J O U R NAL
OF THE
PART I. (History, Antigutites, \&c.)
(Nos. I and II, and Extra Nos. I and II.-1902.)
EDITED BY THE
Honorary Philological Secretary.
" It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science
in different parts of Asia, will commit their observations to writing, and send them to
the Asiatic Society of Calcutta. It will languish, if such communications shall be long
intermitted; and it will die away, if they shall entirely cease." Sir Wm. Jonrs.

## CALCUTTA:

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    1902.
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PRESERVATION MASTER ATHARVARD

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OF TH:

## JOURNAL OF THE ASIATIC SOCIETY OF BENGAL,

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ISSOED WITH
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Plates I and II : Copper Coins in the Wun District, Barar.

## ERRATA.

```
Page 5, line 9: for Viadya read Vaidya.
    " 6 " 21-22: cancel 4 after Nowwab,-and place it after Amirchand in
        following line.
    8 " 17: for Shaja read Shuja.
    10, nots 1 : line 1: for compared read composed.
    86, line 4: for Manikarn read Manikarn.
    18: cancel at before somewhat peculiar.
    25 : for mañgalakalāç read manggalakalaç.
    32: " Bodhisativa read Bodhisattva.
    10: " gvālāmukhi "Jvāímukhi.
    85: "Mañikarn. " Manikarn.
    4: insert comma after Sitā.
    88 : for State-religion by its Bulers read state-religion by its
                    rulers.
    40 " 9, 15 and 21 : for kaliça read kalaça.
    17 : for tricūla ," triçūla.
    9: ", Gapta made as belonging read Gupta as belonging.
    16: add railing after Buddlist.
    26 : for Rengat-Tूzhirin read Rauqatn-t-Tähirin.
    20, 28, and 33 : for \(A^{\prime}\) agim read \(A^{\prime}\) ram.
    25 : for Jāmā-al-Maqāmīt read Jam'u-1-Maqāmāt.
            8: "Malli read Malla.
    11: " Anisu-t-tālibin read Anisu-tn-tālibin.
    84: "'Aalam read'Alam.
    82: " buūr read ba-nūr
    19: "Kash-mirī read Kashmiri.
    20: "Ratnā-kara and Rad-rata rcad Ratnākara and Rudrafa.
    31 : "Harsha-karits read Harshacarita.
    1 : "Bābhan read Bābhą.
    21: "Kei read Kern.
    80: " Brahman be read Brahman.
    82: "'my legends' read 'many legends.'
    6: " 'Prithar.' read 'Prithwi-'.
    at end of note 4 : for ' note 14,' read ' note 2 above.'
    105, line 14: for ' Kalpi' read 'Kalpi.'
    106 " \(15: ~ "\) 'Birbal' " 'Birbal.'
            1: " 'Sohanpã' read 'Sohanpā1.'
            11: " 'Kartik' read 'Kātik.'
            21: " 'Bir Bal' " 'Birbal.'
    28.4 :," 'Bhärti-Chand ' read 'Bhartichand.'
    28: " 'Patorib' read 'Patori 5 '
    note 8: " 'note 28' " ' note 8, p. 105.'
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Page 109, line 29: for 'Madh Kar' read 'Madhkur.'
" note 3: " 'Note 26' read 'Note 6, p. 105;'
100, line 2: ", 'Madhpur-Sah' road 'Madhpur 8th.'
'lonience ' read ' leniency.'
    ' Ghor.Jhámai ' read 'Qhor.Jhimmar.'
    ' Baroni ' read ' Baroni.'
    ' Patar Kachai' read ' Pathra-Kachir.'
    'Gantum' read ' Gantum.'
    'Bhanrer' n 'Bhinper.'
    ' at ' read 'as.'
    ' Piohhar' read ' Pichhor.'
    'Garotka' " 'Garotha.'
    ' note 42' " 'note 4, p. 108.'
    'Charipar' „ 'Chainpur.'
    'note 50' " 'note 8, p. 110.
    112, line 24, 26 and 35 for ' Selim' read 'Salim.
        24, for 'Jehãngir' read 'Jahảngir.'
        'Bhārwar' read 'Bhảnper.'
        'Motli' read 'Moth.'
        ' Indarjit' read ' Indarjit.'
        'Bhadoriga ' read 'Bhadorin.'
        'Kuchhwäha ' read ' Kachhwäha.'
        ' Blărer' read ' Bhãnper.'
        'Selim' " 'Salim.'
        'Jehãngir' read ' Jahāngir.'
        'Irichh ' read ' Irichh.'
        'Charite' , 'Charitr.'
        'Mabbaras' read 'mułbarns.'
        'Chandar Bhản' read 'Chandarbhãn.'
        ' Kangåre' read ' Kanghärs.'
        ' Narū ' read ' Nāra.'
        'Man' " 'Män.'
        'p. 87' " 'p. 129.'
        ' note 84' read ' note 15, p. 115.'
        'that one day ' read ' that in that one day.'
        'p. 24' read 'p. 118.'
        ' Bhāarerr' read ' Bhảnrer.'
        'Lakhevà-dädã ' read 'Lakhwa-dȧda.'
        'Chanderi' read 'Chanderi.'
        'Patheri' read 'Patehri.'
        'note 74' ", 'note 4, p. 118.'
        'note 76' ," 'note 2, p. 114.'
        ' note 35' " ' note 6, p. 107.'
        ' In pargana...Lalitpar,' substitute 'a pargana in the
        Lalitpur sub-division of the Jhanai district, north of
        Lalitpar.'
    127 " 1 line 1: for 'Chanderi' read 'Chanderi.'
        " " " 6: " 'Duraj Singh ' read 'Durag Singh.'
        " 4: for 'soe p. 24' read 'mee p. 118.'
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Page 188, line 28 : for 'Panari' read 'Panāri.'
    130, note 8: " 'note 168 ' read ' note 1 above.'
    " " 4 : " 'page 23' read 'p. 117.'
    " " 5 : " 'note 169 ' read ' note 8 above.'
    131 " \(1: "^{\prime}(1888\) A.D.)' read '(1288 A.D.); but this is of very
                            doubtful authenticity.'
        ' note 151 ' read ' note 6, p. 127.'
        ' S. of Gwalior' read ' S. of Gana.'
        'p. 87,' read ' p. 129.'
        'note 180 ' read ' note 8, p. 131.'
        ' note 152' ", 'note 6, p. 127.'
        'note 187' , ' note 9, p. 125.'
        'Kili Dūn' " 'Kăla Dūnf.'
        ' note 169' ", note 8, p. 130.'
        'Banpūr' ", Bānpūr.'
        'note 135' " 'note 7, p. 125.'
        'Gudūซal' " 'Gadāwalo'
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                        Editor's Note.
        To pp. 48 and 48 :-
    Mr. R. Barn has kindly pointed out to me that the coins of Dhrava Mitra and Rudra Gupta described on pp. 42 and 43, have already been published in Cunning. ham's Coins of Ancient India, Plate VII, 1 and 2.

To pp. 47.60 :-
The pecaliar transliteration and spelling of Oriental mords adopted by Major Raverty in his paper on the Invention of Chess and Backgammon, pp. 47-60, has been retained at the author's special request.

Postscript to Mr. Theobald's paper (Vol. LXX, Part I, No. 8, p. 38, 1901.)
Since writing the above I have acquired a silver 'Purāpa' with the figure of a Rhinoceros on it. This animal will therefore remain on the list of animals on those coins.

I find too that, by some inadvertence, the Rhinoceros has been excluded from the list of animals found on copper coins, though $I$ had already figured it in my paper (J.A.S.B., 1890, Part I, p. 217, fig. 14), which figure wae from a copper coin of Ujain. The Rhinoceros may therefore be inserted in the list on p. 71 as 65 A., that being its proper place among animals.

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## JOURNAL

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## nen <br> Part I-HISTORY, LITERATURE, \&c.

No. 1.-1902.

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Under orders of the Council the following aystem of transli－ teration will be adopted for the fature in all publications of the Society． Authors of papers for the Journal，Pt．I，are partjcularly requested to adhere to it in their contribations．

A．FOR THE DRVANAGARI ALPHABET，AND FOR ALL ALPHABE＇S RELATED TO IT．


In the above the virama has been omitted for the sake of clearness．
In Modern Vernaculars only；$\overline{\text { F }}$ may be represented by $r$ ，and $\boldsymbol{Y}$ by rh．

Avagraha is to be represented by an apostrophe，thus बो sषि so＇pi． Visarga is represented by h．，Jihvāmüliya by h．，and Opadhmäniya by h． Anusvära is represented by $\dot{m}$ ，thus अंब犬े sainsarga，and anunasilia by the
 accent is represented by the sign＇and the svarita by＂．Thus，afp：
 represented by ！Thus，वे 玉gघंस te àvardhanta．

B．FOR PERSIAN（INCLUDING ARABIC WORDS IN PERSIAN）AND HINDÜSTĀNI．
（The system is not applicable to Arabic when prosounced as in Arabic－ spaaking countries）：－

| Vowels．$\quad$ Consonants． | Sounds only found in <br> Hindūstāni． |
| :---: | :---: |



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$\begin{array}{ll}\text { \＆} & \text { jh } \\ \text { 合 } & \text { ch }\end{array}$


Postscript to Mr. Theobald's paper (Vol. LXX, Part I, No. 2, p. 38, 1901.)
Since writing the above I have acquired a silver 'Purâna' with the figure of a Rhinoceros on it. This animal will therefore remain on the list of animals on those coins.

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## JOURNAL

OF THE

## ASIATIC SOCIETY OF BENGAL

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Part I-HISTORY, LITERATURE, \&c.

No. 1.-1902.

Account of late Maharaja Nubkissen Bahadur.-By S. C. Hill, Esq.
[ Read 5th Maroh, 1902.]
A few months ago Mr. N. N. Ghose published a most interesting Memoir of Maharaja Nabkissen. Amongst the documents consulted for the compilatiou of this Memoir was " An Account of the late Maharaja Nubkissen Bahadur, required and delivered to A. Sterling, Esq., Persian Secretary to Government, on the 30th April, 1825."

Maharaja Nubkissen died on the 22nd November, 1797, and the above Account is said to have been written by Maharaja Sir Radha Kanta Deb Bahadur, K.C.S.I. It may therefore be taken as an authentic narrative of some of the leading events in the life of the celebrated Diwan of the Honourable East India Company. I have been permitted to publish it in the Journal of the Asiatic Society by the courtesy of Raja Binay Krishna, a descendant of Nubkissen and therefore the hereditary friend of the British Government whose power his ancestor assisted to establish.

This all too short Account should be extremely interesting to the historical stadent not only because the early history of the British connection with India is attracting so much attention at the present moment but because the proper understanding of Hindu character depends largely upon our being able to obtain side-lights illustrative of it as it
J. I. 1
appeared before the mantle of Earopean customs and language began to obscure its features from European eyes. If anything is evident from a consideration of this Account it is that the Hindu of Bengal, in all the essentials-of character, is unchanged and unchangeable.

In the first place the apparent resignation of the Hindn to "the powers that be" does not imply the death of his national and religious feelings. In 1756 the Hindus were looking for a deliverer. A Frenchman, resident in Chandernagore at the time of the capture of Calcutta by Siraj-ud-daula, wrote to Paris that the people of the country " hugged themselves in the expectation that the English would defeat the Nabob and deliver them from his cruelty and oppression." In fact it was the intrigues of the Hindu merchants and bankers at the Murshidabad Darbar that brought about the rupture between the English and the Nawab, and, when they saw their new allies beaten, the Hindus with a loyalty not often ascribed to them, took every opportunity of protecting them from the Nawab's vengeance. Their action was none the less effectual because it bent to the storm and was secret.

The Hindu has always been fond of what may be called "political speculation," and clever young men of this reputedly timorous race have always been prepared to risk life and property by lending a helping hand to brave men in adversity on what appears an almost impossible chance of recovery. Nothing could have appeared more hopeless than the condition of the English at Fulta, yet Nabkissen thought it wise to urge his relations to save these apparent outcasts from starvation.

It is not the Hindu only who worships the great Goddess Chance, but the Hindu delights in recalling the influence of trifling incidents upon the careers of great men. Nubkissen walked in a certain street on a certaiu day, and so became the Company's Diwan.

Finally as an illustration of Asiatic reserve and Asiatic love of dramatic effect one may notice the disclosare of Nabkissen's rank. A man of high birth, he accepts a post, which, though lucrative and probably honourable amongst his fellow-countrymen, gives him no position commensurate in the eyes of his Earopean employers with his real rank. It is disclosed by an enemy in a way which is intended to mortify as well as damage him, but, owing to the lucky accident of Clive's intuitive knowledge of Asiatic character, the disclosure only adds to his honour and confirms his position.

I have vainly searched the records of the Government of India for evidence of Nabkissen's having assisted the English at Fulta, but the accounts of what happened at Fulta are extremely meagre and, though the secret supply of provisions by natives under cover of night is nontioned, the names of these natives are not given. This is no reason
for doubting the family tradition, ${ }^{1}$ for it is certain that Nubkisen's friends were influential people at Fulta, and it was only the inhabitants of the immediate neighbourhood who could hope to correapond with the English without attracting the notice of the Nawab's spies. How this brought him to the notice of Lord (then Colonel) Clive is explained in a note by Babu Nilmani Mukerjea, late Priucipal of the Sanskrit College, Calcutta, which I append to the Account.

## 8. Charles Hill,

Officer in charge of the Records of tho Goot. of India.
Juswary 14th, 1902.
Account of the late Muharaja Nubkissen Bahadur required by and delivered to A. Sterling, Esq., Persian Secretary to Government on the 30th April, 1825.
As an account of this family from its first founder and his immediate descendants would contain an immoderate length of detail (they having held respectable situations under the former sovereigns of Bengal) I will begin with his eighteenth descendant named Daveedas Majmooadar; this individual was appointed Kanoongoe of Pergunnah Mooragachs, \&c., in the District of 24-Pergunnahs, where he resided having removed his dwelling-house from his native village of Cansona, near Moorshidabad. On the demise of Daveedas Majmooadar his sons Sahasracsha Mujmooadar and Racminikant Byabaherta presented themselves to Nowwab Mahabutgunge ${ }^{2}$ at Mcorshidabad, who was pleased to appoint the former to his late father's office, and the latter a Manager of the Estate Casubram Roy Chowdhoory then minor Zemindar of Pergannah Mooragacha, \&c. After the death of Rucminikant Byabaherta his son Rameswar Byabaherta having succeeded his father, paid into the Now wab's Treasury the Revenues of the above Pergunnah amounting to more than the former settlement, in consequence of which Casubram Roy having attained to full age confined Ramswor Byabaherta in his own house, on account of which Ramcharn Byabaherta (son of Rameswor Byabaherta) went to Moorshidabad and introdaced himself to the Royrayn ${ }^{8}$ Chain Roy and delivered in writing in the Nowwab's Record

[^0]an additional Tahud or agreement for the sum of 50,000 Rapees for the Pergunnah of Mooragacha, and was appointed Ohdadar or Revenue farmer for that Pergannah, and obtained the release of his father from confinement and revenged on Casubram Roy by imprisoning him and paid in sums to the Now wab's Sircar over and above the Tahood executed by him and afterwards quitted his abode in Pergnnnah Mooragacha and built a house at Govindpore in Calcutta where he baving left his family proceeded to Moorshidabad, and presented himself to the abovementioned Nowwab and Royrayn, and was appointed Salt Agent and Collector of Hidgelle, Tumlook, Mohisadub, \&c., and discharged his duties to the great benefit and entire satisfaction of his superiors.

In the meantime Nowwab Muniruddeen Khan, brother of the Subadar of Arcat, having quarrelled with his brother came to Nowwab Mahabutgange, Sabadar of Bengal, who showed him much respect and nominated him Subadar of the Province of Cuttack and also appointed Ramchurn Byabaherta Dewan of that Province and sent them with a considerable force for preventing the incursions of the Mahrattas. They accordingly arrived at Midnapore to suppress the Pindaras, and from thence marched towards Cuttack, but their Army was at a great distance excepting a few people of their retinue who accompanied them when a number of Pindaras consisting of about 400 Horsemen, suddenly fell upon them from the woods, and plundered and cut off the Nowwab and Dewan with their attendants who fought them with great bravery.

At that time Dewan Ramchurn had three infant sons, vis., Ramsundra Deb the eldest, Manickchandra Deb the second, and Nobocrishna Deb the youngest. They were very mach distressed at the loss ${ }^{1}$ of their father, and their paternal property by the death of Fukher Tojjar at Hooghly in whose hands the same had been deposited. Their mother defrayed the expense of their maintenance, education and marriage with her own money and built a new house at Govindpore in consequence of the old premises having been encroached on by the River. Some time since that Fort William was erected at Govindpore, after the residences of Individuals of that village having been removed, they received from the Hon'ble Company 10 Biggahs of ground in Arpooly \& and 5,000 Rupees for buildings in lieu of their dwelling-house at Govindpore. The ground received in Exchange at Arpooly not being sufficient for habitation Ramsundra Deb purchased a house, formerly belonging to Ramsunker Ghose, at Sootanooty in Calcutta with the above money after which

[^1]Nobocrishna Deb bought more grounds and built suitable buildings, and resided there with his numerous family and relatives. When Ramsundra Deb became fit for business, he at first did the duties of Aumeen or Supervisor of Punchcote commonly called Punchet ${ }^{1}$ and other places and supported his family for some jears.

In the year 1756 all the nobles and principal persons of the Provinces of Bengal and Behar were dissatisfied with the tyrannical conduct of Nowwab Seraj-ud-dowlah, whereupon Rajah Rajbullabha ${ }^{\text {a }}$ (who was a Viadya by caste of Dacca) fled from Moorshidabad and took refuge at Calcutta, in consequence of which the Nowwab issued a Perwannah to Mr. Drake then Governor of Calcutta, directing him to seize and send the Rajah to him but Mr. Drake without complying with this requisition answered the Perwannah stating that he would make the Rajah pay immediately if the Nowwab had any demands against him, on sending particulars of the same, upon which the Nowwab was very much incensed at Mr. Drake, and wrote him another Perwannah threatening him that if he did not deliver up the Rajah on receipt of the Perwannah he would send his Troops to seize the Rajah and to drive out the English from Bengal, in consequence of which Mr. Drake and other English gentlemen were thrown into perplexity, they not having sufficient force to repel the enemy when Rajah Rajbullabha assured them that all the Sirdars who were dissatisfied with the Nowwab would never fight the English and accordingly all the Ministers and Sirdars of the Nowwab joined together and sent a Persian Letter from Moorshidabad to Mr. Drake, by a Hurcarah ${ }^{8}$ who delivered it with the instruction that it was a Letter which contained a seorecy and should not be read nor replied to by the agency of any Musulman Moonshee but that a Hindu should be emploged for that purpose, for which reason Mr. Drake without shewing that Letter to the Company's Moonshee Tajuddeen, ordered his Hurcarahs to search for and bring a Hinda Moonshee from Calcutta.

On that very day Nobocrishna Deb was gone to Burrah Bazar in the afternoon, when one of the Hurcarahs of Mr. Drake knowing by inquiry that he was acquainted with the Persian language took him to Mr. Drake to whom Nobocrishna Deb read the Persian Letter and explained the contents thereof and wrote an answer to it, although he was then a youth attending school, yet he executed this arduous task, by the superior mental faculties he was endowed with and thereby met

[^2]with the highest approbation of Government who were pleased to appoint him to the office of a Moonsliee of the East India Company and granted him a Palankeen with Bearers for his conveyance and 200 Rupees for Dress.

After the above the Nowwab Seraj-ud-dowlah attacked Calcutta with a grand Army in June 1756, and the English baring bat a small force did not engage in hostilities, and the Governor and most other English gentlemen retired to Madras ${ }^{1}$ on board of ships and the rest were imprisoned in the Black-hole, and all the inhabitants of Calcatta fled to different places. The Nowwab having taken Calcutta, named it Alinugar and dominated one Rajah Manickchunder Governor of Alinugur, and returned to Moorshidabad. Mr. Drake and the former members of Council having arrived at Madras brought Colonel Clive on board of one of Admiral Watson's fleet who landed with his force at Fulta (otherwise Colpy) ${ }^{2}$ within six months and took the Forts of Budge Budge, Tana Magooa, and Aligar ${ }^{8}$ (which was built and so named by Manickchunder) and defeated the Nowwab's Army and surprised Rajah Manickchunder who was then amusing himself at Nautches and cansed him to flee to Moorshidabad and took possession of Calcutta, in January 1757, when Moonshee Nobocrishna waited upon Colonel Clive, and resumed his Office.

Subsequently in 1757 Nowwab ${ }^{4}$ Seraj-ud-dowlah attacked Calcutta again, and encamped in Amirchand's garden called Hulsy Bang whereupon Colonel Clive deputed Moonshee Nobocrishna with an Engineer Officer under the pretence of makiug proposals of peace and sending presents to the Nowwab and his attendants. The above two Officers of English Government brought with them in writing a particular account of their encampment and Colonel Clive marched his force up to the Nowwab's Camp at the end of the night and blew up the Now wab's Tent and those of his Sirdars by the first fire from Cannon, the Now wab however saved his life by having prudently removed to another Tent daring the night and so escaped with the loss of the greatest part of his Troops and battle and Colonel Clive followed him to Plassey where he fought a dreadful battle with the Nowwab's Commander-in-Chief

[^3]Meer Madun ${ }^{1}$ and slew him, and totally defeated and dispersed the Nowwab's Troops.

Another account says that the above snccessful attack on the Uamp of Nowwab Seraj-ud-dowlah, induced him in February 1757 to conclude a treaty to the greatest advantage of the English but scarcely had this contest terminated when news was received of a War having been declared between England and France and the reduction of the French power became au object of importance to the English. Nowwab Seraj-nd-dowlab informed the Council of Calcutta that if hostilities were carried into his country by the English, he would assist the French with all his power. However after a vigorous assault, Chandernagore was taken by the Eng. lish and the Nowwab having shown marks of displeasure at this event it was resolved to depose him by supporting Mir Jafer Aly Kban (who had married the sister of Aliverdy Khan Seraj-ud-dowlah's predecessor). This wrs followed by a decisive action on the Plains of Plassey in which the Now wab's Troops were routed in every direction and be was obliged to fly from his Capital in the disgaise of a Faquir and was brought to Moorshidabad and beheaded by Meer Jafer's eldest son. ${ }^{2}$

Jafer Aly Khan from Letters having passed between him and Mooushee Nobocrishna did not give battle, but formed an alliance with Colonel Clive who took possession of Moorshidabad and declared Jafer Aly Khan to be the lawful Nowwab of Bengal. With the sanction of Colonel Clive Moonshee Noboncrishns ${ }^{8}$ settled the terms of the Soobadary agreement with Nowwab Jafer Ali Khan, and made arrangements for conducting the affairs of the Provinces in concurrence with the Naib Soobadar Now wab Moozufferjung and fixed an annual Nizamat allowance at $18,00,000$ Rapees and the expenses of the Soobadary, \&c., at 7,00,000 Hupees making in all 25 lacks of Rupees (some say 24 lacks) and returned to Calcutta with Colonel Clive, and was crowned with the highest esteem and regard of that gentleman for his faithfal discharge of the important public duties intrusted to him, after which Colonel Clive proceeded to England assuring Moonshee Nobocrishna that he would return soon with the appointment to a distinguished situation.

In the jear 1761 Mr. Vansittart, being appointed Governor of

[^4]Calcatta, nominated Ramchurun Roy as his Dewan and sent for Nowwab Jafer Aly Khan and Nowwab Mozufferjung from Moorshidabad to Calcutta on account of some faults that they had committed and displaced them from the Musnud and instated Nowwab Kassim Aly Khan Soobadar in their stead. Shortly after Kassim Aly Khan removed his seat from Moorshidabad to Monghyr and treacherously killed all the English gentlemen of Moorshidabad, Patna, Cassimbazar, \&c., and also inhumanly destroyed almost all the nobles of Bengal, namely, Royrayn Ommed Roy, Maharajah Ramnarain, ${ }^{1}$ Rajah Rajbullabha with his son and Jugat Sate with his brother and others, excepting Nowwab Jafer Aly Khan, Nowwab Muzufferjung and Moharaja Doollu Charan who were then in Calcutta.

Afterwards Major Adams ${ }^{2}$ went to war against Kassim Aly Khan, accompanied with force ${ }^{8}$ and Moonshee Nobocrishna and fought a signal battle at Oady Nullah, for four days succossively (some say nine days) and defeated Kassim Aly Khan's Trobps and gained victory over him pursuing him across the Nullah, he however fled to Now wab Shaja-udDowlah at Lucknow. Moonshee Nobocrishna having been employed for three days in the execution of the orders of Major Adam fell sick in consequence of the extreme fatigue and was confined in his Tent on the fourth day when the plundering soldiers of the Nowwab robbed his Tent and attempted to cut him off, but he ran away, and jumped into the Nallah and swam it over and saved his life by joining the British Army. Major Adams having been most arduously employed in this war, was taken dangerously ill, for which reason Moonshee Nobocrishna and Mr. Skinner were bringing him to Calcutta in a boat but this meritorious officer unfortunately died near Calcutta.

In 1765 Lord Clive being appointed Governor-General of India with unlimited powers arrived at Calcutta on the 3rd May and Mr. Vansittart embarked for Earope previously to that without seeing his Lordship, in consequence of the calamities occasioned by his nomination of Kassim Aly Khan Soobadar of Bengal. Lord Clive was pleased to employ Moonshee Nobocrishna confidentially as before and after consulting him reinstated Nowwab Jaffer Aly Khan Soobadar and Mozafferjung Naib Soobadar, after which Moonshee Nobocrishna accompanied Lord Clive as far as Allahabad (some say Delhi) and concluded a treaty with his Majesty Shah Alum, and his Highness Nowwab Shaja-ud-Dowlah to the satisfaction of his Lordship, and obtained from his Majesty on the 2nd Showal 1179 Higeree (A.D. 1765) a dignity of Munsub

[^5]Panjhnsaree, ${ }^{\prime}$ three thousand Suwars or Horsemen Title of Rajah Bahadior Palky Jhalerdar Toogh, Nukarah, \&c., and also from his Highness valuable Khelats and other marks of honor and on the eame day a Mansnb of one thonsand five handred Suwar and Title of Roy were conferred on the above mentioned two eldest brothers of Rajah Nobocrishna, who then proceeded with his Lordship to Benares and Azeemabad and consecrated an Image of the Deity Shiva in the Temple of Visweswora, and effected the settlement of the Province of Benares with Moharaja Bulvant Singh and that of the Province of Behar with Moharaja Setab Roy and came back to Calcatta with his Lordship.

One day as Lord Clive was engaged in the Conncil Chamber in consultation on the subject of rewarding the nsefal services rendered by Rajall Nobocrishna Bahadoor, a Persian Letter in answer to that of Lord Clive arrived from the Soobrdar of Arcat, and his Lordship desired Rajah Nobocrishna to read and explain that Letter and he, finding the contents thereof to be adverse to his interests, remained silent for a moment bat was obliged to interpret it on being urged by bis Lordship. The snbstance of it was as follows: "It is my wish also that the war with English Company being ended and a treaty concluded with them, both the Powers continue in good terms, bat Rajah Nobocrishna (who manages the Company's affairs, being the son of Dewan. Ramcharn, the associate of my enemy Mouneeraddeen Khan) will obstruct the intended negotiation for which resson it is needless to make mention of Peace daring the continuance of Rajab Nobocrishna."

The subject of the above Letter being explained to Lord Clive, he desired Rajah Nobocrishna to await in a room adjoining the Council Chamber for a moment who therenpon was alarmed at the probability of his dismissal, bat on the contrary, his Lordship having consulted with the Conncil, called Rajah Nobocrishna and said thus : "Why did you not inform me so long that you were of auch a noble family $P$ The Company havé derived great benefit from your services and laborious nndertakings. Not knowing the rank of your descent we could not show you the respect due to it. From this day, we appoint you Dewan to the Hon'ble Company and the title and Robe of Honor, \&ce., shall be conferred apon you shortly."

In the 1180 Higeree (A.D. 1766) Lord Clive was pleased to get a Furman or Mandate from his Majesty Shah Alam granting Rajah Nobocrishna Bahadoor a dignity of Munsub Shash Hazary, ${ }^{2}$ Four thousand

[^6]Suwar, and Title of Moharajah and to bestow upon him a gold Medal with a Persian Inscription, as a Testimonial to all India of the regard which Lord Clive and the Hon'ble Company had for his faithful and honest services, and a Khelat of ten Parcha ${ }^{1}$ with Precious Garland of Pearls, Chowkurah, Jeggah, Sirpech, Murassa, \&c. ; and also Shield, Sword, Elephant, Horse, Jhalerdar Palky, Assa, Sotta, Bullum, Choury, Morechul, Ghury, \&c., and allowed him a Guard of Sepoys to watch his Gate and fixed to him a monthly salary of 2,000 Rupees, upon which Moharajah Nobocrishna Bahadour thankfully represented to Lord Clive that through his Lordship's benevolence he was not nuder the necessity of receiving from the Hon'ble Company such a large sum per mensem but that a monthly allowance of Rupees 200 might be fixed hereditarily to preserve the character of his family; and his Lordship accordingly complied with his representation and kinally handed him to his conveyance on an Elephant and the Moharajah came home in a grand procession scattering Rapees all about him and received the sum of 200 Rapees every month from the General Treasury during his life-time, but it was stopped after his death.

In the year 1767 Lord Clive gave the charge of Government to Mr. Varelsta and proceeded to England and Moharaja Nobocrishna Bahadoor continued in the capacity of political Dewan to the Hon'ble Company and discharged every part of his duties to the utmost satisfaction of Mr. Varelst. At that time the old mother of the Moharaja died and he performed her Sraddha or obsequies at such an immense sum of money that no Sraddha of the kind has before or after been made by any person. On hearing this, the Members of the Council informed Mr. Varelst that Moharaja Nobocrishna having expended all his money in. the celebration of his mother's funeral rites, distributed in alms many Lacs of Rapees belonging to the Hon'ble Company's Treasury in his charge. After the completion of the Sraddha when the Mohnraja went to visit Mr. Varelst, he told him in jest saying: "I am informed that you lost your sense and have expended the whole of your wealth as well as several Lacs of Rupees belonging to the Company's Treasury in the

[^7]performance of your mother's obsequies." Moharaja Nobocrishna, as soon as he heard the above, locked up the Treasury (then called Money Godown) and left the key on the table of Mr. Varelat, soliciting him to remove his doubts by sending for the person who accused him together with one of the Members of the Council and desiring them to examine and receive the Cash in Balance at the Treasury, upon which Mr. Varelst endeavoured to pacify the Moharaja by using expressions of politeness and wished him to depart in the temper he came, but the Moharaja said that if the Cash at the Treasury was not examined such measure would degrade his character. Mr. Varelst said to the Moharaja: "I am well acquainted with your character and conduct, there is no doubt but the Cash is in the Treasury ; " notwithstanding which, the Maharaja replied saying: "As long as the Cash shall remain unexamined the imputation both on you and me shall increase." Finding the Moharaja inflexible, Mr. Varelst sent a Connsellor to the Treasury who examined the Cash account and found a surplus of $7,00,000$ Rapees belonging to the Moharaja and apprized Mr. Varelst of it, who was very much ashamed, apologized and delivered back the key of the Treasury to the Moharaja, but the Moharaja declined receiving the key saying, when you were informed of the embezzlement on my part, you could disgrace me immediately by summoning and detaining me until you had examined and received the Company's Treasure, but, instead of doing so, you have kindly preserved my character. In your absence no other Governor will do me so much favour, for which reason I think it proper to resign to you all the high and important offices of the Hon'ble Company, which I have the honour to hold and not to do service any more from this day.

On the next day, Moharaja Nobocrishna Bahadoor removed all the public offices which he had in his house to Mr. Varelst, namely, Moonshee Dufter (Persian Secretary's Office), Araz Beguy Dufter (Office of the Individual presenting all Petitions and representing such as may have been made verbally), Tahseel Dufter of 24 -Pergunnahs, Collector Office of the District of 24-Pergunnahs, Maul Adaulat of 24-Pergannahs (Financial Court of that district), Catchery of Jota Mala (a tribunal trying causes relative to tribe or caste), \&c., and remained unemployed, devoting the remainder of his days to Religion and preparing himself for fatare life.

Moharaja Nobocrishna Bahadoor presented a valuable spot of ground for the erection of Saint John's Church, the present cathedral, without accepting the sum of 45,000 Rapees offered by the Council for the same and constructed a Highway known by the name of Rajah's Jangal or Dike from Behala near Calcutta to Coolpy-about 16 coss in
length—at his own expense of npwards of one Lac of Rupees conformably to the wish of Lord Clive and constructed a wide road leading to his dwelling-house, called Rajah Nobocrishna's Street, by purchasing grounds at a considerable cost and pared aud repaired it at his own expense during his existence, and rendered great assistance in establishing House Tax in Calcutta and obtained a Talookdary Grant for Mowza Sootanooty, Bagbazar and Hogulcoondy in 1778 from the Hon'ble Company in exchange for Moaza Nowparah, \&cc., belonging to him, whereby most part of the respectable and opulent native gentlemen of Calcutta became his tenants, and made a settlement for the District of Burdwan in 1780 and preserved the sources of Government Revenue as well as the Estate of Moharajah Dheraj Tejchunder Bahadoor during his minority. He supported and assisted his numerous kindred and relations as well as respectable Cooleens or individuals of eminent descent and Pundits or learned men of Bengal of renown and encouraged all kinds of Arts and Sciences and gratified the wishes of Actors, Dancers and Singers from different parts of the World. He was the leader of fashion and model of imitation to the native community of this Metropolis and received the first reverence as well as Chaplet and Sandal before others at any Assembly he or his family was present agreeably to the Hindn castom. His house was honoured with the presence of almost all the former Nowwabs, Soobadars, Royrayns, Governor and Rajahs. He died on the 22nd November, 1797, leaving a large Estate, both real and personal, amounting to one crore of Rapees more or less, and two legal heirs or representatives, viz. :

1st, Baboo Gopeemohun Deb, who was third son of Moharajah Nobocrishna's eldest brother-Ramsundra Deb, and adopted by the Moharajah for his son, agreeably to the Hindu Law, and 2nd, Moharaja Rajcrishna Bahadoor, who was born some years after the adoption and died on the 19th of August, 18i23. Gopeemohnn Deb has only one son named Radhakant Deb (who is the Author of the Bengalee Spelling Book, and Sanscrit Dictionary, entitled Sabda Calpa Druma and a Director of the Vidyalaya or Hindu College, Member of the Calcutta School Book Society, Secretary and Member of the Calcutta School Society and Vice-President of the Agricultaral Society). Maharaja Rajcrishna has left eight sons, of whom Baboo Sivacrishna Deb is the eldest.

Note by Babu Nilmani Mukerjea, dated 24th July, 1899.
"About 30 years ago, when I visited the English School at Sarisa, near Diamond Harbour as Deputy Inspector of Schools, I met some members of the Bose family of that village, and our conversation turned on one occasion upon the antecedents of Maharaja Nabakrishna Deb. I
was informed that the mother of Nabakrishna had come of the Sarisa Bose family and that young Nabakrishna used to visit his maternal uncle's house now and then.
" When Colonel Clive halted at Fulta on the Haghli, on his expedition to re-capture Calcutta from Nowab Sirajoodowla, be was put to great trouble for want of provisions. Nabakrishna was then staying with his maternal uncles at Sarisa. Having received news of Clive's difficulties, he began to collect rice, ghee, live stock, \&co., and succeeded in getting a decent supply through the interest of the Bose family, who possessed great influence in that part. Young Nabakrishna had then a presentiment that he would make or mar his fortune, though his relatives were not very sanguine about the success of his adventure; they had then misgivings and endeavoured to dissuade him at first, but he was not a man to be deterred from an undertaking on which he had his heart.
"He then started for Fulta which lay about 6 miles from Sarisa presented himself before Clive who was struck by his pre-possessing appearance and resourcefulness, and accepted whatever provision he had brought with great joy. Nabakrishna followed the expedition up the river, and rendered useful service to his employer Clive by bringing provisions as far as Budge-Budge, where Manickchand, the Nowwab's Governor of the local Fort, showed some fight. Since that time, Nabakrishna who was well-versed in Persian, the lingua-Franca of India at that time, and had a smattering of English, was employed by Clive as his Munshee and rose step by step into high favour, till at last in 1765, when the Emperor of Delhi conferred the Dewani of Bengal, Behar and Orissa, on the East India Company, he played a prominent part by acting as interpreter between Clive and the Emperor, for which he was eminently fitted on account of his knowledge of Persian and English."

## The Secret Words of the Cūhrās.-By Rev. T. Grahame Bailey, B.D., M.A., Wazīrabād.

[ Read 8th Jenuary, 1902.]
Like other tribes, which from the practice of generations, have become addicted to evil deeds, the Cāhrās have a secret vocabulary which greatly facilitates the commission of crime and equally hinders its detection. In their case the special words are connected chiefly, on the one hand with thieving and house-breaking, and, on the other, with the eating of cattle which have been found dead, and consequently with the means employed to ensure a moderately good supply of such dead animals. Throughout this article the secret words will be in italics.

Without a knowledge of these words one cannot become thoroughly acquainted with the Cührās or with their ways of thought and action. In order to get right to the heart of things let us accompany an expedition which has as its object the plundering of some rich man's house. Some churm (thief), who always keeps his eyes open has discovered a kuddh (house), belonging to some Rarkā (Hindū) or Ghir bala Musalmān). He seeks out another Kala (thief) from among his own people, the Rūpge (Cūhrās), or he may find an obliging Bhatī (Sãsī) ready to help him. Having painted in glowing colours the richness of the house in bhimfe (rupees) and bagēle (do.) and hargīye (paise) and thēlē (a kind of ornament), he says 'calo gul lāiye (let us break into the house). We shall follow these men, as on a dark moonless night they set ont. Having reached the house they produce their tomb $\bar{u}$ (iron instrament for house-breaking, an oriental jemmy) and set to work. They take the precaution of placing by their side several chikare or clods of earth with which to assail any unwelcome intruder. The hole is finally made and the thief leaving outside his $k a ̈ r k i$, , stick, and paintri or cäkhal (shoes), and telling his litära (confidant) to keep a sharp look out, enters the house. If he finds no one inside he will venture to light a ghasāi (match). Suddenly a small clod of earth drops near the honse-breaker; this is the neola (piece of earth thrown as a warning of impending danger). He looks round in alarm and hears
the whispered words "kajja camda i" (a jāt.is looking). This interruption in his gaimi (thieving) he feels to be most inopportane. He feels still more ill at ease when he bears another hoarse whisper "thip $j a$ (hide yourself) palwe bōjā " (get to one side). He calls back "kainkar kar (throw a clod of earth) lōth lai sū" (beat him or kill him) and emerges from the house. The neodi (theft) has not prospered. The two thieves flee by different ways to their homes, and next day discuss with great astonishment, bordering on incredulity, a report which has got abroad that a kajja has been attacked by two Cūhrā churm (thieves) who were engaged in lalliz (robbery) and has almost lug gayā (died).

An account given me of an event which took place in a town in which I was staying will serve as an introduction to the sabject of cattle poisoning and carrion eating.
 Hārkě̃̃ dē kol yölkē nūkar kiti bhai Ria wicoó
to-the-Hindūs having-gone accusation made that out of the Cūhras
 someone either poison gave or poisoned-iron-point smote or in some way
 killed. and the Hindu said that we neither to-them
 the carrion to eat will give and not to them the skin will give.

Each company of Cūhrās is supposed to possess at lenst one rukhm, or cattle poisoner. It is his business to arrange for the poison. ing of suitable animals. He charges six annas for a cow and eight annas for a buffalo. The poison is made up into little balls, white, and black, and green, the black and green being more potent. One tola put into the food of a cow is sufficient to canse death in 24 hours, bat a buffalo requires two tolas. They say that a horse will not take food with the poison in it. For this reason they kill horses with poisoned sharp-poiuted instruments, which are made in two sizes; the smaller can be concealed in the hand and is called a lanjiz, the larger is a short stick with the poisoned iron point affixed to the end, and is called chaggi.

It is extremely hard to get Cūhrās to admit any knowledge of these practices or even of the secret words. After speaking to a considerable number of the people I have come to the conclusion that a fair proportion of them are genuinely ignorant of the less common words of their vocabulary. Militating somewhat against this is the fact that they, one and all, delight in the songs sang by their giyānis, which contain a proportion of secret words. There is little doubt
that this Pasht5, as they call their special phraseology is better known in some places than in others, and in all cases it is extremely probable that those men are best acquainted with it who habitually give themselves up to criminal pursuits. The Saxsis call their own specially secret dialect Färsi. It is liardly necessary to point out that in neither case is there any connection with Pashto or Persian.

Unlike the SÅsis the Cūhrās have no grammar of their own. They use ordinary Panjābi, inserting, when there is need for secrecy, their private words which others will not understand. If it be objected that their hidden vocabalary is too meagre to allow them much freedom in this exercise, it may be answered that the subjects in connection with which they desire secrecy are very limited, and it is wonderfal how far it is possible, even with a few unknown words, to mystify the uninitiated.

Sometimes to disguise an ordinary word the letter ' $m$ ' is insertedThus a little boy said to me-"nh Kūtra Ghirbalĩ̃̃ de skamūl pöliza je," -that boy (to the) Musalmāns' school gone bas." Here 'skamul' is used for 'skūl.'

One of my informants amusingly but forcibly illustrated the unwillingness with which Cūhrâs will tell strangers anything about their argot. He confided in me only when all doors werte shat, and even then the slightest sound used to make him start and look round to find out if anyone was listening or watching.

The following song, which sings the delights of carrion eating, will give some idea of the verse current among these people.

1. Maddar Pir pahārf carhiā Khilqat mātthā ţēkdi.
2. Sundī Mai akkar bhannē

Culbēde wicc lêțdi.
3. Giclई Māi jhanḍ khalārē

Dande wallơ wekhdi.

1. Lo! St. ${ }^{1}$ Thigh has risen on high ${ }^{2}$
The penple bow their heads.
2. Mother Cutlet ${ }^{8}$ twists and turns, I' the fireplace as she lies.
3. Mother kneejoint's grizzlingt now, And looking towards the teeth.

1 Observe the canonimation in the first couplet and the dignity accorded in the second and third.

2 i.e., has been elevated to the cooking pot.
8 Akkar bhanṇā means to stretch as in yawning, hence to walk stiffly and prondlyHere it refers to twisting under the action of the fire. For sundi and gicli see vocabulary.

4 Jhand khalärnā, used of hair standing on end, here of splitting up and separaion of meat.
4. IIIß jharmat pā liā K挔 bahṇ banēre
5. Jat jo puchdā Cūluriè

Ghar kī hāi terē.
6. Caudhri nikkē di gand bai Waddee de pherrè.
7. Mat bharāse chaddiè Cūhrì phe̛rē cauphēré.
8. Bhanni hōī sainḍki Cāhrị bhānyiấ ${ }^{6}$ phērē.
9. Pāṭī bōi taingṇ̣i Walpain canphëre.
10. Khālō mēriō kurmō ${ }^{7}$ Kōhli dè bêré.
11. Chailì de wicc sukdē, Khurdumbe ${ }^{8}$ bere.
4. Kites have formed a circle round, Crows sit apon the roof.
5. Asks the farmer 'Cūhri, say what is there in thy house $P^{\prime}$
6. "The younger son's engagement, Sir, ${ }^{l}$
The marriage of the elder."
7. The pot sends forth se savoury steam, The Cūhri bustles round.
8. Broken is her vessel now She hands round ${ }^{8}$ marriage food.
9. Torn also is the Cūhri's skirt, Round and round she goes.
10. "Eat away mys hearties all Fragments from the breast.".
11. In the basket, see, are drying Fat ${ }^{4}$ delicious morsels."

Another pair of conplets relate a practical joke played by a Cabhra.

Ghuţ ghaţkē ganḍar baddlıā
Otte thabbā parālī dā
Kajjē de hatth maĩ de țơriā
Tattā tattā tāri dā.

The bandle bound $I$ tight and fast (i.e., bundle of carrion).
On top a bunch of rice stalks placed (to hide the carrion).
By a farmer's hand I sent it home.
Hot and ready for soup.
"Here we have an Oriental version of "beantiful soup, so rich and green, waiting in a hot tureen." The farmer must have been a Hindu to account for the Cūhrās glee at getting him to carry the carrion.

[^8]J. I. 3

The following refers again to a carrion feast-

Lāl lāl kandhí lāyā.

Ciţte dā degā cārhīdà.
Gbar sād̄ thāna latthā.

Wagyārā nahí chuṭkāri dā.

The red is thrown to the wall (red = the blood of the dead animal).
The white is placed in the pot (white = the flesh ).
In our house there's a thāna to-day (referring to the congregation of kites and crows watching the carrion).
There's no time even for labour that's forced.

There's a fifth line to this rhyme, but it has an obscene meaning. The following vocabulary will be of some interest. The connection between the Cūhrā words and those of Qāsāis, Gamblers, and Sãsis is worth noting.

VOCABULARY.

## Stealing.

chikara, clod of earth.
cāmnã, watch (used also by gam-
blers in general).
chapelna, hide.
churm, thief.
gul launa, break through a house
(san mārnā).
gaimi, theft (cf. Qasāi argot gaimbi, theft, gaimbā, thief).
kala, thief.
$k u d d h$, house.
kainkar karna, strike with a clod of earth.
$k a ̄ r k i ̄, s t i c k$.
lalli lauṇa, steal ( P cf. Såsi lālli, night, Arabic lāil).
litāra, confidant.
něola, throwing earth to warn thief.
nēठdi, theft.
paintri, shoes (left outside), cf. Sẵi pauni.
thipna, hide oneself.
tombu, weapon for breaking into a house.

## Poisoning.

chaggi, a short stick with poison. ing iron point affixed.
dhärkī, knife.
gand dena, kill.
golic, poison ball.
lanjī, a small chaggi (see above) whioh may be concealed in the hand.
rukhm, professional poisoner.
tiärī, poison.
thimă, poison.

## Human Beings.

bhātū, Sãsị cf. S\% ${ }^{\boldsymbol{m}} \mathrm{si}$ bhattū.
ghirbala, Musalmān.
kajja, Jàt used also for Europeans and others (a word used by Sãsis).
kūtră，boy（kūtrí，girl）．
rärkă，Hindă．
tōme，feminine of Ghirbală．
rüyga，řōna and rí，all Cūhrā．
Animale．
ardli，buffalo．
bad，pig（ased also by other
Panjābis）．
caili，little goat，kid．
katisi，cow．
khanjala，baffalo．
kurma，horse．
$\left.\begin{array}{l}\text { kērta，} \\ \text { khutringä，}\end{array}\right\}$ donkey．
rewal，dog．
Food eating，etc．

gule，lassi．
hundak，food．
$k u ̄ n d p a$, eat．
mitka，gar．
nibal，ghi．
nirka，water．
pakheat，food，rotil．
tilmsã，eat．
Oarrion，etc．
anjala，heart．
andra，entrails．
batli，fat remains．
bukka，part of the side．
caura，thigh．
cull，lower half apper fore leg．
dìtha，carrion．
gherā̀，part of entrails．
ghanērī，upper part of side．
gicli，flesh round kneejoint．
jannū，apper half lower hind leg．
jagar，carrion．
kaund，back of neck．
käna，upper half，apper hind log．
kangi，part of lambar vertebrae．
khanjara，carrion．
khurara，flesh on front part of lower half of leg．
$k \delta h l i$ ，breast．
lipra skin，cloth（in Qasāi＇s argot lipri $=$ skin）．
lukra，the part along the spine． maddar，thigh．
mord，pieces of breast．
minj，fat．
miny，brain．
murkan，part of shonlder．
nē̃ri，fat．
patri，lumber vertebrae．
pōtä，round about anus．
phar，shoulder．
pattha，small of back．
rukrā，part of side．
sundi，an oblong narrow slice of meat．
surkayg，lower half of lower leg．
tikiya，upper half，upper fore leg． totia，npper half，lower fore leg． golū，lower half，upper hind leg． tari，soup（connected with Urdū tar，wet）．
las，soup．

## General．

almni $=$ kind of cow $=$ sickness．
abrua，come，arrive（cf．S太̊̈si asrṇa， Qasāi aparṇā，Panj．aparnā．
burkna，buqqa（used also by S⿳⺈⿴囗十一日isi）． bei kull，keep quiet（＇shat ap，＇used also by Sâsis．See kūlpa）．
bagela，money，rupee（cf．Sắsi bagali＝eight anna bit）．
bhimła，rapee（used by gamblera in general）．
dhanda, evil, worthless, bad.
ghasai, lucifer match.
harjiya, paisa, pice.
kathäna, say. It is noteworthy that the Panjäbi words gal, katth, bāt (all meaning 'word' ' matter') have a verb formed from each of them. But while bataṇā is used in Panjabi proper, kathāp̄à is used among by Cūhrās, and galāṇā is found among hill people in the direction of Camba.
$k \bar{u} l_{n} \bar{a}$, do (used also by Sāsis).
kērmıă, kill.
żuurūa, haqqa.
$k o ̄ k a$, intrigue.
öthṇä, beat, kill (Sãsi lōḥ̣ā, Kashmïri läyun, cf. Urdū laganā, Panjābī lauṇā).
lugñ, die (used by Såsis).
nēparna, seize (Panj. naparnā, napn̄a).
nūkarnā accuse.
nükar, accusation.
pōlnā, come, go.
palwa, side (cf. Urdū pahlū).
pachikkā, bad, ugly.
sairnă, give.
suhwa, fine, fat.
tōma, fine fat.
thela, ornament worn round neck.
$t \operatorname{cin}^{2} \bar{a}$, give.
têlni, turban.

## Three Documents relating to the History of Ladakh: Tibetan Text, Translation and Notes.—By the late Dro Karl Marx, Moravian Missionary at Leh, Ladak.

[Read 4th December, 1901.]
Introductory remark by the Rev. Professor Gustaf Dalman, D.D., Ph.D., Leipzig, Germany.

Under the above title, in Vol. LX, of this Journal, pp. 97-135, and Vol. LXIII, pp. 94-107, translations and partly texts have been published from three manuscripts, once in the hands of the late Dr. Karl Marx. But the main part of the third docnment (called C-MS.) was still wanting. Now I am so happy to be able to put even this end of the history of Ladakh before the readers of this Journal. Mrs. Theodora A. Francke, of Leh, sister-in-law of Dr. Karl Marx, has completed the work by giving the translation of C-MS. from the point, where the history of Ladakh was left in the last publication. The whole of C-MS. is preceding this translation.*

## English translation.-By Mrs. Theodora A. Francee.

Then the Wazir on his way back left the Ladakhi boundaries. Daring winter the Ladakhi king and his ministers made the following bad plan: "We shall not keep to our former promise, according to which we are to send taxes, but we shall begin war (send soldiers)!"

[^9]Next year the Wazir quite suddenly, coming through Balldar arrived in Zangskar. Then he went through Kharnag and Shang with his soldiers and arrived at Leh before anybody knew of it.

The (old) king's son, the king Chogsprul, went through Drangtse and Wamle to Spiti ; one or two months later Ohogsprul died there.

Chogsprul's first wife's son was Jigsmed-choskyi-senge-migyurkunga-nambar-gyalwai-Lhn.

The second wife's son, who is now living at Mashro, was Stan-shrungyurgyal.

Then the Wazir sent the (old) king. Dondrub-Namgyal out of the castle, took all the treasures and riches and ordered the Leh minister Ngorub-Standzin to be proclaimed king. He also built the old kila (fort) at Skara near Leh and made the Tanadhar Magna and Janda-Sing captains. There he left altogether 250 men.

Ngorub-Standzin the Raja had to issue all orders and to send the taxes, amounting to 18,000 Rapees, without fail to the Maharaja. The Wazir himself and the other soldiers took the father-king, Bangkhapa and other noblemen, about $20-30$, along with them to fight against Baltistan.

After having fought against the Baltis he (the Wazir) took all Baltistan and returned home. He sent the father-king back to Leh together with the Ladakhi noblemen.

The noble father-king was seized by small-pox in Baltistan and half-way back he died. His body was burned (given to the fire) at Stock.

Then the Raja Ngorub-Standzin reigned for three to four years. He sent the taxes to Jammur but as he did not agree with Magna, the Tanadhar, the latter wrote, calumniating him, to the Wazir.

Therefore after four years the Wazir came again to Leh with his soldiers; he sent the Raja out of the castle and said, that the taxes had not been paid satisfactorily, and that he would punish him severely. "Now I am going to make war with Tibet, and you will have to go with me!" But when the Raja replied : "I would rather die than go!" The Wazir became very angry and imprisoned the Raja in the fort.

Noble young Sodnam, Sgolam Khan of Ohushod, the minister of Basgo and many other Ladakhi noblemen he took along with him up to Ngari-sgorsum to the war.

He (the Wazir) made the Tanadhar Miya responsible for the Government (all the orders) of Ladakh and Meta Basti Ram was sent to fight against Rutog with five hundred soldiers. Basti Ram fought against Rutog and took it.

The Wazir went off with seven thousand men through Gar. He
fought and gradually got as far as Purangs. At a place called Purangstoyo the Wazir threw np trenches. At the same time the Tibetans also arrived at Purangs. In the castle of Purangs called Dagla there were abont one handred and fifty Dogras. Against those the Tibetans fought and killed several ; some had to flee, and when the Tibetans attacked the castle, they took it.

Then the Wazir fought several times during a month and a half in a desultory way. One day, after that time, the Tibetan warriors, with their officers and all fighting men, made a desperate (not caring for death or life) attack at daybreak on the Wazir's trenches.

About noon one of the Tibetan bullets hit the Wazir's left shoulder and the Wazir fell down from his horse (on the ground). The Wazir still held a sword in his right hand. The Tibetans knowing that the Wazir had been hit (by a bullet), not minding their lives (speak of dying), attacked the Wazir's trenches. Then one of the Tibetan horsemen ran to the Wazir and meeting him, pointed his spear at (the borders of) the Wazir's heart, thrust the spear and the Wavir died.

When the sun was near setting, the Wazir's trench was destroyed. They (the Tibetans) killed as many Dogras as they could and took as many prisoners as possible. Many of the Dogras fled, firing backwards towards the Tibetans (hereto).

Then when the Tibetans had taken some men prisoners, they went back to their own camp. The next morning the Tibetans sent to Lhasa by a post all the details about the Wazir's death and how his head (and neck) had been cut off and so on.

On the following day, the Tibetans imprisoned all whom they had seized, among them the Ladakhi minister of Basgo, the young noble Sodrams, the noble Sgolamkhan of Ohushod, besides 18 men and 30 Dogra officers and men. One hundred Tibetans accompanied them on their way towards Tibet.

The Tibetan army went as far as Gar with its General to try the prisoners. After one month they went back to Tibet. One officer with 300 soldiers remained at Gar for one year.

The Dogras who had fled arrived at Leh; so did those who were in Rutog, when they heard of the. Wazir's death.

After one or two years the Ladakhis rebelled against the Dogras, summoning for war Lower and Upper Ladakh, Nubra, Bultistan and Khapulu. All these together sent about two thousand five handred soldiers. They blockaded the kila and the Ohaon (fort) at Leh. In the kila (fort) there was the Tanadhar Magna, and about 50 Dogras, and in the Chaon fort there was a Komidhan and about 300 Dogra soldiers.

The Ladakhis made their trenches surrounding the two forts.

For one month, they had only little fighting. Then there arrived a Tibetan, called Pishi, who was the head of the bowmen, together with about 100 men , to assist the Ladakhis. He took up his quarters in the Leh-castle.

After that, there arrived from Kashmir Dewan Harichand and the Wazir Ratun, together with abont 7,000 men, marching towards Ladakh.

When people at Leh heard that the Dewan and the army had reached Khalatse, they all held a council and agreed on fleeing, because Dewan Harichand had so many soldiers, cannons, etc., with him.

The king and minister and the chief of the bowmen fled in the direction of the upper Indus valley, together with one hundred men. The Ladakhi soldiers fled to their own villages.

After two days the Dewan and the Wazir arrived at Leh with their men. They destroyed all the idols that were in the castle and monastery, not leaving even a single one.

The king, the minister and the men, accompanying them, had reached Drangtse-lungs-Yogma.

The day after this, more soldiers from Tibetarrived at Lungs-yogma, together with the minister Ragasha and Zurkhang, chief of the bowmen, accompanied by 3,000 men. When they all were assembled, they digged trenches.

The Devan and the Wazir also took their men with them and going north, arrived at Dorkhug.

There the Tibetans heard a rumour (about their arrival). Then the chief of the bowmen, Zurkhang, together with one thousand soldiers, went and fought agajnst the Dogras at Dorkhug.

Daring the first battle on the plateau of Dorkhug aboat 30 Dogras were killed, and Zurkhang, the head of the bowmen, returned to Lungsyogma; then the Dewan and the soldiers also went to LungsYogma.

There were two hills on either side of the water. The Dewan and the Wazir divided their army and had their camps on these two hills. As the Tibetans had made their trenches on the platean, there was no fighting until the Tibetans came ont from behind their walls.

The Dewan and the Wazir with their men, working in tarns, dammed up the water in the valley. As the Tibetans could not remain in the middle of the water, they were obliged to come out from their trenches and flee ; so, they were conquered.

Then the Dogras seized all those Tibetans that were left and took them to Ieh.

The Tibetan minister Ragasha, and some of the army who waited, were killed by the Dogras.

The minister Zurkhang and the chief of the bowmen, called Pishi, both were also seized and taken to Leh.

The Tibetans and Dogras lived in peace (good order) without any war ever since; the annual trade going on as before according to the contract made (with the Dogras).

The Tibetan minister Zurkhang and Pishi, the head of the bowmen, then went back both being the leaders of the 'libetan army.

The Dewan Harichand re-installed all the Tibetan ministers and promised to establish again the Ladakhi king and queen with their court.

From Gangsri iu Tibet there used to be given several men as servants to the Ladakhi king which he (the king) gave into the Lands of the Dewan Harichand and the Wazir, and then went to his castle.

Not to a single nobleman the power, which he had possessed during, the old kiug's reigu, was left. But the Dewan Hurichand and the Wazir said: "Only the minister Rigdzin, who was the servant of the late $W_{\text {azir }}$ Zorawar, who died at Purangs, shall remain for ever, what he was betore: the servant of the Government!" and transmitted to him all the Giovernment work of Ladakh.

Then the Dewan and the Wazir both took the Ladakhi noblemen, among whom there were the Leh minister Ngorub Standzin, Ajo Gonpo, Lhadagtsering-stobgyes, along with them and returned to Jammu.

In Ladakh they left the minister Rigdzin and Mayna the Tanadhar, together with the soldiers in the kila fo:t.

I think, it is all true, which has been said, from the first page to this.

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Triloknäth.-By J. Ph. Vogel, Esq.<br>[Road 8th January, 1008.]

In the course of a summer-tour in the Kangra District I had the opportunity of making some notes, which may help to elucidate the connection between the Bodhisattva Avalokitegrara and the brahmanical god Çiva.

An endeavour has been made to explain the former as the Buddhist connterpart of the Hindū deity Brahme, chiefly on account of iconographical observations. 1 This connection however seems a priori highly improbable, considering the place occupied by these deities in the Pantheon of both Religions. The Bodhisattva in its origin the vague creation of monastic contemplation-in order to obtain so prominent a place in the Mahayann system, must have assumed the shape and attributes of the much-honoured and beloved Çiva, not of Brahma, himself merely the personification of an abstract conception, who by his passiveness never appealed to the popular imagination. The close relation between Avalokiteçvara and Çiva has lately been vindicated by M. A. Foucher. ${ }^{8}$ The following facts connected with the name of Triloknath will, $I$ believe, corroborate the same view.

One of the most famous tirthas of the Western Himallayas is Triloknāth, situated on the left bank of the Candrabhāga river, some thirty-two miles below the junction of its constituents, Candra and Bhäga. Though geographically belonging to Patan, which is the name of the lower part of Lāhal, the place has been included in the territory of Cambă. Its inaccessibility, no doubt, enhances greatly the merit resulting from a pilgrimage. Moorcroft ${ }^{8}$ when passing through Lāhul on his way to Bukhāra met "two half-starved Hindu fakirs: one of them had come from Chapra, the other from Ougein : both were going on a pilgrimage to Triloknäth." ${ }^{4}$

[^10]Since the construction of the Central Asian trade road the number of pilgrims mast have considerably increased. When travelling in Kullū one often meets sadhus, who after visiting the hot springs of Manikarn in the Pārbati valley, cross the Rotang-pass and wander down "the wild and willowed shore" of Bhāga and Candrabhāga in order to reach the celebrated tirtha. When I visited the place on the 17th August it happened that the annual mela was just going on. So I had a good opportunity of satisfying myself that the deity of this place is .equally honoured by the Buddkists of Lāhul, Ladākh and Basāhir as by the Hindūs of Cambā, Kallū and other parts. The variety of type and dress displayed by the numerous pilgrims would be highly interesting to the ethnologist. Though their devoutness is of at somewhat peculiar sort, manifesting itself chiefly in dancing and drinking, the question rises: Who is the devata, who attracts people so different in race and religion to his remote and inaccessible shrine?

It has already been stated by the Rev. Mr. Heyde, late of the Moravian Mission at Kyelang, that the Triloknāth of the Candrabhāga valley is no other than the Bodhisattva Avalokiteçvara.

An inspection of his image fully confirmed this statement. The position of the legs (mahäraja-lila) at once suggests a Bodhisattva, though it is noticeable that not the right but the left leg is hanging down. The six arms have the following mudras and laksanas: $\mathbf{R}$. upper abhaya, R. middle akṣamāla, R. lower vara, L. upper trigūla, L. middle (resting in lap) sarpa, L. lower mañgalakalaça. The number of arms, their position and attribates seem rather exceptional, if compared with the Nepalese miniatures, discussed so ably by M. Foucher. The absence of the padma especially would almost raise a doubt as to its identity with Avalokiteçvara. But from the same anthor it appears that the number of arms is anything. but fixed and that six-armed images of Avalokita are not unknown. ${ }^{1}$ Moreover, there is the varamudra, a main characteristic of this Bodhisativa, whilst the snake also occurs among the attributes of one of M. Foucher's miniatures (Pl. IV, 6). To remove all doubt it will only be necessary to state that the image of Triloknāth in its mukufa shows a cross-legged figure : the Dhyāni-buddha Amitābha. The image is of white marble, a material, which I did not find used anywhere else in the Kullü sub-division,
" the Hindu Trinity" and explained as " the three lords of the world." The Hindu Trinity occupies a larger place in the imagination of the West than in the religions belief of India. Sanskrit Trilokanätha of course can only mean "Lord of the three worlds."

1 Foucher, l.c., p., 97 sqq. Of. Waddell, 1.c., pp. 58 and 79 No. 12.
though miniature images of painted marble are occasionally met with in Lāhul.

It is a curious circumstance, that the abode of the Bodhisattra is a regular çikhara temple of moderate size, said to be founded by the Pāndavas! This tradition it has in common with every ancient shrine in the District. It simply indicates the antiquity of the building and the fact that its origin is unknown. Of one shrine, which is supposed to be older than the others, not the foundation, bat the restoration is attributed to the Dharmarajas and his brothers. It is that of yvālāmukhi.

As to the Triloknāth temple the sanctum is combined with a plain oblong structure, covered by a wooden sloping roof with gilt pinnacles. A similar combination is regularly found with Viş̣n temples in the Kullū valley.

In that part of Lāhul whioh is known as Patan the transition between Lāmāism and Hindūism is gradual, but this is by no means the case on the Kullū side. Here the mid-Himālayan range marks a very distinct boundary between the two religions. Any one who has crossed the Rotang-pass must have been struck by the contrast in climate, scenery and population, between the Candra and the Upper Biās valley.

It has been asserted and seems generally accepted by the Enropean inhabitants that Buddhism was once prevalent in Kullū. Captain Harcourt in his in many respects valuable book ${ }^{1}$ on the sub-division, which for some years was committed to his charge, is of the same opinion. The arguments, on which his conviction is based, are the frequent occurrence of the Buddhistical wheel on temples besides the effigies of Buddhistical animals, birds and snakes, and the ceremony of "the swinging rope." As to the first I may remark that locally the ornament referred to is mostly explained as representing the sun and moon, and shows more resemblance to a conventional padma than anything else. But even if it were meant to be the cakra it should be borne in mind, that the wheel is by no means a purely Buddhistic emblem.a As to the curious ceremony of a man sliding down a rope stretched from the top of a precipice, it is practised at Nirmand on the Satlaj. ${ }^{8}$ But this place though for political purposes included in Kullū does not belong to the valley geographically. It was witnessed, Captain Harcourt says, by one of Major Montgomerie's pandits in Potala fort outside

[^11]Lhasa, but this alone is no reason for styling it Buddhistic. At the utmost it might be called lāmaistic, and in that case we ought probably to look upon it as a part of the aboriginal worship, certainly not as an ingredient of the "thin varnish of Mahāyana Buddhism.' ${ }^{\mathbf{l}}$ For in other non-Baddhist tracts of the Himālaya the ceremony of the swinging rope appears to exist. Moorcrofts found it practised at Srinagar, the capital of Garwal.

The most plansible explanation I can offer is, that it is a survival of human sacrifices, the prevalence of which in former times in Kullū and Lāhul is indicated by popular tradition. ${ }^{8}$ But in this peculiar case the victim instead of being actually killed, had to undergo a risk that endangered his life. An offering was thus made to the deity who might decline or accept the sacrifice according to her divine pleasure. In 1856 the latter happened, i.e., the man was killed and since then the practice has been prohibited. I am given to understand, however, that the ceremony still takes place, but on such a small scale that the man's life is not imperilled. If my hypothesis be trae, it offers a curious instance of the tenacity of religious customs, which are still preserved after having entirely lost their original significance.

I have digressed on this subject, beoause during a stay of nearly two months in Kullū, I did not meet with any real traces of Buddhism, such as topes, images, inscriptions or even popular traditions. There is one exception only, which is of special interest for my present subject, vis., an image of Avalokita, known as Triloknāth, at Kalāt on the Bias.

In three places in the Kullu valley there are hot springs: at Manikarn on the Pārbatī, a tributary of the Biās, at Basisht opposite Manali and at Kalāt, halfway between this place and Katrain. In each of these spots the phenomenon has been connected with popular worship. Manikarn is the chief tirtha of Kullu, now a centre of Viṣpu bhakti, though originally as appears from the Mähatmya belonging to Çivaism. Basisht has received its name from the Resi Vasiştha, the Saint being worshipped as the guru of Rexm, who has a stone gikhara in the same place. At Kalāt there is a plain village-temple, dedicated to Kapila Mani. When Vasistha was carrying the precions water from Manikarn to the place, which was destined to bear bis name, he passed Kapila, who ceasing his tapas for a moment snatched from him a few drops and thus gave its origin to the hot spring at Kalāt.

The image of Kapila Muni is made of asfadhatu. This circumstance deserves notice, because nearly all metal imagen, which I found

1 Waddell : Lamaism, p. 80.
${ }^{2}$ Travels, I, p. 17.
${ }^{8}$ Harcourt, l.c., p. 325. Kängra Gazetteer, Part III, p. 17.
in Kullū, belong to Vişnu-worship, and for this reason, are of a com. paratively recent date, both having been introduced in the seventeenth century under patronage of the Kallū Rājás. The shrine of Kapila contained some more images of the same material: Ramcandar, Sita Caturbhuj, Rādhā and Hanūman.

But besides, there was a small image-slab, much effaced and apparently, of considerable age. It showed a six-armed figare, but its attributes were nurecognisable. Only the vara-mudra of the lower right hand was plainly visible, while in one of the left hands there was something like a staff, which might have been either a trident or a snake. The asana was exactly like that of the Avalokitas of Lahul. Moreover, there was a second figure in dhyana-mudra on the head. The püjaris bad never noticed the latter and when it was pointed out to them, they declared it to be Lakşmi! The image itself, however, they knew by the name of TriloknEth and admitted that it represented the same deity as that worshipped in Lāhul. It seems highly probable, that Avalokita was originally the main object of worship at Kalāt and was superseded by the Brahmanical Mani, who still grants him a subordinate place in his shrine. The material of the image in any case tends to show that it was not imported but belongs to the spot.

The same curious mixture of Hinduism and Lāmǎism as is found at Triloknāth in the Candrabhăga valley, is met with in Rawãlsar, the famous tirtha of Mandi, the hill-State stretching along the middle course of the Bias. Here in an absolutely Hindū country we find Padmasambhava, ${ }^{1}$ the founder of Buddhism in Tibet, worshipped not only by Lamas who have their own Gan-pa here, but equally by Brāh. maus, who call him Rsi Lomaga and even possess a Mahatmya, in which the local legend is given in its Brähmanic version. But for my present subject it is of more interest, that in Mandi Town we meet again with the name Triloknāth, but here to indicate-Çiva. The preponderance of Civaism in Mandi is the more striking, when entering the State from the Kullu side, where Vignuism, though by no means the popular worship-has been made the State-religion by its Rulers of the seventeenth century. In Mandi Çiva is worshipped under his well-known symbol, the linga, but besides the images of Çiva Pañcavaltra or Pañcāsana are remarkably numerous. It is worthy of notice, that the five faces of this deity are not placed in one row as is mostly the case with polycephalic statues but in such a way, that the fourth face is on the reverse side of the slab which is otberwise quite plain and the fifth on the top of the image-slab. Thus when seen in front only

[^12]three faces are visible. I may also note that according to a local purohita the five faces of Mahādeva indicate the five Dhyanas.

The images of Çiva Pañcavaktra without exception are ten-armed in accordance with the namber of faces. The attributes and mudras are rather divergent and not always easy to identify. The following belong to three different images in Mandi Town:-

| I | R. upper | Khadga | L. upper | trigūla |
| :---: | :---: | :---: | :---: | :---: |
|  | " 2D | sarpa | 2d | gada |
|  | " 3D | ayukga | \% 3D | ghanta or calafa |
|  | " 4 TH | vara | " 4TH | broken |
|  | 5 TH | broken | " 5Th | Çakti (viz., Pārvatī) |
| II | R upper | tricüla | L. upper | calera |
|  | " 2D | empty | " 2d | damaru |
|  | " 3d | cankha | \% 8D | vadana |
|  | 4 TH | aksamala | 4 TH | kalaça (and Çakti) |
|  | " 5TH | P | 5 TH | sarpa |
| III | R upper | tricurla | $L$ npper | damaru |
|  | " 2d | abhaya | , 2d | cakra |
|  | \% 3D | dipa ( P ) | " 3D | sarpa |
|  | " 4TH | aksamala | ", 4TH | " |
|  | 5 TH | vädana | " 5TH | kealaça (and Çakti) |

As a rule the devata is represented seated on its vähana the bull Nandi, while Pärvati's vähana the lion is standing behiud it, the head turned in the opposite direction.

It will not escape notice that the attributes of Çiva Pañcavalktra are partly the same as those of Triloknāth-Avalokiteçvara. Snake trident and vessel are common to all images. Also the rosary which may be conjectured to have occupied the fifth right hand of the first described image. Even the vara and abhayamudräs occur though not regularly. The occurrence of the rosary and vessel as attributes of Çiva considerably weakens one of the chief arguments in favour of the connection between Brahmã and Avalokita, viz., the similarity of their attributes. I have only to add that in one of the oldest temples of Mandi situated on the right bank of the Biās Çiva Pañcavaktra is worshipped under no other name than Triloknath.

Now travelling down the Biās-valley into Kāngra proper, again the name Triloknāth is met to designate a village (also called Trilokpūr) and tïrtha, about two miles east from Kotla. This shrine "is not a building, but a naturally formed cave. Water charged with mineral matter, dropping from the roof, has at the far end of the cave produced two large stalactites and stalagmites, which meeting midway now form
two pillars. The roof and floor of the rest of the building are covered with masses of stalactite and stalagmite." 1 Besides these numberless svayambhie lingas there is in the centre of the cave, as chief object of worship, a linga of white marble, which is pañcavaktya and thus forms a link between the linga and the image just described.

The substance of the present paper may be briefly stated thus: that in the Candrabhāga valley and also on the southern side of the mid-Himālayan range on the upper Biās Triloknāth is the name by which the Bodhisattva Avalokiteçvara is indicated, while along the lower course of the Biās river the same name is assigned to Çiva, represented either as a linga or as a five-faced statue, which in its attribates shows a marked resemblance to some of Avalokita's images.
${ }^{1}$ O. J. Rodgers. Revised List of Objects of Archæological interest in the Panjab (Lahore, 1891), p. 43.

Notes on two Coins of the Sunga Dynasty.-By Col. C. E. Shepherd:
[ Read 6th November, 1901.]
In Vol. XLIX, Part I of 1880 of the Journnl of the Asiatic Society of Bengal are two papers on coins of the Sanga dynasty, one by Mr. A. C. Carlleyle describing some coins of the dynasty collected by H. Rivett-Carnac, Esq., C.I.E., F.S.A., etc., and a second paper by Mr. Rivett-Carnac himself giving a further description of such coins. In neither paper, however, is mention made of Dhruva Mitra, or Rudra Gupta made as belonging to this dynasty. I send two casts showing one coin of each of these Kings.

The three symbols above the name are identical with those on the coins of Agni, Bhumi and Phaguni Mitra in the papers above alluded to so that Dhruva Mitra and Radra Gupta undoubtedly belonged to the same dynasty; the style of the coins is similar, the name and symbols of the obverse having evidently been struck with a square die and the reverse has the Buddhist much the same as that shewn in some of the coins in Plates VII and VIII of the papers above alluded to. These two coins were obtained at a village near Rāmanagar from the rained site of Ahichhatra. A more detailed description is as follows :-

## Dhrufa Mitra.

Coin of medium size, and of mixed metal having a brassy lustre with however two spots of coppery colour showing on the reverse side, as

if the metals were not thoroughly mixed. The coin has two splits, one very slight, made most likely daring process of manufacture.

Obverse.-Square depression with the three symbols in line above, and name below.
1902.] C. E. Shepherd-Notes on troo Coins of the Sunga Dynasty. 43

Reverse.-Buddhist railing with traces of uprights at each end and an upright in the centre bat what is at the top of this is undecipherable.

## Rudra Gupta.

Coin of same medinm size, also of mixed metal, but the mixture not uniform, the copper more largely predominating in one half the coin.


Obeerse.-Square depression with the three symbols in line above and name below.

Roverse.-Buddhist railing, on the left corner an upright ending in a trident, in the centre an upright rather higher than the left-haud one and having a ... near the top, on the right traces of an upriglit but too deleted to decipher.

Both these coins I believo to be rare.

# A short Notice of a Persian MS. on Gaur.-By H. Beveridar, Esq. 

[ Read 6th November, 1901.]
The attention of students of the history of Bengal is hereby drawn to a thin folio in the India Office Library, p. 1541, No. 2841 of Dr. Ethe's catalogue. It is an account of the buildings and inscriptions at Rajmahal Gaur and Panduah, and it also has a chapter containing a list of the rulers of Bengal from the days of Lakgmana Sena. It is the result of local investigations made by Shyām Prasād in November and December, 1810, when he visited Gaur, etc., in attendance on Major Francklin. The report was drawn up for Major Francklin and appears to be the source of the information given in Francklin's Journal of which good use has been made by Mrs. Ravenshaw and Mr. Grote in Ravenshaw's Gaur. Most, if not all, the inscriptions quoted in the notes to that work are to be found in Shyām Prasäd's report. The latter does not contain mach that is new about Gaur or Panduah, but as it is a very small work-only thirty-two pages of Persian, and is our earliest topography of Gaur, I beg to suggest that it should be pablished in our Society's Journal. For this parpose it would be advisable to borrow the original from the India Office. Shyām Prasād tells one story about Firtaz Shāh's Minār which is new. He says that the builder was one Pirir and that when Firuzz Shāh visited the Minār after its completion Pirir said to him that he could have made a still finer column. This enraged the King, who said: "Why didn't you then?" and had him toppled down from the summit.

In Ravenshaw's Gaur, p. 53, the inscription on the tomb of a child is given. This is also given by Shyām Prasād, and it is interesting to observe that the child must have been the son of the Tāhir Maḅammad who wrote the Rauzat-Tāhirin. Tāhir Muhammad's work shows unusual knowledge of Bengal, and this inscription helps as to anderstand how he got his information. In the list of the Kings of Bengal we find Shyām Prasād giving Qadir Sen as the original name of Sulṭān Jalāl-ud-din whom he calls the son of Käshi, or (Käsì) Rai. It may be remembered that Buchanav, who, got his information from Francklin, also gives Qadir Sen as Jaläl-ud-din's name.

The really new part of Shyām Prasād's report seems to be his first chapter which gives an account of Rājmahal. So far as I know the particulars he gives have not been recorded elsewhere, though there is an account of Rãjmahal in Buchanan.

# T'he Khojas of Eastern Turkistan.-By H. Brveridas, Esq., I.C.S., retired. 

[Read August, 1901.]
Mr. Ney Elias remarks in the preface to his account of the Khojas, published in the supplement to our Society's Journal for 1897, that Mr. R. B. Shaw appears to have used another book besides Mnhammad Sadiq's, but that he has been unable to find it. Had that excellent man been alive, he would have been pleased to learn that the missing manuscript is almost certainly in the Oxford Indian Institute. It appears to be one of two Persian MSS. which were presented to the Institute in December 1880 by General Younghasband who is a connexion of Mr. Shaw. Both of these MSS. give the genealogy of the Khojas and describe the coming of Kamālu-d-din Majnūn from Medina to Farghāna, \&c., but the one which best corresponds to the "other book" of Mr. Shaw is a well-written octavo bearing the Insti-tute-library number 294. It is called the Anisu-t-tālibin (Friend of inquirers), and appears to have been written by $\operatorname{Shäh}(?)$ Mahmūd son of Mirzā Fāzil Jarās (جراس) about 1049 A.H. It is divided into two parts, one giving the history of Ali and sundry Imāms and the other describing the Khojas. It describes Makhdūm-i-A'azim and gives his proper name as Manlān̄̄̆ Ahmad Khwājagi Kāsāní. Compare Mr. Elias' note, p. 5 of the Introduction where he says that the name Ahmad Khwäja has evidently been taken by Mr. Shaw from the " other book," for it is not mentioned by M. Șबdiq.

The other MS. is called Jāmā-al-Maqāmāt (collection of assemblies) and bears the Institute-library number 309. The anthor appears to be $\bar{b} b u \bar{u}-a l-b a q \bar{a}$, son of Khwāja Babān-d-din, and grandson of Makhdüm A'azim, and also nephew of Princess Māhim. He appears to have resided in Yärkand and to have been in the service of Haarat Khwāja Jahān. He records the death of a Yīlbārs Khan and appears to have composed his book in the beginning of 1026 A.H., though the copy was made in 1030 or 1040. The book is an elaborate biography of Makhdūm A'azim and is divided into three chapters. The first gives an account of the material and spiritual descent of the Makhdum; the second records his sayings, and the third, which is much the longest, gives an immense number of his miracles. I could not find that any of them were interesting except one relating to Båbar, and which gives the circumstances under which he composed a quatrain quoted by Abūl Fazl, and another, the last in the book, which records the reformation of an opium-eater of thirty years' standing. The author says in his
preface that anecdotes and conversations of the Makhdum had been recorded by his disciples Ḥāfiz Ibrāhīm and Mullī Qāsim Kātib, but that they had not been gathered into one place. Hence the title of his work. Apparently the author was ordered to compose his work by Maulānā Dost, a disciple of the Makhdūm. The MS. is a small, thick octavo well-written and well preserved. Both MSS. describe Kamālu-d-din Majnūn's marriage with the daughter of Sulțān Iliq Māzi of Far. ghana, the birth of Burhāual-maujidin, and his succeeding his father. in-law on the throne. Their accounts correspond with the beginning of Mr. Shaw's epitome p. 31, l.c., and they are probably the sources of M. Șādiq's book which was written in 1768. The Anisu-t-tälibin calls Sultān Iliq Māzi the graudson of Sultān Satūq Bughra Khān which is also Mr. Shaw's statement. It may interest students of Central Asian history to know that Mr. Shaw's English papers, and also his MS. of Muhammad Sadiq Käshghari (in Turki) are in the Oriental department of the British Maseum. In the same press in the Iustitate-library which contains the two MSS. above described there is a shelf full of Turki MSS. One of them is a bistory and anotber is a biography of Harrat Afāq. ${ }^{1}$ These MSS. also were presented by General Younghusband. The Shaw papers in the British Museum were presented by Mrs. Younghusband.

1 See appendix to Shaw's epitome, l.c. and Dr. Bellew's history of Käshghar, Yarkand Report, p. 176.

# A short Note on the Date of the Death of Nùr Quttb 'Aalam.-By H. Beyeridab, Esq. 

[Read 6th November, 1901.]
In a note published in the J.A.S.B. for 1892, Part I, p. 124, I stated that a book in the possession of the guardian of Nür Qutb's throne at Pandūā was said to give 7 Zi-l-qāda 818 as the date of the Saint's death. Lately I have found this date confirmed by the Mirāt-alasrār, B.M. MS. Or., 216, which on p. $479 b$ gives the date as $10 \mathrm{Zi}-1-$ qāda 818 and also gives the same chronogram " Nūr buīr shud." This is interesting for the Mirāt-al-asrār was written in 1045 A.H. ( 1635 A.D.) and the difference in the day of the month seems to show that the guardian's book and the Mirāt are independent authorities. The Mirät has a long biography of the Saint, and another of his father.

The Invention of Chess and Backgammon.-By Major H. G. Raverty.

[Received 2nd April, 1902. Read in March, 1902.]
There appears to be much uncertainty regarding the origin of the game of chess. One who has written on the subject asserts, that "The date of ite inception no one has discovered, and the question remains to this day a vezed one. Periodically something turns up to bury all former sappositions in the matter, and the day of its birth is pat back a few thousand years."

A German Professor however is said to have " discovered from the last excavations on the pyramids of Sakkara, a wall painting in which an Egyptian king, Teta, is represented playing chess with a high official." This monarch is stated to have reigned about 3,700 B.C.; while another Professor corrects this chronology, and pats it bnck some six centuries to 3,300 B.C.; so that, according to this last surmise, the game of chess is very old indeed, and must have been known in the once mysterious land of Mizraim only about 5,205 years ago. But all this is absurd.

The game of chess is mentioned in Sanskrit literature, and may be found in some stanzas oscurring in the writings of two Kash-miri authors, Batna-kara and Rad-raţa, the first of whom lived in the first half of the ninth centary A.D., and the other in the second half, and in their writings the game is called "Chaturanga, or the Four Membered (Army)."

Abū Rihān, the Berūni or Foreigner, as he is called (the "Albērū$n i$ " of Europeans-al is merely the Arabic article answering to 'the'), who wrote in the reign of Sultān Mas'ūd of Ghaznih, says it was wellknown in bis time, early in the eleventh centary A.D.- 1030 to 1038.

But the earliest mention of the game in Sanskrit writings, as far as we know, is in the first half of the seventh century A.D., in a work entitled "Harsha-karita" said to be the earliest attempt at historical romance in that language, which was translated by Professor
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E. B. Cowell of Cambridge a few years since; but chess is only referred to therein as known in Hind, not the time of its inception.

I shall now proceed to show how, when, and why it was invented.
Among the events of the year 353 H ., which commenced on the lst of August, 946, of the Christian era, just nine handred and fifty-five years ago, the death is recorded of Abü-Bikr Muhammad, known as Sūl-uß̧-Şūli, or Şūl, who was a native of a place called Ṣāli. He was a man of vast erudition, and proficient in most of the sciences and learning then cultivated, including chronology and the traditions of the prophet, Muhammad, and was the author of several works. He was moreover, the greatest chess-player then known, and was famous as such throughout the Musalmān countries. His skill and proficiency in this game, in consequence, became a proverb; and when anyone attained great skill therein, people used to say: "So-and-so is a perfect Ṣāl at chess," or "He is as proficient as Șūl before him."

On this account an idea arose among some persons, that Şūl was himself the inventor of the game; but this was totally incorrect. It was invented by the sage, Sahsih or Sihssih, or Sis as it is written by different foreign, i.e. non-Hindi, anthorities-but it is a Musalmān corruption of the parely Hindi name of Sahasi, son of Dāhir, whose family, in after years, became rulers of Sind, and which Sahasi was also known under the by-name of Laj-Lāj. He is said to have invented it for a Rai or Rājah of the torritory of Sind, named Bhalit, by some called Baghil, who was famous under the name or title of Sheram. The reason of its invention is said to have been because Ard-ghir, son of Bābak, of the Sā̀ānī̄n dynasty of Irān-Zamin, or the ancient Persian empire, had invented, long before, the game of Nard or Backgammon.

Ard-ehir Bābakān having invented it, the game was also sometimes called Nard-i-shir, after him. He devised a chequered cloth (both it and chess are still played throughout the East, on a chequered cloth, which folds up, instead of on a board, as with us) containing twelve divisions or compartments according to the twelve solar months of the Persian year and the muhrahs or connters with which Nard was played, corresponded with the number of days of the lanar month of the Fire-Worshippers or Ancient Persians; and one half of the counters were white and the other half black, because one half the month has moonlight nights, and the other half dark ones. The moves from one division or space to another he likened to the decrees of destiny, which vary and change, are turned and inverted, in the life of every human being, the fate of each one differing from that of another.

So, after this game of Nard or Backgammon had been invented,
it was received with the utmost interest and delight; and after it had become generally known, the people of Färs (Persia proper) used to make a great boast of it, and to exult over those of Siud adjoining them. On this account the ruler of Sind is said to have sent for the sage Sahsih (Sahasi) and to have commanded him to try and invent some other game, which should entirely surpass this boasted Persian game of Nard, bat to be also played like it, on a chequered cloth, and which among the wise, should be considered much more intellectual, and to require mach grenter skill, and far deeper thought, to play successfully.

But some centuries elapsel between the time of Ard-shir Båbakān, who was the first monarch of the fourth or Sāsāniān dynasty of ancient Persia, and that of Nah-shirwàn, who was the first of the fifth or Akāsirah dynasty, and in whose reign the Rai or ruler of Sind is said to have sent him a set of chess-men, and a chequered cloth to play it on, as presently to be related.

In the Sindi, as well as in the Hindi dilects, the name of this gatme is said to be derived from the Sanskrit word Ohaturan, signifying ' artful,' 'cunning,' and also 'variegated,' 'bi-coloured,' ' tesselated,' 'chequered'; which is said to refer to the several members, pieces, or component parts, a mere figure of speech referring to the elephant, the horse, the chariot, and the foot soldier, common man, or pawn. The Persians rejected the short $u$ in the word, and called it Shatrang, while the 'Arabs styled the game Shatranj. ${ }^{1}$

The statement regarding its invention, contained in a famous old book, eutitled "Nafēyis-ul-Fūnūn," or "Precious Things in Science," is as follows.

Sahsih (Sahasi), also known as Lajj-Lāj, son of Dāhir, which latter was oue of the ancient rulers of Sind (and the last of the Rais or

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kings of Sind, who fell in battle fighting against the 'Arabs, when they subdued that territory in 94 H.-712-13 A.D.-, was also called Dāhir), was the inventor of the game. Two reasons are given why it was invented. One is, and apparently the most authentic one, that among the ancient rulers of Sind, Rai Blialit, ${ }^{1}$ by some called Rai Baghil, who was very warlike, and who was never contented unless leading his troops against some one, and carrying on wars against his neighbours, at last became afflicted with some painful disorder which precluded him from sitting a horse, or on an elephant; and as he was passionately fond of military operations, and "setting squadrons on the field," he assembled together the sages, and all the most sagacious and ingenious persons of his court and of Sind, and addressed them, saying: "As you are all aware that I am afflicted with this complaint, I desire that you would devise some contrivance, whereby, without being obliged to sit on horse-back or on an elephant, I may still be able to occupy myself in (the semblance of) warfare; so that I may divert my thoughts from brooding over this disorder afflicting me, and thereby obtain some relief."

Sahsih (Sahasi), otherwise Laj-Lāj, son of Dāhir, then came forward, and häving made his obeisance, represented, saying: "I have in my possession an expedient whereby this difficulty may be solved and remedied, and the Rai obtain the alleviation he seeks." Thus saying, he arose, and having gone to his own dwelling, he soon returned, bringing along with him the game of chess complete, a cloth to play it upon, and the chess-men, all of which he had invented. The other wise men there assembled greatly applauded Sahsih for his invention, and considered that nard or backgammon was not to be compared with it; while Rai Bhalit, was so transported with delight, that he declared to Sahsih, saying: "Demand of me, O sage whatever thou mayest desire, and I will grant it unto thee."

Sahsih, thanking the king, replied : "If the Rai shall be pleased to grant what I ask for, well and good, otherwise it is as he may please to command. I merely ask that a single grain of wheat may be placed on the first square of the chess-cloth, and doubled every time on each

1 Al-Mas'ūdī who wrote the "Marūj-uz Zahab wa Ma'àdin-nl-.Jaaähir-" "Meadows of Gold and Mines of Gems"-and described the state of the countries of the east and the west, aboat $\mathbf{3 3 2 - 3 3} \mathrm{H}$. ( $945 \mathrm{~A} . D$.), in his 7 th Chapter, records, that Dab-Shalim, one of the kings of Sind, who wrote the famous book, "Kalilah and Damnah," was succeeded by another king named Bhalit, who reigned 80 years ; and other writers, including the "Gardaizi," state that, in his time, the book in question, and the game of chess and the means of playing it, were despatched to Nuh-shirwän, as mentioned farther on.
succeeding one. For example; on the first square one grain of wheat on the second two, on the third, four, and on the fourth, eight, and so on; and when the number of squares on the cloth shall have been computed after this manner, be pleased, $O$ Rai! to command that that quantity of wheat be made over to me."

When Rai Bhalit heard this, as he supposed, modest request, be exclaimed to those present in his assembly, in the most contemptoons manner: "I was desirous of bestowing upon him something of great value, and he has instead, merely asked for the most insignificant and paltry thing possible!" To this Sahsih replied: "This is the request that I desire to make, if the Rai shall be pleased to grant it, I do not desire anything more, and shall be quite satisfied with that." The Rai, who imagined he had gone out of his wits, commanded that what he had asked for should be given to him. But when the revenue officials began to make their compatation, in order to carry out the Rai's commands, they, in a great fright, despntched one of their number to his presence, who represented saying: "In the whole of our country such a quantity of wheat cannot be obtained as would be required to carry out the Rai's commands respecting Sahsih." When Rai Bhalit heard this statement, he was filled with amazement, and could not credit it; and he commanded that all the revenue officials should be summoned before him, and show how they arrived at, as he conceived, such an absurd conclusion.

When the revenue officials, with very long faces, appeared before him, he required them to show how they made out that there was such difficulty, nay impossibility, in complying with what Sahsih had asked for; and what they thought it would be ndvisable to do under the circumstances. They replied, that if the wheat produce of the whole world could be collected together, it would not come up to the quantity reqnired to carry out the Rai's command. On hearing this, Bhalit was still more amazed than before, and he felt certain that they conld not be speaking the truth; and he commanded that they should proceed to prove their statement clearly and fully. A number of arithmeticians accordingly assembled together for the parpose; and after making their calculations, declared that it was beyond the power of anyone to comply with Sahsih's request. The way in which they proceeded to prove this was, that, having placed one grain of wheat on the first square, and doubling the number each time, when they reached the sixteenth, it was proved that the quantity then amounted to 32,760 grains of wheat, which is equal to 5 sers ; ${ }^{1}$ and when the nineteenth square was reached,

[^14]a mann was required, which is equal to $\mathbf{4 0}$ sers. Going on calculating in this nanuer by the time they came to the fortieth square, the quantity required was $2,970,152$ manns, which the revenue officials computed to be the produce of one city with its dependent lands and villages, nccording to the revenne custom in those parts; and they then began to calculate by cities. For the fiftieth square it was found that the produce of 1,024 such cities would be required; for the sixtieth square, the produce of $1,048,576$ cities; and for the sixty-fourth or last square, $16,777,216$ cities! But, taking the surface of the whole earth into account, if there should be one city on every square mile even, there would not be sufficient to furnish the quantity of wheat reqnired to carry out the promise given to Suhsih, much less the cities and their lands and villages contained in the Rai's dominions. Hearing this astonishing statement, Rai Bhalit tarned his face towards Sahsih and exclaimed: " $O$ sage! thy genius and sagacity in inventing this game of chess are as nothing compared with the astonishing kind of reward which thou hast chosen for it."

As it was found thus to be impossible to comply with Sahsih's request, whether be received or accepted any other reward, the chroniclers do not say. Be this as it may, Rai Bhalit used to be constantly occupied in playing the game up to the time of his death. When this took place, there was no heir to succeed him on the throne, save his wife, who was then pregnant by him. Consequently, his widow, in concert with the chief men of the country, proceeded to administer its affairs until the period arrived for her being delivered; and she gave birth to a male child. She gave him the name-not a title here-of Shāh ; and used to devote herself to his bringing up, and to his edacation. During his childhood and early youth, she continued as before to carry on the affairs of the country; and when Shāh grew np, he, inheriting his late father's warlike spirit, began to andertake militury expeditions; and he brought the whole of his father's territories, some of which had been seized by enemies during his minority, completely nnder his sway. In whatever direction he turned his arms he nsed to be successfnl, until after some time had passed away, in one of his more distant expeditions, he was dangerously wounded in an enconnter, and died of his wounds.

There was no one about the court who could ventare to break this sad news to his mother, and nequaint her with the fate of her son, until one of the chief men, who was a proficient in the game of chess, which her late hasband, Rai Bhalit, nsed so mach to delisht in, agreed to aoquaint her. When he reached the presence of the Rāni, he found her in a state of great anxiety and despondency, and her mind mach disturbed on account of the prolonged absence of her son. Although he was well
aware of the reason, he inquired of her the canse of her affliction, and the distarbed state of her mind, waiting for an opportanity to acquaint her with her son's fate. She replied: "It is now a long time that no news has been received of $\mathrm{Sh} \overline{\mathrm{h}}$, my son, and nothing appears to be known as to the canse thereof, or what may have befallen him; and this surely is enough to make bis mother's heart sad." The great man replied, saying: "It should be known to the Ranni, that from the hardships and dangers attending distant expeditions there is no remedy, and no avoiding them, nor the anxieties, uncertainties, and reverses attendant on the exercise of sovereign power, and the couduct of military affairs." He then managed to lead the conversation to the invention of the game of chess for the amusement and diversion of the late Rai, her husband, which interested her so mach, that she requested him to go at once and bring the chess-men and the cloth to play it on, and teach her how the game was played. He did so accordingly; and he continued to teach her for some days, in such wise that she soon gained some expertness therein, while, at the same time, it diverted her mind from constantly brooding over the non-receipt of authentic tidings of her son.

She was one day engaged in playing the game with this great man, and was winning, the superiority being on her side, when all at once she called for the Shāh or King; and as her opponent's Shāh had no move left on the board or cloth, she exclaimed: "Shāh māt," which, literally, means, "Shāh is undone," "overthrown," or "destroyed." The great man, now finding the opportunity he sought, replied: "May the life of the Rāui be prolonged, but it is now some time that this very mishap occurred to Shäh, her son, as is here shown; and no one dared to break the sad news; but now it has been pronounced from her own lipe." The truth now flashed upon her, and the fate of her son she thus learnt by means of the game of chess ; and though she was greatly distressed, as may naturally be conceived, the delicate manner in which it was imparted, tended, in some measure, to alleviate her affliction and sorrow, and to enable her to resign herself to the inevitable and irrevocable.

There is, however, another account respecting the manner in which the news of her son's death was imparted to the Rãni, as I before mentioned. It is, that when Rai Bhalit fourd his end approaching, he named his only son, Gan, then a mere boy, his successor, and soon after died. On account of his youth he was then incapable of being intrusted to carry on the affairs of government, and, consequently, the chief men of the kingdom held counsel together, and deemed it advisable to coufer the government on the late Rai's brother, Gan's nocle, who was named Dambir, and made him Regent, until such time as Gau should ber capable of assuming the reins of authority.

As soon as Dambir became firmly established in possession, and affairs had assumed a settled state, he married the widow of his late brother, the mother of Gan; and she in due course of time bore him a son, who was named Talchand. Not long after Dambir also died, and the twice widowed mother of these two sons by her two hasbands, was left to administer the affairs of the country, until her eldest son should be capable of doing so, and she accordingly assamed the reins of Government. Bat as her two sons grew up, rivalry arose between them, which continued to increase, until, at last, when they had attained near unto man's estate and years of discretion, they began openly to quarrel for the possession of the sovereignty. Notwithstanding that their partizans and supporters and well-wishers endeavoured to pacify them, and bring about a reconciliation between the rivals, their efforts were of no avail, and, at last, the two brothers came to an open rupture, and hostilities ensued between them. Having mustered their followers, they come to an encounter, during which, the forces of Talchand took to flight, leaving him on the field among his adversaries. He was mounted on an elephant, and was unable to get out of the mêlée, and manfụlly stood his ground. His brother's forces had so completely surrounded him, indeed, that his elephant could not move one way or other, and his escape was entirely cut off ; and in this helpless state he died of pride and chagrin. His mother was overwhelmed with grief at his loss, and would not be comforted; and it was with great difficulty that she could be prevented from ascending the funeral pyre with the corpse of her son, Talchand.

Gau, her eldest, sent a message to his mother, in order to clear himself from the supposition that he had caused his brother to be put to death, and at the same time, besought her to abandon the idea of destroying herself; that he had had nothing to do with his brother's death, which had happened in the manner related above. Gau then directed the sages of Sind to adopt some means of demonstrating to his mother how Talchand was situated at the time of his death; and this one of them succeeded in doing by means of the game of chess, in which he had managed to interest her. He took the chess-men and chequered cloth, and showed her how the game was played. In the course of the game the Shāh Bādshāh, or Shāh, the King, on the board or cloth, became shäshdar, or anable to move, and the Foot-men, the Elephant (the Bishop of Europeans), the Horse-man (the Knight or Chevalier), and the Wazir or Queen, surrounded the Shāh Bādshāh or King, on all sides, when the players exclaimed: "Shāh māt" or "Shāh, the "King, is undone or destroyed," and having no move left, and no means of flight or retreat, he perished accordingly, and the game was won.

The wise men who were present during the playing of the game, now succeeded in showing the Rāni that this game represented the situation and positions of Gau and his brother, Talchand, on the occasion of the latter's death, after being deserted by his followers, and being left on the field completely surrounded by his opponents; that Gau himself never moved from his position in the slightest degree; but that his forces had made Talchand "shashdar" or unable to move; and that Talchand, finding himself in this position, out of his great pride, and the chagrin at the helpless state he found himself in, died, and thus became "Shāh Māt" or undone-Check-mated.

The Rāni thus became convinced as to the canse and manner of her son Talchand's death; and she was satisfied in her mind that Gan had not slain his brother. She now learnt the game, and began herself to play it; and whenever the "Shāh Mät" came about, she would melt into tears at the remembrance of her son's fate ; and Gau now became raler of the country.

It is from these words "Shāh Māt," that the words "Check Mate" are derived, showing how words in the course of ages, handed down, too, from one race of people to another, become vitiated. The word "Māt" is derived from the "Arabic mäta," he is dead"; and is used in Persian to siguify 'conquered '; 'subjected,' ' reduced to the last extremity,' etc. Both Shāh and Bādghāh mean a king or sovereign, but the former word is given as a name to a man, as well as being used as a title, but the latter very rarely so, as in the title and names of the famous Saljūly sovereign, Sultān Malik Shāh, all three words being of the same meaning; but the first is his title, and the latter his name, Malik Shāh. The word "Rukh," likewise, which Enropeans call the Rook or Castle, has various meanings, one of which is the name of the fabulons bird of the "Arabian Nights," and other eastern romances and traditions (but vitiated into " Roc "), and after which word, "Rakh," eastern lexicographers say, one of the pieces in chess was named.

It remains now to be mentioned how and in what manner the game of chess was first introduced into Irān-Zamin or the ancient Persian empire.

That part of western Hind or India lying nearest to Persia, which at present constitutes the province of Sind, and the southern part of the country of the Panj $\mathbb{A} b$ or Five Rivers, at the period in question, and for a long time after, was well peopled, and in a flourishing condition. The Mihrān of Sind, the great river known as the Great Mihrān, or Hakrā, or Wahindah, and now known as " the Lost River of the Indian Desert," or more correctly, the Dried up Hakrā, flowed through the middle of the country and fertilized it. The Sindina, or Indus of
the Greeks, was at that period but a tributary of the Mihrān or Hakrā and united with the Panj Āb or Five Rivers, giving name to the present territory so called, three days' journey below, or to the southward of Multān. Sind had at a very early period, formed part of the empire of the Persians; and in the time of the Kaianian, or third Persian dynasty, in the reign of Gushtāsif, Bahman, his grandson, and subsequent successor, led an army into Sind and Western India. He reduced Sind completely, and some portion of India adjoining it; and in the district of Sind known as Būdah, he founded a city, which he named after himself, Bahman- $\overline{\text { bād }}$ or Bahman-Nih, which the people of Sind, in their dialect, call Bahman-No, or Bahman's City-abad and nih both meaning a city in the ancient Persian. The ruins of this city of Bahman still remain; but English writers, under the erroneous idea that the name must refer to the Sanskrit word Brahman, and unacquainted with the past history of those parts, have turned it into Brahman-ābād-a parely Sanskrit name with a purely Persian termination, a wholly inpossible combination.

Bahman, known as "Dirāz Dast," or " the Long Armed," is the Longimanus of the Greek writers. He is entitled Kai Ard-shir, who married Ḥadassah or Esther, the Isrā’ili, a direct descendant of Tālūt or Saul, king of Isrā’il ; and to Bahman, the Isrä'ilis owed their delivery from captivity. ${ }^{1}$

Thus in the time of Nūh-ghirwãn, the first monarch of the fifth or Akāsirā (the plaral of Kisrā) dynasty, known as "The Just," the territory of the rulers of Sind extended into the northern Panj Ab of the present day, to the then southern boundary of the Kash-mir kingdom, which then extended over the whole of the alpine Panj $\mathbb{A} b$ and beyond; on the east it adjoined Hājpūt-ānah; northwest to the Khwājah Amarān range; and west over great part of Mukrān. The then ralers of Sind were not under the direct control of the Persians; but they acknowledged the supremacy of the Persian monarchs, and paid a small tribute in virtne thereof.

Shortly after Nūh-shirwān had reached his capital, Istakhur of Fārs or Persia proper, on his return from an expedition against the Khākān of the Tarks, an envoy reached his court from the Rai of Sind bringing presents for the Kisrā, Nūh-shirwān, including several elephants; and among other curions things, a set of chess-men, and a cloth on which to play the game. The envoy also brought a message from his sovereign, the Rai of Sind, to the effect that, if the sages of the Kisrā, Nūh-shirwān's court could discover how this game was

[^15]played, which game one of the sages of Sind had invented, he would be ready to give up his territory and his treasures to him; but, if they could not, it would be unworthy in him to acknowledge Nūh-shirwān's saperiority, or pay tribute to him in future; and it would be unjust and unbecoming in him, the Kisrā, under such circumstances, to entertain the idea of enforcing it by invading his territory ; and further, in case any of the Kisrà's wise men had invented any thing of the kind, that he would be pleased to send it to him." This message, therefore, was equivalent to a wager, that he would stake his territory and wealth against Nūh-shirwān's olaim to suzerainty over Sind and the extortion of tribute, and that the sages of Persia could not discover how the game of chess should be played; but, in this, the Rai of Sind was "Check Mated" at his own game, as will presently appear.

I must here retrace my steps for a moment, to refer to the famous Minister of Nūh-shirwān, the sage, Bazur Jamhir.

One night in the early part of his reign, Nūh-shirwān had $\Omega$ dream, which greatly disturbed him. He beheld himself seated on the throne, with a goblet of wine in his hand, and was about to quaff some of its contents when a hog, which was seated at his side unperceived, snatched the goblet out of his hand, and drank of the contents. He caused the wise men of his court to be summoned to his presence; and when they were assembled he related to them his horrid dream, and requested that they would interpret its meaning to him. All were at a loss to explain it, until after $n$ short time, one of the Mübids or Priests of the Gabrs or Fire Worshippers, brought to Nūh-shirwān's presence, a young man, a native of Marw of Khurāsān, who had lately been studying at Balkh, where was the great Atigh-Kadah or Temple of the Gabrs, who was named Abūzur Jamhir, or Būzur Jamhir, to interpret the monarch's dream, which still disturbed him greatly. The dream having been told him, he, after some consideration, explained it. He said: "In the Kisrä's haram (vul. "harem")-which contained upwatds of one handred ladies, the sisters and daughters of kings and petty rulers-there is one lady, the daughter of the Malik or king of Chāje (the ancient name of Farghānah) of Turkistān; and along with her, in the disguise of a slave girl, there is a youth, and he is on terms of intimacy with her." This interpretation amazed all present; and Nāh-shirwān commanded that investigation should at once be made, and that all the ladies and female attendants of the haram should be brought before him one by one; and the young man, the Khwājah, Būzur Jamhir, was in attendance. He detected the youth disguised as a female slave; and he, along with his paramour, was forthwith put to death.
J. 1.8

From that time forth, the favour of Nūh-ghirwān was bestowed upon the young Khwajab, whose esteem he acquired, and who rose to high rank, soon becoming his chief minister. At last, according to the chronicler, Abū-l-Fazl-i-Baihaki, who wrote about the year 450 H . (1058 A.D.), Būzar Jamhir fell into disfavour, because he abandoned the faith of Zurtusht (vul. "Zoroaster"), and became a convert to Christianity. Nūh-shirwān cast him into prison in consequence; and notwithstanding the tortures to which he was subjected by "The Just", monarch-in this instance sufficiently Unjust-to get him to recant, he would not do so. He held out, and eventually became blind, and totally so, as it was supposed, from the tortures to which he had been subjected; but others say he was blinded by Nūh-shirwān's command.

To return to the envoy from the ruler of Sind, and the game of chess. Nūh-ghirwān, and the learned men of his court, never having seen anything of the kind before, were, of course, quite unable to understand the game, and were at a loss to explain it. At this time Būzur Jamhir had been deprived of his sight, which Nūh-shirwān is said to have greatly regretted when too late; but the sage was still in confinement. He was now sent for ; and when he entered the presence of Nūh-ghirwān the latter expressed his regret for what had been done. Būzur Jamhir replied: "When a king becomes angry with a servant, it behoveth him to deprive the servant of something or other, in order that, should his sovereign subsequently relent, and show compassion towards his servant, he may be able to restore it to him again; but the blessing of sight cannot be thus restored when once destroyed." Nūh-shirwān was quite abashed at these words, and felt completely humbled; and the sage continuing, said: "But through the auspicious fortune of the king, my sovereign, a little sight still remains in his servant's eyes." Having expressed his delight at hearing these words from the mouth of the sage and returning thanks to Heaven that he was not totally blind, Nūhshirwān had the envoy from the Rai of Sind called in; and when he entered, the chess-men and the cloth were produced for Būzur Jamhir to look at, and to discover, if he could, how the game was played. Bāzur Jamhir, after examining the chess-men, said to the envoy : "Come along with me that I may play a game with thee." The envoy accompanied him accordingly; and ranging one half the chess-men on the cloth, he waited to see what Būzur Jamhir would do. He ranged his chess-men exactly after the same manner; and the Sindi envoy commencing to move, Būzur Jamhir followed him in his moves. He lost the first game, but improved on the second, which was a drawn game, and beat the Rai's envoy in the third, and checkmated him!

The sage subsequently, in the retirement of his prison, improved
upon the game of Nard or Backgammon. He did not invent it, as some have supposed; for it had been known long before, as I have already shown. But, in former times, before Būzur Jamhir improved apon it, the dice were but $t w o$, on each of which were fifteen marks or dots, which being added up made thirty, and the game was single. Būzur Jamhir added one dice more, and five other mansübahs or points, as now used; and when be had completed his improvements, a complete set was despatched to the ruler of Sind, as he had requested. What the upshot of the Rai's challenge was respecting the game of chess has not been recorded.

The names of the seven mansubahs or points in Nurd or Backgammon, as improved by the sage, Büzar Jamhir, are, 1. Kad, which means quantity. 2. Ziyäd, increase or growth. 3. Satärah, veil, curtain, star or fortune. 4. Hazāran, thousands. 5. Khānah-gir, holder or possessor of the house or compartment. 6. Tawil, long prolix, tall; and 7. Mansabah, plan, project, scheme, or game.

The Arabian prophet, Mahammad, was born in the fortieth year of the reign of the Kisrā, Nūh-shirwān; and the historian, Abū-l-Fazl-iBaihaki, previonsly quoted, who states that Bazur Jamhir had become a Christiap, says, that the sage, shortly after these events, died from the effects of the ill-treatment he had been subjected to; and that a year after his death, Nūh-shirwān himself, "departed to the Fire. Temple below," after a reign of forty-seven years, when Muḅammad was in his seventh year, 576 A.D. He died a natural death, and was never deposed, as Gibbon tells us; but his son and successor, Hurmuz, was.

The pieces in the game of chess were, at first, wooden figares having the human form ; and what is known now as the King, was then called Shāh Bādshāh, from Shāh son of Rai Bhalitt. The Castle or Tower of the present was then styled the Ruth, after that fabulous bird, as before mentioned; the Bishop of the present day, was then the Fil or Pil (f and $p$ are permutable) or Elephant, and was sometimes called the Camel ; the Knight or Chevalier was known as the Faras, or Asp, signifying a Horse; the Queen was styled Farz, or Farzin, or Farzi, or Farzān, and also Wazir or Minister; and the Pawn or Foot-soldier or Common Man, was called Pigadah as those words signify. "Shāshdār" means "Confounded," "Distressed," "Astonished," "Useless for a square," "Tied up;" and "Shāh Màt," as before mentioned, means " Shāh Bādshāh, or Shāh, the King, is reduced to the last extremity, conquered," etc.

The names used in India differ somewhat, most of them being derived from the Sanskrit langunge.
-H. G. Raverty-The Invention of Chess and Backgammon. [No. 1,
The wise and accomplished Klolifah, Al-Māmūn, son of Harūn-ar-Rashid, composed some lines on chess, which literally are as follow:-
"Upon a square of red-dressed leather,
Two friends, for generosity well-known, Re-call war to mind, and thereon stratagems invent.
Without the gailtiness of shedding blood therein,
This assaults that, and that assails this ;
And the eye of vigilance sleepeth not.
Behold the ingenions foes! how skilfully they move Between two hosts, without banner or drum."

## Bäbhan.-By Mahàmahopādhyāifa Haraprasid Shastri.

[Read 5th March, 1902.]
There are in Behar and in Benares a class of men known as Bābhans or Bhai-hārs. Their position in Hindu society is extremely anomalous. They claim to be Brähmans but no good Brähmans such as the Kanojia and Sarayūpāriyā treat them on equal terms. They would neither inter-marry with them nor eat with them. On seeing a Brāhman a bāblana makes his obeisance, saying : "Paon lagi," (I touch your foot), the Brāhman does not nod in return but prononnces a benedic. tion as he would do to an inferior caste.

The high position attained by some members of this class, such as the Mahār-ājās of Hatıa, Tikāri, Betia, and in the North-Western Provinces of Benares has raised them in the estimation of the Hindus, and some of them now claim to be Brähmans and profess to be students of Yajurveda. But the professors of other Vedas too are not rare.

The anomalous position held by these has long attracted the attention of scholars. The Pandits think that they are Mürdha-bhişiktas a class between Brāhmans and Kọatriyas. So they bow to the Brāhmans and Brāhmans pronounce benediction on them. They offer a curious problem to these engaged in the investigation of castes and occupations of Indian people.

I was struck the other day to find in the Asoka inscriptions, the term Bābhan nsed several times as a corruption of the word brāhmana in the pillar inscriptions. In one place it is used with the Ajivikas a well-known sect of ascetics in ancient India whom Kei identifies with the Bhägavatas. In another place it is used in connection with the Çramaṇas, Buddhist monks.

Now the question is, why is the Asoka corruption, i.e., Buddhist Corruption, of the word Brāhman be the proper name of a peculiar class of men who claim to be Brahmans, whose claim is not admitted by Brähmans?

In Hinda Sanskrit works we often hear of Brahmana Cramanas,
i.e., those who were Brahmans once but had became Çramanas and lost their Brāhmanhood, but still they are called Brāhmans.

From these two facts I have been led to conclude that the Bābhans were Brāhman-Buddhists who lost their caste and position in Hindu Society, but on the destruction of Buddhism are again trying, though unconsciously, to regain the old position they enjoyed 2,000 years ago.

Leaving the safe ground of philology if I am permitted to speculate a little, I believe I have got the derivation of the word Bhūmi-hāraka. After the fall of Buddhism these Bābhans misappropriated the rich monastic lands and from that fact they are called Bhumi-hārakas. The word Bhami-hārak is not a Sanskrit word. It is not to be found in any Sanskrit Dictionary. It is a Sanskritized form of the Hindi word Bhami-hāra, the misappropriator of land.

The geographical distribution of the class (Bābhan) favours the theory of their Buddhistic origin. They are to be found in western Bihar and eastern Koçala countries where Buddhism originated and lingered longest.

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Under orders of the Council the following system of transliteration will be adopted for the future in all publications of the Society. Authors of papers for the Journal, Pt. I, are particularly requested to adhere to it in their contribations.

> A. FOR THE DEVANAGARI ALPHABET, AND FOR ALL ALPHABEI'S RELATED TO IT.
जो $o$, १ो $\bar{\delta}$, रे $a i$, बो $a n$, भ่, - : h

In the above the rirāma has been omitted for the sake of clearness.
In Modern Vernaculars only; $\overline{\text { F }}$ may be represented by $r$, and $\boldsymbol{E}$ by $\mathrm{r} h$.

Avagraha is to be represented by an apostrophe, thns षो sषि sö 'pi. Visarga is represented by h, Jihvämüliyn by h, and Upadhmainiya by h.
 sign ~over the letter nasalized, thus $\mathbb{\|} \tilde{a}$, बँ $\mathfrak{\tilde { a }}$, and so on. The ulätta accent is represented by the sign' and the svarita by ". Thus, 玉ife:



## B. FOR PERSIAN (INCLUDING ARABIC WORDS IN PERSIAN) AND HINDUUSTȦNI.

(The system is not applicable to Arabic when pronounced as in Arabic speaking countries):-

Vowels. Consonants. Sounds only found in Hindūstāni.



g w (or rarely v)

- $\mathbf{h}$

Hamzah if (where necessary)"
The $J$ of the article $d$ in Arabic words should be assimilated before the solar letters; and the vowel $u$ which often precedes the article and absorbs its vowel should remain attached to the word to which it ${ }^{\text {. }}$ belongs. Thus-iقبال المولd Iqbālu-d-daulah.

Tanwin may be rendered by n-e. g., ittijaqan. Alif-i maqsūrah should be rendered by $\vec{a}$.

Final 8 need not be written in Persian and Hindūstāni words, bot should be written in Arabic words.

# JOURNAL <br> OF THE <br> ASIATIC SOCIETY OF BENGAL. 

$\rightarrow$ 기블
Part I.-HISTORY, LITERATURE, \&c.

No. 2.-1902.
Notes on the Dialect of the Kangra Valley, with Glossary of words peculiar to the Kangra District.-By the late Edward O'Brien Deputy Commisaioner of Kangra.

## Prrsonal Pronouns.

Singular.

| Nominative |  | Main, " I. " |
| :---: | :---: | :---: |
| Accusative $\}$ |  |  |
| Dative $\}$ |  | Minjo, "me, to me." |
| Agent |  | ... Main, " by me." |
| Ablativo |  | .. Minjo te, "from me.", |
| Locative | ... | $\ldots\left\{\begin{array}{l} \text { Minjo vich, "in me." } \\ \text { Minjo upar, "on me." } \end{array}\right.$ <br> Plural. |
| $\underset{\text { Agent }}{\text { Nominative }}\}$ | $\ldots$ | Assán, " we." |
| Accusative |  | ... Assán jo, " us, to us." |
| Dative $\}$ | ... | ... Assañ jo, "us, to us. |
| Ablative |  | ... Assát tea, " from us." \{*Mhárá |
| Genitive | ... | $\text { ... }\left\{\begin{array}{l} \text { Mhäre } \\ \text { Mhäri } \end{array}\right\} \text { "our, ours." }$ |
| Locative | ... | $\ldots\left\{\begin{array}{l} \text { Assán vich, "in us.", } \\ \text { Assán upar, "on us." } \end{array}\right.$ |

The second Personal Pronoun is declined as follows :-
Singular.
Nominative ... ... Tú, " thou."
$\left.\begin{array}{l}\text { Dative } \\ \text { Accusative }\end{array}\right\} \quad . . . \quad . . \quad T i j o$," thee, to thee."
Agent ... ... Tain," by thee."
Ablative ... ... Iijo tea, " from thee."
Genitive ... ... $\left\{\begin{array}{l}\text { Tera } \\ \text { Teri } \\ \text { Tere }\end{array}\right\}$ "of thee, thine."

Locative ... ... Tijo vich, " in thee."

## Plural.

Nominative ... ... Tussári, " you."
$\left.\begin{array}{l}\text { Dative } \\ \text { Accusative }\end{array}\right\}$... ... Tussán jo "you, to you."
Agent ... ... Tussán, " by you."
Ablative ... ... Tussán te, "from jou."
Genitive ... ... $\left\{\begin{array}{c}\text { Tumhárá } \\ \text { Tumhári } \\ \text { Tumháre }\end{array}\right\}$ " of you, yours."
Locative ... ... Tussán vich, "in you."
The Proximate Demonstrative Pronoun is declined as follows :Singular.

| Nominative | ... |  | $\left\{\begin{array}{l} E h, \text { " this, he." } \\ E h, \text { "this." } \end{array}\right.$ |
| :---: | :---: | :---: | :---: |
| $\underset{\text { Dative }}{\text { Accusative }}\}$ | $\cdots$ | ... | Is jo, "this, to this." |
| Agent |  |  | Ini, " by this." |
| Ablative | ... | ... | Is te, "from this." |
| Genitive | ... | ... | Is da, etc., " of this." |
| Locative | ... | Plur | ls vich, " in this." <br> al. |
| Nominative | $\ldots$ | ... | Eh, " these, they." |
| $\left.\begin{array}{l}\text { Accusative } \\ \text { Dative }\end{array}\right\}$ | ... | ... | Iná jo, "these, to these." |
| Agent | ... | ... | Ina ne, "by these." |
| Ablative |  |  | Ina tea, " from these." |
| Genitive |  |  | lna da, " of these." |
| Locative | ... | $\ldots$ | Ina vich, " in these." |

## Example.

Eh sach galánde je asá jie narásí mare.
They say this true, that the hopeful lives, the hopeless dies.Kángra Proverb.

The Interrogative Pronoun Kyá "what ?" is declined as follows :-

Plural.
Nominative ... ... Kyá, "what 9 "
$\left.\begin{array}{l}\text { Dative } \\ \text { Accusative }\end{array}\right\} \quad . . \quad$... Kajo, "for what $\rho$ "

Ablative ... ... Kes tea, "from what ?"
Locative ... ... Kes vich, "in what ?"

## Exayple.

Rátí de handhne dí kyá phal paeá.
Janghäǹ dá nír guáe Rảm.
Of wandering on foot at night what fruit did you get ?
You spoiled the splendoar (literally, light) of your legs, Oh
Ram !- Marriage Song.
The Interrogative Pronoun Kun " who 9 " is thus declined:Aingular.

| Neminative | ... | Run, "who ? " |
| :---: | :---: | :---: |
| Dative \} | ... | Kus jo, "whom, " to whom ! " |
| Accusative $\}$ | ... | Kutjo, whom, "to whom? |
| Ablative | ... | ... Rus tea," from whom?" <br> \{Kusda |
| Genitive | ... | $\ldots\left\{\begin{array}{cc} \frac{K u s}{K u s} & d i \\ K_{u s} & d e \end{array}\right\} \text { " of whom !" }$ |
| * Agent | ... | ... Kuni, " by whom !" |
|  |  | Plural. |
| Nominative | ... | Kun, " who !" |
| $\left.\begin{array}{l}\text { Dative ... } \\ \text { Accusative }\end{array}\right\}$ | ... | Kinán jo " whom" " to whom ?" |
| Accusativa | ... | Kinán tea, " from whom ? " |
|  |  | (Kinári da) |
| Genitive | ... | $\ldots\left\{\begin{array}{l} \text { Rinán di } \\ \text { Kinán de } \end{array}\right\} \text { " of whom ?" }$ |
| Agent |  | Kinaǹ, "by whom?" |
| Terá mungií | upat | leini rangí ditá. |
| By whom was (Kángra). |  | reen dapattá dyed ?-Marriage |

Remote Demonstrative Pronodn Oh " that," " she," "he," "it." Singular.

Plural.
Nominative. Oh, "he" ... Oh," they."

Agent ... Uni," by him" Unáa," by them."
Genitive ... $\left\{\begin{array}{ll}U_{s} & d a \\ \text { Us } & d i \\ \text { Us } & d s\end{array}\right\}$ "of him"... $\left\{\begin{array}{l}\text { Unán } \\ \text { Unán } \\ \text { Una } \\ \text { Unán } \\ \text { de }\end{array}\right\}$ " of them."

Correlative Pronoun Seh.
Singular.
Plural.
Nominative ..Seh "that, the same," Seh.

| Dative ... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Accusative |  | ... | ... |  |
| Agent ... | Tini... | ... | ... | $T$ |
|  |  | ... | ... | Tinán da. |
| nitive ... | $\left\{\begin{array}{l} T_{i s} d i \\ T i s d e \end{array}\right.$ |  | $\cdots$ | Tinán di. <br> Tinán de. |

Relative Pronoon Jo.

Singular.
Nominative...Jo, " who, which " ... Jo, " who, which." $\left.\begin{array}{l}\text { Dative } \\ \text { Accusative }\end{array}\right\}$ Jis jo, "to whom, to which." Jinhán and Jinháníjo. Agent ...Jini, " by whom " ...Jinhárin, " by whom." Genitive ...Jis da, "of whom" ...Jinháǹ da, of whom. Ablative ...Jis tea, " from whom." Jinhán tea, " from whom." Examples.

Seh apni máii dá baṛí laḍla he.
He is a great dariing of his mother.
Tis di junasa bari laráki he.
His wife is very quarrelsome.
Main vakíl bhi kitá. Tini dhavve máre, kichh ultar tini bhi nahin kitá.
I engaged a vakil. He consumed (my) money, (but) he did not even make any answer.
Jinhán musadián da bal, tinhán bhare perú pal.
Those who have the assistance of the officials, have their grain receptacles (perú pal) full.
Jinhán jo, Rajea, tera trán.
Those to whom, Oh Raja, is your help.
Tinhán de ghar na khán na manje bán.
To their houses is neither food nor strings for their beds.

## Pronominal Adjectives or kind.

Adehá, "such," " like this," Eindi, Aisá.
Tadehu, "such," " like that," " Wa:rá.
Jadehá, " like which," " as," ", Jaisá.
Kadehí, "like what," " Low," ", Kaisi.

## Examples.

Adehá guár koi mere dekhne vich nahìn aea.
No fool like this came within my experience (within my seeing).*
Seh sáhab kadehá he.
What is that sabib like?
Jadehá aglá thá tadeha hi he.
As the former was like that exactly is he.

> Adxiliary verb Honá, " to be."
> Present.

Singular.
Maï̀̈ hán," I am."
Tú he, "you are."
Oh he," he is.

Plural.
Assán háñ, " we are" (hu). Tussáñ háñ," you are" (hu). Seh háñ," they are " (bin),
Future.

Main hongha, "I will be. "Assán honghe, " we will be " (bhole). Tu hongha, "thou wilt be." Tussín honghe, " you will be" (bhole). Sehhongha," he will be." Seh honghe, " they will be " (bhole).

The past tha, " was," is like Hindi.
$\Delta j$ mere boṭi kamán pichhe ke rahi gae háii
To-day my ${ }_{\text {kitcheon }}^{\text {cook }}$ servants have remained behind. (Kángra).
Tussín aj kal kia pahrde háii ?
What are you reading nowadays?
Eh Rájpút halke háñ.
These are low Rájpáts.-(Rángra).
Kasorn ri wife bari khundar he.
Kasorá's daughter is very handsome.-(Gúdí of Dharamsála).
Ą̣háhún te páhile jo sahib thú so khará thú.
The sahib who was before him, he was good.
Pronominal Adverbs of direction like idhar "hither, " udhar "thither," jidhar " whither," tidhar "thither," kidhar "whither," seem to be wanting in Jándari. $\dagger$

[^16]$\dagger$ Jándar or Jhándar is the term used by the Gaddis for the country net incladed in their country, the Gadderan. [It literally means 'cotton-clothed,' i.e., the people not dressed in woollen garments like the Gaddis.]
E. O'Brien $^{\prime}$ Notes an Kángra Dialect.

Pronominal Adverb of Manner.
Proximate Demonetrative.
Iháṅ, " thus."
Correlative.
Tiháñ," so."

## Relative.

Jihañ, " as."
Interrogative.
Kihán, "how?"

Adverbs of Time.
Agáhári, "before," (Hindi ágé), also agen.
Aj, "to-day," as in Panjabi.
Kal, "to-morrow, yesterday."
Parsồn," the day before yesterday, or the day after tomorrow."
Chauth, " the fourth day past or future, counting to-day as the first day, tomorrow or yesterday as the second, \&c. Panjoth, " the fifth day."
Chioth," the sixth day."
Pachahan, " after, afterwards."
Phiri, again."
Bhiágá, " in the morning."
Bárambár, " repeatedly.
Kadi kadáá" sometimes, rarely."
Nit, "continually, always."
Pápi lok Paharie pathar jinhár de chit.
Ang maloá kadí kadáí, nain maloá nit.
The mountain people are wretches, whose hearts are stone.
They join bodies rarely, they are always joining eyes.-Song.
Hun, " now."
Adverbs or Place.
Nere, " near."
Pár, " over, across."
Uár," this side, "uár-pár.
Wál, " to, towards." Tahsildáre wál já, "go to the Tahsildár. ${ }^{\prime}$
Aresi paresi, " on both sides," " all around." (Hindi(is pás).
Páráhañ," on that side." (Hindi-Pare).
Uráhán, '" on this side." (Hirdi-Urs).
Andar, " within," and báhar, " without," are as in Hindi.
Agáhaǹ," before."
Pachähaǹ, " behind."
Taithe, Talithí," there."
Taithi Gádí saite galí baitá karí.
There with a Gadi I talked.-(Dharamsala).
Handará, " elsowhere." So apni zamíi chaddi handara na gahnde, " they abandoningtheirlaud do not go elsewhere."


Tge nombrals.

| 1, | Ik. | 11, | Giárá. | 21, | Iki. | 31, | Ikatri. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| , | Do. | 12, | Bärá. | 22, | Baí. | 32, | Batri. |
| 3 , | Tre. | 13, | Tehrá. | 23, | Trei. | 39, | Tet |
| 4, | Chaur. | 14, | Chaudá. | 24, | Chauli. | 34, | Cha |
| 5 , | Panj. | 15, | Pandrá. | 25, | Panji. | 35, | Panjatri. |
| 6, | Ohhia. | 16, | Solrá. | 26, | Chhabi. | 36, | Chhiatri. |
| 7 | Sat. | 17, | Satáró. | 27, | Satai. | 37, | Satatri. |
| , | Ath. | 18, | Athárá. | 28, | Athai. | 38, | Atthatri |
| , | Nau. | 19, | $U_{\text {U }} \mathbf{i}$. | 29, | Tnathi. | 39, | Ontáli. |
| 10, | Das. | 20, | Bih. | 30, | Trihi. | 40, | Cháli. |

SONGS.
Songs sung by women at weddings of Brahmans, Rajpúts and Khatrí in Kangra-

We have spread black blankets jí,
The opposite party in marriage (Kuram) have spread carpets jí ;

Come you and sit ciown in the courtsard.
[ Note.-In marriage parties the bride's family are "kurame" to the bridegroom's party and the bridegroom's party are "kurams" to the bride's. There is no English word which expresses the relationship.]

Ki tussán mangde țukrá, Muchrá ki tussán síri de bhukhe the.
Assầr naangde kuṛame diá ḍáriú,
Lei chubáre baithe the.
Question.-What morsel do you want?
A piece, or are you hungry for the whole?
Answer.-We want the wife of the Kuram, They took her and were sitting in the upper stores.

Generosity.
Máli Sáli sakke bhai,
Thikria rí dál banáí;
Chalande gidar tíre lae.
Sáli balandá bhujji kháni;
Málí balandá kání lissé há;
Káni jo pujání.
Máli and Sáli were two own brothers,
'They cooked a dish of dál;
They shot a running jackal with an arrow.
Säli says "Let's eat it fried ;"
Mali says "The one-eyed woman is ill ;
"Let's take it to the one-eyed woman."
Song on Rája Sansár Chand, Katoch Rajpát of Kángra, marry-
ing a pretty Gaddi woman whom he saw herding her cows.-(Dharamsála) -
Gaddí cháre bakriáń,
Gaddin cháre gàe;
Gharrí bhaje saprián,
Binná khädhe gáe.
Her jawan ruia,
Rája Gaddin biähe.

The Gaddí was grazing his goats;
The Gaddí woman was grazing her cows ;
Her gharra was broken on the rocks,
The cows ate the pad (worn between the head and the jar on it).
Seeing her young face,
The Raja married the Gaddin.
Jhándae: Sona.

1. He.-Pussi, pussi,

Kajo russi,
Láhúla giá manáná;
Chal pussi bhat khána.
She.-Jáná juráná, Main nahin anda
2. Púni nahin mukdi:

Tand nahin trutdi;
Sas nahín akhdi
Jo pánie jo jáná.
The ball of wool never comes to an end.
The thread never breaks;
My mother-in-law never says
" Go for water."

Sainu Malis Song.

Gaddí song-
(1). Súhi, súhi pagri ra lání,
(2). Máliá Sáhnuá bo!
(3). Manhú balale je lilárí,
(4). Bati iri jhinjan mangání,
(j). Málía Sahnúá bo!
(6). Piṭi terí katerú lhalrú ?
(7). Láliá Tundiá bo !
(8). Pete kase-rú halarú ?
(9). Sálía Tundiú bo!
(10). Pete máli.ra halarú.
(11). Sáliá Tundiá bo !
(12). Kugti-rá teká na lená,
(13). Máliá Sáhnúá bo!
(14). Kálí, kálá, daglí na láná,
(15). Máliá Sahnúá bo!
(16). Manhú balale je há Tekadár,
(17). Máliá Sahnúá bo!
(1). A red, red pagri do not put on,
(2). Oh Málí Sáhnú!
(3). People will say you are a dyer ;
(4). Bring rice of Bhatí.
(5). Oh Málí Sáhnú !
(6). Oh, what is the skin on your back (full) ?
(7). Oh Lálá 'Juncí!
(8). In your womb whose child is there?
(9). Oh Sáli Tundi!
(10). In your womb is Máli's child,
(11). Oh Sálí Tundí.
(12). Do not take the farm of Kugti,
(13). Oh Málí Sáhnú !
(14). A black, black coat do not put on,
(15). Oh Málí Sáhnú!
(16). People will say he is a farmer,
(17). Oh Málí Sáhnú!
(Note.-(2), "Máli Sáhnú," (7), " Lálá Tundiá," (9) "Sáli Tundí." Máli, Lála and Salí are the names of the persons. Sáhnú and Tundi are the names of their castes.
(3), "Balale" is the 3rd person plural, future tense, from balna, " to say."
Het, s. f., remembrance, memory. "Abe het ai minjo," no remembrance came to me.

## Tae wontng of Sambhúá

1. Sambhiií mérá múríyá dá nát!
2. Sambhúúa dherá ( ${ }^{2}$ ) hai lái. ( ${ }^{1}$ )
3. Dherá hoi lái bo merí ján!
4. Sambhúá dherá hoi láí.
5. Kanalka $\left(^{3}\right)$ ri roṭi, ghiú, dál,
6. Sambhúá khái liari já,
7. Khai karíjá bo meri ján!
8. Dohar dindi ( ${ }^{4}$ ) bachhái,
9. Sambhría soi kari ( ${ }^{1}$ ) já,
10. Soi leari já merijùn!
11. Sambhúá soi karijả,
12. Kálá jíná ( ${ }^{(5)}$, dorá ${ }^{(6)}$ hachhi ( ${ }^{7}$ ), choli $\left({ }^{8}\right)$
13. Ammá meri! Sambhriááyá bo.
14. Oh S'ambhú, my first dancer!
15. Oh Sambhú ! be slow (i.e., stay here).
16. Be slow, my life !
17. Oh Sambhú be slow.
18. Eread of wheat, ghi and dál,
19. Oh Sambhu! eat before you go : (literally " having eaten go.")
20. Eat before you go, my life!
21. I am spreading a shawl.
22. Oh Sambhú, sleep before you go : (literally " having slept go.")
23. Sleep before you go, my life!
24. Oh Sambhú ! sleep before you go,
25. (With) a black like girdle (and) a white frock,
26. Oh mother ! my Sambhú lus come.

Noles.- (1). "Hoi lai," " klıai kari," and " soi kari" are the conjunctive participles from the verbs "hona," "khána" and "soná" respectively. In Hindi these forms would be "ho karke," "kha karke" and " so karke."
(3). "Dhera" is the Hindi and Panjabi "dhirit", "s slow," whence comes " dhiraj," "slowness," " dhirtai," "patience" and other derivatives.
${ }^{(3}$ ). "Kanaka." I'he short $a$ at the end of "kanak" is added to nouns ending in a consonant to prepare them for receiving the case affix rá.
(4). "Dindi" is the present participle feminine, from " dinda," " to give."
${ }^{\circ}$ ). "Jina" is the pronominal adjective of similarity and corresponds to " jaisa" in Hindi.
( ${ }^{6}$. "Pora"" is the cord of black wool the Gaddí winds round his waist. Gaddi women also wear it, and the "dora" is used as a binder by women after child-birth.
(7). "Hachhi" is the feminine of the adjective "hachbé," 'white."
${ }^{(8)}$. "Choli" is the capacions woollen frock worn by Gaddi men and women. It is secured round the waist liy the "dorá." The " cholí" comes down to the knees on men and to the ankles on women. The " dora" round the waist makes a large body in the "cholá" above the waist. The body is called the "khokh," and forms a receptacle for very iniscellaneous articles, such as a number of newly born lambs, bread, and wool for spinning.

The Gaddi girl's choice or a hosband.

1. Tá búḍhrú jo na dení, chachúä, dení, chachúí.
2. Sojre chúnde rand bholi ho.
3. Tâ chákarâ jo na dení, chachúá, deni, chachúá.
4. Hak pándéuṭhijársde ho.
5. Tá dír-desi jo na dení, chachíá, dení, chachíá.
6. Gorí chugánde jo deni ho.
7. Tả rojí jo na dení, chachúá, deni, chachúá.
8. Sajre chúnde rand gahlí ho.
9. Bhede charànde jo deni, chachúá, dení, chachuiá.
10. Khokh bhare lelá más ho.
11. Bhedá de puhála nú jo deni, chachúá, dení, chachúá.
12. Pithi jo delá cholú ho.
13. To an ond man do notgive me, father, do not give me, father.
14. I shall be a widow while my hair is (still) freshly done.
15. 'To a servant do not give me, father, do not give me, father.
16. A call comes-He gets up and goes (and leaves me).
17. To one who lives far away do not give me father, do not give me, father.
18. To one who grazes a herd of cattle give me.
19. To a sick man do not give me, father, do not give me, father.
20. I shall become a widow while my hair is (still) freshly done.
21. To a herder of sheep give me, father, give me, father.
22. He will bring me his pocket full of meat.
23. To a tender of sheep give me, father, give me, father.
24. He will give me a frock for my back.

Notes.-In translating this song all the "tás"andall the "hos" should be omitted. They are without meaniug.
"Jo " in the first, third, fifth, sixth, seventh, ninth, eleventh, and twelfth lines is the sign of the dative case.
"Chách" in Gádí and "cháchú" in the valleys of Kángra is a common word " father."

The meaning of the second and eighth lines is-"If you marry me to an old or a sick man I shall be a widow before my hair, which was done for my wedding, is ruffled," i.e., I shall be a widow before my wedding dress is worn out.
"Bholi" in the second line is the feminine third person singular future, from " bhona," "to be."
"Gorú" in the sixth line means a herd of horned cattle.
" Khokh " in the tenth line is the body of a Gaddi's frock which is made into a pocket by the frock being tightly bound at the waist with a woollen rope called "dorá," which passes several times round the waist. ?'he "khokh" is used to carry miscellaneous articles. The wearer's dinner may be seen in it or even half a dozen new-born lambs or kids.
" Gáhli" in the eighth line is the feminine third person siugular future, from " gahna,"," to go," " to become."
"Lela" in the tenth line is third person singular future, from " lena," " to bring."
"Dela" in the twelfth line is third person singular future, from " dena," " to give."
"Cholí" is the woollen frock worn by both Gaddi men and women. It is made very capacious and loose, secured round the waist with a black woollen cord called " dora." The " cholú "comes half down the thigh on men and to the ankles on women.

## Ter Song of Raja Gopi Cand.

1. Chanan chauki bo rúpijhariyán Rájá Gopi Chand nahíe.
2. T'á amar bholá bo agh, á chündí bargá, thendi búnd kathoni áe.
3. Tá chhaje bo baithí matá Nain Bantí nain bhari, bharí roe.
4. Tả phiri uparhún delhe Rájá Gopi Chand, tá mátá Náin Banti roe.
5. Ta kúni hi dití, mátá, tijo galián? K'úní bole mande bol,
6. Táa nahín bo dití, beṭá, minjo galiáń, na bole mande bol.
7. Tả kúni bo herú, mátú, mande nain? Us de nainán kadhán.
8. Tá na bo herú minjo, betá, mande nain, na koi galiän de.
9. Tá jaisi káyá, betá, terari taisi báwal tere.
10. Tá jal bal matián ho giaṇ húi bhasamán ḍherí.
11. Tá sikh deñ, mátá, meri páie umar káyá.
12. Tá jog dhiáyá Ráje Bharthari, pái umar káyá.
13. Tả jog bo dhiáná mo, mátá, meri páni umar káyá.
14. Tâ jog bo dhiàyá Ráje Gopi Chande pái umar káyú.
15. On a seat of sandal wood, with silver ewers, Rája Gopi Chand was bathing.
16. "The heaven is clear like silver, whence do the cold drops come?"
17. Sitting in the balcony his mother, Nain Banti, was weeping bitterly.
18. Then again Raja Gopi Chand looked up. His mother Nain Banti was weeping.
19. He.-" Who gave, mother, to you abuse? Who spoke evil words?"
20. She.-"Neither was given, son, to me abuse : nor were spoken evil words."
21. •He. -"Then who looked (at you), mother, with evil eyes ? His eyes I will tear out."
22. She.-"No one looked at me, son, with evil eyes, nor gave me abuse.
23. ("It was thinking that) as your body is, so was your father's."
24. "He was burned and became clay. He became a heap of ashes."
25. He.-" Then give me advice, mother, make my body immortal.
26. She.-"Raja Bharthari became an ascetic. He made his body immortal. "
27. He, -I should become an ascetic, mother. I should make my body immortal.
28. So Raja Gopi Chand became an ascetic. He made his body immortal.

A Sona.

1. Nahlá dí tán , laṭi Lubáno jo chhalí, chhali puchhdí.
2. Tá dublá tún kit gúne hoiá ho.
(A Jatí of the ralley chaffing, chaffing, a Lubana asks).
She.-For what reason have you become lean?
3. Tá ek tán bo ṭútư, bo gorie, Jamúáa dá \%âlai ho.
4. Tán dúje bo tán títí balri prit ho.

He- First, oh fair one, the Jammu revenue is deficient (i.e., I cannot pay the revenue).

Secondly, the love of a girl is broken off (i.e., I have been jilted).
5. Tán d̛hedu bálú deni hán Lubáníán.
6. Bharí dení hán Jammúán de hále ho.
7. Tán navví, navvi láni hàn prit ho.

She.-Then you must sell your ear-rings and nose-ring, Lubána.
You must pay in fall the Jamma revenue.
Then you must get a new, new love.
8. Tá pahile bo tán hále bo Lubányán ḍhedú bálú deni hãn.
9. Düje hále math di janjîri ho.

She.-Then at the first instalment, Lubana, you must sell you ear-rings and nose-ring. And at the second instalment the forehead chain.
10. Táa ammá bajhúñ rahni hán, Lubánúán.
11. Bápú bájhuin rahni hán.
12. . Tüdh bájhiù dhün bo madhüni ho.

She.-Then you must remaiu without mother, Lubaná, You must remain without father. Without thee I am silent (i.e., sad).

A Sona.
Uchí, uchí marthiá merá srí ṭákar scndá;
Rádhá báï jhulándí hán.

Krishna.-Tá tú kajo ruṭhi ruthi merí Rukmani Rádhá; Tudh bin nindr na aundí hán,
Râdhá.-Tả daránián mochrú, jithúnián mochrú, Mú gori mochrú nahi hán.
Krishna - Tá tú mat ruthiñ, ruthin mori Rukmani Radhá; Rádhá jo mochrí le dena háñ.
On a high, ligh eminence my Lord God is sleeping ;
Rádhá is fanning a breeze.
Krishna. - Why are you pouting, pouting, my Rukmani Rádhá?
Withont you sleep does not come.
Rádhá.-My younger sisters.in.law (have) shoes, my elder sisters-in-law (have) shoes;
I fair-complexioned (have) no shoes;
(To me fair is no shoe, literally).
Krishna.-Do not pout, pout, my Rukmaní Rádbá!
To Rádhá I will give shoes.
(Literally-To Rádhá shoes are to give).
A Ditty.
Khasam marie
... ... If a husband die. Dal bal karie. Khind $\ddagger u \neq$...
... ... If a blanket is torn,
Tali paie... ... ... Put on a patch, Ambar țuţ...

Kiá siní..
Yár mare
Kiá jiná...

Glossary of Words peculiar to the Kangra District.
Aj (aj), to day.
Akhoka, adj., of this year, akho, as in " akboki chhalí parok, chbalí thaun kharí hin," " this year's maize is (lit., are) better than last year's."

Alá, a bird's nest. "Kas pakhrue da álá hai ?" (Of what bird is that the nest?)

ヘlhía = Amultás. (Lambagráon).
Ambar, sky.
Amri, bâráni land, cf. otar.
Andarwar, the court-yard of one or more houses. (Saloh).
Ang, relationship. (Shahpur). "Tabsíldáre kane tis dá ang hai," (he is related to the Tahsildár).

Angujha, " not hidden," " known." (Saloh).
Ankhiá, trouble: "Mitr dusman ankhiá de waqat pachháne," (Friend and enemy are distinguished at the time of difficulty). (Kangra).

Apan, but.
Ate, and.
Aunda, drain, a small drain cut across a field to drain it (= chalra).

Awán, áwáná, the court-yard of a house. (Hamirpur).
Bachálná, destroy, injure. (Kangra).
Baḍhna, to cut = Vadhna. (Bandla).
Bagar, a kind of grass, used for fodder and for ropes, Andropagon involutus and Ercophorum cornosum (Stewart); cf. gáo-dhan málá.

Bagur, s. f., air, wind. (Kutlehar).
Bahri, year.
G. Báhú, fore-quarter of a sheep. (Dharmsala).

Baii, a covered spring. "At the bái is the camp of Harjála." Also a woman's nipple.
(Garli song).

Baj, ploughed land. (Kaloha).
Bajhi, " except."
Bajog, loss.
Bajrothi, hard, strong, used of hard, round stones in a riverbed as opposed to the soft sandstone of the cliffs; cf. kasaral. (Baragráon).

Bakhán, ease, comfort.
Balad, in the south of the District, i. e., in Hamirpur and Dera, "balad" is used for bullock. In Palampar, Kangra, and Núrpar dand is used.

Balna, tell, speak.
Banj, excommunication. "Tujjo banj pá dita" (I have excommunicated you).

Banná (=Samaln) Vitex negundo, Stewart, 166.
Baran, sabst. masc. or verb, rain or to rain.
Baruṭhi, the court-yard of a house=dalán, cf. áwán. (Hamirpur)
Barsará (spelt barsalá), rainy season.
Bása, a hamlet when high up on a hill.
Basah, trust.
Básand, ploughed land=taraddadi. (Garli).
Basdi, a hamlet. (Kutlehar).
Basinda, a hamlet.
Basúnti, Adhatoda Vasica, Stewart, 164.
Bat, a road.
Bat, s. f. egg.
G. Bát, wind, as in " bap̧a bât jalura" ('a great wind is blowing ')

Bat, upper millstone. Thali, under millstone. (Bhaw arna.
Batra, $1 \frac{1}{2}$ times, of interest. (Kutlehar).
Batti, a measure = two sérs pakka.
Baura, sown.
Behand, capable of cultivation (cf. behan).
Beis (=bido,) a willow. Stewart, 206-8.
Bekanu, a: wether.
Bera, a cluster of houses, a hamlet. (Dhatwal).
Beţari, wife.
Bhájná, be broken, as in " haḍ bhaji-go," (the bone was broken)
Bhakrari, a raallet for crushing olods.

Bhalel, fibre made from the bark of the dhaman tree. (Baragraon).
Bhangan, the name of a fish: (Bhadpar), Bias.
Bhuṇná, break.
Bhanor, see darohlá.
G. Bharakh, s. f. hunger.

Bharauta, a clod-crusher. (Nadaunti).
Bhedu, a sheep generally, also a ram.
Bher, an ewe.
Bheṭh, a precipice. (Alampur).
"Bhitán dei dea," shat the door (lit., the planks, used here as a door).

Bhakrán, a clod-crusher. (Dera).
G. Biár," wind, as in " bari biár jaluri" (a great wind is blowing).

Bido, see beis.
Bij, lightning when it strikes (it is said), while bijli=the flash.
Bilangan, a clothes' horse, a stick suspended by two ropes from the eaves of a house.

Bir, a ridge between fields. (Daro).
Birla, broad.
Biul, see dhaman.
Boglú, a Gaddi's purse of untanned skin.
Bohar, the upper storey in an agriculturist's house. (Sujanpur).
Báhla, adj., low, depressed. (Nagrota).
G. Bujazá, tinder.

Bun, adv., below, as in "bun gích top" (go down and search).
Chach, father.
Chakona, square.
Chalea = aunda, qu. vide. (Malán).
Chamal, the plant which children call "Jack-in-the-box" (Garli).

Chamba, Michelia campaca, Stewart, 5.
Chamrá, skin (of cattle).
Chámrí, skin (of a man),
Chatrati, mahser, cf. kakiaru. (Dera and Sujanpuri.
Chbaln, a lamb.
Chharola, a stile.

Chhiri, wood.
Chhopa, vaccination.
Chhú, the six-sided cactas.
Chhú-nali, water-cress.
Chhubba, the rope with which a load of grass is tied.
Chhumb, a stack of maize. (Kutlehar).
Chirindi, ? maple.
Chírna, to split.
Choi, a stream, a torrent.
Chorna, to strip, to skin.
Choü, a stream, -" Is jiminiá ki tre choü lagde, tap nau hans;"
(to this land three streams are attached, thare are nine months for the water ). (Kangra).

Chunchal, a sort of blackbird with a blue tinted plumage in the sin.

Chura, .parched rice.
G. Cluriáti, hind quarter of a sheep. (Dharmsala).

Dah, courtship, as in " meri dah karni" (make love to me)
Dadhuní, hive.
Dagúlá, grape-vine, and Dhuṛa, grape.
Dand, tooth.
Danga, a stone wall.
Dangu, a scorpion.
Darohla, the multicomb, domesticated tree-bee ; cf. bhanor, the unicomb, wild tree-bee.

Dera, crooked, as " ḍeri lakri" (a crouked stick).
Dháman = Bíul (Gervia oppositifolia, Stewart, 27).
Dhak-dlaak, little by little.
Dharírná; to drag.
Dherá, sun.
Dhera, day (=dhiara).
Dhingará, Hiud. arhar, a kind of pulse, Cajanus Indicus. (Rámgarb)

Dhiotra, a daughter's son.
Dhirna, to drag. (Chaumukha).
Dhí, a tree with large leaves; bears a fruit. Artocarpus integrifoliu. (Lodhwan).

Dhin, daughter.
Dhor, bullock.
Dhura, vide Dagula.
G. Díná, to cross (a pass, river, etc).

Dolna, to tremble.
Dond, a wood-pigeon.
Dote, to-morrow.
Dudhar, a hut in the cultivated land for the parpose of being near the fields.

Etki, this time, now.
Ga, cow.
Gabe, between.
Gadi, a sheaf of rice. (Saloh).
G. Gahna, to go.

Galána, to speak.
Gáo-dhan málá, a rope of bagar grass and mangó leaves suspended across the path to a cowshed to avert cattle-disease. (Baragraon).

Gappí, chatterer, flatterer, as in " Katochári di parol, Ghálakári jo ata, Gappiári jo Chole (i. e. cháwal "), (at the doorway ofa Katoch helpers get flour, flatterers get rice).-Proverb.

Gar, fort.
Garaka, a clap of thunder.
Garju, thander.
Garna, Carissa diffusa, Stewart, 42, very like karaunda, which is Oarissa carandas.
G. Gaülá, langur.

Ghálak, helper.
Ghálná, to help.
Ghálki, help.
G. Gharangar, saddle of a sheep. (Dharmsala).

Ghirini, the bird which makes bottle-shaped nests. (Saloh).
Gharn, a precipice.
Gháará, a stack of rice-straw. Kángra.
Gid, the name of a fish, (Bhádpur), Biás.
Giḍli, name of a fish. (Dera and Sujánpur).
God, an eel-like fish, Mestacemblus armatus. (Dera and Sajan. pur).

Gobrí, son.
Gora, white, fair (of people).
Gorí, a herd of cattle, as in " tere goru kate tahar hin $P$ " (how many head are there in your herd ?)

Gotar, tribe (restricted to the descendants of one ancestor).
Gré, town.
Gulu, a cob of maize from which the grain has been picked.
Guĺ, a cob of maize with the grains on. (Lodhwan),
Gurlu, the sweet viscous matter deposited by insects on the leaves and flowers of the mango in spring. (Rajhún).
G. Hachhá, white (of things and animals).

Hákhar, eye.
Hákhí, a glance.
"Duhí janie di hákhi lagi," (the glance of two lovers met) (Garli song).

Hanḍ, ploughing t’oe standing orop of rice " Hand Har mahine hunghe" (the rice will be ploughed in Har), cf. ur.

Hath, hand.
Hath-lopa, groping - karná, to grope. (Kángra).
Hatiárá, a wretch, a murderer.
Hera, shikar.
Hi, yesterday, as in " Hí aun kachari jo na go," (yesterday 1 to katcherry did not go).

Hián, snow.
Hiúnd, Hiúnda, winter, as " akhoke hiúndá mavj tusso apní babrá bakrí kaṭhi charni hin?" (where will you graze your sheep and goats this winter ?) (Dharmsala).

Hiúṇwat, snow-blindness.
Iji, mother.
It, a brick.
G. Jabara, an old man.

Jalára and pallá, names of blights.
Jálá, when.
Janglá, yoke. (Bhawarna).
Jání-mání, Nolens volens.
Japhlota, croton tree, Jatropha curcas (Stewart's Panjab Plants, page 196). (Kángra).

Jar, fever, as in " jar khit ichhurá ba" (fever and ague have come).
G. Jeli, hard.

Jhauntú, axe.
Jhoţá, a male buffalo.
Jhumb=a stack of Indian corn. (Lambagrán). cf. chhumb.
Jilha, dumb. (Kángra).
Junás, a wife. (Hamírpur).
Ká, crow, pl. ká (apparently, " mate ká hin") (there are many crows).

Kahla, quarrel.
Kajo, why ? (Garli).
Kak, uncle, -i, aunt (i.e., father's younger brother or his wife $=$ patría).

Kakiáru, mahser (=chatráti.) (Dera and Sujanpur).
Kakri, cucumber.
Kalbelan, the time between sunset and dark, evening.
Kána!, Rottlera tinctoria, Stewart, 197. The red powder which forms on the capsules is called kamila and is used for dye, worms and itch.

Kan, ear.
G. Kandá, a flock, (Dharmsála) as in "tassere kande manj ketari babrá bakri hin ?" (how many sheep aud goats are there in your flock) ?

Kanḍá, a thorn.
Kandi, water beetle.
Kandáála, a hedgehog. (Baragrán).
Kaniár, (Kotla-Nírpur) = Amaltás, Stewart, 62.
Kanonian, parched Indian corn.
Kaphí, tinder (=bujazú).
Karal=Kachuar. (Kángra).
Karaṛá, hard.
Karkará, iris, with broad leaves and purple blaish flowers (Triund, Dharmsála).

Kas, a stack of rice, square or oblong (Saloh); cf. kunu. (Saloh).

Kusákra, a crab. (Deblu in Mandi).

Kasar, swarm.
Kasaral, soft, used of the soft sandstone which is rapidly worn into tracks by the fcet of men or cattle (Baragraion); cf. kasari, and bajroţhi.

Kasari, sick. (Baragraon).
Kasmal, Berberis aristata. Rasot is made of the root of the kasmal.

Kaur, a weed with a yellow flower (Lodhwan), observed in fields, generally in February and March.

Kawar-gandal, a plant of the aloe kind, ? Aloe perfoliata, Stewart, 232.

Kendu, Deospyros montana, right bank of Bias.
G. Khaḍa, call.

Khádú, a ram.
Khakhiar, the name of a fish, in Urdu Mabaser. (Bhadpur cn Biás).

Khaktú, a chip, splinter.
Khaláh, locust.
Khal-dara, resin of the chil (Pinus longifolia), Darini.
Khalri, skin (of a sheep or goat).
G. Khandá, a flock.

Khara, good.
G. Kharall, hair.

Kharat, loss.
Khárí, basket.
Kharera, foot and month disease ; (also called bara-rog).
Khatta, sour.
Khauhrá, father-in-law.
G. Kheflá, a porcupine ( $=$ sehli).

Khili, land fallen out of cultivation.
Kbil-sal, rent for uncultivated land.
Khila, cold.
Khikharna, to teach.
G. Khokha, the receptacle above the dora.

Khuchna, to have sexaal intercourse with.
Khuchina, pass, verb, from foreguing.
Khuka, dry.

Khukh, puff-ball, Stewart, 268.
Khunni, name of a fish. (Biás).
Ki and jo, dative affixes, as in "Debi Chand bere kí chalia," (Devi Chand went to shoot).

Kichh, something=kachh.
Kíra, snake.
Kiu, common bean. (Lodhwan).
Kochbi, or kochpi (Dadh), a large landing net. (Kángra).
G. Kod, a fair.

Kokrá, blue rock pigeon (Mundhi) ; (vide parara).
Koţhlá, a clod-crusher. (Kángra).
Kuále, kuál, slope. (Bangar).
Kukrele-da-thá, a stack of maize stalks. (Saloh).
Kakriála, maize-stalks without the cobs. (Lanj).
Knli, girl.
Konu, a stack of rice, round with a peaked top, cf. kas (Saloh).

Kondh, a large stack of wheat.
Kundla, a stack of grass.
Kupah, cotton.
Kurká, name of a fish. (Dera and Sujánpur).
Katăr, dog.
Kuţ-phát, land cultivated after an interval of 2 or 3 years (Lanj).

Láhá, s. m., a landslíp.
Lahar, land in which rice is not grown.
Lahr, a ram used for breeding.
Laira, Sawan.
Lak, waist, "Mera lak dole " (my waist swings,")
Lạ́ná, fine or smooth, as "píthá láná há" (the flour is fine).
Te, thistle. (Lodhwan).
Lindak, tail of cattle only. (Baragraon).
G. Linguṇí, a sheep's tail (cf. lingtí, in Kuluhi).
G. Lodhá, blood, of an animal.

Lo, light, as in " lo kar," (make a light).
Loda, inoculation.

Lunj, wages for picking cotton. (Tira in Kutlehar).
Lurná, fall.
Mahe, buffalo.
Macb, a kind of toothless rake, made with a curved blade and a handle, for levelling muddy land.

Makhar, a swarm of bees.
Makhir, honey.
Maná, flying fox. (Sujanpur Tíra), =manchán. (Kotla).
Máran, Dlmus campestris. Stewart, 210. (Nagar in Kula).
Masarín, potentilla. (Triund, Dharmsála).
Matá, too much, excess.
Megh, rain.
G. Molná, to meet, to be joined, to be procured, as in " minjo

Núrpur manj ik dhár mola há," (I have got a range in Núrpar).
Mugi, a square receptacle made of mud and straw.
Máh, mouth.
Mund, head.
Múnakh, husband.
Ná, name.
Nacharohí, the fourth day.
Nagar, town.
Nakaraj, the day before the day before yesterday.
Nál, river.
Naund, a masonry tank as in "Thural ka naund."
Napílna, to wring, (clothes, \&c.).
Nar, stone.
Nilri, blue jay. (Malán).
Nimán, slow.
Oban, an umbrella of leaves on a bamboo frame (=pohṛ́ at Darini). (Hamirpur).

Osna, descend.
Otar, báráni land, cf. amri.
Páhú, tenant.
Pakhrúa, a bird.
Palla, see jalara.
Pánsará, Wendlandia exserta, Stewart, 17.
Parara, a small st ack of wheat.

Paraj, the day before yesterday.
Paran, foot.
Parara, blue rock pigeon (Mundhi), ride Kokra.
Pariála, Erythrina arborescens. A tree with large leaves, thorns, and knotted (?) bark. At Pundar in Núrpur I saw some wandering tribe making broad bands of this wood, which they made up in rolls and used for making the hoops of sieves.

Parohí, the day after to-morrow.
Parol, s. f., the gatewas of a house.
Parora or Porora. Tree with long pointed glabrous leaves.
Patar, leaf.
Páţbá, name of a fish. (Kángra).
Patría, father's younger brother, and Patrer, -i, his children.
Patra, a water-plant with leav es like sorrel. (Lodhwan).
Per.bhári, lit. heavy-footed, "pregnant."
Peru, a large basket consisting of a cylinder with narrowing mouth and a hole near the bottom for taking out the grain stored in it.

Phátú, a shingle for roofing (Darini).
Phúka, life, soul, as in "Parmesar ki k ripa mere ghar vich chár phúke hain" (by the favour of God there are four persons in my house).

Piche, behind.
Pipal, red pepper. (Hamírpur).
Pirna, to get ready, as in " piro merí palké," (get ready my palanquin). (Song).

Piúlá, yellow.
Prabhú, red bear (Kothi Kohar Sowar').
Pragra, light, as in " pragra pa," (make a light).
Prasan, thread as it is spun, i.e., as from wool it becomes thread and is wound upon the spindle.

Pugna, to arrive.
Puṭhi, prep. and adv., up, above, upon, asin "puţhimat gáche," (do not go up).

Rana, qu̇een bee.
Riạhi, spur of a mountain. (Rihlu).
Rukh, tree.
Rurhu, s. m. fixed rent $=$ P. Chakota.

Sahensar paen, Asparagus racemosus, Stewart, 283. (?=tho usand root).

Sakhná, unladen, empty.
Sakoi, drought, " Is baras sakoi bari hai, hun aseán thelu pa dene," cf. thelu.

Sa malu, see Banná.
Sanḍ, a bull.
' Ghirthni rand ni, Jhotá sánḍh ni.' A Ghirthni cannot bec ome a widow any more than a male buffalo can become a bull. - Proverb.

Sandh, a standing place in shade for cattle.
Sangrá, narrow.
Saprr, a cliff, or rock.
Sat, cold, cool.
Satha, always.
G. Sathri, a bundle of rice, cut but not yet tied. (Saloh).

Sauka, the state of having a rival wife. "Sauke par jana main ne manzár uahín kia," (I did not consent to go on the condition of being a rival wife), Hansa vs. Mt. Koko.

Se, the functions of a barber, a shave. (Kángra).
Sehli, a porcupine. Ponjabi, seh; in Gádi, Kheilá. Sansk. ?
Sel, bark-fibre. (Baragráon).
Sik, lead.
Sinna, wet.
Sirigná, ground-bee.
Sít, (Gádi, khit) ague.
Sitak, bark of a tree. (Baragraon).
So, placenta.
Soa, sligìt rain. (Rajh́n).
Sotna, to glean, sweep, or collect by sweeping. (Lanj).
Sukaman, a parasitical plant. I have only seen it growing on mango trees. Fleshy leaves. I cannot trace it in Stewart. (Nárpur).

Sunáti, needle.
Sup, a winnowing basket of bamboo. Ohhaj is a winnowing basket made of the tili of kaina grass. Sup in Urdu, see Fallon, sub. voce.

Sutrajan, marigold. (Hamirpur).
Tahar, a head (of cattle). (Dharmsala).
Talu, then.

Tan, a machán.
Tap, see ander thelu.
Tarpandi, cro oked (mornlly).
Tasía, trouble, an noyance, (in Gádi, tasíá), as in " maiṇa tusso saite takrár kari-leo, tussa roz roz minjo kajo tasía dinde há 9 " (I made a promise with you, why do gou daily give me irouble ?) (Dharmsála Gádi).

Taü, father's elder brother, fem. tei, and tair, -i, are his children.
G. Taulá quick (also Jándri).

Taundi, s. f., hot season. (Garli).
Thainá, a deposit, " yib meri thainá hai," (this is to be kept for me ).

Thák, s. f., an obstacle.
Thale, prep., below.
Thali, nether millstone. (Bhawarna).
Thelu, a flat piece of wood placed in a water-course to make the flow of water even in order to divide it equally amongst the smaller channels by means of pieces of wood (tap) fised in the thelu.

Thil, snail.
Thula, thick.
G. Thángar, parched grain.

Trámbá, copper.
Trikh, thirst.
Tuka, a cob of maize without the grain. (Lodbwan).
G. Tunḍ, sheep's trotter, cf. thudú in Kuluhi.

Undrar, a bamlet.
Unáan, a spindle held in the hand. (Dharmhála Gádi.)
Ur, planting rice by hand, "assan naḍen úr bhi-lei-chbadia," (we have planted the rice by hand in the marehes), cf. hand.

Usáhal, fr. osná, a descent.
Usina, ascend, as in " muhún thon nañ usíndhá, matha maţha ilan " (by me it cannot be ascended, I will come slowly). (Dharmsada Gádi) ; of. osná.

# A Contribution to the History of Western Bundelkhand.-By C. A. Silbrerad, I.C.S. ; B.A., B.Sc. 

## [Becoived 7th May 1902. Read Mar, 1902.]

The following is a translation of the first third of a History and Geography of Bundelkhand by Diwān Bijhe Bahādur Masbüt Singh, Bundela Thakur of Nanora in the Bärsi pargana of the Lalitpur snb-division of the Jhansi district. The author is a leading durbari of the sub-division and one of the chief Bundelas of the Jhansi district, and a remarkably intelligent gentleman. He is the present head of the family of the Jakhlon Thakurs whose fortunes he traces. The tract with which this portion of the history is concerned is the Lalitpur subdivision, the Orchha state and the Ohanderi pargana of Gwalior, together with some of the neighbouring territories. It gives a fairly clear and concise account of the rise of the Bundelas and their doings in this tract. The history goes on to give an account of Panna and the rest of Eastern Bandelkhand but this portion is little more than an abstract of the Chatharprakash, a translation of the whole of which forms the bulk of Pogson's 'Bandelas.' The second part of the book is entitled 'Geography' and gives brief descriptions of the states and districts of Bundelkhand, containing little or nothing new; and also lists of the animal, vegetable and mineral products of Bundelkhand, which are interesting as giving the local names of many things that are quite unknown to Watts' ' Dictionary of Economic Products,' and which I hope to be able to identify.

The portion, the translation of which forms this paper gives an account of some events of, it is true, mainly local interest, but which I do not remember having seen elsewhere related. The notes added will, I think, enable most of the localities to be identified. All dates are according to the Christian era unless otherwise specified.

The first translation was done by Kliwaja Muhammad Zafar, SubDeputy Inspector of Schools at Lalitpur, and my acknowledgments are due to him for the performance of a tedions task. This transfation was revised by myself, and I have discussed doubtful points with the author.
J. I. 14

## A Portion of the History of Bundelkhand.-By Diwan Bijhe Babidor Mazbot Singh.

Several works on the history of Bundelkhand are already in existence. But not one of them can claim to be so comprehensive as to contain a sketch treating of the geography of the whole of Bundelkhand as well as showing the revenue and population of all parts of the province.

Nor do any of the existing works contain genealogical tables showing the names of all the Bundela Rajas and Chiefs and tracing their lines of descent and exhibiting the canses which led to the separation of the various families from the original stock.

Nor again is there any information forthcoming as to the extent of the entire province; and as to what portions of it are occupied by the Bandelas and by the Chiefs of other tribes, respectively, and what portions are under the direct control of the British Government.

Lastly, other historians have on many doubtful points, contented themselves with the suggestions of their own ingenaity.

It was with a view to sapply these wants that at the instance of Major John Liston, Deputy Commissioner of Lalitpar, I Diwān Bijhe Bahādur Mazbūt Singh, Bundela Thākur and Jāgirdār, undertook to prepare this history of Bundelkhand with the assistnnce of Mr. Quinton, Commissioner of Jhansi, and the Political Agent, Bundelkhand States. It is intended that the book shall summarize all the narratives of events ohronicled by writers of various generations best acquainted. with the Bundela families. Abstracts and extracts from the following works will also find place in the work:-"History of India" (Hindi); "Vishan Purana" (Hindi); "Kawi Paria" (Hindi); Varsingh Charitra (Hindi); Chhatra Prakāsh (Hindi); "Bundel Charitra" (Hindi); "Geography of the Central Provinces"; Krishn Narain's "History". (Urdu); "Wākiāt-i-Bundelkhand" (Urdu); "Imperial Gazetteer of Bundelkhand."

Besides this I am a native of this part of the Provinces and am myself closely connected with the Bundela dynasties, and have received my legends from my ancestors, and have seen many old writings and inscriptions on buildings, ete. ; my aocount may therefore be relied on.

In India as the majority of men know Hindi I have compiled this work in that langaage that it may be the more easily read. It is divided into two parts (1) History, and (2) Geography.

Bundelkhand is the portion of India bounded on the north by the Jamna, the sonth by the Narbada, the east by the Tons and the west by the Käli Sindh. During the period when Raja Udhisthira was reigning in India, Sisupāl was the Raja of Buudelkhand and the country was then called Chen-Desh. For several generations Sisupāl and his
sons ruled over it; but later it fell into the hands of Raja Karam of Oudh. This Raja erected a building at Kalinjar and removed the city of Chanderil from its site in the time of Sisupal to the foot of Gera hill and dug a tank called Parmeshwar. He built a fort at Gera hill and made it a military station. At a distance of about seven miles from modern Chanderi ruins of temples, etc., still indicate the site of the Chanderi of the time of Sisupāl these are known as Burhi (old) Chanderi. ${ }^{1}$ In a history edited by Manshi Krishn Narain it is mentioned that the kingdom of Raja Karam extended from Oudh to Mau Mandsowar ${ }^{2}$ and for several generations the Rajas of this dynasty ruled over it. Somi, the last Raja of this line, left his kingdom and fled to Kachh and Bhuj. Jamna Deva-succeeded him and became king of Chen-desh. There is a legend that the marks of the hoofs of his horse are to be seen on stones in Chāndpür, ${ }^{8}$ Chandrapur ${ }^{4}$ and Sironj ${ }^{6}$; the only foundation of truth probably being that he was Raja of this part of the country and made Chanderi his capital. He claimed supremacy over all the countries from the Jamna to the Narbada, and from the Chambal to the Tons. About this time Bhärat Raja of Ujjain conquered Central India, but soon after becoming an ascetic was succeeded by his brother Bikram, who from that date assumed as one of his titles, Raja of Chendesh. He was a powerful and wise monarch and is said to have ruled over the whole of India. Chen-desh was the centre of his domain, and his kingdom was known as Madh-desh or the Central region.

It is clear from the Vishnu-purana that Nag-banshi Kshattris were ruling over the land from the Jamna to the Narbada and from the Chambal to the Ken. But it is impossible to determine the exact dates of their reigns. The "Imperial Gazetteer" gives the following dates :-

0 Raja Bhim-nagar. 100 Brahapat. 25 Kharjor. 125 Nagendra.
50 Dharamwats. . 150 Biaghranaga. 75 Asank danamar. . . 175 Basunag. ${ }^{6}$.

1 In Gwalior 18 miles west of Lalitpar. Old Chanderi is eight milea N..W. of modern Chanderi and its numerous raise are almost buried in jungle.
${ }^{2}$ Near Djjain.
8 An almost deserted village in pargana Balabehat (district Jhansi) 16 miles 8.8.W. of Lalitpar), There are numerons ruins of Chandel buildings (temples, horsea, etc.,) for an account of which see Baba Chandar Mukarji's "Report on the Antiquities of Lalitpur."

- In pargana Dogaha (distriöt Sagar), 20 miles N.-E. of Sagar.

6 A considerable town in Tonk, about 32 miles S. of W. of Bina Railway Station on the I.M. Bailway.

6The namea in this list are spelt slightly differently. (See "Gazetteer" I. W.P., Vol. I, p. 3).

In 215 Devanāg, the last King of this dynasty, ascended the throne. In his reign Toraman, the general of Raja Gopāl, who was a Kachhwāha by race invaded Eran ${ }^{1}$ in 243 and conquered all countries from Bhopal to Eran. Toraman's son subdued Gwalior at the same time. In 358 Devanag abdicated and went to Narwar ${ }^{2}$ and was succeeded by Sursen, who was a descendant of Toraman. He (Sursen) built the famous fort of $G_{\text {walior }}$ in 285.

An ascetic told him that his descendants would govern the kingdom for 400 generations. Gwalior has been a capital since that time. The descendants of Sursen ruled over Central India for a long time. In 593 the Raja of Kanouj invaded the kingdom and conquered the whole except the cities of Gwalior, Chanderi and Narwar. But the Kachhwāhas soon recovered their authority. But in the meantime Thakur Chandh succeeded in seizing several villages near Mahoba. ${ }^{8}$ The descendants of this Thakur were called the Chandels.

The 84th and last Raja of the Kachhwāha dynasty was Tej-karan whom Dhandeva the historian calls Krishn Narain. About 933 the Parihar dynasty rose into importance and invaded and conquered Gwalior. Krishn Narain or Tej-karan left the capital and went to Dhūndhār, ${ }^{4}$ but his descendants removed their residence to Narwar and Indurki. ${ }^{\text {b }}$

The first King of the Parihar dynasty was Vajradama, who subdued Central India. Meanwhile the Cliandels of Mahoba, were gaining power. Vajradama was followed successively by Raja Kirat, Raja Bhūvanpāl I and Raja Padhpāl. In 1093 Bhüvanpāl II succeeded Mahipal who, in 1161 was succeeded by Raja Madhusudan, but even before his accession the Chandels had got possession of the whole kingdom except Gwalior, which after his death fell into the hands of Tomar Thakurs in 1232. The events connected with Chandib and his descendants will now be chronicled. It has already been mentioned that during the reign of the Kachhwàha Thakars Chandib got possession of Mahoba and Kanonj, and while Kings of the Parihar dynasty were reigning his descendants over-ran the whole kingdom.

After the death of Chandib his son Wakipat ${ }^{6}$ assumed the title of

[^17]Raja and annexed Ajogarh. His son Bijai conquered Chatharpar, Man, ${ }^{2}$ Chauderi, etc., and was succeeded in order by Jaso-Dharm Deva, Bijaipāl, and Kirat-Varam. The last King Kirat-Varam, wrestod Panna and Shahgarh ${ }^{8}$ from the Gonds. After Kirat-Varam, Jaya-Varma, Solakshan and Prithur-Varma ascended the throne in succession. In 1118 Govind-Chand succeeded Prithwi-Varma and subdued the whole of Central India subverting the Parihar dynasty which at that time retained possession of $G$ walior and a few other villages only.

Nar-Varam succeeded in 1163 and was followed in 1167 by Parmol. In 1209 Narhar succeeded, in whose reign the Gonds, Lodhis, Ahirs and others rose and divided the kingdom, and the dynasty was consequently enfeebled. The last King was Bhoj-Varam, grandson of Parmol, whose reign was a continual struggle with rebels, by whom he was sometimes defeated and whom he at others sabdued. Daring his nominal reign Bir Bandela rose into power and got possession of Man, ${ }^{4}$ Mahoni, ${ }^{6}$ Kalpi and Kalinjar. He repeatedly defeated Bhoj-Varma and finally overthrew the Chandel dynasty.

Several buildings of the time of the Chandels are atill found in Kalinjar, Mahoba, Deogarh ${ }^{\text {f }}$ and Madanpar ${ }^{7}$ bearing inscriptions in Hindi.

After the overthrow of the Chandel dynasty that of the Bundelas was established. It is said that long before this Gharwar Kshattris, who were Suraj-bansis by descent ruled in Käshi (Benares). The last King of Gharwār was Chait-karan whom Krishn-narain calls Birbhadr. In the Bundel-Charita it is stated that the total revenue of his kingdom was one crore of rapees.

Birbhadr had five sons:-(1) Ishri, also called Rāj Singh, (2) Hansrāj, (3) Mohan, (4) Mān, and (5) Jagdās or Pancham. The last was: his father's favourite. In his lifetime the Raja divided his kingdom among his five sons giving half to the four elder, and half to

[^18]Pancham, a division which not unnatncally cansed ill-feeling between Pancham and his elder brothers, with the result that on the death of the Raja in 1170 Parcham was expelled and his dominion equally divided amoug the four brothers.

On the loss of his kingdom and wealth, he was in great distress, and he went to Bindhachal, ${ }^{1}$ where on the first of Sāwan Sambat 1228 ( 1171 A.D.) in order to gain a victory over his brothers and recover his kingdom he practised the most severe asceticism in honour of the goddess Bindhāsni or Durga. For several days he took neither food nor water and continaally chanted prayers; but without avail, on the eighth day, however, he sat within a circle of fire and on the ninth day standing on one leg prayed to the goddess, bat still without avail. On the last day he resolved to offer his head to the goddess as a sacrifice, but before this consummation was reached the goddess cried: "Thon wilt enjoy the happiness of a King." Pancham asked her to appear before him and to give him some sign that he would defeat his brothers and regain his kingdom. The goddesis gave no answer. Pancham resumed his religious chants, took his sword and tried to cut his throat, but the goddess thereupon appeared and cried : "Victory, Victory, Thou wilt be viotorious and become Raja of a kingdom, and thy descendants will rule over Central India." When Pancham was about to behead himself and the goddess saw that a drop of blood fell from the cut to the ground, she cried: "Budit or Bundela (a drop)" and blessed him saying that his descendants would be called Bundelas hereafter; and then disappeared, Pancham collected a force, defeated his brothers; seized the kingdom and made Benares his Eastern Capital. The descendants of Pancham's four brothers are still called Gahrwār Thakurs.

Pancham was blessed with a son and according to the direotion of the goddess, named him Bir-Bundela. It is said that during the reign of Bir Bundela, Shahāb-ud-din Ghori invaded India and decisively defeated Jai Chand Raja of Kanouj abont 1195. Munshi Krishn Narain mentions in his book that in compliance with the orders of his father Bir Bundela fought a battle with Tatar Khan Afghan, in which 72 officers of the Khan's force were wounded; Bir Bundela himself shot 300 men with his own bow. This defeat actually stopped the Khan's further advance. It may therefore be inferred that it was in the time of Pancham that Shahāb-ud-din Ghori conquered India.

In 1214 Bir Bundela ascended the throne on the death of his father, who had reigned 49 years. He was able to extend his sway over several neighbouring kingdoms to the West, North and South. In 1231 he
subdued Kālpi and Mahoni and after defeating Bhoj Varam Chandel aunexed Kalinjar. Bir Bundela gained a complete victory over the Gharwärs of Marra' and extended his conquests to Rewa, Oudh and the Doab. These conquests are related in detail in the Bundela Charitr.

He was sacceeded by Karan-Tirth, who married the daughter of Nimrāna Chauhan. Karan.Tirth obtained his name in consequence of having built a tirth or temple, which is still esteemed one of the famons temples of Benares. He offered Kashi or Benares to the Brahmans. His son Arjun Pāl came to Mahoni in 1313; and Toar of Gwalior gave him his daughter in marriage. From the Kabpriya and KharsinghCharitr it appears that he was the first Raja who made Mahoni his capital and ruled over Kalpi, Man, Mahoni, and Kalinjar. He had three sons:-(1) Birbal, (2) Sohanpāl, and (3) Dayapāl The Imperial Gazettoer ${ }^{2}$ states that in 1263 Raja Arjunpal sent his son Sohanpāl to Kateragarh ${ }^{8}$ and that the fort was surrendered to him ; on his death he was succoeded by his eldest son Birbal. He gave a few villages to Sohanpāl who had married the danghter of a Dhandera of Ganeshkhera.* Sohanpal not being satisfied with bis share of the inheritance went to Nāga the Kanghar Raja of Knrär, ${ }^{\text {b }}$ with 45 sepoys and 18 sowars. In the Bundel-Charitr it is related that he asked Nàga to help him in taking his share from his brother; this Näga promised to do on condition that he would eat, drink, and inter-marry with him; Sohanpal was vary much enraged at this suggestion and was about to leave Kurar, bat hearing of his intention $N \bar{a} g$ a formed a plot to forcibly detain him, and compel him to accede to these proposals. Sohanpal hearing thereof fled from the court, and went to Makatman Chauhan, who was a descendant of Dhandera Deva and commanded 4,000 men on behalf of Nāga. Him he requested to assist him against his brother, but Mukatman refused saying that he would remain neutral.

After this Sohanpāl, leaving his small force behind, went alone suocessively to the Salingars, Chauhāns and Kachhwahas, and told his story to them. But none of them offered to assist him. However a Panwār Thakur, named Panpal, Jāgirdar of Karhara, ${ }^{6}$ offered assistance and the two conspired to remove Raja Nāga by stratingem from his

[^19]kingdom, which was worth 13 lakhs. It was agreed that Sohanpa should go to Kurär and pretend to accept Raja Naga's conditions of inter-marriage, etc., and invite the Raja and his relatives to his honse. Sohanpäl went to Kurār and did as agreed on. After a time Raja Naga, with his brothers and ministers, came to Sohanpal's house, whereupon Panpal arrived with 300 Kshattris, and as soon as Raja Nāga and his followers had sat down to eat Panpal Panwâr and Sohanpāl Bundela fell upon and slanghtered all the Kanghār ohiefs, and immediately seized the fort of Kuràr.

In this way on Wednesday the 2nd of Kartik Sambat 1345 (1288 A.D.) Sohanpāl became Raja of Kurār, and appointed Parpal and Makatman as ministers. He said to them :-"As no Kshattri in the time of my distress gave'me help except you no other save yourselves shall marry into my family." 1

Accordingly he gave his danghter in marriage to Panpal and as dowry a village named Itanras, to his younger brother Dayapā as a jagir of one lakb. From this time the Kshattris were divided into three different classes of Bundelas, Panwārs and Dhanderas. The total revenue of the whole Bundela territory was 26 lakhs of which half was possessed by Bir-Bal and the rest by Sohanpāl.

Sohanpāl had two sons, Sahjendra and Rām, of whom the elder Sahjendra succeeded him in 1299. He also had two sons, Nānak Deva and Sannak Deva, of whom the former succeeded in 1326. His sons were Prithwi Rāj and Indra Rāj of whom Prithwi Rāj succeeded in 1360. Prithwi Rajj framed good laws for his subjects, subdued the Bundelas of Birbal's and Dayapall's families and performed a "yag" named Maheshri ${ }^{8}$ in Kurār. He was blessed with two sons, Madoipal ${ }^{4}$ and Kisāb. In 1400 Madnipāl succeeded and left three sons named Arjun Deva, Māl and Bhimsen. On his death in 1443 the eldest Arjan Deva succeeded. The "Kabpriya" speaks highly of him as having had read

[^20]to him the four Verlas and the religions Puranns, and offered 16 Māhadān' to Brahmans. He had two sons named Malkihēn and Satract. In 1475 Malkhān succeeded his father and showed himself a pówerful and wise prince. In 1482 he fonght with Bahlol Lodi, ${ }^{8}$ and dying in 1507 left eight sons, Partāp-Rndr, Sảh, Jait, Jogajıt, Baryár Singh, Bhao Singh, Kharagsen, and Birchand, of whom the eldest PartapRudr succeeded to the throne. He annexed part of the kingdom of Ibrahim Lodi ${ }^{3}$ yielding a revenue of $1 \frac{1}{4}$ crores, Ibrahim being engaged in a struggle with Bäbar. On Babbar's becoming emperor and returning in 15144, after conquering the kingdom of Medni Rai Raja of Chanderi he only succeeded in recovering Kalpi from Partap-Rudr, and appointed him to rule the rest of his kingdom. On the 13 th Baisakh 1587 Sambat ( 1531 A.D.) he founded the city of Orchha, and made it a military station. He was a famous hunter, and it is related that after reiguing 24 years he met his death in this way; one day while hanting the jangles near Orchha he heard a cow cry out in pain, and going to see what had happened found that it had been seized by a lion. He fired but missed, and finding it impossible to reload, attacked the animal with a sword and succeeded in killing it, but not before it had so manled him that he only survived long enough to reach his palace (1531).

He left nine sons by his three wives, of whom the eldest BhärtiChand succeeded him. The second brother Madtkur Såh, lived with him and asnisted in the administration. The third brother Udiajit got Mahoba. The fourth Amän Dås received Patori, ${ }^{\text {b }}$ the fifth Prāgdās obtained Haraspur, ${ }^{6}$ the sixth Durgādès, Durgapur, ${ }^{7}$ the seventh Chandaudēs, Kateru, ${ }^{8}$ the eighth Ghansāmdās, Maigawan, ${ }^{\text {a }}$ and BhāratRai, Kurär.

Raja Bhartichand built the beantiful temple of ChaturbhajBhagwān in Orchha.

[^21]In 1544 Sher Shāh, ${ }^{1}$ having tomporarily defeated Humaynn and thus become Emperor of Delhi, attempted the conquest of Bundelkhand. In accordance with the order of the Raja, Madhker Sāh with 5000 selected cavalry attacked the enemy's forces, and though he suffered heavily succeeded in getting possession of the enemy's standard, and so steadily harassed his army that be was forced to retire.

The Emperor Sher Shāh beseiged Kalinjar and annexed the neighbouring country. Daring the siege the Imperial Magazine caught fire and exploded, killing the Emperor. In 1545 his son Selim Shāh ascended the throne and in his reign Bhartichand took Kalinjar. This success of the Bundela Chief Selim Shāh was compelled to overlook as be was at that time engaged in a contest with Hamayun and also with his own brothers. He had indeed once sent a small detachment from Gwalior, which was compelled tó retire without even crossing the Sindh. Bhartichand extended his kingdom till it stretched from the Tons to the Sindh and from the Jamna to the Narbada, and yielded a revenue of two crores. From about this time this part of India was known as Bundelkhand-the country of the Bundelas.

In 1551 Bhartichand performed Bäjpai-yug ${ }^{8}$ at Tongāran. ${ }^{8}$ As he had no son he was succeeded on his death in 1552 by his next brother Madhkur Sāh, who proved a wise and pious prince, learned in the Shastras and laws. He was specially a follower of the two-handed Narsingh-Bhagwān whom he worshipped morning and evening. He was also a man of great valour and simplicity, often riding out unattended. His love of justice was such that however important the question at issue might be he would not utter judgment without first consulting the code of Manu. The Delhi Emperor attacked him on several occasions but without suocess; these attacks were during Akbar's minority conducted with insufficient forces; when he however succeeded to fall power he sent a large and well-equipped army under Niamat Khēn. The Raja advanced as far as Baroni4 and there met the Imperial army, a severe engagement followed resulting in the retirement of Niamat Khān. Akbar then sent Ali Kūli Khān with a second force. To meet this Madhkur Sāh despatched his eldest son

[^22]Bäm Säh with an army of 86,000 . The armies met at Bhanrer, ${ }^{1}$ and Ali Küli Khan was repulsed and so much haraseed that he retired leaving horses and equipage which fell to the Bundelas. His father was so pleased at the generalship displayed by Ram Siah in this campaign that he increased his powers. Akbar made a third attempt to subdue the Bandelas, sending Jam Käli Khan who however was likewise defeated at Chelras After this battle the Raja appointed his second son Horal-Rao Commander-in-Chief, and his third son DulharReo governor of the fort and treasury of Orchha. His foarth and fifth sons Ratansen and Indarjit respectively he made ministers of Rexm Săh. His four remaining sons Saikh Partäb Reo, Har Singh Deva, Bireingh Deva and Satrjit being still quite young continued their edacation. In 1568 another unsuccessful invasion of Bundelkhand was made by Sheikh Kūli Khan, \& general of Akbar. But in 1574 the Emperor sent Seiyid Muhammad Bära at the head of a larger and better equipped force to conquer Bundelkhand. This the Raja's eldest con advanced to meet and a battle was fought on the Sindh, in which Rämsāh was defeated and compelled to retire to Orchhe followed by the Imperial army. The Raja himself then marched out of Orchha and another battle was fought, wherein in spite of the valour displayed by the Raja, and his sons and brothers, the Bundelas suffered defeat. The Raja's brother Amān Dās was killed, and Orchha surrendered. This disester was followed by the loss of all his territory from Gwalior to Sironj. But nevertheless he succeeded in recovering his power to some extent, and in driving the Muhammadans from Orchha aud Karhara. ${ }^{8}$ and making himself master of Bundelkhand proper. Akbar was not content with his partial success, and in 1633 sent a large army under Sadik Khān by way of Narwar. Madh Kur Sāh collected 50,000. men and marched towards Karhara when he engaged the invaders. In the battle the Bundelas were defeated with the loss of 7,000 of their number, and Horal Rao son of the Raja was among the slain, and his brothers Prägdas and Durgadās were wounded. As a result Orohha was recovered by the Emperor. Previons to this invasion the Kachhwāha Governors of Rampura4 and Lahir ${ }^{5}$ had made an alliance with Sadik Khān; but in spite of this the Raja laid siege to Orchha in 1636 in the course of which siege kis son Satrjit was killed. Raja Biharimal's brother Raja Raj Singh Kachhwāha was at this time in

[^23]the camp of Sadik Khān. The Emperor sent an order through him re-instating Madhkur-Sāh, who thus retarned to Orchba and governed the country again. But this policy of lenience proved a failure as regards the interests of the Emperor and soon after Akbar was obliged to send another expedition nnder Seiyid Raju Bāra Khān.' The Raja despatched Indarjit to meet it and he succeeded in defeating the Muhammadans who were driven back. In 1584 Prince Mirza Marād himself, the Klıān Khānām Wazir, Raja Durga, Raja Jagannāth and Raja Rām Chandar renewed the attack. It is related in Firishta's history that when the Prince arrived near Orchha, Madhkar Sāh opposed him at the head of 50,000 men. The engagement which followed lasted 9 hours, and in it 5,000 Bundelas and 1,200 Sawars were killed and Räm Sāh, Ratan Sen and Indarjit, three sons of the Raja wounded. His whole force fled but the Raja refused to retire, and with $\mathbf{3 0 0}$ horsemen armour-clad, charged the left flank of the Imperial army where Morād was commanding in person. He succeeded in wounding Marād so that he fell from his horse and lost his arms ; Madhkar Sāh said to him "Why are you lying on the ground $P$ Get ap, take your weapons and fight." The prince answered, "Why do you not kill me now yon have the chance ?" The Raja replied, "I am a Kshattri, it is contrary to the custom of Kshattris to kill a weaponless man." Mared was so struck at this that he exclaimed, "I pardon you." The Raja said "I will make peace if you promise to restore my kingdom to me." Murād replied. "Such part of the kingdom as has been in your possession up to this date shall be restored to you and a sanad to this effect shall be given to you, but you will have to accept conditions." The battle then ceased; and the Raja entertained the Emperor's army for several diys and showed great hospitality. Marād gave him a sanad bestowing on him the kingdom on condition that he should assist the Emperor with 7,000 Sawars when the latter required them for war. After this the Imperial army adranced towards the Deccan to invade the dominions of Chānd Bibi (generally known as Chānd Sultāna).a

Madhbur Sāh entrusted his kingdom to his eldest son Rām Sāh, and to his grandson Bhapāl Rao he gave Chainpur ${ }^{8}$ in Jagir ; the latter was the son of Horal Rao the Raja's second son, who had been killed in battle. Bhapāl lao founded Bhapãl which was called after his name.

[^24]Dalhar Rao the third son of Madbkar Sāh received Shivapuril in Jagir; the favourite son Ratan Sen, Ghor-Jhamai ${ }^{2}$ the fifth Indarjit, Nad-kachuwa; ${ }^{3}$ the sirth Partēp Rao, Künch; the seventh Har Singh, Bhasneh; the eighth Birsiugh Deva Baroni. ${ }^{\text {b }}$ Madhkar Sāh during his whole life only once visited the Emperor, on all other occasions on which he was summoned he sent his son Ratn Sen with 7,000 Sawars. His total revenue was two crores and ten lakhs. After a reign of 38 years he died in $1583{ }^{6}$ having attained the age of 80 years.

At the time of his death his eldest son Rām Sāh was at the court of the Emperor at Delhi ; the Emperor after condoling with him besiowed npon him the kingdom of his deceased father. The other members of the family who considered that they had rights to parts of the dominion brought forward their claims and two years passed before these were all settled. Finally such of them as had acquired their rights under Madhkur Sāh were continued them and their names and lands separately entered in the records. They were not entirely independent however, as the Raja enjoyed certain rights of supremacy as head of the family. The names of the sub-divisions are as follows :-(1) of the Kachhwāhas Rampūra (2) Raghubansis Patua Kachai ${ }^{7}$ (3) Gonds Bilahra ${ }^{8}$ (4) Dāngis, Garh Pahra ${ }^{9}$ (5) Panwars Konahra, (6) Gonds Bari ; ${ }^{10}$ besides these grants he gave to the Dhanderas Săhabād, ${ }^{11}$ and to the Gantum clan Garhakota. ${ }^{18}$ Lastly Bihat, ${ }^{18}$ Beona ${ }^{14}$ Kathera and Mahewa ${ }^{15}$ were given in jagir to four Bundela Thakars.

Besides these estates of the brothers of the Raja and the four jagirs just mentioned, Kālpi and Bhanrer were given to Abdullah and Hasan Khān respectively. They were jointly bound to provide a total force of 7,000 Sawars for the Emperor in time of war. There were in this way altngether 22 sharers in the kingdom.

[^25]In 1592 Birsingh Deva raised an insurrection, in which he was assisted by Indarjit and Partab Rao. They wrested Bhānper and Pawain 1 from Hasan Khān, Karhara and Berchhas from Harduar Panwār, and Irichh ${ }^{8}$ from Abdullah. On learning of this Akbar despatched Daulat Khăn, whom Rām Sāh joined. The Raja reduced Birsingh Deva to terms and brought him to Daulat Khan, and then returned to Orchha, while Daulat Khān went on to the Deccan accompanied by Birsingh Deva and the Rajä's eldest son Sangrām Sāh. But before long Birsingh Deva on the pretence of hanting returned to his home in Baroni against the orders of the Imperial Commander. Daulat Khān marched after him, but on seeing that he was assisted by Bhapāl Rao, Partāp Rao and Indarjit, abandoned the idea. Shortly after this Akbar arrived at Narwar by way of Gwalior, and directed Raja Bām Sāh to either present' before himself Birsingh Deva and Indarjit; who had in the interval stormed the forts of Narwar and Gwalior, or puuish them severely himself. Rảm Sāh with the aid of the Kachhwāhas and Pathāns went to Baroni, and after a few days' resistance succeeded in expelling Birsingh Deva thence. In this contest however Jugrup Kachhwāha a man of some note, was killed. As soon as Ram Säh withdrew Birsingh Deva recovered possession of Baroni. But he very soon left it finding it not a safe place for him so long as Akbar and Rām Sāh were his enemies. He accordingly went to Prayäg to see Selim (known as Jehāngir after his accession). He was a son of Akbar and at that time Sübadar of Allahabad and in revolt against his father. Selim received him with great favour and directed him to murder Abul-Fasl, who was then returning from the Deocan. This he accordingly did, and on the 9th Kätik $1660^{4}$ (A.D. 1603) killed the famons minister, midway between Narwar and Antri. ${ }^{5}$ Akbar was greatly enraged at the murder, and sent many chiefs under Tirpur Kshattri with a powerful force to capture Birsingh Deva; thịs force he ordered Sangrām Sāh the son of Rām Săh to accompany. Birsiugh Deva was besieged in the fort of Irichh, but after a few days' resistance, fled by night and went to Prayäg. Selim received him with great favour and promised to make lim Raja of the whole of Bundelkhand as soon as he should ascend the throne. Birsingh Deva lived for a short time in Prayäg, and then returned to Bundelkhaud, were joining with Sangràm Sāh he openly

[^26]revolted and expelled Hasan Khān from Bhänrer and Kharag Reo from Lachüra. ${ }^{1}$ The brother of Kharag Rao, who had been tilled at the time of his expulsion, appealed to the Emperor, who ordered Indarjit to proceed with n powerfal army, promising to give him the whole of Bavdelkhand if he should defeat Birsingh Deva and KamSāk. Indarjit begged that the Emperor himwelf should accompany the force, and would have obeyed the Imperial order, but that he was unwilling to rain his eldest brother and make himself master of the kingdom. The Emperor dismissed him and sent Tirpar Kshattri with a large army to Orchhe. When the general reached Gwatior, Rảj Singh and Räm Singh Kachhwāhān, the Bhadoriya Rnja,' the Chanhan Raja and the Jāts ${ }^{8}$ joined his camp. As soon as the army reached Datia, Hasan Khān and Khwàja Abdullah joined it. In 1602 on the bank of the Betwa close to Orchha the conflict took place. The battle lasted several days between the Bundelas ander Sangrām Săh, Indarjit Partāp Rão and Birsingh Deva ou the one side, and the Imperial army on the other. Sangräm Sāh was killed, but the Bundelas were victorions. Indarjit being specially distinguished for his gallant condact in taking the enemy's stiandards. Raj Singh Kuclihwāha who was with Tirpur's force, was wouuded and captured by Birsingh Deva, but Räm Sāh sent him back to the Emperor's army with respect and honour. Tirpur Kshattri, after remainiug quiet a few days at Bhăper, collected a fresh army there; but in the meantime Akbar had died and Selim had succeeded assuming the title of Jehängir. In $1604^{4}$ he summoned Birsingh Deva, who with Bhärat Sāh the grandson of Räm Sāh and Indarjit went to Delhi. The Emperor bestowed on lim the title of Mabaraja and gave him a sanad appointing him ruler of the whole of Bundelkhand. The three returned to Iríchh and Birsingh Deva offered his companions his condolences on the loss of their dominions. Aftor this Indarjit went on an expedition with the Emperor's forces, and told Rām Sāh of Birsingh Deva's appointment; he straightway went to Irichh where Birsingh Dem received him as he had always hitherto done; bat a misunderstanding soon occurred and Rām Sāh returned to Orchha and both parties prepared for war. By the order of Jehāngir, Khwāja Abdullah Jāgirāar of Kalpi, and Haidar Khän came to the assistance of Birsingh Deva, who was also joined by Partāp Rāo and the

[^27]Bundelas of Kathera. Birsingh Deva marched towards Orchhia where he was opposed by Rām Säh's fórces under Bhapāl Rāo and Indarjit. In the battle that ensued Indarjit was woanded and the army of Orchha struck with panic fled. Bhupal Rao with a small detachment ferced his way into the fort, and continued to assist Räm Sāh. Negotiations were opened and Rām Sāh agreed to meet Khwāja Abdullah, who, however, treacheronsly made him prisoner and carried him to Delhi, where the Emperor received him with respect, bat in order to stop further quarrels kept him captive for several years. By 1604. ${ }^{1}$ Birsingh Deva was supreme throughout the whole of Bundelkhand having reduced all the 22 chiefs who had participated in the kingdom. In 1608 after the Emperor had firmly established his power he released Rân Sảh and bestowed on him the Jāgir of Bār² yielding a revenue of three lakhs. The kingdom of Birsingh Deva contained 81 pargenas and 12,500 villages; the total revenue was two arores. According to the Bundelkhand-Charite it was bounded on the North by the Jamna, on the South by the Narbada, on the West by the Chambal, and on the East by the Tons.

Birsingh Deva was well acquainted with the Dharam Shāshtra and laws generally. He was mindful of the sin he liad committed in usurping his brother's kingdom, and feeling great remorse, in penitenee made nine pilgrimages, and offered innumerable sacrifices. In Bindraban aloue he presented 81 mannds of gold, a gift remembered to the present day. At Datia he built a grand palace at a cost of Rs. $36,90,980$, which is still a notable structare. On oue occasion by order of the Emperor, he attacked and overcame the Rajas of Rowa and Narwar. In 1613 he erected a temple in Bindraban at a cost of 30 lakhs. He performed the Täraian Birt, ${ }^{8}$ and listened for seven days to the recitation of the Măha-purana. He was famed for his etrict justice; in this connection it is told of him that one day his eldest soll Jagat Deva when hunting, allowed his hound to kill a Brahma-chäri or hermit. On hearing thereof the Raja summoned his -son to him, and puthim to death for having cansed the death of an innoceut devotee.

He coustructed the famous tanks of Bir Sāgar ${ }^{4}$ and Barwa Sāgar ${ }^{6}$

[^28]and many others-in all 52. About 1682 when Shảhjabãn acceanded the throne of Delhi, Birsingh Deva again revolted. The Emperor's forces defeated him and captured Orchha. He then with 10,000 Saware commenced a guerilla war in which he was well seconded by Jujhar Singh and his own sons and brothers. After a year of this the Emperor restored the kingdom to the Bundelas, but offered it to Jujliar Singh: The Raja had ten sons:-(1) Har Deva, (2) Pähar Singh, (3) Bhagiwăn Rao, (4) Kishor Singh, (5) Tarsi Dās, (6) Rai Singh, (7) Krishn Dăs, (8) Partāp Singh, (9) Mädho Singh, and (10) Chandar Bbăn. He gave them respectively jagirs as follows:-(1) Taraoli, ${ }^{1}$ (2) Tehri, ${ }^{2}$ (3) Khargapar, ${ }^{8}$ (4) Semra, ${ }^{4}$ (5) Palera,b (6) Baragaon, ${ }^{\text {b }}$ (7) Chirgaon, ${ }^{7}$ (8) Kunch, (9) Jaitpur, ${ }^{\text {b }}$ (10) Kakarbai. ${ }^{\text {P }}$ Each jagir was of such a size as to yield a revenue of one lakh.

In the spring of 1627 Birsingh Deva died and was succeeded by Jajhär Singh, who distrusted all the Bundelas and made some altarations and reductions in the Jagirs. His brother Chandarbhãn entered the service of the Emperor and was apppointed a Commander of 800 sawars and 1,500 foot. About 1631 Jujhär Singh in accordance with an order of the Emperor, went to Choragnih to fight on his behalf, and left his brother Har Deva at Orohlas in charge of the kingdom. On hia retarn, suspecting an intrigue between his wife and Har Deva, he questioned her, the Rāni replied, "as he is your brother I love him, there is nothing else between us." The Raja said, "if you are true obey me and poison him." The Rāni obeyed, but felt such remorse that she poisoned herself too. The Raja mourned her death deeply, and in 1632 performed the ceremony of Agmarshanyug to parge himself of the sin of mardering his brother. Manshi Harnarain, an historian, says that Har Deva after his death, appeared as a spirit and revealed to many that Jujhär Singh had poisoned him to prevent his succession, being himself childless. As soon as Shälijahān heard of this be issued a proclamation directing altars to be erected in honour of Har Deva and the dethronement of Jojhār Singh. Bāki Khăn was directed to enforce this order and went to Orchha with a strong force, but was defeated

[^29]and rotarned to Delhi. In 1638 Sbăhjahan despatohed Mnhabbat Khān from Agra, Khän Jahēn, ${ }^{1}$ from the Deccan and Khwaja Abdulleh from Prayag. These three armies converged on Orchha, and a severe conflict took place in which Salivahan the son of Champat Rai Jagirdar of Mahewa was killed. In the night after the battle when both armies were in their camps, Champat Rai took with him a body of Jujhär Singh's troops and unexpectedly fell apon the enemy. Bäki Khăn and Shabar Khản the general ware both killed, but in spite of the loss of their leaders the Imperial army gallantly opposed the Raja's forces and sacceeded in separating the Raja from his allies; finally Jujhar Singh was completely defeated and fled to the Deocan, but fell ill and died in Gondwãna. Champat Rai continued a guerilla warfare, while the Imperial army returned to Delhi, and in 1635 the whole of Bundelkhand except Datia and Chanderi was anuexed. For six years no one was appointed Raja of Orchha, and during the anarchy consequent thereon Champat Rai continued to ravage the country; he collected many of the late Raja's army, possessed himself of Orchha, plandered Sironj, captured Bhilse and defeated the Sabbadar of Ujjain. In short he ravaged the country from Jhansi to Mahewa. In 1633 Shāhjahān sent an expedition commanded by Muhammad Shāh, Wali Balā̄dur Khān, Nausher Khān, and Abdullah Khān. Champat Rai was ber sieged in the fort of Orchha, and after a gallant resistance was defeated and his brother Pähar Singh was sent for from Dhamoni ${ }^{2}$ and set up in his place. He was not however entrasted with the whole of Bundelkhand, bit only with such a portion of it as yielded a revenue bf 60 lakhs, for Datia and Chanderi had long before this been annexed and made over to other rulers. Besides these two, several other small states were retained. Chsmpat Rai sucoeeded however in escaping frosa the besieged fort, and continued his ravages as before.

Pāhar Singh had two.sons Sajān .Singh and Indraman. In 1651 Sujān Singh was installed as Raja on the death of his father. The famons tank at $\Delta$ rjār ${ }^{8}$ was constructed in his time. The Imperial .Clazetteer states that the town of Rānipūr,4 which is close to Man, was

[^30]built by him. He left no heir, and the kingdom passed to his brother Indraman. The latter died after three years in 1673, and his soth Jaswant Singh succeeded him, but died in 1686, leaving the throne to his son Bhagwant Singh a minor. The widow of Indraman, Ranl Raj Kunwär, was appointed regent. In 1688, Bhagwant Singh died childless ; and accordingly Aghota Singh the son of Bijhe Säh was cumaioned from Baragaon in 1689 to be adopted. He was sent to Aurangseb who approved the adoption and solemnly nominated him. Aghota Singh was a brave, hardworking and wise prince. About 1708 Balaji ${ }^{1}$ Marhatta invaded Bundelkhand and defeated Kamar Ali Khän who had been despatched by the Emperor to oppose him. Thereupon Shăhjahan ${ }^{2}$ ordered Aghota Singh to march against the Marhātta leader: The latter was slain in the first battle, and the army returned to the Decoin. In 1715 Aghota Singh constructed the statue of a man in gold, and presented it to Brahmans. He was then blessed with a child who wat named Prithwi Singh. On one occasion Aghota Singh accompanied Bahādar Shăh the Maghal Emperor, to the Panjäb and distinguished himself by gaining a victory over the Sikhs. ${ }^{2}$ In his time the power of the Maghal Emperors began to decline, and the Marhättas rose into importance, and repeated attacks were made by them on Delhi. In 1735 Malhär Rao Holkar with 100,000 men marched from the Deccun. Aghota Singh with the Raja of Datia and other of his relatives opposed him, and a disastrous conflict took place near Thansi. On both sidea the killed and wounded numbered about 9,000, bat Malhar Kao and his ohiefs were slain, ${ }^{4}$ and in consequence the army was disheartened and returned. Two months after this conflict in the middle of 1735, Aghota Singh died and was succeeded by Prithwi Singh. Daring his reiga all his brothers and relatives tarned against him and Rajendragir who had charge of the fort of Jhansi revolted and took possession of Jhansi and Moth. ${ }^{5}$ On the other side the country was ravaged by Güjare and Kangars. On the death of Prithwi Singh he was succoeded by his grandson Sānwant Singh. In 1748 Sabã ${ }^{6}$ sent an axpedition under
in 1678 (Gazetteer N.-W. P., I, 573). There is an inexplicable error in the date somewhere,

1 Presumably, Bälaji Visvanāth first Peshwa; it is probably meant that an invasion was made at his orders.
2. This is obviously a mistake, and probably Bahädur 8häh (1707-12) is tnoant.

- This was probably the expedition commanded by Munian Khïn (1710).
- This is arrogating too much to the Bundelas, Malhir Reo Holkar was hot slain, but. was merely cheoked in 1786 by Saĩdat Ali Kh̄n Säbudar of Oudh.
${ }^{6}$ The N..W. pargana of Jhansi district.
6 Maharaja of the Marhattas. This event happened in 1748. Acoording to Gasetteor N.W. P. (I. 80).

Narui Shankar, who defeated the Raja and overthrew his kingdom. At that time the total revenue was Rs. 24,54,264. One-third of the territory including the seven parganas of Pachhor, Karhara, Moth, Garotha, Garwai, ${ }^{1}$ Man, and Jhansi, was annexed by the Marhättas. The revenue of the ceded portions amounted to eight lakhs. The Marherttas made Jhansi the head-quarters of the territory and Sheo Rao Bhao was apppointed Governor. The Sanyāsis ${ }^{2}$ were totally overthrown. Sänwant Singh raled for eight years over the remaiuing part of his kingdom, and then died without heirs. His widow ${ }^{8}$ adopted Hati Singh, a grandson of Aghota Singh. In 1767 a quarrel occurred between Hati Siugh and the Rāni. The army and the ministers siding with the Rāni, Hati Singh fled to Datia, where Indarjit received him with respeet and gave him a handsome allowance. The Rāni after taking Tehri, adopted Pajan Singh the son of Lachman Singh; but in 1772 quarrelled with him also, and Pajan Singh went to Tehri and lived there for one year and a half, while the Rāni continued to rule the country. In 1774 disgasted with this world, Pajan Singh retired to Chitrakot, and devoted himself to religions exercises. The Rāni in the same year then installed Man Singh the son of Amresh of Mohangarh. 4 These continual changes in the selection of a raler gave Vishn Singh ${ }^{6}$ the opportunity to annex Amra ${ }^{6}$ and other villages yielding a total revenue of one lakh. The Rāni quarrelled with Mān Singh as she had done with his predecessors; and he retired to Räjgarh. In 1773 Kunwar Bhartichand, the great grandson of Aghota Singh, was adopted. After ruling three years he fell ill and died in 1778. Daring his illness he had solemnly nominated his brother Bikramajit as his snccessor. The state was now rapidly declining, there was great disunion between the varions members of the family and the treasury was empty. The troops refused to perform their duties owing to their pay being in arrears. Bikramajit sold pargana Barwa Sãgar to the Sūbadar of Jhansi, and was thus able to pay the troops. He overthrew the Rajas of Taraoli, Mohangarh,

[^31]Semra, Palera, and Jiron, ${ }^{1}$ and annered their territories. He distributed large sums to sink wells and dig tanks. On one occasion he engaged the $G$ walior troops, and so atterly defented them that it is said that not a man survived to tell the tale. After a long and successful reign of 56 years he died at Tehri leaving no heir. ${ }^{2}$ In 1834 his brother Mathura Das was installed, who was succoeded in 1840 by his adopted son Sajān Singh, who also died heirless. In 1853 Hamir Singh was adopted and placed on the throne. He was a debauchee and left no heir ; and consequently on his death his brother Partāp Singh succeeded, and is still reigning.

Jagir of Khanya-Dána.
The second son of Aghota Singh the Raja of Orchha, was Amresh. He with the help of the Peshwa's force obtained Mohangarh ${ }^{8}$ as his share in 1735. He had three sons, Maharāj Deva, Mãn Singh, and Nannegir ; Mān Singh was adopted by Mahendra Rani, ${ }^{4}$ and ascended the throne of Orchha, while Māharāj Deva succeeded to Mohangarh, and a jagir worth one lakh. After the death of Mān Singh his succossor Bikramajit attempted to crush Măharāj Deva, who, leaving Mohangarh went to Khanya Dāna. His son and successor Jawâhir Singh negotiated a treaty with the British Government in 1808. He had two sons Pirthipāl and Bijhe Babēdur. In 1844 Mardan Singh Raja of Bānpūr ${ }^{5}$ made Pirthipāl Singh a Raja in his kingdom; but he was not recognised by the British Government or the Raja of Orclha. Pirthipāl Singh was succeeded by Gopāl Singh in 1868. He left two sons named Chitthar Singh and Mardan Singh. In 1869 Gopal Singh died and was succeeded by Chitthar Singh. In 1877 at a grand Darbar held in honour of the Prince of Wales the title of Rao Rāja was conferred on him. Chitthar Singh is still in possession of Khanya Dāna, but has lately changed his name to Durga Singh.

## Datia State.

In 1625 Māharāja Birsingh Deva seated Jujhār Singh on the throne of Orchha, and distributed jagirs to his remaining ten sons, so

[^32]thate each son got nn estate of one lakh as his share. At that tirrie Bhagwen Rai with two of his sons was at the Emperor's Court as the representative of his father Birsingh Deva. His other two sons Dhurmangad and Sakhat Singh were at Orchha; Birsingh Deva ontrusted the list in which the bhare of Bhagwàn Rai was recorded to Dharmangad. This Dhurmangnd was very brave and warlike. It is related of him that after swimning a river he met a lion on the bank which he killed with one blow of his fist. As soon as he received the list showing to what estate his father was entitled he went to Palera : and properly administered the country. Har Deva and his nine brothers also took possession of their respective jagirs. When Bhagwān Rai heard of this he returned with the Einperor's permission to Orchha, and asked his father saying, "What order have yoo for me?" The old Raja replied "Nóthing, I have already distributed the kingdom among your brothers and you and given a separate list showing each one's share. The details of your share are with your son Dhurmangad Singh, go and take it from him." Bhagwān Rei not liking to quarrel with his son, asked his father to grant him the grand palace of Datia, four courtiers and 300 horsemen. The Raja did so, and gave him the palaco and with it the secret treasure buried there. In 1626 Bhagwãn Rai went to Datia with his two sons, Prithwi Rāj and Sabhkaran. On the death of Birsingh Deva he passessed himself of Baroni, which had been allotted for the maintenance of his father. He ruled 21 years and died in 1647. Bat the Gazetteer (of N.-W.P., I. p. 557) states that in 1640 Bhagwān Rai and his brother Beni Dās were killed by a Räjpat in battle. In any case on the death of Bhagwan Rai his two sons Prithwi Rajj and Sabfkarkn went to Delhi, and petitioned the Emperor to continue to them their father's jagir. Buit the Emperor was then engaged in despatching an expedition to the west, and conld not attend to them. Accordingly the two brothers accompanied the expedition so as to please the Emperor by their valour and gallantry. At the very beginning of the battle the two young warriors charged the enemy at the head of 800 horse. The Imperial forces alapporting them vigorously finally gained a complete viotory. Prilhwi Rāj was killed in the battle and Sabhkaran being wounded returned to Delhi. The Emperor was so pleased with his conduct that he offered him a jagir of 12 lakhs out of the kingdom of Orchlia. On hearing this the widow of Prithwi Raj came to the capital, and begged the Emperor to do something for her son Chatharsāl. The Emperor willingly offered Chatharsāl Baroni with a revenue of Rs. $1,25,000$ in jagir. From that time Sabhkaran was a jagirdar of 12 lakis and Chatharsal

[^33]of 11: Sabhkaran fought 22 battles for the Emperor, and died in 1884: He was succoeded by Rao Dalpat Reo, who brilt a fort in Datia. In 1707 there was a quarrel between Azam Shäh and Bahadar Shah.! On Azam's side were only 22 Rajas, while all the remaining Rajas of India were on that of Bahādur Shāh. The latter marched from Delhi to attack Agra. Rao Dalpat Rao was in command ${ }^{2}$ of Ksam'u Shāb's force and advanced with the 22 Rajas to oppose the enemy's army. The battle took place at Jaju a village alose to Agra. The struggle was severe and each side lost 21,000 men, amongst whom was Rao Dalpat Rao, who had bravely maintained his position till his death. It is said that one day he had shot 400 arrows. He left three sons Bhartichand, Rảm Chandar, and Prithwi Singh. Of these Rao Bhartichand succeeded his father in 1708. He died in 1711 and was succeeded by his younger brother Rām Chandar. He was very strong and well-versed in astronomy and literature. At the time of his succession his son Răm Singh was a fall grown man. The Raja quarrelled with him and exiled him. He acoordingly took up his abode in Chanderi. During his exile he maintained himself by selling his furniture, ornaments, eto. After a short time he was blessed with a son whom he named Gumān Singh. He, at the age of twenty; had a son named Indarjit. The horoscope of this child was sent to Räm Chandar, who was then at Delli. He sorutinized it and pres dicted that all the forefathers of the child would die within tho year, but that the child would be pions and prosperous. Ramoliandap paid little heed to the prediction, and threw the horoscope into the fire. But the misfortunes foretold soon began to appear. Not long after this he was ordered by the Emperor Muhammad Shǎh 8 to subdue Bhagwân Rao Khichhi. Rām Chandar offered 10800 ws and a mannd of gold to Brahmans and set out with 1,000 horse. He was then 95 years of age but still wore his helmet and armour and conld strike a mighty blow. The battle took place at Korajahānābad. Just before the battle he was reinforced by 7,000 men from Dutia. Riding on his elephant he commenced the attack, and sucoeeded in driving the enemy from the field to the gate of the fortress, but being strack by a bullet fell dead in the howdah. A Thakur who was seated by him had the presence of mind und courage to put on the helmet of the deceased Raja, and ordered the army to adrance. The troops stormed the fort and set. up their standard on it. Bhagwān Rao Khichhi with a litandful of men escaped by another road. After the viotory the army

[^34]performed the funeral ceremonies and returned to Delhi. Bahādur Skäh greatly mourned the death of the old warrior, and sent for his son to bestow on him a khilat and suitable rewards, but he was anable to come on acount of illness. Within two years Rām Singh and Gumān Singh also died; and the Räni of Rām Singh in 1746 installed Indarjit who was then a minor. She constructed the Sita tāl in Datia. The Mughal power was now rapidly declining. In 1748 NäruShankar ${ }^{1}$ marched from the Deccan to invade Bundelkhand. The Raja was still but a mere child and the Mnhrätta general forced his ministers to surrender him pargana Bhanere. Pargana Ālampar? was at the same time given to Holkar. About 1819 Indarjit bestowed a jagir of $1 \frac{1}{4}$ lakhs in Samthar on Debi. Dhar Rājdhar, and at the same time much alms; he also heard the recitation of 18 Paranas. He built the town of Indargark ${ }^{8}$ naming it after himself. He died in 1752 and his son Satarjit succeeded him. In 1788 when Māhajit Singh was going from the Deccan to Delhi, he met Satarjit on his way, and such a friendship sprang up between them that they treated eacli other as brothers. In 1793 Pundit Gopàl Rāo invaded Bundelkhand at Mahādaji Sindhia's order, which however was approved by the Emperor Shāh Alam. He first attacked Datia on the 13th Phägun. (March 1794) with 12 companies of infantry, 8,000 horse and 96 gnns. The Raja came out from Datia with 10,000 foot and 30 gans. In three days 700 men and eight chiefs of the Raja, and 7,000 men of Gopal Rao were killed or wounded. The Peshwa's general at Jhansi, Sheo Rao Bhan, persuaded the Raja to parchase peace ly promising the Pundit to present him with something which he said in reality he would not have to pay. At the same time he advised Gopāl Rao to retire, which he said he could do without loss of glory. Both parties acted upon his advice, and fighting ceased, and Sindhia's general returned to the Deccan. In 1797 Sindhis 4 again sent a force of 20,000 foot and 50 gans under Ambhaji Inglia. This army renched Bhānrer aud in the month of Phägun (March 1798) overcame and killed 200 horse and foot and five officers who held Kanjoli ${ }^{5}$ on behalf of the Raja; the artillery was also captured. In Cheit (April) he besieged the Raja's son who was in the fort of Seonrha ${ }^{6}$ with a garrison of 12,000 men. For eight months the firing was incessant. Finally Sindhin's force attempted to

[^35]storm the fortreas. The garrison after first pouring a volley into the attackers, sallied out and drove them baok a mile or so. Both sides lost some 6,000 men, but Ambaji abendoned the siege and retired towarde the Kachhwâhs country. I In 1800 Bali Reo came with 16 battalions of infantry, 7,000 horse and 80 guns. A severe conflict took place at Bilahri.e Raja Satarjit, ${ }^{8}$ Raja Jai Singh, Raja Durjan Sāl, Diwan Chithar Singh of Jakhlon, ${ }^{4}$ Rao Dalil Singh, Jargoji Lakhpoji,b and other Bundela chiefs adranced with 4,000 men to oppose him. But defeat or victory is in the hands of Providence, Raja Jai Singh, Diwan Chithar Singh and Dalil Singh were beaten off and withdrew to their respective dwellings, and Durjan Sāl retreated to Bhāurér. But Satarjit and Jargoji Lakhpoji continued to stoutly oppose Sindhia's forces close to Seonrha, where they were joined by Lal Sāh and many other Kachhwāhas. Durjan Săl returned from .Bhānrer. Finally another battle was fought and Bāli Rao defeated.
, In 1801 Daulat Rao Sindhia sent an army of 5,000 horse, four battalions of infantry and 18 guns under Pirla Sáh ${ }^{6}$ to reinforce Bäli Rao. As soon as he got near Seonrha the Bundelas attaoked him at the pass (ghāti). After twelve hours' fighting the Raja's force yielded and fled in all directions. But Satarjit with his 30 seleoted horsemen charged the left flank of the enemy's army, and wounded Pirí Sah with bis spear. But one of the chiefs of Sindhis's force gave him a severe cut on the head with his sword, which would have cansed him to fall from his horse had he not been canght by Wali Panwār, and with the help of Rohāz Khān and other troopers carried off safely into the fort. The Raja died the same evening and his funeral ceremonies were performed. He was succeeded by Parichat.

In consequence of the death of General Pirh, Sindhia's army retreated and in 1802 a treaty of peace was concluded with Sindhia. Pārichat was a great statesman and beloved by both his subjects and his army ; but he had no heir. One day he found a child in the jangle whom he adopted and named Bijhe Bahadur, and on his death on the 3rd Magh 1893 (A.D. 1839) this son succeeded him. Bijhe Bahādur fought with Sindhia at Daboh, ${ }^{7}$ but soon after becoming insane died

1 i. e., the present Jalann district.
10 miles W. of Datia in Gwalior.
8 Oalled Chathargal in Gazetteer, N.-W.P., I. 409.

* In pargana Lalitpar, Jhansi distriot, 11 miles S.-W. of Lalitpur.

5 Probably identioad with Lakhevā-dāda.
6 Better known as M. Perron.
1 The chief town of the pargana of that naine in Gwalior, 30 miles W. B.-W. of Jalann.
J. I. 17
on the 8th Katik 1914 (October 1857 A.D.) Bhagwasn Singh the son of Diwan Mahewaran Singh was adopted and succeeded on the 3rd Aghan (December). He is still in possession of the Rajj, and has received the title of Lokendra Mäharāja from the British Govern. ment.

## Ohauderi State.

Madhkur Sāh's eldest son Rām Sāh was the Raja of Orchha, but his brother Birsingh Devs dethroned him by order of the Emperor Jahāngir in 1604. ${ }^{1}$. Rām Sāh continued to resist for some time but was finally captured and brought before the Emperor by Abdullah Khan in 1605.1 He was received and treated with respect, but to avoid chance of future disturbances the Emperor detained him in Delhi as a State prisoner. Meantime Birsingh Deva made himself the master of all Bundelkhand. During the absence of Rām Sāh, his grandson Bhärat Säh and other numerous relations continued in arms and succeeded in seizing Patheri. After several days' fighting Birsingh Deva regained it, but Bbārat Sāh was far from being finally subdued, and captared Dhamoni shortly after. In 1608 the Emperor released Rām Sāh and gave him in jagir Bārn and the surrounding country valued at three. lakhs. He made Bār his capital and collected all his relations there. He had eleven sons and seven grendsons; his eleven sons were (1) Sangrām Sāh (2) Hari Dās ; (3) Bithul Dās; i4) Mohan Rao ; (5) Tirbhuan Rao; (6) Sujān Rao ; (7) Blikwat Rao; (8) Mukatman; (9) Balbhadr; (10) Makund, and (11) Kunwarju. .Of these the eldeat Sangrām Sāh had been killed long before in the battle of Orchha. The remaining ten sons, and seven sons of Sangrām Sāh came to Bar and settled there. Sangrām Sāh's sons were:-(1) Bhārat Sāh, (2) Krishn. Rao, (3) Rūp, (4) Kirat, (5) Dhārū; (6) Chandar Hans; (7) Mān. So large a family was maintained by a territory yielding bat three lakhs per annum. In 1612 Rẹam Sāh died and his grandson Bhārat Sā̀h succeeded him. In 1616 Bhārat Sāh defeated Godarām, who was governor of Chanderi on behalf of the king of the Deccan and seised the town. In the same year he met Mirza Shīh Jahān on his way to the Deccan under the orders of the Emperor, and told him the story of the storming of Chanderi, at which Shāh Jahān was pleased and granted him a sanad.

Bhārat Sāh built the present fort of Tälbehat in 1618, and divided
I See note 74, the dates are obviously a year or two too early.
8 Spe note 76.
his kingdom into four parts :-Dadhai, ${ }^{1}$ Haraspur, ${ }^{8}$ Golakot 8 and KEngarh.4 At that time his dominion whs valued at 9 lakhs, of which he gave shares to his brothers:-to Krishn Rao several villages in Bānsi ${ }^{6}$ yielding a revenne of Rs. 75,000, he built the fort which still exists there, and also Reor in Lalitpar city, which incladee a fine well ${ }^{6}$ and is now occupied by the Municipal School; to Diwan Rüp villages in pargana Bijrotba' ${ }^{\prime}$ worth Rs. 12,000; to Diwîn Kirat, Kakarua ${ }^{8}$ with a revenue of Rs. 12,000, to Chandar Hans Jamandena ${ }^{\circ}$ valued at Rs. 10,000; to Diwãn Dhīrū, Karesra 10 worth Rs. 12,000 in jagir; and to Diwān Mãn, Barodā ${ }^{11}$ with a revenue of Rs. 4,000.

After Bhärat Såh, Debi Singh ascended the throne at the age of 16. 12 He was renowned in astronomy, medicine, literatare, and the law (Dharmshãstra) and was at the same time an excellent shot. In 1665 he accompanied an expedition which was sent by the Emperor to subdue Kabul. There he lost 15,000 horse, and his Divên Udebhen, ${ }^{18}$ but ultimately the Imperial army was victorious. The Emperor being pleased with him granted him the following parganas in Bundel-khand:-Garola, Khemlasa, Rahatgarh, Etawah, Basoda, Udoparr, Bersia, Bhilsa, Sironj and Malthon. ${ }^{14}$ With this addition the revenue of the kingdom of Chanderi totalled Re. 24,00,000.

[^36]In 1679 Debi Singh fought successfully in Bengal ' constracted the Singh Sägar lake and founded the village of Singhpir. The tank and village are both near Chanderi and still in existence. He built the Singh bägh in Talbehat which still exists batin ruins. Debi Siagh died in 1717 at the age of 87 , leaving three sons, Sahja, Senapati and Darag Singh. They all went to Delhi that the Emperor might seleot the successor, Bhanu the priest, who was at that time regent, reoommended Sahju as being the eldest son, but Aurangzeb suspecting his choice sent for Rao Gomat and Rao Hada the two generals of the late Raja and asked them who was the lawful heir. They asid that Eahju was an illegitimate son, Senapati a grandson whom the decoesed Raja bad adopted, and that Durag Singh alone was born from the Bini. The Emperor accordingly nominated Durag Singh as snocessor. He gave pargana Kanjia ${ }^{2}$ to Sehju with the title of Raja. To Ampanati he gave Bhāngarh ${ }^{8}$ with several other villages worth in all about Rs. 12,000 per annum. But Darag Singh was made mueorain over both. While making these grants Aunangzeb retained Bersia for himself and appointed Dost Mahammad, who had recovered Malwa for the Emperor from the Mahrättas, its Superintendeat. This is the man who subsequently established the kingdom of Bhupā.

In 1728 Raja Darag Singh defeated Bägha Banjhāra. ${ }^{4}$ In 1732 Sankar Rao came from the Deccan with 10,000 horse to attack Chanderi. But the Raja defeated and killed him at the Singhpur pass, and plundered his cavalry.

On the death of Durag Singh his son Durjan Singh succeeded in
Basoda and Udepur, are Gouth of Bisa, the former a station on the I. M. By. Bersia the most Western part of Bhapäl.
1 At the orders of the Fmperor.
2 Till 1861 part of Gwatior, then exohanged for pargana Chanderi and ether territory, and now forming the N..W. corner of Khorai Taheil (Sagar distrist).

8 In Khorai tahsil (Sagar distriet) 20 miles N. N.-W. of Khorai.

- The 解ory of Bigha, and of some clan of the Banjairas is thus related by the anthor. "A Baja of Asanagar near Bicanir was bitten by a snake and Jäti a Jaini Gurn promised him reoovery if he and tis people turned Jains; this he agreed to do and recorered. But some of his subjects refused to obey his orders to become Jains and left his state resolving henceforward to have no settled abode leat they ehould be again forced to do as they had jast done; they thas beoamo Benjäras. Bagha was the son or grandson of the leader of these secessionista, and ia asid to have had 2,000 armed followers and 12,000 head of cattle. Hitherto these Benjāras had paid dues, etc. on entering different states, but Bagha and his follawers refused to do so, and though on several occasions attroked by the Imperial troops had been unsucoessful till this occasion. But the legends of Bägha are numerous : the oriminal fraternity of the Sanorias have a legend that the firat grant of 12 villages in Lalitpar and Orohha was for killing this same Bägha.

1733. ${ }^{1}$ In his time Govind Bundolas of Sagar meised Ganola, Mathon, Khemlasa and Rahatgarh. In 1735 Malhar Rao invaded Bundelkband with an army of 100,000 and defeating Durjan Singh, annexed Bhilsa, Bironj, Udepür, and Basoda, and erected a fort on the boundary, which he called after his own name Malhargarh. ${ }^{\text {B }}$

Durjan Singh left four sons, Män Singh, Zoráwal Bingh, Sūba Sehib and Dhiraj 8ingh. Of these Mān Singh succeeded him. During his reign * Pandit Närn Sankar came from tho Deocan, and annexed half the country comprising Mangaoli, Bahrai, Piprai, ${ }^{\text {, Kanjia and Isagarh. }}$ Mãn Siagh gave PEli ${ }^{6}$ to his brothor Zoriwal Singh, Bamori ${ }^{7}$ to Sūba Bahib, and Bänpär ${ }^{8}$ to Dhiraj Singh. He had two sons Anradh Siagh and Hati Singh. Mān Singh built the fort of Mahroni,9 and dying in 1760 was suceoeded by Anrudh Singh. Rao Hati Bingh, who lived with him, acted as his deputy rather than as a minister. In 1775 Anradh Singh died, leaving a son named Räm Ohandar, who was only a boy, at the time. Hati Singh did not place Baxm Chandar on the throne, but himself ruled the courtry as regent. The Rūni suspeotiag Hati singh's intentions, fled one might with the boy and 50 sawars to

1 The dates given here for the acoession of the Rajas of Chanderi are very different from thoge in the Gasetteer N.-W. P. (I. 350 et seq). They are :-

| Raja. |  |  | coording to the author. | According to the Gavetteor. |
| :---: | :---: | :---: | :---: | :---: |
| Debi Singh | ..0 | .. | -1717 | 1646-1683 |
| Daxaj Sipgh | ... | ... | 1717-1788 | 1668-1687 |
| Durjan Singa | ... | ..- | 1788- | 1687-1733 |
| Män Singh | ... | ... | -1760 | 1788-1746 |
| Anrud Singh | .0. | ... | 1760-1774 | 1748-1774 |

I have not so far been able to explain the discrepancy.
2 Better known $\approx$ Govind Pandit, the Mahrätta leader who agpistod Ohathar Bāl when nearly overwhelmed by the Muhammadang, and whom Chathar gà rewardod with ono-third of his kingdom.-(1781). Ancestor of the Rajas of Jalann, Jhansi and Aurraxai.

B In Gwalior on the Betwa on the Western border of the Sägar district.
4 Probebly 1748 (see p. 24).
5 Sahrai and Piprai are both near Mangaoli in that part of Gwalior which borders the N..W. portion of Sägar distriot.

- In pargana Balabehat (Jhangi district) 15 miles 8 . of Lalitpur, atill held by his demcendants.

7 Bamori Kalan, pargana Lalitpur, district Jhansi, 7 miles S. 8.-W. of Lalitpur. His descendants have lost possession of the village.

8 In the pargana of that name (Jhansi distriot) 22 miles F . of Lalitpar, Dhiraj gingh': descendents no longer hold it, but possess in jegir Gadiạna ( 10 miles N.-E. of Lalitpar) and a few other villages.

9 Head-quartore of the thahsil of that nome in the Thansi distriot, 23 milea E. S.-E. of Lalitpur.

Achalgarh, ${ }^{1}$ and took up her abode at Chandhri Kirat Singh's house. He immediately sent a letter to Jākhlon whence Diwān Dhurmangad Singh started with 500 men and arrived at Achalgarh. In addition to his own men he collected 50 horse from among the Zamindars and 100 sepoys of the Chaudhri's. Thus with 100 horse and 600 foot behind him he reached Chandheri, and set up Räm Chandar in the presence of Hati Síngh. Kirat Singh was made regent and Dharman. gad Singh Commander-in-Chief. Hati Singh withdrew to the fort of Tälbehat, and prepared to fight. After a while Räm Chandar's force arrived there and a conflict ensued which lasted several months. Ultimately Rām Chandar proved victorious and gave 16 villages including Masora' to Hati Singh. In 1778 Rām Chandar was firmly seated on the throne. In 1783 he put to death Hati Singh and a Brahman of Tälbehat; remorse however came upon him, and he was so much afraid of their spirits which haunted him, that he made pilgrimages to aH the shrines of India, but all without avail. Finally he visited Ajudhya, where, finding a refuge from his fears he spent the remainder of his days. During his absence from the kingdom one of his relatives named Devaju Panwar, collected a portion of the revenue and sent it to the Raja for his maintenance.

Meantime ${ }^{8}$ Abha Sāhib sent an expedítion under Moypanth from Saggar to overthrow the kingdom of Chanderi. There marched out to meet the Marhattas of the Bundelas Rao Umrao Singh of Rajwāra ${ }^{4}$ with 2,000 men, Diwàn Chithar Singh of Jēkhlon with 1,500, the Chaudhri of Achalgarh with 1,000, and Durjan Sāl Khichhi with 500 horse; these all assembled at Lalitpur. A battle was fought between Lalitpur and Panari ${ }^{6}$ which lasted the whole day, 500 men of Chithar Singh's were killed, and he himself wounded. The battle was indecisive and both parties returned to their homes.

Raja Ram Chandar had four sons Parjapål, Mar Pahled, Bāwanpāl and Chithar Singh. In 1802 he appointed Parjāpal to succeed him and sent him from Ajudhia to Chanderi. He subjugated all the Bundelas, but was killed in the battle of Rajwāra. ${ }^{6}$ He was succeeded by Mūr Pahläd. In his time a Frenchman named Jean Baptiste Filose,

[^37]who was a general of Sindhia's attacked Chanderi in 1811. On his way to Chanderi he conquered the jagirdars of Geora, ${ }^{1}$ Bansi, Kotra, ${ }^{2}$ Nanora, ${ }^{5}$ Barwär, ${ }^{\star}$ Rajwāra, Mahroni, Jākhlon, Deogarh, etc., and arrived at the capital. Raja Mūr Pahlảd fled to Jhansi. But Diwăm Bakht Singh and Kanwar Umrao Singh his two brothers, together with the jagirdars of Jäkhlon, held the fort for three months. At last through the treachery of a Thakur of Silgan ${ }^{6}$ it fell into the hands of Jean Baptiste Filose. Tälbehat was next attacked and captured after a siege of three months. In 1812 Sindhia's general gave 31 villages ${ }^{6}$ to Mür Pahladd, and reduced the remainder of the kingdom of Chanderi to submission. In 1828 all the Bundelas together with the Raja determined to overthrow the sovereignty of Sindhia, and sent a Vakil to the Agent to the Governor-General of India in Bända with a complaint that Sindhia was forcibly depriving them of their kingdom. In 1830 Col. Filose came from Gwalior and the Mir Manshi from Banda to reconcile the two parties. It was settled by treaty that one-third of the kingdom, valued at Re. $1,65,681$ per annum should be retained by Raja. Mür Pablad, and the remaining two-thirde be given over to Sindhia. From that date Mür Pahlad was known as Raja of Bănpūr. After his death his son Mardan Singh succoeded him in 1842. He [rebelled in the mutiny and his territory] was [confiscated and himself] granted a pension of Re. 2,600 per annum. At present his grandson Nirwe Singh residing in Datia, receives a pension of Rs. 500 per month.

Sangrām Sāh the son of Raja Rām Sāh had seven sons. The reign of Krishn Rao one of these seven sons, will now be described. In 1612, when Maharaja Rām Sāh died in Bar his grandson Bhărat Säb succeeded him. Krishn Rao was the son of the first Rāni, but being younger than his step-brother, was passed over for the throne, and appointed to assist in the administration at head-quarters. As so0n as Cbanderi fell into the hands of Bhārat Sāh he distributed "Hakes "(rights, estates) to his brothers. Bat Krishn Rao refased to taite his 'hak' and came to Lalitpur under pretence of collecting revenue. From Lalitpar he sent a representative to Shähjahãn petitioning him to

[^38]'grant him the 'hak' to which he was entitled as son of the first Rani. The Emperer ordered Bhărat Sāh to give him one-eighth part of the kingdom. He accordingly granted bis brother a jagir of Rs. 75,000 in Bansi together with Reor and a garden in Lalitpur city. The ten uncles and four brothers of Bhärat Sāh, who had been made separate shareholders in the kingdom were made subject to Krishn Rao. From this time the descendants of Krishn Rao have been known as the "Bānsiwalas." They were entitled to take their seats on the right hand in Durbar, and were invested with the right of installing the Raja. Krishn Rao built a fort in Bänsi and a well in Raor, where is now the Lalitpur Municipal School. He had three sons Bishan Rai, Udebhēn and Dalip Narain, and died in 1643 when he was succeeded by Bishan Rai. Udebhān accompanied Debi Singh (Raja of Chanderi) to Kabbul with an expedition sent by the Emperor of Delhi, and was killed there with 50 horsemen. As a remaneration the Emperar gave his son Makund. Singh the title of Diwān, and presented him with a horse and two swords in addition to 58 villages in pargana Etāwah. 1 Makund Singh kept this jagir separate from that which had been granted him by his grandfather Krishn Bao. His uncle Bishan Rai was annoyed at this asd confiscated his 'hak'; Makund Singh complained against him to Māhāraja Debi Sigh, and the discussion continued for some years, until finally in 1683 it was agreed that the petitioner should get villages worth Re. 27,000 from the jagir. ${ }^{2}$

Diwãn Makund Singh had two sons, Dāl Singh and Naraingir ; to the former he gave pargana Etāwah, and to the latter the Bànsi villages After having done this he went to Delhi, and accompanied the Imperial. army commanded by Sabharām to Kandahär where he was killed in 1760. Maharāja Debi Singh gave the title of Diwān to Dāl Singh and Naraingir and confirmed thom as jagirdars of Etēwah and Datia respectively. ${ }^{8}$

In 1735 Malhär Rao Holkar ${ }^{4}$ came from the Deccan and killed Dal Singh. His son Dhan Singh then left Etäwah and went to Datia. ${ }^{6}$ In 1737 Abulfael, an Imperial general, attacked Chanderi and a battle was fought at Datia in which Diwān Naraingir and 300 sepoys were slain. After his death his son Dharmangad Singh succeeded him.

[^39]The lattor had six sona, Bakht Singh, Uinrao Singh, Chithar Singh Udiajit, Nirpat Singh, and Rijjagir.

Dhurmangad Singh took great interest in improving the jagir, and also in religions matters. Daring his life he entrusted the whole of the affairs of the jagir to Chithar Singh and Bakit Singh, making Jâkhlom the chief place in his jagir; but himself left his family and retired inta the Sidh-Gapha ${ }^{1}$ with two or three men and became a devoteo. Shortly after this he died (in 1794) and his sons divided the jagir between them. Chithar Singh and Udiajit received $1 \frac{1}{3}$ shares and Diwãn Bakht Singh and Umrao Singh one share only. Diwān Bakht Singh built a fort at Nanora while Knnwar Umrao Singh and Udiajit ereoted forts at Baroda ${ }^{1}$ and Dadhai respectively, both of which are now in rains. Chithar Singh also built a fort at Chapra, 8 and a temple to Ganesh in Jakhloa. He :was both war-like and fortanate. In 1785 he wrested Sahrai, ${ }^{4}$ Isagarh, Sarai ${ }^{5}$ Chachonra ${ }^{6}$ eto., in all 12 parganas, from the Peshwe. The annual revenue of the 12 parganas was not less than 7 lakhs. Ho had an escort of 50 horsemen, and 1,500 sepoya who always attended him. On several occasions he helped the Rajas of Panna, Datia, Dhole pur, Bajranggarh ${ }^{7}$ etc. It was he who repulsed the formidable attack of Morapanth of Sägar in 1787 and saved the kingdom of Chanderi. In 1807, Udiajit died and Chithar Singh in 1808. His brother Diwăn Bakht Singh outlived him. In 1781 Dagdu Bảba of Malhărgarh, wha was one of the Peshwa's governors, unsuccessfully attacked Piprai. ${ }^{8}$ In 1795 Sindbia's army with a strong force of artillery came from Pirghat ${ }^{\circ}$ to attack Piprai, but wras repalsed by Bakht Singh. In 1800 Bàli Reo, a general of the Peshwa, with 12,000 men attacked Jakhlon; the battle lasted the whole day. By evening Diwăn Chithar Singh arrived from Deogarh and in the next day peace was negotiated and Bāli Rao went to Tori. ${ }^{10}$

[^40]In the beginuing of 1812 Sindhia's general Colonel Filose, with eight battalions and 200 horse attacked Chanderi. Maharaja Mūr Pahlād being unable to dofend it fled to Jhansi, and Diwan Bakht Singh and Umrao Singh opposed him. At first the general besieged the fort of Nanora whence Bakht Singh and Umrao Singh, after bravely maintaining their position with the help of 60 sepoys for eight days, fled. Colonel Filose attacked Jäkhlon a second time in 1812. Diwān Bakht Singh maintained a resistance the whole day, and in the evening retreated to Deogarh. After eight days the colonel followed him there, and after three more days fighting drove Bakht Singh to ChanderiMür Pahlād then fled to Jhansi leaving his fort to be defended by Bakht Singh. The siege was carried on for several weeks but in the end through the treachery of a Thakur ${ }^{1}$ the town was surrendered. Bakht Singh and Umrao Singh held out in the fort of Chanderi till provisions ran short, when they fled to Piprai. ${ }^{8}$ Sindhia's general followed them there but being defeated, on the same day went to Pāli, ${ }^{8}$ and halted there with his army. Another battle was fought at Dudhai and the colonel was beaten off. He then returned to Lalitpur and leaving two companies there started to Tãlbehat. In 1813 Diwàn Bakht Singh attacked Lalitpar and after driving out Sindhia's troops plundered the town. As soon as he heard of the expected retarn of Colonel Filose he marched out and opposed him at Tenta, ${ }^{4}$ bat being defeated went to Nanora and after a short time to Jāmandāna ${ }^{5}$ and there cut ap 200 of Sindhia's Sāwars. In 1814 a skirmish took place at Amrodh ${ }^{6}$ and the colonel was compelled to retire with the loss of foncompanies. In the same year Bakht Singh fell ill; a vakil was sent and a peace concluded by which the colonel granted him his former jagir. The Diwān died soon after at Tehri, and was succeeded in the jagir by his son Diwăn Gambhir Singh aged 13, with his nucle Umrno Singh as guardian. In 1821 Siām Rao was appointed governor of the district on behalf of Sindhia. He confiscated the muafi in Malhārgarh, which yielded an ànnual income of Rs. 1,300 . Diwān Bahādur Gambhir Singh marched out to oppose the confiscation, and encountered Siam Rao at the head of a small force. The fight lasted six hours and resulted in the repalse of Siam Rao, who withdrew to Malhārgarh ; Diwān Bahadūr was however wounded. After this a series of small fights ensued between him and Siudhia's

[^41]forces, full details of which cannot be given in order ; they will acoord. ingly be merely summarized. On one occasion Siam Rao came to Parisari, ${ }^{1}$ whence being defeated, he retired. On another cocasion he attacked the village of Päli, and after 15 days' fighting was repulsed. He once besieged the fort of Nanora, and captured it in 15 days; but a fow days later there was another fight at Käli Dün" in which he was defeated and driven back. He was then superseded by Mädho Rao, but the new Governor was defeated at Bikrampur, ${ }^{8}$ and forced to retreat. Soqu after he unsuccessfully attacked Diwãn Bahādur at Bhuchera, ${ }^{\text {d }}$ but was driven off to a distance of four miles. He was next repulsod at Khänd.b After this another of Sindhia's officers Lachman Rao attacked Nanora, and an engagement ocourred which lasted for 15 days. Another battle was fought at Gahora, ${ }^{6}$ and Diwān Gambir Singh, being defeated, fled to Datia. ${ }^{7}$ Lachman Reo again came at the head of two companies and 500 horse, and Diwān Bahădur with several Bundela chiefs opposed lim; fighting lasted eight days; both sides lost 500 men and Sindhia's army withdrew to Lalitpur. Finally a treaty was concluded by which the 'hak' was restored, and Diwān Bahādur secured the treatment to which he considered himself entitled on the occasion of an interview. In addition to this Diwān Bahādur had fights with several other Rajas and jagirdars :-the Rao of Rajwāra, Raja of Orchha, Rao of Khanyadāna, jagirdar of Murwāri, ${ }^{8}$ jagirdar of Gora, ${ }^{0}$ and the jagirdar of Kisalwãns. 10 As early as $\mathbf{1 8 1 3}$ he had fought Colonel Filose at Garlaakota. In 1828 he dug a tank at Jäkhlon.

In 1829, when Bikramajit Raja of Orchha wished to regain Chanderi by paying the charges of the Gwalior Contingent, he appointed his son Mardan Singh commander of his army, and Umrao Singh of Rajwära, and Umrao Singh of Jākhlon as his advisers. Diwān Gambhir Singh was made a general and Bakshi Bakht Singh of Talbehat was put in charge of the cavalry. The campaign began by an attempt on the part of Bakshi Bakht Singh to storm Mahroni, but in this he was prevented by the arrival of a force of Sindhia's with two light guns, and accord-

[^42]ingly retired to Khiria, ${ }^{1}$ but hot before Tilok Singh of Gurha ${ }^{2}$ had been killed in the fighting. Sindhia's troops did not follow them to Khiria as it was in Orchha territory. After this Diwãn Bahadar Gambhir Singh with a large body of Thakurs plundered Kalyãnpūra, ${ }^{8}$ and was only porsaaded not to advance to Lalitpar by a handsome present from the bankerṣ of that town. Diwân Bahādur accordingly left Lelitpur and marched north encamping on the bank of the Kherar nadi at Burenro, near Jakhora. A detachment of one company of foot, one of artillery and one of cavalry arrived at Sirsi. ${ }^{5}$ Diwên Bahadar Singh met them at the head of 1,000 foot. As soon as Mardan Siagh heard of this he went to his assistance, and by two hours after sunrise Sindhia's force was defeated and fled into Sirsi. The Bundela army went to Tslbehat, and attacked the fort, cannonading continuing day and night. But when Sindhia's force from Lalitpar had joined that from Sirsi and both pressed the Bundelas, they left Talbehat and retired to Bijrotha. ${ }^{6}$ At this time an order was received from the Agent to the GovernorGeneral that fighting was to stop, and the matter to be left for the decision of the Sapreme Government.

In 1812 Colonel Filose from Gwalior, the Mir Munshi from the Agency and Nanneju Thakur from Tehri met at Sindwâha, ${ }^{7}$ and there the Batota treaty was framed. Diwân Bahădur Gambhir Singh and Kunwar Umrao Singh were allowed to retain possession of their provious shares. In 1838 the fort at Nanora which had been destroyed by the colonel, was rebuilt. In 1839 Diwãn Bahādnu Gambhir Singh died, and was succeeded in the jagir in the same year on Chait B. 11 by his son Diwnn Bijhe Bahādur Dalip Singh. He tras a skilfal rider, wise, a good schotar in the Shästras, and devoted himself to the worship of Gopålji. He died at Banptri in 1905 on Magh S. 11 (1849) and was succoeded by Diwan Bijhe Bahădur Mazbüt Singl (the author of this book). Till 1863 he was a child, but oarly in 1864 edited the Bindprakash in Hindi, a book which contains extracts from all the Shästras and Puranas; and which is of great ase to scholars of the Veda. In 1865 he rebailt the fort at Nanora, which had been destrojed by

1 In Orchha, 4 miles in..F. of Mahroni.
86 miles F . of Mahroni.
8 In pargana Lalitpur (Jhansi distriot) 8 miles E. of Lalitpur.

- A small village on the Kherar Nadi 2 miles N. of Jakhora which is 17 milen N. N..W. of Lalitpar.

6 4 miles S. S.-E. of Jakhora.
6 See note 135.
718 miles S. E. of Lalitpar; there are here the tombs of some members of the fumily of Major Alexander, a French officer serving in Sindhia's army, and whose descendents beld the neighbouring village of Jaria in jagir.

Sindhia's force. In 1868 he constructed a tank in Karranal and more recently another emaller one in Gudūwal.' In 1874 he began a garden in Jikhlon which still exists, and which with God's help shall be improved. In 1876 he edited a manual named Nitchandar in very simple Hindi, which can be used by all religions.

1 In Gwalior 6 miles 8. of Chasderi.
8 On the Betwe, 11 miles W. of Lelitpar.

## Faqir Khayr-ud-Din Muhammad, the Historian of Shah 'Alam.-By E. Devison Ross, Pe.D.

Our information with regard to the historian Faqir Khayr-ud-Din Mubammad Ilähābādi is principally derived from what he himself tells ns in the course of his works. Of these, so far as I am aware, three only have hitherto been known to scholars, namely: 1. The 'IbratNama, or "Book of Warning" described in Rien's Catalogae of the Persian Manuscripts in the British Museum, Vol. III, p. 946, and in Sir H. Elliot's Hiṣtory of India, Vol. VIII, pp. 237-254. 2. The JaunpürNama, a History of Jannpūr, described by Riea loc. cit. Vol. I, p. 311 ; 3. The Balwant-Nama, described by Sir H. Elliot loc. cit. Vol. VIII, p. 416, which is another title for the Tuhfa-i-Taza, branslated, by F. Curwen and printed by the Allahabad Government Press, 1875. Of the first of these works the late Dr. Chas. Rieu wrote as follows: "The 'Ibrat-Nama is the fullest and most accurate acconnt we possess of the chequered career and troubled times of Shäh 'Alam, and it has all the value of contemporary record, penned by one who had taken an active share in some of the principal transactions of the period, and was personally acquainted with the most prominent actors on the scene."

The Jaunpūr-Nama contains the history of the town of Jaunpurr from the middle of the 14th centary down to the time of Akbar. It was written for Mr. Abraham Willard, as was also the Tuhfa-i-Tãza (or Balvant-Náma), which contains an account of the Rājas of Benares.

The details concerning their author which we derive from these works are very meagre, and only cover a period of about eight years. There is, however, another work by Faqir Khayr-ud-Din in the Library of the Asiatic Society of Bengal which throws much new light on the author and his personality. This little book, which ouly comprises 45 folios, is called by the vague title of Tazkirat-ul-‘Ulama or "Lives of the Learned" and is divided into three faşls and a khatima.

Fasl I. Contains a short sketch of the history of Jnanpūr.
Fasl II. Notices of eminent men. This section contains quotations from such 'well-known works as the Tarikh-i-Firüz-shahi and the Tabaqat-i-Nasiri.

Fasl III. An account of the Foundation of the Madrasah of Jaunpür, and the methods adopted for bringing together in that city studénts and scholars.

Khatima. Concerning the author.
It is this Khatima or "conclusion" which contains the frash light on our author to which I have referred, and which forms the staple of the present article. In it Khayr-ud-Din also gives a complete list of his works up to the time of writing, that is A.D. 1801 (A.H. 1216). The list is a long one, amounting to upwards of 30 works, and concerning most branches of Mohammedan lore. It is strange that so few of them should have reached posterity. Of all these works, the one whose disappearance (or perhaps non-appearance, for he speaks of it as incomplete) is to be most regretted is the Kitab-l-'Alam-Ashüb, "A History of Hindustan from the time of the advent of the great King of Iran down to the time of Amir-ul-Umara Mirzß Najaf Khān."

I have decided to print the text of this Khatima and in this place merely to sum up the principal events in the author's career which are to be derived from the available sources above enumerated.

Fagir Khayr-ud-Din Muhammad was born in Allahabad in A.D. 1751. He began his studies at the age of eleven, and completed his course in five years, under the instruction of Sayyid Muhammad Husayn Müsavi of Aurangābād, who was held in the highest esteem, we are told, by rich and poor in Allahabad. In A.D. 1771 his master died, and Khayr-ud-Din proceeded to Jannpür to study under Maulana Muhammad 'Askari, with whom he read many works. In Jannpūr he also gave lessons and began at his time to write books. At the end of sixteen months he returned to Allahabad, where he began to teach in his own Madrasah. Shortly after this, however, in A.D. 1772, the district of Allahabad was placed by the "Great Sahibs," under the charge of Nawwàb Shujä'ud-Dawla, who confiscated the stipends and endowments of all teachers and shaykhs: and Khayr-ad-Din was consequently compelled to close his Madrasah. He threw himself on the mercy of the "Great Sahibs" who took him into their employ and charged him with important duties. The next twenty years of his life he seems to have spent partly in the service of Shāh 'Alam, partly in the employ of varions English and native officials, and partly in teaching in Allahabad or Benares. In 1783.4 we find lim employed as confidential agent by Mr. James Anderson, the British Resident in the camp
of Scindhia. In 1785, owing to a severe illness, he took leave of Mr. Anderson and returned to Allahabad. "He then attached himself to the fortunes of the Shāhzāde Jahändir Shah, the eldest son of Shahjahān, whom he assisted in his attempt to seize upon the Delhi Government, and by whom he was treated, according to his own statement, as the most trusted friend and adviser. " 1

In A.D. 1787 he proceeded to Lucknow : and after some time again returned to Allahabad. In 1793 his then master, Mr. Trevis, was appointed Judge of Jannpiri, and Khayr,nd-Din accompanied him thitherAfter few months, however, Mr. Trevis was transferred to the Appelate Court at Benares, and was succeeded in Jannpūr by Mr. Abraham Willard, whose service Khayr-nd-Din now entered. There is, however, a discrepency in the dates here, for the Jaunpūr-Nama says that Mr. Willard was appointed in 1796, whereas according to the Tazkiratul.'Dlama he must have succeeded to the Judgeship of Jaunpar in 1793 or 1794.

Khayr-ad-Din spent the last years of his life in Jaunpūr, in the enjoyment of a Government Pension granted in recognition of his faithfol services in negotiation with the Mahrattas.

He died about the year A.D. 1827.
The following is the complete text of the Khatima:-








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 1 Riga floc. cit. Fol. III, P. 946, from the 'Ibrat-Nama:
filf








 بسركار عدالت هندوستلنيان موقون گُرديد و واحبان هاليشان جـج

 شودن بـلا









 در مبارت عر'يا وترجهه





 J. I. 19
































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TThę Licchavi race of ancient India.—By Satis Chandra Vidrãbeưṣaṇa, M.A., M.R.A.S.

Since time immemorial, India has been hospitable to foreign races. In the Mabābhărata and Purāpas we read

Varisnt forms of the word Licchavi. of warlike races entering India from outside,
getting admittance into Hinda Society, and being absorbed in one or other of the four great castes of the Indian people. In this paper, I shall give'an account of a rase that came into our conatry, in abont the 8th centary B.C., and gradually identified itself with the Ksatriya or military caste of Northern India. This race is called Licchavi. The Pali chroniclers have so designated it. In the Brahmanic Sanskrit works the race has been called Nicchivi. The Suvarnaprabhāsa-sūtral of the Northern Buddhists designates it as Litsavi. In the ancient inscriptions the variant form Licchivi is found sometimes to have been used, while the Tibetan authors have occasionally named it as Li-tsa-byi.

In the well-known Hindu Socio-religious institute called Manusamhitā the Nicchivis have been reckoned
The Origin of the Licchavirace.
among the Vrātya K şatriyas. Mann says: ${ }^{2}$
"From the Vrātya Kşatriyas are born the following, viz.: Jhalla, Malla, Nicchivi, Nała, Karaṇa, Khasa and Draviḍa."

Now let us examine the meaning of the word Vrätya used by Manu. The word Vrätya has been defined in the Hindu çāstras as signifying one who has lost caste through non-observance of the ten principal Hindu ceremonies (samskäras) especially of investiture with the sacred thread. This definition of the word Vrātya slows that the Licchavis, though included in the Kgatriya caste, did not in the time of Manu wear sacred threads nor observe any of the ten principal rites enjoined in the Brähmañic caastras. In fact they were even then regarded as foreigners, and ns such did not conform themselves to the rules of Hindu

1 Suvarna-prabhāsa Sūtra, chap II.
2 Manusaphitā, chap. X, verse 22.

Sobiety. They were however oven then regarded as a respectable people. In the Jataka ${ }^{1}$ of the Sutta-pitaka, which is a most ancient Pali canonical work of the Buddhists, we read of a barber's son, who desired to marry a Licchavi girl, but was severely reprosiched by his father foo netting his mind on such forbidden frait as a high-born lady of the Licchavis.

Sanang Setsen, in his history of the Eastorn Mongols, says that the Sakga race was divided into three sections, vis., Sakya the great, Sakya the Licchavi, and Sákya the mointaineer. Alexander Csoma de Koros has recorded the same triple division of the Sakka race from Tibetan sources, and has said that Sakky is identical with Scythian. The Liochavis must on this supposition be regarded as a branch of the Soythian race.

Samuel Beals observes that the scene found at Sānchi (in the Bhapal State) probably refers to the Stūpa raised by the Licohavis over their share of the relics of Baddha. The appearance of the men shows they were a northern race; their hair and flowing hair-bands and musioal instraments agree, according to Beal, with the account given of the people of Ku-che. It is stated both in the Pali and Northern Buddhist books that the Licchavis were distinguished for their bright-coloured and variegated dresses and equipages. All the evidence seems, in the opinion of Beal, to point to these people being a branch of the Yue-chi.

I am inclined to believe that the Licchavis came into India immodiately from Nisibis, which was, according to Ptolemy, one of the mott notable towns of Aria (near modern Herat). In the Manusaphita the Licchavis are called Nicohibis which, in my opinion, correspond exactly to the Nisibis ${ }^{8}$ of Ptolemy. The northern parts of Aria were, according to him, possessed by a people called Nisaioi or Nisibi. I further suppose that the same race has been called by Arrian as Nysaioi. Arrian* observes that the Nysaioi were not an: Indian race bat descendants of those who came into India with Dionysos. The district in which he planted his colony he named Nysaia, after Mount Nysa, and the city itself Nysan These stories about Dionysos are of course but fictions of the poets. Nysa the so-called birth-place of the wine-god has, hovever, been identified by M. de St. Martin with the existing village called Nysatta on the northern bank of the rivers of Kabul. Wilson identifies it with, Nisse north of Elbarz mountains, between Asterabad and Meshd.

[^43]This place, he adds, ought to be of Median or Persian foundation, since the nomenclature is Iranian, the name of Nysa or Nisaya, which figures in the cosmogonic geography of the Zend Avesta, being one which is far spread in the countries of ancient Iran. Megasthenes in the 4th century B.C. found in India a race called Nesei. This, I believe, was the same as Nicchibi or Licchavi.

Looking at the celebrated canonical Pali scripture, called Mahā-

## The Licohavis regarded as enomies by the Ruler of India.

 parinibbāna Sutta, supposed to have been rehearsed in the first Buddhist conncil in 543 B.C.,' we obtain an interesting account of the Licchavis and seven other cognate clans, unitedly called Vajjis. The Licchavis are there represented as living in Vaisáli corresponding to the modern village of Besārh, in the Mazaffarpur district. In the first chapter of the work, we find tbat the great Monarch A jäta.catru, of Magadha, (Behar), the then paramount ruler of India, builds a fort at Patali-grāma and sends two of his Brähmana ministers to consult Buddha, as to the feasibility of subduing or driving out the Licchavis and other Vajjian tribes. Buddha replies to them; saying that so long as the several clans of the Vajjis remained united, they would be invincible. However, in the course of three years (i.e., in 540 B.C.) the nforesaid monarch, Ajätacatru, brought about such a disunion among the several clans that they became tery easily conquered. In chap. VI of the afore-mentioned Malāparinibbāna Satta we find the Licchavis claiming and actually receiving one-eighth part of the relics of Buddha's body. It was in 543 B.C. that Buddha entered Nirvanya, and it was in the same year that the relics of his body became distribated among the Licclavis of Vaisáli, Mallas of Kusinagara, and others. Oue of the most interesting facts to .be noticed in connection with this episode is that the Licchavis are described there as claiming Keatriyaship. They are stated there as sending messengers to Kusinārā, saying: "Bhagavān Buddha was a Ķ̣atriya, we, too, are Kşatriyas, so we, too, deserve'a part of the relics of Bhagavàn's body." Another interesting fact to be noticed is that the Licchavis had, at the time, a republican form of government; they had then no kings, bat simply obeyed the orders of their elders.In the Mabā vapsa, the well-known Pāli chronicle of Ceylon, compiled in 431 A.D., we find the descendants of

> The Licchavi dynasty ruling over India. the aforesaid Ajāta-gatru reigning in Magadha up to the year 471 B.C. It was in this year that a member of the hicchavi race was installed in the sovereignty of Magadha. It is a curious fact, of Indian history, that the Licchavis, who were looked down as outcastes up to the year 540 B.C., succeoded, so soon as in 471 B.C., to see one of their members eleeted monarch in

## 1902.] S. C. Vidyäbhūsaṇ-Licchavi race of ancient India.

the capital city of Magidha. In spite of all efforts on the part of Ajäta-çatru and his sinccessors, against the Licohavis, the latter held their own in India, and succeeded in securing the good feelings of the people here. This member of the Licchavi race, who was elected sovereign over Magadha, is named Sisíninga, the founder of a dynasty called S'iśnāga. He is stated in the Mahāvamsa to have at first been Primeminister to King Nāga-dasaka, the last royal descendant of Ajata-catru. There are several atthakathăs, or Pali commentaries, on the Mahāamsa preserved in the ancient monasteries of Ceylon. In the atthakatha of the priests of the Uttara-Vihăra of Anurādhapura it is recorded that Sisungiga was a great statesman, and belonged to a very respectable family of the Licchavis. He reigned in Magadha for eighteen years. His son Kālāśoka reigned twenty-eight jears. Kālăśoka had ton sons, who ruled the empire for twenty-two years. It was during the conjoint administration of the sons of Käläsoka that the Nanda dynasty became powerful in India, and usurped the sovereignty of Magadha. This is a very brief account of the Sisínagga dynasty, supplied by the celebrated Pāli Mahā̃amsa of Ceylon. The Vip̣̣upurāpa of the Hindus gives a slightly different account. We have found that, according to the Maliā from 471 B.C. to 403 B.C. But according to the Vippuparãpa (Book IV, Chap. XXIV) they ruled over Magadha for 362 years, beginning their reigns a little earlier than at the date fixed by the Maha. ramsa. It is scarcely desirable to enter here into any controversy on the subject, but I must say that though the members of the Licchavi race exercised sovereigaty over Magadha for a short period only, they left a distinguishable mark in the religions and political history of Iudia. In the Manu-Samhita we have seen that the Licchavis did not strictly observe the Brahmanic rites.
 a distinguishable mark in the religious history of India. The Mahāparinibbāna. Sutta, on the other hand, describes them as devotees to Buddha and his religion. In the well-knawn Divyivadāna (Chaps. III and XI) of the Buddhists of the Northern School we find the Licchavis faithfully serving Buddha on special occasions. In the Cullavagga of the Vinaya-pitaka, and in the Mahāvamsa, we find that, though followers of Buddha, they did not observe the Buddhistic discipline to the letter. It was they who in 443 B.O., having declared some ten indulgences as being allowable to priesthood, brought about the first schism in the Bnddhist Church known as the Mahasamgiti heresy. . Ten thousand Licchavi priests received on this occasion the penalty of degradation. In spite of all these, we must acknowledge the Licchavis to be the wisest and most learned representatives of the Buddhist
dommunity of old. In the celebrated canonical Pali gcripfure, called Amgattara-nikāya (Book III) .we read of two Liechavi youths named Abhaya and Panḍita-Kamāraka holding very high:metaphysioal discnssions with Ananda, while in the Maiā̄vamsa (Chap. XCIX) the Licchavi princes of Vaisąli are mentioned as being the typioal examples of those who live in peace and harmony. The famous Buddhaghoga of the 5th century A.D., in his Päli commentary on the Dhammapada (Chap. XVI, verse 7), cites an aneodote in which Buddha is made to hold a very high spiritual conversation with the Licchavi priests of Vaisali.

The political influence which the Licchavis attained in India did not

The political and soolal influences of the Licohavis. coase with the termination of their sorereignty in Magadha. It is true they were ancceeded by kings of the Nanda dynasty, bat the people continued to respect them as ralers. The Buddhist works, of both the Northern and Soathern Schools, have uniformly designated them as Kumāras, Kumãáa being a hereditary titlo of the Licchavis. Now the word Kumāra is a synonym for Rāja-putra and signifies a prince. In the Gayn copperplate Inscription of Samudra. Guipta, we find that, in about 320 B.C., the celebrated Indian emperor, Chandra Gupta, married Kumāraidevi, who was daughter of a Licohari prince. ${ }^{1}$ "That the Licchavis were then at least of equal rank and power with the early Guptas is shown by the pride in this alliance manifested by the latter:"
$\therefore$ It is carious that kings of Nepal, Tibet, Ladak and Mongolia, too, trace their descent from the Licchavis. In

> The Nepal - branch of the Licchavi race. accordance with the Vamkāvali of Nepal, and the inscriptions pablished in the Indian Antiquary (Vols. IX, XIII, and XIV), we find that the Licchavis gradually attained such a great power and honour in Nepal that they became regarded there as a branch of the Surya-vamsa or solar race The Nepal kings carry their descent from the san and come down to Dasaratha. After Dasaratha there are said' to have been eight kings in lineal succession, and then there was the illastrions Licchavi. After Licchavi there were some kings and then was born the illastrions king Supug̣pa. The 24th in descent from him was Jaya-deva I, who has been treated by Bhagavan Lal Indraji as the first historical member of the Licchavi family and the founder of the Nepal branch of it. After Jayadeva I there were eleven kings and then came Vraa-deva, Samkara-deva, Dhirma-deva, Mäna-deva, Mahi-deva, and Vasanta-deva. It is unnecessary to enumerate here the numerous kings who succeeded Vasanta-deran

[^44]But it is essential to state here that all the kings, succeeding Jaya-deva I, belonged to the Liochavi race. Jayadeva I reigned in Nepal about 330-355 A.D. There was intermarriage existing among the Licchari families of Nepal and the ruling families of Magadha, Ganda, etc. The inscriptions present us with several instances of double government in Nepal. Thus Amęu-varma and Vrpa-deva were simultaneonsly ruling in two different places of Nepal. Amequ-varma, who, acoording to the Chinese pilgrim, Hwen-thsang, belonged to the Licchavi race, reigned in Nepal 635-650 A.D. That the Licchavi tribe was one of great antiquity and power, in the direction of Nepal; is shown by the writings of Fa-hian and Hwen-thsang, which connect them with events that preceded the Nirvãna of Buddha. The Licchavi conquest of Nepal is assigned to Newarit, whose age is unknown. Nothing need be said here about the Lichavi rulers of Nepal descending from the sun. All the powerful rulers of India have claimed their descent from either of the two myth$i_{\text {cal personages named the Sun and the Moon. I consider Bürya-vamban }}$ and Candra-vamisa as terms of compliment, which were rightly bestowed on the ruling families of India and outside. If there is any honour indicated by the term Sürya-vaméa, that honour was pre-eminently deserved by the Licchavi rulers of India and Nepal, and it is not at all sarprising that they actually received it.

The first king in Tibet was Nya-khri-tsan-po who, according to the Tibetan books, belonged to the Licchavi race.

The Tibet branch of the Licochavi race. The 27th in descent from him was Lha-tho-tho-ri, and the 32nd was Sran-tsan-gam-po. This last King, who reigned in Tibet, in 627 A.D., had two principal wives-one being taken from China and the other being the danghter of Amisn-varma, the Licchavi king of Nepal.

The ralers of Mongolia and Ladak do likewise claim descent from the Licchavi race. But so many changes have taken place in the ruling families of Nepal, Tibet, Mongolia, Ladak, etc., that it is at present impossible to trace nnmixed Licchavi blood in the people of those countries.

Nothing is definitely known to us of the fates of the Indian branch of the Licchavi race that lived in the early

## The Indian branch of the Licchavi race.

 centuries of Christ. With the revival of Brahmanism in India, in the 7th century A.D., there occurred a thorough re-organization of ancient castes. The Licchavi kingdom of Vaisāli began probably to acoept Brahmanism at this time, and we are not surprised to read the records of Chinese pilgrims (such as those of Hwen-thsang), who say that in the 7th century A.D., Buddhism was on its decline in Vaíāli and heretical doctrines J. I. 20.were much prevailing there. Since the 7th century A.D. there have taken place in India so many reconstructions of the ancient castes, made partly on the principle of ethnological, partly philological, partly socioreligious and partly political and other divisions that it is at present impossible to discover a single drop of Licchavi blood in India, without the help of chemical analysis. It has already been said that Vaisáli, in which the Licchavis lived in ancient days, corresponds to modern Basärh in the Muzaffarpar district. They gradually dispersed over different plaoes in the districts of Goruckpore, Shahabad, Champaron, etc. It is therefore not altogether improbable that some of the people of the military caste of these districts may bear some remote relationship to the Licchavis of old. Writers of Indian history have not yet made even mention of the Licchavi race in their respective works. The present paper of mine, though extremely meagre, will, I hope, serve to draw the attention of scholars to the investigation of the history of this once most powerful race of India.

## The Vratya and Samkara Theories of Oaste.-By Satis Candra Vidid- 

No institution has exercised a greater influence upon the interests of mankind than that of caste. There was caste among the Egyptians, Colchians, Iberians, Medes, Persians and Etrureans; and in the Now World it was found among the Peravians and Mexicans. It existed among the earliest Attic tribes and Spartans whose trades and ocoupations were almost all hereditary. The laws of caste also prevailed among the Saxons. It is, however, in India that the caste system has reached its highest development, while in most other countries it has gradually ceased to exist. In India there is a permanent separation of classes with hereditary professions assigned to each, and the most ancient documents regarding the origin of caste are to be found here. As the subject is being scientifically investigated by the Director of Indian Ethnography, I shall in the following pages give only a very brief outline of Vrätya and Sapkara castes making only an incidental mention of the original castes.

## I. Original Castrs.

According the Hindu Cāstras, castea may be classified as (1) müla (original), (2) vrattya (fallen), and (3) sapkara (mixed). In India there are four original castes, viz. : Brāhmapa, Kịatriya, Vaiçya, and Çüdra. Mañ* says:-
"The Brähmapa, the Kpatriya, and the Vaigya castes are the twioe-born ones, but the fourth, the Çüdra, has one birth only; there is no fifth caste."

The daties enjoined on the four castes are thus stated by Vapiethat:-

[^45]150 S. C. Vidyabłuuspapa-Vratya and Samzara. Theories of Caste. [No. 2,
"The Brāhmapa must study, teach, offer sacrifice, act as a priest, and give and accept gifts. The Ksatriya should stndy, offer sacrifice, give gifts, and govern and protect people. The Vaicya should stady, offer sacrifice, give gifts and should cultivate lands, conduct trade, tend cattle and may adopt the profession of usury. The Çüdra should only serve the aforementioned three castes."

According to the Rigveda* these castes sprang from Brahma the Supreme Being, in the following way :-
"The Brặmana was his moath, the arms were made Kģatriya, his thighs were what is called Vaiçya, and the Çüdra sprang from his legs."

## Seven Dripas.

These four castes existed in six ont of the seven dyipas that were known to the ancient Hindus. In the Vippapuräpa $\dagger$ we read :-

 मूर्स्स । (वीश्रिष्ठ संटिता, रब बख्याष:)।

* आध्सबोर्ब प्रुखमाषोव्

बाह्य राजन्यंतः।
उस्र वदस्स बक्ष वैष्यः
पघ्यां मूसोर्जायत। ( करवेद २•।ع•।२叉)॥
$\dagger$ चलु-大ोपः।
प्राज्ता चनिया वैष्बा मध्ये प्रूद्राख्य भागश्रः।

चच-क्षोपः।


श्राब्लणनोपः।


कास तोपः।

"In Jambu-dvipa (India) there live Brahmapa, Kipatriyn, Vaipya, and Çüdra. In Plakea-dvipa these four castes are named, respeotively, Ārya, Kura, Vivimị̂n, aud Bbārin. In Çalmala-dvipa they are designated as Kapila, Arupa, Pita, and Krapa respectively. In Kupa-dripa they are called, respectively, Damin, Cuepmin, Sneha, and Mandeba. The Puplkara, Pugkala, Dhanya, and Tispa castes (that represent, reepectively, the Brähmapa, Kşatriya, Vaiçya, and Çadra) iuhabit the dvipa called Krauñca. In Çāka-dvipa the Brähmapa, Kpaariya, Vaiçya, and Gẽdra are, respectively, named as Maga, Maçaka, Mānasa, and Mandaga. In the seventh, called Pagkara-dvipa, there is no superiority or inferiority among men."

Arya.-In the above we have found that the Brahmapas called Aryas lived in Plakpa-dvipa, probably identified with Arisna (the land of the Arii). Aria (bounded on the north by Margiane and a part of Baktriane, on the west by Parthia and Karmanian desert, on the sonth by Drangiane, and on the west by Paropanisadai) was a small province included in Ariana, which comprehended nearly the whole of ancient Persia.

Damin, etc.-The Damins were the Brähmanas of Kupa-dvipa (probably identical with Serike mentioned by Greek writers and inhabited by Damnai and other tribes). Galmala-dvipa in which the Kapila Brähmanas, and Kianuica-dvipa in which the Puģkara Brāhmapas lived cannot be identified with accuracy.

I do not know whether there is any particular class of Brahmapas

[^46]152 S. C. Vidẏßhụ̄̆ana-Vrātya and Saı̣kara Theories of Caste. [No. 2,
that are specially designated as Arra in India, and whether the Aiyar Brahmanas of Madras have anything to do with the Arya Brahmapas of Plakş-dvipa. The Kapila Brāhmanas that live in Surat, Broach, Jambusar, etc., cannot also with any degree of certainty be identified with the Brahmanas of that name that lived in Çālmala-dvipa. I have also got no document to identify the Pọ̣karaṇa Brāhmaṇas of Marwar, Gujerat, Bikanir, Ramgarh, etc., with the ancient Puṣkara Brāhmanas of Kraninca-dvipa. But fortunately for us the Maga Brahmapas that lived in C̄aka-dvipa can, with a pretty accuracy, be identified with the Brāhmans of that name that live in Behar and other provinces of India.

## Saka-dvipi Brāhmana.

Maga was the name of the Brāhmanas of C̄aka-dvipa. In the Sāmba and Bhavisya Purānas the Magas are described as a class of Brāhmapas who descended from the disc of the Sun. In the Purãpas* the name Maga is thus derived :-
"The blessed Sun-god is called Ma, and these Brāhmaṇas in virtue of their worshipping Ma are called Ma-ga."

Regarding the origin of the Maga Brāhmaṇas we find in the Purānas (such as Sāmba and Bhaviqya) an interesting story, the substance of which is given here: Prijavrata, son of Svāyambhuva Manu, was monarch over seven dvipas. After his death his son Bhavya became king of Caka-dvipa. He constructed a golden image of the Sun and also built a temple for the idol. But as there were no Brāhmanas competent to consecrate the idol he prayed to the Sun-god himself for doing the work. Then the Sun became absorbed in deep meditation and eight Brāhmanas suddenly issued out of his body. Immediately after birth they addressed the Sun as father and devoted themselves to the study of the Vedas and Upanishads. Thereafter the Sun-god asked the king to make over the temple to the charge of these Brāhmanas, who became worshippers of the Sun. On account of their worshipping $M a$ (the Sun) they became styled Ma-ga.

Their migration to India is thus described: Once Sāmba, the son of Bhagavān Cri-Krspa, became overtaken by leprosy. Finding no other means of averting the evil he approached Narrada and mournfully related to him the particulars of his disease. Narada advised him to worship Mitra (the Sun). Accordingly he built a golden statue of the

Sun and a temple for it. He used to offer worship to the statue overy day. By the grace of Mitra, Sàmba became oured of his leprosy. The place in which he worshipped the Sun was called Mitra-vana (the Sungrove) in the Panjab. Then Sániba became desirons of consecrating the temple and continuing worship of the Sun. Finding that the Brahmapas in India were incompetent to do the work, Samba consulted with Nārada and Gaura-makha about the mattor. They advised him to bring Brähmapas from Çaka-dvipa for worship of the Sun. Accordingly, with the consent of his father, Saxmba proceeded to Çaka-dripa riding on Garuda. There were eighteen principal families of Maga in Çaka-dvipa. At the earnest request of Sàmba, members of all these families came to Jambu-dvipa (India) and settled in a city built by Sāmba called Sāmba-pura (Multan). The temple of the Sun was entrasted to them. They consecrated and offered daily worship to the statue. In the seventh century A.D., Hwen-thsang saw in Maltan a magnificent temple with a golden statue of the San richly adorned, to which kings of all parts of India sent offerings. From Maltan the Magas came to Magadia and gradually scattered themselves all over India. The celebrated astronomer, Varăhamihir, who was a Šaka-dvipi Brahmana," was one of the nine gems in the court of Vikramẽditya.

Maga and Magi.
According to the celebrated Greek geographer Ptolemyt there lived in India in the second century A.D. a class of Brāhmanas called Brakhmanai Magoi. The country occupied by these Brähmanas was abont the Upper Kaveri, and extended from Mount Bettigo eastward as far as the Batai. According to Mr. J. Campbell Brakhmanai Magoi of Ptolemy meant 'sons of Brāhmanas,' that is, Canarese Brāhmans, whose forefathers married women of the country, the word Magoi representing the Canarese Maga, 'a son.' Lassen supposed that Ptolemy, by adding Magoi to the name of these Brāhmanas, meant to imply eithor that they were a colony of Persian priesta settled in India, or that they were Brahmanas who had adopted the tenets of the Magi; and expresses his surprise that Ptolemy should have been led into making such an unwarrantable supposition.

In my humble opinion the Brakhmanai Magoi mentioned by Ptolemy were the same as the Maga Brähmanas mentioned in the Purāpas. The word Magos was a very honourable title, being equivalent to " Venerable"

[^47]or "Doctor." It was given by the Akkadians, the primitive inhabitants of Chaldea, to their wisemen, whose learning was chiefly in what we now call astrology nnd magical arts. The word is found in cuneiform inscriptions. It was adopted by the Semitic inhabitants of Babylon, and from them by the Medians, Persians, and Greeks. The question as to why the Brähmans of Çāka-dvipa were designated Maga lias been and may still be answered in many different ways. Some scholars have identified the Çăka-dvipi Brähmans called Maga with the Median priesthood called Magi. I am inclined to sappose that the word Maga was a mere title of honour bestowed upon the Brāhmans of Çaka-dvipa nnder circumstances parely political. It is known to most of as that the title Majumdar (or Majmu-dir) borne by some very respectable classes of the Hindus is a Mahomedan word (composed of Arabic Majmut and Persian suffix dar signifying a record-keeper. I would in the same way believe that the Brāhmans in the north-western frontier of India got the designation Maga from the Persian or other foreign rulers." It is a wellknown fact that the Indian Brähmans have been designated by Greekwriters as Sophists. Are not Maga and Sophist identical in meaning?

## Position of Sāka-dvipa.

Now it is necessary to add here a few words about the probable modern site of Çāka-dvipa. Çāka-dvipa may with pretty accuracy be identified with Sogdiana; at any rate the latter was included in the former. The river $I k s ̣ u$, that according to the Vig̣nupurāna (Book II Chapter IV) flowed through C̄̄ka-dvipa, is, in my opinion, identical with the Oxus that according to Ptolemy separated Sogdiana from Baktrians. The name Sogdianat exists to this day, being preserved in Soghd, which designates the country lying along the river Kohik from Bokhara eastward to Samarkand. The records of Alexander's expedition give much information regarding this country, for the Macedonian troops were engaged for the better part of three years in effecting its subjagation.

The Mahabhārata $\ddagger$ helps us in determining more exactly the site

[^48]+ McCrindle's Ptolemy, p. 277.


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## 1902.] 8. C. Vidyíbhūsaṇ̊-Vratya and Saỵkara Theories of Oasto.

of the original home of the Maga Brahmans. In the Bhispa-parva, Chapter XI, we find that in Çāka-dvipa the Brähmans lived in the province of Mriga (Mrga), Ksatriyas in Masaka, Vaiças in Mānasa, and the Çūdras in Mandaga. Mriga mentioned in the Maliābhärata is undoubtedly a Sanskrit name for Margiane mentioned by Greek writers. Pliny says (lib. vi c. xvi) that Margiane was noted for its sunny skies and vines grew there in abundance. It lay confronting a tract of conntry in Parthia, in which Alexander had built Alexandria. The ancient city of Margiane * is represented by modern Merv.

## Saka-dvipi Ksatriya.

The province called Masaka of Çaka-dvipa, described in the Mahabhārata as inhabited by Ksatriyas, was no doubt the same as Maisoka (in Hyrkania) mentioned by Ptolemy. $\dagger$

The Kक্̣atriyas of Máaka (in Çaka-dvipa) referred probably to the Massagetai that lived in Margiana, Sogdiana and Sakai, etc. The Massagetai are mentioned by Herodotus (lib. i, c. cciv.), who says that they inhabited a great portion of the vast plain that extended eastward from the Kaspian. He then relates how Cyrus lont his life in a bloody fight against them and their queen Tomyris. Alexander came into collision with their wandering hordes during the campaign of Sogdiana as Arrian relates (Anab, lib. iv cc. xvi, xvii).

Antiquity of Sāka-dvīpa.
It should also be noted here that Marakand (nाबं), now called Samarakend, which was the metropolis of Sogdiana (Çāka-dvipa), was

[^49]156 S. C. Vidyăbhūṣaṇa-Vratya and Saı̣nkara Theories of Caste. [No. 2,
well known to the ancient Hindus. In the Vedic literature mention has been made of countries that lay even far off from Samarkand and Merv. Iu the Rigveda (7-18-19) we find mention of Yakẹu, which is probably identical with the Oxus. In 10-34-1 of the Rigveda mention has been made of the mountain called Majavat, where Soma plants grew abundantly and at the foot of which lay (according to the Matsyspurāpa, chap. 120-19) the lake called Sailoda, from which sprang the river also called Sailoda. This river is the same as Silis marked on geographical maps as Jaxartes (ukert Geographie der Griechen and Romer, vol. iii, 21, p. 238), which falls into the sea of Aral. In the Rāmāyans* we find that the people called Uttara-Kuru lived on both banks of the river Sailoda. The Uttra-Kurus, mentioned by Ptolemy as Ottorokorrhai in Eastern Tarkestan, have been described in the Aitareya. Brähmana of the Rigveda $\dagger$ thus :-
"In the north, on the other side of the Himalayas, there are the countries called Uttara-Kuru and Uttara-Madra. The people living there use ablution for attaining Brahmahood. The people who make religious bathing in this way are called Viräj."

In the above we have found that the rivers Oxus and Jaxartes, which flowed respectively through the southern and northern extremities of Sogdiana (Çāka-dvipa), were actually mentioned in the Rigveda-the oldest docnment of the Hindus. While frequent mentions have been made in the Vedic literature of the people who performed aacrifices, etc., round the Caspian Sea and Sogdiana, we do not there come across a single passage making even the slightest allusion to the people of sonthern or middle India. It is an undeniable fact that the forefathers of the Brāhmanas came from the North-West, settled themselves in Brahmāvarta (the Punjab), and gradually migrated towards the south. I therefore would conclude that the Çaka-dvipi Brähmans are the

[^50]remnants of the most ancient Brāhmans* that chanted the hymns of the Vedas and Upanięads in the land of Aryas in the North.West. The designation Maga (wise) acquired by them from Persian or other foreign ralers does not in any way detract the aanctity of these noble Brāhmans of old.

In the Purāpas Çāka-dvipi Brāhmans have been described as worshippers of the Sun. There is nothing strange in this description. All true Brähmans are worshippers of the Sun. I give here a translation of the Vedic hymn called Gayatri,t which is obligatory on all beat Brähmans of India to recite every day. It rans thus:-
"I adore that excellent lustre of the San-god that sends us intelligence."

Graha-vipra.
On the authority of the Brahmayāmala $\ddagger$ (chap. xiv) some

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 भूमध्ये च न्रसचारी दैवज्ञो दारकापुरे। जाविक्ये मैचिसे चैब पहविप्रेति बं घ्वकः।
बह्रदेश्रे धम्नवक्ता पासाले प्राक्तिसंशक:। सारसते गुमुखो गान्धारे चिच्रपयिड्डतः।
तोरहोष्ने सिधिविपो गाटके ॠच्बस्बचकः।
उद्याने च्योतिषो विपो ज्रत्वबे विधिक्षारकः।
बमाटे योगवेक्षा च विटाढ़े देवपूजकः।
राढ़ देश्पे उपाध्यायो गयायां तम्नधारकः।
बबिभे जाविप्रः स्याइ बाचार्ये मौड़़देश्रके।


158 S. C. Vidyābhŭşaṇ-Vrātya and Saṃkara Theories of Oaste. [No. 2, scholars* have asserted that the Graha-vipras (whose occupation consists in the science of planets) belong to a certain branch of the S'saka-dvipi Brāhmans. The Kula-pañji (family-record) of a certain class of Grahavipras does, in fact, corroborate the assertion. Jjotiş çāstra (the science of time and planets) is indeed regarded in the Süryya-siddlañta as having been first propounded by a person $\dagger$ who descended from the disc of the Sun (Çāka-dvipi Brāhmaṇa P). On the other hand, I should add here that the ancestors of other Graha-vipras $\ddagger$ were the same as those of other clasmes of Brāhmans in India. Referring to the Indian Brāhmans, who are designated as Sophists, Arrian § (in the second centary A. D.) observes:-
"To this class the knowledge of divination among the Indians is exclusively reatricted, and none bat a Sophist is allowed to practise that art."

## II. Vràtya Cabtige.

In the previous section we have found that each of the four original castes had to observe certain religious rites enjoined on it by Çāstras. Those members of the first three castes who wonld not observe these rites, specially those who failed to invest themselves with the sacred thread at the proper time, had to be degraded from their community. These unfortunate members were called Vratyas or fallen. Vratya is thus defined to be a Brąhmaṇa, Kệatriya or Vaiçya who has lost caste through non-observance of Çāstric rites. In the Manu-samhitäi|| the word Vrätya is thas defined :-
"Those children whom the twice-born beget on wives of equal caste, but who, not fulfilling their sacred duties, are excluded from the Sāvitri (investiture with the sacred thread), one must designate by the appellation Vrātyas."

[^52]§ MoCrindle's Megasthenes and Arrinn, p. 209.
|| ष्रिजात यः सवर्यार्ष जनयक्यव्रतांख यान् । तान् साविध्रो-परिघह्टान् प्रात्या इंत विभिर्दिपेत् ॥ ( मनुसंशिता २•। २•) ॥

In the Vedic literature, however, the :word Vratya bears a wider signification. There we find that all people-whether natives of India or foreigners-who were not within the pale of Brähmanic civilization were also included among the Vrātyas. In the Tāndya Mahābrāhmana of the Sámaveda (chapter 17, section 4) the Kauqitakis * have been specially noted as Vrātya and Yajñavakirna. The 17th chapter of the Tāndya Mahābrāhmana of the Sāmaveda $\dagger$ begins with the description of the following myth regarding the Vrätyas :-
" When the Devas ascended to Svarga some of their fellow-brethren still wandered on earth as Vrātyas. These latter being afterwards desirons of joining their fortnnate brethren, came to the spot whence they had ascended to Svarga, but owing to their ignorance of the hymn (Vedic), they could not accomplish their object. The Devas, sympathising with their less fortanate brethren, asked Maruts to teach them the necessary hymn. The Vrātya Devas, having thus learnt the hymn called Sodaga with the metre called Anustubh, ascended subsequently to Svarga."

The above, I think, in a mere allegorical way of describing how fereigners became from time to time incerporated in the society of Brähmans by learning the Vedic practices.

I have already referred to the fact that most parts of Central and Western Asia were known to the Hindis. In the 5th Book of the Atharva-veda $\ddagger$ we further find that to the Brāhmans of ancient India,

[^53]160 S. C. Vidyàbhūąnṇa-Vrātya and Sampkara Thèories of Caste. [No. 2, Gandhāris, Mūjavants, Çūdras, Mahārp̣̣as and Vāhlikas in the NorthWest wore not less known than the Angas and Magadhas in the east.

In the 15th Book of the Atharva-veda called Vrātya-kānda* the Vrātyas have been greatly extolled. Thus we read :-
" He, in whose house a learned Vrätya puts up for a single night, acquires mastery over all the pious people of this world. He, in whose house he resides for two nights, becomes chief among all the pions people of the sky. He earns all the virtues of heaven, in whose house a learned Vrätya resides for three nights. He is certainly destined to be supreme among the virtuous of the virtuous, in whose house the learned Vrātya becomes guest for four nights. He will certainly gain immeasurable virtue, in whose house the Vrätya will live for innumerable nighta."

The Vrätya Kāndạ of the Atharvaveda ends thus :-
"I bow down to the Vrātya in the weat by day and to the Vrātya in the east by night."

Mägadhas or the people of Behar have been repeatedly mentioned in the Vrätya Kāņ̣a. As the Vrātya people referred to in the Vedic literature-cannot, owing to distance of time, be identified with the people of modern India I shall illustrate my theory of the Vratya castes by referencen to the Manusamhita, \&c., the present recensions of which were, according to scholars, prepared abont the lst century A.D.

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Manc affords as a pretty long list of the Vraxtya people. In his list of Vrātya Brāhmans* we find the following people :-

Vratya Brahmana.-"From the Vrātya Brahmana spring the wicked Blirjja Kanṭaka, the Avantya, the Vātadlūna, the Puspadha, and the Çaikha."

In reality these people were distinctly foreign or aboriginal races.
Avantya.-Referred to in Baadhāyana (1,2,13) was probably the name of the Brähmaņa inhabitante of Avanti (Ujjain). The probable reason of the Avantyas being designated Vrātjas is that they were greatly influenced by Buddhism. Avanti, which formed the weatern part of the great kingdom of Malwa, was ruled by the eldest sonf of the Buddhist emperors of Magadha. Thus Asoka, who was emperor of Magadha, had at first been ruler of Aranti. So also was Aboka's eon Mahinda prince of Avanti. It is a well-known fact that the priests of Avanti took a prominent part in the great second Buddhist convocation about 443 B.O. In fact, Brāhmanism did not properly flourish in Aranti until about 71 B.C., when it declared independence of Malava. We can therefore fairly conjecture that the inhabitants of Avanti were called Vrätyas, owing to their leaning towards Buddhism.

Vata-dhana.-Enumerated among the northern tribes, is probably the same as Vethadina or Veţha-dipa described in the canonical Pali worka. According to the Maha-parinibbāna-sutta the Brahmanaas of Veṭha-dipa were devotees to Buddha and his religion. In chap. VI of the work it is distinctly stated that, on the demise of Buddha in 543 B.C., the Brāhmanas of Veţha-dipa claimed and actually received 8th part of the relics of his body on which they built a great stūpa. Veţha-dipa was situated in or near the district of Sahabad. We can thus well imagine why the Väţa-dhānas or Brāhmanas of Veţha-dipa were called Vrātyas.

Vrätya-Kṣatriya.-Among the Vrātya-Kapatriyas $\dagger$ Manu includes

* धार्बत् तु चायने विपाव् पामात्मा अण्जकाएक्तः ।

घावन्य बाठधाओ च पुष्पध: पूस रब च ॥ ? ॥ ॥ (मすुषंधिता, श - 『).

## $\dagger$ भधो मक्ती राअन्याद्य ब्रातब्निध्दिविरेव ध्र ।  घनकाषं क्रिया जोपादिमा: क्षनिय जातयः । वसलर्वं गता लोकी क्राइयादपूरेन थ 8 ही

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the Jhalla, the Malla, the Nicchivi, the Naţa, the Karap̣a, the Khasa, and Dravida. He further says: "In consequence of the omission of sacred rites and of their not consulting Brähmanas, the following Kpatriyas have gradually sunk in this world to the condition of Çüdras; viz., the Panp̣drakas, the Audras, the Draviḍas, the Kämbojas, the Yavanas, the Çakas, the Päradas, the Pahlavas, the Cinas, the Kirātas, and the Daradas."

It is scarcely necessary for me to observe here that most of the tribes mentioned by Manu as Vrātya Kı̣atriyas were foreigners. A few there are who were aborigines of India. Regarding each of these tribes a short note is added below :-

Jhalla.-This tribe still lives in Northern India under the name of Jんāl.

Malla.-The Mallas were a Buddhist people that, according to the Mahāparinibbāna-sutta, lived in Pāvā and Kusināra in the district of Gorackpore. Megasthenes and Pliny mention them as Malli, " in whose country was mouut Mallus, bounded by the Ganges.

Nicchivi.-The same as Licchavis, who, according to the Mahapari-nibbāna-sutta, lived in Vaisāli (moden Basārh) in the district of Muzzaffarpore. They were powerful in the 5th century B.C. Samuel Beal is inclined to identify them with a branch of the Yue-chi race $\dagger$ that lived in the western border of China. But I think the Nicchivis were the same as Nisibis or Nysaioi mentioned by Ptolemy and Arrian. They lived in Nysa, or Nissa north of Elburz mountains, between Asterabad and Meshd. In the 4th century B.C., Megasthenes saw in India a race called Nesei (probably the same as Nisibi, Nicchivi, or Licchavi). In the Ballāla-charita chap. XVIII, the Nicchivis have been regarded as pure Kquatrāyas and designated as Nikubhas.

Nata.-The Nats, $\ddagger$ who, according to Wilson, correspond in their habits with the Gipsies of Enrope, live in the districts of Bhagalpore; Gazipore, Oudh, Marwar, Kattywar, \&c. The Natas were, I think, a branch of the nomadic people of Sakai (in Central Asia).

Karana.-The Karanas were probably the same as the people of Khaurana who, according to Ptolemy, lived in Skythia in Central Asia. The word Korano that is found inscribed on old coins is probably the same as Karapa. According to Samuel Beal§ Korana and Kushēna are

[^55]1902.] S. C. Vidyābhūṣapa-Vratya ard Saı̣kkara Theories of Oaste. 163 only different forms of the same word. Now the Kushañ tribe, to which King Kanishka belonged, has been designated by Chinese authors as Kwei-shwang, which was a branch of the very powerful race called by Chinese writers as Yuechi that lived in Central Asia on the Chinese borders. It is therefore not altogether improbable that Karapa, Korana Kushāna, Kwei-shwang, and Khaurana were names of one and the same tribe that lived in Central Asia.

Now Karana is the name of a well-known Indian caste. People belonging to that caste live in various parts of India, oconpying social position below the Rajputs.

The people called Karana also live in the eastern hills of Assam, in Burma, and Siam.

Khasa.-The Khasas came from Kasia (Kashgar ?) in Skythia (in Central Asia) and settled in large numbers in the Upper Panjab, where they were, according to the Buddhist chronicles of Ceylon, subdued by Asoka about 260 B.C. They were chief.among the mountain tribes that, according to the Rājatarangiṇī, bordered on Kāśmira.

MoCrindle observes:-
"Baber knows also that a people of the name of Khas is indigenous to the high valleys in the neighboarhood of the eastern.Hindu-Koh; and with every reason, we attach to this indigenous people the origin of the name of Kashgar, which is twice reproduced in the geograpliy (of Ptolemy) of these high regions.*

The Khasas live in great number in Northern India under the name of Khas or Khasiya. Referring to the Khasiyas, Rev. Mr. Sherriugt observes:-
"This is an extensive tribe of Rajputs inhabiting the hill country of Garhwāl, Komaon, and Dehra Dão. Their right to the rank of Rajputs is questioned by some Hindus......................The natives of Kumaon look upon the Klasiyas as the oldest inhabitants of the province."

Dravida.-The Dravidians of Southern India, consisting of inuümerable tribes of diverse socíal positions, have been collectively designated as Kspatriyas (Vrätya) in as mach as they were noted for their valour even before the rise of the Andhra, Chola, Pändya, and other dynasties.

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Paundraka,-The ancient people of Puṇdra-bardhana correspond. ing to modern Dinajpur and Maldah in Northern Bengal. The worst specimens of the Paundrakas still live in Northern Bengal under the name of Pŭḍo.

Audra.-The people of Orissa.
Kamboja.-The Kämbojas were the people that inhabited the Hindu Kush mountain, which separates the Giljit valley from Balkh.

Yavana.-Probably the Bactrian Greeks. The Yavanas are men-
 etc.

Caka.-The people of Sakai bounded on the west by Sogdiana, on the north and east by Skythia, and on the south by Imaos (Boloor chain). According to Ptolemy* the country of Sakai was inhabited by nomads. They had no towns, but dwelt in woods and caves. The principal tribes living in Sakai were (1) Karatai, (2) Komaroi, (3) Komedai, (4) Massagetai, (5) Grynaioi Skythai, (6) Toornai, (7) Byltai, etc.

Pärada.-Pāradas were probably the people of Paradene in Gedrosia (Baluchistan).

Pahlava.-Probably the people of Parthia. They are mentioned in the Mahāblıārata (Sabhāparva, Chap. 32). In the Viạṇa-purāpat they are described as a Vrätya Ksatriya race conquered by Sagara and sentenced by him to wear beards. The Vallabhi gowalas of the present day may perhaps be traced to the pastoral tribes of the Pahlavas.

Cina.-The people of China,
Kiräta.—The Kirātas are a flat-faced people (decisively Mongolian in appearance) that are very numerous in Sikkim, east Nepal, Darjeeling; etc. According to Ptolemy Kirrhadia or the residence of the Kirätas lay in the east-north-east frontier of India notably in modern Tipperah. But in reality Kirrhadia included Sylhet, Assam, Kooch Behar and Rungpore too. McCrindle $\ddagger$ observes :-
"Although the Kirāta, long before the time in which he (Ptolemy) lived, had wandered from their northern fatherland to the Himālaja and thence spread themselves to the regions on the Brahmaputra, still it is not to be believed that they should have possessed themselves of territory so far south as Caturgrāma (Chittagong), and a part of Arakan. We can therefore be scarcely mistaken if we consider the inhabitants of this territory at that time as a people belonging to further India, and

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in fact as tribal relatives of Tamerai, who possessed the mountain reo gion that lay back in the interior . . . . ."

Darada.-The Daradas, mentioned in the Mahsbharata and Rajataraygini, were the people of Dardistan. They inhabited the mountain region which lay to the east of the Lambatai and of Souasteneg and to the north of the appermost part of the course of the Indus along the north-west frontier of Kaśmira. MoCrindle* observes:-
"This was the region made so famous by the story of the gold-dig. ging ants first published to the west by Herodotus (lib. iii, ccii) and afterwards repeated by Megasthenes, while version of it is to be found in Strabo (lib xv, ci 44), and in Arrian's Indika (sec. 15) and also in Pliny (lib. vi, cxxi and lib. xi, cxxxvi)."

Vrätya Vaiçya.-Referring to the Vrätye Vaiçyas Manu says:-
"From the Vrātya Vaiça caste are born Sudhanvan, Carya, Kārūş, Vijanman, Maitra and Sātrata."

Nothing is known about the people mentioned here. A little that is known about Kāruşa is noted below.

Kärlısa.-The people called Kärūsa are mentioned in the Viẹnud purāna (Book II, Chap. III). In the Mahabbharata we find that King of Karūsa† attended the sabliā of Yudhisţhirsm Some identify Kärūṣ with a part of the district of Shahabad, but I think the people called Kārüşa were the same as Calissae that, according to Megasthenes (McCrindle, p. 137), lived beyond the Ganges. $\ddagger$

From the above it is evident that the people of Parthia, Paradene, Balkh, Sakai, Skythia, Sériké, China, Dardistan, Nepal, Sikkim, Behar, Orissa, Northern Bengal, Southern India, Kirrhadia, etc., have all been called Vrātyas or non-observers of Vedic rites. In fact the foreigners and aborigines who were not followers of Brāhmanism were called reātyas.

* McCrindle's Ptolemy, po 107.
$\dagger$ fिखुपाल: सच घत: काह पाधिपतिषणा।

(मशामारत, षभापर्षं 8 ॠः)
$\ddagger$ Mr. Pargiter observes :-
Kärüsa, therefore, was a hilly country and lay south of Kasi and Vatse between Cedi on the west and Magadha on the east, and enclosing the Kaimur hillg, which are part of the Vindhyas; that is; it comprised all the billy country of which Bowa is the centre, from about the river Ken on the weat to the confines of. Viher on the east. It would have tonched Chedi on it north-west and Dacarna on ite weat (Jou nal, A. B. B., Part I of 1895, p. 255-56.)

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…. Fratya-stoma.-In the first paragraph of this section the distinci tion between a pure caste and n Vrạtya caste has already been indicated: It-now remains to give a short account of the sacrifice by which a Vrātya could be admitted into a pure caste. In the Tāpụya-pañca. vimiça Brähmapa of the Sāmaveda this sacrifice called Vrātya-stoma has been described at length. It is of various kinds, of which two may be mentioned here. The first, called Hina-vrätya, was a sacrifice that ras performed for the conversion of the unfranchised people, and the aecond, called Gara-gir, was that for the re-admission of the degraded ones.

The people called Hina-vrātyas" are thus described in the 'TāndyaMaläbrälmaṇa: "Verily the Hina-vrätyas are those who wander on earth as Vrätyas do not practise Brahmacaryya, do not till land, nor carry on trade."

The Gara-girst (lit. 'swallowers of poison') are thas described:
"Those are called Gara-gir who eat the food to be eaten by Brähmanas, who though not abused complain of being abnsed, who pauish those not deserving punishment, and who though not initinted speak the lnngaage of the initiated."

In the Tāndya-Mahābrāhmapa of the Sāmaveda and Çranta-Sūira of Lätyāyana it is stated that the Vrātya householder who wishes to perform the Vrätya-stoma $\ddagger$ should secure a turban, a whip, a small

## * होगा वा एते होयन्ते ये व्रात्यां प्रवसन्ति चहि मध्चर्यं चरनित्त व जिं वं बसिभ्यां बोड़़्रों वा एतव् स्तोमः समात्पुमर्षति।





Vide in this connection Rājārām Rām Krishna Bhagavat's article named "A chapter from the Tänḑa-Brāmapa" in the Journal of the Bombay Branch of the Royal Asiatic Society, Vol. XIX of 1895-97.







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bow (without arrows), a chariot (with boards), a cloth (with black borders), two pieces of woollen garmpnt, a silver coin, a pair of black shoes ( with ears), thirty-three cows, etc.

As soon as the sacrifice is performed he should give these things to lis old brethren who still remain Vrätyas or to a contemptuous Brähmapa of the province of Bihar (Brahma-bandhu Magadhadesiyāya). It

- is further stated that there should be at least thirty-three Vrätyas for performing this sacrifice. When such a sacrifice was performed the Vrätyas, having secured the rights and privileges of the twice-born castes, might afterwards learn the Vedns, perform sacrifices, receive presents and dine with Brāhmapas without being required to sabmit to penance. This is a very brief account of the Vrātya theory. It is, however, necessary to add here a few words about the "contemptions Brāhmans" of Vihāra (Magadha) who used to accept the gifte given by Vrātyas. I.suppose these Brằhmapns are now-a-days called Agradānis. .

Agradāni Brähmana.-According to the Brahmavaivarta Purạ̄n the Agradānis are a class of degraded Brāhmanas who receive presents pr take things previously offered to the dead. In the present days the Agradāni Brāhmaṇas receive in the Preta Çrāddha or obsequions ceremony such presents as sofas, wooden shoes, calves, gold pieces, sesamum seeds, \&c. They also receive all gifts in the Prayascitta (or the ceremony for expiation of sins). Now, this Prayscitta is nothing but a Vrātyastoma. I am therefore inclined to believe that the Agradāni Brăhmans of the present day are descendants of those Brähmans of Vilaar (Brahmabandho Magadhadeśíyn) who used to accept gifts from the Vrätyas in the days of composition of the Tāndya-Mahābrahmana and Lātyāyana ÇrautaSūtra.

It is very difficult to say at what period the Vrātya-stoma became stopped in India. Perbaps the real trath is that it was never stopped. It atill continues in a modified shape, under the name of Prăyaścitta. But the rigidity of the Hindu society of modern times forms a strong contrast to the flexibility of that of the ancient days. Social exclusiveness perhaps commenced in India with the Mahomedan invasion of the country in the 9th century A.D.; for, even as late as about the 7th century A.D. the Huns and other foreigners had been incorporated in the Hindu society and ranked as Kaptriyas.

$$
\begin{aligned}
& \text { प्राल्येज्यो प्रात्वधनाति ये त्रात्यचर्याया क्षविरताः स्युः ब्रध्मबन्धवे वा }
\end{aligned}
$$

(बाध्यायनोये श्रौतसूचे C । द)

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## III. Saírara Castes.

In later Sanskrit works the word Vrātya is very seldom found. The term that repeatedly occurs here is Samkara. It is thus defined by Mann*:-
"By adultery committed by persons of different castes, by marriages with women who ought not to be married, and by neglect of the duties prescribed by STästras, are produced children who are called VarṇaSamkara (or simply Sainkara)."

Thus, according to tradition, Samkara signifies those castes that are said to have been produced by a mixture of different castes. As the mixture can take place in innumerable ways the number of mixed castes is unlimited. Thus the four original castes by intermarriage can give rise to twelve mixed castes. These twelve by mixture among themselves and with the four original castes may produce handreds of other castes. In this way the mixed castes may be multiplied infinite-fold. This is a very brief statement of the traditional theory. My own theory about the Samkara is quite different. In my opinion, the Vrätya and other people, having entered the hierarchy of Brāhmanas, were called Samkara. The Samkaras were, in fact, the people (foreigners or aborigines) who entered the Brāhmanic society at a comparatively late time. Let me illustrate my theory by reference to the Samkara castes mentioned in the Manusamihita (Book X). The Samkara castes which, according to Manu, were produced from parents of different castes are shown below with a short note of mine appended to some of them :-

Ambaṣ! ha-is, according to Mann, son of a Brāhmaṇa father and Vaiśyr mother. But in all probability the Ambaştha is identical with the tribe called Ambautai that, according to Ptolemy, lived in paropanisadai (in Ariana) in the eastern part of the Hindu Kash mountain. Lassen thiuks that these Ambautai may have been connected in some way with the Ambastai that lived round the country of Bettigoi. The locality of the Ambastai is quite uncertain. In Yule's map they are placed doubtfully to the south of the sources of the Mahānadi of Orissa. According to McCrindle $\dagger$ the Ambastai represent the Ambastha of Sanskrit, a people mentioned in the Epics, where it is said that they fought with the club for a weapon. In the time of Alexander tribes of Ambasthas lived in the Punjab (McCrindle's Megasthenes, p. 149).

Nisada.-According to Manu, son of a Brālumaṇa father and Sūdra mother. But in reality Nişäda was the name of an aboriginal people of

* घ्यनिचारेग वर्गनामवेधायेद्येन च।
 † McCrindle's Ptolemy, pp. 160-161.

India mentioned in the Nirukta (3-8). In the Listyāyana-Çranta-Sūtra (8-2-8) mention has been made of Nişada-qramas (villages possessed by. Niṣädas). In the Rāmāyaṇa (Ayodhyā käṇa 50) we fiud that Guha, the lord of Nişādas, who reigned in S'ringaverapura was so pious that he showed hospitality to Ramachandra during his exile in the furest. Some say Sringaverapura lay in Berar ; others think it was situated in the neighbourhood of the district of Mirzapore, while a third class of scholars identifiy it with Sangroor.

Pārasava.-Same as Niṣāda.
Ugra (Aguri).—Son of a Ksatriya father and S'ūdra mother.
Avrita.-According to Mann, son of a Brāhmana father and Ugra mother. Arrta is perhaps the same as Abaortæ that, according to Megasthenes, lived beyond the Indus towards the Caucasus. McCrindle (Megasthenes, p. 149) observes : -
"The Afghan tribe of the Afridis may perhaps represent the Ab. aortm."

Abhira.-According to Maun, son of a Brähmaṇ father and Am. bastha mother. In reality the Abhiras (the Ahirs of common speech) were the pastoral tribes that inhabited the lower districts of the north. west as far as Sindh. The country of the Abhiras was called Abiria (in Indo-Scythia) that lay to the east of the Indus above where it bifurentes to form the delta. Some scholars maintain that Abiria was the same as Ophir of the Christian Scriptures.* According to the Viẹnuparāna (Book IV, Chap. 24) the Abhiras conquered Magadha and reigned there for several years.

Süta.-According to Manu, son of a Kqatriya father and Brāhmana mother. But Sūta was perbaps the same as Sete that, according to Megasthenes, lived in the neighbourhood of Dardistan.

Vaidehaka.-According to Mann, son of a Vaiçya father and Brāhmana mother. But Vaidehakas were perhaps a tribe of the aborigines of Videha (Darbhanga).

Candala.-According to Manu, son of a Sūdra father and Brāhmaṇa mother. This was in reality the name of the ferocious aborigines of India

Magadha.-According to Mana, son of a Ksatriya mother and Vaigya father. This was probably an aboriginal tribe of Behar.

Ksattri.-According to Mann, son of a. Sūdra father and Ksatriya mother. But according to Greek writers $\dagger$ the people that lield the territory comprised between the Hydraotes (Rāvi) and the Hyphasis (Biyas) were the Kathaioi (or Kaptriaioi) whose capital was Sangala. The name is still found spread over an immense area in the north-west of India, under forms slightly variant. A tribe of the Kgattris named

[^58]+ McCrindle's Ptolemy, pp. 157-58.

Kathis, issuing from the lower parts of the Punjab, established themselves in Surāẹtra, and gave the name of Kathiabad to the great peninsula of Gujerat.

Ayogava.-According to Mann, son of a S"ädra father and Vaiśyn mother.

Dhigvana.-According to Mana, son of a Brāhmana father and Ayogava mother.

Pukkasa.-According to Mann, son of a Nişäda father and S'ūdra mother.

Kukkuṭaka.-Son of a Südra father and Niṣida mother.
Svapāka.—Son of a Kṣntri father and Ugra mother.
Venn.-Son of a Vaidehaka father;and Ambaştha mother.
Sairandhra.-Son of a Dasyn father and Ayogava mother.
Maitreyaka.-Son of a Vaidelia father and Ayogava mother.
Kuivarta.-According to. Mnnu, son of a Niṣāda father and Āyogara mother. But the Kaivartas were perhaps a tribe of the original inhabitants of Bengal, etc. In the Rāmāyaṇa (Ayodhyākāṇdr 83) they are described as moving in cow-carts and (in the Ayodhyākānda 84) as possessors of five hundred boats.

Märgava.-The same as Kaivarta.
Daça.-The same as Kaivarta.
Kàavara.-Son of a Nis̨ãda father and Vaideha mother.
Andhra.-According to Mana, son of a Vaidehaka father and Kār-āvaia mother. The Andlras were perhaps the same as Andhare mentioned by Megasthenes as living near the upper Narmadā (McCrindle, p. 138).

Meda.-Son of a Vaidehaka father and Niṣāda mother.*
Pändusopäka.-Son of a Cap̣̣āla father and Vaideha mother.
Āhinḍaka.-Son of a Niṣäda father and Vaideha mother.
Sapãka.-Son of Caṇ̣̃ala father and Pukkasa mother.
Antyävaśayin.-Son of Caṇd̄āla father and Niṣāda mother.
In the above we have found that the so-called mixed (Samkara) castes are not mixtures of different castes, but are 'integral races of people whose ancestors were either aboriginal inlabitants of India or intruders from outside. I may also cite here a few iustances of castes that had previously been regarded as Vrātyas, but in later days were reckourd as Samikaras. We have already seen that the Karaṇa, Pauṇtraka, Malla, \&c., were regarded by Manu as V'atya Kథ̣atriyas. But in later Sanskrit

[^59]works they have been regarded as mixed castes. Thus in the Brahmavaivarta Purāpa the Karaṇa is mentioned as having been boru of a Vaicya father and S'ūdra mother, the Paundraka from a Vaiça father and Çundi mother, and the Malla from a Leta father and Tibara mother. The Bharjjakantakas, who, we have seen, were regarded by Mann as Vrātya Brāhmanas, have been described in the Gautama Saphita (Chap. IV) as a mixed caste born from a Brähmana father and Vaigya mother. The Yavanas, who were regarded by Manu as Vrätya Ķ̣atriyas, have been deiscribed in the Gautama-Samhita as a mixed caste born from a Ksatriya father and S"ūdra mother. The Kirāta mentioned in the Manusaminita as Vrātya Kşatriya has been described in the Ballalacharita as a mixed caste born from a Vaigya father and Brāhmapa mother.

Saraka-The Saräkas returned in the Government Census as a Jain or Buddhist sect have been mentioned in the Brahma-Vaivarta Purãna as a Hindu caste born of a Jola father and Weaver mother. In reality the Sarākas are immigrants from Serike (in Central Asia). The Jain sect called Saraogie is perhaps identical with the people called Sorgao* that, a,coording to Megasthenes (in the 4th century B.C.), occupied a tract of country lying above the confluence of the Indus with the stream of the combined rivers of the Punjab. According to Jain accounts, Saraogies are descendants of those Rajputs and Vaiças who were converted to Jainism by Acharyya Jina-sena in Khandela (north of Jaipar) in the year 643 after Mahāקira, i.e., in 116 A.D. Sorgae therefore in the 2nd century A.D. advanced as far sonth as Jaipar. I do not find any intimate relation between the Saraogies and Sarakas. However, both might perhaps have come from Serike (in Central Asia), one through the north-western frontier and the other through the north-eastern.

Kaiwarta, \&c.-The Kols, who are evidently an aboriginal wild people of India, have been designated in the Brahmavaivarta Purāna as a mized caste born of a Leț̄ father and Tibara mother. The Kaivartas, who were perhaps the original (and once very powerful) inhabitants of Bengal, have, we have seen, been described in the Manusamhita as a mized caste born from a Nişäda father and Ayogava mother, but in the Brahmavaivarta Purāna as that born from a Kpatriya father and Vaicya mother. The Andhra, Chola, and Pāndya tribes of the Dravidian people became in course of time reckoned as pure Kşatriyas. The Tāmila tribe of Draviḍa made several inroads iuto Ceylon, and the 5th centary A.D. five Tàmila, kings successively reigned in the island. The Tämils came towards the north, too, and the Tāmbuli caste of Bengal was perhaps formed by them. I think I need not cite any more examples to establish my theory of Samkara castes.

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Origin of Samkara Castes.-lt should be observed here that in the primitive stage of the Hindu society, when the foreigners and aborigines first came in contact with each other, intermarriage among different castes did perhaps prevail. The Brāhmana could marry girls of all the four castes, the Ksatriya of three caster, the Vaicya of two castes, and the S'ūdra of his own caste only. The children born of parents of different castes generally got the rank of their father. Mana" discusses the point thus :-
"69. As good seed, springing up in good soil, turns ont perfectly well, even so the son of an Aryan by an Áryan woman is worthy of all the sacraments.
"70. Some sages declare the seed to.be more important, and others the field; and again others assert that the seed and the field are equally important; bat the legal decision on this point is as follows:-
"71. Seed sown on barren ground perishes in it ; a fertile field also, in which no good seed is sown, will remain barren.
"72. As through the power of the seed, sons born of animals became sages who are honoured and praised, hence the seed is declared to be more important."

Regarding the distribation of assets among the sons born of wives of different castes, Manu† lays down :-
"Let the son of the Brahmani wife take three shares of the estate, the son of the Kęatriy $\bar{\delta}$ two, the son of the Vaicya a share and a half, and the son of the S"udrā may take one share."

Intermarriage is of two kinds: Anuloma and Pratiloma. The former is that in which a man of a higher caste marries a woman of a lower caste, and the latter is quite reverse of the former. Mana's laws concern themselves with anulomaja children. There is no definite law regarding the pratilomaja children. They get the rank of either of the parents according to expediency. Thus, the Anulomaja and Pratilomaja children did not constitute the Samkara castes, but became absorbed in one or other of the four original castes.

The anuloma marriage sanctioned by Manu and other lawgivers prevailed at a time when each of the four original castes possessed the power of assimilating in itself people of the other castes; nay, all people -foreigners or aborigines. In course of time the four original castes, having lost this power of assimilation, became stereotyped. At that stage the foreigners and aborigines had to perform the purificatory ceremony called Vrātya-stoma before they conld get admittance into society of Brāhmapa, Ķ̧atriya, or Vaicya. The four castes which had

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in the beginning been living organisms became by and by dead crystale, and there came a time when even the Vrātya-stoma became insufficient for the incorporation of outsiders. At this stage each tribe of unfranchised people, after being admitted into the Hindu society, formed a caste of its own. In this way innumerable castes (wrongly called Saynkara or mixed) became formed. In the present age of civilization the so-called Samkara castes are in their turn tending towards mergence in the four original castes and each man is trying to trace his deacent from the earliest Brāhmaṇ, Kक्̣atriya, Vaiçya, or Çūdra forefather. It is probable that in course of time the entire Hindu popalation of India will be absorbed in the four original castes for whom alone dnties, etc., were prescribed by Šastras. But the defect of the matter lies in the fact that the fourfold classification of castes does not completely suit the present condition of the Hindu society.

From what we have found here it is evident that the traditional ©Samkara process of birth exists in mere theories, but does not correspond to actual facts. No caste ever came into existence in the way presupposed by the traditional theory. I do not include here among the Samkaras those people who in the early stage of the Hindu society were born from parents of different castes; for, they did not contitute a fifth caste, but used to become incorporated in the caste of their father. It is, however, undeniable that even in the present day there are some rare instances of the father and mother being of different castes, but in those cases the children get the rank of either of the parents. In Darjeeling I met with several instances in which the Brāhmaps father and Chatri mother gave birth to children that were Chatris, but I never met with a single instance in which a Brảmapa father and Chatri mother gave birth to a child that produced a third caste. Though the Sapkara process of birth is an absolute myth, it must be admitted that the theory of Samkara castes expounded in the Brähmanic Sāstras is indeed very grand. The Brāhmapa legislators by tracing the four original castes from the different limbs of Brahma the Supreme Being and then deriving all other castes from a mixture of the four thoroughly established the unity and common footing of all the members of the Hindu society: All castes, from Brāhmans to Chaṇdālas, are shown to be directly or indirectly connected with the Supreme Being and the gradations of honour existing among the members of different castes are also duly maintained. But it should be observed here that the Vrätya theory was very much simpler, for it assumed only four classes of people. The Vrätya people, having performed the Vrätya-stoma, could freely mix with members of the four pure and original castes on terms of equality.


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# NOTE ON THE PUBLICATIONS 

of the

## ASIATIC SOCIETY.

The Proceedings of the Asiatic Society are issued ten times a year as soon as possible after the General Meetings which are held on the first Wednesday in every month in the year, except September and October; they contain an account of the meeting with some of the shorter and less important papers read at it, while only titles or short resumés of the longer papers, which are subsequently published in the Journal, are given.

The Journal consists of three entirely distinct and separate volumes : Part I, containing papers relating to Philology, Antiquities, etc.; Part II containing papers relating to Physical Science; and Part III devoted to Anthropology, Ethnology, etc.

Each Part is issued in four or five numbers, and the whole form three complete volumes corresponding. to the year of publication.

The Journal of the Asiatic Society was commenced in the year 1832, previous to which the papers read before the Society were published in a quarto periodical, entitled Asiatic Researches, of which twenty volumes were issued between the years 1788 and 1839 .

The Journal was published regularly, one volume corresponding to each year from 1832 to 1864 ; in that year the division into two parts above mentioned was made, and since that date two volumes have been issued regularly every year. From 1894 an additional volume, Part III, has been issued.

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## NOTES

ON THE

## BASHGALİ (KÃFIR) LANGUAGE.

COMPILED BY
COLONEL J. DAVIDSON, C.B., I.S.C.
[Pwblished as Extra No. 1 to the Jowrnal of the Asiatic Sooiety qf Bengal. Vol, LXXI, Part I, 1902.]

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## SYS'PEM OF TRANSLITERATION ADOP'CEİ.

A.-Presian or Hindettāni Luttrers.

B.—Vowel Sounds.
a as in America.
a , , , father.
\& $"$, fall.
e ,, ," French était.
è ,, ,, mate.
i $\#$, pin.
i ", pique.
u „, b bull.
$\overline{\mathbf{u}}$,, the oo in fool.
o ", , first o in promoto.
ס ", "second o in promote.
If a vowel is nasalised, as in the Hindūstāni word for "in," or the French word "bon," the sign $\sim$ is placed over the nasalised vowel.

In quotations from different authors, their system of transliteration has not generally been ohanged.

Where a consonant is doubled it is pronounced with greater force.
-

## PREFACE.

$\mathrm{A}^{\mathrm{T}}$T the latter end of my two years' duty in Ohitral, in March 1893, I prepared, during the short periods of leisure at my disposal, a vocabulary of 1,744 sentences from English into the Bashgali Käfir dialect and portions of a short grammar, with the aid of two of the most intelligent Käfirs of Kämdēsh and the Bashgal Valley who could be obtained, viz., Shēr Malik and Gul Mir (a man with at least one alias), both of whom are well known to Sir George Robertson.

The services of Taman Khān, an intelligent Chiträlī, were secured to assist in these translations. No boná fide Kāir, conversant with either Urdū, Persian or Pushto, or in fact any language except his own and a little Ohitrāli, was available. Both the Kāfirs employed knew a few words of, but could not converse at all readily in, Urdū, and had a very useful knowledge of Chitrāli. Taman Khān understood Urdū and Persian well.

Before commencing this task I had studied the Khowār or language of Ohitrāl. As the Käfirs mix more freely with Chiträlis than with any other race, those residing in the eastern portion of Käfiristān pick up a certain amount of the Chitrāli language, and several of their idioms-(in the Bashgali dialect at all events)-are identical with those of the Chiträli or Khowār. Every one of the sentences now published [except 12 taken from other sources marked ( $\mathbb{T}$ )] was taken down by me personally : some were frequently gone over, on successive days, to insure as much accuracy as possible.

The Kāfir dialects are not written. There are no Kāfir books, and it is generally said there are no rock inscriptions in the country which woutd help to throw any light on the origin of the language. It would be interesting to find the rock inscription, ordered to be set up by the Emperor Timūr, referred to in Appendix I, if it is in existence.* Sir George Robertson (1896) and Dr. Wolff (1861) mention a rumour that some rock inscriptions exist in the country, and Colonel Gardner states he saw some about 1826 A.D. The popular Kāfir sentiment regarding writing and reading will be found recorded in sentence No. 1129. 'The Kāfirs, however, have a legend that, at one period of their race, they practised reading and writing.

It seems desirable that the language, as it is now used, should be mastered, for the Afghān rule must result in its becoming largely modified.

As a consequence of the conversion of the Käfirs to Mahomedanism, which will take place to a large extent within a few years, very many of their manners, customs, and religious and social ceremonies will undergo a great change. Indeed it is hardly too much to predict that, as no written records exist of the Käfir languages, in a few

[^63]" It will be interesting to my readers to hear a slone was found at the gate of the Fort of Kallam, on which these words were engraved :-
"The Great Mogal Emperor Timour was the first Muslim conqueror who vad. quished the country of this anruly people up to this point, bat could not take Kullum, owing to its diffieult position."
years, the new rulers of the country will have swept into ohlivion the very names of some of their ceremonies, deities, and customs, so that these will be lost to all possibility of research. Thus the Persian words röza, fast; chhudä, God; bihisht, Heaven ; diuzakh, Hell, have been grafted into the language, and are largely used.

It is believed that the Bashgali dialect, with minor modifications, is understood by most of the Siāhpösh Käfirs.

The people of Käfiristān do not generally speak of themselves, nor of their language, as Käfir. They are known amongst themselves as belonging to certain clans or valleys, such as Bashgali, "a man who resides in the valley of Bashgal"; Waiguli, "a man of the Waigul district," and the language they speak is also similarly designated.

It is very hard, if not impossible, to render by English letters the correct pronunciation of many of the words, especially some of the nasal sounds. Sir Alexander Burnes gave his opinion that it was impossible for an Englishman to pronounce some of the Käfir sounds. Among the most difficult to pronounce are some of the second persons plural of the future, imperative, and conditional of several verbs.*

It is impossible that this collection of sentences and grammar can be free from mistakes, as, in some cases,

[^64]possibly the Käfirs did not exactly understand the nature of a sentence, the translation of which was desired, as well as for the following reason: Sometimes a sentence, of which the Kāfir translation was needed, would be carefully explained to the Kāfirs by the Ohiträli employed, and apparently well understood. One of them would give his rendering. The other would frequently object, stating it would not be so spoken in his village, etc., etc. Thereupon a beated altercation would arise, lasting a long time, without any agreement being arrived at. In such cases the rendering which seemed more likely to be correct has been accepted. From these sentences, and from many others taken down, but not printed, a short Bashgali Grammar has been prepared.

The language will be seen to resemble Urdū in con. struction. It has many Persian and Sanskrit words.

In the following pages the transliteration is that laid down for the Linguistic Survey, Government of India, 1898. Our letters, however, appear unfitted to represent certain Kāfir sounds.

If the language appears a simple one, owing to the brevity of its grammar, and sterile as to the number of words, it may be remarked that, as is the case in Chiträli, the idioms are extremely numerous. It would probably take any person a considerable time, under the most favourable circumstances, to speak the language idiomatically correct.

The leisure at my disposal did not permit of my making the grammar more complete than it is, the material for preparing these papers being collected during the intervals of more important duties. Efforts were made, without success, to elucidate many principles of grammar
other than those now produced. It was impossible to obtain from the Kāfirs employed, with any degree of certainty, information regarding many points on which it was sought. As I am not a linguist, it seemed to me that the leisure available for this work would be utilised better in procuring a large number of sentences on every day topics and in simple form, than in endeavouring to solve grammatical intricacies which, with men such as the Käfirs, might have taken up a great deal of time with possibly very small result.

The amount of time taken up and the difficulties and disappointments experienced in endeavouring to elicit grammatical and other linguistic information, from such very unsophisticated men as are the Kāirs, are described in Surgeon-Major Bellew's lecture at the United Service Institution, India, 1879; Dr. Leitner's similar lecture of 1879; Dr. Leitner's "Dardistān" (1877) ; and Sir George Robertson's "Kāfirs of the Hindūkush." Dr. Leitner's opinion was that the difficulties in the way of finding out the rules of Käfir grammar were insuperable.

Dr. Trumpp in his article in the Royal Asiatic Society Journal, 1862, remarks on the absence of aspirates in the Kāfir language. Sir G. Robertson informs me he tried to teach some Käfirs to pronounce a few English words, such as "happy," "hard," but found it impossible. In my vocabulary of sentences a few will be found.

As is the case in some other languages, notably Turkish, the attention paid by the Käfirs to certain intricate rules of euphony, which must be puzzling to any one not born in the country, is very remarkable.

Sir G. Robertson, in his manuscript notes, remarks on the great difficulty experienced owing to the apparently
erratic way in which the Käfirs inflect words for the sake of euphony, " which they must have at all hazards, eliding words, adding suffixes and affixes, and cutting off syllables whenever there is a difficulty of pronunciation. They try to make the smallest possible number of words express their meaning. They express their meaning to a great extent by gesture, intonation of the voice, and laving particular stress on some syllable, or word in a sentence."

The same word will not always be found spelt in an uniform way in my collection. Many letters are interchangeable, thus $2=d s$ or ts, as zim, dsïm, tsïm, snow;
 will kill. Letters are often transposed, as bagräm, bargām; katrawor, kartawor; brōbur, barābar, börbur. In words such as pghtarak the $p$ is often dispensed with. For the sake of euphony or sasnsion, words undergo a great variety of changes, thus, "a man" may be manjī, manchī, mō $\frac{1}{h}, m o c h \bar{i}$ and even musshī; " very muoh" may be bluk, biluk, biliuk, bilugh; "good," or "well," is lé, less, lesst, lessta. Short vowels are sometimes lengthened, and long ones shortened; sometimes a syllable is dropped, and at other times one is inserted, thus, "female" may be stri, shtrī, shtarī, shtōrī, ishtrī; "to-day" may be pohtarak, shtarak, shtak, stak, stag; "for the sake of," $d u g \overline{\bar{a}}, g \tilde{\bar{a}}, t k \tilde{\bar{a}}, k \hat{\bar{e}}, d \overline{\tilde{e}}$; for "he," or "it is," there are at least ten words, and for " he," or " it becomes," at least six words.

In very many words I found it impossible to decide whether the vowels should be long or short, whether certain vowels should be nasalised or not, and whether, in certain words, the $r$ and $t$ should be hard or not. Great varieties of pronunciation were met with.

The same difficulty was experienced by Azimullah, a good Persian scholar, mentioned on page 165, Appendix I.

It has been stated in London newspapers that the easiest route for an army attempting to invade India from the North of the Hindu Kush would traverse the centre of Käfiristān; it may, therefore, be desirable that, for military reasons alone, something regarding the language of the country should be known.

I have to acknowledge my great obligations to Dr. Grierson, C.I.E., Indian Civil Service, for mucb assistance kindly given me in preparing these papers, and for placing a great many documents at my disposal.

## GRAMMAR.

(I) ARTICLE.

1. There is no Artiole in the Bashgali corresponding with our Indefinite Article; when desirable the cardinal eo, one, can be used.
(II) SUBSTANTIVES.
2. The Substantive has two genders, masculine and feminine, but the rules regarding gender are not universally followed. Whether the varieties of gender are natural only, or grammatical as well, I cannot state positively.

Some Nouns which appear feminine are as follows: -


Adjeotives ending in $a_{1} l, m, n, r$, used with the above words, also tenses of verbs ending in $l$ or $a$, undergo certain changes. This is not, however, universally the case. Some sentences of the vocabulary will be found to contradict this rule. They are, however, all recorded exactly as - rendered, at the time, by the Káfirs employed to translate.
3. The use of neo, nāh, male, and ishtri, female, is very common to indicate natural gender, as neo ushp, horse ; ishtri ushp, mare.
4. The following examples show that a feminine seems recognisod :-
manchī-è ushp brí, $i s h t r i m r i$, shtalẽ khunza mrle, mãrī perongi, $i \overline{\tilde{a}}$ bra jugūr $\bar{a} w r \underline{i}$,

A man took a horse.
A woman has died.
Perhaps the Queen will die.
The stick is broken.
My brother took a wife.

In the above instances the terminal of the Verb has been changed from $\bar{a}$ to $\bar{i}$ to agree with the feminine Noun. Two examples contradicting the above are in the sentences, namely-

$$
\begin{array}{ll}
u s h \bar{h} p m r \bar{a}, & \text { The horse died. } \\
g \overline{d o} m r \bar{a}, & \text { The cow died. }
\end{array}
$$

5. Dr. Trumpp was doubtful whether Nouns and Adjectives had any gender; he says "so much is clear that the terminations of Adjectives do not change according to the gender of Substantives." Sir George Robertson says be is uncertain whether any feminine is really recognised, but he is sure that some changes are made in Adjectives in connection with the Substantive which they qualify, perhaps only for the sake of euphony.
6. The Substantive has the following states in declension :-
(i) The Subjèct, viz., Nominative or Agent.
(ii) Genitive (of), dative (to), ablative (from, etc:), locative (in, etc.).
(iii) Accusative.
(iv) Vocative.
7. The Nominative singular and plaral are often identical.
8. The Oblique cases are formed by adding certain post-positions (see para. 63) to the inflected cases.
9. The Nominative or Agent precedes the Accusative and Verb; as tos't pitr to latri psetai, thy father lost thy property.
10. Whether the Baghgali (like the Arabic and Sanskrit) recognises the Agent (instrumental) case or no, in sentences where transitive Verbs are used in the Past Tenses, or whether it follows the Persian construction, is not clear. By the Agent * form is meant the idiomatic inversion of the sentence, by which the Verb is rendered passively, and agrees in

[^65]gender with the real objeot, if any, the object (accuaative) becoming the subject and being rendered in the Nominative. When no Nominative is expressed the Verb is impersonally in the singular masculine form. Thus "he killed the horse" would become "the horse was killed by him." Dr. Trumpp came to the conclusion that the Agent was used in the dialect of which he wrote; that in the singular it was not inflected (being identical with the Nominative); and that in the plaral it took the termination ef. Dr. Grierson thinks the Agent is ased in Baahgali. I appliod very many test sentences and sometimes found it apparently used and at other times not. The following sentences seem to show the Agent is used :-"

| iã̃ bra ju | My brother took a wife. |
| :---: | :---: |
| 2. xhil marê iã̀st urr bri, $\dagger$ | A kite took off my partridg |
|  | A man took off my horse. |
| 4. manchiee wigh ptess, | The man gave medicine. |
| 5. õts host susni awarí, | I brought a handkerchief. |

The following seem to show that the Agent is not nsed, or, at all events, the Agent is the same as the Nominative:-

| issä, | Tin |
| :---: | :---: |
|  | The boy has |
| ghani digar pilingi | The Afghāns have done injury. |
| char shtri awariss, | The ruler took a wife. |

11. Khān Sähib Abdul Hakim Khān, $\ddagger$ who has made some translations into Baghgali, informs me he thinks the Agent is not used. He has favoured me with translations of the following test sentences:-

Thou hast made my cloth dirty, Tu $\bar{z} s t a$ basend mul krā.
She has cooked my food, Aske $\overline{\bar{g}} \tilde{\tilde{c}}$ buti karā.
Who has caught the thievẹs? Shtãr ku wanemiá?
We have caught one thief, Emàe eghtãr wanemia. He has washed my dirty cloth, Aske ĩsta mul basenâ nigã.

- The following examples occur in Sir G. Robertson's manuscript papers: manchi uzhur dugājugür awri, the man has brought:a woman for medicine, and Oiah ano - averā, Utah has brought ghi.
 went, whi maré is mascaline, and, if so, in example 2 bri seems to agree with wrr.
$\ddagger$ His transliteration differs from mine in some words. $\downarrow$

He has cleaned my gun,
Who has given you medicine?
I hear your speech now,
I yesterday heard your speech,
You jesterday said some words to Chānlu,
When you arrived yesterday I-had not eaten my food,
My brother had killed his daughter when I arrived,
My daughter had eaten the fruit when Mirak came yesterday,
He fired two guns,
You men have brought good wood, Thou hast killed my cock,
The father killed his own son,
The father is killing his own son,
The horse has eaten all the grass, The horse is eating the grass,

Aske $\overline{\text { ̃sta }}$ tapka sagãya.
To gé dāriu ku ptesesh?
$\bar{O}$ tu vari ightrak kar tēnum.
If tu vari dus sangāisi.
Dus Clā̃âu tã tu kai mãar nazush ba.
Tu dus preishtã̃ $\tilde{\bar{i}}$ yash na yãressi.
$\bar{O}$ parimdd $\tilde{\bar{a}} \tilde{\mathbf{\imath}} \mathrm{sta}$ bra askesta jus jãrissi.
Dus Mirak āzittā̃ $\tilde{\tilde{a}} s t a j \bar{u}$ kachwech yãrissi.
Aske du tapka barkstara. Shâ manchī̃̄̃ lē dao averestai.

Tot amu pitras jãriã.
Tot amu pitr jãrana.
Ushpe sundi yus yãrissĩ.
Ushpe yus yuno.
12. In mentioning the difficulty of ascertaining, for a certainty, whether the Agent form is used or not, it may be noted that there are many parts of India where the Agent form is not understood, and not used by the country folk, who are very far more advanced in grammatical notions than are the Kāfirs.
13. The genitive has often no suffix, being recognised merely by apposition, the Noun, which is in the genitive, being placed before that which governs it ; as-


Sometimes the suffix $\dot{i}, \bar{e}, i \bar{e}, s t$, est, es or $s$ is applied, as manchi-est, of a man ; mehr'st patti, letter of the Raler.

[^66]Sometimes the Chitraili form of genitive is used, adding o to the Nominative, as-

| sirkäro, of Government. | bidizo, of heart. |  |  |
| :--- | :--- | :--- | :--- |
| tottio, | of father. | $w \bar{u}-0$, | of sister-in.law. |

A common form of Genitive is to add wa to certain compound words, such as al bidi-wa, of great heart (generous) ; digar sira-wa, of bad heart; shtal wari-wa, of true word; lattri-wa, (man) of property; drushtz-wă, (man) of poverty; kānovwa, (a place) of trees, (shady); $l \bar{e}$ bidi-wã, (man) of good intention.

Where we use a Genitive the Käfirs often ase a Dative; thus, in place of "a horse's bridle" it is very usual to say " horse-to bridle."
14. The Dative, Locative, and Ablative are formed by adding the suffixes $\bar{a}, \tilde{\theta}, \bar{i}$, or $\bar{\delta}$, together with $t \tilde{\tilde{a}}$, stê, mẽgh or some other of the postpositions mentioned in para. 63. The Ablative is sometimes formed by adding $\tilde{\varepsilon}$ to the Nominative, as eo gujart̃, in one day; tarwochê, with a sword; or $\bar{a}$, as, peshania, on (your) forehead ; dushta, on (your) hand. In the Dative, the suffix $t \tilde{a}$ is often dispensed with. Sometimes the suffixes $\bar{a}, \tilde{e}_{1}$ etc., are not used, or short vowels are used in place of long ones.
15. The Accusative or Objective is often the same as the Nominative. Some words add a, è, e, or, (as in Khowär,) o for the Accusative, or chango the terminal, if a short vowel, into $\bar{e}$ or 0 , as-

| work, $k u d u ̄ m$, | Accusative, | kudūma. |
| :--- | :--- | :---: | :--- |
| horse, ushp, | $"$ | ushpē. |
| snow, zim, | " | zimo. |
| head, pshai, | " | pshaio. |

16. The Vocative is usually formed by adding $\bar{a}$ or $o$ to the Nominative, as $t \delta t t-\bar{a}$, father! Sometimes it is the same as the Nominative, some Interjection, suah as $h \bar{e}$, preceding it.
17. The Nominative plural is often the same as that of the singular, but sometimes $\bar{a} n$, èn, $i n$, or $a n$, is added.
18. The inflected cases plural (as in the Chiträli) endin $a n$ or on or on.

Examples.
19.

Manchi, man.

Singalar.
Nom. manchi,
Gen. manchi-est, manohi-s,
Dat. manchi-e tã̃,
Acc. manchi-ē,
Agent (?) manchi-ē,
Abl., Loc. manchi-ē stē, otc.,
Voc.

Plural. manchi or manchian. manchion or manchion'st. manohion t $\overline{\bar{a}}$. manchizn.
manchizn (?).
manchion stē, etc.
manchi-a.

Ugh L , horse.

Singular.
Nom. ushp,
Gen. ushpē, ushpo,
Dat. ushpè $t \overline{\bar{a}}$,
Acc.
Agent (?) ushp-ē (?),
Abl. ush$p \bar{e} s t e \bar{e}$, etc.,
Voc. $h \bar{e} u s h p$,

Plural.
ushp.
ushpan.
ushpan t
ushpan.
ushp.
$u_{s h} h \bar{a} n$ stē, eto.
hē ushpp.

Tōtt, father.

Singular.

| Nom. | $t \delta t t$, |
| :---: | :---: |
| Gen. | $t \delta t t^{\prime} 8, t \bar{t} t i, ~ t \delta t t i o, ~$ |
| Dat. | totte $t \overline{\bar{a}}$, |
| Acc. | $t \bar{t} t$, |
| Agent (?) | tott-ē ( ${ }^{\text {c }}$ ), |
| Abl. | tott stes, etc., |
| Voc. | tottia, |

Plural.
$t \delta t t$.
tottann, tottañ'st. tōttan (?) $t \tilde{\bar{a}}$.
tottàn (?). tott (?).
tottan stē, oto. tottia.

## (III) ADJECTIVES.

20. The Adjective ordinarily precedes the Noun, as al wott, big stone ; if used as a predicate, it follows, as tātztt brd sang digar ess, your clan is all bad.
21. It sometimes undergoes inflection of case to correspond with its Substantive as shī siū$m$, an old carpot ; siūmē kālē $t \tilde{a}$, in an old fort.
22. Several Adjectives*were recorded by me as ending in $l, m, n, r$, such as all, big; siūm, old; shingïr, pretty, and, when in company with cortain Substantives, adding $a, \bar{e}, \bar{i}$, presumably for the purpose of gender. Adjectives ending in $\bar{a}$ change the $\bar{a}$ to $\bar{i}$ for the feminine, or, at all ovents, occasionally, for the sake of euphony.

The following are examples:-

| al mosh, | big man. | $\left\{\begin{array}{l} \text { alli parr, } \\ \text { kartz allí ushp, } \\ \text { alla amu, } \end{array}\right.$ | big apple. long, big horse. big house. |
| :---: | :---: | :---: | :---: |
| digr manchi, tdrgr $\mathbf{u} \bar{u}$, drgr wari, | bad man. <br> long root. long story. | digri putt,* $d r g r i \quad u s h p$, drgrī $\operatorname{argrī}$, | bad road. <br> long horse. <br> long log. |
| kayhir waki, al kayhtriwoztt, | white lamb. <br> large white stone. |  | white cow. <br> white horse. <br> white beard. <br> white hair. |
| shingir, | pretty. | $\left\{\begin{array}{l} \begin{array}{l} \text { shingīra } \\ \text { stan, } \\ \text { shūare- } \\ \text { shingïra ess, } \\ \text { shingira } \\ \text { shunz, } \\ \text { shingira basna, } \\ \text { shingīra pish, } \end{array}, \end{array}\right.$ | pretty garden. <br> rose is pretty. pretty lawn. pretty clothes. pretty flowers. |

wishtr taman, wide trousers. wishtri putt, wide road.

[^67]zhil bhim, wet ground. $\begin{cases}\text { zhill buri, } & \text { wet (uncooked) bread. } \\ \text { shila yus, } & \text { wet (green) grass. } \\ \text { zhila dar, } & \text { wet (green) wood. }\end{cases}$
The following instances are contrary to the above rule:$b r a \operatorname{shingora} a s s \bar{a}, \quad$ the brother is handsome. ushp shigil assā, the horse is fast.

Possibly the rule, as in Khowār, is that males are Masculine and natural females Feminine, and all others Neuter, but, whatever rule may be made out, there appear examples to show that it is not regularly followed.
23. Khān Sāhib Abdul Hakim Kbān has obliged me with translations of the following thirteen sentences to test the existence of inflections of Adjectives to agree with Substantives. Certain Adjectives which I found to end in ix in the Nominative Masculine Singular, end, in his translation, in era; and the word al, big, is rendered by him as ola.* Words like kazhera, when used to qualify Nouns naturally feminine (such as cow, mare), generally change their termination in these examples into $i$, but all other Adjectives onding in $n, a, k$, undergo no change.

Thy beard is white,
My hair is white,
My daughter is not pretty,
My ball is white,
My cow is white,
My mare is white,
My horse is white,
Our horses are all white,
Take the saddles off all the white horses,
All your horses are very fat,
That little girl is very dirty,
That big boy is dirty,
All our mares are very fat,
tus dari kayhera assa.
$\tilde{\tilde{\imath}} s t a \operatorname{dru} k a \underline{\text { lera }}$ assa.
$\tilde{\bar{z}} s t a j \bar{u}$ vizheri $n ' a z a$.
$\overline{2} s t a$ arkē kazhera assa.
$\overline{\tilde{z}} s t a \operatorname{ga}$ kayheri assa.
$\overline{\tilde{z}} s t a$ ishtri ushpa kazheri assa.
$\tilde{\tilde{2}} s t a \operatorname{ush} p a$ kashera assa.
imästa ushpa sundi kayhera ashta.
sundi kashera ushp $\overline{\bar{a}}$ d $\overline{\bar{a}}$ zina waksha.
shāsta sundi ushpa bitiuk karta aghta.
aske parmenstuk juk biliuk mulohun bissa.
aske ola arri mulchun azia.
imāsta sundi ishtri ushpa biliuk • karta ashta.

[^68]24. Many Adjectives are formed from the Noun of Agenoy of the Verb, as follows:-

1. less kudūm kul,
2. widarl,
3. pott zarl,
4. zian karol,
5. lãk kul,
6. less ushp p'tsir nishèl,
7. tarwochē wīl,
8. $p$ 'putt lattri rangal (ngal?),
good work doing, industrions.
fearing, timid, cowardly.
road knowing, guiding.
loss-making, destructive, malicious, harmful.
song making, singing.
on a horse good sitting, equestrian.
sword beating.
on road property taking, highway robber.

The above can be used as Substantives or Adjectives: thus No. 2 is either timid or a coward ; No. 3 is guiding or a guide; No. 7 sword smiting or an executioner.
25. Adjectives formed in English from a Substantive, by adding $y$ or ly, such as foxlike, foxy, etc., are formed in Bashgali by adding to the Substantive either ohōr, or ayūr, or agyür, pirstha, purstha, prishtha, as-

> wriki, fox; $\left\{\begin{array}{c}\text { wriki ayūr, } \\ \text { wriki purstha, }\end{array}\right\}$ foxy, clever.
> krũ̃, dog; krữ chōr, doglike.

Dggrbes of Comparison.
26. The Comparative is formed by asing the Positive together with the Ablative case (post-position tãa, stē) of the Noun to which it refers, asm

Mirak drgr manchī assā,
Mirak Chälūu tã drgr azz,
tū kur iã kure $t \bar{a} a ̄ a l ~ e s s, ~$
emâ manchī pachan warī $\backslash \bar{a}$ damtol aght,
$\boldsymbol{i n} \bar{a} \cdot s \bar{e}$ po sē stē kachwaoh This year frait is scarcer than last chägh ess,

Mirak is a tall man.
Mirak is more tall than Chānlu. Your ass is bigger than mine.
Our men are braver than the enemy. year.

- 27. The Superlative is formed by asing a Noun of maltitude or quantity with the Positive, as, Basti sundi manchion tã damtol ake, Basti is the most powerfal of all men,
(IV) PRONOUNS.

28.     - Personal Pronouns.

$$
\mathrm{I}, \tilde{\bar{z}}, i \tilde{\bar{a}}, \tilde{\bar{o}} t \varepsilon . \quad \text { Thou, } t \bar{u}
$$

The Personal Pronouns, which we use with Verbs, are omitted by Kāfirs. In the Dative and Accusative they are almost always understood. In the vocabulary of sentences they have been more often inserted than would be the case colloquially.

$$
\text { Ots, } \overline{\mathrm{z}}, \mathrm{i}, \quad \text { I. }
$$

Singular.

| Nom. |  | emá. |
| :---: | :---: | :---: |
| Gen. |  | emâ, emâast. |
| Dat. |  | emà tã̃. |
| Acc. | $\overline{\bar{o}} \mathrm{t}$, $\hat{\bar{o}}, i \overline{\bar{a}}, \bar{z}$, | emd. |
| Agent (?) | $\bar{\sim}$ | emá (?). |
| Abl. | $i \bar{a}$ mè $\underline{s} h, \mathrm{etc} .$, | $e m a ̂ t ~ m e ̂ g l ~, ~ e ~$ |

Voo.
Tū, thou.

Singular.
Nom. $\quad t \bar{u}, t u, t o, t \overline{0}$.
Gen. $\quad t \bar{\sigma}, t \sigma^{\prime} s t, t u s \bar{a}, t \bar{u} s \bar{a}, t u s \bar{e}, t \bar{s} t \bar{a}$,
Dat. $\quad t \bar{u} t \tilde{\bar{a}}$,
Acc. $t \bar{u}, \cdot$
Agent (?) $t \bar{u}$,
Abl. tī $m \overline{\tilde{c}} \underline{g} h$, etc.,
Voc. $t \bar{u}$,

Plural.
emâ.
emâ, emâs't.
emâ t $\tilde{\bar{a}}$.
emá.
emá (?).
em $\hat{b} m \tilde{e} g h$, etc.

Ikīă, ikia, ikya, askā, aki, iyē, izē, he, that.

|  | Singular. | Plural. |
| :---: | :---: | :---: |
| Nom. |  |  |
| Gen. |  | amshi-est. |
| Dat. | akiyè, akio tā, | amkian tã̃. |
| Acc. | $a k i, ~ a s k e ̄$, | amkiàn. |
| Agent (?) | $a k i-\bar{e}$, | amki. |
| Abl. | akio-mẽ ${ }_{\text {g }} \mathrm{h}$, | amkian mếsh. |

Both ina (this) and akiā (that), if used with words onding in $m$, are liable to take that terminal, as, inām bagrām, (in) that village.
30. In addition to the ordinary Pronouns of the 1st, 2nd and 3rd person, as above declined, certain pronominal suffixes, that is to say, letters or syllables, affixed at the end of words, take the value of Pronouns and are used instead of our Possessives, as-

| $t \bar{t} t \bar{t}$, | my father. | pitran's, | his sons. |
| :--- | :--- | :--- | :--- |
| $t \bar{t} t-c h \bar{i}$, | thy father. | pitress, | his son. |

31. The following are samples of pronominal suffixes used with Transitive Verbs in the Past Tenses, or sometimes with Intransitives:-
$i \overline{\bar{a}} t \bar{u} \bar{e}$ tang $p t \bar{a}$ 'gh, $\quad$ I gave thee one rupee.
$\bar{z} t \bar{u} \bar{e}$ tang dã $k a r s i ' \underline{\underline{a} h}$,
$t \bar{u} \frac{\tilde{z}}{\mathbf{z}}$ ghodr kara'gh,
ṑts $t \bar{u} d \bar{u}$ wōr gijjjz karā'gh,
$\bar{i} t \bar{u}$ wina' $\frac{\mathrm{gh}}{}$,
 di n'vinosä'gh,
$t \bar{u} \overline{o ̃} t s n^{\prime} p t \bar{a}{ }^{\prime} \mathrm{m}$,
$t \bar{u} i \tilde{\bar{a}} s t d u g \overline{\tilde{a}} \tilde{\bar{\sigma}} \mathrm{~g}$. $-k a r s a^{\prime} \mathrm{m}$,
tū iữ digri uṣ्hp kai ptas'm?
$t \bar{u} i \tilde{a} \hat{a} t \tilde{\bar{a}}$ "e $\operatorname{e}$ tang prèlom" kras'm,

I lent one rupee to thee.
I made thee my servant.
I twice have told thee.
I have beaten thee.
$\left\{\begin{array}{c}\text { Ever since I made thee my ser- } \\ \text { vant I never have beaten thee. }\end{array}\right.$
Thou gavest not to me.
Thou hast looked out for me.
Why gavest thou a bad horse to me?
\{ Thou to me hast promised "I $\{$ will give one rupee."

[^69]| $t \bar{u} i k i \bar{e} p t \bar{a}$, <br> t̄̄u iktē vin̄ $\bar{a}$ (vinossā), | Thou gavest to him. Thou hast beaten him. |
| :---: | :---: |
| $i k i \bar{e} \hat{o} t s$ ptä'm, | He gave to me. |
| mihrè askā kudūm iñã $t \tilde{a}$ wiliás'm, | The Ruler gave that job to me. |
| $i^{\text {i }}$ iē ${ }^{\text {ôts }}$ vināa'm (vinoss'm), | He beat me. |
| ikiē iã̃st shai winä'm, | He beat my head. |
| $k \bar{u} t \bar{u} p t \bar{a}{ }^{\prime} \underline{h}-\bar{i}$ ? | Who gave to thee? |
| $i k i t u \bar{u} p t \bar{a}$ ' ${ }^{\text {h }}$, | He gave to thee. |
| ikī tū vinà'gh (vinossi'gh), | He beat thee. |
| $t \bar{u} t \bar{a} d \bar{a} r u \bar{u} k \bar{u} p t a ' \underline{s h}$ ? | Who gave medicine to thee? |
|  | What word did the man make to thee? |
| $i^{\text {n }} \bar{a} \mathbf{i k l}$ d $\bar{u}$ tang $p t \bar{a}$, | He (this man) to him (that man) gave two rapees. |
| emâ tū porch tang pta'sh, | We gave thee five rapees. |
| emât tū vinä'sh (vinossi' ${ }^{h}$ ), | We beat thee: |
| ema iki usht tang ptà, | We gave him eight rupees. |
| emd iki vinā (vinossā), | We have beaten him. |
|  |  |
| shd $\overline{\text { ôts }}$ sutt tang pta'm, shd öts vina'm (vinossa'm), | You gave me seven rapees, You beat me. |
|  |  |
| shd ikt yanits tang ptà, | You gave him eleven rupees. |
| shhâ iki vinā (vinossā), | You have beaten him. |
| \& ôts trits tang pta'm | They gave to me thirteen rupees. |
| amkiān ôts vina'm (vinossa'm), | They have beaten me. |
| amkīan tū sapits tang pta'sh, | They gave to theo seventeen• rupees. |
| amkiàn tū vina'gh (vinossi'gh), | They have beaten thee. |
| amnd iki nēits tang ptà, | They gave to him ninetoon rapees. |

32. In the Present or Future Tense of a Transitive Vorb, terminals are not used with it to indicate the Pronouns which may be the object, thas :-

| ōts askiē vinom, vilom, | I beat or shall beat him. |
| :---: | :---: |
| $\overline{\text { ôts tū vinom, vilom, }}$ | I beat or shall beat you. |
| $t \bar{u}$ İ vinj, vilogh, | Thou beatest or wilt beat m |
| tū ikiè vinn, vila | Thou beatest or wilt beat him. |
| ikia tū vinn, vila, | He beats or will beat thee |
| ikia ${ }^{\text {a }}$ vinn, vila, | He beats or will beat me. |

In the above instances, the Verb follows the examples of terminations given for the ordinary conjagation of the Indicative Present and Future.
33. The Reflexive Pronoun which answers to the English word "self," as in "himself," is yot sara or yot zara, and is ased thus :-

| $i \bar{a}$ | y $\bar{t} t$ sara, | I myself. |
| :--- | :--- | :--- |
| emâ yot zara, we ourselves. |  |  |

tu yot gara, . thou thyself.
( $t \delta t t$ ) y $\mathrm{y} t$ zara, (my father) bimself.
shâ yot sara, you yourselves.
amnd yot zara, they themselves.

Sometimes $m \bar{i}$ is used, as Mirak $m \bar{i} k r a$, Mirak himself made.
34.

Possessive Pronouns.

| His own, | amo, amo'st. |
| :--- | :--- |
| Your own, | yo'st. |
| Their own, | amshio'st. |

35. 

Intrrrogative Pronouns.
Who, which, what? kachi ?
How many $\rho \quad c h \bar{i}, c h e ̄, c h u k, ~ c h o k ? ~$
Kū, kāchī, kett, who ?

Singular.
Nom. $\quad k \bar{u}, k \bar{c} c h \bar{i}, k e t t$.
Gen. $k \bar{u}, k \vec{a} ’ s t, k u ' s t, k \bar{a} w o$.
Dat. $k \bar{u} t \overline{\bar{a}}$.
Acc. $k \bar{u}$.
Agent (?) k $k \bar{c} c h \bar{i}, k \bar{u}$.
Abl. $\quad k \bar{a} m \tilde{\tilde{c}} \underline{g}$.
Voc.

Plural.

## kadchi.

 ku'st, $k \bar{a}$ 'st. kett t $\boldsymbol{\overline { a }}$. kāchi.$k a ̄ c h{ }^{2}$.
kett $m \tilde{\Xi}_{8} h$.

Relatife Pronouns.
36. Relative Pronouns are hardly used.

Verbel Participles, which are used where we should ase Relative Pronouns, seem to contain the Relative Pronoun, e.g., Where is the man who took the news? Where is the news-taking man? shū avodl mōch korar ess? That is the odour of a dog which has died (of a dead dog). iki mrisht knizi digar gun axs.

Some Relative Pronouns are kai, whoever, whatever ; ketta (manchi) (the man), who.

Indifinitr Pronouns.
37. The following are some Indefinite Pronouns :-


## (V) VERBS.

38. Verbs are Neuter, Active, and Passive.

They have two Numbers, Singular and Plural. They are generally placed at the end of a sentence. They have four Moods, viz. : -

Infinitive, Índicative, Imperative, and Conditional.
39. The Infinitive appears always to end in sth (or stha or st or sta), as, awesth, to bring; yosth, to eat; lushtisth, to burn or be frost-bitten. If stha or sta* is the terminal, not sth, the $a$ is very short, hardly discornible, and is always elided if the word following it commenoes with a vowel. In the following it is taken for granted that the Infinitive enda in sth. By rejecting the above termination a root is obtained (which has often been borrowed from various languages) from which the several Tenses are formed. If the root ends in a way which will render the affixes hard to pronounce, it undergoes some slight change, as lughtisth to burn, root, $l u_{\mathrm{g} h} t$, which, in some of the cases, becomes $l u$ zh.
40. The Infinitive is very often used as a Verbal Substantive. It is then inflected in the Singular-(it is not used in the Plural)-by a long $\bar{a}$, (which answers to $d u g \tilde{a}, t h \bar{a}$, for the sake of), being added, as yostha, for the sake of eating, nizhisthä bon giats, fetch us a seat for the sake of sitting on; and by adding $\dot{\delta}$ or $\boldsymbol{i}$ and asing one of the many post-positions given in para. 63, as lunishtz mës $h$, by the falling. It can be used in the following way : ikiè visth ass, it is (appropriate) to panish him.
41. The Participle Present, or Active Participle, or Derivative Substantive, or Noun of Agency, e.g., "doing," is formed from the root by adding $n$ or $l$, as, (good work) doing (man), (lē kud̄̄m) kul (manchī), nighin, sitting. It may also be used in the Future or Past Tense, as, "the man who sang, or is singing, or is about to sing" are represented by "song-making," lālu kul. It takes the place of a Relative Pronoun, as, "the man who took the news has come," shū awèl manchi ayo. It can be used as an Adjective, as, song-making (man), lālu kul, or a song maker, singer ; ushp wetsu amchōl, horse's shoe fastening (farrier). When used as an Adjective, it changes gender, to agree with the Sabstantive which it qualifies, asm piltil-i ushp, a falling horse.

[^70]42. The Participle Past or Conjunotive Participle-(having eaten)is usually formed from the root by adding $\bar{a} t \bar{i}, \bar{e} t \bar{z}, \bar{t} t \bar{i}, \delta t \bar{i}, \bar{u} t \bar{z}$, or $t i$ or $d i$ only, as, nishiti, having sat, $y \bar{u}-t i$, having eaten, aohūn-di, having run, wanam- $d \pi$, having caught. It is used as the equivalent of a Verb followed by a Conjunction, as buri $\bar{i} y \bar{u} t \bar{z} g w a$, having eaten food he went, or, he ate his food and went, or, as soon as he had eaten his food he went. The termination is sometimes $t a, t \bar{a}$.
43. The Indicative Present-(I am doing) -is formed from the root by adding (together with a consonant or a vowel, for euphony, if nocessary) nam or nom, tam or thum, or am; as, kunam, I am doing, widartam or vidaram, I fear.

It is often used in a Future sense. Its terminals are-

| Singular. | Plural. |
| :---: | :---: |
| 1. $\mathrm{am}^{\text {a }}$ | mish, má. |
| 2. $n j, n c h, o h, s h, n j \bar{q}$, nchi, etc. |  |
| 3. nn, tt, ttett. | $n t, n d, t t, t t e t t$. |

44. The Future-(I will or shall take)-is formed from the root by adding lom, as, awèlom, I will take.

Its terminals* are-

Singular.

1. lom.
2. logh.
3. 7 a .

Plural.
mish, mâ.

loh, la.

The terminal lā becomes $l \bar{i}$ when used with feminine nouns.
45. The Imperfect-(I was doing, I used to do, I would do, I would have done)-is formed from the root by adding azzam or assam, preceded, if necessary, by some consonant ( $n$ and $r$ being favourites) for eaphony, as, I was doing, ku nazzam. Its terminals are-

Singular.

1. azzam.
2. azzish.
3. $a z z i$.

Plural.
azzamish.
azzãr.
$a z z \bar{i}$.
46. Past Indefinite-(I made or have made)- is formed from the root by adding $\bar{a}$, or $\bar{a} h$, or $\bar{\delta} h$, or $o$ (sometimes for euphony on), preceded, if

[^71]necessary for euphony, with a consonant, as awesth, to bring, root awe, past awöra. When used with a feminine Substantive it changes its termination to agree with it, as, the man died, manohi mra ; the woman died, ishtri mri. Khān Sāhib Abdul Hakim Kbān says he thinks there is no form, such as "he has eaten," "he has gone," as the Baghgalis only know the past in the sense "he ate, he went, etc."
47. Pluperfect-(I had done)-is formed from the root by adding isst, as amjissi, I had pat on clothes.
48. The second person singular of the Imperative is generally formed from the root by adding a long vowel (preceded by a consonant, for euphony, if necessary), as shivee, sew thou ; namб, show thou ; kshi, do thou; io, eat. Where the root is a monosyllable ending in a long vowel, such as pree, that becomes the Imperative. The remaining tenses of the Imperative seem almost the same as the Fiture.
49. The Conditional-(if you do, when you shall do, when you shall have done)-is formed by adding $b \hat{a}$ to the Present, Fature, or Past: as karbâ, if I should do ; enjiz $b a$, if you go. Sometimes $\tan$ is used in place of bâ; and, for sake of euphony, some slight change of letters, so as not to clash with $b d$ or $t a n n$, takes place.
50. The Interrogative is formed usually by adding $\bar{a}, i \bar{a}$, or sometimes $\bar{i}$, as-

> tū ettishion ?
> art thou going?
> $t \bar{u}$ ko $p t \bar{a}$ ' $s h-i$ ? who gave thee ?
51. Phrases such as "at the time of my going" (a form of Gerund), are rendered thus, $\tilde{z}$ en $d \tilde{a}(t \tilde{a})$.
52. The following are samples exemplifying the rules commencing at paragraph 39 :-

|  | To RuI. | To Gryn. | To Rexy. | To Tami Ling. | To Ear. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Infinitive | achūnaoth. | presth. | otisth. | minhosth. | yucth, yosth, iasth. |
| Root | $a c గ \bar{u}$ un. | $p \boldsymbol{F}$. | oti. | minº. | $y \overline{u s}_{0}$ |
| Participle Present, Vorbal noun, etc. | achūnam. | prell ( 7 ). | otin. | mishesl. | $y$ yut. |
| Participle Past. | aohūnd | prête. | otiti. | mishati. |  |
| Present | achünam. | prēnam. | otinam. | mixhonam. | yünam. |
| . Future | achünlors. | prēlom, prom. | otilom. | mimezozam | yūlom. |
| \% Imperfect. | achūnazzam. | prēnaszam. | otinazzam. | mimhonazzam. | yūnazzam. |
| $\stackrel{\sim}{*}$ Past . | achūnic | $p t a ̈$ | otimia | mishiä. |  |
| Plaperfect | achūnissum. | ptāssiam. | otinassam. | mizhessiam. | iärissam. |
| Imperative | achūnర. | $p r e \bar{e}$ | otī, otiz. | mixhб. | $\bar{i} \bar{i}, \begin{gathered} \bar{a} y \bar{u}, \\ y \bar{u} . \end{gathered}$ |
| Conditional | achūnamba. | prêlomba. | otinamba. | mimbētax. | yūnamba. |

53. Transitive Verbs are formed from Intransitives, and Causals fróm Transitives, by lengthening the final vowel, or sometimes by inserting $\boldsymbol{a}, \boldsymbol{e}, \tau, \delta, o$, before the termination sth, as-

| piltisth, | to fall. | piltaosth, | to canse to fall. |
| :--- | :--- | :--- | :--- |
| amjisth, | to pat on clothes. | amjosth, | to clothe. |
| pashisth, | to light. | pashiosth, | to cause to light. |
| wisth, | to rest. | widsth, | to cause to rest. |

54. The following are samples of the conjugations of certain verbe. Each was taken down separately from the mon employed, after a number of sentences had been worked out, showing the nef of each Tense :-

Inpinitiry, esth, to be.

## Indicatife.

Present.
Imperfoot.
Singular.
Plural.
Singular.
Plural.
$\left.\begin{array}{l}\text { 1. adzum,* assum } \\ \text { azzum. }\end{array}\right\}$ 1. asumish.
2. $\alpha x x i \underline{g} h, ~ o s h i g_{g} h$,
$\left.\begin{array}{ll}\begin{array}{l}\text { assi, } \\ \text { aghi. }\end{array} \quad \text { oshi, }\end{array}\right\}$ 2. aعãr.
3. as8è, assia, assa,, 3. hosth, aight, $\begin{aligned} & \text { ass, ass, est, } \\ & \text { amsā, assett ess, } \\ & \text { essa, ai, asēl. }\end{aligned}$$\quad \begin{aligned} & \begin{array}{l}\text { asht, ai, } \\ i s t a, ~ a s s e ̄ l, ~\end{array} \\ & \text { etasal, àsth. }\end{aligned}$
After an adjective, the 3rd person singular or plural is often wai, $a$, or $\varepsilon a$; as, zor wai, are strong; spahi digar $a$, soldiers are bad; cho manchiza, how many men are there $P$
"Is not" is often rendered $n$ 'ai.
"This is it," inass

1. azzum, assivm. azsumigh.
2. $a z z u$ bh.
acãr.

$n^{\prime}$ aisi is commonly used for "was not."

## Imprbative.

osh, be thor:

Oomprtional.
Singular.
Plural.

1. ashimba. asvimiehba.

2. ashbba:
aezaba.
[^72]Infinitive, busth, to become.

1. Part. Pres., būl.
2. " Past, buti, būti, butiz, bitĩ, bissi.

Indicative.
3. Present-

Singular.

1. banam, bunam.
2. banjiz, buch.
3. "būnn, bonā, būtt, buttett, bosel, büttā, bā, bitto, buttaser.
4. Fature-

Singular.

1. bülom, bulom.
2. būlogh, bulass.
3. $b \bar{u}$ loh, bulă .
4. Imperfect-

Singular.

1. būnazzam, bunazzam.
2. bunamsish.
3. banazsi.
4. Past Indefinite-

Singular.

1. $b a^{\prime} m$.
2. $b a^{\prime} \underline{\xi} h, b \delta \underline{g}$, , bozha.
3. $b a$.
4. Plaperfect-

Singular.

1. bissium. $\dagger$
2. bissiah.
3. bissi, bistai.

Plural. bümigh, bumish. bưr. bünd, bund. . | Plural.
būmma.
bülôr.
būloh, bulā.

- Does it become P botasala ? It is well,
festa bala.

Plural. bünazsamish. būnazãr. bünassi.

Plural. bamish. bör. ba.

Plural.
btssiumish.
bissãr.
bissi, bistai.
$\dagger$ Aloo bosam, booish, etc.
8.

9.
.
Singular.

1. bimtã, bulazzamba.
2. bishta, bulazzighba.
3. bitta, bulazsiba, bulanhbd.

Imperative.

## Plural.

bumma.
bfir.
bula.

Conditiomal.
Plural.
bimista, bomazerba.
bĩrdâ, bulãerbâ.
bitta, bulausba.

Infinitive, êsth, esth, or güsth, to go.*

1. Part. Pres. (f)
2. " Past, gtt.

## Indigative.

3. Present-

Singular.

1. ennam, anam, aietam, ettam.
2. $\mathrm{Onj} \mathrm{t}, \mathrm{e}$ etish.
3. ann, enn, ettett.
4. Fatare-

Singular.

1. èlom, êlam.
2. $\quad$ nja, èlos $h$.
3. emnä, allon,èla, ellä, afzio.
4. Imperfect-
$\qquad$

Singular.

1. ēnazzam.
2. ènazrish.
3. ënazzi.
4. Past Indefinite-

## Singular.

1. $g a^{\prime} m$.
2. $g a^{\prime}$ sh.
3. gavoa, gus.
4. Pluperfect-

Singular.

1. gūssam.
2. gursish.
3. gజ®sad.

Plural. emigh, étimigh. êr. end, ettett, ettessel.

Plural.
ënauzamish.
en nazzär.
ennazer.

Plural. èmá, èmish, etimish. , êr $\boldsymbol{r}$. ellã, alla.
Plural.
gamish.
$g$ ãr.
gawā, gyē.

- It is belioved some of the tonses are derived from esth and some from güsth.

8. 


9.

| Singular: | Plural. |
| :---: | :---: |
| 1. $g \bar{u} m b \hat{a}_{\text {. }}$ | gamishba. |
| 2. $g \bar{u} j b d$. | gwipba |
| 3. gūba, gaieba. | guba. |

Infinitive, kusth, korusth, to do or make.

1. Part. Pres., kul, karōl. .
2. " Past, kusth, (?) kati, ktt.

Indicative.
3. Present-

Singular.

1. kunam, kotam, karonam, $k_{s h} h a ̈ m, k o m$.
2. $k u n j \bar{z}, k a \underline{s} h, k_{s h o n j i . ~}^{\text {. }}$
3. kunn, kutt, kuttētt, kolann, kō̃r.
4. Futare-

Singular.

1. kulom, kalom, karolom.
2. kulogh.
3. kulä.
4. Imperfect-

Singular.

1. kunazzam.
2. kunazzish.
3. kunazer.
4. Past Indefinite一
5. $\left.\begin{array}{l}\text { Singular. } \\ \text { 2. } \\ \text { 3. }\end{array}\right\}$ karā̈, karo.

Plural. kunazzamish. kunazeãr. kunams.
kummá. kưlr. kula.
kumma.
$k \tilde{\bar{u} r}$. kuttētt, kund.

8. 

Singular.
1.
2. ksha.
3. kuta.
9.

Singular.

1. karbâ, kulaibâ.
2. kulojbâ, kunjı̈bâ, kshonjıbâ.
3. karbâ.

## Imperative.

Plural.
keummá.
ksh ${ }^{2} r$.
kula.

## Conditional.

Plural. kummabá (?). kurba (?).
kulabá (?).

Inpinitive, mpiath, to die.

1. Part. Pres., mol (?).
2. " Past, mristh.

Indioative.
3. Present-

| $\quad$ Singular. | Plural. |
| :--- | :--- |
| 1. mrēnam, mrētam, mrethum. | mrēmá. |
| 2. mrenjz. | mrếr. |
| 3. mrēnn, mrētt. | mrẹd, mrett. |

4. Future-

Singular.

1. mrlom.
2. mrldsh.
3. mola.

Plural.
mrömish.
$m r$ ễr.
mrêla.
5. Imperfect-

Singular.

1. mrēnazzam.
2. mrēnazzigh.
3. mpēnazzi.
4. Past Indefinite-

Singular.

1. $m r a \bar{a} m$.
2. $m r a \bar{a} s h$.
3. $m r a$.

Plural.
mчēnazzamish. mтēnazãr. mệ̀nazzi.

There is also a form mright azsum, am dead; remainder as aasum. (Seo page 19.)
7. PluperfectSingular.

1. mpissam.
2. $m r i s s i s h$.
3. $m r i s s \bar{a}$.

Plural.
mrissamigh.
mpissãr.
mristai, moishta.
8.

Singular.
1.
2. mrē.
8. mrēla.
9.

Bingular.

1. mramba.
2. mrojba.
3. miaba.

## Impmative.

- Plural. mẹēma. $m r e ̄ r, m r e ̂ ̃$. mesta.


## Condirional.

Plural.
mraminhba.
mケ̛ัba.
mabad.

Infinitive, miahōsth, mijōsth, to tell lies.

1. Part. Pres, mijol.
2. " Past, mijeti.

Indicative.
3. Present-

Singular.

1. mizhonam.
2. mixh $\delta n j$.
3. mizhonn.
4. Future-

Singular.

1. mixholam.
2. mizhzlash.
3. mizh $\begin{aligned} & \text { l } \\ & \text {. }\end{aligned}$
4. Imperfect-

Singular.

1. mizh $\bar{n} a z z a \dot{m}$.
2. mizhonazzish.
3. mixhbnazzi.
4. Past Indefinite-

Singular.

1. mizhia'm.
2. mizhia'sh (?).
3. mish $i a$.

Plural. mishomish. mizh $h \tilde{o} r$. mizhend.
$\qquad$


Plural.
mizh $\overline{2} m a$.
mizhhōlr.
mixhbla.

Plural.
minhōnazzamigh. mizhhōnazzãr. mishonnazzi.
7. Pluperfect-

Singular.

1. miyhessiam.
2. mizhes8i.
3. mizhestai.

Plural.
mighiämish ( $?$ ). mighiã̃r. mizhia.
8.

## Imperative.

## Singular.

1. 
2. mizho.
3. mizhola.
4. 

Conditional.


- Probably in the few instances where the termination tan is shewn for the Conditional tense, there is also a form ending in $b a$, similar to those shown in the conjugations of busth, esth, kusth, etc.

Infinitive, lughtisth, to be frost bitten.

1. Part. Pres., lushtil (?).
2. " Past, lughtitti.

Indicative.
3. Present-

Singular.

1. luzhenam.
2. luzhenj.
3. lushè̄nn.

Pleral.
luahermish.
lushherr. lushēnd.
4. Fatare-

Singular.

1. bughonentom.
2. huzhënēlogh.
3. luz̧hēnellă.

Plural.
luahhëlema.
 luahānella.
5. Imperfect-

Singular.

1. luzhēnazzam.
2. luxhënazsish.
3. luzhēnaseei.
4. Past Indefinite-

Singular.

1. luyhengam.
2. luxhengash.
3. luzhenga.
4. Pluperfect-

Singular.

1. lughengossam.
2.' lu zhengossigh.
2. lughengossa.

Plural.
luzh ${ }^{2} n a w s a m i s h$. lughēnassã̃r. lughānamer.

## Plural.

 luzhengamish. luzhengär. luzhenga.
## Plural.

luyhengossamish.
luzhengussã̃r.
luyhengusthai.

- The root is luil $h t$ or $l$ whe , the tenses being formed acoordingly.

8. 

## Singular.

1. 
2. lughè.
3. luzhēnella.
4. 

Singular.

1. lughtimtän.
2. lushtiohtan.
3. lushtinntan.

## Implatitiv.

Plural.
luzhêlema. luzhēlĕ̃r. luzhēnella.

Conditional.
Plural.
lushtemishtär (?).
lushtễrtän (?).
lushtinntān (?).

Infinimive, nighisth, nighisth, or nighisth, to sit.

1. Part. Pres., nishīn, nishēl.
2. " Past, nishiti.

## Indicative.

3. Present-

Singular.

1. nizhennam.
2. nizhenj.
3. niuhhēnn.

Plural.
nighēmigh.
nizh ${ }^{\text {err }}$.
nishēnd.
4. Fature-

Singular.

1. nizhēlom, nishhlom.
2. nizhēlosh.
3. nixhēla.

Plural.
nizhēmá.
nizhlălr.
nizhēla.
5. Imperfect-

Singular.

1. nizhinazzam.
2. nizhinazzish.
3. nizhinazzi.
$\qquad$
4. 

Singular.
1.
2. nizhē.
3. nighēld, nizhâ.
9.

Singular.

1. nizhēlambâ.
2. nizhēlazhbâ.
3. nizhēlaba.

Imprrative.
Plural. nixhēmd. ninhêlr. ninh ${ }^{2}$ ēa.

## Conditional.

Pluralo nishelamishbes. $n i \not x h$ ẽl $l r b d$. ninhēlaba.

Infinitive, piltisth, to fall.

1. Part. Pres., piltit.
2. " Past, piltētī.

Indiciative.
3. Present-

Singular.

1. piltēnam.
2. piltanj.
3. piltann.
4. Fatare-

Singular.

1. piltilom.
2. piltilosh.
3. piltila.

Plural.
piltilèmá. pittēlr. piltilā.
5. Imperfect-

Singular.

1. piltinassam.
2. piltinassigh.
3. piltinassi. -

Plural.
piltinassamish.

- piltinassãr. piltinassi.

6. Past Indefinite-

Singular.

1. piltiä'm.
2. $p i l t i a^{\prime} \underline{s}_{-}$
3. piltiā.
4. Pluperfect-

Singular.

1. piltissam.
2. piltissigh:
3. piltissi!

Plural. piltiàmish. piltiãr: piltiã.
8.

Singular.
1.
2. pilti.
3. piltila.
9.

Singular.

1. piltimdã̃.
2. piltighta.
3. piltilta.

Inperative.
Plural.
piltilema.
piltēlãr.
piltila.

Conditionat:
Plural
piltimishla pilt $\imath \tau d \bar{a}$. piltilta,

Infinitive, achūnasth, to run.

1. Part. Pres., achinnam.
2. "Past, achandr.

## Indicative.

3. Prement-

Singular.

1. achanam.
2. achunanj.
3. achanann.

## 4. Putare-

Singular.

1. achanlom.
2. achinlogh.
3. achanla.

Plural. achūnamish. achür. achūnand.
5. Imperfect -

Singular.

1. achinamam.
2. achinassigh.
3. ach nasm.
4. Past Indefinite-

Singular.

1. achania'm (?).
2. achemia'sh ( $)$.
3. achenia (?).
4. Plaperfect-

Singular.

1. achinissam
2. achanissigh.
3. achaniosit

Plural. achünissamish. achūnissãr. achūnissi.
8.

Singular.
1.
2. achüno.
3. $a c h u ̄ n l \bar{a}$.
9.

Singular.

1. achūnambâ.
2. achūnashbá.
3. achũnabâ.

## Imperative.

Plural. achalamma. achunlâr. achanta.

Conditional.
Plural. achünamishbd. achürba. achanaba.

Infinitive, otisth,* utisth, to remain.

1. Part. Pres., otin, utin.
2. " Past, otīt̄, utti, $\dagger$ uttā.

Indioative.
3. Present-
,Singular.
3. otinam.
2. otinj.
3. otinn.
4. F'utare-
5. Imperfect-

Singular.

1. otilom.
2. otilogh.
3. otilä.

## .



Singular.

1. otinazzam.
2. otinazeigh.
3. otinazzi.
4. Past Indefinite-

Singular.

1. otinià' $m, u t t a$.
2. otinia'sㅆ.
3. otiniá.

Plurab.
otimmish. otãr: otind.

Plural. otimma, otilammi. otilr. otila.

Plural.
otinazzamigh.
otinazzãr.
otinazzi.
7. Pluperfect-

Singulur.

1. otinassam.
2. otinassish. 3. otinassī.

Plural.
otinassamigh
otinassãr.
otina ${ }^{\text {sīi. }}$
*The first letter tbroughout the verb is sometimes $u$.
$\dagger$ This is found in the sense of "that which remained ; the leavings."
8.
Singular.
1.
2. oti, otio.
3. otīla.
9.

Singular.

1. otinambâ.
2. otinazhbá.
3. otinabâ.

Impriative.
Plural. otimmé. otilãr. otild.

Conditional.
Plural.
otinamizhlet. ot $\tilde{\imath} r b d$.
otinabâ.

Infinitive, iasth, yosth, yusth, yūsth, to eat.

1. Part. Pres., yūl.
2. " Past, yūti, zhūtz.

Indicative.
3. Present-

Singular.

1. yūnam, aietam.
2. $y \bar{u} n j \bar{j}, y \bar{c} c h \bar{k}$.
3. $y \bar{u} n n, y \bar{u} t t, y \bar{u} t t e t t$.

.
Plural.
yümish.
$y$ ưr.
$y \bar{u} n d, y \bar{u} t t, y \bar{u} t t e t t$.
4. Future-

Singular.

1. yülom.
2. $y \bar{u} l o g h$.
3. yüla.

Plaral. yūmâ. yừr. $y \bar{u} \bar{a}$.
5. Imperfect-

Singular.

1. yünazzam."
2. yünazuigh.
3. $y \bar{u} n a z z \bar{i}$.

## Plural.

yūnazzamish.
yūnazzãr.
yünazzi.
6. Past Indefinite-

Singular.

1. $\bar{z} \boldsymbol{a}$, iãra (?).
2. $\dot{a} a \tilde{a} \bar{a}$.
3. iã̃a, iyã, iyāsht.

## 7. Plaperfect-

Bingular.

1. iã̃issam.
2. iãrissigh.
3. iârissi.

Plural.
iãramigh (?).
$i \bar{a} r$.
iã̃a.

* In this tense the letter $l$ sometimes takes the place of $n$ as yülazzam, etc.

8. 

Singular.
1.
2. $i \bar{\delta}, \bar{a} y \bar{u}, y \bar{d}, y \bar{u}$.
3. yula.
9.

Singular.

1. $y \bar{u} n a m b a ̂$.
2. $y \mathfrak{z n j b a b . ~}$
3. yūnabâ.

## Conditional.

Impirative.
Plural. yuma. y zi . yäla.

Plural. $y a \overline{m i s h b a}$. $y$ ũr $b a$. $y \overline{u n d a b a}$.

Infinitive, ngūsth, to take.
J. Part. Pres., ngal.
2. " Past, ngatt.

> Indicative.

## 3. Present-

Singular.

1. ngānam.
2. nganj.
3. ngann, ngatt.
4. Fatare-

Singular.

1. ngālom.
2. ngālosh.
3. ngala.
4. Imperfect-

Singular.

1. ngānazzam.
2. ngänazzish.
3. $n g a \pi n a z z i$.
4. Past Indefinite-

Singular.

1. $n g u \bar{u} t a^{\prime} m$.
2. ngüta'sh.
3. ngūtă.
4. Pluperfect-

Singular.

1. ngūtūgsam.
2. $n g \bar{u} t \bar{u} 88 i s h$.
3. ngūtūgsi, ngūtastai.

Plural.
ngāmish.
ngãr.
ngand.
$\qquad$
1
Plural.
ngāma.
$n g a ̃ l r$.
ngabă.

Plural.
nganazzamish.
ngãnazzãr.
ngānazzi.

Plural.
ngūtämish.
$n g u ̄ t a ̃{ }^{2}$.
$n g u ̄ t a$.
.

Plural.
ngūtüssamish.
$n g u \bar{u} \bar{u} s \varepsilon a ̃ r$.
ngūtūssī, ngūtastai.
8.

## Singular.

1. 
2. nga.
3. ngald.

## Impreative.

Plural. ngama. ngãr. ngald.
9.

Singular.

1. ngatambí (?).
2. ngūllazziba (?).
3. ngūtaba.

Conditional.
Plural.
ngamabd (?). ngã̃lrba (?). ngutaba.

Infinitive, prēsth, to give.

1. Part. Pres., prël (?).
2. " Past, prēti.

## Indicative.

3. Present-

Singular.

1. prënam.
2. prēnjī.
3. prētt, prënn.
4. Future-
5. Past Indefinite-

Singular.

1. $p t \bar{a}^{\prime} m$.
2. $p t \vec{a}$ ' $\underline{\text { b }}$.
3. $p t a$.
4. Pluperfect-

Singular.

1. ptāssiam.
2. ptässish.
3. ptā̄si, ptustai.

Plural.
prèma.
$p r e ̂ ̀ r$. prënd.

Singular.

1. prèlom, prōm.
2. prēlossh.
3. prèlă.
4. Imperfect-

Singular.

1. prēnazzam.
2. prēnazziş̆.
3. prēnazzi.
.

## .

Plural.
prëmá.
prêlur.
prēlă.

Plural.
prēnazzamish. prënazzãr. prēnazzi.

Plural.
ptamish.
$p t \bar{a} r$.
pta.

Plural.
ptassamish.
ptāssãq.
ptassi, ptustai.
8.
Singular.
1.
2. prë.
3. prèla.
9.

Singular.

1. prèlombâ.
2. prēloshbá.
3. prèlābâ.

## Imperative.

Plural.
prēmá.
prẽlr. prèla.

Conditional.
Plural. prēlomishbâ. prêlö̀rba. prêlāba.

Infinitive, awēsth, to bring, to take.

1. Part. Pres., awêl.
2. " Past, awiti.

Indicative.

## 3. Present-

Bingular.

1. awēnom, awētum.
2. $a w e \overline{n j}$.
3. areènn, areētt.

Plurat.
awēmigh.
awẽ̛r. awēnd, awēttett.
4. Fatare-

Singular.

1. awḕ, awēlom.
2. awēlosh.
3. avē̄la.
4. Imperfect-

Singular:

1. awēnazzam.
2. awēnazzishl.
3. awēnazzi.
4. Past Indefinite-

Singular.

1. $a w \bar{e} r \bar{a}^{\prime} m$.*
2. awēra'sh.
3. awērā, awaristhai.

4. Pluperfect-

Singular.

1. awarissam.
2. awarissish.
3. awarissi.

Plural.
awarissamish (?).
awarissãr (?).
awarissi.

* Awöra or arwara, and pluperfect awarissam or arworissam.

8. 

## Singular.

1. 
2. giats, gats.
3. awēla.
4. 
5. 

Bingular.

1. awarambâ.
2. awarijba.
3. awaraba.

## Imperative.

Plural.
awēma.
gatsãr.
awēlā.

Conditional.
Plural.
awaramishba. awarêrbd (?). awaraba.

Infinitive, amjisth, to put on clothes.

1. Part. Pres., amjil.
2. " Past, amjitiz.

Indicative.
3. Present-

Singular.

1. amjinam.
2. $a m j i n j$.
3. amjitt, amjinn.
4. Futare-

Singular.

1. amjilom.
2. amjilosh.
3. amjílă.
4. Imperfect-

Singular.

1. amjinazzam.
2. amjinazzish.
3. amjinazzi.
4. Past Indefinite-

Singular.

1. $a m j \dot{i a}$ 'm.
2. $a m j i a \bar{s}$ h.
3. amjia.
4. Pluperfect-

Singular.

1. amjissim.
2. amjissish.
3. amjissi, amjistai.

Plural.
amjimish.
amj $\frac{\sim}{2} r$.
amjind.
$\qquad$ -

Plural.
amjimma.
amjâlr.
amjila.

Plural.
amjinazzamish.
amjinazzãr. amjinazzi.

Plural.
amjı̄̄amish.
amjiã̃r.
amji $\bar{a}$.
$\qquad$
Plural.
amjissimish.
amjis8ãr.
amjiesi, amjistai.
$\cdot$
8.

## Singular.

1. 
2. $a m j \bar{u}$.
3. $a m j i l d$.
4. 

Singular.

1. amjilamba.
2. amjiloghbâ.
3. amjilabá.

Imperative.
Plural. amjimma. amjīlãr. amjıla.

Conditional.
Plural. amajimmaba
amjžlrba,
amjilaba.

## Inpinitive, pahisth, to grind.

1. Part. Pres., pshil (?).
2. " Past, pshitit.

## Indicative.

3. Present-

Singular.

1. pahinam.
2. $p$ shinj.
3. pshinn.
4. Fature-

Singular.

1. pghilom.
2. $p s h i l o s h$.
3. $p s h i d a$.

> Plural.
> pshizma. pshãlr. pshzla.
5. Imperfect-

Singular.

1. pshinazzam.
2. pshinazzish.
3. $p$ ghhīnazzi.
4. Past Indefinite -

Singular.

1. $p$ shha'm.
2. $p$ sha'sh.
3. psha.
4. Pluperfect -

Singular.

1. pshissam.
2. $p$ alhissieh.

3: pathäs8.

Plural. pshimish. $p s h \tilde{\imath} r$. pshind.

Plural.
pghinazzamigh. pshinazsã̃r. $p$ ghīnazzi.
$\qquad$

Plural.
pshamish.
$p s h a ̄ r$.
$p$ shad.
$\qquad$
7.
,

Plural.
pshissamish.
$p$ phhissã̃r.
pghisei.
8.

9.

Singular.

1. pghinamba.
2. $p$ sh $\bar{i} s h b a \hat{( }$ ( $)$.
3. pghibd.

## Impreative.

## Oonditional.

Plural.
pshimishba. $p s h \tilde{\imath} r b a$. pshibâ.

Infinitive, wisth, or visth, to beat.

1. Part. Pres., wâl.
2. " Past, witi.

> Indicative.
3. Present-

Singular.

1. vinom.
2. wioh, winj.
3. vinn, witt.
4. Future-

Singular.

1. wilom.
2. wilosh.
3. vila.
4. Imperfeot-

Singular.

1. winazzam.
2. winazzish.
3. winazzi.
4. Past Indefinite-

Singular.

1. wina'm.
2. winá'gh.
3. wina.
4. Plaperfect-

Singular.

1. winossam.
2. winoscish.
3. winossi.

Plural.
winämigh. vinā̃. wina.
winazzamigh.
winazzãr.
winazzi.
8.
Singular.
1.
2. wi.
3. wila.

## Imperatife.

## 9.

Singular.

1. winamba.
2. winoshbâ.
3. winabâ.

Conditional.

## Plural.

winamishba (?).
wĩ rbu (?). winabd.

Inpinitive, nishösth, to cause to sit; to set.

1. Part. Pres, nixhbl (f).
2. " Past, nizhzti (?).

Indicative.
3. Present-

Singular.

1. nizhonam.
2. nizhōnj.
3. nizh $\delta n n$.
4. Futare-

Singular.

1. nizhzlom.
2. nizh $h l o g h$.
3. nighola.
4. Imperfect-

Singular.

1. nizhhōnazzam.
2. nizhönazzish.
3. nigh $\overline{\text { andazzi. }}$

$$
+
$$

Plural.
nizh $\sigma m i s h$.
nizh $h \tilde{o} r$.
nizh $\bar{n} n d$.

Plural. nizholma. nizh $\bar{o} l$ lr. ninh $\delta l a$.

1
Plural.
nizhōnazzamigh. nizhōnazzãr. ni $\overline{\mathrm{gh}} \overline{\mathrm{O}} n a z z i$.
6. Past Indefinite-

Singular.

1. nishēā'm.

- 2. nisheā'sh.

3. $n i \underline{s} h \ddot{a} a$.
4. Pluperfect-

Singular.

1. nizhōnassam.
2. nizhonassigh.
3. niphonass .

-54] Virbbs. 65
4. 

## Singular. <br> 1. <br> 2. nizhat. <br> 3. nizhäla.

9. 

Singular.

1. nixhālezambâ.
2. nizhälezizhba.
3. nixhalezibd.

## Inperative.

Plural.
nighamma.
nixhōr.
$n i \underline{h} h \bar{a} l \bar{a}$.

Conditional.
Plural.
nizhālazamishbá.
nizh $\bar{l} l_{a z r ̌ b a . ~}^{\text {. }}$
nixhālazibâ.

Infinitity, piltosth, to cause to fall; throw down.

1. Part. Pres., piltol (f).
2. " Past, piltesti.

## Indicative.

- 3. Present-

Singular.

1. piltonam.
2. piltonanj.
3. piltonn.
4. Future-

Singular.

1. pilttlom.
2. piltologho
3. piltola.
4. Imperfect-

Singular.

1. piltonassam.
2. piltonassigh.
3. piltonassi.
4. Past Indefinite-

Singular.

1. piltēa'm.
2. piltea'deh.
3. piltēa.

Plural.
piltoma.
piltỗr.
piltond.
$\qquad$


Plural.
piltolemma. piltzlō̃r. piltola.
8.

## Singular.

1. 
2. piltob.
3. piltold.
4. 

Singular.

1. piltomba.
2. piltd $g h b a$.
3. $p i l t z b a$.

## Impgratife.

## Plural.

 piltomma. piltzlãr. piltola.Conditional.

## Plural.

piltomaba (?). piltôrrba (?). piltōlaba (?).
55. The following are some forms of a defective or irregular verb aosth, to come :-

| having come, it comes or will come, $\}$ | attz. <br> afgia. | $\begin{aligned} & \text { Imperative, } \\ & \text { come, } \\ & \text { if you come, } \end{aligned}$ | ats prêts. anjzbâ. |
| :---: | :---: | :---: | :---: |
| he comes, | ann, awettett. | we are coming | $m a$. |
| I came, | aiydsam. | or will come |  |
| thou camest, | aiy $\overline{\text { grh }}$, osh. hāu. | they come, | atteett. |
| he came, | $\left\{\begin{array}{l} \text { aiyo, ozz, } \\ e 88, \text { adsā, }, \\ \text { afziziz. } \end{array}\right.$ | they have <br> come, | afziā, osth <br> osthai, $\hat{a} y \bar{u}$. |

56. "To be able," bnsth, is used by adding it to the root of a verb, supplemented by a letter for euphony if desired, as, to oatch, damisth; I cannot catch, dam-en na battam.

| I cannot enter, | en na battam. |
| :---: | :---: |
| I cannot pull, you cannot run, | kshon na battam. achūn na banj. |
| you can kill, | jā̃r bachā. |
| he cannot make, | kon n'buttett. |
| thou wilt not be able to go, | $n ' p a ̈ ~ b a l o s h . ~$ |
| 1 cannot go, | n'iam banam. - |
| he cannot go, | pilingèn na batt. |
| cannot see, | oma war n'bammâ. |

57. "To have" is rendered thus: I have two horses, to me two horscs are, $i \tilde{a} \bar{d} \bar{u} \bar{u} \boldsymbol{u} h p$ asht. A form wâs, "has," is sometimes heard, as tapak wâs, he has a gan; dush n'wâsam, I have no blame. This word has many parts which seem to come from an infinitive wasth.

## Passive.

58. The passive form of the -verb is not very often used. The following are samples :-

My arm is broken,
The stick is broken,
My ankle is broken,
The bow is broken,
The bridge is broken,
My saddle will be broken,
The leg will be broken,
I am beaten,
Thou wilt be beaten,
He would have been beaten,
We have been beaten,
Grass is eaten up,
You will be killed,
He was killed,
Ten soldiers were killed,
iã dui pełangwa.
mãri parongi.
grik petangus.
drön petangüs.
8ū petangess.
zin petang ellã.
nanden pefanlä.
ots vina vina karessam.
tu vinagan ungalos는.
ika vinagan ungalazi.
emd vinagan ungutussi.
$y \bar{u} s$ y $\mathrm{w} t \mathrm{i}$ laga biss.
shha jã̃a elãr.
aska jã̃ra gwă.
duts spăi tapã̃ gwa.

The last eight of the above were obtained by Klän Sähib Abdul Hakim . Khăn.
(VI) INDECLINABLES.
59.

Adverbs of Time.
afterwards, $\left\{\begin{array}{cc}p t i o r, & \text { ptivar, } \\ \text { ptibar, } & \text { or } p a m \bar{e} .\end{array}\right.$ $\begin{array}{lr}\text { hitherto, } & s t a r a k \text { wok. } \\ \text { immediately, } & s a p p, z a p p . \\ \text { last year, } & \text { - } \rho \bar{\sigma}, p \bar{s} \bar{\varepsilon}_{.}\end{array}$
all together, $\bar{e}$ wot.
always, at any time,
at last,
at what time?
back again,
before,
by night,
daily, pare wör. cai wōs $t \tilde{\bar{a}}$.
pètik.
ko?
$d \bar{i}, w \bar{a}$.
shaiye.
radar.
sang gujr.
$\left.\begin{array}{c}\text { day after to- } \\ \text { morrow, }\end{array}\right\}$ attrib.
day before $\}$ nottrē. yesterday, $\}$
each day;
daily; in $\}$ co gujrẽ̃.
a day,
early, or soon, shangyē.
early morning, kuiã̄.
ever,
$k u \bar{i}, k u \bar{i} w \delta s t \tilde{\bar{a}}$.
formerly, . $\quad\left\{\begin{array}{c}\text { shangye } \bar{e} \text { zama- } \\ n a t \overline{\bar{a}} .\end{array}\right.$
henceforth,
$p \bar{a} m \bar{u}$.
late, drew.
never, once, $\bar{\theta}$ wort. rarely, achok woktā.
 since when ? kun stē? $\left.\begin{array}{l}\text { some day or } \\ \text { another, }\end{array}\right\} \dot{k u i} w \bar{i} s t \tilde{\bar{a}}$. sometimes, kāchī, kuī kun. soon, app, achūnam. ten times, ducts wör. today, $\quad\left\{\begin{array}{l}\text { stark, pstarak, }\end{array}\right.$ \{pshtarak, shtak. to-morrow, dalkiẽ, dalkia. twice, $d \bar{u}$ wōr.
$\left.\begin{array}{c}\text { two days } \\ \text { hence, }\end{array}\right\}$ achutt. when $? \quad\left\{\begin{array}{l}k \bar{a} s t \bar{e} t \\ k a i \bar{a} r, \\ k a i k t c t\end{array}\right.$ yesterday, $\quad d \bar{u} s, d u s$.
60.
anywhere, around,
back,
back again, down hill, down stream, downwards, far,
in front,

Adverbs of Place.
$k o ̄ r$. p'banūr.
wa.
di.
br ūllē, burr.
vinrè̄n.
wầr, wac, y華r.
badar.
$\left\{\begin{array}{c}\text { panoi, nashtar- } \\ \text { wâ̂. }\end{array}\right.$
in front of, nirgo.
here,
ant, antic.
high up, ch ĩr.
inside,
att eैंr.
$\left.\begin{array}{c}\text { low down (a } \\ \text { valley), }\end{array}\right\} n \tilde{\imath} \dot{r}$.
near,

outside, bar, bor $\tilde{\bar{u}}$.
somewhere, kor.
$\left.\begin{array}{c}\text { on this side (of } \\ \text { a river, etc.), }\end{array}\right\} \tilde{\overline{2} r}$.
on that (the

this way, that way,
in $\bar{a} p \bar{p} r, a n i p z r$. aki $p$ or.
there,
up hill,
up to, kati.
whence, kor stē.
whereabouts, kett.
which way? korar ?
61. Adjectives and adterbs of Quantity.

| how much ? | chï, chok, chuk. |  |
| :--- | :--- | :--- |
| this much, | igiak. | very $\quad\left\{\begin{array}{c}\text { bilūgh, bilugh, } \\ \text { biliuk. }\end{array}\right.$ |
| so many, | azhik. |  |
| so mach, | azhisto. | to a small extent, achok. |

62:
Advarbs of Similitude.

| aloud, certainly, | kāgré. buasht. | $\text { separately, } \quad\left\{\begin{array}{c} k \tilde{u} r \quad k \tilde{u} r, k \bar{u} r \\ k u \bar{u} r . \end{array}\right.$ |
| :---: | :---: | :---: |
| even, | $d i$. | somewhat, a $\}$ achok. |
| forcibly, | kartẽ. | little, $\}$ achok. |
| for nothing, | $g i \underline{\bar{a}}, g i j \overline{\bar{a}}$. | slowly, by stealth, chill |
| how? | kaikotē, kākt̄̄? | surely, nashtonti. |
| like this, | ajik. | therefore, ikiē dug |
| like to, | $\left\{\begin{array}{c} \text { agyur, purst, } \\ \text { agūr. } \end{array}\right.$ | verily, buasht. <br> violently, $k \delta t \tilde{\epsilon}$, kart E. |
| loudly, | kotê. | well, lee, lesstaka |
| no | na, $n \bar{a}, n o h$. | wherefore'? kai dugãa |
| otherwise, |  | hy ? $\quad\left\{\begin{array}{l}k y \tilde{E}, ~ k a i ~ d u \\ \text {, }\end{array}\right.$ |
| perhaps, | shtalê, ingol kã. | . $\cdot$ \{ ky $\hat{u}, k$ kaikotē ? |

63. 

Post-positions and Prepositions.


Post-positions and Prbpositions-continued.
for sake of,
from,
in,
$\left\{\begin{array}{l}d u g \tilde{\tilde{a}}, \quad \text { sometimes } \\ \text { pronounced very } \\ \text { rapidly like tik } \overline{\tilde{a}}, \\ k \tilde{a}, g \tilde{a} ; \text { sometimes } \\ \bar{a} \text { is used as a } \\ \text { suffix to Infini- } \\ \text { tives as yusthā, } \\ \text { for sake of eating. }\end{array}\right.$
stē, ste, stê.
$\left\{\begin{array}{l}b \text { as a prefix, as } \\ b^{\prime} b h \bar{z} m, \text { in the } \\ \text { ground ; or } p^{\prime} \text { or } \\ p a ; t \overline{\bar{a}} ; \text { suffix } \bar{e} ; \\ m \tilde{E}, m \overline{\tilde{\imath}} .\end{array}\right.$
in midst of, $\quad p^{\prime}$ mijhiz.
instead of, piol.
near to, chirool, tavarẽ $t \overline{\bar{a}}$.
$\begin{array}{ll}\text { of, } & t \tilde{\tilde{a}} . \\ \text { on, } & t \tilde{t} .\end{array}$
on account of, tĩa.
outside of, $\quad b \bar{e}, b e g \bar{u}, b e q \bar{u}, b a r$.
together with, $t \tilde{\bar{a}}$.
towards, $\quad p o r, b a$ (as a prefix).
under, pagiör, pagū̃r.
until, wik.
upon,
up to, wik.
$\left.\begin{array}{l}\text { with (in com- } \\ \text { pany), }\end{array}\right\}$ més $s h, m i \underline{s}$.
$\left.\begin{array}{cc}\text { with (by } \\ \text { means of), }\end{array}\right\}$ wār $\tilde{E}, w r \overline{\tilde{a}}$, wr $\tilde{E}_{.}$
$\underset{\text { means of (by })}{\underset{\text { with }}{ }}\}$ mēsh, mish, mësh.
64.

Conjonctions, etcetera.
The Käfirs appear to dispense with conjanotions as much as possible. The construction of the language avoids them. Some seem borrowed from the Chitrali.

| $\left.\begin{array}{l} \text { also, } \\ \text { even, } \end{array}\right\}$ | dit |
| :---: | :---: |
| and, |  |
| not, | nā, na, nai, noh. |
| if, | ka. |
| otherwise, | $k a-n a$. |
| r, | $t$. |

yes. Although in an affirmative reply to such a question as "Has Widing come $P$ ", "ges" is sometimes rendered by the Chitrali word "di," it is usual to reply "He has come" or "Widing has come."

- The post-position $t \bar{Z}$ is sometimes $t \bar{a}$ or $\mathbf{t} \boldsymbol{E} r$.

65. 

## Intibugctions.

Movements of the hands, etc., are very largely used to express feelings of surprise, annoyance, etc.
alas,
be silent, bravo,
good-bye and
good luck,
66.

(VII) NUMERALS. Cardinals.

1. $\bar{e}, e o, y u, y \bar{o}$.
2. $d \bar{u}, d u i$.
3. trè.
4. shto.
5. puch, $p \bar{\delta} \bar{h}, p_{\overline{0} j}$.
6. shu.
7. outt.
8. usht.
9. non.
10. duts, dots.
11. yanits.
12. dits.
13. trits.
14. shtrite.
15. pachits.
16. shets.
17. sapite.
18. ashtite.
19. neits.
20. witsi, watsa.
21. witsi eo.
22. witsa duts.
23. $d u$ witsei."
24. du witst duts.
25. trè witsi.
26. trē witsi duts.
27. shto wittsi. $\dagger$
28. shto witsi duts.
29. $\left\{\begin{array}{l}\text { pjch witsi, but sometimes } \\ \text { sher is used. }\end{array}\right.$
30. duts witsi.
31. pachits witsi.
32. asar.
33. $\left\{\begin{array}{l}\text { diu asar je duts witsi } \\ \text { (sometimes azar is ased). }\end{array}\right.$
34. puch arar.

The Käfirs, it will be seen, like the tribes of the Russian Caucasus, count by twenties. $\dagger$ Sir George Robertson informs me that, in the high figures, their counting is not only very rapid bat remarkably accurate, in spite of the apparent drawback.

[^73]Ordirals.
67. The Ordinals are formed thus :-
panishr, first. witsi ptiwar, (?) twentieth.
panishr stē ptibar, (?) second. poch witsi ptistar, (?) hondredth. trè ptivar, (?) third
68. Duplication is expressed thas :$d \bar{u} \bar{e} p o r, \quad$ two-fold. $\quad d u t s e \bar{e} p o r, \quad$ ten-fold.
69. Distribative Numerals:-

| $\left.\begin{array}{l}\text { yo } n a r i k, \\ \text { yo } k \bar{u} r \bar{\theta},\end{array}\right\}$ one by one. | trè, |
| :---: | :---: |
| dodun, two by two. | yo chashton, four by f |

' 70. Fractions, etc.-

chillai, | quarter. |
| :---: |
| erangst, |$\quad \underset{\text { a pair. }}{\text { tinch, }} \quad$ half.

(VIII) MISCELLANEOUS.
71. The following are some of the ordinary weights and measure-ments:-

| manna, | $2 \frac{1}{2}$ seers, ( 5 lbs.) | ht, | $\{$ elbow to end of |
| :---: | :---: | :---: | :---: |
| kayhē, | 15 " (30 lbs.) |  | \{ middle finger |
| shto kaxhe, | 60 " (120 lbs.) | $\overline{\text { e }}$ giats, | neck to dit |
| dright, | span. <br> felbow to | è lambar | $\left\{\begin{array}{c} \text { from shoulder to } \\ \text { ditto. } \end{array}\right.$ |
| dusht, | clenched fist. | è potten, | a pace. |

72. The following are divisions of the day :-


| $s \bar{u} p t z$, | $\left\{\begin{array}{c} \text { time of the sun's } \\ \text { appearance. } \end{array}\right.$ | six chusulit, <br>  | sunrise. \{ evening twilight, |
| :---: | :---: | :---: | :---: |
| yazhi-wèl, | morning. |  | $\{$ sun-down. |
| sū tsävoen biba |  | patramjuk, | night. |
| sü̆ puēli, | sunset. |  |  |

73. 

Cardinal Points.

74. The following information is given by the Reverend Worthington Jukes:-

## Days of ter Were.

| dilkãr, | Sunday. | sawer wasa, | Wednesday. |
| :--- | :--- | :---: | :--- |
| shpah, | Monday. | namāch wasā, | Tharsday. |
| áttrí, | Tuesday. | agar, | Friday. |
|  | sād wasā, |  | Saturday. |

The Morthe.
There are twenty days in a month, and eighteen months ( $360^{\circ}$ days) in a year.

| nilon, | lst month of a jear. |  |
| :---: | :---: | :---: |
| shūt, | 2nd | ditto. |
| ? | 3rd | ditto. |
| palrãna, | 4th | ditto. |
| badi pāsha, | 5th | ditto. |
| karina, | 6th | ditto. |
| nakã̀roa, | 7 th | ditto. |
| mālà, | 8th | ditto. |
| wāgcha, | 9th | ditto. |

[^74]The Montig-continued.

| wariann sherwa, | 10th month of a year. |  |
| :--- | :--- | :--- |
| ses kra, | 11 th | ditto. |
| wutsa satkiya, | 12 th | ditto. |
| aǐyo, | 13 th | ditto. |
| mãr wãra, | 14 th | ditto. |
| drin, | 15 th | ditto. |
| mansia, (?) | 16 th | ditto |
| do mansia, (?) | 17 th | ditto. |
| watta, | 18 th | ditto. |

# ( 67 ) <br> SENTENCES. 

## ENGLISH-BASHGAIİ.

## A

1. He is a very able man.
2. Chiträl is above Brōz (ie., up stream).
3. By an accident Mirak's gun Merak tapak bējar bar odor Bast i went off and Bast was hit. t a p propti. Bast mara. Mira Basti died. It was not by design that Merak killed Basti.
4. My whole body aches much. I Iãs sundi jut bilugh bradsott. cannot go.
5. The Chărwolo also says his Charweli di ias shat bradzott head aches.
6. This year all the fruit is acid.
7. The dog is across the river.
8. My horse is very active.
9. This egg is addled.
10. By going there what advantage is there?
11. That man's advice is not good.
12. My father is a good man: his advice is good.
13. Break this wood with an adze.
14. Come after me.
15. Come after five days.
16. We three will go after four days.
17. Stay here, Come after ten days.
18. In the early afternoon (noon to Grighbō bilugh tap ass: grith3 p.M:) it is very hot: in the late afternoon (3 p.M. to evening) it is cool.

[^75]19. What is your father's age? Tōtta $t \hat{\bar{a}}$ ohok sē bissa ?
20. My father is considerably $I \tilde{\bar{a}}$ tōtt bilūgh manjar ess. aged.
21. To agree to my words is good IÑ warī wagā : tū lestabalã. for you.
22. Agriculture is good for man. Ptal kudum karbo manchi lestabala.
23. I have no ailment.

Ia bradzo n'assum.
24. My father has no ailment.
25. Silence ! my brother is aiming.
26. To-day the air is cold.

Iã tōttia kai bradzo nēss.
Chūsht ठshi ! iर्̄̄ brâ tapik damitt.
Pshtarak (ghtarak or shtak) dumish. tatt: shil bā.
27.. In my valley to-day there is no air:
28. Alas! my son is dead.
29. That sepoy is very alert.
30. This is the place where ducks alight.
31. All my horses have died.
32. All we will go.
33. All the men have gone.
34. On that hill there is always snow.
35. The Mehtar allowed it. Mehr manchīe vari damitt.
36. Do you allow me to depart $P \quad I \overline{\bar{a}}$ purugul bosellā ?
37. I, having paid my respects to Mehr salām gaitī èlom: purū the Mehtar, am allowed (have got my leave) to de. part, and am going.
38. Are you going alone; or does your brother go with you?
39. My son will also go.
40. I don't walk: I always ride.

IÑ piṭ di afaio.
$\overline{\bar{O} t s}$ pottm n'aistam: sang ushpo mĕsh ēlom.
41. This is amazing work.
42. Among them one is a thief.
43. To be angry is not good,

Inā kudūm lē vari ass,
Annio p'mĩch eo shtãr ess.
Mashikr boh less noh,
44. Don't be angry: I will give Tū kabā na bot: õ̃ts buri prestom. jou bread.
45. Yesterday my father became $D_{u s}$ tott bilugh mashoghott. very angry.
46. If you go, I will be angry. Tiù gujbâ iã̃ burabiz bolam.
47. I won't go : don't be angry. Ne èlom : burabiz n'kshl.
48. My brother has gone: my Iã brd gwã: iã tott bilugh burabiz father is very angry. kutt.
49. My ankle is broken. Iã̃ grik proztangoss.
50. My brother has not come: Iã̃s brâ n'aiyo: © var manchi aiyo. another man has come.
51. When he asked me, what Inä kuttãtom tū ka walaoh ? answer gavest thou?
52. I gave answer "I am siok" $O$ waliosam "jitt bradutt." (my body aches), moreover $I$ answered "Thou liest."

Õ walatom "tar larich."
53. Here there are many ants. Amnigul lë aght.
54. In winter ants don't bite. Zawör gun'chagö̃titt.
55. In spring ants bite much. Wizdor gã bilūgh chagỗtitt.
56. There are verily ants; but they Amni buasht gtaght; n'chagốtett. don't bite.
57. I am very anxious; my father Ots wülhtàtum ; tott marett. must die.
58. Is there (any) bhüsa (chopped Hatt tüs assī ? straw) there?
59. Come here apart.
60. Does the enemy appear?

Ani parkiē ats.
Maghūbata warantam ?
61. This apple is sweet.
62. How many men are there in this village?
63. The Afghān soldiers ars bad.
64. Why are they bad ?

- 65. This year apricots are sour.

66. My lower arm is broken.
67. On my upper arm is a boil.

- 68. In my armpit is a boil.

Inā parr arusess.
Inam bagram cho manchizā ?
Aoghani spahi digarà.
Kyũ digar essa?
Inā̈ sè sarren chinai bà.
Iã̃ dūi pètangawa.
Iãast gotrā $t \bar{a} p o ̄ n d u k b a$.
Iãst kachkarà pōnduk ba.
doghäni $\operatorname{sain} p \overline{\text { onj }}$ watsa manchi essa.
69. In the Afghān army there are a handred men.
70. Walk up and down around my Inā p'amū barēla palga. house.
71. The dog keeps watch around Krũ in inā p'amū palangett. my house.
72. Bring my bow and arroiv. I Iãst dron shūr giats.
73. If you eat arsenic, you will die. Skâ yulosh melosh.
74. Ascertain : have the coolies Aǐghkshi : barwai awettett? come ?
75. I have ascertained: the coolies Aìsh kfã : barwai n'afwia. have not come.
76. Go to that house; ascertain Ikiā p'amū wigi aìsh kghi. well.
77. The mountainnash wood is Tir dar dangess. strong.
78. Take away the fire ashes. Ango tã̃ assā gaiē.
79. Bring so much ashes.

Axhik assē giats.
80. How much ashes shall I bring? Chuk assē avoèm ? Tū kai aǐsh What are you asking? kuch ?
81. The aspen tree wood is useless.
82. This ass is not good.

Romēn dā̀r kai ūd n'ess.
83. I have fallen; give me assist- Ots lunissā ; iर्̄̃ lestā kshĩ. ance.
34. Thou art giving me assistance ; TTu iñ̃ litrā prēchi ; ồts tȳū̃̃ lesta I will give thee o present. kulom.
85. Yesterday I gave thee much $D u s$ ồts bilūgh bor pta'gh. Tiu bread. Atest thou it? sundl iã̃rā?
86. I was very hungry, and ate it Iã̃ bilugh atta bissi sundz iyáa all.
87. Thon art very foolish: why Tū bilugh charagh ess: kyā oundt atest thou all of it? iyānā tū?
88. Look! the enemy makes an $A \overline{\tilde{\imath}} \underline{\underline{h}} \mathrm{k}$ ghz. Pachan wari afzio. attaok (has come on).
89. The dog attacked me. Krũi iã t $t \overline{\bar{a}}$ atursiā.
90. He is a quiet man : don't attack Naluzo manchi ess : kai n'amnio. him.
91. Make an attompt to carry out Inā wari kuttā kghé. this intention.
92. You don't make an attempt $T \bar{u}$ in $\bar{a}$ wari nai kutt kogh to follow this up.
93. In autumn the leaves fall. Shäro por viyanya.
94. Autumn is the time for reaping Shāra bā kati erwemá. wheat.
95. This yèar many avalanches Inä sé turus lēāyā. have come down.
96. In the spring many (avalanches Wasut vōtt lē afzī̄. of) stonas fell.
97. That man is very avaricious.
98. Avoid tobacco.

Ikia manchi bibugh dang eis.
Tamkio leatā (?) kghĩ.
99. Avoid meat five days; you are Poj wäs ano lestă (?) bunhi ; tiu ill.
100. I awoait my son.
101. At the time for prayer araake me.
102. My son is asleep : awake him.
103. My axe has beoome blunt.

Iã̃ pitr pghuiss: betso.
Iã̃ pets dura biss.

## B

104. My back aches.

Iã̃ tã pti bradzott.
105. Go baok! bad man! Tū digar manchi assish! ani ats!
106. If you will come back, I shall Tū dī ats anjībû, jãrlam. kill you.
107. You are tired: I shall give Tū gatra bissigh: tū achu kalom. you a baok.
108. The Afghāns are bad men.
109. In that bag is oloth.
110. Bring my bag here.
111. A thief has taken off my bag.

Aoghani manchi digar asht.
Stã pashtuga $t a \tilde{a}$ lattri asht.
Iã̃ paghtuga ani gats.
112. The coolies have brought my Ani baruai lattri arworistai. baggage here.
113. That man is bald. Stä manchi kurr ess.
114. The polo ball is lost.

Chari piz biä.
115. That man is bandy legged (?) Stā manchi kuttatt. (limps).

- 116. On the bank of the river Ao tawar̃̂̃ pīgh lē ai. there are many flowers.

117. The dog is barking: thieves Krüi rattatt : shtã ayasar.* have come.

[^76]118. This year wheat is bed; barley Inā se gum digara bā; rits lesta is gocd. $b \bar{a}$.
119. Make a basket for me.
120. I want a big basket.

Iẫ dugễ kawã k shẽ.
121. Here last year there was a Inā poē shuj.biss. battle.
122. The Badakhshi fights (makes Tänh shaj lesta kulai. battle) well.
123. My horse is a bay colour.

Iã̃ ushup pilir ess.
124. I see a beacon on the hill.

Bado ango varion.
125. Light a beacon on that hill.
126. What is in the bird's beak?

Ikiä bado ango kehi.
Marangatse noehpē kai etsal ?
127. Take care! that beam is not Tarã̃chi bō! Ikī̄ā argrū less ness. strong.
128. There are clouds. We cannot see the constellation of the Groat Bear.
129. Are there bears in the forest?

Ba ben its assē ?
130. My foot pains: I cannot bear $I \tilde{\tilde{a}} t \hat{\bar{a}}$ kür bradsott : dōr na butt. it.
131. That man's beard is become Stā manohī tã dãri kanhura bissã. white.
132. I am beaten: I will beat thee Ots vina vina karesam: dalkien tu to-morrow.
133. That bird is beautifub.
134. I am tired : get my bed ready.

Ikīā marangats sbingar aiets.
Gatra butz ayā sum: prugh1 gaiets.
135. I have brought a bed; there is Prusht avärā ; ashtrith $n^{\prime}$ aiesht. no bedding.
136. In Bumboreth there are many Mämreth mãcherik lē asht. bees.
137. Bees will sting. I am afraid Māoherik atur ghilā : widerthum. of them.
138. Go thou before, I will follow. Tū naabtar wai bō, 合ts pituraisalam.
139. What does that man beg? Ikia manchi kai awegutā?.
140. He is not a bad man : he is a beggar.
141. Sit behind me on the horse.

Ikiā manchi digar n'ess: naluz • 20âs.
T $\bar{u}$ ushpa tã $\bar{a} \tilde{a}$ ptiora nisher.
142. After eating food don't belch.
143. I place no belief in him.
144. Thou liest! I don't believe Tīu laraichi! tū wavi n'patitom. thee.
145. I have eaten too much: my Shồ le iarồ : ktol bradzott. belly aches.
146. Brōz is belovo (down stream Bruz Shtrālo stā nîr ess. from) Chitrāl.
147. My walking stick is become $I$ ã̃s manui dür biss. bent.
148. My father is here : and besides Iã̃ tott añ ess: wärā $k i ̄ c h ~ n ' p s s$. him no one.
149. We have bhüsa and besides Emâ tã̃ ushp dugẽ tūs ass: wårā nothing else for horses. n'aiesht.
150. Is the Afghân or Chitrāli Aoghān spähi lest ai na Bilian soldier the better? lest ai ?
151. Between Chitrāl and Brōz Shdrāl Bruz p'mij grām n'aiesht. there is no village.
152. Beware! the dog will bite you. Taraichi bo! krũi aturshilon.
153. Beyond Dróah there is no cul- Dryus pãr kujhi n'aieshta. tivation.
154. The big dog is amiable; the Âl krũi less: parmen krũ atursmall dog bites.
155. On the ghawal pass there are no birds.
156. Give me a bit of meat.
157. Put a bit in my horse's mouth.
158. The horse bites; don't go near.
159. The black horse fell yesterday.
160. Fetch me two blankets from the house.
161. Bleed him from his forearm.
162. In the spring a strong wind blew, and the fruit is damaged.
163. The old man is blind.

- 164. My pugri has blood on it.

165. Spring has come; the trees are blossoming.
166. Blow the fire hard.
167. The wind blows very fast.
168. Blow out the light.
169. My knife has become blunt.
170. He is a very boastful man.
171. Take care! there is a bog ahead of you.
172. My leg has a boil on it.
173. For making tea boil water.
174. There is a bone in my dog's mouth.
175. My bow is broken.
176. Give this box to the coolie.
177. What is this boy's age?
178. That man has no brain: he is foolish.
179. Break a branch of that tree.
180. In order to get some brass I am going to Chitrāl.
181. The Government soldiers are all brave.
182. Bravo! don't be tired!
183. Thy ass is braying loud; listen! all the asses are braying.
184. Get bread for my coolies.
185. If you won't give me bread, I will die.
186. Do not break my box.
187. If you break the wood, I shall be very angry.
188. My box is broken (break).
189. My father has broken (break) his leg.
190. If you fall, your leg will break, as you are fat.
191. Go slow : let the horse take breath.
192. The Chārwêlo gives bribes. Chärwēlz wārā lettri prett.
193. Make bricks for my bouse.
194. My girl is a bride.
195. To make a bridge, get beams.
196. The bridge is broken.
197. In my country there ale no wooden bridges.
198. My horse's bridle is broken.
199. Bring a broom, olean this place.
200. Bring bread for me and fetch grass for the horse.
201. I fell; my stick broke.
202. My arm is broken.
203. Thy brother has fever.
204. My brother is dead.
205. I brought one load of grass ; my brother brought two loads.
206. My father is a very strong man: he has brought three loads of grass.
207. The woman is bringing a basket, and the men have brought stones.
208. The Charrwèlo is a brutal man.
209. My buck wheat is not ripe.
210. There are many bugs in this bed.
211. Build a house for me here. $\quad I \tilde{a}$ a dugã ani amu kghi.
212. All my bulls have. died. Chänlū's bull is very fat this year.
213. On the ground I found a Inä bhima tãa epol toch badui got. flat bullet.
214. Many men are gathered for the burial.

- 215. Burn that long etigk.

216. Bury that corppae.
217. A bird is sitting in the bush.

Iã̃ amu dugõ̃ mrai puru kehk.
Iã jūi noi bazimà prälom.
Sū tamu kati gzats.
Sū petang ess.
Emâ gul tã̃ dảo siu n'aght.
$I \tilde{\tilde{a}} u$ shp $t \bar{a}{ }^{\text {lonanbom petangess. }}$
Skã giats, inani jaga ska.
Iã dugã̃ bor gats; uskhp duga yus gats.
Õts piltam; mã̃i parengi.
Iẫsi dusht perongà.
Tū brâ ontzatt.
Iăai brâ mrạ.
 yus awārā.
Iã̃ē tztt biluk karwā manohi ess: troi bor yus awāqā.

Jugūr kawã awett, sai wōtt awārā.

Charwōl̄ mashu-wā manohi ess.
Iã̃ shom n'piess.
Inā prushhtī tã guzrr lē asht.

Iã̃ aabu sang mpishtā." Chãlu nah aghn inä së bilugh kurt ess.

Bilugh manchi kănãai dugã aya.
Ikia drangai shtan lughē.
Ikida mxighta kāna satē.
Dsali tã marangats nighinn ess.
218. This butter is not clean.
219. Buy a rupee's worth of cloth.

Ind nuṛi shta n'biss.
E tang digri mãri prēti giats.

## $C$

220. The white cow's calf is dead.
221. Oall the old man.
222. The camel is a bad animal
223. My horse is very fat and cannot go.
224. You are a bad man : you take no care.
225. Have a care! don't throw Tū kushulwā kshi! (Tarã̃chi bō!) down my load.
$i \tilde{\bar{a}}$ bōr viãr n'ütē.
226. That man is very carsless Ikia manchi bilugh bềr ess. (foolish).
227. In that village is there any Ikya bagrom dāo sella sē ? carponter?
228. The carrier has fallen into the river.
229. I am tired; I won't carry à load. Mirak will carry the load of two men.
230. The cat has grown lazy and won't catch mice.
231. Catch that horse's bridle.
232. All the cattle of this village have died.
233. Put the big cauldron on the $A l$ tol ango $p^{\prime}$ tsiru watē. fire.
234. What is the cause of your anger?
235. In that cave a dog is sitting.
236. Oease this work.
237. The ceiling of my house is bad.
238. That is a celebrated carpenter.

Bilugh lē dão sell ess.
239. The chaff (chopped stratw) is all bed from rain.
240. The chain of my door is $I \tilde{\bar{a}} d \bar{u} t \bar{a} \bar{a}$ chimá pētannguss. broken.
241. Bring a chair for sitting on. Nighisthä bōn giats.
242. This cloth is not to my taste; Inā latiri $i \overline{\bar{a}}$ shotik $n$ 'bā; nmélă change it.
kshs.
243. This charcoal is bad : it doesn't Inā pé less n'asht : na parchitt. burn.
244. Tooday I will give charity, Ots shtarak gảno telam, shtalf tott perchance my father will n'mrla. not die.
245. On my brother's cheek is a $I_{\tilde{a}}^{\tilde{a}}$ brâ naskor absiss. boil.
246. Baabgali Kāfirs won't eat Katā kilār n'yūla. cherse.
247. This year all the cherries are Inā sē sang gilos chinosht. sour.
248. My chest aches. I $\quad$ ã̃ zira bradsott.
249. My hen has ten chickens.
250. My child is very ill.
251. I have no chimney to my I $\bar{a} p^{\prime}$ 'amu dawök n'asht. house.
252. I fell; my chin is broken. Lunissam; akli pror biss.
253. The Ohitrali soldier is not a Bilian spahi digar n'ai. bad man.
254. My chest is big; that choga is $I \tilde{a} \tilde{a}$ or wishtr ass; shengà aron butt. tight.
255. Here are two chogas: choose Ani dū ghugā aght : eo gaiē. one.
256. In my clan are many men. Emá tőtt brâ lē asht.
257. There is no clay here to make Ant mrai kusth dugã palol n'ess. bricks.
258. Your hand is dirty; clean it. Tī doī mol biss; dire.
259. Thy father's speech is clear. Ta tott wari less. .
260. That boy is very clever.

Stā marir bilugh kaghul ess.
261. That cliff is bad : don't go near. Tkī shti digar ess : atkhī n'iyè.

- 262. About 3 p.m. we will climb Grigh biznor ūm.
the hill.

263. I cannot climb this hill, Ots ina bado n'ai iam banam.
264. To make a oloak fetch some Budsun husth dugã whe sapp gata black cloth. (T)
265. Bring two clods of earth for me. I $I \hat{\bar{a}}$ dugã dù paleleht giats.
266. This oloth is very thiok. Inā eapp bīt ess.
267. My clothes are dirty; wash $I \overline{a ̃}$ bazisnd mol bistai; nishēe. them.
268. There are many clouds; per- Nāru būt ess; ingol kāagol bolan. haps it will rain.
269. Clean my coat.
270. Who has killed my oook?
271. To-day the breeze is very cold.
272. This year there is no snow and no cold; it is quite warm.
273. On account of the snow my feet are oold.
274. The sun is set: it has become cold.
275. I have caten too much and have colic (i.e., my stomach is stoollen).
276. Oolleot the sepoys and coolies to-morrow at dawn.

Spāhi barwai dalkif attri wasnão (wasankyō) (P).
277. Sir ! the coolies are oolleoted, but the sepoys have not come.
278. What is the colour of your father's horse?
279. The asses, horses, and coolies have all come.
280. The sepoys complain that the Chărwolo is a very cruel man.
281. I considered the enemy had $\tilde{\text { Ots }}$ wushtatäsum mashu wavi fled. mikiä.
 word separately.
283. Call a man to oook my food. wald,
Iâ buri ãsh kũrik manchi oshti ${ }^{\circ}$ giats,
284. The coolie is fallen in the river: Barwai po-s luniss: ao p’mich he is drowned in the water. pisbia.
285. I have no cord to fasten the 8 andok giristh dugã kanik n'aiesht. box.
286. This is a dry year: the corn is Ina sé damkol wa: gam lushingwa. dried up.
287. I saw a corpse in my field this Iniagh ptul p'mich manchi morning. mright waria'm.
288. My brother is very corpulent, Iã̃ brđ al ktol oss ; n'palangett. and can't walk.
289. In my village there is my $I \tilde{a}$ bagrom it brao karbogh aght; brother's cotton crop and no one else's.
290. I want medicine for my father ; I $\bar{a}$ tott dugã ughlu wagattam; bilugh he coughs much. kasitt.
291. Count the coolies: how many Barwai gìrē: chē manchi aght ? are there?
292. My country is very pretty; it is Emá gol bilugh shingari ass; shil highland (cold). ass.
293. My cousin has seven balls. Tötti pitr (?) sott aghu ai.
 black $P$
295. My cowherd is a very bad man.

Iâ gâo patsā (psawai) bilugh digar manchi ess.
296. That crag is very steep : a horse Sta kti ukar ess: ughp na batt. cannot go.
297. That boy got cramp in the Sta liliwak poi tif shille dur biti water owing to the cold. ass.
298. He is a thief. See! he is shtãr ess. Aîghi ! kriti chor shtocreeping like a dog. kuroett.
299. From the crest of the hill Bado shaie ste Dryus warantus. Drölh appears in riew.
300. Forgive my crime; I am a $I \tilde{a}$ vari (?) bakelehio; $\tilde{\delta}$ garib assum. poor man.
301. My walking stiok is erooked. I
302. This year there is maoh rain; Starak sē bilugh agol prētt ; ptal my crop is spoiled.
303. On oroseing the pass the wind Bude thai t榎 dumi bilugh digar ba. was very bad.
304. In this valley there are many Inā gula $t \tilde{\bar{a}}$ koff le asht. orowes.
305. Your cock crows much. Tiu nai kakkak bilugh kasitt.
306. The Commissariat bābū is a Commissariat bābū bilugh kart ess. very cruel man.
307. My pony's crupper is broken, I $\bar{a}$ ushp $t \overline{\bar{a}}$ prampor bradzi peţanso he can't go down hill. gess ; i $\overline{\tilde{a}}$ dugã̃ ushp buru palangen na batt.
308. A big stone came down and $A l$ vott atsiti iâst lû̃r periss. orushed my leg.
309. Why does that small boy ory Ikya parmen marir kaido shutt? out?
310. Spring is the good time to Krujă shisthã wosut less. oultivate.
311. The Kāfirs' cultivation is cele- Katồ krụhi bilugk lesst ess. brated.
312. That man is very cunning (fox Tkia manchi iwraki ayūr ess. class).
313. Get me a metal cup to drink Pashku giats: ao pinam. water.
314. I am ill: therefore call a doctor Bradzo assum: iñ̃ dugã wokshhal to cure me. giats, aìshkqbi kom.
315. My custom is not to smoke Tamkio kusth iत̃ char n'ess; nasor tobacco; I take smuff. kolum.
 knife,
317. The soldier out my leg off. Spahi iãsi kũr pētess.
318. The Chärwēlo gave me an Chärwèli hukm ptas'm tū duī pētegā. order to out your hand off.

## D

319. My father killed the Chārwēlo Iã̃ tōtt Chärwōlz katõ vitz jiōn (?) with a dagger.
320. Daily bring me a little milk.
321. This ground is damp and not fit for pitching (causing to stand up) tents.
322. The men of this village dance Ina bragom manchi nōt digara badly.

## (jā̃̄riā).

Sang gujr iñ $d u g a ̃ a$ achok zū giats. -
Ina bhim shil ess; jilamd wotasth digar ess.
kuttett.
323. My father dances well.
324. That precipice is dangerous, don't go near.
325. Owing to an eclipse of the sun, it is dark.
326. My daughter's age is 13.
327. To-day I go to Chitràl; every day I shall do a march.
328. The sun melts the snow by day.
329. To-morrow at daylight let me go.
330. My donkey is dead, my horse is dead; I can't lift the load.
331. My uncle last year was very ill: now he is become deaf.
332. The ford is deep ; we can't cross.
333. The chārbu (Chitralli head man of village) is a very deep (fox class) man.
334. The Badakhehhāni army de- Tajī sarz̄en Bilian sarĩ psiā. feated the Chitral army.
335. Our army, being defeated, fled.
336. That defile is good for fighting the enemy in.
337. Go quickly : don't make delay.
338. The village is far : don't delay here.
339. The coolies demur and say we can't carry loads.
340. The road is steep: we should descend from the horses.
341. Your horse is falling: you had better descend.
342. Let go ! this business is not desirable for you.
343. The men of that village are destitute.

Tott not lesta kutt.
Inä thurus digar ess, tavaral n'ai.
Sū garo yaristhē dugã andhar biss.
Iã̃ jū terits biss.
Starak gugr Shdral aietum ; eo gujrẽ $\bar{e}$ eozs pott kalom.

Gujr zimo sū tipât.
Dalkiê rach bibâ èlom.
Iãst kur mrissā, ushp dī mrā; borrnga n'balam.
Iã̃st jisthâ poè bilugh bradzo wâs: starak asangà biss.
Atr guru ess : patren na bamiçar.
Uru bilugh vriki pirstha manchi ess.

Emdst sarĩ gatrã biti mikiñ.
Ikiä artuni gol pachan wari shush kustha less.
Achünamiè: drē n'kshī.
Gräm badūr ess: pott drè n'kshī.
Barwai larettett : wari walettett bor $n^{\prime}$ awēma.
Pott tohkur ess; usghp tã̃ wãwo etsati emâ.
Töst ushp piltalis wã osth lesta bala.
Kudüm nai kêha! tū̄ kaı miok (P) ness.
Ikiä bagräm manchi bilugh drughtiWhaght.
344. Our enemy is very determined, and will not fly. Look! they have fled.
345. That fellow is a regular devil.
346. Have you ever seen the devil?
347. I have not seen the devil; even my father has not seen him.
348. In my country there is no dew in the summer.
349. I have had'diarrhara three days.
350. If you have had diarrhcea many days, you will surely die.
351. The Chärwèlo has died: all the men are very glad; my brother also died to-day.
352. Yesterday my horse fell on the road and died.
353. There is a difference (quarrel) between those two men.
354. Yesterday there was a difference between me and my brother.
355. Don't take that road; it is Askā potta tã̃ n'iyē ; digar ess. difficult.
356. I ate a lot of rice early this morning and it is not being digested.
357. That boy's clothes are very Askä marir basnábilugh mulbistai. dirty.
358. All the men of that village are discontented.
359. I distike that man.
360. At the time of my diemounting from my horse, I luniosam. alipped and fell.
361. My brother's disposition is Iẫ brâ al bidi-wãassa. very good.

Emd pachanvari bilugh damtōl manchi aght, n'mukettett! Aĩsh kshīi ! mikiá.
Ikiā manchī bilugh yutsh ess.
T $\bar{u}$ kui yūăb warainsa ?
Iã yüab n'warainsā ; tōtt dī n'varains.
Ema gol tã wizdor mâh $n^{\prime} b u t t$.
Troi wos butt iã̃ bazira padrē ū prēt.
Shtal latta woss bā padrē ū prêtt tū nashtontī mrlosh.

Ohāroèli mpiss: sang manchi shdtinistä (?); shtarak gujr iãasi brâ di mfa.
$D_{u s}$ iã ushp p'putt piltiä mariā.
Ammi dū manchỉ kilwariān aght.
Dus iã brâ iã kilā bissi.

Puruchkāl bilugh butt iãsht; bru afzià.

Ikiä bayram manchi sang kughan n'aieght.
lkiä manchi iã̃ dugã digar ess.
$U_{\underline{s} h p} t \bar{a} \bar{a}$ wāo atsatam, piltiosam, ,
362. Why are these two men dis- Amni dū manchi ka kila kuttett ? puting?
363. In this district are many cows.
364. Take this flour ; divide it Inā brē ngā; yā p'mich bata kehớr. among yourselves.
365. In our valley there is a diviner. Emá b'gò è pahar ess; bíugh He is a very old man. He manjar ess; shtal wari walann. is a true speaker. (T)
366. Don't do this business: it is Inä kudūm n'kshi: chor n'ess. undesirable (not the custom).
367. I fear I am dying: call a doctor.
368. The dogs of that village are Tkī̄ bagrom krũi bilugh digar ai. very fierce.
369. Is your's a male or a female Tors nah krûi ya shtari (ishtri) $\operatorname{dog}$ ?
370. You have put too large a load on that donkey.
371. The thief broke one plank of Dus radar iãast dū bitil shtãr my door last night.
372. That man is a thief : I bave no doubt of it (i.e. besides him no one else is the thief).
373. I have a doubt whether or not he is a thief.
374. The coolies have gone down (stream).
375. Take down the load from the Ushpē pa pti bor waoksho. horse's back.
376. Get four coolies to drag the Shtowa manchian wald argru wabeam.
377. My horse is very thirsty; he drinks much. kthol.
Iã̃st ushp bilugh do pig biss; bilugh áo pitt.
378. Don't drink much water; Bilugh áo na pi : n'pā bilosh. (otherwise) you won't be able to travel.
379. An ass has come to my field; E kur ĩ̄̃st ptul p'mich adsa ; io drive him out. tarâgho.
380. No snow fell in the winter, so Zivorr zīm n'ptā; ikiā dugã duma there is a drought. sē $b \bar{a}$.
381. My cow fell in the river, and $I \tilde{\bar{a}} s t$ gáo po-ē luni, piz biā. is being drowned.
382. The Mehtar comes! Beat a Mehar aiyo! dōtt wãr. drum.
383. My brother is a drunkard for Troi sē biss iã̃st brâtin pin. three years.
384. You hava.brought green wood; Tīu zhilā dār awēshtaí; dri dār fetch $d r y$ wood. gaiets.
385. I myself have seen that the $I \tilde{\bar{a}}$ vari $\tilde{\bar{a}}$ panilē jallai nishinistai. ducks have alighted on the river.
386. In front of the Mehtar's house is a lot of dung on the road: brash it away with a broom.
387. There is much $d u s t$ on account of the wind.
388. A dworf has come to ask food.
389. Where do you dwell? Why have you come here?
390. Last year I dwelt in Kāmdēsh; this year I shall dwell in Rambür.
391. I am poor; my dwelling is $\hat{\bar{O} t s ~ g a r i ̄ b ~ a s s u m ; ~ i n ̃ a m a ~ a c h o k ~ a i . ~}$ small.
392. That man has dyed his beard. Stā manchī dạ̄ī zãr korishtai.
393. I have had dyspepsia for two $D_{\bar{u}}$ sē biss borii na bajit jarand. years.
394. I have eaten too much orial's Arorwē ano bilugh iã̃o bilugh shur flesh and have much lāsett. dysentery.

E
Parè barwai iâri tang prē.
Badistē nhi marē atti iã̃ $k$ kakkak ${ }^{*}$ wanamdz brā. sky, and caught my fowl and took it off.
397. Owing to cold, my ear pains.
398. To-morrow we will go very early.
399. This year snow fell early, so it is little.
400. There is a hollow here : fill it up with earth.
401. Last night there was an earthquake: I was much frightened.
402. To-morrow do we go east, (sun-rise way), or west (sun-go-down way)?
403. Yesterday we went east ; tomorrow we will go west.
404. Yesterday's road was difficult; to-day's is easy.
405. Before marching, to eat much is not good.
406. It is five years since we have had an eclipse of the sun (since a shadow has eaten the sun).
407. Don't go near the edge of the built up pari; you will fall.
408. Yon don't make an effort! Tiu bibidi n'kshonjī! Tu$k a k t z$ How can you learn ? zaronlosh ?
409. The Chārwēlo is angry be- Katā aqhào n'prend Charwēle kapa cause the Kāirs won't bitt. produce eggs.
410. This man is a great thief; Iyīmanchī bilugh shtãr ess; iyē eject him out of the house. $\quad \quad$ 'amu stē nuksāo.
411. That man is my elder brother.

- 412. That cauldron is empty : the water leaks out.

413. Empty out the water of this Inब pashku t $\overline{\tilde{a}} \hat{a} 0$ uchar kghy. ewer.
414. Very well, Sir ! I have emptied Sahib ! te ! do uchar kyã. the water out.
415. When you have ended your work, Koi kudūm püshabā iã̃ tã aets. come to me.
416. Our men are few; the enemy's Ema manchi achok aesth; pachanmen are many. wari lē aeoth.
417. Certainly, our men are few ; but Shtal, emd manohi aokok aesth; they are more energetio than pachanwari tã damtסl aesth. our enemy.
418. The English soldiers are very Prang spahi bilugh lè manchi asht. good men.
419. I have eaten enough : it is not Bēs $i \tilde{\bar{a}} r \bar{a}: l \bar{e} i \bar{a} \bar{a} t h ~ l e s s ~ n e s s . ~$ good to eat more.
420. Why hast thou entered my $T \bar{u} k \bar{a} d u g a ̃ ~ p ' a m u ~ a t t a ̉ ~ g a ̄-s-a g h ~ ? ~$ house? I gave thee no iñan hukm n'ptā. leave.
421. Your entire clan is bad. Tā tōtt brâ sang digar asth.
422. Get me a beam equal to this.

I苂 dugã ikīā argrū pristha argrū giats.
423. The enemy shat me in a house, Pachan wari p'amu att attotiss : but I escaped. bảti mikiosam.
424. I am bound, but I hope to escaps in the evening.

Attotinissam, bibidk biba salkawar mikalom.
425. Every man of this village is a Inā bagrām sang manchr shtãr ai. thief.
426. The Chärwēlo is a very evil Chärwēle bilugh dagar manchi ess. man.
427. In this village there is not even one ever.

Inā bagrom p'mioh eo di paghka n'ai.
428. In our village my brother is a thief, and except him no one.
429. This cloak is not good; ex- Inā shuga less n'ess; nmelā keghi. change it.
430. Thou liest! There is no excuse TTū larēchē ! tūu kai nelus n'ess. for thee.
431. Stay thou here!. Expect me! Tī ani oti ! iã̃ aìsh kshi.
432. The right eye of my brother $1 \tilde{\bar{a}}$ bráo dateiẽ achiễ bradmott. aches.
433. My brother's eye-brow got IÑ brâo tremchuk achẽ̃-patț̄a lush.
burnt by the lamp.
ingostai.
434. Lift ap your eye-lid, show your Achẽ̈-ktelik wāro ; achê oksh. eye.

## F

435. On that man's face is a black mark, so big.
436. If our luck is bad, we shall fail to climb the hill.
437. The Chitrālis say that on Tirich Mir there are many fairies and nothing else.
438. The Mehtar's falconer fell in the water and died.
439. Take care! If you fall into the water, you will die.
440. That wall will fall, don't approach it.
441. Much rain has fallen this Starak p'sé bilugh agol ptā. year.
442. Last year much snow has fallen.
443. This year there is a quantity of snow; to-day snow has not fallen.
444. My dog has fallen into the $I \tilde{a}$ krũ̃ poigwà. water.
445. In my country is a famine.
446. My brother is more famous than that man.
447. From Chitrāl, both Shoghōt and Gairath are equally far.
448. Sit near me ; don't sit far off.
449. Chitrāl is near, Drōsh is far.
450. In our village there is no farrier (horse shoe-fastener).
451. Your horse is very fast; mine is slow.

Sta manchiā makā tãazhisto shi nishän ess.
Shtalễ i nasib n'azilaba, ashtrē tã ūwē n'balem.
Bilian manchi walettett Missarmin watr (vetr) bilugh aght wāra n'aiesht.
Mehr marapsawai poi-ē lunēti $m \quad \bar{a} \overline{.}$
Trẫchi bō! Tū poi êtish tā $m r l o s h$.
Iyē châ witlalā, torễ n'à.

Pō bilugh zim zimitā.
Starak sa bilugh zim ess; starak gujar zim n'ptā.

Iẫ gul tĩ̈ bilugh att ess.
I $\overline{\bar{a}}$ bra stà manchi $t \overline{\bar{a}}$ bilugh damtoll lē manche ess.
Shdrāl stē Shogoi Gairath tîoh badur asth.
I合 tawarẽ̛ nishē ; badūr n'nishi.
Shdral tavoarê, Dryus badûr ess.
Emá bagrom ushup wetsâ amchol n'aiasth.
Tīushp bilugh shatrami ess iñ ushp n'pa balas.
452. It is three years since I turned Trè sa bā $\overline{\bar{o}}$ muzalmãn bissam; Musalmān; I keep the fast.
453. The time is near for breaking Pochētr peristh tur ess. the fast.
454. My horse has become fat, and $I \tilde{\tilde{a}} u s h p$ kartab ess: pa n'batt. can't go.
455. My fate is bed; your fate is Iãst mink digar ess; to mink lesst good. ess.
456. My father and mother are lãst tōtt nūn mrā: $\overline{\bar{o} t s ~ p a r k i ~(k u ̄ r) ~}$ dead: I am left alone. edsam.
457. You are fatigued: I will give Tū gatrabā assish: achu kulom. you a baok.
458. Don't flee to Badakhshān, Badakshã̃ mẽ na mugõ, kā widegh there is no fear.
459. I fear my enemy will kill me. $\overline{\text { Öts }}$ widarnam pachan warī i jã̃rlā.
460. Why have they run away? Kaiko maikiya sar? Shtãr dugễ They have run away from fear of thieves.
461. My brother feigned dead, and Iãst bra mpalogom (?) vizescaped by night. - hom (?) radur mikios.
462. My father fell on the road. I I $\overline{\tilde{a}} 8$ tott pott piltiā.
463. Thy father fell into the river. T'ū tōtt baglo (b'gol-o ?) piltià.
464. The female is usually cleverer Jugur manchi tode bilugh kshul ess. than the male.
465. Fetch four men to make a Sū̄ postho shtowa manchīān gaiets. bridge.
466. I have fetched four men. Iñ shtowa manchī awāfā.
467. 'This year many men have died Starak sa randsōl biti bilugh of fever.
468. My father is very ill; he has $I \tilde{\tilde{a} s i}$ tott bilugh bradzo ess; unsatt. fever.
469. Fever has had hold of me for four days; my body aches.
470. Last year very few men died of fever.
471. The Aghrath valley men are Aorett b'gol manchi ahoch kusth useless for fighting.
472. This year figs, apples, and Inä sē tã̃ kiwitt,parr, tsiren chinaio peaches are sour.
473. That man's figure and my $I k i \bar{a}$ manchi wishirworh iãst brù brother's figure are the wishirworh eo aght. same.
474. Take this ewer, fill it with Inā pashku nã̃ti (ngatiz?) âo para water. kshi.
475. Your house is filthy; of Tīu amu mol ess; ghtalê tū bradzocourse you will get ill. wo bolass.
476. I found (find) these clothes on $A m$ bazisná potto wariām. the road.
477. Thou art a very fine man. Tī bilugh lè manchī ess.
478. I have nine fingers; you have $\tilde{\mathcal{I}}$ non angur $a i ; t \bar{u} t \tilde{\bar{a}}$ duts angur ten.
479. When you have finished work, Tū koi kudūm poishaba, anji I will give you food.
480. Cut down two fir trees for mak- Sū testh dugẽ dū ruganâ peffi ing the bridge. giats.
481. The fire is too much, subdue Angà bilugh ess, wālti kshi. it.
482. Make a fire-place in my house. I $\tilde{\bar{a}} p^{\prime} a m u$ angā-kutān $k s h \bar{i}$.
483. There is no fire. Angà ness.
484. For the purpose of making a Angà kor dar apsio. fire, fetch wood.
485. There is no firewood here; Anī watesth dār n'ai; käkti anga how can I make a fire? kom (kulom)?
486. My soldiers are very. firm and $I \tilde{\bar{a}}$ spāhi bilugh zorawā ai, n'mukelā. will not flee.
487. This man came first; that Ināmanchī panishãr oss; stā manchi man was sêcond; Mirak ptiwar oss; Mirak troi wostha was third.
488. Our people consider fish unlawful (as a dead thing) to eat.

Emâ manchi à matsa yosth dugê muldār ess kuttett.
489. This business is not fit for a Inā kudūm mehrē less ness. Mehtar.
490. The enemy's men carry a very big white fag:
491. The flumes of that fire have got

Pachan wart manchi bilugh al kashtr tuppdon wanamess. up very high.
492. This country is flat like a Inä watan dushpar purstha diwar hand.
ss8.
493. In thy house are many fleas, but in winter they don't bite.
494. I am afraid of the Diwānbegi, for that reason I am fleing.
495. If I $f(e e$ on the road, the Mehtar's sepoy will catch me.
496. The enemy has fed.
497. In Ranbür there are no flies in winter.
498. That man is foating on the river (having inflated his stomach).
499. A flock of my goats has come on the hill.
500. From the melting of mow, the river is in flood.
501. Having taken a load of wheat and ground it, bring the flour.
502. On the Gangalwatt pass the Gägra wott bado pagur putik shinflowers are pretty.
503. Last year my mare gave a foal. Pö sề iãst ushpè ishtri ughp kapaìs.
504. This year my mare is not in Starak sê iãs ushp shali n'ess. foal.
505. Bring fodder for my horse and Iãs ushp iã gao dugẽ yūs gats. cow.
506. You go in front; let him fol. Tī nashtarvodi bō; iki ptiwar low.
507. You stay here and get food Tūunionishē; isha tyor kghi. ready.
508. My brother is a very foolish Iã̃ brd bilugh ghatṭà manchi ess. man.
509. Yesterday my foot was frost- Dūs badu iã kũr lushltiä. bitten on the pass.
510. Do you want a foot man, or a Tī kũro manchi aĩgh kuchiā, uşhphorse man? o-sir manchi az̃eh kuchā?
511. I heard the thief's footfall. Shtãrē kữr ohnt p'kōr gawā.
512. For sake of my small child get clothes.
gir ai.
To p'amu pakki bilagk aeltt; sinoor n'yüttett.
Divänbegi widarnam, giakti makonam.
Iã̃ p'pott mukinjebs mehr opahi vanamela.
Mashu wari mikiă.
Zawör Mänmet tawarik n'aiesht.
Tkiä manchi poiē ktol t̛̃rkti nogh kör.
$\tilde{\mathbf{I}}$ poshtrē dizho dom titti afzia.
Inä sim wilitit gol ao bilugh afziā.
E bor gum ngati psheti brẽ giats. atsala. . Iãst permonstuk parmire (marire) dugẽ baenâ giats.
513. We mon't carry loads for Emá gijjĩ bor n'ngama. nothing.
514. Is a gan good or a eword ? Tapak less ai tarwach lase ai f Iã For me a gan is good. dugẽ tapak less.
515. Sir ! the soldiers are damaging

Sahib! Spaki emá ptul marmuni our crops. Forbid them.
516. I forbade them, but they don't obey (take counsel).
517. Turn him out of the house with force.
518. Send me a guide to show me the ford, for the water in the river is quite low.
519. Come! let us ford the river.
520. This man is not of my valley, he is a foresigner.
521. On your forehead there is blood. What has happened?
522. On your horse's forequarters there is mud : make it olean.
523. Between Urgách and Ranbür there is a very big forest.'
524. I have forgotten the order which the Mohtar gave me.
525. Thou art a very forgetting man; don't forget.
526. If I forget, may God give me punishment.
527. The Chiträl new fort is stronger than the old fort.
528. How many foster brothers Tä chok chir* bra host? have you $P$
529. That ohild is not my foster Ikia parmen iãst ohir pift n'ai. child.
530. I have ten foster sisters. I Iã duts ohir sūs ai.
531. Two Sâhibs are coming; I am sure they will want two fowls.
532. Last night a fox came and Dus p'tramjuk wrigi attz sang took off all my fowls. kakkak brā.
533. To-day it is not cold : water Starak shil n'ess : âo shē n'tilā. will not freeze.
534. The water of the river is Ina gol $t \tilde{\bar{a}} \hat{a} 0$ ghe $\bar{e}$ tin ess. frozen.
535. This fruit is stale; get fresh Sta kazhwajľ amı istai; less kazhfruit. wajli gyats.
536. That man is my friend; he is Ask $\bar{\phi}$ manchi iãst suli azza; shtan not a thief.
537. To frighten him I said "many Ikīa manchī widarosth dugè gijjī thieves have come"; only karsi "bilugh ghtãr osth $\bar{a} " ; \bar{e}$ one, thief has come.
538. All the frogs are dead from Shillê $t \bar{a}$ mãruk sang mristai, inā cold, not one is left this see eo di n'asht. year.
539. I am blind, I can't see; go Õts kãr assum, n'wrantum: tū thou in front.
540. The frontier between Chitrāl and Badakhshān is very cold.
541. There is no hoar frost this year, Inã sè mē̃h n'ess, ahẽ dín'ess. nor black frost.
542. There is a cold wind on the Bado yuts dumī ess; tū n'ai! tū pass; don't go! your ear kōr lushtilā. will be frost bitten.
543. What are you sulky about, Tū kai kapā bissish, miok andr that you make frowns? kriss?
544. Is that ewer full of water or Inā pashhku $t \tilde{\bar{a}}$ âo parē karsā $z \bar{u}$ milk?
545. All the men of my village are assembled for the funeral of parē karsa ?
I苂 tōtti kān̄ dugẽ iñ bagrām my father.

## G

546. All the boys of my village are Emâ bagräm sang marir mighi playing (making a fame). kuttett.
547. Two donkeys have come into $\tilde{I}$ b'darestãn dū kur atti bilugk my garden and done much harm.
548. The hill is very steep; the Ina do bilugh uker ess; ushp horse is gasping. shũskett.
549. My forefathers have lived in this village for four generations.
550. My grandfather was a very $I \hat{\tilde{a}}$ wão bilugh al bidi-w $m$ manch generous man (great heart man).
551. The Aiyun' men can't make Angãr manchi ano tyor kon na ghī (clarified batter). battet.
552. The Afghản soldiers came and Aoghānī spahi osth ema bgrom stē took away four girls from shtowa juk bra. my village.
553. My horse's girth has got loose; I $I \tilde{\bar{a}}$ ushp tĩ̃ mushtē jinjil biss ; tighten it. wishtē.
554. If you do well, I will give you five rapees.

Tī̀ lē kudūm karba pōch tanga prēlom.
555. If you give me bread, I shall Tiù bor prēnjibâ ôts kujhēl balom. be happy.
556. I have given him seven rapees.
557. The glacier is rery bad this year, we can't cross it.

I $\overline{\bar{a}}$ \& $k i \bar{i}$ sott tang ptā.
Starake sè inzarin bilugh digar ess, awi na bam.
558. Buy for me (bring me having given money) two looking glasses from the bezar.
559. Go on! (horse), my horse is very lazy.
560. To-morrow I will go to Chitrāl. Dalkiē ôts Shdral ēlom.
561. To-day you will go to Gairath.
562. The day after to-morrow we will go to Shishi.

- 563. They will go to Brơz. Amnâ Broz enda.

564. Go thou to Chitrāl.
. 565, Let them go to Chitrāl.
$B^{\prime}$ bzār stē mar̄̄ prēt̄̄ du tare $i \hat{a}$ dugẽ gats.

Prēts! ushp bilugh beru ass.

Shtarak tū Gairath ēlosh.
Attri emd Shishi èmigh.

Shdral i.
Shdrāb ellă.
566. The bābū has come to bay Babūu gash maṛi prêty nguisth dugã goats, but my son's goats are aiyo, i商 pitr gash sang mpa. all dead.
567. God is kind (great); perhaps Imrä al ess; shtalf iã tott n'morla my father won't die, I washätam. think.
568. The War god is very good to Kato manchd dugê Gieh bilugh tê the K
569. How long have you had goitre Tī̄ chi se biss gur biti ? (been goitred)?
570. In my country is much iron, Emáa gul tã̃ chemu lē asht, sõn but not gold. n'ai.
571. That farrier is a very good $I k i \bar{a} u s h p$ watsd amchol manchi man. bilugh damtol manchi ess.
572. The Chiträli houses are good.
573. In your country why do women carry the household goods, and men march empty handed P .
574. This gorge (tight valley) is a good place to stop the enemy.
575. I dislike the governor of this Inā watan tã̃ nanwpi î̃̃ dugê digar country.
576. In my country it is not usual $I \overline{\tilde{a}}$ gul t高 parr je tong giṭu kosth to graft apples on pears. chur n'ess.
577. Do peaches come from seed or from grafting?

Aru attz mẽş botasalā giṭu karb@ botaralà?
578. Get one rapee's worth of grain Eo tangē pul ushpē dugã̃ gats. for our horses.
579. My grandfather and grand- Wāo wāi sang mra. mother are both dead.
580. The grapes of my garden are $I \frac{\tilde{a}}{\text { a }}$ bdristan dros ali pul ess. very big.
581. Bring green grass for my horse ; $I \overline{a ̃} u s h p$ dugẵ zhila yus gats; dari he won't eat hay (dry grass).
582. I am very grateful for the kindness which you have done me.
yus n'yūtt.
T̄̄̄ bilugh mihrbānz karsam; ôts bilugh ghamagh kutlam.
583. That boy goes towards his Ikia marir totts pshin tĩ pretann ( () .
father's grave.
584. The traveller has brought his Wischio amu ushpe iắst dristãn horse to graze in my garden.
585. My donkey is great ; your.donkey is greater than mine.
586. You are very greedy; don't eat too much food.
587. Spring is come: all the trees have become green.
588. My goats are grey ; my brother's goats are all black. marmari kusth dugã́a arvara.
Iã̃ kur al ess ; tã kur iã kuré ta al ess.
Tū bilugh al ktol-wa asoish; burt ghhirēn n'äyū.
Wosut bā: sang stūm por bā.
Iã̃ gash karbir ess ; braro gash oundl ghi asht.
589. Why grievest thou $P$ Thy $T \bar{u} k \bar{a} d u g \tilde{a}$ shnohi? tū ushp horse is ill, but to me hope bradsowai, ĩ्a barè assaba is he will not die.
590. Sir! all night we have been grinding corn at the mill, and the bābul won't give us a oopper.
591. I know nothing about horses ; send for the groom.
592. The horse is dirty with sweat; groom him with a wisp.
593. My horse is rolling from side to side on the ground and groaning, perhaps he has a pain in his belly.
594. This ground is very damp, and not fit for standing up (erecting) tents.
595. My boy has grown big.
596. My crop grows well on the ground this year.

- 597. Get a sharp man to guard my property.

598. Mir Hamza is my guest; it is unlawful to kill him.
599. My tooth is broken and my gum is wollen.
600. The Amir's soldires have come Käbul Amiro spāhi $\bar{a} y \bar{a}$ Katôst and taken away all the tapak sang brā. Käfir guns.
601. My country men make gun- I $\overline{\tilde{a}}$ watan $t \overline{\bar{a}}$ manchi ani dāru tyor powder here. . kuttett.
602. A gust of wind came and took away all my clothes.

Dumi allangiti atsiti $\frac{\tilde{2}}{2}$ sundi bas$n a ̂ b r a ̄$.

## H

603. I don't smoke tobacco; it is not the habit of my ancestors.
604. From the hail of the heavens my crops are damaged.
605. The hair of the head of my Totti she ghū kazhīra bistai. father has become grey.
606. The goat's hair is good for Qash shū zh $\tilde{0}$ kusth dugẽ lessta making carpets.
607. This is a big apple; I'll give half to you, and half to your son.
608. We are all tired ; we will halt here. buttett.
In $\bar{a}$ alz parr ess; chillai tū prom, $\bar{e}$ chillai tū pifr prom.

Emâ sang gatrā bosamish ; anĩo wasemê.
609. In that hamlet there are ten houses. The enemy is in this hamlet.
610. Call a blacksmith; tell him to bring a hammer.
611. You are a fool, jou don't know the difference between right hand and left.
612. A thief cut off my liand. Shtãr iãsi dui petiã.
613. Bring a handful of grain for my horse.
614. I have brought two red hand- Ots dū zĩr hōst susni Peghar stē kerchiefs from Peshāwur. awarissi.
615. The handle of my axe is Ia petdri dōn pefangess, broken,

Ikīa bagrom dotsam amu ai. Ina mashu bagrām ess.

Barī walo; samtonn awèlā.

Tū chatta assish ; tū pachच̃ur dusht $k \delta$ dusht $n^{\prime} \not \underline{h} \bar{a} r t i s h$.

Iãst ushp dugã ē gor pul gats.
616. Hang my pugri on the branch Iãst sharr ikia kãna tsd tã barof that tree. pachargo påà (?).
617. If you are happy, I am con- Tü kusbān aghiba $\tilde{o}$ di kuzhan tented; if you are angry, assum ; tū kapa oshibd $\tilde{o} d i k a p a$ I am discontented.
618. This hill is very hard.
619. I fear thee; thou art a very hard man (of a bad heart).
620. The Manlais don't eat hare's flesh.
621. Is your harvest good this year ?
622. This year my harvest is not good.
623. The harvest is very early this year ; last year it was late.
624. My brother has a gan.
625. The Baghgalis hate the Afghān priests.
626. I have a sword bat not a gun.
627. The Chiträlis have not got a gon.
628. The Käfirs don't keep havoks.
629. It is three months that my cow is eating hay (dry grass), so she has become thin.
630. Bul Khän hit me on the head with a stick; it pains much.
631. Gumăra is the head of our olan.
632. The head man is very ill and seems on the point of dying. ( $\mathbb{}$ )

- 639. The horse's headstall is broken ; he is going loose in the stable.
- 634. The manare has got in a big Ani bilugh tsū uletṭ biss. heap here.

685. I heard the sound of a gan; Tapkè wanistha ia p'kor gwa : tū didn't you hear it? $\mathrm{p}^{\prime} \mathrm{k}$ ör n'gwā ?
686. On the hearth are many ashes: I $\overline{\tilde{a}}$ postan assa le ass : ska mesh sweep them up with a skr. broom.
687. Inside this fort is much heat: Kalo tã̃atũr tāb le butt: dumi there is no wind.
ness.
688. Take away this ghl and heat Ano ngätī tapēti giats.
it, and then bring it back.
689. The coolies say our loads are Barwai warl kuttett emâ bōr gāno very heavy; we cannot go. ai ; emáē na bam.
690. Make a hedge of thorns around IÑ ptul pachūré,tarin watarawa (?) my field.
691. Yesterday I walked much; Dūs bilugh pilingam; iãst kurktã̃ my heel's skin is come off.
692. The Kāfirs have never heard Katō̃ $t \tilde{\tilde{a}} p^{\prime} k \delta r^{n}$ n'gosa dsudsuk assa of a Hell.
693. The Kāfirs do not know (the Katā dsudsuk ojé bihishfe (badiste) difference between) Heaven* and Hell.
694. Give me help ; I am tired ; I I $\overline{\tilde{a}}$ mễh puru kshi ; gatra bosam; am done up ; I can't lift my load.
695. All my fowls are hens, I have not even one cock.
696. Get out! Henceforth I won't see you at my house.
697. Pir Khän's son is the henchman (or food distribator) of the Mehtar, and Mir Khān is his cook.
698. Last year a herd of ibex was herding on this hill top. anio wopsanasum; i $\overline{\bar{a}}$ bōr ngā n'battam.
Ĩ̃ sang ishtri kakkak aiesth ; $\bar{\theta} d z$ nai kakkak n'aiesth.
Prēts! Iē! p'starak stē p'amu n'wrantam.
Pir Khan pitrs meht buri churz ojē Mir Khän mohr ano kohäl ess.

Po sē marish è dom inā bado p'khur dom tiness.
649. Come here. I'll whisper some- Ani ats. Tiu wart p'kor ajholam. thing (some word) to you.

[^77]650. Flee by night ; hide in the day Ruadhar magó; gajr chught oshtintime. àjè.
651. Let us hide here; the enemy $A n \bar{i}$ attā bamî̂; pachan wari shall not see us.
n'vrëla.
652. Hide me in such a place that the Chärwèlo shall not see me.
653. This hill is high, but not very In do dargrin assiä, urkri n'assia. asteep.
654. In the highlands it is always cold; down low it is hot.

Sarētā parē wō̃r shalla bond ; badärē $t a b \bar{b} b u t t \bar{a}$.
655. This hill is not very stiff; that mountain is very steep.
656. I can carry your load downhill, but cannot take it uphill.
657. We have marohed much, bat, up to now, the top of the hill does not come in sight (or we can't see).
658. Hill-men are very powerfal. Men of the plains are very small hearted.
659. On the other side of that white hillock is my house.
660. The hilt of your sword is so small I cannot clutch it.

Tīu trow $\bar{u} c h$ misht parmenstuk, damen n'battam.
661. The horse of him is lame. My horse is lame and to-morrow I shall hire.
662. On the hindoquarters of my $I \tilde{\tilde{a}} \not \approx h \mathrm{~h} u \underline{h} p$ ptibr tũ du kaehtr prots black horse are two white spots.
663. My horse is lame: to-morrow Ia ushp kutâtt ; dalkiê wodre ushp I shall hire another animal. wagalom.
664. Hitherto I have had no ill- I $\overline{\tilde{a}}$ starak wik kai bradso na biss. ness.
665. My horse doesn't stand still ; I Iẫ ushp oti na batt; ôts wãwats can't dismount. Hold him. n'battam. Wanamã.
666. Take care! There is a hole Taraĩchi bō! tū p'nishr kadr ess: in front of you: come ptior ats. back.
667. The enemy are hidden in the hollow: I have seen them with my own eyes.
668. In that forest are holly trees and no other.
669. The Afghāns have eaten all my honey.
670. Thou art a thief! Thou hast no honour.
671. From palling at a hookah too much, my head aches.

Pachamoari bugdrē p'mish attã bistai: yost achỡ vre wariam.

Askd pashui tã wanzi kano asth, ware käno n'aiesth.
Aoghani manchi emd sundi märohi iãr.
Tū shhtãr assish ; tū kai jirik n'ess.
Chillam bilugh kshaiesth dugã, iã $t \overline{\tilde{a}}$ shai bradzott.
672. I hope' my father will arrive I $I$ ã bapdi ess tōtt sū pinjebā allonn. here at sundown.
673. Yesterday I shot with a gan Dus tapkê witī mirish jã̃ronn (?): an ibex which had only one horn.
674. There are so many hornets in IIã p'amu azhik bamo asht, atto my house, I can't enter it.
675. Thy horse is a male.
676. My father's horse is a female.
677. The Mehtar gave me a horse and a mare.
678. Why have you given me a bad horse?
679. Don't give me a stambling horse.
680. Is a male horse good $P$ Or a Shtari ughp less ass näh ushp less female?
681. The female horse is lazy.
682. A male horse is very fast.
683. In every Kāfir village there is a maternity hospital. (T)
684. Here there is no snow, it is hot, and good for tents. en n'battam.
Trost ughp näh ushp ess.
I totto ughp shtari ushp ess,
Mehr ē neo ushp é ightri ughp ptaz'm.

Iã piltali ushp n'gyats. e8s?
Shtari ughp dangar ess.
Näh ughap bilugh shigil ess,
Sundi katō̃ gräm è pghar eax.
Ani sim n'ess, tabi ess, jillamâ $d u g \underline{a ̃}$ less ass.
685. My house is very far, but your Iã̃ amu biliuk gujr ess, tā amu house is very near. tavarẽ ass.
686. In this village how many Ina bagrom ohok amu assil ? houses are there?
687. My brother's house is vory Iā brâ ama bilugh mul ess. dirty.
688. How much ghi shall I bring ? Chok ano awèlom ?
689. Why is that man howling? Tkiä manchi kai dugã chà witt ?
690. I am very humble.

Ots bilugh drughti-wā assum.
691. In my country bulls have no Iã̃ gul tẫashè kū n'aiesht. hump.
692. That hunch-backed man is the $I_{k i a ̄}^{w a ̃ o ~ m a g h t a r ~ m u l l a ̈ ~ p i t r ~ e s s . ~}$ son of 2 mallah.
693. Thanks to keeping the fast, I Pochétr ngutesth dugã, atta bissam: am very hungry, and have become very thin.
694. The Mehtar has come to hunt Mehar shurṭr kusth dugã aiyo. (make sport).
695. The doctor is clever and won't Tapip biliuk ushukul assia, tã nē hurt you.
696. That woman says "my husband is dead." bradzāott.
Askā jugūr gijji kuttä " iãst mōgh mriss" kuttā."
697. The Ibex are not here; they Mirishen ani n'aiesth; al do tã̃ have gone to the high hills.
698. I have seen no ice anywhere this year.
699. I have an idea that this year there will be much heat in summer.
700. Thou art idle; this is not time for sleep.
701. From excessive laziness thou hast become an idiot.
$g w \bar{a}$.
Inä ēe ghie kör n'variàm.
$O$ woshtettam inä sä wasdor bilisuk tap bola.

TTū yugh assish ; inā wēl pghhu wêl n'ess.
Tiu biliuk pshuik oss; askē dugã̃ $t \bar{u}$ charfà bissisgh.

[^78]702. If you go, I will go. If you Tū enji bâ $\overline{\tilde{o}}$ dí èlom; tū n'enjīdon't go, I also won't go. bâ $\overline{\bar{o}}$ di n'ēlom.
703. Thou art ill: come with me to $T \bar{u}$ bradso oshi: $\bar{i} m \tilde{E} s h$ ozhumā $t \bar{a} \bar{a}$ hospital: I'll give thee ats: $\tilde{o} t s$ ashhur prèlom. I $\overline{\tilde{a}} s \bar{z} b r a ̂$ modicine. My brother also da biluk bradso ass. is very $i l l$.
704. Very well; I am coming im- L̄̄ ; $\overline{\text { öt }}$ s sapp ēlom. mediately.
705. He is a very impudent fellow. Ikid manchi bibugh chațṭā ess.
 left behind, and no one else. wārā n'ai.
707. You are a very independent $T \bar{u}$ bilugh to chitt* t $\overline{\bar{a}}$ manjia ashi, fellow, I will punish you tū wilom. (beat).
708. You are a very industrious Tīu biliuk kudūm kal manchi fellow.
709. I am an inhabitant of Brōz.
710. The Afghāns have done much injury here.
711. I did not kill Mir Kbān, I am innocent (have no crime).
${ }_{\hat{O}}^{\text {ass }}$ ash .
$\overline{\text { O}}$ ts $B r o ̄ z$ wārī assum.
Aoghānī manchi anī bilugh dagar pilingi kars.
Ots Mirkhān n'jã̃̄iss, k $\bar{a} \quad$ dush n'ŵ̂sam.
712. A coolie has fallen head down- E barwai shiē yür biti piltiss; wards and is quite insenbiluk bễrā biss. sible.
713. Inside my box is a lot of $A d r \bar{\theta} t \overline{\bar{a}}$ atē̃r bilugh $p t \bar{z}$ ai. paper.
714. What do you intend? Shall Tī̄ kai bidi ess ? dalkiễ èmâ ta we go to-morrow or not? n'èmâ?
715. According to your intention To chitt.* (as you please).
716. I don't intend (my heart is Iã chitt n'ess. not).
717. To irrigate my fields I will Parẽst dugã ptul t $t \tilde{\bar{a}}$ yб epamâ. make a water channel.
718. I want iron to make an axe. Padri karosth dugã chimr $\tilde{\bar{a}} s h$ kotam.
719. There is not one ironomith in Angãr eo de bafi n'aiesht. Aiyün.

## $J$

720. Yon are a very jabbering man. Tī biluk wari walal manchi assish.
721. Jackals make a great noise at Shial radhur bilugh cha witt night.
722. There is honey in the jar. Kuni $t \tilde{\bar{a}} a t \tilde{\bar{u}} r m \bar{a} r c h i \pi a s s \bar{a}$.
723. My jaw is broken by my fall- Lrmisthi mish akilatti peţangwä. ing.
724. He is a very jealous (bad Ikia manchi bilugh digar zira-wā.
heart) man.
725. It is not good for boys to jest Marir mếsh bilugh mishishth less too much. * n'ess.
726. My brother gives a lot of $I \bar{a} b r a ̂ a h t r i s s e^{*}$ gar lē prētt. jewels to his wife.
727. This year there is no juice in In̄̄ $\bar{s} \bar{\theta}$ parr aruzwai n'bistā. the apples (not juicy).
728. The junction of the Lattkhū Mastīj gol âo Lutkui gol âo è pur and Mastijj rivers is a bitta to $\overline{\bar{a}}$ diwar ass, aruni gol plain, not a gorge.
729. The wood of the juniper burns Sarēz dão angā karbâ lessta parvery well. chitta.
730. The Mehtar has just come Mehr Broz t $\tilde{\bar{a}}$ starak aiyo. from Broz.
731. Do me justice! I am in- Iā isop ksht! $\bar{o}$ dush nocent. $\begin{aligned} & \text { nâsam. }\end{aligned}$

K
732. The Käfir language is very Katõ wari bilulc n'võ̃rasth assã. bard to learn.
733. I am off on a journey. Keep Badur samiritsam. Inā adrē iã - this box for me. dugã̃ $\mathbf{u} t e ̄$.
734. Why have you not kept some Achok bor pstarak kya na awitāra ? bread to-day?
735. I was very hungry, so I kept Biliugh atta bisaż, giaklí n'awitārā none.
*Isktri-s-Ē, wifo-of himoto.
736. My servant has lost the key of Iäst shodr iãst adrè askuẽ psess. my box.
737. Why do you kick my horse ? TT̄̄u kai dugã iã ushpē pâ vich; tūu I will kick you.
pâ vilom.
738. If you kick me, I will beat Tīu $i \tilde{a}$ pâ vichí $\bar{o}$ tū manoiā wilom. you with a stick.
739. I have an intention to kill Iã chitt bitto tū jã̃lom. you.
740. You are a very kind-hearted Tī̄ bilugh lē bidiwā manchíassigh. man.
741. To show kindness to a smake Bibimst mễ $\overline{\text { sin }}$ mighighth lest kudüm is not a good policy. ness.
742. The king has taken a bride. Mehr ghtri avariss.
743. In my kitchen, food is being Iã̃ bufi kutan amu tã̃ sang mancooked for all the men.
chiān dugă anjz tyor kuttett.
744. A kite came down and took off Zhi mare os iãst urr bri. my chickor.
745. A stone hart my knee, as I was Dus piliang tã̃ zān pa wott marching yesterday.
746. Get a knife to out meat. $p \bar{u} p t a$. (?)
747. What art thou knitting? I Tū̄ kai oshich ? Ots ghugā oghinam. am knitting a choga.
748. My rope has got knotted.

Iã̃ kanik gittangus.
749. What is your name? What Tā kyā nam ess? Tottáa kai näm is your father's name? I ess? Iã̃ ghū ness; tottio ghá do not know; my father does not know.
750. I do not know the Chiträi language.
$\overline{\bar{O}}$ Bilian wari n'zãrlsam.
751. I do not know Umrā Khān. Õts Umrāanhän n' jạ̃lsam.
752. For men to do labour is good. Manchian dugã̃ kudüm kshilless.
753. Get a ladder, I'll go on to the Chik giats, pkrüm èlom. roof.
754. My hens have laid four eggs Iā ishtri kakkak starak shlowa azio to-day. kafistà.
755. All the water of the lake is Panile ào sundi she tin ass. frozen.
756. My white lamb is lame to day. Ĩ aka 757. My horse is lame; all our $I \tilde{\tilde{a}} u s h p$ kuttātt; emd sundl ushp horses are lame. kuttättett.
758. A lammergeier came down from Zhi marē badist t $\tilde{\bar{a}}$ wō ayo kakkok the sky and took off my damitz gwa. cock.
759. Why does not my lamp give a I $I \tilde{\bar{a}}$ tel kaikoti ruch n'buttosal? light?
760. My land is not good for $I \tilde{\bar{a}}$ bhim rits dugã less n'ess. barley.
761. All the land is useless (not Sang bhim n'utkor ess. arable).
762. Is the land around your house cultivated or waste?
$T \bar{u} p^{\prime} a m u$ ptior bhim ābâd assett zajir assett?
763. Is your house on the high To pamu sirtan tã sett ghor t $\overline{\bar{a}}$ lands or low lands (valley)? assē ?
764. The Kāfir language is very Katõ warī bilugh aruswoā essā. sweet.
765. This horse is small : get a large one; for my father is a large man.
766. Last night I went to Broz. Dus rador Bruts gūssam.
767. Last month I was ill, now I am wंell.
768. He made many excuses; at last he took his load.
769. You have come late: there is no load for you.
770. You have come late (inopportunely). The Mehtar has not leisure to hear your (written) petition.
771. Why are you laughing? The Tī̄ kai dugã kanich? Diwānbēga Diwänbëgi is angry.

Inä ushp parmenstuk ess: al ushp
 assa.

Pō-ē mos bradzowā assium, starak adrug̃ assum.
Ikīa manchi bilugh tuti ptā; pèlik bठ̃ ngūta.


I'ù malāl boti aiyosh. Mehr t̄̄ pati kor kusth dugã̈ shotik n'ess. mashu kolann.

[^79]772. Adjoining my house is a very pretty lawn and fruit trees.
778. My horse is very lasy; yours $I \bar{a}$ ushp n'pà baless; tū ushp is fast.
774. The dog is lasy and does not bark.
775. I shall get off my horse ; you $\tilde{\bar{O}} u \underline{s} h p t \overline{\tilde{a}}$ wāo atsolam ; tū ngātēti lead it.
776. Lead thou; I will follow thee.
777. You four' men lead; we four will follow.
778. Get lead to make bullets.
779. If we kill the enemy's leader, all will flee.
780. The enemy's leader has fled.
781. I can't learn the Chitrali language : it is very difficult.
782. To make (sew) pubboos bring some ibex leather.
783. Why hast thou gone? I did $T \bar{u} k \bar{a} g \bar{a}-0 g h$ ? $I \tilde{\tilde{a}}$ pur n'grussish. not give thee leave.
784. Come back! I do not give thee leave to depart. Break up this wood: then I will give thee leave.
785. We shall leave Chitrāl at daylight to-morrow.
786. At time of starting leave the yellow dog behind.
787. Summer has gone; the leaves Wizdōr gwā; shtōmatã por wiasiā. of the tree are falling.
788. A horse will go, but it must be $U_{s h p}$ ailt, wanamdi barēbā. led.
789. The Mehtar has eaten his food; Mehr yash iñ ro ; ajik yash uttā this much meat is left.
790. Why is Pir Khan left behind? He is not ill.
shatramil ess.
I pamu ptior bilugh shingīra brunz ass; kachwach kāno dí asht.

Krũ̃ digar ess ; n'rattatt. giats.
Tū panoi bō; $\overline{\bar{o}} t \bar{u}$ ptivar atsolam.
Shâ shtowa manchi panoi bō̃; emâ shtowa manchi ptior atsomã.
Purik kusthē dugā tūch giats.
Emâ pachanwari-ē jasht jã̃rlma pachanwari manchi mukēlà.
Pachanwari jasht mukiss.
Bilian wari pilangon (?) n'battam : biluk zur assā.
Wetso shewesth $d u g \tilde{\bar{a}}$ mareshin chiom gats.

Anīats! Tī purū $n ' n g a t t a m . ~ D a ̄ r ~$ pētē ; tū samilam.

Dalkiē emâ ruch bibâ Shdräl stã̄ èmâ.
Samrī bâ zĩr krũī tafā kghi. bistai.
Pirkhän kai dugā̃ wopsin ess ? • Bradzo n'oss.
791. My right leg aches; my left Iã̃st pchũtar chőn bradeott; kỗwar leg is all right. chōn lesst ass.
792. To-day I have no leisure; come Starak iã̃ worm n'ess ; dalkiö ats. to-morrow.
793. I will' lend you one rupee for $T_{\bar{u}}^{\bar{e}} \operatorname{tang} d \bar{u} m \bar{z} s t a ̃ a \tilde{a}$ kalom. two months.
794. I lent you one rupee last year, Po see $\bar{\imath} \bar{e}$ tang dã karsish, tīu $\bar{o}$ you have not given it back. $n^{\prime} p t a^{\prime} m$.
795. Chānlu killed a large leopard Dus Chã̃lü bado shai âl jut jã̃iss. on the mountain yesterday.
796. Don't bring so mach ghi; bring Ajik ano n'gyats ; achok giats. less.
797. A load of my grass has fallen into the river. Let it alone.

Iāst è bodr po-ē gwà. N'cho; piz bilà.
798. A man has brought you a Manchí tū dugā Mehr'st pati letter of the Mehtar.
799. What is the use of telling lies?
800. The Chiträlis tell many lies (are very lying).
801. Sir I this boy tells many lies.
802. If you tell lies, I will beat you.
803. A woman's corpse is lying on the ground; I am sure there is no life in it.
804. My house is dark ; light it.
805. The coolies say " our loads are very heary : lighten them."
806. Tell the man to light a fire.
807. I saw the lightning; I did not hear the thander. awariss.
Mizhosth kai $\delta t$ ( $o d$ ?) ess ?
Bilian bilugh mighăl.
Sähib! Inä marair bilugh mishott.
$T \bar{u}$ mishoch silibo vilom.
Jugūr mriss akīठ bhimā wötriss; ôts wizhhanam ikiä tă eha ness.

Ĩ pamu andhar biss; roch kghi.
Barwai gijij̃ kund emâ bor gãwa aght ; luga kshi.
Manchi walo angā parchiālà.
Deshpilsal wariäm; uderl n'samg. $\bar{a} y \bar{a}$.
808. These two brothers are exactly alike.
809. My lips are split with the cold.
810. Listen! I think a thief is coming.
811. Don't give my horse much grain, give him a little.
812. Give me a little food.

Amnī dū brâ ē yōr aght.
Ĩ̃̃ yüabt skille tã pètangroa.
Kōr kti! bibdǐ kghãm ghtãr aiyo:
 ( $p r e \bar{e}$ ).
Iã̃ achok brē pré.
818. Where dost thou live ?
814. I live in Broz.
815. One coolie has brought a load of snow.
816. Why have you loaded my $I \overline{\tilde{a}}$ tapik $t \bar{u} k a i$ soss $t \overline{\bar{a}}$ attushiss ? gun?
817. The locusts have done mach harm to my crops.
818. This mountain is very lofty.
819. The coolies say "We cannot drag so large a log."
820. This $\log$ is very long: cut it exactly in two.
821. My loin-cloth is tight; loosen it.
822. Look! when the coolies appear, tell me.
823. The men of this village are very poor; no one has a looking glass.
824. The government soldiers don't wear loose clothes.
825. The Chitrālis let their horses loose in this forest in summer.
826. My horse's girth is loose: $I \bar{a}$ ushp trang jijil biss : ikio tighten it. wishtē.
827. I took a herd of goats yesterday on the top of the pass. I have lost them all.
828. The coolie says he fell and his load is lost.
829. A man is going, a lotah in his hand having taken.
830. Last night a loud sound came on my ear. I don't know what can have happened.

Tū $k a \bar{a} w o$ gul $t \overline{\tilde{a}}$ buch ?
Ots Brāz nishinissam.
$E$ barwai zīma t $\overline{\bar{a}}$ bōr awārā .
 kriss.
Iyē bado bilugh opignâ ess.
Barwai walettett (gïjjī kund) " emá ajistuk al argru kshon n'battamish."
In $\bar{a}$ argru biluk drigrī ass : $p^{\prime} m i j h \bar{u} \bar{u}$ pētang.
Iã shirr wishtiass ; jijil kshī.
Aǐsh kshi ! koz barwai warī̃ $b \hat{a} i \bar{a}$ walō.
Inā bagrom manchi biluk drushtizwa manchi asht; eo di tarē n'aiesht.
Sirkāro spāhi frāk zapp n'amjind.
Bilian manchi wizdor amshiest $u s h p \bar{a} n$ ikiā $p s \delta n$ nachâttett.
woilue.

Dus gash dom bado shai awarissi : sang keti psiā.

Barwai gijjz kutt $\overline{\tilde{o}}$ paltiosam, bor psiā.
E manchi kuniyà b'dosh damēti prētt.
Rador kotē̃ wari i $i \tilde{\bar{a}} \quad p^{\prime} k \delta r$ gwā. Kai wari bosel $i \tilde{\bar{a}}$ shū $n^{\prime}$ ess.
831. In spring my garden is very Bosut wokt tãa iã darestãa shingira lovely. $b \bar{a}$.
832. All the coolies have come : they Sang barvai aiyā : kai băpsā n'kriohave done no loss (harm). siā.
833. I heard the sound of the low- $G \hat{a}$ arsett : i $\tilde{\tilde{a}}$ sangaya . ing of the cattle.
834. Chitrāl new fort is down low; Shdral noi kālo nĩr ess; sium kalo the old fort is higher up . ch $\tilde{\imath} r$ ess. stream.
835. I have sown lucerne seeds Ani maghich bi ashiss. here.
836. Your luck is good; mine is To baré lē assiā ; iã barē utettī ces. little.
837. That coolie is not weak; he is a Stā barwai darē n'ess ; ber ass. lunatic.
838. My lungs ache from much Bilugh kassetum: atü̃ bradzott. coughing.

## M

839. That man talks much nonsense; I think he must be mad.
840. The magpie is not a bad bird; he does not eat up -our maize.
841. I have given money ; if any man is dissatisfied, let him tell me.
842. My horse's mane (neck hair) has got bad; he has mange (rubs it).
843. You have no manliness, you are become idiotic.
844. Much manure is collected near my house.

Stā manchi bilugh berãn walett; $\overline{\tilde{o}}$ purjitom ohatta assel.

Biliankor digar marangats n'ess; jigor n'yūtt.

İ pais ptā; kāchi manchi $n^{\prime}$ shotinestabd, $\frac{\tilde{2}}{2}$ walā.

Ushp $t \bar{a}$ maroik (marengi) tã̃ dro (gho) digar bistai; changrot.

Tū kai less bidi ness, tu chatfa bissigh.
Iã̃ pamu torẽ̃ biliukt dsal wasamristai.
845. On that hill are many thieves. Ikiā pashī $t \overline{\tilde{a}}$ ghtãr le aght. Iã̃ In my village there is not one thief.
846. Is Bragamatal a full day's march to Chiträl or nearer? It is a two days' march. For a man with a load it is a three days' march.
 hand f
848. The Markhor have not come Starak se shāra bado stê y yũr n'āyā. down this year from the hill.
849. Many men have come for my Iẫ brâ jugūr awri iādugã̃ bilugh brother's marriage. manchi wasanristai.
850. My brother married (took a Iã brâ pō sē jugür awri. wife) last year.
851. Look! Mirak's horse has got A $A \bar{i} g h$ kshí Mirak, ushp shar t $\tilde{\bar{a}}$ wurshia.
852. You are master (great)! I Tū âl ashīi:õts tū shodr assum. am your servant.
853. What is the matter with you? Tī kai bissigh?
854. What is your meaning? I T̄̄̄ kai manichi; tē wari $n$ 'purcan't understand your josam. speech.
855. It is three days since I have Troi wobs ano bitta iã n'iã̃r: attã̃
eafen any meat: so I am $b d$. hongry.
856. My servant coughs much; Iã̃ shodr bilugh kasett; ikiठ dugâa what medicine is ${ }^{\text {'good for }}$ him?
857. My stomach is swelled from Karbiza bilugh $\dot{\tilde{a}} \overline{\mathrm{a}} \bar{a} \boldsymbol{i} \tilde{\tilde{a}}$ ktol alla bā. eating (I have eaten) too much melon.
858. The ghi is frozen : melt it. Ano shē tin ess; ikiē tipāo.
859. My cloth is torn : sew it (mend it).
860. My gun is broken; get a carpenter to mend it.
861. In Chiträl there are many mendıcants.

Bragamatal Shdrāle e gujr pott ess tawarẽe ess? Dū gajr pott ess. Barwai bor ngäti trai gajr pott ess.

## bogged in a marsh.

 kai ngehā lestabalā ? Iã̃ bazisná ushi bistai: iklā shivē, (lesta kshi).Iã̃st tapak petangess; ikiā less kusth $d u g \bar{a}$ dão sellē giats.
Shdräl kalandaré bilugh a asht.
862. The merchant is a great thief SAdawai bilugh shtõ̃r ess; sang and always lies.
863. Be merciful: if you are merci- Odh $b \bar{\sigma}$; tū mash kotish tū $d r$ less, you will go to Hell.
864. The Mehtar has sent two messengers to the Khän of Dir.
865. At mid-day there is great heat. Just at mid-night

Grish bilugh top butt. Rador barbōr shillä brtt. it is cold.
866. I am thirsty, $I$ will drink $I \tilde{a} a \operatorname{do}$ pig biss, zu pilom. milk.
867. Bring the cow to milk her. Gâo giats, dolama. Gáo dulē. I have milkisd the cow.
868. The bābū says "grind the Bābū gijjz kutt "rits pshiō"kutt: barley "; bat there is no apshian n'ai. mill.
869. The miller says the stone of Apshiān manchi gijjः loutt apshian his mill is broken. wär peringess.
870. My cultivation is bad: I have I $I \overline{\tilde{a}} s t$ ptul digar ess: gum ness, no wheat, only millet. katsâ ess.
871. I have heard that in this $I \overline{\bar{a}} p^{\prime} k \bar{o} r$ gwā ina b'gul ashtrutt valley is a mine of lead stone. tuch kön ess.
872. There is much mist, and one Bilugh mẽ̈h biss, pachanvari
can't see the enemy.
warantan n'buttett.
873. I made a mistake; three men I $\overline{\tilde{a}}$ larissā : troi marchi aìyā, shto have come, not four. manchè n'aosht.
874. Mix this medicine with water Inā wushē $\bar{a} 0$ mish suntrō kati $p i$. and dirink.
875. I am very poor and have no money whatever.
876. There are clouds, so the moon is not well visible.
877. To-morrow evening is new moon.
878. To-day is half moon.
879. It is two days after full moon.
880. You have eaten much; don't eat more; you will be sick (vomit).

Biliuk kai nowā manchi assum : i $\overline{\hat{a}}$

Nāru'ssa, mős! lesstaka n'waron prētt.
Dalkiē salkēn wār noi mõs atsêli.
Starak gajar napūr ess.
Môs pichis oss biti dū oss di biss.
Tū bilugh iō̃r ; wārā n'yü; shtẫr. chi.
881. Awake me in the morning; Yaghi wèl tã $\mathfrak{i} \overline{\bar{a}}$ bektsa; pshuikan don't let me sleep.
882. Mosquitoes bite much; I can't sleep.
883. In the summer moths get at Wizdor basnā $t \tilde{\bar{a}}$ wēk buttett. the clothes.
884. It is two months since my mother died.
885. The road is level now; mount your horse.
886. The mountain is very high. Pashi bilugh al ess.
887. On the top of the mountain there is much snow.
888. Mountaineers are good for carrying heavy loads.
889. The road to Urguch is bad ; a footman will arrive quicker than a mounted man.
890. In winter the (mouse) mice go somewhere or another. They have come now to light (to the eyes) again.
891. Mirak and Basti are not alike. Mirak has moustachios and Basti has not.
892. Mirak has a big mouth; Basti has a small mouth.
893. This place is not good for pitching a tent, there is much mud.
894. There is much weod here.
895. A mud stream came last jear and destroyed my crops.
89\%. In my garden there are many mulberries.
897. In Drosh there are five hundred government mules.
898. The mule is better than the ass for load carrying in the hilly country.
899. I am sure Samar has murdered Iâst bidi assā Basti-è Samar Bastī ; Basti is dead. jãriss ; Bastī mrä.
900. Dān Malik is a murderer and Dān Malik manchi jã̃rl assà, tott's his father and grandfather. di wão's di manchi jãrl assa. They are all bad men. Sundi digar manchi aght.
901. The musicians made a great Dus radar durwà amshia p'mish noise last night amongst biluk rārā kriss. themselves.
902. The muzzle of my gun is filled np with mad (in the middle of opening of gan).
903. In Ohitrā̀l are many mynahs: Shdrāl satr marangats lē asht; there are none in the high. srētã n'asht. lands.

## $\mathbf{N}$

904. An iron nail has broken my Chimētku nāchễ tã̃ mizhe. finger nail.
905. Give the name of each individual coolie.
906. The officer says give me ten Kāâr names. Well! liston! (Here follow ten names.) (T)
907. The road is narrow : two leden mules can't go abreast (or in pairs). One must follow the other (one in front, one behind).
908. This is a nasty road.
909. The water is nasty : fetch some good water.
910. This fruit is nasty to taste Ina kajwaj aruewai n'asht. (not luscious).

[^80] your words. n'aiett.
912. Take away the water; I have Ao giē ; âo kā ud n'ess. no necessity for it.
913. From carrying a load my neck Bōr ngusth dugã̃ kamo bradzott. aches.
914. There is not a needle in our Ema bagrom $\overline{\boldsymbol{e}}$ chimchich di village. n'aiest.
915. Our women don't know what Ema jugūr n'zã̃tett chimchich kai sort of thing is a needle. lattriess.
916. My horse neighs much: I am $I \tilde{\bar{a}}$ ushup bilush rārã kutt: $\overline{\bar{o}}$ sure he is hangry.
917. Garak is my neighbour and is a very stingy fellow. purjitam atta biss.
Garak emâ amu vishi ass: bilugh nashtā ass.
918. Mori has married my Mori iã nawós jus shtari kriss. nephew's danghter.
919. Fon are a bad lot; I'll never Tī digar manchi assigh; tū koi dI forgive you. kai n'prēlom.
920. Is that new snow on the Bado gian noi zim assā? mountain?

922. This month (having) gone, Inā mos gaieba sōr mठsa t $\overline{\bar{a}}$ Dryus next mont $I$ will go to ettam. Drosh.
923. This year hs ing gone, next Inā sē gaiebâ sör sē tī̃ Peshdr year I am going to Pegh- ēlom. āpur.
924. This road is nice for camels. Ina putt shturē dugã less.
925. By night two thieves came to my house.
926. The noblemen of Chitrāl are Shdral al manchi lē manchi ashth. very good men.
927. You are a noble fellow.

Tü biliuk al bidio (zira-wā) manchi assish.
928. The coolies are making a Barwaibilugh sharf kuttett. Mehar great noise. The Mehtar pshutf n'yett.
can't sleep.
929. Tou are talking much nonsense. Tiu charfe (chattē) walētish. Ta Dun't make a noise. shart n'kshi.
980. I saw a man yesterday who Dus manchi voariam nasar n'ess. has no nose. He cays a Manji gijji kutt $\bar{\imath} t s$ nasur bear tore it off.
931. Inside my nostril is a boil. Nasur tā até̛r apsiss.
932. The coolies have not yet come; but I have seen they are near.
933. You ask a copper from me? I have nothing. Why should I give coppers for nothing $P$
934. Now they have come, but one man is left behind.

Barwai n'āyā; $\tilde{\imath}$ wariām turẽ̛ asht.
 kai n'asht. Tī gijjā kai dug $\tilde{a}$ paix prēlom?
Starak $\bar{a} y \bar{a}: \bar{e}$ barwai ptior otin ess.
985. In my valley are many nullahs. I $\overline{\bar{a}}$ watan t $\overline{\bar{a}}$ bilugh gul asht.
936. My fingers are all numb with Shillë angur ghangur bistai. cold.
987. 'The numda of my saddle is all Zin tokum ushp khel tãa shila biss. wet with the horse's sweat.
938. Our friends are numerous, and the enemy few.

Emà zotr lē asht : pachan warl achok ai.

## 0

939. I take an oath I will kill Dan $I \overline{\tilde{a}}$ ghott $\operatorname{chim}$ (ahatt dibi) Dān Malik.

Malik jã̃rlam.
940. You are a bad lot; you obey Tū digar manchi assish; ko wari no one's word. n'awèguch.
941. If you offend (make mall of $T \bar{u} i \tilde{\bar{a}}$ parmenstuk kachi tī digar me) I'll bring you to grief kalom. (evil).
942. There is no oil for lighting the Ptremshhk pashiosth dugãã tē n'ess. lamp.
943. My clothes are become old. Iã̃ bavisnd siūm bistai.
944. Our house has got old (in Emást amu witeliss. ruins).
945. I can't understand the old man's talk; his teeth have fallen and he mumbles; his old woman also doesn't speak clear.
946. The wood of the olive is very Kāo dār manoī kusth dugã less strong for walking sticks, ass; $n$ 'prẽ̛liss. and won't break.
947. On the Chiträl road there are thieves.
948. On my table a knife is left.
949. On my head is a boil.
950. On that hill there is no grass.
951. Have you done this on purpose or forgetfully?
952. If I climb a hill, my head aches. Why does your head ache? Yon don't march on your head; you march on your legs.
953. Call up the coolies one by Barwai yu kūrē walo. one.
954. Once I fell into the river, so I fear it much.
955. I was left behind on the top of the pass. For three days I have only eaten wild onions; I had no food with. me; I am hungry.
956. I have brought a donkey load of onions for the sepoys.
957. I have only one horse.
958. Near my house are holly trees only, and no other trees.
959. Mirak is a great hunter ; he has killed a big oorial to-day.
960. My box is not open.
961. Bring an axe to open my box.
962. My opinion is the enemy is about fleeing.
963. Chānlū seeks an opportunity Ohā̃ $\bar{u} i \overline{\bar{a}}$ kudūm nashisth dugã̄ to harm my work,

Ewōr poi p'mĩ sh lunissam bilugh widarēttum.

Badz shai wopsanossum. Troi wбs
 n'assi ; atta bā.
$E$ bठr trashtu spāhi dugã awērā.

Ī̄̄ ē ushp ass; Wār̄̄ n'aiesht.
Inā pamu tawarẽ̃ voanzi asht, wārē kano n'aiesht.
Mirak bilugh shartrī assā ; starak gujr âl mirish jã̃ritī āyā.
I $\overline{\tilde{a}}$ aḍ ganã n'ess.
$I \overline{\tilde{a}}$ adr ganā kusth dugãa pets giats.
Ià babdi ess pachanwari mikēlā. aîsh kutt.
964. Be on the watch; seize the Aĩ̃sh kshē; Widing pamu begū ba opportunity of Widing going out of his house to kill his dog.
965. On the opposite bank of the Poi pẽ̃ $d \bar{u}$ manchi emâ mêsh river two men are march- t tĩch katz ettett. ing even with us.
966. The Kāfirs are very poor (of Kata kai novwa asht; Bilian biluk no account); the Chitrālis oppress them much.
967. To kill an oppressor is fair.
968. You are a great man. I. will obey whatever orders you give me.
969. I gave you an order to bring five men. The head man says there are not five men (available).
970. The golden oriole is a very pretty bird and sings sweetly in spring.
971. This little boy is an orphan: his father and mother are both dead.
972. Our cows are all grown thin. Emâ gâo sang bilugh dadar bistai.
 so he is an outlaw.
974. Get outside the house ; you are Pamu bē i; tū bêr assish. a fool.
975. I ovoe Chānlū two rupees. $\quad \hat{\bar{O}}$ ts Ohã̃ $\bar{u} \bar{u}-\bar{e} d \bar{u}$ tangē dām assum.
976. Owls frequent my garden at Rador iñ̄̄ b'darestẫ bāghrē lè afait. night.
977. This is my own horse.
978. Do you own an axe?
979. The oroner of the house has. gone to Peshāwor.

## P

980. My arm pains; and both my $I \overline{\tilde{a}}$ dot bradzott; dū achiê sots eyes ache. kuttett.
981. The sepoys are marching in Spahl yamnā butio end. pairs.
982. The Mehter has built a new Mehar noi niehi ama hrishtai. palace.
983. Your face is pale : I am sure To miok adfà biss: $\overline{\bar{o}}$ purzanam you are ill. bradso-20a assish.
984. You killed my brother: I Tīu ī̄̃̄ brâ jä̃riss : õ $n$ ' pmightēlam. won't pardon you.
985. Your parents are well bred; Tiu nōn tōtt al manchi asht; tit and why do you take to kai dugā shtãr bissigh? thieving?
986. Make this apple into three Ina pärro trē pārti kshĩ. parts.
987. The flesh of the hill partridge $\mathrm{U}_{\mathrm{ff}}$ ē ano $i \overline{\tilde{u}}$ dugä digar ess; $\hat{0}$ is unpleasant to me; I n'aietam. don't eat it.
988. The Lawari (Rāolī) Pass (col) Räolī-gor pakhtalā ziroor biliuk is very difficult in winter. digar ess.
989. The Gangalwatt pass is harder Rāolz-gor pakhtalē t $\overline{\bar{a}}$ Gägri-wott than the Lawari. pakhtală digar ess.
990. I shall pass three days at Drösh. Trē gujr Dryus nishilom.
991. At the foot of the Gangalwatt Gāgri-wott badō pagūrā Katō̃ sōn Pass there are only pasture ess ; gräm n'ess. lands of the Kăfirs; there is no hamlet.
992. Across the river is a narrow Poè pãr limrai pott ess; ushp path ; it is not fit to take a pilangosth pott n'ess. horse.
993. It is only a goat path, not a Dushān pott ess, ushp pott noss. horse road.
994. Fou are an impatient fellow: Tiu tupetich manchs ascieh : daxiz have patience. kshi.
995. The Pathăns have fixed my Aoghānt iã dugã mos tā tré tanga pay at three rupees por mājib prēttett. mensem.
996. The peaches of Ranbūr are as Konisht āru iã dui tã brobar aib big as my hand. asht.
997. All the pears this year are Ina së sundE tong gā bistai. soar.
998. The Hindustāni people are Hindustan-o manchi bilukzhi asht. very dark.
999. In winter the body gets warm Zawor morch ī̄̄rabî jitt tapett. by eating pepper.
1000. You are a perfect man! You Tīu lē mō̃ch assish : tū Katō wari talk Bashgali very clearly. biliuk lē warī kuch.
1001. Some one is cooking meat; Manchi ano pachitt; ano tã gan I smell its perfume. afziä.
1002. There are many clouds; I Näru bissã; shtalē agal prōlā think perhaps it will rain; washitam; Imrä jã̈rlanı. God only knows.
1003. When jou have given me Tī ī̄ koi purl kolaiba Konight leave (permission to), I shall ēlom. go to Ranbūr.
 from galloping. afzia.
1004. You are a pertinaoious Tīu bilick sōp sip manchi essisin. fellow.
1005. Are there pheasants in jour Tīu pashur tā bātachol ashtī? forest?
1006. There are no pheasants ; but Bātachol n'aiesht; bābakar le asht. there are lots of monãls.
1007. Get a piok to pick out stones. Wōtt ukshosth dugã wöh giats.
1008. My coolie has dropped a Iãs barwai jil wō uktsess: ulẽ̃ blanket : pick it up and kahi ikiē prē. give to him.
1009. Give me a piece of meat. IIN achok ano giats.
1010. The Sāhib wants (has started ?) Sāhib kür jã̃risthai dugã samriss. to shoot pigeons.
1011. The (wooden) pillar of my Iã̃st amu shtuan ranzat: $\hat{\bar{o}}$ house is weak : I think it vishitam inā sē witlilk. will fall this year.
1012. I have no pillow, so I can't Potsantesta n'ess, õ̃ts pshurk sleep. $n^{\prime}$ battam.
1013. Who is that man wearing $E$ manchi sbedrukral basnd a pink shirt?
amjistai; ikio kai nom essä ?
1014. I don't smoke a pipe (tobacco). $\overline{\bar{O} t s}$ tamkio $n^{\prime k} k{ }^{2}$ atam ; naswūr I take maff.
1015. Who gave you that pistol? kunam.
Ikiā drun tape $t \bar{u} k o p t a ' s h \bar{i}$ ?
1016. My goat fell into this pit lã̃ gash dus ināa sbē tãa luniss. yesterday.
1017. You have no pity on the coolies; and of course they

Tū barwai aĩgh n'kutigh; tū shtale amnīठ tã̃ digar assigh. dialike you.
1019. This place is unfit for pitching tents.
1020. Our cattle are all dying of the plague.
1021. Widing is a plain (straight) man, and does not lie.
1022. This plain is as broad as the plain of Mori.
1023. You have arranged an excellent plan for crossing the pass, and I am grateful to you (shall reward and make you glad).
1024. Send two men to plaster the $D_{\bar{u}}$ manchi inä châ oharesth dugã wall.
1025. I want a metal plate: not a I Iã̃t dapil awizhess: pashku awigh wooden platter. n'ess.
1026. The Kāfir boys play much Katồ parmẽ̃r bilugh miabittett. games.
1027. The Chitralis are fond of Bilian manchi làlu kusth dugãa playing masic (singing). bilugh kuzhẫn asth.
1028. Your brother is a pleasant- Tiua bra biliukk shingorà assā. faced man.
1029. If you please me, I shall give $T \bar{u} \tilde{\imath}$ lē zānchibs tū sē tū̃ gum you a bag of wheat. prēlom.
1030. We will go to-morrow, or next Dalkiẽ ētimigh, attri ètimishā, to day, as you please.
1031. Please decide the day for starting on the journey.
1032. The harvest is bad; but grass is plentiful this year.
1033. The iron of my plough is broken! What shall I do?
1034. The ground is frozen : it is no good to plough now.
1035. Pluck and bring those yellow flowers under that willow tree.
1036. The point of your sword is not sharp (has not an edge).
1037. I don't see the enemy's horsemen ; point out with your finger and show me where are they.
1038. Some one gave my dog poison, and he died this morning.
1039. Kāfirs don't play polo.
1040. There is not even one polo ground in the Bamboreth valley for playing polo.
1041. Pomegranates are good to eat when you are thirsty.
$\tilde{O}$ pachanwart ushp sir manchi
n'warentam; kor asht angur warē
$\tilde{O}$ pachanwart ushp sir manchi
n'warentam; kor asht angur warē wārō.
Ikīā pkūsh pgūro riti pī̀h pe!ī giats.

T' $\bar{u}$ tarwoch char psio n'ess.

Gizhē manchi-e iñ $k r \bar{u} i ~ w i s h ~ p t e ̄ s s, ~$ starak piāsh mrā.
Katā manchi parchev n'mishittett.
Mamrēt è dì brun n'aiesht parchev mishisthai dugã̃.

Koì do pig bibā amãrts pits (pisth) lesst butt.
1042. I think the ducks will light on the pond.
Ots babdī ksh̄̄tam jallai nilē tã̃a attu prēlā.
1043. I want a pony, not a big horse ; for the road is bad.
$I \overline{\tilde{a}} d u g \tilde{\bar{a}}$ yābū giats, âl ush$p n^{\prime} g i a t s ;$ pott digar ess.
Emaí bilugh garib manohi assumisho paisa n'wâttettamish.
Al manchī nālus wariān bilugh digdr kuttett.
1046. The poplars grow on highlands; Chitral is low and they won't grow there.
1047. The fast (Ramzān) is over; it is the feast day : the people are assembled for shooting at the popinjay.
1048. I will eat porridge to-morrow morning; I have a stomach ache, and can't eat meat.
1049. Divide the bag of wheat in four portions : give one portion to each coolie.
1050. The head man of this village is become very portly (large belly).
1051. The sepoy has forgotten his pouch in his house.
1052. Pour out the milk from this ewer into the pot, and fill in water instead.
1053. I have left the powder for my gan in my house.
1054. Why can not you go? You are a powerful man.
1055. The coolies make praise of the Chārwèlo saying "he is a very great hearted man."
1056. This is the fast month: you should say your prayers five times every day.
1057. At the time of going, make prayers.
1058. Yestorday I said my prayers five times.
1059. To-day we shall travel much; we shall not say our prayers.

Tãrak kảno sivētâ buttett ; Shhdrāl shor assa, ani n'buttett.

Pochētr paoshā ; namaj biss ; amni manchi asselà uchasth dugã̃ wasanriotai (asselat tapkiē wisth dugã vasanristai).
Dalkif piash okra ashuralom; ktol bradkott, ano n'yülom.

Inā gum aē tãa shtowa bitta ksh] ; ina barvai yo chok prē.

Inā bagrom ura bilugh all ktol-wà assā.

Spāht pamu dorinott pmishtēti āya.
Pashku tã $z \bar{u} p t o l t a ̃ a ̃ a t i o ̄ s h ; p a s ̧ h k u$ zū pizl äo parī kghi.

Tapik dugã̃ pamu dori pmishbêtz ayosam.
Tī̀ kyā n'è banjí ? tū damtōl manchi aght.
Barwai Ohärwèliḕ dugã̃ wari kextett "bilugh al bidi-wā manchi ess" kuttett.
Inä pochētr ngusth mōs assā; во gujare̊̀ pō̈h wor namàj kusth less.
Iendâ (ien tã̃) namáj ksha.
Dus pönj wōr namâj krā.
Shtrak bilugh wiohakmigh; nam』j n'kummá.
1060. Yesterday I became very tired :
I did not say my prayers.
1061. I am a traveller; neither to
make prayers five times a
day nor to keep a fast is
necessary for travellers.
1062. That precipios (or built up pari) is dangerous, and you cannot cross it.
1063. Yesterday I gave you a present of one rapee: to-day I am angry with you and won't give you anything.
1064. In the present year on account of a good smowfall there is much grass.
1065. You have patience! I am coming presently; I forgot (I have) a little work (to do first).
1066. Shēr Malik has brought some very pretty clothes from the merchant (made and brought).
1067. Previously to starting don't drink much water or milk.
1068. You have paid too long a prioe for that cloth.
1069. In every Käfir village there is a chivef priest. (\%)
1070. The high priest is a man of considerable possessions. ( $\mathbb{I}$ )
1071. The ohanting priest sings. very Debilāla biliuk lē lelu kul ess. well. (T)
1072. The princo's age is twelve Mehrkruee dits sē bise. years.
1073. The princess' age is ton years. Kunzā jūs dots sè bise.
1074. The prince has killed with his Mehrkruē sang manē manchi own sword all the prisoners b'brunz-o pagūro amo tarwochi on the polo ground.
1075. My horse is hangry : produce corn for him.
1076. Produce the clothes which I left here yesterday mësh witt jã̃ $\bar{a}$ istai.
$I_{\bar{a}}^{\tilde{a}} u \underline{h} h p$ attā biss: ikī dugã̄a pol paidā kshi.
Dus iẫ bazisnd año pmishtiassz $i \tilde{\bar{a}}$ b'doi giats.
1077. You promised you would give me one rapee.
1078. I bave no proof that this is my blanket.
1079. All my general property and household property was burned by the enemy.
1080. Thou art too proud (a man who knows no one): I think you will surely come to grief.
1081. My servant reports he has got all provisions ready for the journey.
1082. I want pubboos for journeying over the snow : boots are too unyielding and slip much.
1083. Sir! Tauchins are better than pubboos for snow; but take care they be soft.
1084. My white pugri is become dirty with the journey.
1085. Go to the munshi: ask for ton men to pull this beam.
1086. We don't eat pumpkins, as it is not our custom. Our parents never eat pumpkins.
1087. Sir! this man came and cut my pumpkins by night. Give him severe punishment, so that he shall never thieve agait.

T'ū ko kai n'chamol (?) (jānṛl ?) manchi assish: $\overline{\bar{o}}$ purjītam tū digar bulosh.
IĨast shodr gijjji kutt "putt dugã̄ sang yash wottestai" kutt.

Zìm tã̄ pilangisth watsâ iã dugã giats; boot dangu buttet silkiottett.
Sähib! watsâ tã̄r pagur palāno lesst buttett ; a $\overline{\tilde{n}} \frac{1}{h}$ kshi chil būnd.
 biss.
Munghi tā̃r $i$ : dots mō̃sh ugrē kshosth dugã woli kshi.
Emâàlo n'yūmish chor ness. Emá $n \bar{n} n d \bar{\imath}$ tōtt d亢̌ àlo n'yūlai.

Sāhib! ikiā manjz radur iã̃st alo shhtãrakti pēti briss. Ikēā less katī wi, di shtãr n'kulā.
1088. You are a thief. I will T̄̄u shtãr assish. Tīu wilom. punish (beat) you.
1089. That man tells many lies. Ikiā manchi bilugh mighott. Ikī̄ vi. $P_{\text {unish }}$ him.
1090. Last night a thief came and Dus radur shtãr atti ì kaltacha took off my purse; if I brā; ashīa shtalễ wanomalom catch him, I will take away shion (jion?) nuksalam. his life.
1091. I purposely left a dog outside the house, in hopes a leopard will come, and I can shoot him with a gan.
1092. Look! The enemy has fled. Get together all the horsemen of the village to pursue him (or, we will pursue him).
1093. Why are you pushing me? If you push me, I will do for you.
1094. Put this walking stick in my house.
1095. My arm aches. I can't put on I $\overline{\bar{a}}$ doz̀ bradzott. Basnâ amji n'bat. my olothes. You put them on me .
1096. Puttess are good for riding in. Paito ushp sir nishishth dug $\overline{\tilde{a}}$ lesst ai.
1097. In my country boys began to wear pyjamas at ton years

Emá watan t $\overline{\bar{a}}$ dots sē bista marir taman amjittett. of age.

## $Q$

1 C98 My horse is canght in a quag- I mire. Get fourmen to pull Shtowa mō̃ch ukghosth dugā him out.
1099. Quails are very good to eat; Yusth dug $\overline{\tilde{a}} \mathrm{kra} \tilde{\bar{r}} \mathrm{ra}$ less; ema but we can't catch them. . damē n'battamish.
1100. There is a quantity of stone Añ $20 \delta t t$ lé ai. here.
1101. Why dost thou make a quaurel Tiū kai dugãã iã tã̃ ntili buch ? $\bar{O}$ with meP I don't wish to quarrel with thee.
1102. Some one has caused these two brothers to quarrel.
1103. You are a very quarrelsome man; I'll take you before the Kāzi.
1104. I have heard the Queen is very ill, and possibly will die today.
1105. Why do you question me P Do you take me for a robber?
1106. You go quickly and fetch the doctor! I am dying.
1107. Don't you go too fast; there is a quicksand in front of you; you'll be caught.
1108. Take carel Be quiet 1 you talk too much.
1109. I am very poor; I have no quilt.
1110. You say everything quite true.
1111. I quitted my stick. Let it be! I don't need it.
1112. In my quiver is not even one arrow; how can I fight?
1113. Look! my father plays quoits very well. (T)

Tū sang wari paruketi walaoh.
Iã̃ manot nachēti ossum. Pisbillize ! kai ūd n'ess.
Iã̃ ehtur tã édi ghār n'ess; kaikotz pghiman?
A $\mathfrak{i ̃}$ ghkshail Iã̃ tott bilugh lo aluts kutt.

## R

1114. These two brothers are racing Amnie dü bra ushp ghigiottett. their horses.
1115. The rafters of my house are weak; I fear they will fall.
1116. My cloak has beoome ragged; I have no money to buy another.

Jãa amu polingistif petanless ; ỗ weshanam witlala.
Iã̃ şhugã yâteâ biss; wãrē shuga ngūsth dugãa iã tãa tang n'aieakht.
1117. In these days rain falls, but Starak agal grätt, sim na prêtt. not snow.
1118. If it rains to-morrow, I can't Dalkiê agal pittab太 Dryusā na go to Drögh.
1119. If rain falls, I shall not go. balam.
Agal biba n'aim.
1120. If snow falls, I shall stoy here; Zim pittaba ani otim; agal biba (but although) rain should ollom. fall, I shall march.
1121. There is a big rainbow to-day, so 1 don't think it will rain to-morrow.
1122. My ram has eaten some poison in the woods and must die.
1123. In the summer time bears are very rare in my country.
1124. In Badakhshän I rarely saw any camels.
1125. In winter the rats (big mouse) all go away. One doem't know where they can'go.
1126. I have seen with my own eyes that the enemy is hidden in that ravine, as an ambuscade.
1127. This chupatti is raw; why have you not cooked it? Cook it immediately.
1128. This meat is underdone (raw), but it is not my fault, there is not fire enough.
1129. The Bashgalis say it is not good for men to read books. Priests should read books, and no one else.
1130. Why are the coolies delaying? Why are they not ready?
1131. What is the real reason why the Chärwèlo won't give coolies?

Starak gugr indrōn chi ptess; dalkĩ̛ agal n'allon ỗ purjanam.

Iã maghurala pson p'mich wish iã̈s : $\bar{o}$ purjonam mpla.
Ĩ̃̃ gul tī̃ tapi waktā its (rits) bilugh chäk asht.
Badakeghan bilugh achok wokta shtur wariàm.
Ziwor al mazză sundl end. Tinch n'ess korē endabá.

Iã̃ yost achèn warē $\overline{0} \hat{g}_{h} k r a ̄ a ̄ k y \bar{e}$ păf pachanvart bizul atta bistai.

Inā buri zhilli ess; tā kai dugãa n'dai ess ? aqpp daio.

Ind ano nā karch ess, iñ shotike n'ess, angäā n'ess.

「Katā manchi gijji lound manchion dugā parhi õgh kusth dugã̄ (parhi walan) lesst n'buttett. Mullā parhi walesth dugā̃ lesst buttett, wārā lesst n'buttett.
Barwai kai dugã̃ mäta bistai (drō kund)? Kaikotē tyor n'aesht ?
Shtal vari kshí, Chärwēll kai dugã barwai na prētt ?
1132. Do you really go to Chiträl tomorrow?
1183. My crops are destroyed. There is no-one to reap my wheat.
1134. What is the reason of your going to Asmär to-morrow?
1135. All the men of Kämdëgh have turned rebels, and ejected the priests, and have killed some.
1136. Have you received your pay? I have not yet recoived it, for I shall receive it after a month.
1137. Don't go near that swamp and those reeds. I think the enemy may be hidden among them.
1138. My reins are broken; get a needle and fine thread to sew them.
1139. My relations by marriage and my blood relatives have all fled from Asmār for fear of the priests, and have come to Bragamatal.
1140. I am solitary. and have not one relation.
1141. The Mahomedan religion is very hard : (I can't see) what is the ase of keeping a fast.
1142. The fire is gone out; relight (or rekindle) it.
1148. I will go a little ahead to look for the enemy. Remain thou here until such time as I come back.

Tū dalkiẽ Shtrāl abtalen ētighiā (ènja) ?
Iã̃ ptul digar bistai. Gum urusth dugā eo dì manchī n'aesht.

## $T_{\bar{u}}$ Parish kai dugã dalkiẽ ètigh (ēnji) ?

Kāmdè sh sundi manchi yagi bistai, sundi mulla a tur aghā, ackok mullà jã̃ristai.

Tī mājib vrăghattasā ? Starak na rräghuttus; é mos ptisoar rräghalam.

Tī iki shlur napuki drigri yūs tawarè n'ai. $\overline{\bar{O}}$ purjonam pachanvari ikiä p'mîgh attā bistai.

Iã ualhp ashi bradsi petangess ; chimchich lamr pachen gats shusth $\bar{\beta}$ $d u g \tilde{a}$.
Ema psūr dar emá'st sundi tōtt bra mullä dugã widherti Parish stẽ muktē gwā. Bragamatal oso thai.

Ots' kūr assum; ĩ̃̃ kāohi zōtr n'aiseht.
Muzzulmān din bilugh sur ass: poohētr ngūsthabâ kai faida butt ?

Angā yassa ettā ; pashão.
$\overline{\bar{O}}$ achok panishr balom pachanwarr
 tū aniò niz̧hé.
1144. Alas! one of my coolies has remained behind; he has not turned np; I fear the enemy will kill him.
1145. Take away the remains of that meat.
1146. Take this cloth and make me a pair of pyjamas; then bring me the remains of the cloth.
1147. If it snows in the morning, we cannot get across the pass : there is no remedy (no power ; it can't be helped).
1148. Certainly you gave me the order yesterday. I have not remembered. Forgive me and don't be angry.
1149. What do you request? You requested something yesterday and I gave you one rupee, and now again yon request something; I won't give you anything.
1150. The Chārwēlo enquires how many coolies does the officer require, and for how many days does he require them?
1151. Chānlū and Mirak resemble one another.
1152. My dog resembles your dog.
1153. Asmār is a good place : I shall reside here four years.
1154. The Mehtar does justice, therefore all the subjects respect him.
1155. They are respectable people in that village ; and neither very poor nor very rich.

Uterestã̄ ! Iã̃st eo barwai ptivoor atin ess; n'ais; f̂ widernam pa. chanvari manchi barwai jã̃rlā.

Ikiā ano uttā bistai ngāti gyẽ.

Sōn gyē taman kighi nttã bistai son giats.

Dalkiễ yaykhi-woèl tã̃ zim afziā bado shai putré n'bama ; kōt n'ess.

Shtalē tū dūs hukm pta'm. Iã̃ babdi n'azzia. Māta kshi: kapa n'bo.

Tū kai ragach ? Tī̄ dus kai lattri
 starak dz ragaoha? $\bar{O}$ tū kai n'prēlom.

## Chärwēti kudāt Sāhib chē manchi ragat, chē wōs di katI ragat?

Chā̃̄̄ Mirak ē purstha ai.
 Parish lesst gul assĩ : ö̀ts shtowa sē ani nishilom.
Mehar osop kutt, ikiā dugã̃ mokar'st shodr sundi adap kund.

Tkī̄ bagrām manchi brōbar manche asht; bilugk lattri-voa di niasht, bilugh k $\bar{d}-n 0-10 E$ n'asht.
1156. The Charba of that village is not at all respectful (good doer) : he should be punished.
1157. You are tired. Rest a few days in my house. What time you are rested, you can go.
1158. It is a good plan to rest one day in every five days.
1159. We shall stay in this village for the sake of some rest.
1160. In this business what result is before you? Even if you kill the Chārwèlo you will never become Chärwēlo.
1161. After seven days, I shall return, and I will at that time return to you your cloak.
1162. I go towards Asmār and I will never return. Good-bye (may you keep well).
1163. The head man has taken all the revenue of this village, and says the villagers have paid none to him. He is a great liar and rascal.
1164. If you find my cloak which fell on the road yesterday, I will give you a reward of one rapee.
1165. My rozai (of my bed) is very old.
1166. Whenever it rains, I get rheumatiom in my right arm and left leg.
1167. This year there is much rhubarb on the hills; it is very fresh and nice for men and goats to eat.

Ikīā bagram uru manchi dugā lesst kul n'ass : ikiā visth ass.
$T_{\bar{u}}$ gatrā bissish. Tīu dū troi woss iẵ pamu wigio. T $T \bar{u}$ kuī wigiā $i \underline{z h} \bar{i} b \bar{a}$.

Pöch wös tã ē wös ozhamesth less ass.
Ozhamesth dugã inā bagrām $m \bar{\imath}$ nizhèma.
Inā kudūm p'mĩ $\bar{s} h$ tū $k a i$ wari ess? Shtalē tū Chärvēlī jã̈rlosh tā Ohärwèlī n'bulogh.

Sutt wos ptiwar pilingiti atsalam, - askē wōs tã tu'st shhugā tū tã พā prêlom.
Parish pör ennom. Kui dī nē atsalom. So-өnjí.

Ikiā bagrām uru sundī shom ngut. astai, wari kuttett" $i k i a m$ bagrām manchi shom $\overline{\bar{\imath}}$ na prētett." Bilugh mishall mishott; bilugh digar manchỉ ess.
$1 \tilde{\tilde{a}}$ shugā dus p'putt atteliss: tū awēloshhbā è tang giàn prēlom.

Iầ spì bilugh siūm biss.
Kuī agal yū̃r onzībd pachūtr dushht tā̃ kū̃var chū tã wāī prêtett.

Iñā $s \bar{e}$ bado radsâ bilugh ess; manchiēn shharon dugã̃ $y \omega s t h \bar{\theta}$ $d u g \tilde{a}$ lesst ass,
1168. In my valley there is a quantity of wild rhubarb, rok," khozla, kalor, and badrai. (ब)
1169. A stone rolled down the hill, hit me on the ribs, and knocked me over.
1170. My rice orop is very good this year and there has been a large quantity of rice produced. There is more rice than Indian corn this year.
1171. Thou art a rich man and I am a man of no account.
1172. You have muoh riches, cattle, goats, and coin, but I am a man of no account.
1173. I don't know how to ride, as my house is in the mountainous conntries, and there are no horses there.
1174. Chānlū is a very good rider, but probably can't climb hills like me (having done like me on hill cannot go).
1175. You lie! why do you demand two rapees? Your right (due) is only one rupee:
1176. You are a fool. Why don't you know your right hand from your left?
1177. I went to the merchant to bay a ring. He cays they have not come from Peshäwar.

Emd b'gul bilugh sabha, rok, khosla, kalor, badrai asht.

Bado stē $w o \delta t t y \tilde{\tilde{u}}$ aiyo; iñ $t \tilde{\tilde{a}}$ pachukru prapta, ōts piltiāo.

Iñ̄ $8 \bar{e}$ shāli bilugh lesst ess, mâ bilugh paidā bolā. Inā sē jowar tã̃ mâ bilugh e8s.

T $\bar{u}$ lattri-wā manchi assigh, 言ts kai no-vōa assum.
Tī $t \bar{a}$ bilugh lattri asht bilugh gaw $\bar{x}$ ( $g \hat{a} o$ ) asht, bilugh dizhē asht, bilugh tang asht; 亏̄̃ts kaino. $2 \bar{a}$ assum.
$\overline{\bar{O}}$ n'ghp p'sir nizhisth nā janretam; $\dot{\hat{a}} \overline{\tilde{a}} t ~ a m u ~ a t \overline{\bar{u}} r$ ess, $a k \bar{i} u \underline{\ell} h p$ n'ess.

Ohã̈lü lesst nshp p'sir nishel assã, shtalē $\overline{\tilde{a}}$ purstha katī pashū tã na batt.
$T \bar{u}$ mishoch $\bar{i}!T_{\bar{u}} k a i d u g \bar{a} d \bar{u}$ tang wagachī (ragachi)? Tī t $\tilde{\bar{a}} \bar{e} \operatorname{tang}$ atsili $a 8 s \bar{a}$.
Tī charrāa assish. Tī pachũ̃tr dush k $\overline{\tilde{u}} w a r$ dush kaikotē na janretish ?
Angushti ngūsth dugã̃ saodägar t $\overline{\bar{a}}$ gūssam. Saodāgar gijjiz kunn " angushtiēn Peshấr stē n'āyā" kutt.

[^81]1178. The fruit is ripe in Drossh but in Chiträl it is not yet ripe, because cold winds prevail there.
1179. The apricots don't ripen this year, for there is no sunshine. I fear they never will ripen.
1180. Rise! why don't you rise? 1 have awoke you (caused to rise) three times: the san has risen, and is clearly visible.
1181. Cross the pari (or built up precipice road) by all means (there is no fear); if you go close to its edge, there is a risk of your falling (I fear you will fall).
1182. The river is very full of water.
1183. In summer there is not a ford in this river; owing to snow melting, the water reaches up to your chest, and sometimes up to the neck.
1184. The road is good. There is no cornice (built up road) hetween Drōsh and Gairath. A donkey can go; perhaps a horse can go, but a camel cannot go.
1185. Roast this bit of ram's flesh for my three coolies.
1186. Chānlü has robbed five rupees from Mirak.
1187. That is not the case. Mirak is himself a robber, and is too wideawake to allow Chānlū to rob even a stone from him.

Dryūs kachwach pagistai, Sh $d r a l$ starak wīk n'pagistai, ikī̄a dug $\bar{a}$ akī bilugh yūts damu ushtett.

Inā sē yūr na ess, ikiē dugãà serīna pagann. Ō babdi kshatam kuī di na pagalā.

Ushtā! T Tū kai dugā n'otich 3 Troi wör tū utēagh : sū pti, lesst waron ett.

Ushtivoā t言 pẽ̃r $\bar{\imath}$, kai widerasth $n ' e s s ; ~ \overline{\bar{o}}$ wideram tū pachūrē èlogh tū piltilosh.

Gologh (gol Igh) bilugh ess.
Wasdur inā b'gul $t \overline{\bar{a}} \bar{e} d \bar{z} t \bar{u} r n^{\prime} a s s ;$ kui zim vilnabā âo pa chuk wik bibā, kui b'garak piu butt.

Putt lesst ass. Dryus stē Gairath p'mĩsh è dī ushti n'ai. Kur wēl ass; shtalẽ̃ ushp wēti, ushtar na wēlร.

Inā parmenstuk mazharlē ano pacho i黾t troi barwai dugã.
Ohãlū Mirak stē pōoh tang shtãar kristai.
Ina wari tich na bunn. Mirak mi shtãr ass, bilugh kshūl manchi ess, Chã̃lū Mirak; stē $\bar{e}$ vōtt dit ngã n'batt.
1188. Yes, you say what is true. Tū shtalẽ walanch. Mirak shtãr Mirat is only a thief, but he is not a fine highway robber like Basti!
1189. In the spring that big white rock will surely roll down the hill some day, and kill some-one.
1190. Don't let my horse roll on the ground, my saddle will break.
1191. The timbers of the roof of my house are very strong and will last until five years.
1192. How many rooms are in your house?
1193. The root of that tree is as long as two men.
1194. My rope is broken. What shall I do? How can I carry the load without a rope?
1195. The rose is the prettiest of all the flowers, and its scent is very nice.
1196. There are many dog-roses (?) in our valley, bat no other roses.
1197. Chānlū is a rosy faced man, but Mirak has a very dark countenance.
1198. The beams of my roof are all rotten, and I fear it will fall some day.
1199. My clothes are very rough; your clothes are very soft (thin).
1200. The road between Drösh and Br zz is very rough.

Dryus stē Brus p'mighu putt bilugh digri ess.
Iã bazisnâ bilugh chil aghht; tū bazisnâ bilugh turungo aght.
Chãlū. gam purstha manchi assa, Mirak ahi kor manohīasā.

Iã pkrum argru plthal aght, widernam kui wozs tã vitleli katz (?).
1201. The Commissariat ghi boxes are square; the kegs of spirits are all round, so don't you make any mistake.
1202. When you travel to Brōz, go round by our village.
1203. Why is my horse rubbing its mane? I think it must have mange.
1204. I want a rug, and a numnah, and a carpet, and a goat's hair rug (Chitralli " pilisk").
1205. I shall ruin you, as you have disobeyed the Mehtar's orders.
1206. Here used formerly to be a village, bat now only ruins are left.
1207. Two men have run away (fled).
1208. I cannot run; last year, when going down hill, I fell and broke my left leg.
1209. The enemy have all run away, carrying all their own property and leaviug one old man only.
1210. I will give you one rupee.
1211. I will take eighty Käbulz rupees or fifty Indian rupees for this horse.
1212. Rushes are visible there, so I suppose there mast be also water near them.
1213. The rust has destroyed my sword. Rub it with sand.
1214. In the rutting season you can kill five markhor in a day.

Oommissariat ano adar shtowa ptiwā asht; tin pā sundī pandur $a$ ㄹhht, tū nmélī n'ngā.

TTà kui Bruz gujbâ emâ pamu pabañur gititi.
Iã̃st ushp kai dugã maroik dro changrott? $\overline{\bar{O}}$ purjonam ikio tā arna biss.
Iã̃ kalin, spī, zalimcha, zhũur $p^{\prime} k \bar{a} r$ ess.

Ta Mehar hukm n'ragattā, tū tor azhêlam.

Shangyè zamana tã̃ anīo grām azsī, starak zanzīr biss, wāra n'aiesth.
$D_{\bar{u}} s a i$ mukiā.
$\tilde{\bar{O}} \mathrm{t}$ achūn na banam; pot ${ }^{\text {se }}$ badठ pagior yū̃r enazzam piltiām kō̃. war po pūptā.
Pachan wari sundi mugistai, sundi yost lattrì brā ; è purdik ptiwar utiness, wārā $k \bar{a} d i ̄ n ' a i e g h t . ~$

Ote ta tã̃ è tang prelom.
Inā ushp dugãa shtova vissī zamāni ngānam dū vissi duts angrēzì tang ragalam (ngānam).
Aki noll waron eltā; $\bar{o}$ purjittam akīo tawarē âo dì assà.

Teamar iã tarwach digari kriss. $T_{s \bar{u}}$ warē pilsó (marmarī kghī).
Epor bibā ē gujar p'mĩsh pjoh shäru jã̃r baoha.

## $S$

1215. To-day is my Sabbath (i.e., Starak agar ess: kā kudūm na day of rest) : I am not kalom. going to work. (T)
1216. Get me a sack and fill it with barley or wheat.
1217. You appear very sad to-day; have you lostall your goats?
1218. My saddle is very big and heavy; get me a smaller saddle.
1219. Saddle the grey horse. I will let the black horse rest today.
1220. The saddle cloth is very old and not fit for a Chārwēlo.
1221. The cornice is safe this year. The Mehtar ordered me to set it right.
1222. For the sake of my cow bring a handful of barley: but if you fetch two handfuls it will be better.
1223. All the salt for our valley comes from Peabāwar.
1224. Saltpetre is very prevalent in this valley.
1225. Get a bit of cloth the same as this for making a shirt.
1226. There is mach sand near the river.
1227. Ever since the water fell, some logs of wood are stranded on the sand banks.
1228. There are very few sand fies this year because of the winds.
1229. Get all the men together sharp to make a sangar (breastwork).
1230. Fetch twenty saplings and pat them into my ground.
1231. I have inspected your work and am satisfied with it.
1232. You are eating a lot. Are you not satisfied yet? Why don't you rise and wash your hands?
1233. Everything has come in, but they have not brought the saucepan; I fear it dropped on the road.
1234. The carpenter has an axe and hammer; but says he never even saw a sawo.
1235. What do you say? Speak loud; speak slowly; and each word separately and clearly, or I can't understand you.
1236. The Chārwēlo says he (the man) is sick.
1237. The scabbard of my sword fell yesterday and is lost.
1238. The Commissariat scales are not understood by us and we are robbed in consequence.
1239. There is a scar on his hand and a scar on his face.
1240. This year mulberries are very scarce: more scarce than last year.
1241. In my field erect a scare crow (a dead man's figure) at the sight of which the birds will flee awry.

Bangut tyor kusth dug苂 sundz manchio zapp wasanrā.

Vissī kanjik awētī $\frac{\tilde{\imath}}{}{ }^{\prime}$ 'bhiom ptē.
Tī kudūm $\overline{\hat{o}} \mathrm{sh}$ karsā, bilugh kuahān assum.
Tī bilugh buri (anjī) yūchi. Tū ktol n'kaṛā̄ $\quad T \bar{u} \bar{i} k a i \quad d u g \bar{a}$ n'utinshess? Kai dugã̄ dush n'dariss ?
Sundī lattrī osth, chindor n'awḕ $\bar{a}$; vidarnom p'putt t $\overline{\bar{a}}$ atlon gwa.

Dār-sellē tã̃ pedriz assā, kushtun dis
 n'warins.
T̄̄ kai mãrechī $P$ Kagrẽ walo; chillẽ walt; yo nirrikẽ wari kshī ; lesst katī walō; $\bar{o} t \mathrm{t}$ t̄̄ wari n'purjitam.

Chärwèlz bradswaio kuttā's.

Iñ̄st tarroâch wui dūs atlongai; puz biss.
Emá manchiān Commissariat tarja nixhān na jänramish, ikiā dugā psotr.

Ikyē b'dush pror nizhān assā; p'miok di pror niæhān assā.
Inā sē marach bilugh chogh asht : $p \bar{o} s e \bar{e} s t \bar{e}$ chogh asht.

IÑ ptul p'mich manchi bmriaht niahān ksh̄, marangats askib Ögh ktz mugulā.

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1242. The scent of the dog-rose is nicer Parr piğh gun tã tarã pitgh gan than the scent of the flower of the apple.
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1243. The scissors of the tailor are so blant they won't cut cloth.
1244. Soorpions go somewhere in the winter. Would to God they would not retarn in summer!
1245. Send two men to scout, and give them orders to stay on the road till evening (san down).
1246. I saw him scouving and I am Ià ikié manohi wariām miok sure he is my enemy.
1247. The old woman is screaming from fear of the thieves. andhr kunn: $\bar{o}$ purjanam iã̃st pachanvari ased.
Wäi pubi kutt : shhtãr dugã̃ bilugh vidarett.
1248. The seam (?) of my choga Iã̃st shugã wigha biss (?). has become undone.
1249. Go and search in the village for a ladder, and I shall myself go shortly to search.
1250. This is not the season for frait to ripen.
1251. He came secretly by night to my house and took away my coat.
1252. I am blind and I saw (see) nothing last night when Mirak came.
1253. I have sown the seeds, but not $O$ bhim tã̃ bì ajissi, $\delta$ di na wo ass. one has sprouted.
1254. It seems to me they are all $\tilde{\bar{O}}$ purjinam sunde plchula bā. rotten.
1255. Have you seen Käbal P. No, I Tū Käbul wariăn? Í n'warins, have not seen it, but my father saw it.

Tū prēts b'gràm p'mich chik ợh kghi (õahē) $\overline{\tilde{o}} d i$ ôgh knsth dugã zapp anam.
Inä kajwaj pagasth dugã wokt na 88s.
Ikiā manchi rador chillẽ atti iã̃st shlugā brā.

Ots kãr assum; kū̃ Mirak ossabā iã $k \bar{a} d \bar{n} \mathrm{n}^{\prime}$ wariàm. $I a ̂ ̃ s i t z t t$ wạiàns.
1256. Go to the village and seise six horses by force.
1257. He says he sells clothes only and does not sell cooking pots.
1258. The Mehtar has sent a man Mehr è manchī parhī ngātī namiā. boaring a letter.
1259. The Mehtar has sent a basket full of grapes for you.
1260. When the stone hit my head I fell senseless.
1261. The sentry of my tent fell asloep; and a thief came and took my gan away.
1262. You are a useless servant. I dismiss you.
1263. My servant is very fat and lazy.
1264. Sir! your service is an hohorable service and I am proud of $i t$.
1265. Several persons have come for service.
1260. The sun has not yet set : there are many clouds.
1267. Get a needle to sew this cloth.
268. Let us sit in the shade; it is very hot.
1269. This is a shady place and good to rest in.
1270. Shake the tree, and the fruit will drop.
1271. The tree shakes with the wind: I have not shaken it.
1272. The water of the pond is quite shallow and very muddy.
1273. For shame! you have no shame; I thought to myself you were a good man.

Ikyē bagrom i; shu ushp vrangāti giats.
Askā manjī gijji kutt $\overline{\bar{o}} b a z i s n a ́$ wrēch kuttam paisa ragattam tol na wrēch kanam.

Mehr chakta dros parē kti tū dugãa ptossi.
Kui iñ̄̈st shai t $t \tilde{\bar{a}}$ wōtt praptawā त̄̀ts charreà bitī piltiām.

 shtãr katī gūs.
Tū digar shodr assish. To tōr ashēlom.
Iãist shodr bilugh kart ass bilugh dangar ess.
Sāhib! Töst shodari bilugh lesst ass; iã̃ bilugh ūd bissam.

Bilugh manchi shodari kusth dug $\hat{\bar{a}}$ osth.
$S \bar{u} n a$ pūgess ; $n \bar{x} r u b i l u g h$ ess.
Inā basnâ shusth dugã̃ chamchich gats.
Tsāwē tā̃ nighēmā; tabi bilugh butt.
Inā kāno-wā bhim ess; wigasth dugãa lesst ass.
Kāno ranzāo, kachwach y $\overline{\tilde{u}}$ ella.
Damu tā̃ kāno ranzann: i käno na ranzēi.
Inā p'nilē âo turungo ass; b̀ilıgh mul ess.
 karosh tū lesst manchi asoish.
1274. Don't have false shame (about
eating) ; you are hangry :
eat to jour heart's content.
1275. You are a shameless thief; Tī jerik na wã, shtã̃ assish; get you gone.
1276. I am dead beat. Shampoo my ${ }^{-}$back and legs.
1277. Do you know the difference Tū Mirak ajè Widing wizhirwor
between the shape of Mirak $k \bar{e} r \bar{e} k \bar{u} r \bar{e} \bar{z} \bar{a} r c h \bar{a} ?$
 and I am off.
1279. Share this flour between the $I_{n \bar{a}} b r \bar{e}$ shto manjiān p'migh four men
1280. My knife is as sharp as my sword.
1281. That woman screams; I think she is hart.
1282. A sheaf of corn is worth a Emâgul tã̄ $\bar{e} \bar{e}$ gidr gum $\bar{e}$ sir $z \bar{u}$ seer of milk in our country.
1283. Shear the sheep and take its wool to Ranbūr.
1284. The cattle have gone out of Gâo shall sta bar gostai. the shed.
1285. I have six sheep, a ram and $I \tilde{\bar{a}} \mathrm{sh} u$ wē asht; $\bar{e}$ mushharala assä ;
an ewe and a lamb.
$\bar{e}$ wez assā ; $\bar{e}$ wāk assă.
1286. Get me a sheet from the Sodāgar-o t $\bar{a}$ stē $i \tilde{\bar{a}}$ dugãa $\bar{a}$ pujil merchant.
1287. A fox came and the shepherd Wrigi osth; patsā mochi worigi caught it.
1288. Why don't the Government Sirkār-o spāhi kai dugãa kirã na soldiers carry shields.
1289. The tailor made my shirt last Basnâ shul pō sē i$i \tilde{\bar{a}}$ digfi shhst ; year. It is worn out.
1290. Why are you shivering? Is it from cold or from fever?
1291. My shoes are very thin.
wanamiss. ngattett.
Jerik $n^{\prime} z \overline{\bar{a}} r$; tū $\hat{a} t t a ̄$ biss; less kati ktol kshi.
partsi.
$\tilde{\bar{O}}$ wotinam; ī̃ãst ptī pchu marō. barakshi.
 assā.
Askā istrī pubi kutt, $\overline{\bar{o}}$ purjonam ikiē zān biss. erangst (ē brobar) ess.
Inā musharala brē; ikiē voarūk Konight wik ngā. gats. daliss (siūm biss).
Tī kai dugã ditkichī? Tī shille bissī, tu ranzol assā ?
I $\overline{\bar{a}} s$ t kashk wetza bilugh turungo asht.
1292. My horse's shoes are very Ots uşhpē nāl (wetzâ) bilugh woighbr broad. $\hat{a}^{a s s a \bar{a} .}$
1293. I don't know how to shoot. Ôts tapk baruten na sã̃ētam. I have a bow and arrow Iã̃st dron je shtor asht; tapk bat not a gan.
1294. Get me a handful of wheat Bāzār stē è gör gum giats. from the shops.
1295. My stick is short.
1296. The coolie is very short in stature and cannot carry my load.
1297. On my shoulder there is a boil. I can carry nothing.
1298. From carrying the officer's big load yesterday my shoulderblade aches.
1299. Shout out to Mirak. Say to him that Basti is shouting to him.
1300. Show me where does the road to Mastaj go?
1301. I will show you a place where eleven men are hiding with tbeir matchlocks. I can't go: you go and fetch them to me. I went; there is no body in that place.
1302. Shut the door.
1303. The door of his house is shut, and I can't open it.
1304. We have no sickles; how can we out the wheat?
1305. Which side of the river shall we march to-morrow ${ }^{\text {P }}$ (i.e., shall we go that side or this side of the water?)
1306. Samar beat me with a stick yesterday on my side, so my side aches.

Iã̃st mãroi parmenstuk ess.
Barwai bilugh parmenstuk ass; iã̃ $b \bar{r} r$ ngā $n$ 'batt.

I $\overline{\tilde{a}}$ patōs apsiss. Ots $k \bar{a} d i \pi n a$ n'battam.
Dus sahib-ē al borr ngutassi ; pati bradzott.

Mirak chō witi walo. Vrt (wari) kshi Bastī tū valonn.
$\tilde{I}_{\text {wāro }}$ Mastīch-i putt kotrā̃ giess.
$\tilde{I}_{\text {pazh }}$ wrālom yanits manchi aki amshlest tapkien ngäti nïinistai. Ots n'annam; tu giti $\tilde{\imath}$ gats, Ots $g a{ }^{\prime} m$; askā pazhu tä kai n'aiesht.
$D_{\bar{u}}$ barm kehing.
$I k i \bar{e}$ amit $\bar{d} \bar{u}$ kach ess, ỗts ikiē nuksā n'bannam.
Ema tã̃ chari n'aiesht; gum kaikota ruima?
Emad dalkiễ èmigh ; ao tã pễr emish ao tã̃ ĩr emishā ?

Samar dus mãrot mĩgh iã̃st ani winä'm; ani brasott.
1307. What are you. making sighs for? Are you tired or ill?
1308. Silence ! don't speak; only lift your hand up if you see the enemy.
1309. Tell the men to be silent and not to say a word. The onemy will hear.
1810. The merchants take silk and silver to Peshāwur.
1311. You are very silly; you would never do for a spy.
1312. Bince I entertained you, did I ever beat you? Never.
1313. He is not a sincere man : I am sure he is treacherous (liar).
1314. The sinew of my leg is cut with a knife.
1315. If you are all tired, call Mirak to sing; he is a good singer. He will cheer us all up.
1316. Last year I did sink in the snow. To-day I have sunk in the water.
1317. My sister has fever to-day.
1318. My sister-in-law has eight sons.
1319. Sit on this stone. Don't show your head to the enemy.
1320. I am very cold; get a goat's skin for me.
1321. I can go across the water with an inflated skin, but not without.
1322. Mirak has stolen my skin-bag Mirak iãst titsa shtãr kti briss, (for carrying flour).

Tū kai dugã hhü kshâchi ? Tīu gatra $\bar{a}$ bissish $\bar{a} ; b r a d s o-w \bar{a} a s h i \bar{a}$ ? Chusht ashб! na wari kshi; tū kuī pachanwari varinba dusht $\bar{u}$ $k$ shä.
Manjz t六 wari ksha chusht asho
 wari sangala.
Sodāgar arghumje aru Pezhar por prënd.
Tṻ bilugh bedins-wā assish ; t̄̄ kui shū aweèn na bachi.
 vinoja ? kui di n'vinosäsh.
Tkiē manchīē zara lesst n'ess: $\hat{\bar{o}}$ purjanam mizhol assa.

Iā kũr nūng karo (katā) mish periss.
Shtalễ shâ gatrā bissãr. Mirak t $\overline{\bar{a}}$ wari kghi; làlu kulonn; bilugh lesst lālu kul assā. Emâ sundz kuzhal kulā.
Po вё zim yữr gūsвam. Starak âo $t \tilde{\pi}$ p'mich bissam.
$I \overline{\tilde{a}}$ sus $t \overline{\bar{a}}$ shtarak raneul bies.
$I \tilde{\tilde{a}}$ wū-o usht pitr auht.
In $\bar{a}$ vott p'sir niehē. Yost shai pachan wari t $t \tilde{\bar{a}}$ na wọ̄ro.

I六 bilugh shillā biss; ī̄ dugā wazest chamo giats.
Âotarmir mẽsh áo t $\tilde{\bar{a}}$ petrn banam; gī̄̄̄̄̄ na banam.

1323. A bullet hit the sepoy's skull; Pondrik spāhē pashē proptā ; $\bar{o}$ purI expect he will die.
1324. The sky is clear; I think we can march in the morning.
1325. The slave has run away from fear of this cruel master.
1326. I am sure his master will slay him some day or another.
1327. When I approached the sentry last night, I saw he was sleaping.
1328. My leg is asleep, I can't stand up.
1329. The thief cut off the $s l_{\text {esves }}$ of my cloak.
1330. The ground is frosty and very
slippery. Take care! you will slip.
1331. Is the hill a gentle siope or is it a difficult slope? And, when you have crossed, what is (the slope) on the far side?
1332. Go slowly ; I am done; let us take breath.
1333. He is a small man; give him a small load.
1334. My house is small; yours is large, his house is the largest.
1335. In your childhood had you small-pox? I think you are pitted with small-pox in the face.
1336. I smell a nice smell of roses and a nasty smell of a dead dog.
1337. What does your dog smell? Tīu$k r u ̃ z ~ k o \bar{a} \operatorname{gon}$ kann $?$
zhanam mrlā.
Dì bilugh shingīr 08s; babdi ess dal$k i \tilde{e}$ mighim èmá.
Loni amost damtol mochis widarthi mugis.
$\tilde{\bar{O}}$ purjanam kuī ikiē mochi's jā̃rlā.
Rador kui pālē tā torẽ assium $\overline{\tilde{\imath}}$ wariäm pshuissā.

Iã̀st $p \bar{u}$ shingur bunn, $\overline{\bar{o}} t s$ uttī $n a$ banam.
Shtãr i $\overline{\bar{a}} s t$ shugā dashta $p r e ̄ t \bar{i} b r \bar{a}$.
Bhim shī tin ass, bilugh silkin biss. T'râchi bō! tū silkilosh.

Ikīā ashtar chakür assā nchangust ass $\bar{a}$ ? Kū bado shai putarijbd $a k \bar{z} p \bar{\sigma} r$ kāst $a z z \bar{a}$.

Chillē̃ i ; ṑts utinam; yū prezhamâ.
Ik $\bar{i} \bar{a}$ parmenstuk manch $\bar{i} a s s \bar{a} ; i k i \bar{e}$ parmenstuk bör prē.
$\tilde{I}$ amu prama ess; t̄u amu ala ess, ikĩ amu sundi amu tã̈ bilugh ala ess.
Tū kui parmenstuk axsi tu purr bissiā? $\bar{O}$ purjanam tū purf mugho (miok-0) ashi.


1338. The dog-rose smolls sweet. Tar $\tilde{i}$ pish gun ann. Mrisht'est

The corpse smells bad.
1339. My house is full of smoke. Iāst amu tã dūm purē assā.
1340. Why don't you smoke Tiū kai dugã tamkio n'kusoch ? tobacco?
1341. My pyjama cloth is smooth. I $\overline{\tilde{a}}$ taman basnd chil ess.
1342. On the march yesterday (at the time of marching) a long snake bit my brother in the leg.
1343. The sepoy snatched the fruit from my hand and bolted.
1344. My head aches from mach sneexing.
1345. The snow is up to our arm-pits. Zim kachkrui wik assā. Ema How can we cross the pass bado kaikote putr bama? to-morrow?
1346. I have been snow-blind in both my ejes for seven days.
1347. If you see the enemy do 80 (like this).
1848. The soldiers are very brave and shoot straight.
1849. So much (so large) loads we Ikiā'st al bōr ngā n'bamigh. can't carry.
1350. His back aches; put a soft Inā chil (?) bradzonn; ani pagur cloth under it.
1351. This cloth is very much soiled; Inā basna biluk mul asht; nuksā. take it away.
1352. The old man solicits a rupee. Askā purd $\bar{u}$ ē tang ragatt.
1353. Some man has come and says ' Kā möch oss gajji kunn sähib chok the sāhib wants some flour.
1354. Somehow (from wherever you can fetch), you must get the horses.
 go). It is your turn, moreover, to go.
chilla basná ptē.
Sutt wos (gujr) bā iā̃ st zim dugã achiē̃ lushtiā.
Pachan warī warinbâ tū gitā ksh̄.
Spāhi bilugh lē damtol manche asht, tapkiē lesst vind. brē ragatt.
Kơr stē awenjz̄bâ ushp tyor kshã. assā.
1856. Sometimes he says Mirak Kāchi gijjz keunn Mirak Bastz killed Basti: sometimes he järriss: kachi gijjz kunn Dan says Dān Malik killed Malik Bast̃ jâriss. Basti.
1357. In my house there must be a dark cloak somewhere, I don't know where.
1358. My son was wounded and captured by the enemy, but escaped by feigning death.
1859. My son-in-law is ill and will surely die.
1360. What sorrow afflicts you? Tī kai kapā bitigh ? (why art thou sorfowful).
1361. I am sorry your son is dead.
$T \bar{u}$ piţr mriss : $\overline{\tilde{0}} \mathrm{ts}$ kapā bissum.
1362. The man has brought sour fruit and sour milk.
1363. Have you sown the flower (rose) (P) seeds ?
1364. Get a wooden spade and an iron spade.
1365. The horse has eaten his bellyful of grain ; and two handfuls of barley are to spare.
1366. Speak! Why are you silent? Are you dumb P
1367. The enemy carries spears but no guns.
1368. That man is a species of fox.
1369. Take this money ; spend it as you like.
1370. I shall spend the night here; we will go to-morrow.
1371. The spiders are very plentiful this summer.
1372. Spinach is good to eat with Ano mễsh pālak (?) iärraba less meat. bunn.
1373. To spit before a headman is
very disrespectful.
1374. He is a very spiteful man.
1375. You have spoilt our business. I dismiss you.
1376. Get one small spoon and one large spoon from the bazar.
1377. How many black spots are on your white dog's back?
1378. He is a yellow dog all over, and not spotted.
1379. In spring this spring has much good cold water.
1380. Sprinkle water on the fire.
1381. If you sprinkle earth on the snow, it will melt fast.
1882. The spur of that hill is easy to climb.
1383. The spy has come, but brings word that the enemy has made preparations to march to-morrow.
1384. Let the shape of the sangar (wall) be made square, not round.
1385. The horse ran away from his stable last night.
1386. The enemy came last night and burnt my stack of grass.
1387. How many stages is it from Dir to Chitrāl?
1388. The frait is stale and dried.
1389. That little boy stole ton stalks of corn.
1990. The man stammers much.
1891. The Mehtar is coming; stand

Jast panishr sabjun wisth katraworr kwdüm essä.
Ikiā bilugh ziān karol manchi $68 s \bar{a}$. Tīu oma kudūm digar kariss. Tiù $\tilde{\bar{o}}$ tor ayhēlom.
Bazār stē bilankochi gia'ts, al kochi ds giats.
 prots asht?
Iã krũ̃ brobar adr rang azzā; shtring na ass.
Wasut ina undsAo $p^{\prime}$ mish bilugh les yuts 0 a azza.

Zim t $\overline{\bar{a}}$ p'sir palal (mri) aghibs zapp witinn.
Ikī̄ pauhon ĕsth dugã̃ lesst ass.

Shū awèl manchi oz: shū avera dalkiẽ pachanwarī oshtasth dug $\tilde{a}$ tyor ass.

Ini bangut shto ptistak kshẫr, pondr $n^{\prime} k s h \frac{A}{2} r$.

Dus radur ushp ushp-amn tã sto puz biss.
Dus radur pachan-wari osth iñ̈st yūs gotṭ angā tarā.

Dir stē Sh Kajwaj less n'ass, dariss.
Ikiā parmonstuk marị duts gum kof shtãr kati brā.
Tkiā manchi bilugh supkott.
Mohr ann; ushtō. up.
1392. There are clouds and the stars Näru bilugh ess : rashts na varon
are not visible.
1393. My brother is starved to death. There is no one to feed him.
1394. What is the state of your father who is imprisoned by the Amir?
1395. If you will stay here two nights, I will make you comfortable.
 kill you with my gun.
1397. This hill is too stoop for coolies to carry loads.
1898. My father is very stern: his own sons all fear him.
1399. I got steps made in front of my door.
1400. Get my walking stick and my polo stick.
1401. The road is very sticky from Agal osthē dugã pott bilugh shur the rain.
1402. My girths have become stiff Ughp ashpe dugã giri wightangess. with the horse's, sweat.
1403. The hornet did sting my cheek Bāmo dus i $\mathfrak{\tilde { a }} s t$ naskor tĩ̃ attamshi. jesterday.
1404. There is a stink here as of a Ani mrist krũz digar gun ess. dead dog.
 it is too short.
1406. The women make excellent stockings in Aiyuln.
1407. He is a thief and has been put in the stocks by the Mehtar.
1408. The stomach of the boy is swelled from eating too much Indian corn. ond.
$I_{\bar{a} s t}$ brâ âttã mrā. Itkīe buṛī presth dugā̀ kai na asht.
Amir tōst tōtt bāndā kriss kā'st biti a.88ä?
$T \bar{u}$ ant du rador baloghba, $\tilde{\tilde{O}} t \mathrm{t} t \bar{u}$ dugã̃ lesst kasmat kalom. tapkiẽ vitz jã̃rlam.
In $\bar{a}$ bad $\bar{\sigma}$ bilugh nchangiest $a s s \bar{a}$, barwai bör ngātz bado ū n'bann.
Iã tōtt bilugh dang manchī ess; ikIost putriness ikie waranti widharand.
 axhiss.
Iã̃st mãroi giats parchē di giats. biss. parmenstuk ess.
Angr jugür bilugh lesst jarob kund.

Shtã̃r assā. Mohr gãrã mêgh band krissā.
Ikī̄̄ marir bilugh jawō̃r iã̃̄ā; $i k i e ̄ k t o l ~ b i l u g h ~ a l ~ b i s s . ~$ mulan
1409. Collect stones to build a house. Wōtt wasanraঠ amu kusth dugã.
1410. Don't go near the falling $T \bar{u}$ akiā watla wott tã̃ torõ $n$ 'ai. stones (stone shoot). ( $n a i$ i.)
141]. When you go to stool, does any Kuī tū alkũr gujbd hui annā $f$ blood pass?
1412. Stop that man and search him Ikiā manchi otiō ikiesst basnd tã to see if he is a thief. $\quad$ ofgh kshi shhtãr assă.
1413. I shall stop at your house $\overline{\text { Ots }}$ tost pamu tầr trits wozs balom thirteen days till the end of kui wik pochêtr na petlon onna. the fast (of Ramzān).
1414. A violent storm came accompanied with hail, and did much harm.
1415. Mori has become rioh and very stout.
1416. Speak always straight and true, and don't lie.
1417. My goats have strayed, and I don't know where they may be.
1418. The water of this stream is very clear and white.
1419. Get a hundred men to make an irrigation cut or stream.
1420. A mud stream came and beat down my crops.
1421. There is much water in the stream.
1422. Mirak says he will strike Basti with a stick. .
1423. The coolie says I have only a bit of string, not a thick rope. How can I take the load $P$
1424. This horse is weak: give me a strong and large horse.
1425. This horse stumbles much, I am sure he will fall.
1426. My horse stumbled and fell.

Bilugh gảnowakti damu ushhtiä, azkir dī oz, bilicuk nuksän krā.

Mori bilugí lattri-wä biss al ktolwā dī biss.
$T \bar{u}$ sundt ghtal wart kegh, na mighaj.
Iã̃st gash piz bad, tĩ̃oh n'bunn kor asselabā.

Inä b'gul âo biluk shtā kazhir assä.
Pöch vissi manchi wasanpào yū kusth dugã.
Koru ozz iãst ptul pagūr tãristai.
Baglao (b'gal-o) ao lass.
Mirak gijjì kunn "ö̃ts mãroi mẽ́gh Basti vilom" kutt.
Barwai gijiji kutt "iã tã̃ lamr kanik ass, kartä kanik n'aiesht" kutt. "Bör kaikota ngālam ?"
 wak assā: kartī alī ushp giats.
Inā ushp zõlazzatt (?), ỗ purjonam piltali.
Iã̃ ushp zõllasti piltiss.
1427. My horse stumbled by knock. I $I \tilde{a} u s h p$ wठtt t $t \overline{\tilde{a}}$ pul prēti piltiss. ing against a stone, and fell.
1428. This is a very dry year, so the crops are stunted.
1429. Suddenly the enemy appeared from the jungle and attacked us.
1430. We suffer much from the Afghāns, who oppress us.
1431. Sugar is very good to eat when it is very cold.
1432. The coolie is not tired; he is only sulking (making a fuss).
1433. In summor there is much heat in this village.
1434. The sun is not visible owing to many clouds.
1435. This is a sunny village, therefore fruit ripens early in the season.
1436. At sunrise we will cross the pass to-morrow.
1437. At sunset $I$ think we shall reach Chitrāl.
1438. The sunshine is hot : let us sit in the shade.
1439. Collect a hundred men and surround Mirak's village. Take care you do not let a boy even escape.
1440. He was surprised and therefore fell into the enemy's hands.
1441. I have a suspicion Basti will kill Mirak to-night.
1412. Mix this medicine with water and swallow it.

In $\bar{x} s \bar{e}$ dumā $s \bar{e} b \bar{a}, p t u l$ dumā parmenstak bistai.
Pachan warī shū n'azsi tan dā̃ (?) b'ziul stē bar osth omâ pazhī stē winān'ish (?).
Aoghāni manchi emá tã biluk zor karond, emâ biluk zur bā.
KuĒ shillā bilugh bibâ gar iã̃rabâ lesst butt.
Barwai gatrā na biss giān kartawōr kunn.

Wazdur inā bagräm bilugh tapi bunn.
Nāru bilugh assā, sū waron na ett.
In $\bar{a}$ ashperak gram ass, ikiē $d u g \bar{a}$ kachroach shangīe pagann.

Dalkiẽ sü chī presth wokt t $t \overline{\tilde{a}}$ bad putroma.
$\tilde{\bar{O}}$ purjinam sū pinjebā Sh Shdrāl promá.
Sū tapई ess: tsawẽ̃ tã nizhēmá.

Poch vissi manchīan mĕ̃ grām pabunor azhō. Trã̃chi bũ̃r è parmir di bar na lazar.

Deṛh $b \bar{a} ; ~ i k s \bar{e}$ dugã̃ pachanwari b'dush gwa.
$\tilde{\bar{O}}$ babdi kshatam rotr (radhar) Bast Mirak jã̃rlā.
Inä dāru âo mis mazhūra kshī pì.
1443. The horses are stack in the Ushp p'ghar tã̃ yữrghã.
swamp.
1444. You have eaten my bread, so Tūiãat buri iã̃rissā, ỗts abott kuI swear I won't do you any lom tū kāa ziän na kulom. harm.
 my horse's belly.
1446. My horse has sweated much.
1447. Get a broom and sweep the ground for my tent.
1448. The tea is very sweet, and the Cha $\overline{\tilde{z}}$ bilugh machi ass; ikia kachfruit is very sweet (lus- wach bilugh arazâo ess. cious).
1449. My upper arm had a blow Iã̃st gotr tã̃ dus prôr biss, apsiss. yesterday and has swelled.
1450. My horse is more swift than $I \overline{a ̃} u \underline{\underline{c}} p$ tū ushp tã̃ shatarami assã. yours.
1451. I can't swim. My brother Õts noşb kun na banam. Iã̃ bra swims like a fish in the ao matsi purstha nōgh kỗr. water.
1452. I can't swim without an Aotrmir mish nōgh ko banam giầ inflated skin.
dazhnoshॅ̆ n' banam.
1453. Get me a switoh for making Ushpē madasth dugã̃ chnī giats. my horse go.
1454. My sword is very blunt: Iã̃ tarwach bilugh dễu biss: ikiã sharpen it. teeo kshi.
1455. My sword belt is very tight: Iã̃st tarwach parõ̃gh tã̃arrĩn biss : loosen it quickly.
1456. Sher Malik is a fine swordsman ; he can easily kill Mori, and think nothing of it.
zapp wightri kehi.
Sher Malik bilugh less tarwochẽ̃ wil assä; Mori giämi pruıhkurè jã̃rlā.

## T

1457. My horse has a black tail. IĨast ushbp dumri ghi assā.
1458. Who takes this load? Take Inā böra kā̈hi ngālabasa? Amni these four loads to Drasan. ghto bör Dräsan wīk ngã̀r.
1459. Who has taken my load? I Iã bōr kā̈ brä?
1460. A man came and has taken my Manchi-ē ozz iã ushp wrangätz bri. horse by force.
1461. Don't take of your olothes; it Tū basnâ na nuksāō; piliangsth is time to be starting. wokt biss.
1462. Don't go near that small-pox Ikīā manchīēe tuk shilā biss; tū tor man ; you will take the n'ai; tū tã di shilă. disease.
1463. Why do you talk so loud $?$ • Tīu kai dugã cho witiz walanch ?
1464. Mirak is taller than Basti, and Mirak Bastī $t \bar{a} \mathrm{drgr}$ ess, ojē $t \bar{u} t \bar{t} t t$ thy father is taller than my father.
1465. Where the tamarisk grows Kör hinja (?) bundabâ aki âo tyor there is sure to be water torẽ̃ bunn. near.
1466. If ever you have fever, it is Kui $t \bar{u} t \bar{a} \operatorname{tap} \bar{i}$ onz $\bar{i} b d$ chai pisth good to drink tea.
1467. Get me a man to teach me the Baahgali dialect. lesst bunn.
Katō̃ varī $\bar{\imath} z \bar{a}$ āōsth dugã ē manchi

1468. This cloth tears very easily; Inā bazisnd zapp drioh bunn; less it is not good. n'ess.
1469. The boy has torn (tear) my Ikīa parmen marir iãast digri drich shirt. kriss.
1470. What are the tears in your $T \bar{u} a c h \tilde{e} t \bar{a} a \operatorname{acha}$ kyē atsand? Ku eyes for? Has any one hit winozha? you $P$
 stealing my shirt?
1471. He is telling a very long story,
1472. He is telling a very long stor
but I do not believe him; may-be he is lying. digfi Mirak bra ?
Ikiä manohi bilugh drgr wari walann ; $\tilde{\imath}$ ikkiā $t \bar{\imath} c h n n a b u n n ; ~ m i g h-~$ ona shtalễ walann.
1473. Ten tents have come from Dats jilama spāhien dugã Dryus Drodeh for the sepoys.
1474. You have given me one rupee; T Tūiã $t \tilde{a} \bar{e}$ tang ptä'm; ebamanh 1 thank you.
1475. That is a very good man.

Askã bilugh lè manchī ass.
1476. Go that way; don't come this way.
1477. I will give thee one rapee.
1478. Their loads are very heary.

Akià pör $\bar{z} ;$ ani por n'ai.
$\overline{\text { Otts tū } t \bar{a}}$ è tang prēlom.
Amkiàn bör bilugk allangāasht.

1479．Do not beat them with sticks．Amno mãroi mêsh na wi．
1480．Drink your medicine；then Kui uzha piba aski wokt t⿱⿱亠䒑日心十 achok walk about a bit．pilingio．
1481．Go into my house and get Iã̃st pamu atti $\tilde{\bar{i}}$ akiē stō shuga thence a choga．gats．
1482．I have been ：there is not one Gūssam：aki ē di shugā n＇aesht． there．
1483．These men say they cannot Amnā manji gijjiz kund＂omáe na march．
bamá＂kutt．
$I \overline{\tilde{a}}$ dugã karti mã́ro giats．
Ikīā bzul tã bilugh kāno acht ：ikué p＇migh andhar ess．
1486．You are a thief，I shall beat Tū shtãr assish，tū soidom．Shtalt you．It is not true，I am n＇ess，i $i \tilde{\bar{a}}$ shtär n＇assum． not a thief．
1487．If you thieve，I shall cut your Tū ghtär kulaibā girēk pefalam． neck．
1488．My thigh bone was broken Pōsē ushp p＇tsir stē $\downarrow \sim \overline{\tilde{a}} r$ 0ssam ：chū last year by falling from a peringā． horse．
1489．My brother is very thin from $I \tilde{\bar{a}} s t$ brâ poohētr ngusth dugã̃ bilugh fasting．
1490．Mirak＇s boll is very thin．Mirak ashu bilugh dadar ess．
1491．My choga is of very thin tex－Iãist sihugā biliuk turango assa． ture．
1492．Is this horse thin？or thy father＇s？

Inā ushp dadar assä toche ushp dadar assä？
1493．My horse is very small；thine $I \overline{\tilde{a}}$ ushp biliuk parmen ass；tost al is a big horse． $u s h h p$ ess．
1494．Think（having made intention） before you speak．
1495．I think Mori will die this night．
1496．I have run from Brōz to Drosh and am very thirsty．

Babdi kashiti gïjjz（vart）kshi．

Opurjonam Mori starak rador mrla．
$\tilde{\bar{O} t s ~ B r o z ~ s t e ̄ ~ D r y u s ~ v o i k ~ a c h u ̄ n i e s a m ; ~}$ bilugh do pik bā．
1497．The Chärwēlo＇s father died Chärwēlz̄－o tott starak gujr mpā． this day．
1498．This year we shall go to Shtarak sē emâ Drāsan tã̃ imá． Drāsan．
1499. This stick is large; that stick Inā dāo al ess, ikiä dāo parmen ass. is small.
1500. This village is very large. Inām gräm bilugh al ess.
1501. A thorn has run into my foot.
1502. Those men are all ill.
1503. Thou art very tired: rest thou here.
1504. Get some thread to sew my clothes.
1505. Take this wheat and thresh it.
1506. The water has come on to my threshing floor and spoilt it.
1507. There is a boil on my throat.
1508. Throw me down that stick.
1509. The enemy has cut off the thumb of Samar's right hand.
1510. Did you hear the thunder last night, and feel the earthquake?
1511. Tie this rope for me.
1512. Widing has killed a tiger.

Inã kanik iãast dugãa gìrō.
Widing jat jã̃riss.
1513. Those pyjamas are too tight, I Inā taman bīliuk arar ass, ठts iki cannot wear them. amji na banam.
1514. Tighten the girth of my saddle.
1515. On the river bank there are a hundred timbers.
1516. Spring is a good time to sow Wosut shiak be bhim tã azhisth vegetable seeds. dugã less wokt butt.
1517. It is a long time since you left Peshāwar.
1518. I have not time to learn Bashgali.

Katō warī sã̃rasth dugã̃ wōm na ess.
 been to Kāmdēsh ?
1520. Mirak is a very timid man; he won't oross the pass.
1521. There is no tin in our village.

Iã̃st ain bramighten weshtō.
B'gul pōch wisssi gãra aght.

Peshâr stē samartż bilugh drē bă.

52, ho
Mirak bilugh widharal manchī ass ; badō putrën n'dronn (?).
Emad bgräm kalla tuch na ess.
1522. The tinsmith says this tin is Kallä tuch kar gijji kunn "inā all bad. tuch sundi na ght ett (?)" kitt.
1523. I think you are tired. You are dead beat. Lie down awhile.
1524. I am going to Broz.
1525. Don't go to Chiträl.
1526. Kăfirs don't smoke tobacco.
1527. To-day rain will sarely fall.
1528. My toes are all frost-bitten.
1529. Pull the rope all together.
1530. To-morrow we shall go to Gairath, and the day after to Chitrail, and the third day to Shoghot.
1531. The day after to-morrow thou shalt go to Bragamatal.
1532. Pat out your tongre long out of your month that I may see it.
1533. I think it will snow to-night.
1534. You are too fat; you cannot ran.
1535. I fell going down hill, and broke my tooth.
1536. The sepoys can't see the road : light torches for them.
1537. This boil harts very much: don't touch it.
1538. Did the thief go towards Chiträl or towards Ashrett?
1539. Go thou towards Dir.
1540. I see a tower. Is it Mirak's watch tower?
1541. I see the track of a pony's feet on the road.
1542. Send me a cunning man to track the thief's footsteps.
$\hat{\bar{O}}_{\text {st }}$ purjanam tū gatrà bissish. Tūu otinogh. Aghol ahumbo.
$\tilde{\bar{O} t s}$ Bruts tã ennam.
Ba Bilan n'ai.
Katā manchì tamkio n'kshond.
Starak tyor agal ann.
Iã̃s kũir angur sundī sim tã̃ lusgh tistai.
Sundi manchi ē wör kanilk kşhõr.
Dalkiẽ emd Gairath ēmd; attri Ohandral ēmá; achutt Shogor $\bar{e} m a ̂$.

Attrì tū Bragamatal ēlosh.
Dits azhitã drgr kti bar kshi õts õgh kulom.

Shtarak radōr sim tyor prëla.
$T \bar{u}$ bilink kartā ash $\bar{a} ; t \bar{u}$ achūun na banch.
Bado yũ̃r atsandã̃ (tã $?$ ) piltiàm; iãst dutt peringess.
Spähi putt wran na band: amnd dugã̃ talā pashêt $\begin{aligned} & \text { gats. }\end{aligned}$
Inā apsisst biliuk bradzott : ikiē tã dusht na pēkshē.
Shtâr Chandrāl pör gwā te Aghrett por gūssā?
Dīr pori.
$\tilde{\bar{O} t s}$ kutt $\tilde{\text { ôgh }}$ kulom. Mirak kutt assā ?
P'putt tã̃r ushp poh ô $\overline{\mathrm{g}} \mathrm{h}$ kulom.
Shhtãr poh õ̃b kasth dugãa iã tã shatrim manche namo.
1543. Let us set a trap to catch a Juf wanomasth dūgã pagh wonta leopard, and do you set a marē wanomasth dugã parmentrap (make a small house) to stuk amu kishĩr. catch a hawk.
1544. Mori is cunning for setting Mori posh kusth dugãa shatrim ass. traps.
1545. My horse is very tired, he can- Iã ushp bilugh gatrā bā, na pā not travel. bann.
1546. When shall you travel from Tī Dryus stē kuī samarlogh ? Drōsh?
1547. I see many travellers coming $\tilde{\bar{O} t s} \tilde{\bar{o}}_{8} h$ kalom biliuk wiscbā manchi from Bragamatal. Bragamatal stē atsand.
1548. On the road there is s quantity Pa putt aim bibugk ess, ushp na balē. of snow, so a horse cannot traverse it.
1549. By treachery Chānlū caught Chãlū Bastī mizhētī wanamiss ikīē Basti to kill him.
1550. Are the sepoys taking treasure or powder'? $j$ ã̃ $i s t h ~ d u g \overline{\bar{a}}$.
Spähi khazonn nganda wārē dorè tuch ngandā?
1551. In my garden there is not even one fruit tree.

Iã daristã̃ è dī kachroach kāno n'aiesht.
1552. Why is your body trembling? Have you fever? Are you cold?
1553. Mirak has played a trick on Mirak mizhongai $i \tilde{\bar{a}} t \overline{\bar{a}}$ oss. me.
1554. What trouble has overtaken T $T \bar{u} k \bar{a}$ nalos biss? you?
1555. Take the horses to drink at Ushp ngāti pano âo pião. the trough or equeduct.
1556. Get the trunk of a tree and Kāno kara gats; ikiē kandr kshi. hollow it out.
1557. I want a trustworthy man Bhtal manchi pkār assā Dir wik to carry a letter to Dir. parhi ngusth dug $\quad \overline{\bar{a}}$.
1558. Speak the truth, or I will kill Bhtal wari kshi, shtal wari na - you if you don't. $k u n j \bar{z} b a \hat{\bar{o}} t_{s} j \bar{a} r l a m$.
1559. Mirak is a very truthful man : he is not a liar.

Mirak biliuk shtal warī-wā manchz assā ; mizhāl n'ass.

1572. Basti is very ugly.

Basti bilugh digar kor manchi assā.
1573. My paternal uncle killed Basti's son with a sword.
1574. I can't eat underdowe meat.
1575. The tower is undermined.
1576. Underneath my bed is a Iã̃at prusht t $\mathfrak{\overline { a }}$ pagür ghi shugā black choga.
工 chen vit jã̈riss.
$\overline{\bar{O}} \mathrm{t}_{8}$ nhilē ano yū n'banam.
Ikiā kutt arkien biss. assa.
 say?
1578. Undo the knot of my rope. Iã̃st lanikī girangusthē nukmāס.
1579. Undoubtedly Mirak killed Basti with an arrow, for I saw him with my own eyes.
1580. We are very unfortunate.
1581. That village has been uninhabited for sixteen years.
1582. Unless you go, I don't go.
1583. Unload the barley bags from the horses.
1584. This is an unlucky month for contracting any marriage (make a wife).
1585. Your request is very unreasonable (the talk of foolish men).
1586. Until you retarn, I won't plough the land.
1587. This is a very unusual proceeding (unworkable).
1588. Are we to go up stream to-morrow, or down stream?
1589. Upon the top of the mountain has the snow melted (gone) yet?
1590. Upper Maroi is a fine large village. The men of Lower Maroì are a poor lot.
1591. You have put my box on the ground upside down.
1592. Stop your horse to let him make urine.
1593. Get some medicine for us.
1594. Use this ointment, and rub it on, just as I tell you.
1595. This is a useless act, and no good will come of it.

Shtalē Mirak Bastī kon vītz jã̃aiss, $i \bar{a}$ yost achẽ warē wariām.

Emá biliuk kā no-wā azzamigh.
Askā bagrām shets sē bā kāchi na nizhinistai.
Tū na enjī-bâ $\bar{o}$ dī na ennam.
Ushp p'ptī tã̃ rits pashtuk wākshō.

Inā mठs shtrī kusth dugãa dagar ess.

Tū vari bilugh charrā manchiān wart assā.
$T \bar{u}$ atsir wik azhē n'karolam.

Inā kudūm bilugh nā kusth kudūm assā.
Emâ dalkĩ̃ chīr èma, ñ̄̃̄r ēmâ ?

Bado shai zìm starak gūssā?

Chĩ̃ Maroi bilugh âl grām azzā. Nĩ̃rē Maroz manchiān bilugh kā no-wā asht.
$T \bar{u} \quad i \bar{a} \bar{s} t ~ a d r ~ b h i ̄ m ~ t \tilde{\bar{a}}$ shai $\mathrm{y} \overline{\tilde{u}}$ tarissā.
Ushp otēठ \{̊o kūsth dugच̃̃.

Emâ dug $\bar{a} u$ uhhā gats.
Ano ngāti, 言ts kaikotz wilàmbâ giaktz tabal ksht.
Inā kudūm abas $a z z \bar{a}, i k i \bar{a}$ mish $k \bar{a}$ paidā $\mathfrak{\imath a}$ bunı.
1596. Mirak is a very vain fellow. $V$

Mirak bilugh utili manchs azs.
1597. Try as you will, it is in Ikiãa kudūm chuk dì karbad kā paidàvain. na ess.
1598. That valley is very narrow, and Ikiā gōl bilugh arin assā, niwor sūin winter gets no san. na prēnn.
1599. There is no snow at present Shishi b'gol starale zim na ess. in the Shishi valley.
1600. Our fellows showed such Ema manchon gittä aknch krā pachvalour (fought so mach) anvari zapp mukià. tbat the enemy ran away at once.
1601. This ring is very valuable. Inä angushtūn bilugh mari-wã azzā.
1602. Cease that vaunting; people get annoyed by it.
1603. The Baghgalis don't oultivate Katā manohī ehak kigh na knnd. vegetables.
1604. The veins of the horse stand ont owing to his galloping mach.
1605. Why do you not make a Tū yost amu dugã parē kyē na verandah for your house?
1606. I am very angry with Basti.
1607. Chānlū appears vexed. Why Ohãllü kapā bist waron onn. Kai is he put out? dugã̃ kapā biss?
1608. You vex me; that's why I am Tū iã̃ gatrā kanji ; ikiē dugãa kapa angry with you.
1609. In every village of the Başh- Parē Katō̃ bigrām yō narı kutt galis is there a towe: (one apiece).
1610. The enemy cut down all our Pachanwari wanzo mëgh omâst vine trees with axes. drogh grî̃ts sundī pẹrià.
1611. The horse is tired, don't use Uşhp gatrā biss, ikio mẽalh zur violence with him. $n^{\prime} k s h \bar{h}$.
1612. A violent wind is blowing to- Starak bilugh karwã damu ughtenn. day.
1613. Violet colour is good for Taman dugãa mulkhen* rang lesst trousers.
axs.
1614. The violets have come out (into Malkhen pish ù osthai. - flower).
1615. Last night I heard. Aror's Düs rador Aror vari ohat iñ̃ p'kor voice. I am quite sure it gawa. $\tilde{\bar{O}} l_{\text {lesst }}$ purjanam Widing was not Widing's voice. vari chat n'ozz.
1616. You ate too much: that's Tī bilugh iũur̃̃: ikiz̃ dugãa tu baron why you are vomiting. azinj.
1617. The vultures are seated on the Parol mrisht ushp p'tsir nizin ess. dead horse's carcase.
18. W
1618. We will cross the river by Emâ kũir tūr tã golo tã petrēmá; wading. We won't swim.
1619. I made a wager with Mirak that in one day I would go from Drósh to the emâ daghnojī n'ēmâ.
Õts Mirak mởh datik kustham* Dryus ste Shāwal bado wik $\bar{\theta}$ gujar èlom. Shāwal pass top.
1620. I won my wager (wager being $\overline{\text { Ots }}$ dâtik kusth iâron Mirak made, ate) and Mirak lost it.
1621. My waist is very small. Iã̃st sãnawotan bilugh lamar assã.
 in my house.
1623. This cloth is not suited for a waistcoat.
1624. Wait here until you see with your own eyes that I am returning.
1625. I shall walk, not ride tomorrow.
1626. The soldier is not walking up and down.
1627. The wall of my garden fell down last night.
1628. There are no walnuts on my large walnut tree this year.
1629. Do you want a horse for tomorrow's march ?

Inä basnâgor kaltachā kusth dugã̃ lesst na ass.
Añ̄z otī yost achẽ warē varan wîk ki Sāhib pilingdzann.

Dalkiã̃ õts kũir warē ennam, ughp psir na ennam.
Spāhi $n$ 'palengá.
Dus rador iãast nixhāo tã̃ châ urriss.
Iầst al iamra kāno ina sē iamra mana na eass.' (?)
Tर̄ dalkiẽ $p$ 'putt $\overline{\text { čsth }}$ dugã̃ $u \underline{\underline{c} h p}$ raganjā ?

[^82]1630. In what war did Basti die P Bastī gijj pitshnn tã̃ mrã ?
1631. He was caught a prisoner in Pitghan damia. war (enemy caught him).
1632. This is a very warm place.
1633. This fire makes great warmth.
1634. Karuk has a wart on the, thumb of his right hand.

Anīo bilugh tapi bhìm assa.
In $\bar{a}$ angā bilugh tapī kunn.
Karuk pach $\overline{\tilde{u} t r ~ d u s h t ~ t ~ t a ̃ ~ j a s h t ~ a n g u r ~}$ kachai biss.
1635. Last year there uas no snow, Po së zim n'aisī yūs di n'aisí. so there was no grass.
1636. Wash my clothes for me. I $\quad$ ãa $d u g \bar{a}$ abasnâ ao tã̃ ninjō.
1637. The wasp stung my hand. Üshpik iñ dusht atamshish.
1638. Watch over (do sentry duty Rador iã̀st jilamā tã̃ palā krō.
at) my tent to-night.
1639. How many watchmen shall I put near your camping ground to-night?
1640. Mirak and Chānlü will divide the watches of the night between them.
1641. This water is not good for Inä âo pisth duĝ̃ less n'ess. drinking.
1642. Make this water hot for Ohaikusth dugã inā áo tipāo. making tea.
1643. The water of this water-cut is muddy and not fit to drink.
1644. Sir! your servant says "I have warmed the water."

Sāhib ! tost shhodr gíjgz kutt "iã ào tipess."
1645. The water is very dirty. There is no fire: how can I warm any water.
1646. How many water mills are in your valley?
1647. Which way has the enemy fled? This way or that way?

Âo bilugh alūri ess. Angā n'ess: kaikotz \&o tipam.

Tē b'gul chuk apghē asht ?

Pachan wari korir mugistai? Ant pōr mugistai, akī pōr mugistai?
1648. Shall we go this way or that way to-morrow?

Dalkiō̃ ant pōr ēma aki pōr ēma ?
1649. We are all very poor.

- 1650. The coolies of this village are so weak they can't carry the loads.

1651. Do the Bashgalis wear red shirts?
1652. How many weavers are there in your valley?
1653. Weed the grass out of my Shiok p'mij yūs biss, nare. vegetables.
1654. What is that old woman Ikiā purdik kai duggã ghan duzds weeping for?
1655. The bäbă is woighing the flour. I saw him weigh it yesterday.
1656. They don't use stones for $A m n i$ tursth dugä wott $n$ 'utend. weighing.
1657. There is not one well in my Iã̃st gul tã ēdi àoduk nāai. country.
1658. You have done your work $T \bar{u}$ yost kudūm bilugh lesst kristai. very well.
1659. Are you all well?
1660. Yesterday I went to Drōab, Dus õts Dryos gäsam, tu Drushp thou wentest to Draghp.
1661. The day before yesterday he Nottrè izè Ashrett guls. went to Ashreth.
1662. The enemy fled to the west. Paghamvari sū pū ettann porr mugistai.
1663. A very cold wind is blowing sū pū esth pōr stē bilugh shal from the direction of the damu ushtinn. west (setting sun).
1664. The ground is very wet: the Bhim bilugh ghil ass: spahi akiē sepoys can't encamp there. jilamd uten na band.
1665. What did the spy tell you $P \quad$ Shhū ngal tū tầ kā varí karosh ?
1666. What sort of a horse is that? Toia us $\underline{l} p$ kā'st ushpa azzä ?
1667. What for are you angry with Tū kaikotẽ iã tã kapā bissigh ? me $p$
1668. The grain of the wheat is very small this year. This year there is much frait.
1669. Up till when did you look out for me yesterday?

In $\bar{a} s_{\bar{\theta}}$ in̄ gam pul parmenstuk ass. Starak $p$ 'sē kachwach bil. ugh ess.
$T \bar{u}$ dus kni wīk iñ̄st dugã ồsh karsam?
1670. When did Widing come yes- Dūs Widing kāstē tã oz? terday?
1671. When you see me on the hill Kui bado shai ồts warimbā aki ta top, then go you to yo own home.
1672. Whence comest thou?
1673. Where is Mirak ?
1674. Whereabouts is your home?
1675. Which man is talking?
1676. Which is your stick?
1677. Which way did Mori travel ?
1678. The Badakhshāni whips are excellent.
1679. A whirlwind threw down my tent.
1680. Don't speak so loud. Whisper Al vrī na kshi. IĨ̃ p'kor vri kghi. to me .
1681. The white cow is lame to-day. Starak kazhirī gâo kutann.
1682. Who says "Gumăra is a thief "?
1683. Whose horse is that?
1684. Why are you frightened ?
1685. Why did your father go to Kabul?
1686. Is the road wide or narrow?
1687. He has put on very wide trousers.
1688. Is that woman a widow?
1689. That is a wild sort of horse (a thing of the woods). yost pamu $\boldsymbol{i}_{0}$

TTu kōr ste atsanji ?
Mirak kōr ass ?
$T \bar{u}$ amu kett $a z s \bar{a}$ ?
Kāchì manchi wari walann?
Kett tū mãroz assā ?
Mori kurār gūs ?
Badakshān'st ushp-bradzi bilugh lesst bund.
Yagh duma ozs iã̃st jilama piltēā.

Kāchi gijjī kunn "Gumāra shtãr ass '?
Thī̄̄̈ kust ushp assā ?
Tū kai dug $\bar{a}$ widharanj ?
Tōtt kaikotē Käbul gosī ?
Putt wishtri assā arin assā ?
Askā manchi biluk vishtr taman amjiss.
Ikīā jugūr pulatan assā ?
Ikīā ushp bilugh bzul (p'pghu) lattri ass.
1690. There are no willows near Bruts torēē $d \bar{i}$ ramo kāno na a $\underline{\underline{h} h t .}$ Bfōz.
1691. My wife died yesterday Dus radorr iã̃ ishtrīmri. evening.
1692. You are a very wilful fellow. Tū bilugh to chitt t六moch ashi.
1693. If you are willing, I shall $T \bar{u}$ kshul ashī $\overline{\hat{O}} t \mathrm{t} \boldsymbol{\overline { e }}$ mos shodr take you into my service for kulom. a month.
1694. They are making a window for $I \tilde{a} s t$ amu dugã̃ duak-dū tyor $\dot{k} u n d$. my house. .
1695. Wine is not good for the Kat $\overline{\bar{o}}$ manchi dug $\overline{\tilde{a}}$ tin lesst $n$ ' butt: Käfirs : I fear they will get $\tilde{\bar{o}}$ ts widharnam charrāa buttā. idiotic.
1696. Get me the feathers of that Askē marangatsē pach bird's right wing. $\quad d r e ̄ p a r u ~ i \tilde{\bar{a}} d u g \tilde{\tilde{a}}$ gats.
1697. The men are winnowing the Manchi shāle babiā aghind, damu rice, as there is a bit of a achok ann. breeze.
1698. In winter the water of this Zawōr inā b'gul âo kui kui shè tinn. stream is sometimes frozen.
1699. Wipe my gun with a cloth.
1700. If you had been wise, you would not have eaten anripe grapes jesterday.
1701. What is your wish in this Inā kudūm p'mish tū chitt (bidī) affair!
1702. With me who will go across the river f We will go with inflated skins.
1703. The soldier cut my leg off $S p \bar{a} h i ̄ i \tilde{\bar{a}} s i \bar{i} k u ̃ r ~ t a r w a ̄ z-e ̄ m ~ p e t ̣ i s s . ~$ with a sword.
1704. I can't go without you, nor without an inflated skin.
1705. There is no witness that Karak: took the goats. .
1706. The wolf took off my goat last night.
1707. That woman is lame.
1708. The old woman is tired, and can't walk on.

Iñast tapkiē puch mish skā.
T $\bar{u}$ kshul bista tū na pagi kach. wach dus na yulozish. $k \bar{x}$ 'st azz?
I六 mễsh ào tã̃ $p \overline{\bar{a}} r$ kett ann? Emá aotrmir mẽ̃h ēmâ.

Tū n'ai ōts e n'banam, ṑts aotrmir mẽsh ennam gyān n'ennam.
$K \bar{a}$ shosh n'ai Karak sharr (gash) barokti.
Dus radठr shall oss iã̃st gash brā. Ifki jugũr kuttātt.
Iki purdik gatrā biss; pē botten na bann.
1709. My daughter is a girl (little Iẫst jū osht se bist juk assā. woman) of ten years.
1710. Bring wood for making a fire. Dão gats anga kusth dugñ.
1711. That wood (orchard, or garden) Ikià nizhảa biliuk shingiera assā. is very pretty.
1712. That wood (forest, jungle) is Ikiē bannē tã̃ bilugh kinno ashht. very thick with trees:
1713. Is our camping ground wooded Emá jilama uchasth jaga ta (shady) or devoid (of kāno-wä azzä giyãn azzä ? trees) ?
1714. Fetch wood, let's make a fire. See! two men have just
 sai dão awārā. brought wood.
1715. The wool of the Badakhabāni sheep is very good for chogas (cloaks).
1716. Wonderful! how did you Uterestā! Tū kaikoti shuā básh ? escape ? (become alert).
1717. It is wonderful: so many Derbăn vari ess: ē wōs tā egiak earthquakes in one day.
1718. Say one word at a time. indrish ptā.
Eo nargi vari ksha.
1719. Yoar woork is very hard. Tū kudūm lilu gh zur essāa."
1720. The working men of our house Iäst pamu kudüm-kul manchi sundi are all ill. bradsowāa asht.
1721. In the whole world there is In dunyā $t \tilde{a}$ Mirak purstha shtār not a thief equal to Mirak. n'ai.
1722. The worms have eaten the Gu iãst kachwach kīno karrūu root of my frait trees. iã̃iss.
1723. The spy says the Mastuj Shū-ngal manchi gijji kult Mastij valley is worthless : nothing gol digar ess : aki kā paidā na grows there. butt.
1724. How were you wounded, by a ballet or sword?
$T \bar{u}^{0} k \bar{a}$ prêr bissish, tarwoch prôr bissizhā, tapkiē pondhik pror bissishā ?
 wrap around your arm. sharr awārā.
1726. The sepoys are wrestling: thuy are not fighting.

Spähī alek aloł̀and ; kalä na kund.

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1727. That old man's forehead is Askä purdikè miok bilugh ahakehiss.
    very wrinkled.
1728. I fell yesterday, and my wrist Dus piltissam, iã̃st dught sachi
    is damaged. witrpiss.
1729. Call a manghi to write a letter Munshi walo iã dugã parhi strasth
    for me, as I can't write a , dugã ; ōts yo zarē parhi strān
    letter myself.
1730. This work is wrong.
1731. This is the wrong side of the
    cloth ; that.is the right side
    (or outer side).
        na banam.
    Inā kudūm digar ess.
    Inā basnd ahn atễr assā ; ikiā barā
    assa.
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## Y

1732. The yäk carries an enormous Zügh gado biluk allangä bor ngann. load.
1733. What are you yawning for? Tī kai dugã̃ uzzamanj? Tū dus Did you not sleep last rador n'pshusia? night?
1734. I shall return after six years. Shu së ptibar pilingite èllom.
1735. Fetch me that yellow flower. Ikiã zarin pizgh $i \tilde{a} d u g a \bar{a} g a t s$.
1736. Are you well P Yes, I am Tūaduniyē ashā ? $\bar{O}$ aduniyē assum. well.
1737. Yesterday we went to Utsum Dus omâ Utsam gūssamish : sha and you went to Shighi. Shigha gursễr.
1738. The day befors yesterday they . Attrī amnd Kiär gyè. went to Kiär.
1739. Mirak has not yet come.
1740. I shall make you all contented.
1741. Is your cow young?

Mirak shtarak wik na ozs.
1742. My cow is younger than yours. Iã̃ gdo tū gâo tã̃ lillik assä.
1743. Your father is a very brave Sha'st tött bilugh keghul manchi ess. man.
1744. Your (thy) gan is bad. Tin-se tapik digar ess.

## APPENDIX I.

The following is a list of some important works which help to throw light on the languages of Käfiristän. None of these, except the third, written partly under my supervision, were available for refern ence in Chitrāl, where I prepared the sentences, etc., now published.
abdol Harim Khan, (Khin Sahib), Native Political Absibtant, Chitrad. -Manuscript papers on the Wai-ala dialect, spoken in Waigal, 1900, kindly lent for inspection by Dr. Grierson.

Of these words, 70 per cent. have a considerable similarity to the corresponding words in my collection, and a large number agree with the Waigali of Sir H. Lumsden.

The infinitives end in sta, and the terminations of some tenses and persons of the verbs, and many numerals, including puch-vishi ( $5 \times 20$ ) one handred, agree with the Bashgali of my collection.

Abodlesda, Géographie d'.-Traduite par M. Reinaud: Paris, 1868.Saghānyān se prononce en Persan Djaghānyān. C'est un grand district où l'eau et les arbres abondent. Le nom d'origine en est Saghāni. Le Saghānyān est un groupe de localités situées au-delà de l'Oxus.
azimollaf, Naik, 27th Punjab Infantry.-A collection of BashgalzPersian sentences in manuscript in the office of the Brigade Major, Chitral, 1897-98. The grammar and words agree with my collection.

Baber, Mémoires de.-Traduites par A. Pavet de Courteille.-Le beuluk de Djagān-serai * ost situé toute à l'entrée de Käfiristān. (This was written aboat 1503 or 1504 A.D.)

Bellbw, De. H. W.-Ethnology of Afghanistän. Congress of Orientalists, September, 1891.-A paper of great interest on the Greek influence on the tribes of Afghānistān, the Hindū Kuab, and those about the Upper Oxus, Badakhabān, etc.

Biddulph, Colonel.-Tribes of the Hindoo Koosh : Calcutta, 1880.-The Baabgali vocabulary (about 350 words) agrees very fairly with the words collected by me. His infinitives are not uniform as to termination, but sometimes end, as in the Chitrali, in $k$, and in various other ways. His 1,000 is hazär.

Bird, J.-See Lrege, R.

[^83]Burnes, Liedt.Colonel Sir A.-
(1) Cabool, a personal narrative, 1842.
(2) On the Sīah-pösh © Käfirs. Journal Asiatic Society, Bengal. 1838.
(3) On the Siäh-pōsh Käfirs. Pro. Bombay Geo. Sociely, 1838.

He gives a vocabulary of 105 words and 16 namerals, (of which ohal is 80 , and hazär 1,000), and 14 short sentences, (obtained from a resident of Waigul), all of which is practically included in Sir H. Lumsden's Waiguli collection.

There is a good deal of difference between his collection of words and mine. His grammar, as shown in the sentences, differs from mine. He says some of the soft labials cannot be pronounced by an European. He gives 24 Paabai words and 8 Paahai sentences, and remarks that the Paghai language is spoken in 8 villages and is very similar to the Käir. There is not much similarity between these Pagbai words and the words and sentences of my Baabgali collection.

Campbell, J.-Lost among the Afghans, 1865.-The writer states he lived some time in Käfiristān, but gives no remarks on the language.

Capùs, G.—Vocabulaires de langues pré-pamiriennes. Bulletins de la Sociêté d'anthropologie de Paris, 1889, p. 203, etc.-At Chiträl a vocabulary of 139 Siàh-pöab Kāif words, 30 numerals and 9 short sentences was prepared. These were evidently obtained from the language spoken at Loudhé (Lattdeh ?) in the Baabgal valley, and agree generally with my collection. According to Capus, 1,000 is ew sarr, evzarrba.

- He gives a second collection of 114 words and 8 short sentences taken down at Meabed from a slave of Tzoum. Some of these correspond fairly with my collection: others differ. About half agree with the Waiguli of Sir H. Lumsden. In this collection chal is 40 ; sadd, 100 ; hazär, 1,000 ; and gunei, wife.

Capds, G.-Le Kafisistan et les Kafirs Siahpouches, Revue Scientifique, Revue Rose. Vol. 43 of 1889 (Paris), pages 1to 8; 237 to 291; Vol. 44, pages 424 to 432.-The Greeks did not penetrate into Kāfiristān. He gives a map of Kāfiristān from information by Biddulph and Tanner.

He notes the days of the week are Agar, day of rest, and the remaindor

[^84]ëbi; dibi ; trebi; chtvobi; pouchbi; chou (18t, 2nd, 3rd, 4th, 5th, 6th ?). He records a Käfir prayer: "I amatch guich, bilim guicha, haloche patchemichi," (of which there is no translation), and a few religious terms of priests, deities, etc.

Cyrus conquered a tribe named Oapicha, red, on the borders of Ghorband and Panjir. This is perhaps the people who made the wine known as Capicbi or Capisa, renowned about 400 B.C.

Capus, G.-Quatrième Congrès International des Sciences Géographiques, Paris, 1889. Le Kafiristane et les Kafirs Siahpouches.This gives a long account of the country, habits, customs, deities, etc.

Tomaschek's words are quoted "c'est nne langue pracrite pure, qui s'est débarrassée des nombreuses inflexions du Sanscrit, et les remplace par une agglutination d'éléments propres. Toutes les langues du Pamir et de l'Hindu Kouch ont de commun la façon de compter par multiples de vingt, de sort que 70 se dit $3 \times 20+10$, et 400 devient $20 \times 20$. Il faut y voir l'indice d'une base commune non aryenne."

Capts, G.-Bulletins de la Société d'anthropologie de Paris, 1890. Vol. 1, p. 250-272.-Kafirs Siahpouches.-The article repeats some of the information given in previous articles above referred to. The Kāfir music noted by him "est du rhythme trois quatre avec un monvement de valse, et différe complètement de la mélodie sarte en se rapprochant de la kirghize." In the discussion following the lecture it is said "Si les Kâfirs ont réellement une numération vigesimale, leur langue serait la seule langue indo-européenne ayant une numération semblable."

Central Asia, being a review of several books.-Qwarterly Reviero, 1873.-All the scanty vocabularies professing to represent the languages of the Käfirs, Kohistānis, Pashais and other pre-Afghān tribes of that mountain country shew a good deal in common with a good deal of divergencer * * * Hear again the accurate Elphinstone, "There are several languages (dialects?) among the Kāfirs, but they have all mauy words in common, and all have a near connection with the Shanskrit. They have all one peculiarity, which is that they count by scores instead of by hundreds, and that their thousand, (which they call by the Persian or Pushtu name), consists of 400 or 20 score." It is suggested that the Ashpins of Kāfiristān may be the Aspasii, and the Ashkins the Assaceni of

## - Alezander's historians.

Churce Missionari Intelligencer, see Fazl Haqq.

Conningham, Sir A.-Ladākh, Physical, with notices of surrounding countries, 1854.-Contains tablea of comparison of various Alpine (Himalayan) dialects.

Codrt, M. A. (Añcien élève de l'école Militaire de Saint Oyr, and in the army of the Maharajah of Lahore).-Alexander's exploits on the Western Banks of ths Indus. Translated from the French for Journal Asiatic Society, Bengal, 1840.-His local information is based on the reports of men obtained at Peshāwar to spy out the country secretly.

He thinks the Mount Mahram, en roate from Adbtnagar to Banēr, and 12 koss from Ashtnagar, may be Mount Meros of Arrian, and Nyssa, the present Achtnaggar, though there are probabilities against it.

It is said one Kirkat, a Kăfir, once ruled the country near Dir, from which the Käfirs were ejected by Mahomedans.

It was reported to him that "a city called Massanger, known also by thename of Maskhinē, exists on the Southern Frontier of Kāfiristān close otBaba Kara, 12 koss from Bajaor, and 4 koss from Mount Mahrām. The tribe called Assaceni exists in that country."

Downes, E. (C.M.S., Pesbāwar.)--Kafiristãn, an account of the country, Lahore, 1873.—Contains a collection of 170 words prepared from vocabularies by varions persons. The dialect is not stated. The words differ considerably from my collection.

Downes, E., and Jounson, E. C.-On the Siāh-posh Käfirs, Ohurch Missionary Intelligencer, Volume X, 1874.—A summary of remarks on Kăfiristăn. The above contains hardly any words in any Kāfir dialect.

Eliot, Sir H. M.-History of India as told by its own historians, 1871, Volumie III, page 389, "Malfūzāt-i-Timürī."-Shows the invasion of the country of the Kators and Siāh-poabes from Paryān ; mentions one village named Shokal and another Jorkal. Their ruler is Adalabu or Udaaku. Their languago is distinct from Tarki, Persian, Hindi, or Kaabmiri. On reaching Khāwak, Timûr repaired an old fort.

Timūr* ordered an engraver in stone to cut an inscription somewhere on those defiles "to the effect that I had reached this country by sach and such a route in the auspicious month of Ramazān A. H. 800 " = May 1398.

In Volume II, Appendix, page 407, he thinks the body of troops known as Kators, organised by the Ghaznivide Sovereigns, the Kators of Käfiristann, and the Kators of Kamãon may be connected.

[^85]He mentions the Yuetchi (Tartar) invasion over the Hindu Kush into Afghānistān and Peahāwur. Chinese writers say that about 160 B.C.• the Yuetchi, (driven out by the Hioung-now), established themselves in Transoxiana.

Shortly after, the Yuetchi chief, Khieou-tsieou-hy, proclaimed himself king of all the countries between the Oxus, Hindū Kagh and Little Thibet. Subsequently the Yuetchi Monarch Ki-to-lo descended south of the Hindū Kagh to invade India about 200 A.D.

Here we seem to have the origin of the name Kator, * * * on the very site of the modern Kāfiristān or land of the Siāh-poshes.

Elphinstone, Hon. M.-Account of the Kingdom of Caubul "and its dependencies, 1839. Appendix 0.-The Caufirs count by scores, not by hundreds. Their thousand, (which they call by the Persian and Pushtu name), consists of 400 or 20 score. This derivation of their language seems fatal to the descent of the Caufirs from the Greeks.*

Fazl Haqq and Nordlla.-Afghān Missionaries in Kāiristān. Ohurch Missionary Intelligencer, December 1878, p. 724; being a reprint of an article published in 1865.

This gives a sample of a popular Kâfir song. A man in the village of ghina has sold his son to Mahomedans. When the boy has grown up, he kills 14 Mahomedans, escapes to his home, and the mother in proud delight sings the following song:-

Parolē bēlē batō warmē lawè
Badal lowe bēlē añ̄ batō lou sousawe.
Ura pras sagor aman batō warmē lawē
Awar paras dandako partus tatakotawe.
Pa sheristan gangare sutā.
" Well done, my lad! Well hast thou fought!
My old blood was drying up for grief for thee,
When thy father sold my high-spirited boy.
And thou hast killed fourteen men and come home again, With the bells tinkling on thy feet."
This apparently is the language spoken at Shaiderlam or Shino Begura, Nikera, etc. It is not stated what is the dialect. It does not tally with my collection.

[^86]Gardner, Alexander, Colonel.-Memoirs of. London, 1898.-States - the Therbah tribe, who live ten days' march west of Kä firistān, intermarry with the Käfirs Siäh-podal. Colonel Gardner, aboat 1826 A.D., visited the Khilti (Kti ?) race of Kā6rs, (outer range and northern crest of Hind $\bar{u}$ Kuab), and got as far as the Ghoar-i-pir Nimchu. There were shown to him "two marble inscriptions with Arabic characters engraved on them, said to have been presented by two kings who reigned at Delhi, viz., Mahomed Ghori, and Shāhbudin Ghori. There was likewise a large slab of green marble, also with an inscription, said to have been presented by Timūr in person, when he attempted to invade Kāfiristãn, but got no further than this point. This memorial was erected in 1398."

According to the Pir, Scythia was the original cradle of the Käfir race, and they claim one of the kings of the dynasty of Cyrus as their founder.

The whole of Badakhabhān formerly was held by the Käfirs.
In 1193, when the Mahomedan Government of India was founded, Käfristān was broken up, and Badakhabān was the name given to that part from which the Käfirs were expelled.

Colonel Gardner again visited Kāfiristān about 1829 A.D., but, unfortunately, the copious notes and diary which he made have been lost. He was informed that, about 1770 A.D., two Europeans (R.C. Missionaries) had resided and died in Kāfiristān.

Gheyn, Van den.-Le Yidghah at le Yagnobi. Bruxelles, 1883.-La méthode de numération vigesimale n'est pas d'origine aryenne. Empruntée aux populations autochtones des Khaças (les Haspioi d'Herodote et les Kasioi de Ptolémée) et encore en usage chez les Khajūnas on Booriabkis des Cantons de Yassin, Hanza, et Nagir, elle a fait invasion dans un certain nombre de dialectes eraniens de l'Hindou Kusch.

Goes, Bentode.-Purchas S.; his Pilgrimes, Part III, 1625.-Although notining regarding the language is recorded, it states that Benedictus Goes "equipped with a table of moveable feasts till the year A.D. 1610 left Lahore in Lent 1603." When in the neighbourhood of Peshāwur he was informed that "thirtye days off was a Citie named Capherstam (Kāiristān) into which the Saracens are not permitted entrance, and, if they enter, are pat to death. But merchants are admitted their Citie, yet not their Templea, Hee said the inhabitants of that region goe to Charch all of them in black * * Heroby Goes supposed that
they were Christians," an idea which Marco Polo also soems to have entertained.

Grierson, G. A. (Pe.D., C.I.E., I.C.S.)-Linguistic Survey, Government of India, Caloutta, 1899. The Käfir Languages, outlines of Bashgali, Kaldgha, and Wasĩ-Veri or language of Veron. (Advanced proofs.)-The Siāh Pūsh Kāfirs, N. and N.W. of Kāfiristān, all speak varieties of one language, of which the Baahgali may be taken as a type.

Some of the Käfir dialects, (those specified by Sir G. Robertson,) show sporadic instances of agreement with the Iranian languages, but the general phonetic structure of most of them is Indian. Their grammatical structure, however, varies from any Indian language. Seven pages are given to the Bashgali dialect and nine pages to the Wasi-Veri or language of Veron, (which is now written for the first time, and ten pages to words and sentences in five languages including Baghgali and Wasi.-Veri.

Gribrson, G. A. (PhD., C.I.E., I.C.S.).-Linguistic Survey, Government of India, 1900. Pashai, Laghmānī or Dēhgāni. (Advanced proofs.)—The Paghai dialect is closely connected with Gewar-bati and Kaläaga, and has interesting points of relationship with Bashgali and Wasǐ-Veri.

The infinitive of the verb, as in Khowār, ends in $k$.
The specimen translation of the story of the Prodigal Son seems to me to have far greater affinity to Khowār than to Baghgali Kāfir.

About 23 per cent. of the words are identical with, and 17 per cent. somewhat similar to, the Waiguli of Lumsden and Burnes, and about 60 per cent. seem quite different.

Griffith, W.-Journal of traval. London, 1847, Vol. I, p. 458.—Con. tains a short account of the Kāfirs from personal interviews near Katoor, (a short way N.W. of Chigar-serai), with Kāfirs from Arunsha, etc., and gives a vocabulary of 64 words. The dialect is not stated. The author says, " the mixture of Hindūstāni names is very curions indeed, particularly those names of things which, from being indigenous, one would suppose would have indigenous names." Some of his words are Chitrāli, others Persian ; about one-third of his words agree with mine.

De Guianss.-Histoife Générale des Huns, des Turcs, etc. 1758.Tamerlan fit graver sur les marbres l'histoire de son expédition avec l'époque de l'Hégire et celle dont se servent ces Barbares.

Holdioh, Colonel, T. H., C.B., C.I.E., Royal Engineers.-Geographical Socsety Journal, Vol. VII, 1896. "Origin of the Kafirs of the Hind $A u$ uh." -Major Deane, C.S.I., has lately discovered some strange insoriptions
on stone slabs in the Indus valley, east of Swāt, which have been examined

- by a Congress of Orientalists who can only pronounce that they are in an unknown tongue. Possibly they may be of a vast age, for the opinion is pronounced that they recall a Greek alphabet of Archaic type, and it is a possibility that the characters inscribed may prove to be the forgotten form of the Nysscoan dialect.

In a verse of a Kāfir war hymn quòted in the article, (one of a classical and Bacchic type), the references show that the Káfirs owned part at least of Badakhshān, and revered the hill Meros, the mountain of Bacchus near Nyssa.

Kāfiristān has only been partly explored. Who can say what may be discovered in future explorations ? The Käfirs may perhaps in the future be proved to be "the modern representatives of that very ancient Western race, the Nysscoans, so ancient that the historians of Alexander refer to their origin as mythical."

Hughes, Rev. T. P., and Sped Shit, Munshi.-Account of a visit of the latter to Käfiristān. Ohurch Missionary Intelligencer, July 1883.-"Today was the Kāfir Sabbath or Sunday, Aggar. No work is done on this day by men or women." The few Kāfir words which are given, all correspond with those in my collection.

Jukes, Worthington, Revd. (late of C.M.S.)-A mamusoript vocabulary (about 30 pages) of Käfir words and sentences, names of men, women, villages, rivers, etc., taken a few years ago, from a Käfir who had left his country, for Laghmān, six years previously.-This collection agrees very fairly with mine, though some of the grammatical renderings differ.

In this collection Kāfiristān is rendered by Katon gil (gol, gul P) "the Kator valley " (?).

Klaproth.-Tableaux Historiques de l'Asia,1876, p. 132, eto.—The langaage of the Petits Yue-tchi was identical with that of the B hiangs or Thibetans. The ancients knew them as the Indo-Scythians. Their capital was Kian-chy-tching, and their chief abode, soath of the Oxus, known as Koei and Gooi.

Lassen, C.-Indische Alterthumskunde, 1867.-Has very interesting chapters on the history of the countries near the sources of the Upper Oxus.

Leech, R., Lievt., R.E.-Journal Asiatic Society, Bengal, August 1838, and Transactions, Bombay Geographical Society, Vol. I.-This contains a vocabulary of Pashai words- 168 words, 20 numerals, 9 short sentences-
spoken by the inhabitants of Mandal, Chitela, Parena, Kūndi, Seva, Kulmān. About one-sixth agree somewhat with my collection of Bashgali, • and about one-third are common to Urdū or Persian, as, ghoda, ghodi, horse, mare ; gāl, abuse ; dāru, powder ; gom, wheat.

The numerals 1 to 20 are in many cases almost identical with Persian or Urdu; and one-eighth of the words agree with Lumsden's Waiguli.

Mr. J. Bird observes (Bo. Geo. Soc., Vol.I, p. 403) the Paahai language is of special interest in connection with the Pasiani, who, with the Asii and others, overturned the Greek Kingdom of Bactria 125 B.C. He thinks the languages of Kāfiristān, Paghai, Chitrāl have a common origin in a Sanscrit or Persian language, probably the Zend.

Leitner, Dr. G. W.-Languages and Races of Dārdistān, 1877.Treats of the Kalägha " language, not of the dialects spoken by people in Kāfiristān proper.

Leitner, Dr. G. W.-Lecture on the Bashgalis and their language. -Journal United Service Institute (Simla), 1880.-This treats of the Kaläsha dialect, i.e., the langagge spoken by the Käfirs who reside, not in the Baghgal valley of Kāfiristān, but in Chitrāl territory and are subjects of the raler of Chitrāl. It has a fairly close resemblance to the Chitrāli dialect or Kho-wār, including the infinitive of the verb which, (as in Khowār,) ends in $k$.

Leitner, Dr. G. W.—Dārdistän in 1866, 1886, and 1893.—At p. 33 is a Bashgali prajer in the Kalasha dialect. It is largely Chitrālī and Urdü. Dr. Leitner says, (in regard to the word Kator), Bāba Āyub, a Khorassāni adventurer, established the Chitral dynasty and took the name Kator, whence the dynasty is called Katori. Kator has been said by some to be Kitolo, the king of the great Yuetchi, about 420 A.D., who conquered Balkh.

Leitner, Dr. G. W.—Käfiristān and the Khalifa Question, 1895.— Considers the Käfirs must be ancient Greeks.

Recently the Afghāns have destroyed over 150 temples with innumerable ancestral carvings showing Greek traditions.

Leitner, Dr. G. W.-Journal Society of Arts, 1897.-There is much yet to learn about. Kāfiristãn. Alexander the Great advancing against Nyssa,

[^87]the heart of Greek Käfiristãn, discovered its inhabitants to be descend-

- ants of very ancient Greeks. The Kāfirs are essentially pagan of the classical type, and more resemble Europeans than any Asiatic race.

Ludwig, George Von -.-Travels Ihrough Upper Asia from Kashgär, Tashbalyk, Bolor, Badakhshan, Vakhinn, etc. R.G.S., 1866.-This work has been described by some noted geographers as untrustworthy.

He gives certain Kāfir words, e.g.-

| Imra amu, | God's house, Temple. |
| :--- | :--- |
| busibo, | bustard. |
| gabsu, | copper. |
| danep, | goat's wool cloth. |
| marilpan, | golden. |
| yashi, | jasper. |
| omimir, | spring fog. |
| Imra bolli! Gish bolli, | exclamations. |

He mentions a dialect known as Gobi.
He says he saw a stone pillar with an inscription on it in the valley of Luimka near Mustopan, (village of the Chaghur Gobis). It is not stated what were the characters. Possibly this was uot in Kāfiristān.

Lumsden, Sir H. B.-Mission to Oandahar, 1860.-This gives a list of about 1,500 or 1,600 words and 19 short sentences in the dialects of Traieguma * and Waigul. A great many differ from the Bashgali of my collection. The infinitive of the verb in his collection ends generally in $n$, but sometimes in $m, k, i$ or $h$. This termination being rejected, a root is left which sometimes coincides with the root in my collection, such as that of,_" to catch," "beat," "do," "drink." He says it is evident many of his words have Sanskrit roots. The article contains no grammar.

McCrindle, J. W.-Ancient India as described by Ptolemy. Calcutta, 1885.-The Sakai were located east of the Sogdiani, under Mounts Askanimia and Komedus, of which the ascent lies in $125^{\circ}, 43^{\circ}$. Ptolemy describes them, (vide Ptolemy's map No. 7), as nomadic, dwelling in woods and caves. Their tribes were the Karatai and Komaroi, both along the Jaxartes; Komedai $\dagger$ residing in mountains; the Massagetai $\ddagger$ along the range of the

[^88]Askatangai *; the Graynaio Skythai ; Toornai; and Byltai near Mount Imaios, i.e., Baltistān or Little Thibet. The Sakai therefore appear to have been the mountaineers of Kāfiristān, Badakhghān, Bhignān, Roshbăn, and Baltistān. Their boundaries were: west, the Sogdiani ; north, Skythia, along the line parallel to the Jaxartes, so far as the limit of the country which lies in $130^{\circ} \mathrm{E}$. and $49^{\circ} \mathrm{N}$.; east by Skythis along the meridian lines prolonged from thence and through the adjacent range of mountains called Askatangas, as far as the station at Mount Imaios, whence traders start on their journey to Seres, and through Mount Imaios as it ascends to the north as far as the limit to the country, viz., $143^{\circ} \mathrm{E}$., $35^{\circ} \mathrm{N}$.; soath by Imaios itself along the line adjoining the limits that have been stated.

Beyond the valleys at the foot of mountains Askanimis and Komedus and the village which they call Lithinon purgon "stone tower," (lying in $135^{\circ}, 43^{\circ}$ ), lies the very long road by which traders parsue their journey towards Seres, Serica (?).

MoCrindle, J. W.-Invasion of India by Alexander the Great. Westminster, 1896. -The districts through which Alexander passed are now called Kāfiristān, Chitrāl, Swāt, etc. "It is more difficult to trace in this than in any other of his campaigns the course of his movements, and to identify with certainty the various strongholds which he attacked
A glance at the labyrinth of mountains and valleys which occupy the whole space in question in the best modern maps will safficiently show how atterly bewildering they must have been to the officers of Alexander, who neither used maps nor a compass, and were incapable of the simplest geographical observations." (Page 61.)

McNair, W. W. (F.R.G.S.).-Explorations in part of Eastern Afghänistän and Käfristän, 1883.-This gives a vocabulary of aboat 108 Käfir words, 28 numerals, and 7 short sentences. The numerals agree with mine, as do half the words, and most of the grammar of his sentences. Some of the words tally with those of Sir H. Lumsden and Sir A. Burnes (Waiguli). Many are different from any Kāfir collection which I have seen, or from Sir A. Burnes' Pagkai collection. The monument ordered to be erected by Timurr was reported in 1883 to be in existence between the forts of Pughian $\dagger$ and Kurban.

Masson, Cearles.-Narrative of various journeys in Belochistän, afghânistän, etc., 1842, see also in Bombay Geographical Society's transactions

[^89]Vol. V.-It is not until 1399 A.D. that the Siāh-pösh are recognised by - name. He refers to the "Kāfir epocha" which Timur discovered (vide Timür, ) and the interest as to whether the Kāfrs still preserve it; and notes the fact that Timur's Expedition was hardly à conquest, as he had to beat a hasty retreat. He alludes to Baber's Expedition to Birain (probably Veron), and notes that from that time up to Elphinstone's Account, 1839, nothing is heard of the Käfirs, except the erroneous accounts, (1603), by Goes.

Moron Lall.-Travels in Punjab, Afghänistān, etc., London, 1846.Contains a notice of the Siah-pōsh Käfirs, but very little as regards their language.

Moorcroft (William) and Trepeck (George).-Travels in the Himalayan Provinces, elc., etc., Käbul-Kanduz, Bokhära, 1841.—The district of Gilgit is inhabited by Dardus, evidently the Dāradas of Sanskrit geography, and Daradœ or Daradre of Strabo. They are also no doubt the Kāfirs of the Mahomedans, although they have of late been nominally converted to Islām.

Mollāt Najib.—In "Kingdom of Cabul" (Elphinstone) it is stated Mullāh Najib wrote a vocabulary (translated by Irvine) of the language at Kāmdēsh. I have failed to trace it in London.

Norris, E.-Journal Asiatic Society, Bengal, 1862.-This collection of about 90 words obtained from a Kāfir in Tehērān is considerably different from my vocabulary, but about one half agrees, in a measure, with the collection of Burnes and Lamsden. In his collection one handred is chal, and one thousand, hazär. His infinitives end in $s$, as, veeyaus, to beat.

Nobdlla, see Fazl Haqq.
Padthier, M. G.-Le Livre de Marco Polo, dictated in 1298. Published, Paris, 1839.-" Il est voirs que dix journées vers midi loings de Balacian, une province qui s'appelle Bacian, qui ont langue par eus et sont ydolastres et sont brunes genz; ils scevent moult d'enchantement et d'art diabolique. Ils sont malicieuse gent et sage de leur coustumes. Cette province est moult chaude (froide ?). Leur viande est char et ris." Pauthier, in a foot-note, argues that Bacian mast have been Paschiai* in Kāfiristān, with its dialect known as Pachui (Bachai). He refers to a statement of the Emperor Bāber regarding a small river " flowing from

[^90]the west, which traverses Pioh, a country of Kāfiristān. When I tooke Chigar Serai the Kāfirs of Pich came to their aid, men who were great drinkers of wine; they fear neither God $\dagger$ nor man, and are heathenish in their customs." Pauthier says: "the Bacian of Marco Polo and Pioh of Bāber are probably one and the same."

Pritchard, J. C.-Researches into the Physical History of Mankind, 1844, Volume IV, Chapter XII, Section V. Of the Siāh Pōsh or Kafirs of the Hind $\bar{u}$ Kush.-Their langarge is nearly allied to the Sanscrit. The Laghmānī or Dehgāni langaage is said to be a Kāfir dialect. The Siāhposish, judging from their language, "belong to the Indian race, and the language which has long been a learned and dead langaage in Hindūstān is still preserved in a peculiar dialect among the mountaineers of the Hindū Cancasus."

There is strong evidence that the Sanscrit language, or a peculiar modification of it, was the idiom of the ancestors of the Kāfir race.

He gives a voeabulary of 23 words of the Siäh-pösh, which very much resemble the Sanscrit. Twenty of the words are the same as those in my vocabulary of sentences.

This book quotes a communication by Ritter to the Berlin Geographical Society, May 1839, "Einige ethnographische Mittheilnngen über die Siāh Pögh von Alexander Burnes" printed in the "Monatsbericht über die Verhandlangen der Gesellschaft für Erdkande."

In the latter paper are some remarks by Professor Bopp on specimens of the Siāh Posh language.

De Quatrefages.-Histoire générale de la race humaine, Paris, 1889. -He classifies the Siăh-pösh as-

Tranc, blanc ou cancasique. | Famille, Hindone.
Branche, Aryane.
Ramear, Indo-Earopéen.

Raverty, Captain H. G.-On the languages of the Siäh-posh Käfirs. —Journal, Aeiatio Society, Bengal, 1864, p. 267.-Disagrees with Dr.

[^91]Trumpp in varions essentials. It is not stated which of the Eiāh-pöeh dialects he employs. He thinks his collection of about 150 words, and those of Mr. Norris and Sir A. Burnes, tally, generally speaking. Raverty's collection of words and construction of sentences do not agree very well with mine. He gives a short list of words in the Pashai dialect, spoken in the country south-west of Kāfiristān. Nearly all these words are contained in Leech's collection of 1838: about one-third are similar to his (Raverty's) Siāh-pösh words. About half his Siāh-pōgh words and about half his Pasbai words agree with the Waiguli- of Lamsden. He says the Paabais are the aborigines of the country.

Raverty, Major H. G.-Käfiristān and the Kafir Tribes. Calcutta Review, July 1896.-Contains an excellent outline of the history of Kāfiristān, the Hinduānei-Kator and the Siāh-pōsh tribes. The Kāfiris of Tibbat are also referred to.

Robertson, Sir G. S., K.C.S.I.-Kafiristan and its People. London, 1895, and The Kafirs of the Hindī Kush. London, 1896.—The conclusion is arrived at that the dominant races of Kāfiristān, the Katirs Käm, and Wai, are descended from the old original population of East Afghānistān who refused to accept the Mahomedan faith about 950 A.D. Traditions are recorded that the Presuns are an aboriginal race; that the K反̄m were originally Sālārzais or Koresh ; that the Kāfirs extended as far as Swāt, and that the Kalãsh extended to Gilgit. They have no admixture of Tartar blood.

The following is his list of tribes :-

6. Presun or Viron; a very ancient people, inhabiting 6 villages, speaking a language different from the Siäh-poub, a language which, according to the Kàm opinion, "no one can ever learn." They differ from the Wai or Aebkan.
7. Wai ; in 10 villages; their language differs from the Siăh-pöal or Presan.
8. Aghkan; in 2 villages; their language is somewhat like the Wai.
"That the Käirs are made up of different races, appears certain : that they have no admixture of Tartar blood seems obvious ; that they came from the west, or at least the great majority of them, is their own fixed idea and is more than probable."

Desoribing the women's head dress and its appurtenances-he says, " I have seen on the brass thimbles short English expressions such as 'For a good girl.' These were the only printed or writton words I ever found in Käfiristan."

Robertsox, Sir G. S.-Manuscript vocabulary of words, outlines of grammar, and sentencos, and idioms; Käfir into English, 1896\%.TThis is the most comprehensive collection which I have seen, and contains many valuable idioms. I understand that in all essential matters Sir G. Robertson's collection agrees with mine.

Sddie Istanixi.-Aeographical works of.—No. II.-Takwim-al-Baldan. London, 1832.-This, (written about 1635), mentions Katür (or Siāh pöahann, the country of persons who wear black clothes), situated on the confines of Kăbul.

Srod Shāi, Manghi, vide Hfareś, Revd.
Tanare, Major.-Kajfristān and the Käfir language. Pro.R.G.S., Vol. I of 1879, $p$. 713.-The language of the Chaganis is like that of the Kāfirs.

Mr. W. Jenking, Assistant to Sir L. Cavagnari in Käbul, was, at the time of his death, employed in working up the langnage of Käfristan.

Tanner, CoLonel.H. C.-Notes on the Chuganis and neighbouring tribes of Kafiristãn. Pro. Royal Geographical Society, 1881, p. 279.-In the preparatory remarks on the above lecture, Dr. Cust stated that the purely philologioal portion of Colonel Tanner's notes was reserved to be dealt with by Dr. E. Trampp (Professor of Manich), and would be published by the Royal Asiatio Society. Colozel Tanner giver a few

## Appendix I.

sentences "in the language of the Käfirs as near as I have been able to pick it up." These exhibit 25 words, some of which are Urdü, others Sanskrit. The grammar does not tally with mine. It is not stated what dialect was employed.

By the kindness of Dr. Cust I have been able to inspect Colonel Tanner's collection of manuscript papers on the Dehgãno or Darah Nūri dialeot of the Laghmān language and on the language of the Sañu Käfrs.

The Darah Nüri collection consists of about fifteen foolscap pages of words and sentences. Many words are similar to the Persian; a few only, inoluding the system of numeration, e.g., painjwea ( $5 \times 20$ ), are similar to those in my Baghgali oollection. The grammar differs from mine, the infinitive ending in $k$.

The colleotion of specimens of the language spoken by the Sañu or Wäm tribe of Lăl Kăfirs, (as taken down from a man of the Chagani tribe), comprises aboat 170 words and 70 short sentences, as spoken in "Sañuglam, a town situated at the head of a valley that flows Northward from the Kund Mountains into Darah Pech. The Sañas are enemies of the neighbouring tribes of Katawàr Kāfirs, and do not understand their language."

About one-third of the words are very similar to those in my collection. The terminals of some tenses of the verbs (notably the future) agree with my examples.

About half of the words, as shown in a comparative table drawn up by Professor E. Trumpp, who recently saw the collection, agree more or less with the words in his work referred to on p. 182.

About twenty per cent. of the words are similar to corresponding words in the Waiguli oollection of Sir H. Lumsden.

Hardly any of the words correspond with the Wasì-Veri or Veron language as recorded by Dr. Grierson.

Trerntirp.-Russia and England in Asia. 1875. Translated by Daukes, Calcutta, 1876.-He gives a specimen of the Bolor or Kāir language (see Appendix IV). It does not correspond with my collection. Terentief says the Siāh-pōsh style themselves Bolors; he thinks they are descendants of 20,000 slaves (Sklabinoi) who emigrated in 664 A.D. to Syria, and that Rassia is therefore specially interested in them, an hypothesis which his translator and other critics consider untensble.

Timūs Beg.-History of, by Oherefeddin Ali; translated into Mrench by Mons. Petits de la Croix.-Timũr invaded the country of the Ketuers
and Biäh-poblh in A.D. 1398. The difficulties encountered in getting the horses over the Kāfiristān Hills are well described. Timulr observes : "The infidels of this country were as strong as the giants of the people of Aad; they go all naked : they have a peculiar language hitherto unknown which is neither Persian, nor Tarkish, nor Indian, and know no other than this : but for the inhabitants of some neighboaring places, who are found there by chance, and having acquired their language oan act as interpreters, no one could understand them. Their kinge are known as Oda and Odachoub." On the Siàh-póah men promising to abjure idols and embrace the Mahomedan religion, Timūr gave them clothes and encouraged them with affectionate speeches. But these wretches, whose hearts were as black as their garments, fell on one of his regiments, which they almost annihilated. Timúr's army then put to death a large number of the Käfirs, carrying away women and children. They built towers on the top of the mountain and end of the bridge, with the heads of the traitors who had never bowed the head to adore the true God.

Timūr ordered to be engraved in marble the history of his action, month of Ramadāu, A.D. 1398, and he added the peculiar "epocha " which this people used.

The pillar so inscribed gave the greater pleasure to Timũr, as these people had never been conquered by any king, not even by Alezander the Great.

Caouc is mentioned as a town of the Ketners which Tim ür rebuilt.
Besides the words above quoted, he gives no specimens of the languaga as then spoken.

Tomasorir.-Contral-Asiatische Studien : I, Sogdiana, 1877. II, Dis Pamir-Dialekte, 1880. Published in the Sitsungsberichte, Imperial Acadomy, Vienna.-Has 3 curions ancient maps of the countries which bound Käfiristän north and east and west. The Kalàsha dialect is the bridge between the cultivated Arnya" and rough west Käfir dialeots. It has many traces, though rough, of the old Veda dialect. The book has interesting remarks tracing some of the Kalalaba and Baabgali words to their origin.

Tomascari.-Art. in Eno. Arsch. and Gruber, 1882 (quoted by Mons. G. M. Capus in "Le Kafiristan et les Kafirs Siah-pouches." Revwe Soiontifique, 1889).-The Käfir is a Prakrit language; it has a predileation. for nasal vowels, "aspirations et cerebrals," with one pecaliarity, vis,",

- Arnya, the langaage apoken in Chitrāl, Yasain.
the frequent omission of a final r.* The Kafirs count by twenties, as is the case in all the languages of the Pamirs and Hindu Kush. Thus they have a common non-Aryan base.

The Kāfir language and Chiträli, compared with the Prakrit literature of Central India, have conserved some of the most ancient forms of the Aryan epoch.

Trumpp, Revd. E., D.Phil.-On the language of the so-called Käfirs of the Indian Oaucasus. Journal Royal Asiatic Society, Vol. XIX, 1862.-His opportunities for conversing with three Käfirs, (which dialect is not stated,) "extended to a few days or rather hours." The words collected and the grammar, (notably the pronouns, some numerals, and the peculiarity of the future tense of the verb, differ a good deal from my collection. Barnes, Raverty, and Trumpp are at considerable variance. About 36 per cent. of Dr. Trumpp's words agree with the Waiguli of Lumsden and Burnes.

Dr. Trumpp remarks, "The Kāfir tongue being a pure Prakrit dialect, separated from its sister dialects since the irruption of Mohammedan power, in the tenth century of our era, is of the greatest importance to Indian philology, as we have a very imperfect knowledge of the common dialects then in use in India. We may fairly infer that the dialect of the Káfirs has been preserved to us pure or very little altered in the course of time, as the Käfirs were quite cut off from all connexion with the other Indians, and hemmed in on all sides by impassable mountains, which enabled the fugitive race to defend their independence against all assaults on the part of the savage Pughto tribes which were settling down in their ancient seats."

Dr. Trumpp thinks the words collected by Sir A. Burnes are not Kífir words but Kohistāni. He observes that, whereas in the Prakrit dialects of India, the adjective agrees with the substantive in gender and case, the Käfir seems to incline rather to the Iranian than to the Prakrit of India. He doubts if nouns have any gender; adjectives are not subject to change for gender and case.

He remarks on the rarity of aspirates, showing an affinity to Iranian and Pughto.

He says the instrumental case is used. In the singular it is the same $a s$ the Nominative. In the plural it is formed by adding ff.

[^92][^93][^94]
## APPENDIX II.

# Translation of 2 Samuel xii, verses 1 to 6, in Persian, Pushto; Badakhediz, Khowär (Chiträlī), and Baskgaľ. 

Perbias.

1. Wa Khurdàvand Nathan rä nasd-i-Däud firistad wa nasd-i.wai àmada aorā guft kt dar şhaharē dū mard būdand yakē daulatmand wa digarè fakir.
2. Wa daulatmand rā gosfand woa gāo bi nihayat bisyār būd.
3. Wa fakīr rā jus ek māda barraē kochak na būd kī än rā kharida wa parwarish däda hamräh wai wa pisarān ash busurg mē shud as khūrāk-i wai mè khword wa as käsa.i-o mé noghïd wa dar aghosh-agh me khwabid wa birāe agh misl-i dukhtar būd.
4. Wa •musāfirè nazd-i ān mard-i daulatmand amad wa aora haif
 ki nazd-i wai àmada būd muhayȳa sāzad; wa barra-i an mard fakir ra girifta bar ${ }^{\text {ze }}$ àn mard ki nazd-i wai amada bud muhayya sakkt.
5. Angah Khashm-i Dāud bar an shachs afrūkhta shhuda ba Nathan guft Khudävand kasam kasë ki in kär ră karda ast mustajib-i katal ast.
6. Wa chün ki in kār rā karda ast wa hech tarahum na namūda barra rā ohahär chandan bäed radd kunad.

Pusito.

1. Nō Khudāvand Nāsān Dāūd tah wãstāwuh, aw haghuh waraghs wartah wuh yo wèl chi pah yawa kkhahr kkkh dwoa sari wū̀ lah dagho dwäro nah yo daulatmand aw bul khwār wuh.
2. Awo haghah daulatmand bēhadda dèrè mègē aw ghwa laralè.
3. Aw haghah khwär hēte şhai nah lārah magar ywua warūki èrrai chi dah pârodilēa aw satalẹ̀ wah; aw haghah lah dah aw da dah lah tşãmino sareh lowe shive wah; da dah lah nawarai ye khurala aw lah käsi ye tekkhala awo da dah pah ghōg kkkh bah tsamlästala aw da lūr pa shan ye wak.
4. No haghah daulatmand sare lah yo musäfr raghē ; no haghah lah khpulo gadüro aw lah khpulo ghwão lah akkistalo nah sra sawe ukar ohe haghah musäfir che dah lah ragkalē wuh tiyärè ukare ; nō da haghah
khwār sari èrraige univoulah aw haghah sart lah chi walah rāghale wuh

- tiyāra ye kralah.

5. No pah haghah sari bāndi da Dā̄̄d khapagi dērah garma shooula aw Nās̄ān tah ye uwi chi Yahwah hai dè ohi daghah sare chi dā kär ye kare de soz da marg de.
6. Aw da haghah èrri di tslor gūna war ugarzawi tsaka chi dah dā $k \bar{a} r$ ukar au cra sawe ye u nah kar.

## Badakhenf.

The people of Badakhaban are stated to have adopted their present language daring the last few centuries only. Until a few centuries ago it is said the Käfirs ruled in Badakhghān.

The similarity of the Badakhahi language to Persian will be apparent from the translation of verse 3 of the preceding; kindly sent by Khan Sāhib Abdul Hakim Khān.
3. Az hamu luchik ghair az yak khurd barra chīē na būd ki hamu ra parwarish karda ba amrahi-e kihudish o bacha $\bar{a}$ ish kalān mē shud az näne hamu mē khurd ba kasa-ish āl mē khurd ba baghal-e hamu khab mē kard ba hamu dukhtar e khud wāri būd.

## Khowãr, translated by Khān Sāhib Abdal Hakim Khān.

1. Khudai Nathan o Daud o nasa weshēstai hassa hattogho nasa giti liu prai i shahra ju mosh astani i wāli quwating birai i wāli chan birai.,
2. Hassa quwating o kēeri o chi lyutpongi be-nehāyat bo birani.
3. Hassa chān mosh oitseq istri werkhu o sar ghair khor kya rakh no astai hattogho wägh diti gani tan ta ha-lē astai hattogho o chi tagho gizhawan sum hal bitt borda oshoi hattogho jibarm-ār jiba oshoi ochi hattogho ghana pia oshoi hattogho bitg to poraoshoi oche togho te jüro chaqa saria oshoi.
4. I musāfir hassa quwating o nasa hai ; quwating hatte giru musäfir o pachin tan kēriun ochi lyutpongiān sar kya rakh gani kushiko no khoshētai; hassa chãn mosho werku o gani hassa musäfir ki giru oshoi hattogho te prai.
5. Hatte wakht Daud-o qahar hassa mosh-o-te hai, Nathan-o-te reitai, Khudāi o goll kā ki haia korm kori asur hatte mosho māriko bash.
6. Hassa mogh ki haia kormo togho hardi no puli ki kori asur hatts werkhu o sar chör hissa siād kori haottgho te achi diär.

Baghasli, translated by Khān Sāhib Abdul Hakim Kbān.

1. Imrã Nathan-s Daud tĩ̃ namia: aske asket-tã̃ gigi karas ${ }^{\circ}$ God Nathan David to sent: he him to speech made. " - grom tã̃ du manje azamme, e manji āra azi, e kãnotoa "one city in two men were, one man rich was, one of no account azi.
was.
2. Aske $\bar{a} r \bar{a}$ ste turte $\delta$ share goskare belyuk azamme. That rich(one) to flocks(?) goats cows(?) many were.
3. Aske känawäni manje e ightri waki axi, That of-no-account manto one female lamb was wäre $k \bar{a} \quad n a \quad a z i, \quad a s k e, \quad$ mãri preti, other anything not was, it, money having given, ingäti dor bisi aske mêgh aske ste ritra mẽgh having taken nourished (?) him with him of children with olu bunazi ; aske ste yuwã̃ tã̃ je aske ste karud $\overline{\tilde{a}}$ pinazi; aske big grew ; him.of food and him of cup did drink; him ste pazhi pshunazi; aske ste ju bamri azi. to bosom in did sleep; him to daughter like was.
4. E vischā aske ārā manje $t \overline{\tilde{a}} \quad \bar{a} z e$; aske $\bar{a} r \bar{a} \bar{a}$ manje One traveller that rich man to came; that rich man amoste turtse $\tilde{o}$ shar $\tilde{a} \tilde{a}$ dã gosharã d $d \tilde{a}$ aske vischā $g \overline{0}$ own of flocks(?) goats of cows of that traveller for pretstagê bidile nakra; aske nalusva manje ste waki to give (?) not made; that poor man from lamb ingati amu tĩ bziste manje pta." having taken house to having come man (to) gave."
5. Aske wêl tã̃ Daud-e aske manje patsìr waģhe kra. That time at David that man upon wrath made. Nathan tā̃ vilaya "Imrā dugō̃ ku inē kudum karessa-bā Nathan to said "God for! he who this work shall have done janastas."
shall die.
$\begin{array}{ccccccc}\text { 6. Aske } & \text { gitē } & \text { kudyum } & \text { karessaba } & \text { je } & \text { shighik } & \text { na } \\ \text { He (who) } & \text { such } & \text { work } & \text { can have done } & \text { and } & \text { mercy } & \text { not }\end{array}$ saress shhto parē aske perla." knew four fold to him shall give."

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or five Käfir dialects.

| Käfir dialeot Norris). | Traieguma Kắir (Sir H. Lumaden) | Kaläsha Kăfir (Leitner). | Thibetan. | Sansorit. | Turkieh. | Greek. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| niar | gudda | gordokh | būngū | khara | khăr | onos |
| ... | eu; zu | ... | swā | gavah | arpa | krithe |
| berār | brāh | baya; | spun | bhrâtā | birader | phrator |
|  | goieta | gak | bã, | gaun | inak | bous |
| davali | dubli | tghnu | bălang | putri, duhitā | kis | thagater |
| soon | - tsun | sheon | grasmo khyi | kukkurah, sva | kyūpek | knon |
| ajeen | achi | êtgh | $\left\lvert\, \begin{gathered} \text { mig, } \\ \text { spyan } \end{gathered}\right.$ | alkgh | ain | omma, ophthal- |
| taula | fara | băbā | pha, yab | tātăh | bāba | pater |
| pay | kor | karr | rkangpa, zhabs | pādah (hand, karah). | ayak | pous |
| -e | ain ; ai | angàr | mē | agnih | ātish | par |
| ana | ... | moss | sha | mãsa, anna | ēt, lãhm | kreas |
| ... | ohok | trhai | shra, spu | kesah | tūē | kome |
| gooah | goah | hashsh | sla | asvah | àt | hippos |
| mor | hai | aya | mă | mătā * | ninah | meter, |
| .. | wuh | lon | tshā | lavanam | tūz | hale |
| sus | ${ }^{\text {sus }}$ | bāba | aohhe | 8vasă | kizkardâsh | eores, kasis |
| ... | tărräh | ... | skarma | tärā, riksham | sitārah | aster |
| yar | an | ūg | chhu | appah, nda | $\overline{\mathrm{a}} \mathrm{b}$ | budor |
| gūn | gnm | -.. | tro | godtūma | gahdum | paros |
| mishi | mushai | strija | bhomo | stri | kāri | gane |

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#### Abstract

APPENDIX IV. $\rightarrow-$ The Lord's Prayer in the Bolor (Käfir), langwage (Terentief), and remarks on the Bolor Country.


The following is a translation, as given in " Russia and England in Central Asia," (M.A. Terentief), of the Lord's Prayer into the " language of the Bolors or Siāh-poebh Kāfirs." It does not agree with the Waiguli or Baghgali dialect as recorded in any book which I have seen. There are no diacritical marks.

Babo vetu osesulvini. Malipatve egobunkvele egamalako. Ubukumkani bako mabuphike. Intando yako mayenzibe. Emkhlya beni, nyengokuba isensiva egulvini. Sipe namglya nye ukutiya kvetu kvemikhla igemikhla. Usikcolele isono zetu, nyengokuba nati siksolela abo basonaio tina. Unga singekisi ekulingveli zusisindise enkokhlakalveni, ngokuba bubobako ubukumkhani namandkhla nobungkvalisa, loude kube igunapakade. Amene.

Bolor has been called the will $0^{\prime}$ the wisp of geography and the symbol of controversy.

The following is a list, etc., of some of the many works which treat of it.
Padthirr.-Le livre de Marco Polo, 1307 A.D. Paris, 1865.
SHaw, R. B.-A Prince (Mirzā Haidar ; Tarikh-i-Rashidi, 1543 A.D.) of Kashgar, on the Geography of Eastern Turkestan. R.G.B., Volume XLVI, of 1876.-Bolor is mentioned as co-terminous with the Yarkand Province of Raskam and Taghdumbäah. It included the present district of Kāfiristān., According to Mirzā Haidar the country of Bolor corresponded with Därdistān.

Klaproth.-Magasin Asiatique, 1825. Tome 1er.-Bolor is southeast of Yarkiang and east of Badakhahān, and Baltistān is south of it.

Vigire, G. F.-Travels in Kashmir, Ladāk, eto., 1842.
HymboLdt.-Asie Centrale, Vol. II, p. 365.-Système des Montagnes du Bolor.

[^96]Raverti, Captais H. G.-Notes on Käfinistan, Journal Asiatio - Society, Bengal, 1859, and Account of Jpper Qashqar, etc., Journal Asiatio Society, Bengal, 1864.

Cunningenm, General Sir A.-Ancient Geography of India, 1871.Bolor is little Thibet.

Ludwig, Grobar Von -.-" The Pamir and sources of Amu Darya, 1861," and "The Bolors and their Oountry, 1868," being articles woritten by M. Veniukoff, based on "Travels through Upper Asia from Kashgar, Iaghbalyk, Bolor, Badakhshan, etc., by George Ludwig Von -," published in Journal of Imperial Geographioal Socioty of St. Petersburgh and translated for Journal R.G.S., London, 1866.

This purports to be an account of a journey made about 1790 A.D., through various countries, including Käfiristän.

A map is given which locates the town of Bolor 130 miles north of the town of Ohitral.

Arrowemite, J.-Map of Central Asia, 1834 ? 1840.-He had permission to examine and embody in his map certain information by George Ludwig Von-, which has since been shown to be misleading. In this map the town of Bolor is shown about 90 miles north of the town of Chitrall; the Bolor river (rising near it) flowing about 100 miles to the north; and the Bolor range on its east, running for abont 120 miles north and sonth.

Rawlinson, Major.Grneral Sir H.-The Pamir Region, Oentral Asia, Pro., R.G.S., Volume X, 1866, and Volume XVII, 1873. On Badakhghan and Wakhan.-He considers the Memoirs by Veninkoff on the Pämir Region and Bolor country are not to be trusted for certain reasons.

Rawlinson, Sir H.-Quarterly Review, London, 1866.-Reviews a variety of writers, including George Ladwig Von -. He considers the information given regarding Bolor, Vaķhăn, Badokhakăn "involved in inextricable confusion," etc., etc.

Khanikofy, M. de.-Letter to R.G.S., London, in re the above criticisms, 10th April, 1866. Pro. R.G.S., 1866.-He upholds Veniukoff and George Ladwig Von -, a map by whom is produced, dated 1806. Lord Strangford (Pro., R.G.S., 1866, p. 317) thinks Khanikoff's vindication untenable.

Vmideorf, Colonel--Additional ramarks, 1867, on the Bolor Highlande, translated from publications of Imperial Geographical Society $\mathbf{S t}$. Potersburgh, by T. Michell, Esq., R.G.S., Volume XIII., 1869.-Thir hap
a map which locates the town of Bolor 290 versts north of the town of Chitral and 100 versts east-north-east of the town of Badakhahān.

Strangrord Viscount.-Pro., R.G.S., London, Volume XIII of 1868. -Severely criticises the papers above referred to by Veninkoff.

Yoly, Colonel H., C.B.-The Book of Ser Marco Polo (translated), London, 1871.-Marco Polo locates the country of Bolor E. N. E. of the Pamer, peopled by savage idolaters who "are in truth an evil race"; but, in a map of Marco Pole's itineraries at page 168 of Volume I, the town of Bolor is shown at least two degrees North of Kafiristan and two degrees West of Pamer. Bolor possibly included Balti and the mountains adjoining Pamer.

Yole, Colonel H., C.B.-R.G.S., London, 1872, Volume XLII.Reyiews various works, devoting 7 pages to the proper locality of Bolor.

Shaw, R. B. (F.R.G.S.)-Oentral Asia in 1872.' Pro., R.G.S., 1872. -The City of Bolor may now be allowed to "fade into a mist of confusion."

Rawlinson, Sir H.-Monograph on the Oxus. Journal R.G.S., Volume XLII, 1872.-Part of this is written to show that there has been a series of misconceptions regarding the locality of Bolor, a name in use from 10th to 17 th century, but obsolete ever since. It is the pivot for much sparious geography in Central Asia.

Michell, R.-Russian Expedition to Alai and Pamirs. R.G.S., Volume XLVII, 1877.

Pearse, Major H.-Memoirs of Alexander Gardner, 1898.
Biddulph, Colonel.-Tribes of the Hindoo Koosh: 1880.-Bolor had its centre in Skardo, which is commonly called Palor, or Balors or Balorats.

Holdici, Colonrl Sir T. (R.E.)-Proceedings Pāmir Boundary Commission of 1896, Calcutta, 1897.-The name of the great meridional watershed dividing the Orus basin from the plains of Kaehgār has varied through different periods of history. Its classical name was Taurus and its medieval name Bolor Tagh; in more recent years the Nezatash or Pämir or Sindi Range; and latterly Sarikōl. It now forms China's west boundary. The Pãmirs formed part of the medieval kingdom of Bolor, which again was part of the Yuchi Empire of Tokharistan. The limits of Bolor are clearly given in the Tarikh-i-Rasbidi by Mirza Haidar, cousin of the Emperor Bäbar. The country of Bolor then ( 1525 A.D.) was bounded east by Kaabgar and Yarkand, north by Badakhahan, weat by Kabul, and south by Kaghmir. It was inhabited by a clage of
idolatrous people whose description agrees with that of the Káfirs of the - present day. It evidently then included Kãfiristãn.

Alberon's India, (written about A.D. 1000).-Sachau's Translation. Vol. I, p. 207.-Leaving the ravine, by which you enter Kashmir, and entering the platean, then you have for a march of two more days on your left the mountains of Bolor and Shamilan, Tarkish tribes who are called Bhattavaryan. Their king has the title Bhatta Shah. Their towns are Gilgit, Aswira, and Shiltas, and their language is the Turkish.

Baron Cdrzon of Kedl bston.-The Pämirs and the Source of the Oxus, 1898.- Very many authorities are quoted, and the opinion arrived at that Bolor included Kăfiristān, Upper Ohitrāl, Yàsin, Gilgit and Hunza Nagar.

## APPENDIX V.

The following prayers, etc., in the Kämik (Kamdeah ?) dialect have been procured by C. Rose, Esq., Superintendent, Postal Service, Chitral :-
 hast made me; thou art seated above; good do to me.

3. Tu sun mäleh. Oyo mare raja.

Of thee of gold (is) crown. Than all greater thou art. Imo! sun màleh. Tu sun mäleh. Oh God! of gold (thy) crown. Of thee of gold (is) crown. Mirro (Imro?) sōnē train. Oh God! of gold (is) thy throne (?).
4. Prater for oneself-

Imra emo darboh. Imroh kurān darboh.
Oh God! to ns do good. Oh God! to our children do good. Emo ishtri darboh. Emo balogh ara To our wives do good. To us much wealth vargas. Emo atra pisāo. Eta le do (give) for us. Of ns enemy destroy. To us good vargas. Emo lati le gas. Emau ga di
do. Of us harvest good bring. Of us herds too le gas; dasho di le yap.
good make; goats also good make.
5. Prater before setting out to kill a man-
Bālam Gish tu-e panishr bo!
Sotron

War God! thou before (ns) be! Of twice our number
probon! Gish *u shai
the strength give! Oh War-god! of thee head (in name gf) wam (winam?)

I strike.
6. Imprecation-

Mirro (Imro P)! inē pisão.
Oh God!. him kill.
7. Prayer befori setting odt to kill a man-

Imro! askè emauk b'dusht o jo ema jasht Oh God! him of us in hand (?) to kill machhkē.
deliver up. (?)
8. Prafer after failing to kill a man-

Imra! ōts nari manji.zam (aszam). Ísta kor
Oh God! I feeble man am. Of me nature (P) nätayan. Imra! tu aske pisão.
feeble is. Oh God! thou him kill.
9. Grage after filling a man-
$T \bar{u}$ koron kult.
Thou blessing (P) madest (i.e., by thy grace we killed him).
10. Hymn of rejoicing to Gish after killing an Ememy-

Sonè chen utro pitrash. Gish! Tu
Of gold eyed mother (thou) the son. Oh Ginh! Thee sho wao ushro alao shai news again (?) give (we recall) of pumpkin $\dagger$ the head pachen mashi lash.
(like) a-ball (?) a man thou strikest.

* When delivering a stroke.
$\dagger$ We reoall thou nsedst to cut off the heads of pumpkins (certain enemies) as easily as a man strikes a ball.

The following is the only Kāfir story whioh Mr. Rose was able to procure:-

Story of the Moon.
One day the sun and moon were bathing in a tank, when a man, carrying a bedstead, and his dog, passed by, returning from bis field. They asked him which of them, (the sun or moon), was the more beautiful. He replied that both were equally beautiful ; but again and again they asked him, and finally he said that the sun was a little more beautiful than the moon. On hearing this, the moon became angry, and took the man, with his bedstead and dog, away to the sky, where they still live in the moon
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## JOURNAL

OF THE

## ASIATIC SOCIETY OF BENGAL.

Vol. LXXI, Part I, EXTRA No. 2.-1902.

## THE PHILOLOGICAL SECRETARY.


"The bounds of its investigation will be the geographical limits of Asia: and within these limits its inquiries will be extended to whatever is performed by man or produced by nature."-Sik William Jonbs.

* Communications should be gent under cover to the Secretaries, Asiatic Society, to whom all oiders for the work are to be addressed in India; or care of Messrs. Luzac \& Co., 46, Great Russell Street, London, W.C., or Mr. Otto Harrassowitz, Leipzig, Germany.

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Part I.-HISTORY, LITERATURE, Etc.

EXTRA No. 2. - 1902.

## THREE EPISODES

## PROM

"CANDİ."


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# THREE EPISODES 

## FROM <br> THE OLD BENGALI POEM

## "CANDİ,"

TRANBLATED INTO ENGLISH

BY
E. B. COWELL, M.A., PROFREBOR OF BANBKRIT AND PRLLOW OF CORPUS CHRIBTI COLLEGA in the university of cambridge.

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## PREFACE.

Mukunda Rām Carravartip, ${ }^{1}$ some extracts from whose poems I wish to introduce to the English reader, lived in Bengal during the latter half of the sixteenth and the early part of the seventeenth century. He seems to have passed his life in the districts of Bardwān and Midnapur, and he commemorates in his works Mānsinh, the celebrated general of the Emperor Akbar, who became governor of the newly conquered provinces of Bengal, Bihār, and Orissa in 1590. But his poems tell us as little of the wars and conquests which fill the history of Akbar's reign; and which naturally engrossed the thoughts of the poet's contemporaries, as Spenser's "Faery Queen" tells us of the actual events which stirred men's hearts during the reign of Queen Elizabeth. Mukunda Rām's characters, in fact, live in a mythological world as far removed from the actual world of human life as those in Ovid's "Metamorphoses"; and the Goddess Candii continually appears upon the scene to help her votaries and confound their enemies, as if they were living in the earliest mythological ages. But all this is only the external form of the poem. Under this fanciful surface we come in contact with a solid reality; for there we may find a picture of Bengali village life as it actually existed in the sixteenth century, before any European influences had begun to affect the national character or widen its intellectual or moral horizon; and it is this vivid realism which gives such a permanent value to the descriptions. Our author is the Crabbe

[^97]among Indian poets, and his work thus occupies a place which is entirely its own.
" Quidquid agunt homines, votum, timor, ira, voluptas, Gaudia, discursus, nostri est farrago libelli";
and hence the poem forms in itself a storehouse of materials for the social history of the people as apart from their rulers. Wherever he may place his scenes-in Çiva's heaven, or India, or CeylonMukunda Rām never loses sight of Bengal; he carries with him everywhere the village life of his own early days. All family or village customs are dear to him, and his work is therefore a mine of curious local and social information; and his various characters, though they may appear as only passing interlocutors in the scene, always have a real life and personality of their own. In fact, Bengal was to our poet what Scotland was to Sir Walter Scott; he drew a direct inspiration from the village life which he so loved to remember.

I subjoin a translation of the passage at the beginning of the poem where the poet gives an account of his early career, and how he was forced to leave the obscurity of his native place and find a new home and a poet's fame in the court of a neighbouring zemindar.
" Hear, neighbours, how this song of mine first into conscious utterance leapt :
Candī came down in mortal form beside my pillow as I slept. Good Gopināth, the talūkdār, lived honoured in Selimäbād;
For generations seven his race the same estates and home had had. Dāminyā village was their home, far from the world a safe retreat, Until Mānsinh came to Bengal, that bee of Vishnu's lotus-feet. And in his days Mahmūd Sharif over the district stretched his hand; A local governor sent by heaven to scourge the vices of the land. Under his rule the traders groaned, his hand lay heavy everywhere, Brāhmans and Vaishnavas alike stood helpless in their blank despair.

[^98]His measures of all fields were false, his acre's rods were always wrong, And howsoe'er the poor complained their words were as an idle song. Waste heaths he reckoned fruitful fields; he passed across the land like Death;
The poor man's last rag he would seize; prayers to his ears were idle breath.
The moneylender's aid was naught ; his loans but added more to pay; Two annas short was each rupee, and then the interest day by day.
At last the ryots lost all hope; their hard-earned borrowings brought no cheer,
And if they tried to sell their stock, there were no buyers far or near. Good Gopinäth by some ill fate was thrown in prison; in wild surprise The ryots crowded round the court, but what availed their tears or cries? Stunned with the blow I sold my stock for little more than half its worth, And after counsel held with friends I left my home and wandered forth. I and my brother took our way ; 't was Caṇ̣ī led the helpless pair ; At Bhetnā Rūprāi gave us alms, and Jadukuṇ̣áa sheltering care. Adown the Gharāi stream we sailed, the Dārukeçvar next we passed; We stayed awhile at Pändurpur, and to Kucatyā came at last. There without oil I took my bath, water my hunger's only stay ; Hungry and faint my children wailed, but I was famished e'en as they. There near a lonely hermitage, hungry and scared, I fell asleep, When Candi in a vision came and bade me rise and cease to weep. A leaf she brought and pen and ink, and though I knew no Vedic lore, She taught me metres and their laws and bade me sing her praises o'er. The river Çilài then I crossed, to Ãrarā my way I found, A land with holy Brähmans filled, its lord like Vyās himself renowned, Bainkurā-rāy his honoured name; I paid my homage full of fear, And brought some verses in my hand, to which he lent a favouring ear. He gave me rice and paid my debts, and made me tutor to his son, And from that day Prince Raghunãth has stored my lessons every one. Dowered with all virtues from his birth, sages and nobles at his call, He greets me 'gura' from his heart and honours me before them all."

While Bābū Gobind Candra Datt resided in Cambridge some thirty years ago, I first learned from him about this old Bengali poem, and he kindly undertook to read it with me. We read
together more than half of it while he remained in England; and after his return to India I continued my studies alone, and he allowed himself to be my continual referee in all cases of difficulty. There were often obscure words and allusions, but he generally solved them all; and he sometimes amused me by his interesting accounts of the consultations which he had held with Calcutta friends over any passages of special obscurity. These attempts of mine to put certain episodes of the "Candil" into an English dress had lain for many years forgotten in my desk, until I happened to read Mr. G. A. Grierson's warm encomiums on this old Bengali poem "as coming from the heart and not from the school, and as full of passages adorned with true poetry and descriptive power." * This mention of my old favourite rekindled my slumbering enthusiasm, and I have tried to make my imperfect translations as worthy as I could of a place in the Journal of the Asiatic Society of Bengal. I shall be delighted if some younger scholar is roused to an earnest study of this fascinating poem.

With regard to the Bengali text, I may add that, although the "Candi"" is a favourite poem in Bengal, many passages appear to be more or less interpolated, and the readings of many lines are corrupt and obscure. I have generally used the edition printed at Cuncurā in b.s. 1285 (A.d. 1878), but I have often derived help from comparing it with the text in the common bāzär editions printed at Calcutta in Çaka 1789 (A.d. 1867) and b.s. 1286 (a.d. 1879). In my translation I have sometimes ventured to shorten the long descriptions, which are apt to become tedious.

[^99]
# THE OLD BENGALI POEM, CANDT̄. 

## I.

The hero of the first part of the poem is Kalaketu. In his former birth he had beon Nilämbar, the son of Indra; but for an offence committed against the god Çiva in heaven he had been born on earth as a hunter. He marrise a peasant's daughtor, Phullarä, and lives with her in a hut in a forest which appears to be situated somowhere in the kingdom of Kalinga. Hore he supports himself by his bow, and his wifo goes to the noighbouring village and sells the meat which he brings home. Thoy are plunged in the depths of poverty; but they are devout voorshippors of Candi, who is rosolved to interfere in their behalf. One day the hunter has especially bad luck and wastes the whole day without capturing any game in the forest, axcept a solitary lisard. This spoil, however, little as he thinks it, is to be the beginning of his good fortune, for Candiz has assumed this diaguise to befriond him. He returns home in sad disappointmont; and here we commence our first oxtract.

Famished the hunter reaches home, but finds, alas! his wife away, For she is gone to Golāhāt to earn a pittance if she may;
Soon she espies him from afar, and full of hope comes hastening home, But as she marks his empty hands her face is overcast with gloom. She smites her forehead with her hands, and bursts in tears for sheer despair : "Why with my husband still alive must I a widow's miseries bear? Where were the Ghatak's* senses gone so evil-starred a match to plan? My father must have lost his eyes to give me up to such a man!

[^100]My wedding gifts foretold my fate-turmeric, saffron, pān, forsooth;
I should have taken heed betimes, nor sold to poverty my youth."
With gentle words he comforts her, but still she sobs the same sad tale:
"There's not one grain of rice at home, and who will buy our goods when stale?"
"Bimalà's mother was your friend; think you, will she compassion take? Carry some present in your hand, a porcupine * for friendship's sake;
Old kindness may be not yet dead; who knows but she may hear and lend Some refuse rice to help our need; go toy your fortune with your friend.
Borrow besides a little salt and cook some supper for us both,
I'll go for you to Golāhät and bear your basket nothing loth.
And by the bye, packed in my net, you 'll find a lizard tied with care;
Take it and cook it with the rest ; 't will be a relish to our fare."

> She takes her humble present in her hands, And at her old friend's door in doubt she stands, When from within she hears a cheery shout, "Come in, I'm glad at last you' re found me out!" "A poor man's wife no time for calls can spare, Hunger absorbs my every hour and care." Her friend in welcome seats her by her side And decks her out in finery like a bride, Anoints her hair, and combs and binds her braid, And paints with red her forehead, as her maid. Poor Phullara, trembling, makes her errand known, And begs some rice-a bushel-as a loan. "Oh business for to-morrow," she replies, "Comb out my hair and tell your histories." Thus sat the friends, linked closely as of old, Each heart absorbed in all the other told.
> Meanwhile the goddess, left alone thus bound, Snapped with a shout the noose which tied her round;
> She was no more a lizard pinioned there;
> She stood a maiden now, divinely fair,

[^101]Robed in the costliest garb e'er dreamed by thought, Which at her will the heavenly artist * brought; Bright with all gems, a queen in all her pride, She stood that lonely hunter's hut beside.

Glad with the stock of borrowed rice she bore, Poor Phullarã reached at length her cottage door ; When lo! her left arm throbbed, and throbbed her eye, $\dagger$ As she beheld a 'full moon' standing by! Surprised she greets the lady with a bow, " What is thy name and whose fair wife art thou ?" Laughed in her heart the goddess as she stood, And mocked poor Phullarā in her joyous mood: " Of Brähman caste, Ilāvrit $\ddagger$ is my home, But all alone I love abroad to roam ;
Of honoured race my lord, none worthier lives; But what a household his with seven co-wives! § So, by your leave-your kindly heart I knewI've come to make a few days' stay with you !" As Phullarā heard the words the stranger said, The very skies seemed tumbling on her head;
Poison was in her heart, though mild her tone; No thirst nor hunger now ; all thoughts of cooking gone!
"What, such a youthful bride as you in a strange house like mine to stay! Tell me, fair lady, how you dare unguarded and alone to stray? That waist of yours waves in the wind, poised like a stalk so light and fair; No lion's waist is half so thin, and scarce its burden can it bear. The bees forsake the jasmine flowers and to thy lips by hundreds fly; Thy moon-face wears its gentle smile like summer lightning in the sky. Those glossy curls, like dark blue hills, wreathed with white jasmine flowers-I swear
Fate wished to prove her power and fixed the flickering lightning in thy hair!

[^102]Far brighter than the elephant's gems gleam with a lightning flash thy teeth, While red like bimbas * shine thy lips, a nose-ring gem thy nose beneath.
The gauze-like dress that veils thee round and adds a charm to every limb;
The pearl-like shells upon thy hands,-all makes my mind with wonder dim!
Say, art thou Urvaçī come down, or Umã dressed in all her sheen,
Indrān̄ī or Tilottamā, $\ddagger$ or say what other heavenly queen?
I cannot fathom in my thought why you have left your husband so?
Oh I entreat you, tell me true, what spell has brought you down thus low?
Was it some burst of jealous rage? But if meanwhile of grief he dies,
Who is to tend his dying hours, as at the ghät he languid lies?
Was it some crabbed mother-in-law or husband's sister's scolding tongue?
I will go with you to your home and try my best to right the wrong."
"How many questions more?" she said; "here in jour house I'm come to stop;
Your husband's griefs have pierced my heart, I'll bring him wealth beyond his hope.
But would you know the ills I bear? My husband has a favourite wife, § Gangā her name, a crown to him; but all the house she fills with strife. All day she storms, and he the while eats poison at his wild carouse: What wonder that I banish shame and hurry headlong from the house?
Alas that I was ever born, a helpless woman doomed to be, Myself despised, my rival loved! have I not cause for jealousy?
My cruel father knew full well the hated rival I should find, And yet he gave his daughter up, no faintest scruple moved his mind. Rich is my lord, and seven co-wives live with him in what peace they may, Each hating each, their railing tongues are never silent all the day. He eats datura ** till his brains are addled, and he wanders on Drowsily mooning in a dream, but glad to find himself alone.
With ashes is his body spread, with bones benecklaced round his throat; Thank heaven, he wears a tiger's skin which serves alike for shirt and coat.
Snakes form his wreaths, he beats his drum, and laughs all worldly joys to
scorn;
The god of love ne'er ventures near, he knows him for his foe long-sworn.

[^103]My rivals beat me as they will, he sees and hears, but does not care; A house with seven co-wives within,-there's fever-poison in its air. Destiny was my cruel foe, and in a hopeless desperate mood I recked not of the consequence, but fled alone into the wood.
I met by chance your hero there; himself he brought me with him here; Go ask him, and refuse me not, for I have refuge none elsewhere."
"Not so, I'll teach you what to do, and send you safely to your home."
Her inmost thought the goddess knew, and said, "To stay with you I've come.
Eat to your fill henceforth, for I will all the house expense provide;
Receive me as no stranger-born, but as a friend, one close allied.
I'll go before your husband's steps, in all his perils I'll be nigh,
In all his conflicts in the woods a certain sign of victory.
List, I will toll you who I am, if further history you want;
I at Benares live concealed, my husband is a mendicant.
Wealth of a hundred kings is mine, more than would buy the world," she saith;
"Such wealth I'll give you; in return I only ask for trust and faith."
Phullarã. "I'll tell you what is best to do; back to your husband's house return;
This will bring comfort in the end, as you, though now perplexed, will learn.
If you forsake your husband's house, how will you show abroad your face?
A husband is a woman's lord, her guardian, her one resting-place.
Others are nought compared to him; he in both worlds can bring her bliss;
He may chastise her as he will, for a king's right and duty this.
Have you not heard how Sītā once was carried off by Rāvaṇ's guile
And forced to live a prisoner, shut up in Lankā's far-off isle;
How Kāma slew the ravisher, but only took her back as queen
After th' ordeal fire had proved how spotless bright her truth had been?
And even then some base-born carle could still so deeply sting his pride;-
Desperate he drove her forth again a lonely outcast from his side.
What, shall a lady born like you, so noble, so divinely fair,
Be angry like some low-born scold and fling her honour to the air?
E'en if a low-caste woman stay in a strange house a single night, The neighbours point at her with scorn, and all her kindred hate her sight. Go, you have done a thoughtless thing; believe me, to return is best, And if 'your hated rival scolds, pay back her jibes with interest.

Why in a passion leave your home? you sacrifice your all-for what? Poisoning yourself for spite to hor; and will the rival care one jot $?$ ". The goddess answered : "I am come, because I cannot bear to see Your noble husband thus beset with all the ills of poverty. And list; I met him in the wood, 't was he himself who brought me here; Ask him yourself; if he denies, I'll go and seek my home elsewhere. Say what you will, I mean to stay; my wealth shall all your sorrows cure; I am a lady as you say, and I will keep my honour pure. I thank you for your good advice, but keep it for some future day; You may require it all yourself ; fear not that I shall lose my way."

With sad forebodings, next, th' unhappy wife Gives the year's history of her struggling life : "See this poor hut; a palm-leaf thatch atop; One ricinus * post within its only prop; How mid such squalor could you bear to stop? Baiçākh $\dagger$ (1) begins my misery's calendar: Dust-storms sweep by, the suns more fiercely glare; But howsoever fierce o'erhead the heat I with sore feet must go and sell the meat; Ladies may sit 'neath shady trees, but there How should I find, alas ! a customer? E'en in the villages they scarce will buy, 'Who would eat flesh in Baiçākh?' is the cry. These rags ill shield my poor head from the sun;Baiçākh is poison : this for number one. Jyaistha $\ddagger$ (2) is worse; for fiercer still its rays; And I, however thirsty 'neath their blaze, Yet dare not set my basket down to drink, Or kites will empty it before I think; Jyaisṭha's a fasting month to me perforce, No month of all the twelve to me is worse. Next comes Āsārh (3), to soak the fields and roads; And e'en the rich in their well-stocked abodes

[^104]Feel, as they watch their stored provisions fail, The ills which all the year the poor assail. I trudge to sell my goods from door to door, Thankful for refuse rice, nor hope for more. The leeches bite me as I wade the plains; Would 't were a serpent's bite to end my pains! Down pours the rain in Çrāran (4) night and day; Bright or dark fortnight, which is which, I pray! But I must bear my basket, wet or fine ; Rags soaked, a never-ending shower-bath mine. And if the rainfall stops a while o'erhead, Down come the floods to drown us in our bed. In Bhädrapad (5) yet fiercer rainfloods fall; Rivers or atreams, one deluge drowns them all. How can I tell you half our lot of dour? Brahma was angry, so he made us poor. Āçwin (6) is Caṇ̣i's month, and everywhere Rams, buffaloes, and goats are slain to her. All women put their finest dresses on, All except me; poor Phullarā alone Must rack her brains for food, or famished die; With all these victims, who my goods will buy? Kärttik (7) begins the winter; young and old Get their warm wraps to shield them from the cold. Heaven gives good cloth to all save only me;
But some deer's skin my winter cloak must be. I crouch to warm my blood with head on knees, Or shiver in the sun and slowly freeze. Kind Märgaçirs (8) of all the months is best: Now I can eat my bellyful and rest; Indoors or out, there's food enough, no stintOnly the piercing cold, death's self is in't. I wrap my tatters round me, but they tear, And, as I clutch them, split and leave me bare.
In Paus (9) the winter's at its height; meanwhile All men in various ways the cold beguile;
As oil to rub the limbs, or warm attire, Strolls in the sun or betel by the fire;

All others keep the winter cold at bay, And only I must bear it as I may. I buy an old torn mat* with venison; Its dust is smothering when I put it on; Ah! surely fate to women is unjust! I scarce can close my eyes at night for dust? Then Mägh (10) is dreadful with its fogs and mists ;
Let the poor hunter wander where he lists,
He finds no deer to catch, for sale or food;
Nor find I herbs to gather in the wood.
Oh Mägh's a piteous month for hanting men;
No one wants flesh, for all are fasting then.
Phālgun (11) makes most fall ill; but as for me,
How could I tell you half my misery?
Fierce is the cold; I pawn in sheer despair,
For refuse rice, my stone and earthenware;
My plates and dishes I must all resign!
Oh what a miserable lot is mine!
I dig yon hole $i$ ' the ground, and when I sup
Pour the rice gruel in and lap it up!
In Caitra's (12) month the soft south breezes blow,
In the sweet jasmine flowers the bees hum low;
And with the spring's soft influence in their heart
Maidens and youths are lovesick, though apart;
All joy save me, but I for some old sin
Must think of hunger's ravening pange within."
The stranger heard to th' end, then said at last :
"From this day forth these woes of yours are past!
Think of them as a something now no more, Henceforth you share in all my ample store!"
Her face all soiled with grief and jealous fears, Poor Phullara poured a passionate burst of tears;
In sudden frenzy from her door she fled,
And in wild haste to Golāhāt she sped,
And found the hunter, who in strange surprise
Stared at her broken voice and streaming eyes:

- The khosala is a coarse mat used by the poor to sleep on, and sometimes also worn for clothing in cold weather.
> "You have no sister-in-law, nor rival wife; Whom have you quarrelled with in deadly strife?" "I have no rival wife at home but you; Fate has indeed been cruel, you untrue! Waking or dreaming-heaven my words will proveYou never found me faulty in my love! How have you turned your heart to villany? Why thus become a Rãvaṇ's self to me? Whence this young wife and all her rich array? Beware, the ant gets wings, but falls a prey.* Kalinga's cruel tyrant watches near; He will soon strip you bare, if once he hear." "Come, wife, and tell the truth, deceive me not, Or I will beat you soundly on the spot."
> "Yama be witness: at our door at home
> A lady stands now waiting till you come." Poor Phullara, when she flew to reach her lord, Had with her brought her basket and her board : Homeward now start the two, this guest to find, But board and basket both are left behind! She leads the way in eager hurry back, While Kālu, $\dagger$ pondering, follows in her track. They reach the hut; 't is filled with dazzling light, As though ten thousand moons illumed the vault of night.

With lowly bow of reverence he thus addressed the stranger fair:
"A poor and lowly hunter I; tell me, bright lady, who you are; And why, yourself of brähman race, or, it may be, of race divine, You with your peerless beauty come and enter this mean hut of mine. This house betrays my bloody trade; a lady, if she steps within This cemetery strewn with bones, must bathe to cleanse away the sin. Go home in haste, while yet the sun lingers in yonder western sky; Go home, I pray, or slanderous tongues will hunt you with their hue and cry. Did you come here, fatigued, to rest? howe'er it be, I pray you, go; Phullarā glad will go with you, and I will follow with my bow.

[^105]Think of poor Sitä ; 'gainst her will the cruel fiend his victim bore, But all th' ordeals she endured could not her once-lost home restore. Women's good name is only kept, like an old dress, with ceaseless care ; * Thoughtlesaly handled or exposed too often, each is apt to tear."

The goddess heard in silence all he said, And as in shame before him bent her head;
Impatient now with folded hands he cries:
"I cannot read your meaning 'neath this guise;
But be it what it may, I care not, so
You only leave this house of mine and go.
'T is yours to keep your name and honour pure;
Be true yourself, and they remain secure.
But 't is not well here in such guise to come;
And why, when questioned, doggedly thus dumb?
Some noble's mansion your own dwelling is;
What can you want with a mean hut like this?
The wealth of kings is round your person hung,
And yet you stray alone, so fair and young;
Have you no fear of robbers as you roam?
Low I implore you at your feet, go home."
Still stood she dumb; enraged, the hunter now
Paused not, but fixed an arrow to his bow;
Then to his ear the fatal shaft he drew,
Calling the sun to witness ere it flew.
Lo! the bent bow grows rigid in his hands,
And like a painted archer, there he stands!
His palsied muscles mock the will's control,
And tears proclaim his baffled rage of soul.
In vain he strives to speak one syllable,
Body and soul are smitten by a spell.
In vain his wife would take the bow away;
He cannot yield it; it perforce will stay!
The all-gracious Mother now at last they hear
Speak in her real voice and stop their fear:

[^106]"Know I am Candī, your true constant friend, I come to give you blessings without end. This ancient forest which now darkens round Thou shalt cut down, and there a city found. To each man give a cow and rice and land, And rule thy people with a father's hand; While every Tuesday shall henceforth be mine, For solemn sacrifice and worship at my shrine."

Canḍi then shows the hunter where a great treasure lies buried in seven jars, and she helps him to carry them to his cottage. The next morning he takes a ring from one of the jars and goes off to a moneychanger to turn it into hard cash to meet his immediate necessities. But the neighbour owes the hunter an old bill, and gets out of his way, thinking that he is come to dun him for payment.

Poor Kālu calls, " Where is my uncle, pray?
An urgent need has brought me here to-day." "Alas!" the wife replied, "too late you've come, Early this very morn he left his home. A sudden business called him, to my sorrow, But he will pay your little bill to-morrow. Meanwhile we've need of wood, so bring some more, And by one payment he 'll discharge each score." "I'm very grieved to hear that he's away, My business will admit of no delay;
I came for ready cush a ring to sell;
Some other friend will serve my turn as well."
Smiling, her manners she began to mend, "A ring? pray wait a minute, my good friend." Hearing the sound of gain, by some back gate Her husband now comes running up elate, Eager for this new customer with his ring, And carrying scales and purse for bargaining. " $O$ nephew, is it you I see at last? How have the days dealt with you as they passed ?"
"Uncle, I start betimes with net and bow, And roam the woods until the sun is low,

And Phullarā plies her trade, her gains are small, And both come home too tired to make a call.
But I have brought a ring for you to see,
You'll help me in a great perplexity.
Deal with me, neighbour, like a generous man, Weigh it and please allow me all you can."
The merchant takes it, and, intent on gain, Carefully notes the weight to its last grain.
" No gold or silver is this ring of thine,
Only bell-metal polished till it shine.
Ratis sixteen it weighs-heaven prosper us-
With two rice grains besides as over-plus;
Now forty cowries are each rati's rate,
And twenty cowries pay the extra weight.
So that makes eight times eighty plus a score; Then there's your little bill adds thirty more.
I dare say part in money will suffice,
I'll pay the rest in whole or broken rice."
The hunter thought, "A pretty dream, I wis;
Are the seven jars at home all false as this?" Aloud, "Your offer in your face I fling,
I'll go and take the fellow back his ring."
The merchant said: "Five cowries more I'll pay;
Come let us deal, I'm honest as the day;
I and your brother oft have dealt, 't was he Who told me what a bargainer you could be."
"Come, give me back my ring, and do not frown;
I'll show it to some other in the town."
"I 'll add yet fifty more, upon my soul;
All in good cash, no broken rice nor whole."
His hands already seemed to grasp the prize,
But Caṇdī laughed with Laksmī in the skies;
And a clear voice he heard from heaven which told, " Think not to cheat the hunter of his gold;
Give him seven crores in cash, at once paid down.
Caṇ̣ī has given it to him as his own;
So shall thy wealth be largely multiplied."
The merchant heard the words, but none beside;

He tarned to the hunter, "I was but in jest, Take these seven crores, and may thy wealth be blest." He paid him down the coins, all true and good, And bade him fetch the oxen for the load. Homeward the hunter hastened with a will, But the good news flew even faster still; Where'er he went he found the farmers there, And every ox is pressed its load to bear; They crowd around the money-changer's door, And into ready sacks the gold they pour; Then to the hunter's home they bend their way, And there he stores his wealth as best he may; While every friend in need receives his fee, And every heart is glad with sympathy.

I here close the first extract, but the original goes on to describe at some length the hunter's adventures after this accession of good fortune. He obeys the goddess' commands and cuts down the forest and founds the city Gujarät in her honour; colonists flock to inhabit it and secure the privileges which he offers them. Amonget them comes one Bhäinu Datt, and I add a short passage which describes his introduction of himself. It will show how the poem abounds with picturesque episodes, some of which a little remind the reader of Dickens' wealth of minor characters.

Among the foremost Bhäñru Datt comes with choice plaintains in his hand, And in the rear to back him up his brother-in-law close takes his stand; With a broad hem sown on his rags, his pen stuck ready in his ear, Impudently he makes his bow, "Good uncle, hail!" as he draws near. A tattered blanket is his dress ; a quiet smile lights up his face;
He waves his arms repeatedly, and in loud voice thus pleads his case:
"Hopes of your favour bring me here, under your rule to find a home;
Learn that my name is Bhäiru Datt-you 'll know it well in days to come.
The Kāyasthas from far and near below my place are furced to fall;
In family, judgment, moral worth, I am the leader of them all.
Blood of the three best families flows in my veins free from all flawBoth of my wives were ladies born, a Mitra is my son-in-law.

All Kāyasthas on either bank of Ganges stream can eat with me;
I claim them all as kin, and they give us their daughters willingly.
My family's stock has many shoots-wives, mothers, brothers! it makes me pant!
Six sons-in-law with families-seven houses is the least we want. Please give me oxen and a plough, let basket, pedal, fan be sent; My gracions lord will nowhere find a worthier recipient."

But, like Sancho in his island, the hanter has little knowledge of the world, and his officials, Bhäniru Datt especially, grievously oppress the people ; at last his feudal lord, the King of Kalinga, invades the province, and Kälaketu is conquered and thrown into prison. The goddess Candī, however, appears in a dream to the king, and her votary is restored to his people; and at his death he leaves his little kingdom to his son.

## II.

The second part of "Candi" begins, like the first, with the fall from howeon of the nymph Ratnamala, who, for a forgetfulness in her dancing before Siva and Durga, is condomned to be born as a mortal on the oarth. She is agonised at the sentence, but Durgà promises to protect her, and bids her oproad her guardian's worship whorever she is. The nymph is accordingly born as Khullana, the daughter of Rambhävati, who is the wifo of Lakshapati, a riok morchant in Icchani, in tho district of Bardroän.

For seven months Rambhāvatī feeds her herself;
She was overjoyed when she saw her child's first teeth.
When the year was complete the child runs about from place to place;
She eagerly puts on various kinds of ornaments.
Two, three, four, five years go by,
She plays in the dust with her girl-friends.
In her fifth year they pierce her ears,
And every day she puts on beautiful dresses.
Khullanã grows from day to day;
When six years had passed, one could not describe her complexion,
She was beautiful without any ornaments.
One cannot give any simile for her, she is the furthest limit of beauty, the moon shines in her face.*

As she grows up to girlhood, her parents anxiously look in all directions for a suitable son-in-law ; but the years pass by and Khullanä still remains unmarried.

In the meantime Dhanapati, a merchant of the neighbouring town of Ujāni, had married Lahanā, the daughter of Lakshapati's eldest brother. They had no children, but Dhanapati was high in favour with the raja of the district.

[^107]The following adventure introdaces him to the reader :-
The merchant and some gay young friends forth sally one bright holiday, Bearing their pigeons in their hands, to wander in the fields and play. Leaving their palkis they alight and fly their birds in aimless fun, Their garments and their ornaments slip down unnoticed as they run. Then "Let each hold the female bird," he cries, "and let the other fly, And whosesoever bird comes back the first shall win the victory." The city lads troop round to see and clap their hands in wild delight; Up flies the merchant's pet white bird, nor lag its fellows in their flight. Each player holds the female bird in his left hand a prisoner fast, While the male pigeons soaring up dart to and fro in hurried haste.
None had as yet turned back, when lol a falcon hovers in the skies:
At the fell sight the birds disperse, each for dear life in terror flies.
Flies like the rest the merchant's 'white,' and towards Icchăni speeds its way;
Through thorns and briars, with upturned face, its master follows as he may. Holding the female in his left, he calls and calls, but calls in vain;
Walls, fences, ditches stop him not, he struggles on through grass or cane, And close behind his brähman friend Janärdan toils with might and main. Just at that moment Khullanā was playing, by a strange good hap, With some girl-playmates out of doors, when drops the pigeon in her lap; She covers it beneath her dress, and while the rest in wonderment Crowd round about her, she runs home to hide the prize good luck has sent. The merchant follows after her, charging her with the robbery; " Why have you stol'n my priceless bird? were I to lose it I should die. Come, give it back, for, if I'm forced the theft in earnest to report, $I$ am the merchant to the king, and great my influence at the court. Come, give it back, and end the jest; I see it hid beneath your dress. You know I must not venture force, 't would break all rules of politesse." Smiling, she whispers to herself, "My cousin's husband, who can doubt?" And then aloud, "Your favourite bird you must e'en learn to do without. It will not be your meal just yet; thank heaven you 'scape that guilt to-day; It grieved my heart to see you run like some low fowler for his prey. It came a suppliant to my breast-a suppliant is inviolate; This is a rule which overrules e'en merchants of the royal gate. Still, if you'll turn a suppliant too, and all these highflown airs forget, And come with straw between your teeth, I may give back your pigeon yet."

The merchant, guessing who the girl must be, Takes smiling leave; and, sitting 'neath a tree, Hears all the neighbouring gossips' tongues astir, But scandal's voice has only praise for her. Then to his brāhman friend he turns for aid, "Try your best skill to win me this fair maid." Proud of th' important message which he bore, Janärdan hastens to the father's door. There he is welcomed with the honours meet, A seat is brought, and water for his feet; And the pleased father shows his eldest son, And names his other children one by one. Still some vexed pride inflames the Brähman's mind, Proud of the embassy he kept behind: "Is this your welcome for an honoured guest? Where are your robes, pān, sweetmeats, and the rest?
Am I not come on marriage business bent, With offer of a noble settlement?
Your daughter there is twelve years old, I hear ;
And still unmarried-can I trust my ear?
Happy that father who has safely given
His daughter to a husband when she's seven ;
She needs no dower to lure the buyer's eyes,
Kind speeches are enough with such a prize. Happy, too, he who weds his child at nine,*) He saves the funeral honours for his line, And for himself wins happiness divine. But you, poor dreamer, blind in heart and brain, Have let ten years, eleven, pass in vain.
Nay, worse than this, you've let the twelfth year come, And still she lingers in her father's home.
A girl of twelve unwed!-remember hell,You as the father are responsible."

The father answered: "You speak well; I will do all a father should. Look for some fitting son-in-law in Bardwān or its neighbourhood."

[^108]Of eligible sons-in-law Janärdan then recounts the list, But none are worthy of the prize; each is found wanting and dismissed. "Of all the merchants of renown on either side of Ganges' stream, Like Dhanapati none I find-in wealth, rank, virtue, none like him. Ujăni is his native place, the foremost merchant of the land, Pious to brähmans and to gods, like Karna liberal of hand; Truthful and just in all his ways, of dramas fond and poetry; Lives not on earth the son-in-law worthy of Khallanā but he." The father heard with gladdened heart the praise of such a paragon: "Arrange the marriage if you can, forthwith secure him as my son." Meanwhile, concealed behind the door, his wife o'erheard the conference; Little did she approve the scheme, and vehement was her dissidence.
"How could you ever give consent or waste your breath with such a man?
I will not sell my child like this-was ever such a monstrous plan?
What's all your boasted learning worth? it only makes you more a fool; Think of my giving up my child to bear a hated co-wife's rule! Lahanä's tempers and her storms-'tis not your learned books can show; What your own brother's daughter is, who half so well as I can know? A foolish thing is this you've done; you've heaped disgrace upon your head; How will you show your face abroad or bear the taunts which will be said? I' $d$ rather tie her round my neck and plunge with her in Ganges' wave, Than give her thus to misery, a hated co-wife's drudge and slave. Oh do not listen to the scheme, nor let your judgment be beguiled; With such a tigress in the house, what would become of our poor child? Khullanà's like a gentle fawn, and would you for a flattering tongue Tie such a noose round foot and neck, and do your daughter such a wrong? Give her the husband she deserves, so shall our daughter's heart rejoice, You shall gain merit by the deed, and men will praise you with one voice."
"It cannot be,-the astrologers have read the story of her life,
' T is written in her horoscope that she must be a second wife."

The mother feels her last appeal is spent, And gives reluctantly a sad consent. This hindrance smoothed, the father next in haste Invites the future bridegroom as his guest. He spread a bright red blanket for his seat, Water one brought, another washed his feet.

Rambhā in secret scrutinized his face, And sent to call the matrons of the place. From street to street the maid the message bore, And trooping come the gossips to the door; Their garments in disorder and their hair Loose streaming in their hurry to be there; This had one bracelet and one anklet on, That had one eye with powder, one with none; One leaves her hungry babe, nor heeds its cries, One bears her baby with her as she flies.
The invitation comes by name to few, But all the neighbours hear and flock to view,
Ard each is welcomed with the honours due.
Each sees the bridegroom as he sits in state, And every one wends homeward, heart and soul elate.

The author next describes the angry grief of Dhanapati's childless wife Lahanä, when she hears from her neighbours that he is thinking of a second marriage, and that the new wife is to be her own uncle's daughter. At first she upbraids her husband with his inconstancy:-
" You have forgotten all your vows, but not for fault of mine; 't was fate, Who made not woman's youth and life run side by side, of equal date. When the sun sets, the lotus fades nor stays to see itself undone; But, when the palm has lost its youth, its withered leaves still linger on."

She is, however, consoled by the gift of a silk dress and five pans of gold to be made into a bracelet. The ojjhā or astrologer is next sent for, and he goes with Janärdan, the family priest, to the house of the bride's father to fix the day for the marriage. The astrologer announces that the next year, as a 'seventh year,' will be very unlucky, which terrifies the father, as his daughter will then be twelve years of age. The marriage, therefore, is hastened in order to fall within the current twelvemonth, and they finally fix on the 21st of the current month, Phãlgun* (which corresponds to part of our February and March). The poet now proceeds to describe the marriage itself, beginning with what takes place in the bride's house :-

[^109]Lucky the hour and lucky is the day, And all the household wear their best array; By Rambhà's care, in garments turmeric-dyed, The daughter 's seated by her father's side. And now the matron-world come flocking in, Their shouts of $O l u$ rise in cheerful din,
While the invited guests from far and near Come trooping up to share the festal cheer. The drum, lute, pipe, gong, cymbals, conch, and bellsEvery known instrument the concert swells;
The deafening sounds the house tumultuous fill, While dancing girls display their agile skill.
Next, to the Sun the offerings due are given, To Ganẹ, Brahma, and the planets seven,* And her $\dagger$ who guards the children, power benign, The churning stick set upright as her sign ; While chanting priests the Vedic texts repeat, And the nine offerings place in order meetEarth, perfumes, stones, rice, dūrbā grass, and flowers, Fruits, ghì, and curds-to please the heavenly powers. Next silver, gold, a mirror for the bride, And pigments, yellow, red, and black, beside; Cowries and shells, whose hues were ne'er surpassed, And a full dish, with lighted lamps, the last. In a clear voice the Brähmans chant the Ved, The while Janärdan binds their hands with thread. Next to the Mothers $\ddagger$ offerings are addressed, To Ruci, Gauri, Padmã, and the rest, And to the Nändīmukhs § are set to fall The seven due lines of ghi along the wall;
While Rambhā with her pitcher hurries round, Placing the auspicious water on the ground.

[^110]We have next a curious chapter describing the charms which the mother employs in order to secure her daughter's influence over her husband after her marriage. She takes the cord from a buffalo's nose, and a lamp sacred to Durga, which the servant had previously buried in the ground; this will ensure his being as docile as any animal whose nose is pierced.* The entrails (?) of a snake are next procured from a snake-catcher's house, and the gall of a rohit fish caught on a Tuesday. A cow's skull is brought from a cotton-field, on which the merchant is to be made to stand for twice twenty minutes; he will then be dumb as a cow, however Khullanā may scold him; and a friend of hers, a brāhman woman, brings her some asses' milk and curds $\dagger$ in a half-baked dish to complete the charm.

Meanwhile, like Kāma's self impersonate, In his own house the merchant sits in state;
Brāhmans recite their praise, the näch-girls sing, And with the shouts of friends the buildings ring; All that can bring good luck you there might view,
Each good old custom's honoured as was due, Unbounded is the hospitality, And every Brāhman gets an ample fee. Then at the hour when the sun's rays decline, And, raising dust, return the homeward kine, With jewelled neck and wrists and flower-crowned head, And all his limbs with saffron overspread, He mounts the dooley; loud the dance and song, And bards sing praises while it moves along; The slow procession streams a mile or more, The city's deafened with the wild uproar ; Loud boom the elephant-drums, as on they go In battle order as to meet a foe. Meauwhile, advancing from the other side, The followers of the brother of the bride Come in strong force; the two processions meet, And loud the crash and jostling in the street.

[^111]Hard words are bandied first; then, as they close, They seize each other's hair and rain their blows; They pelt with clods, and fiercer grows the fight, But still the bridegroom's party keep their light. But Lakshapati, hearing of the fray, Hastens these angry passions to allay; He grasps the bridegroom's hand with welcome loud, And bears him home in safety from the crowd. With tears of joy he first embraced him there, Then put the wonted perfumes on his hair, On the red blanket made him take his seat, And had the water brought to wash his feet, And gave him bracelets, sandal, gems, and rings, To mark the honour which his presence brings. Next Rambhā comes, and her glad welcome pays, With all the forms enjoined from ancient days; His feet are washed, the arghya dish brought in, And curds flung over him good luck to win. Next with a string she measures, as he stands, His under-lip and measures both his hands; Then with the selfsame string she ties him round And knits him fast to Khullanā, captive-bound; Seven times she winds the thread in tangles fast, And loops the end to Khullanā's skirt at lastA certain charm, so ancient dames have told, He will be silent howsoe'er she scold.

Next comes the giving of the bride: the Brāhmans on their seats rehearse In solemn tones before the crowd the Veda's consecrated verse; The nāch-girls dance and play and sing, no voice in all the throng is mute, While loudly sound the kettledrum and tambourine and conch and lute. Then round the bridegroom on a throne they bear her to the canopy;
With smiling looks the happy pair now face to face each other see.
From her own neck she takes the wreath and puts it round him with her hand,
Loud are the shouts of all the friends, the ulus of the matron band.
The father then takes kuça grass and Ganges water freshly poured, And, calling Durgā to attest, makes o'er his daughter to her lord;

And, the new kinsman welcoming, he gives him presents manifold, Elephants, horses, litters, cars, silver, and costly robes, and gold. Again the burst of music sounds, the Brähmans bind and loose them both; Then on Arundhati* they gaze, type of unwavering wedded troth; Their parched-rice offerings next they pay to the star Rohini and Sōm $\dagger$;
Last to the sacred fire they bow, the guardian deity of home.
Then they are brought within the house, and there the husband and the wife
Together eat the sugar-milk, the handsel-meal of married life. $\ddagger$

> Rām 's the first sound that wakes the new-born day;
> The bridegroom rose his daily rites to pay;
> The laughing relatives around him close, And claim th' accustomed largess as he goes; Then crowned with wreaths they seat the happy pair, And all the maidens bring their presents there. Some satins, silks, or sandal's richest smells,
> Some fill the betel-box with cowrie-shells, And gems for th' husband, and-auspicious sight!Rare shells with convolutions to the right! Loudly the drums and conchs and tabours bray To speed the parting bridegroom on his way; The mother, as to take his leave he stands, Puts the 'five jewels' § gently in his hands.
> Prostrate before his fath'r-in-law he bows, Then mounts the palanquin and leaves the house.

After spending some days at home in making festivities with his relations and friends, Dhanapati one day went to the Raja's court to pay his respects. He finds that the Rāja has lately received from a fowler two

[^112]marvellous birds, a säri* and a parrot, versed in all kinds of knowledge, and is desirous of procuring a golden cage to hold them. Such a cage can only be made in Gaur, the old capital of Bengal; and as Dhanapati arrives, by his ill fortune, at this juncture, he is peremptorily sent off to Gaur on this errand. He has to proceed at once, without being allowed to return to his house; he can only send a hurried line to Lahanā, entrusting Khullanã and the household to her care. He arrives at Gaur, but finds continual obstacles and delays while the cage is being constructed, and he remains there many long months.

At first the two wives, left alone in the house, lived in perfect harmony together: Lahana acted as the affectionate elder sister; she cooked her choicest dainties for Khullanā and devoted herself to making her happs. But this state of things did not last long; the maidservant Durbalà saw with disgust the unusual concord, and determined in her mind to do her best to put an end to it. "Where the two co-wives are not quarrelling, surely the maid in that house is crazy; I will carry tales of one to the other, she will love me like her own life." Durbalā soon kindled Lahanā's latent jealousy, as she warned her of her coming loss of influence when the merchant came home from his journey: "he will be the slave of her beauty; you will be only mistress in the kitchen."

Lahanā, in her despair, bethought her of an old friend of hers, a brähman woman named Līlāvati, who professed to be well versed in philtres and charms; and she despatched Durbalā to her with a message and a rich present of plantains, rice, and cakes, with fifty rupees as a fee and some bright new cowries and betel-nuts. "Durbalā took two from these last on her own account, stuffing one into each cheek. The porters go before and behind, and she in the middle; slowly, slowly she marches, swinging her arms and gathering some campak flowers as she goes."

> She left the writers' quarter on the left, And elated she entered the brāhmans' quarter. She arrived at the house of the brähmanī medicine-woman, She calls loudly at her door for the lady Līà.

[^113]She gives her presents and pays her respects, And Lilāvati with kindly greeting takes her by the hand.
She asks her for the news about her mistress, "You have not been here, Duyä," for many a day." Durbalā told her the whole story, "She wants some private talk with you."

When Līāvatī arrived, Lahanā poured out her griefs: "No husband in the house, a co-wife set over her head-trouble heaped upon trouble!" Lilāvati laughed at her disconsolate friend's sorrow. "Why are you so downcast at one co-wife? I have six co-wives at home, and think nothing of it!" She then described how she kept her mother-in-law and all her rivals quiet by means of her spells, and how her potions had completely subjugated her husband to her will. A long account follows of the various spells which she recommended her to use; but she especially recommended to her the spells of cheerfulness and gentle words.
" She who would win her husband's love must wait on him with smiling look, Not lose her beanty at the fire, for ever drudging as his cook; If thoughtless of her husband's wish, to all his interests blind and cold, The young wife is a constant care, just like the miser's hoarded gold; Or if her tongue is never still, of what avail will beauty be? Fain the silk-cotton's crimson flowers without the scent that lures the bee.
Brown is the musk, the queen of scents; 'tis sweetness wins the surest love, And the black kokil, by its song, enchants all listeners in the grove. Test for yourself th' advice I give-be gentle words henceforth your art;
They are the best and surest pit t' ensnare that deer, your husband's heart."
Lahanā answered: "Gentle words? good heavens! I know not what they mean;
I was a single wife too long, mine the sole rule the house within;
I cannot meet this altered lot, my heart through fortune's spite is sore;
Truly my cocoanut is spoiled, water has soaked it to the core!
No gentle words I needed then; and, if my husband scolded me, I beat the board about his head and stormed in louder tones than he. Talk not to me of gentle words; tell me some better means, I prayOh what a sudden scurvy trick was this for destiny to play!
See, I am utterly undone, the snake has bit me in the eye;
Where can I bind the bandage tight to stop the poison's agony $? "$

[^114]Lilāvati now begins to doubt as to the potency of her spells in such a desperate case as the present one; and the pair finally resolve to forge a letter as coming from the absent merchant to his elder wife at home. In it he is represented as lamenting his long absence and the continual expense it involves, and he asks her to send him some of Khullanä's gold ornaments; while Khullanā herself is to be set to tend the goats, and to wear the meanest clothes, and to sleep in the shed where the rice is shelled, in order to avert the malignant machinations of the demons. By this device the two conspirators hope that Khullana's beauty will be spoiled, and thus her influence over the merchant brought to an end.

Ten days she kept the letter in its place, Then went to Khullana with a fond embrace, With downcast looks and many a lying tear: " 0 sister, can I tell you what I hear?
Hear for yourself this letter full of wooHow can you hope to 'scape this cruel blow."
She read the lines, but only smiled-she knew The letter had a look that was not true. "I have no fear, good sister," answered she;
"Who has been writing this to frighten me? My husband forms his strokes in different wisoWho has been tricking us with forgeries?"
"Surely our lord dictated what is writ, Although another's hand indited it;
Think of the many servants he has got, Ready to do his bidding on the spot. You must e'en tend the goats as best you may;
His orders, like the king's, brook no delay."
"Crowned as a bride I came, unthinking, glad;
How short an hour of wifehood have I had!
What fault of mine deserved such punishment?
Why such a cruel letter has he sent?
Go, Lahanā, mind your own concerns in peace,
And all these domineering meddlings cease."
" Little you know, you raksshasī accurst;
Ill was the hour you showed your face here first;

The king the order gave which caused the ill, That hateful cage which keeps the merchant still; 'T is this that sends you out the goats to tend ;Blame your own fate, not me, and there's an end!" "Then if that letter is our lord's, his own,
Where is the messenger, who brought it, gone?
Of all the servants whom he took to wait,
Has even one been seen within our gate?"
"To make the cage he has not gold enough;
Three servants came, impatient to be off;
They took the gold and vanished in a trico-
You were too busy at your favourite dice.
Two wives like us, left husbandless alone,I fear we're sure to quarrel while he's gone.
You married him for his wealth-you know 'tis true,-
Am I to be your slave and wait on you ${ }^{\prime \prime \prime}$
"Childless old woman, if you thus presume, I'll beat you, as your mistress, with my broom."
"Durbalā, you have heard this forward chit;
Shall she go on and I submit to it?
But yesterday she left the nursery,
And now she dares to bandy words with me!"
Each shook in wrath her bracelet-jangling arm ;
The neighbouring wives come running in alarm.
By sad mischance, poor Khullanä's hand, though weak, Came in collision with the other's cheek;
The touch was slight, but Lahanä's fury rose, And, all on fire, she dealt her angry blows;
Each stormed and cuffed, and pulled the other's hair,
In vain the neighbours tried to part the pair;
Helplessly wondering, they watched the fray, And Lahanā's torgue soon drove them all away. Each on the other then her anger bent, Their armlets, anklets clashed, their clothes were rent;
Like showers of hail their mutual blows fell fast,
But Khullanā was overpowered at last.
In vain she called her absent husband's aid,
Lahanā listened to no word she said;

> She strips her of her bracelets and her rings, Torn from her head her wreath and pearls she flings, Her anklets, armlets, zone, away she bears, And from her waist her silken sāri tears. Poor Khullanā stands of all her pride bereft, Only her iron ring of wifehood left;" Thirsty and tired and weeping, there she stands, A rope tied tightly round her neck and hands. E'en Durbalā feels compassion as she weeps, And brings some water for her thirsty lips. Gently she thanks her in a grateful tone, " O Duyā, but for you, my life had gone."

Low at her feet she falls and weeps: "Oh help me in my loneliness; I come with straw between my teeth, a suppliant in sore distress. I have no friend nor kindred near ; my husband, he is far away, And Lahanā in the empty house tiger-like rages for her prey. 0 Durbalā, I rest on thee, be thou my help for pity's sake; Go tell my mother, as from me-'t was she who made the sad mistake ' Your daughter Khullanā is dead-oh what a wondrous' gain you got When to her fate you sold your child !-abide in joy and sorrow not.' And tell my father, here alone, through Lahanä's tortures I expire'T was his own hand that ruthlessly threw his poor daughter in the fire."

Durbala. She punishes the least offence with blows, For a small fault she'd cut off ears and nose; I must not vex her-you must wait, I say, I'll take your message when I find a way. In the meantime be patient and submit, And feed the goats, if she insists on it. I'll take your message safely-never fearAnd in a trice your father will be here." Next Lahanã came, her harsh command to press, While Duyā brushed the mud that stained her dress;

[^115]The staring neighbours gather from the town, And Līā counts the goats and writes them down.* Says Lahanā: "I will mark them every one, That any changeling stranger may be known; And should one die, if I the body see, I will say naught, and she from blame be free." Poor Khullanā, helpless in her bitter woe, Put on her rags and sadly turned to go;
Durbalā only showed a little care, And brushed the dust while Lahana bound her hair. Slowly she goes with leaves her head to shade, And in her hand a simple switch was laid. The goats run scampering, heedless where they roam, And angry farmers storm to see them come. Her flower-like body in the sun's fierce heat Seems withering up, her clothes are steeped in sweat. A river stops her-urged by greater dread, She carries every goat across its bed;
Next comes a wood in sight, beneath the boughs
The hurrying goats disperse themselves to browse;
She hears the wolf"s sharp howl, and wild with fear
Runs to and fro to show that she is near;
The kucg grass with its needles stabs her foot, And drops of blood betray her derious route.
Wearied at last, she sits beneath a tree
Watching the goats stray heedless o'er the lea.
At length she stirs herself at evening-fall, And drives her goats together to their stall, Then waits for Durbala to bring her fare, All that the stingy Lahanā can spare.
Coarse was the meal-an arum leaf for dish-
Old refuse rice, poor pulse, and common fish;
Tough egg-plant stalks, of withered gourds a alice, But ne'er a pinch of salt to make it nice.

[^116]Khullanä, weeping, eats as best she may, Swallows a part and throws the rest away, While Lahanã comes and watches at her side, And scolds her for her daintiness and pride. On her straw bed she lies each weary night, And leads her goats afield each dawning light. Some rice, half dust, is in a bundle tied, And thus the day's provisions are supplied. Carrying her switch in hand she wanders slow, And on her head a leaf to cool her brow. Under pretence of bringing water there One morning Durbalā hurried after her. "I saw," she cried, " your parents yesterday, And told them all, but nothing could they say. Your mother grieved the doleful story heard, But good or bad she answered ne'er a word;
And your old niggard father, I declare, Sent you some paltry cowries-here they are."

At length the spring came down upon the woods, And the spring breezes woke the sleeping buds; The season sends its summons forth to all, And every tree hangs blossoms at its call; The drunken bees feel waking nature's power, And roam in ecstasy from flower to flower, Just as the village priest, the winter done, Wanders elsewhere to greet the vernal sun. Amidst the leaves she hears the cuckoo's voice, And the known note makes all her heart rejoice. "Oh will my lord come back," she cries, "to-day? He has been gone a weary time away."
But while she counts the months, by chance she sees A parrot and a sārī in the trees;
Loud she upbraids them-they had done the wrong, Their luckless cage had kept her lord so long. "That golden cage, that whim of yours, in truth, Has made poor Khullanā widowed in her youth;

You drove my lord from home, and I forlorn Was left a cruel co-wife's drudge and scorn. She grudges me my food, or clothes to wear, I wander keeping goats in my despair. Have you come here to wreak your angry will Because that cage remains unfinished still? Take care, be wise, my patience has a bound, I may turn fowler, reckless how I wound; I may ensnare the parrot in the tree, And leave the sāri widowed just like me. But if you feel compassion for my pain, List to my prayer, fly 'back to Gaur again, My husband seek, and pour into his ear The tale of all the miseries which I bear."

At last the goddess sends a dream to Lahanā which alarms her, and she fetches Khullanā back and begins to treat her more kindly; and, by a similar dream, she reminds the merchant of his forgotten home duties. He has beon wasting time on his own pleasures during his long stay of more than a year in Eastern Bengal, under the pretext of watching the construction of the cage. Warned by the dream, he delays no longer, but returns with the cage, and is welcomed by the Raja with every honour.

Lahanā hears the news, and sore dismayed
Turns for some help to her deceitful maid:
" The master has at last come back, I hear;
Khullanã will bewitch his mind, I fear:
Where are the ointments, charms, and philtres stored?
Help me, I pray, and win me back my lord."
Durbalā brought the box, well pleased to tell
The mystic uses of each drug and spell;
But while her mistress tries each charm in turn,
She breathless runs poor Khullanā's thanks to earn.
"O little mother, let me kiss your feet,
Come out and hear the music in the street;
Your hope's fulfilled, my lord's come home at last, And your long night of misery is past.

I have no mistress now but only you, I am all yours-you know my words are true. I'll bear you witness what your griefs have been, I've vexed my inmost heart for what I've seen.
Show him the rage and switch; disprove her lies,
And make her presence hateful to his eyes, Multiply all her misdeeds as you please; Faint heart ne'er brought a rival to one's knees." Poor Khullanã smiled to hear such comforting, And gave the girl in gratitude a ring; Then Duyã rose and brought the jewel-case, And straight unlocked its stores before her face, While she adorned her mistress with the best, And with art's utmost skill her person dressed, Rings, gold, pearls, jewels-what can art do more?
When lo! they hear the merchant at the door!
He bids farewell to his attendant train, And calls for his wife to greet him home again. Khullanà comes at once her lord to meet, And pours a stream of oil before his feet;
But she was as a stranger to his eye,
Some nymph, perhaps, come down from Indra's sky;
His compliments but pained her as she heard, And with head bowed she answered ne'er a word. Covering her face she turned within at last, But Duyā heard behind the door what passed, And eager to be friends with both she flew To tell th' expectant co-wife all she knew. " Oh have you heard, my lady, what has come? My lord, thank heaven ! has safely reached his home, And who but Khullanā, forward $\operatorname{minx}$ though prim, Has rushed to be the first to welcome him! She with her youth, best clothes, and fineries,What an unfair advantage 't was to seize!
She never asked your leave, but ran to th' gate, Eager to be the first at any rate.
Had we but had a wiser lord, alack!
He would have scorned her tricks and thrust her back."

Lahanā begs Durbalā to finish adorning her, and thus arrayed she hastes to make up for her lost time; but when she comes before the merchant, he appals her by asking her who was the beautiful stranger whom she had already sent before her to give him the first welcome. Lahanā pours out her complaints.
"When first you went, a long and weary age, Sent by the king for that unlucky cage, You left young Khullanā in my special care, No thought and no expense was I to spare. I did my best-so much I will averBut little was the help I got from her. She never stirred to cook the household fare, Nor lent a hand to help me with my hair ; Dress her one thought or cooking something nice, Or with some idle friends to play at dice. I used to dress her out; my gems and rings She wore as if they were her proper things ; No moment from her constant claims was free, Durbalā had no time to wait on me; On every choicest dish she must be fed, And at unheard of hours her meals were spread.
She never cares to pay a visit home, Nor lifts her hand to have her mother come;
To spend the money is her only thought,Fancy the waste and mischief she has wrought!"
Her outburst well her lord could understand,
And slipped a golden bracelet in her hand.
The merchant then arranges that Khullana is to prepare a special feast for himself and his friends, and, in spite of all Lahanā's machinations, it all turns out as he wishes.
III.

## KHULLANĀ'S ORDEAL.

Tho merchant Dhanapati was one day playing backgammon with some friends, when his family priest ontered and reminded him that the frrst annivorsary of his father's death wass near at hand, at which tims ho would have to offor the customary ancestral sacrifice called the craddh. Dhanapati, who had been absent on the king's commission in Gaur whon his father died, determines to perform the rites woith evory mark of honour ; and he invites all his kinsmon and the prinoipal mombers of the morchant oasto in all the neighbouring towns to be present. Thoy come in great numbers and assemble at his house on the appointod day. Dhanapati porforms the çräddh,* and then follows the desoription of the reception of the guests.

The ģraddh was over and the Brähmans gone,
Loaded with costly presents every one, When, full of care, his way the merchant wends
To pay due honours to th' assembled friends. How shall he likeliest give the least offence,
To whom presume $t^{\prime}$ assign the precedence?
Cānd is the first in character and race, -
Cand is the one who best deserves the place. 'T is Cänd to whom he turns the first to greet, And brings the water first to wash his feet, Then draws the sandal-mark upon his brows, And round his neck the flower-wreathed garland throws.
But Çañkha Datt in sudden wrath out burst,
" $I$ in these meetings am by right the first.
Lo! Dhūsha Datt can witness how of late
His father's gräddh he had to celebrate ;

[^117]Full sixteen hundred merchants, one and all Of stainless credit, gathered in his hall, Yet I was first of all that company;
Too much good luck has made you blind, I see." Retorts the merchant, " First, I grant, you were; But why so? Cānd, I warrant, was not there. His wealth and virtues are alike untold, Even his outer court * is filled with gold." At this Nilāmbar sneers, "And think'you, then, That gold can purchase everything for men? His six poor childless wives bemoan their fate,Can gold light up a house so desolate ?" " I know you well, Nīlāmbar," Cānd replies, "Your father too,-there's many a rumour flies.
He used to sell myrobalans, fame avers, With all the city's scum for purchasers. His cowrie-bundles, with a miser's care,
He stowed away here, there, and everywhere; He'd stand for hours, and then, the hustling o'er, Go home and dine, with ne'er a bath before." "Well," says Nilāmbar, "well, and why this din?
He plied his lawful trade,-was that a sin? And then the snack which you his dinner call,A sop of bread or plantain, that was all." Nīlämbar's son-in-law, Rām Rāy by name, Now interposes to divert the blame: " If we're to wrangle on a caste affair, Had we not better turn our thoughts elsewhere? When a young wife keeps goats in woods alone, Is there no loss of caste to anyone?" At this around the room a murmur went, One whispers and his neighbour nods assent, And then Räm Rāy, to deepen the offence, Called for the Harivamça's evidence.

[^118]> All sat awaiting what would happen next, While the old Brähman read the sacred text; The unfriendly merchants laughed or jibed aloud, While Dhanapati sat with head low bowed.

A passage is then read from the Harivamça which illustrates, by the story of Ugrasena's queen, how dangerous to female chastity lonely wanderings in the forest may prove. Rām Kuṇda then proposes that the passage from the Rāmāyaṇa should be read which describes how Rāma, after rescuing his wife Sitā from her imprisonment in Lankā, only received her again after she had proved her purity by entering unharmed a burning house of lac.

Then Alamkāra Datt next wags his tongue:
"Our host may well suspect there's something wrong;
His wife kept goats and wandered without let,-
Who knows what drunken ruffians she has met?
So let her pass the ordeal; till that 's done,
Who 'll taste the food she cooks? Not I, for one.
Or if the ordeal's risk unwelcome be, Then let him pay a lac and so be free."
Here Lakshapati* threatens: "I shall bring
The whole affair at once before the king."
Then Çankha Datt: "Has pride your heart so filled
That you must play the king upon the guild?
Take care, for Garuḍ's $\dagger$ son his caste defied,
But the sun scorched his wings and tamed his pride.
If it's the king to whom we must resort,
Let us all go in a body to the court;
But kings know more of criminal penalties,
These caste disputes the caste itself best tries.
Duryodhana, they say, though stout and brave,
Scorned the advice of ten, and found a grave.

- Dhanapati's father-in-law.
$\dagger$ The king of birds; his son was Sampäti.

It still holds true; if ten your conduct blame, And you stand out, then woe betide your fame!" Meanwhile the host, while loudly thus they brawl, Steals out dismayed to scold the cause of all.
"What craze possessed yon, Lahanā, to send your co-wife to the wood To tend her goats-you'll rue the day-left houseless in the solitude? You promised me to keep her safe; basely have you betrajed the trust; For your own ends you've ruined her and dragged my honour in the dust. A king will vex by open force, by slanderous tongues our kith and kin;
A serpent by its spring and bite-but yours a deadlier wound has been.
I married her to have a son, to build for me a bridge to heaven,
That so the ancestral offerings, when I was gone, might still be given. For who is like the sonless man-what bitterness is such as his?
In the three worlds he has no hope-life is one string of miseries. What is my life now worth? Go bring a knife or poison, let me die; We shall be glad then, both of us, but not e'en you so much as I."

From her he goes to Khullanā, and urges her by every plea To shun th' ordeal's unknown risks and calmly face the calumny. "Leave the ordeal's test alone; stay still at home, your proper place. Were you by some ill chance to fail, how could I look men in the face? E'en should there be some fault in you, 'tis not for me to utter blame;
'T was I who left you thus exposed; ill I deserve a husband's name. You wandered in the wood alone-women are weak by nature all;
Old stories swarm with precedents how soon they, left uncared for, fall.
Cease then your fear, I'll pay the sum, and should some cross-grained wretch still pout,
I'll pay it down a second time-my purse will yet a while hold out."
" 0 foolish husband, if you give to-day, Year after year you'll have the same to pay. Year after year they'll wring by force their claim, And far and wide will blow my tale of shame.

I must, then, brave th' ordeal-it must be ;
I will drink poison if you hinder me."
Deep in his heart he knew her innocent,
And from his face the cloud of trouble went.
With lightened heart he entered now the hall,
And asked their presence at his festival,
And "Khullanā," he said, "shall cook for all."
Most of th' invited guests seem pleased to come;
Only Nila ambar downward looks in gloom.
" The tenth-my father's cräddh is on that day;
How can I then eat flesh with you, I pray?"
' T was an old wound that rankled in his breast-
The sore seemed healed, but still the merchant guessed.
"I ask you not to eat our common fare,
Eat rather what your Brähmans will prepare;
But when the craddh is over, be my guestYour simple presence is my one request."
"In Gayä's shrine and Puri's have I stood-
I must not eat an alien gotra's food."
Glancing askant in rage and wounded pride,
In a rough voice the merchant thus replied:
"Shall one whose ancestors have dealt in salt
For fifty generations without halt
Boast of his family, self-deceived and blind?
He retails salt to every low-caste hind, And out of every penn'orth sold by weight
Steals a full quarter,-shall this boaster prate?"
Out spoke the merchant thus, with anger filled;
Räm Kuṇda then, th' attorney of the guild,
Catching a signal in Nilämbar's eye,
Put forth his hand and deftly made reply :
"' $T$ is all a caste affair,-then what's amiss?
This one sells salt by caste, and potherbs this.
You married a young girl, too young and fair;
She, keeping goats, has wandered,-who knows where?
A fish that's lying stranded on the shore,
Or gold or silver on a lonely moor,-

Such is the maid who lone in forests hies; Who can refrain from seizing such a prize? This is the common judgment of mankind, And who shall call that common judgment blind? If Khullanā be spotless, as you say, Th' ordeal let her pass in open day. Then send the invitations round, and we Shall all be glad to taste her cookery." Poor Dhanapati, thus on all sides pressed, Accepts the challenge and awaits the test.

In Ganges water bathed and then bedight
With garments as the moon or jasmine white, Khullanā offers at the goddess' feet The flowers and lamps and perfumes as is meet. Then walking round the image lifts her cry, "Oh save me in this hour of jeopardy!"
Low on the ground she pleads with sobs and tears, Till moved t' her deepest heart the goddess hears. Before her suppliant in the room she stands, And on the low-bowed head she lays her hands. She promises her presence and her aid, And Khullanā no longer feels afraid.

Meanwhile the merchant holds a council sage:
A hundred paṇ̣its reverend with age, Arranged in state on seats of honour all, Discuss th' ordeal's ceremonial.
They call on Yama; then, as in his sight, A mantra on two peepul-leaves they write;
Two casual strangers next are led aside, And on their heads the symbols twain are tied. Into the lake they dive,-all tongues are still,But what strange shouts of joy the city fill?

With her eight nymphs the goddess in her car Looks down upon the contest from afar. They rise, but not together now as erst, ' $T$ is Khullanä's foe gives in exhausted first. The leaves reversed, the divers plunge once more, But Khullanā still is conqueror as before. Says Çañkha Datt: " Th' ordeal was not fair; There was collusion with the men, I swear. Leave all these tricks, and if you would deoide Her innocence, some other test be tried." A deadly serpent next is brought,-its eyes Are two karañja blossoms in their dyes *; Wildly it hisses, pent its jar within, The jar seems bursting with the stifled din. The merchant drops his ring inside, and loud Rises a cry of wailing from the crowd.
But Khullanā, kneeling, lifts her gaze on high And calls the Sun to help her purity, And seven successive times they see her bring Out of its prison, safe, the golden ring. There was a silent hush, till from the press Rām Dān's harsh voice broke out in bitterness: "' T is all a trick, -that serpent's mouth was bound,
Or 't was a poor dull worm that could not wound."
A smith set up his furnace on the spot
And heated there an iron bar red-hot;'
Red like the newly risen sun it shone, Fear pierced the merchant's heart as he looked on. Upon a peepul-leaf the mystic line He traced and placed within her hand the sign; They seize the bar with tongs as fierce it glows, And bring it reddening like a china rose;
But Khullanā, dauntless, utters her desire:
"Thou life of all that lives, hear me, 0 fire!

[^119]If I have sinned, then scorch me with thy brand;
If I am pure, rest gently in my hand."
She atretches forth her hands the bar to clasp,
The burning mass is lowered into her grasp ;
With head bowed low she bears it all alone, Through the seven rounds she bears it, one by one, Till on the straw at last the bar she lays,Up in a moment flames the straw ablaze. Still Çankha Datt looks on in discontent, And thus he gives his bitter envy vent: " I'm half afraid to interpose my say, But false ordeals-what are they but play? There was some witchcraft in it-all was plann'd, Hence was that bar like water in her hand." Another test was tried-the Brāhmans came And set on fire some ghi, -up flashed the flame; But Khullanā, where the flame was fiercest, turned, Dropped the gold in, then took it out, unburned. Then Mādhab Candra: "Call you this a test? It was a false ordeal, like the rest. Pay the sum down, ordeals all are vain; So, your wife cleared, your honour you 'll regain." * Though sore provoked that thus each trial fails, Once more the merchant yields to try the scales, $\dagger$ Again does Khullanā, fearless, meet the event, Once more the proof proclaims her innocent. Then Ghūsha Datt comes forth the case to mend: "I sympathize with your distress, my friend; Your fellow-castemen, right and left, you see, Still wag their tongues whate'er th' ordeals be.

[^120]A lac-house was the test which Sitā paseed,To this one point they all come round at last. You are my mother's brother; this alone Would prove I have no interest but your own. Make a lac-honse and let her enter in, This test will purge the faintest breath of sin." Then Mänik Cänd: "I must no more sit mute, This test alone will settle the dispute. It was this test proved Sita innocent, How can we find a better precedent?" $\Delta t$ last the merchant yields, with anguish filled,But where's the architect such house to build?

A solid mass of gold, a gourd ( $?$ ) in size,
With solemn state is offered as the prize.
On a high pole his banner flouts the sky, While drums and trumpets bray their hoarse reply. Town after town-the rumour fills the land, But all shrink hopeless at the strange demand; " $\Delta$ house of lac, like Räm's!" the whisper ran;
"The gods' ordeals who but gods can plan?"
Meanwhile her secret schemes the goddess laid
And summoned Viçwakarman * to her aid;
Called by a thought he came, behind his back
Stood Hanumat: " Go, build a house of lac."
They go-an old man this, and that a boyTo undertake the perilous employ.
The moon conducts them to the merchant's room:
"To build the house of lac you need we're come."
They stretch the measuring line and mark the ground, And dig a trench seven cubits deep all round.
Of lac the walls are made, of lac the floors,
Of lac the beams, the rafters, and the doors,

[^121]The Bengali Poem, Candi. ..... 43

Of lac the struts and tie-beams every one, Of lac the roof and all that's laid thereon. The house thus built, away the builders went, While all the guild gaze on in wonderment; " Her honour 's stainless," e'en Nilämbar saith, "Who 'scapes unscathed from such a certain death."

But Khullanā, at the novel risk dismayed, Turns to her old protectress for new aid. The goddess hears her prayer of anxious dread, And gently lays her hand upon her head; And tears of joy from Khullanä's eyes o'erflow As she pours forth the story of her woe. Awhile the goddess muses; then her will Calls Fire himself to avert the threatened ill. Swift at her bidding mighty Agni came, Eager to know what service she would claim. "The fiery test my votary is to brave; Lo, I entrust her in thy hands to save." He answered: "Cool as sandal will I be; Thy bidding is my highest dignity." Then as a pledge to bid her fears begone, In Khullanä's hand he lightly placed his own; ' T was cold, -she shrank not as the fingers kissed, Not e'en the lac *as melted on her wrist.

Around her neck the goddess' wreath she wore; And as she stepped within the fatal door She fired the hall : the flames spread far and wide, Swelled to the roof and soared aloft outside. From her chaste body, lo! their tongues retire, Cold as the sandal is that blasting fire.

[^122]High to the sky the dark smoke-pillars rise; The gods themselves gaze down with wondering eyes. Loud as June thunder roars the o'ermast'ring blaze, E'en the Sun's horses rear in wild amaze! The rafters melt, the cross-ties, roof and all; Melt the four walls, and in one crash they fall.
A shower of flowers rains downward from above, Ne'er did this æon such high courage prove! Poor Sità's tale is all long-past and old,We have heard it with our ears, but this our eyes behold!

Meanwhile the merchant beats his head and flings himself upon the ground; In the mid flames he fain would spring, but that his friends his hands have bound :
"Loved of my soul, I see thee not,-and life is worthless, reft of thee; Where thou art gone I too will go,-I will be with thee presently. Ah, faithless husband that I was! I left thee in the co-wife's power, Hence all those wanderings in the wood, and all the misery of this hour!" The kinsmen weep in sympathy, with hair unbound and looks distraught; And even Lahanā feels remorse when she sees all her spite has wrought.

The smoke cleared off, the fire burned fierce and bright, But oh! no Khullanā appears in sight!
In agony of heart the merchant turns,
And wildly rushes where it fiercest burns,
When from the very centre of the flame
To his stunned ears a cry of "Victory!" came, And forth she stepped and stood before the throng, Chanting aloud to all her 'victory' song. From her thick hair the drops of moisture rained; The shell upon her wrist was still unstained;

Still flowed her robe uninjured to her feet, Nor had one fibre shrivelled in the heat.
As she stands radiant, her maligners all
Before her feet ashamed and prostrate fall;
And Çankha Datt is first to own his sin, -
How blind and obstinate they all have been.
"Curse us not, sister," is their common prayer;
"Forgive the pride that made us what we were."
Nilämbar Dās came forward with the rest
And tardily his error thus confessed :
"Count me your brother,-no ill-will I bear,-
Gladly I'll eat your rice if you 'll prepare."
Then said Rām Dän, his voice half-choked and low :
" You are no mortal woman,-now I know;
Who would believe me if the tale I told ?
Who has e'er heard the like in days of old ?"

Triumphant thus in all the various tests,
Khullanā now prepares to feast her guests.
They fill the court, arranged in order round,
Seated by precedence upon the ground;
And Khullanā herself, all smiling, waits,
And hands the rice to all in golden plates.
First soup of bitter herbs to give a zest,
Then potherbs with a savoury relish dressed;
Fried fish; kid curry, ${ }^{*}$ and a thick rich broth;
And every dish is perfumed. Nothing loth,
The guests applaud the courses as they come,
And fragrant steam mounts up and floats through every room.
The lighter dishes next in due degree, -
Sweetmeats and curds, and rice-made furmity.

[^123]All wash their mouths, and, ending the repast, Camphor and betel-leaf are handed last.* Each guest receives his present when they part; The merchant's open hand wins every heart. Then to Durväsas, $\dagger$ patron of the clan, A horse is given whereon sat never man; While Kauçiki $\ddagger$ receives her ewer of gold, And unto Sātgān's guilds their silken bales are told.

- Theee lines are repeated in the same words in another part of the poem, but with a different couplet at the end :

Then pulpy durian-seeds are handed lant, And juicy mangoes finish the repast.
$\dagger$ A celebrated ancient sage.
$\ddagger$ A form of the goddess Durgi or Candi.

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Sir WM. Jones.

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"The bounds of its inveatigation will be the geographical limits of Asia : and within these limits its inquiries will be extended to whatever is performed by min or produced by nature."-Sis Whehar Jonss.
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## JOURNAL

## OF THE

## ASIATIC SOCIETY 0F BENGAL,

## Vol. LXXI. Part II.-NATURAL SCIENCE.

No. I.-1902.
I.-A List of the Butterfies of Hongkong in Southern China, and the foodplants of the larvor.-By Lionel de Niceville, F.E.S., C.M.Z.S., \&c.
[Received 1st September; Read 6th November, 1901.]
The Butterflies of Southern China appear to have been largely neglected by modern Entomologists, though a considerable number of the larger species were known to the ancients. For instance, Linnæus and Fabricins described many species from "China," many of these and a few others were figared by Drury, Cramer, Herbst and Uonovan at the end of the eighteenth century. In 1861 Wallengren described two new species and mentioned a third obtained during the voyage of the frigate "Engénie" which touched at Hongkong; in 1862 Felder described four species and mentioned a fifth captured by the officers of the frigate "Novara" which visited the island; in 1886 Röber described two new species of Lycænidæ from Hongkong; while in 1899 Kirby recorded five species from thence. The first list of the batterflies known to occar in Hongkong was compiled by Messrs. Sydney B. J. Skertchly and James J. Walker, and is published in a little book entitled "Our Island. A Naturalist's Description of Hongkong" by Mr. Sydney B. J. Skertchly, F.G.S., M.A.I. (1893). This list embraces 116 species. Of these I have omitted from the present list Ideopsis daos, Boisduval, Amathusia phidippus, Doubleday, and Pandita J. II. 1
sp., all of which are species found in the Malay Peninsula and are not likely to occur in Hongkong. But a mach more important list is that by Mr. James J. Walker, R.N , F.L.S., entitled "A Preliminary List of the Butterflies of Hongkong; based on Observations and Captures made during the Winter and Spring months of 1892 and 1893," pablished in the Transactions of the Entomological Society of London for 1895, pp. 433-477. In this list 125 species are noted. In the present list I bave omitted Ideopsis daos and Amathusia phidippus for the reason noted above. Moreover, Mr. Walker records what I consider to be five species under two names each, these being 8. Euploea (Isamia) superba, Herbst, and 9. Euplæen (Trepsichrois) midamus, Linnæus. 16. Ypthima hübueri, Kirby, and 17. Ypthima argus, Butler. 78. Catopsilia catilla, Cramer, and 79. Catopsilia crocale, Cramer. 80. Terias hecabe, Linnæas, and 81. Terias mandarina, de l'Orza. 85. Pieris (Huphina) nereisa, Fabricius, and 86. Pieris (Huphina) pallida, Swinhoe. This reduces Walker's list to 118 species. In the present list 140 species are given, of which 22 marked with an asterisk (*) have not been seen by me. The grin in number of species observed in Hongkong in the six years since Walker wrote is therefore twenty-two. Walker also mentions a specimen of Hestia lynceus, Drury, which he had seen "taken more than twenty years ago on the wharf at Kowloon-an obvious importation." This species is omitted from his list and also the present one.

My friend, Mr. E. F. Skertchly, son of Mr. Sydney B. J. Skertchly in collaboration with Mr. Kershaw, proposes to bring out an elaborate work illustrated with coloured plates on the Rhopalocera of Hongkong. A specimen of these plates I have seen chromo-lithographed in Japan, and it is an excellent production. To help in the good work of publishing this volume I have written this paper, as entomological books are scarce in Hongkong, and my assistance has been asked as regards identification of the various species and the necessary synonomy. My share of this work appears in the list below ; the particulars given of the food-plants of the same are closely-allied species occurring in India and elsewhere is a help to the discovery of the transformations of the various species of butterflies in Hongkong itself. A. knowledge of the food-plant of any particular butterfly is more than half the battle in discovering its larva. I may note that Messrs. Skertchly and Kershaw have for the last few years sent me consignments from time to time of Hongkong butterflies for identification; moreover, I have a superficial knowledge of them from having twice visited the colony for short periods. The butterflies of Hongkong are on the whole remarkably similar to those of Iudia, not a single genns being found in the
island or on the adjoining mainland, which does not occur in India, while about ninety per cent. of the species are identical or extremely closely allied, the " local variation" being remarkably slight. This is perhaps not so much to be wondered at, as there is continuous land connection between India and Hongkong save the narrow strait about a mile wide which separates Kowloon or the mainland from the island. Moreover, Hongkong is on the same parallel of latitude as Calcutta, and has a very similar climate, though it is on the whole slightly cooler. The most interesting batterfly mentioned is, I think, Danais (Anosia) erippus menippe, Hübuer, the well-known "Wanderer," a pair of which was taken in Hongkong in August last. This butterfly continues to extend its range, but has not as far as I know been yet obtained on the mainland of Asia, though it has spread from its original home in North America to Europe on the east, and right round through the Pacific Islands, Australia, and the Malayan Archipelago to the Straits of Malacca**

## Family NYMPHALID庣.

## Sub-family Danainas.

## 1. Danais (Radena), similis, Linnæus.

Pupilio similis, Linnæus, Mus. Ulr., p. 299, n. 117 (1764) ; Radena similis, Moore, Proc. Zool. Soc. Lond., 1883, p. 223, n. 1 ; Lep. Ind., vol. i, p. 28 (1890); Fruhstorfer, Berl. Ent. Zeitsch., vol. xliv, p. 79 (1899); Danais (Radena) similis, Walker, Trans. Fint. Soc. Lond., p. 445, n. 5 ; Danais similis, var. chinensis, Felder, Verh. zool.-bot. Gesellsoh. Wien, vol. xii, n. 148 (1862); Papilio aventina, Cramer, Pap. Eix., vol. i, p. 92, pl. lix, fig. F (1775).

The larva of the subgenus Radena has two pairs only of fleshy filaments. Though species of Rudena occur in Ceylon, Burma and the Nicobar Isles within Indian limits, the larva and its food-plant has escaped detection.
2. Danais (Tirumala) limnlace, Cramer.

Papilio limniace, Cramer, Pap. Ex., vol. i, p. 92, pl. lix, figs. D, E, male (1775); Tirumala limniace, Moore, Proc. Zool. Soc. Lond., 1883, p. 230, n. 2; Lep. Ind., vol. i, p. 33 (1890) ; Fruhstorfer, Berl. Ent. Zeitsch., vol. xliv, p. 115 ; Danais (Tirumala) limniace, Walker, Trans. Ent. Soc. Lond., 1895, p. 445, n. 3.

The larva of Tirumala, like that of Radena, has two pairs only of fleshy filaments. It has been recorded in Iudia to feed on mauy plants of the Natural Order Asclepiader, such as Calotropis, Asclepias, Marsdenia, Dregea and Hoya.

[^124]4 L. de Nicéville-Butterfies of Hongkong in Southern China. [Ṅ. 1,
3. Danais (Tirumala) septentrionis, Butler.

Danais septentrionis, Butler, Ent. Month. Mag., vol. xi, p. 163 (1874).
New to the Hongkong list; I have an undoubted female from there captured in March. The food-plant of the larva has never been discovered.
4. Danais (Anosia) erippos menippe, Hübner.

Papilio erippus Cramer, Pap. Ex., vol. i, p. 4, pl. iii, figs. A, B, male (1775); Anosia menippe, Hübner, Verz. bek. Sohmett., p. 16, n. 86 (1816) ; Papilio plexipprs Cramer (nec Linnæns), Pap. Ex., vol. iii, p. 24, pl. ccvi, figs. EG, F, fomale (1779); Herbst, Pap., vol. vii, p, 19, n. 8, pl. olvi, figs. 1, 2, male (1794).

A pair of this species was taken at Hongkong on the 4th Angust, 1901. The larva feeds on plants of the Natural Order Asclepiader.

## 5. Danais (Limnas) chrysippos, Linnæus.

Papilio chrysippus, Linnæus, Syst. Nat. Ins., ed. x., vol. i, pt. 2, p. 471, n. 81 (1758) ; Limnas chrysippus, Moore, Proc. Zool. Soc. Lond., 1888, p. 237, n. 1; Danais (Limnas) chrysippus, Walker, Trans. Ent. Soc. Lond., 1895, p. 446, n. 7 ; Limnas bowringi, Moore, Proo. Zool. Soc. Lond., 1883, p. 239, n. 6; Fruhstorfer, Stet. Ent. Zeit., vol. lix, p. 412 (1898); Limnas bowringii [sic], Moore, Lep. Ind., vol. 1, p. 44 (1890).

Dr. F. Moore in 1893 recorded L. chrysippus from South China, but described $L$. bowringi as a new species from Hongkong, which also is in South China. In 1890, he says that it is "doubtfully of racial value." The larva of Limnas has three pairs of fleshy filaments; in Hongkong it has been reported to feed on Asclepias curassavica, Linn., and in India it feeds on plants of the Natural Order Asclepiades, such as Calotropis and Asclepias.

## 6. Danais (Salatura) plexippos, Linnæus.

Papilio plexippus, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 8, p. 471, n. 80 (1758) ; Papilio genutia, Cramer, Pap. Ex., vol. iii, p. 23, pl. covi, figg. C, D, male (1779); Salatura genutia, Moore, Proc. Zool. Soc. Lond., 1883, p. 240, n. 1 ; Lep. Ind., vol. i, p. 48 (1890) ; Danais (Salatura) genutia, Walker, Trans. Ent. Soc. Lond., 1895, p. 445, n. 6.

The larva of Salatura has three pairs of fleshy filaments, and in India feeds on plants of the Natural Order Asclepiadese, such as Cynanchum, Oeropegea and Passularia, in Ceylon on Raphis, Ceropegea and Raphanus.

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The larva of Parantica has two pairs only of fleshy filaments. The larva has never been discovered, but that of the allied species, $P$. aglea, Cramer, has been recorded to feed on plants of the natural order Asclepiades, such as Cryptolepis, Calotropis, Tylophora, in South India and Ceylon.

8. Danais (Caduga) sita, Kollar.

Danais sita, Kollar, Hagel's Kaschmir, vol. iv, pt. 5, p. 424, n. 1, pl. vi, figs. 1, 2, male (1844) ; Danait (Caduga) sita Mackinnon and de Nicéville, Journ. Bomb. Nat. Hist. Soo., vol. xi, p. 213, n. 6, pl. U, figs. 1a, 1b, larva; 1c, 1d, pupa (1897); Danais (Caduga) tytia, Walker, Trans. Ent. Soc. Lond., 1895, p. 444, n. 2.

The larva of Caduga has two pairs only of fleshy filaments, and feeds in India on Marsdenia, natural order Asclepiadeæ. Hongkong specimens of $D$. sita agree absolutely with Indian ones.

## 9. Euplea (Crastia) aodartil, Lucas.

Inuploea godartii, Lucas, Rev. et Mag. Zool., second series, vol. v, p. 319 (1853); Inploea (Crastia) godarti (sic), Walker, Trans. Ent. Soc. Lond., 1895, p. 447, n. 10.

The larva of Crastia has four pairs of fleshy filaments. Major (now Colonel) C. H. E. Adamson, c.i.e., in "Notes on the Danainss of Burmah," p. 12 (1889), records that he has "bred E. godartii from caterpillars found feeding on orange trees," Citrus sp., natural order Rutaces. More probable plants would, I think, be species of Holarrhena, Nerium and Ichnocarpus of the natural order Apocynaceæ, or Streblus and Ficus of the Urticaces.

## 10. Edplea (Crastia) kinberai, Wallengren.

Euplosa kinbergi, Wallengren, Wien, Ent. Monatsb., vol. iv, p. 35, n. 8 (1860); Kongl. Svensk. Fregatten Fingenies Resa, Zoologi, pt. v, p. 852, n. 4 (1861); Tronga kinbergi, Moore, Proc. Zool. Soc. Lond., 1883. p. 269, n. 12; Crastia kinbergi, de Nicéville, Journ. A. 8. B., vol. lxx, pt. 2, pp. 20, 22 (1901), Iruploa (Crastia) kinbergi, de Nicéville, Journ. Bomb. Nat. Hist. Soc., vol. xiii, p. , n. , pl. , fig. , female; Euploea lorquinii, Felder, Reise Novara, Lep., vol. ii, p. 840, n. 472 (1865) ; Crastia lorquini (sic), Moore, Lep. Ind., vol. i, page 91 (1890); Fuploea felderi, Butler, Proc. Zool. Soc. Lond., 1866, p. 275, n. 20; Crastia felderi, Moore, Lep. Ind., vol. i, p. 91 (1890) ; Euploea (Crastia) frauenfeldi (sic), Walker (nec) Felder, Trans. Ent. Soo. Lond., 1895, p. 447, n. 11 ; Crastia frauenfeldii, Moore, Lep. Ind., vol. i, p. 87, pl. xxviii, figs. 1, 1a, male (1890).

This very variable and common butterfly is restricted to Southern China, and has been bred on Strophanthus divergens, Grah.-natural order Apocynaces. The larva will probably be found to feed on Nerium, natural order Apocynaces, or on Ficus, natural order Urticaces.

## 11. Edplea (Isamia) midamos, Linnæus.

Papilio midamus, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 470, n. 75 (1758) ; Isamin midamus, Moore, Proc. Zool. Soc. Lond., 1883, p. 812, n. 5, pl. xxxii, fig. 5, male ; Lep. Ind., vol. i, p. 132 (1891); Fuplœa (Trepsichrois [sic !]) midamus, Walker, Trans. Ent. Soo. Lond., 1895, p. 446, n. 9 ; Papilio superbws, Herbst, Pap., vol. vi, p. 14, n. 3, pl. cxix, fig. 3, fomale ; pl. cxx, figs. 1, 2, male (1793)*; Euplcea superbn, Felder, Verh. zool.-bot. Gesellsch. Wien, vol. xii, p. 488, n. 147 (1862) ; Isamia superba [sic], Moore, Proc. Zool. Soo. Lond., 1883, p. 311, n. 3 ; Lep. Ind., Vol. i. p. 132 (1891); Kirby in Hübner's 1x. Schmett., new edition, Vol. 1, p. 4, pl. xxiv, fige. 3, 4, female (Limnas Mutabilis Midamus [sic] on plate) (1894); Euploa (Isamia) superba [sic], Walker, Trans. Ent. Soc. Lond., 1895, p. 446, n. 8 ; Danais alopia, Godart, Enc. Meth., vol. ix, p. 177, n. 4 (1819); Isamia alopia, Moore, Proc. Zool. Soc. Lond., 1883, p. 313, n. 6, pl. xxxii, fig. 7, male; Lep. Ind., vol. i, p. 132 (1891); Isamia sinica, Moore, Proc. Zool. Soo. Lond., 1883, p. 318, n. 4, Lep. Ind., vol. i, p. 132 (1891).

There are sereral mistakes in the references as usually given. Herbst calls his fig. 3 on pl. cxix a $\delta^{7}$, while it is a $q$, and his figs. 1 and 2 on pl. cxx a $Q$, while it is a \& . Dr. F. Moore sets this right in Proc. Zool. Soc. Lond., 1883, page 311, n. 3, as regards the 8 ; but on page 313, n. 6, erroneously calls figs. 1 and 2 instead of 8 . He also uses superbic instead of superbus as originally written, and refers to plate 102 instead of plate 122. He makes two species out of Herbst's figures, while they represent one species only.

Dr. F. Moore in 1883 and again in 1891 records and keeps distinct four species of Isamia from South China. These four species are in my opinion one and the same species, which at Hongkong, and doubtless wherever it occurs in Southern China, is a most variable one. In Hongkong the larva has been reported to feed on Strophanthus divergens, Grah., Natural Order Apocynaces.

## Subfamily SATYRIN 雨.

## 12. Mrcalesis (Oalysisme) mineds, Linnæus.

Papilio mineus Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 471, ṇ. 84 (1758); Calysisme mineus Moore, Trans. Ent. Soc. Lond., 1880, p. 162; Lep. Ind.; vol. i, p. 187 (1892) ; Mycalesis mineus, Walker, Trans. Ent. Soc. Lond., 1895, p. 447, n. 13 ; Mycalesis mineus, var. confucius, Leech, Butt. China, Japan and Corea, p. 12, pl. ii, fig. 7, male (1892) ; Kirby, The Entomologist, vol. xxxii, p. 31 (1899).

The var. confucius is the dry-season form of M. mineus found in China. The larva iu India feeds on grasses.
13. Mycalesis (Oalysisme) horsfieldil, Moore.

Calysisme horsfieldii, Moore, Lep. Ind., vol., i, p. 197, pl. |xvi, figs. 2, 2a, 2b,
male, wet-season form; 2c, male, dry-season form (1892); P Hycalesis porseus, Wallace (nec Fabricins), Trans. Ent. Soc. Lond., 1895, p. 447, n. 12.

Only two species of Mycalesis have hitherto been found in Hongkong. Walker gives mineus and perseus. The latter is stated by Dr. F. Moore in Lep. Ind., vol. i, pp. 177, 178, to have a very wide range, being found almost throughout India, Ceylon, Burma, the Malay Peninsula and many of the islands of the Malay Archipelago, and in Hainan and Formosa. It may, as Walker states, be found in Hongkong, but it is more probable, I think, that what he identified as $M$. perseus is the comparatively common M. horsfieldii, which has been described since Mr. Walker wrote his paper. It has never been bred, but its larva will almost certainly be found on grasses.

## 14. Lethe guropa, Fabricius.

Papilio europa, Fabricius, Syst. Ent., p. 500, n. 247 (1775); Lethe europa, Walker, Trans. Ent. Soc. Lond., 1895, p. 448, n. 14 ; Moore, Lep. Ind., vol. i, p. 256 (1892).

The larva feeds on Bambusa Sp., natural order Gramines.

## 15. Lethe confusa, Aurivillius.

Lethe confusa, Aurivillins, Ent. Tids., vol. xviii, p. 142, n. 15 (1897); P Lethe verma, Walker, Trans. Ent. Soc. Lond., 1895, p. 448, n. $\mathbf{1 0}^{\circ}$; Lethe rohria, Kirby (nec Fabricins), The Entomologist, vol. xxxii, p. 31 (1899).

Mr. James J. Walker records Lethe verma, Kollar, from a single specimen taken in the Happy Valley, Hongkong, in March. Tbis is, I think, probably an incorrect identification, the present species being meant. L. verma is a common species in the hills of Northern India, and is found in the hills of Western China, but not I believe in Western China. As the name implies, there has been much confusion regarding this species. Until recently it has been always known as $L$. rohria Fabricius, until Dr. Aurivillins pointed out that the true rohria is an older name for the Lethe dyrta of Felder. The larva will almost certainly be found to feed on the leaves of bamboo.

## 16. Ypthima afanta, Moore.

Fpthima avanta, Moore, Proc. Zool. Soc. Lond., 1874, p. 567; Fiwes and Edwards, Trans. Ent. Soc. Lond., 1893, p. 33, n. 38, pl. i, fig. 27, clasp of male; Ypthima ordinata, Batler, Proc. Zool. Soc. Lond., 1880, p. 148, pl. xp, fig. 3; Ypthima hubneri, Walker, Trans. Ent. Soc. Lond., 1895, p. 448, n. 16 ; ? Ypthima argus, Walker, Trans. Ent. Soc. Lond., 1895, p. 448, n. 17.
T. avanta $\mathrm{i}^{\infty}$ seasonally dimorphic, avanta is the diy-season form,
L. de Nicéville-Butterflies of Honġ̇ong in Southern China. [No. 1,
while ordinata is the wet-season form. I have ventured to put Walker's two species hübneri [recte huebneri] and argus under avanta, as I do not believe that either of them are found in Hongkong, and that they have been wrongly identified. T. avanta is found in the Western Himalayas, in the plains of the North-Western Provinces, at Ranchi and Bholahat in Maldah, both in the plains of Bengal, in the Eastern Himalayas, in the Ganjam district of Eastern India, throughont Burma, and on the West River in Southern China. It has not been bred, but the larva will be found on grasses.
17. Melanitis ismene, Cramer.

Papilio ismene, Cramer, Pap. Ex., vol. i, p. 40, pl. xxvi, figs. A, B, male, dryseason form (1775); Melanitis determinata, Butler, Proc. Ent. Soc. Lond., 1885, p. vi, Melanitis leda, Walker, Trans. Ent. Soc. Lond., 1895, p. 449, n. 18.

This species in seasonally dimorphic, the dry-season form being ismene, the wet-season form is determinata. The larva feeds on rice, Oryza sativa, Linnæus, on large, coarse grasses, all of the natural order Graminex.
18.* Melanitis bela, Moore.

Melanitis bela, Moore, Horsfield and Moore, Cat. Lep. E.I.C., vol. i, p. 223, n. 465 (1857) ; Cyllo aswa, Moore, Proc. Zool. Soc. Lond., 1865, p. 769; Melanitis aswa, Walker, Trans. Ent. Soc. Lond., 1895, p. 449, n. 19.

This species is also seasonally dimorphic, bela being the wet-season form, aswa the dry-season form. Walker records one specimen taken at Kowloon late in 1891. I have not seen it from thence, but do not doubt the correctness of the record. It occurs in Western China, and as far westwards again as Kashmir. It has not been bred.

## Subfamily AMATHUSIIN $\boldsymbol{F}^{\text {A }}$

19. Discophora tullia, Cramer.

Papilio tullia, Cramer, Pap. Ex., vol. i, p. 127, pl. 1xxxi, figs. A, B, female (1775); Discophora tullia, Staudinger, Ex. Schmett., p. 189, pl. lxiii, female (1887) ; Walker, Trans. Ent. Soc. Lond., 1895, p. 449, n. 20 ; Moore, Lep. Ind., vol. ii, p. 197 (1895); Fruhstorfer, Berl. Ent. Zeitsch., vol. xlv, p. 13 (1900).

As far as is known, the larvæ of all the species of this genus feed on Bambusa sp., Natural Order Gramineæ, and are gregarious, very hairy, and are frequently mistaken for the larvæ of moths.
20. Clerome eumeds, Drury.

Danais Fcstivus eumeus, Drury, Ill. Fx. Ins., vol. i, p. 4, pl. ii, figs. 3, male, upper-and underside (1770) ; Clerome eumeus, Westwood, Trans. Ent. Soc. Lond.,

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second series, vol. iv, p. 183, n. 2 (1858); Batler, Cat. Fab. Lep. B. M., p. 44, n. 1 (1869) ; Walker, Trans. Ent. Soc. Lond., 1895, p. 450, n. 21 ; Moore, Lep. Ind., vol. ii, p. 209 (1895); Kirby, The Entomologist, vol. xxxii, p. 31 (1899); Papilio eumea (sic), Cramer, Pap. Ex., vol. ii, p. 132, pl. clxxxiii, figs. O, D, femule (1777); Papilio gripus Fabricias, Syst. Ent., App., p. 829, n. 178-79 (1775) ; Sp. Ins., vol. ii, p. 58, n. 255 (1781) ; Ent. Syst., vol. iii, pt. 1, p. 149, n. 457 (1793); Herbst, Pap., vol. vi, p. 77, n. 41, pl. cxxxv, figs. 3, 4, female (1793) ; Satyrus gripus, Godart, Enc. Meth., vol. ix, p. 497, n. 70 (1819) ; Papilio grispus (sic), Fabricius, Mant. Ins., vol. ii, p. 28, n. 294 (1787); Papilio decempunctatus Goese, Ent. Beytr., vol. iii, pt. 1, p. 218, n. 31 (1779).

No species of Clerome has, I believe, ever been bred. The larva will almost certainly be found to feed on Bambusa sp., Natural Order Graminess.

It is remarkable that no species of the subfamily Elymniinse las been recorded from Hongkong. As the importation of ornamental palms on which the larvo feed is probably considerable from countries where species of the group are common, it is more than probable that species of Elymniinæ will become naturalised in the island and on the adjoining mainland.

## Sulfanily NYMPHALINA.

## 21.* Charaxes (Eulepis) athamas, Drury.

Papilio Eques achivus athamas, Drnry, Ill Ex. Ins., vol. i, p 5, pl. ii, figs. 4, mals, upper and underside (1770) ; Pupilio uthamus, Cramer, Pap. Ex., vol. i, p. 140, pl. Ixxxix, figs. C, D, male (1776); Walker, Trans. Ent. Soc. Lond., 1895, p. 458, n. 52 ; Moore, Lep. India., vol. ii, p. 254 (1895); Bulepis athamas, Rothsohild and Jordan, Nov. Zool., vol. v, pl. x, figs. 1, 2, 3, 5, 7, 8, 9, 10, 11, male; 4, female; pl. xi, figs. 1, 2, 5, 6, 7, 10, 11, 12, male; 3, 4, 8, 9, feinale ;1898); vul. vi, p. 245, n. 12 (1899).

Mr. Jannes J. Walker records that he once saw this butterfly in Hongiong. Messrs Rothschild and Jordan under b. E. athamas athamus record it from South China (Hongkong), but add "Anthentic Chinese specimens we have not examined." I have seen no specimen from Hongkong. The larva in Ceylon feeds on Cæsalpinia, Natural Order Leeguminosæ; in Soath India on Grewia sp. Natural Order Tiliaceæ, on Cæsalpinia, Paincianu, Adenanthera, Acacia, and Albizzia, Natural Order Leguminosæ ; and in the Western Himulayas on Acucia and Albizziu.

## 22. Charaxes polyxena polyxena, Cramer.

Papilio polyzena, Cramer, Pap. Ex., vol. i, p. 85 pl. liv, figs. A, B, female (1775); Haridra polyxena, Moore, Lep. Ind., vol., ii, p. 247 (1896); Charaves polyzena polyxena, Rothschild and Jordun, Nov. Zool., vol. vii, p. 334 (1900) ; Nymphalis polyxo, Godurt, Enc. Meth., vol. ix, p. 399, n 169 (1819); Papilio bernardus, Fabricius, Ent. Syst., vol. iii, pt. i, p. 71, n. 223 (1793); Nymphalis (Charaxes) bernardus, J. II. 2

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Donovan, Ins. China (Westwood's edition), p. 63, pl. xxxiv, figs. 1, 8, female (1842); Charaxes bernardus, Butler, Cat. Fab. Lep. B. M., p. 50, n. 2 (1869); Walker, Trans. Ent. Soc. Lond., 1895, p. 459, n. 53 ; Haridra bernardus, Moore, Lep. Ind., vol. ii, p. 246 (1896); Doəocopa epilais, Hubner, Verz. bek. Schmett., p. 50, n. 464 (1816).

My material from Hongkong can superficially be broken up iuto two distinct groups, one with pale tawny bands on the upper side of both wings, of which I have four males and one female, the males are dated 17th and 26th April, and 5th December, while one has no date; the female also bears no date: the other with white bands, of which I have two pairs, one male is dated 14th July, the other is undated; one female is dated 2lst July, the other bears no date. P. polyxena was originally described from China, and my single tawny banded example of that sex agrees very well with Cramer's figure, but that the " tail" to the binding from the third median nervale is much longer (in Cramer's specimen it was probably broken off), and the dark and light markings of both wings on the underside are more strongly contrasted in Cramer's figure than in my specimen. The tawny banded males are extremely constant, and differ but little from my female; the "tail" to the hindwing is of course much shorter, and the submarginal series of black spots on the upperside of that wing instead of being each centred with a white spot has the anteriormost spot in one instance and the two anteriormost spots in three instances so marked. Of the white banded group in one male the band consists of four portions divided by the veins, the anterior the smallest, the posterior the largest, with a minute white spot anterior to the first of these with no spots beyond it whatever; in my other male the band consists of eight spots, there being two (instead of one as in the firstdescribed specimen) in the upper discoidal interspace, and another in the subcortal interspace, as well as the one on the satural area. The markings of the hindwing on the upperside also differ in my two male specimens, in the first described of these the discal band is fulvons, in the latter it is anteriorly white. My two white banded females also differ the one from the other, and neither of them agree with Donavon's figure, as that figure shows no discal band on the upperside of the hindwing, while in my specimens this band is prominent. In my two examples one has on the upperside of the forewing three fulvous-white spots anterior to the third median nervule, which are absent in the other. My specimens agree fairly well with Dr. Moore's description of that sex under the name of H. bernardus. Mr. J. O. Westwood remarked on Donovan's figures that "This uncommonly rare Chinese butterfly has not been figured in any other work. Fabricius described it only from the drawings of Jones. I possess a specimeu in which the central

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fascia is nearly white, and is continued half way across the posterior wings, and the black spots in the latter are very broad and confluent, without white in the centre." Dr. Moore separated H. bernardus from H. polyxena, and noted that "This species [bernardus] is distinct from H. polyxena, Cramer, and is allied to the Indian H. jalinder, Butlér, and H. hippanax, Felder." Fabricius described the medial band across the forewing on the upperside in P. bernardus as "flava," which is yellow, while Dr. Moore calls it "bluish-white." Donovan's figare of P. bernardus shows this band white just tinged with yellow. Fabricius' description of $P$. bernardus evidently applies to Cramer's figare of $P$. polyxena. In describing the male of $H$. bernardıs Dr. Moore says that the white band on the upperside of the forewing ends "At the lower [first] median veinlet." This is probably a slip for submedian nervure. Messrs. Rothschild and Jordon give seven local races of Charaxes polyxena, of which the Chinese form " G. polyxena polyxena" is the last. They consider the white and yellow banded forms to be one and the same species, the species being dichromatic. It has never been bred.

## 23. Apatura (Rohana) parysatis, Westwood.

Apatura parisatis, Westwood, Gen. Diurn. Lep., vol. ii, p. 305, n. 20, note (1850); A. parisatis, Staudinger, Ex. Schmett., p. 156, pl. lv , male and female (1886); Rohana parisatis, Moore, Lep. Cey., vol. iii, p. 17, pl. cxciv, figs. 2, 2a, male; 2b, $2 c$, female (1896) ; Apatura parysatis, Walker, Trans. Ent. Soc. Lond., 1895, p. 452, n. 27.

The larva of A. parysatis has been bred in Hongkong on (hiutus in MS.)

That of the allied A. carniba, Moore, feeds in Ceylon and South India on Celtis, Natural Order Urticaceæ.

## 24. Parhestina assimilis, Linnæus.

Papilio assimilis, Linnæus, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 479, n. 129 (1758) ; Mus. Ulr., p. 300, n. 118 (1764); Clerck's Icones Ins., vol. i, pl. xvi, fig. 1 (1759) ; Drury, Ill. Ex. Ins., vol. i, p. 33, pl. xvii, figs. 3, 4, male (1770); Cramer, Pap. Ex., vol. ii, p. 90, pl. cliv, fig. A, female (1777) ; Herbst, Pap., vol. vi, p. 43, n. 24, pl. cxxvi, figs. 4, 5, male (1793); Esper, Ausl. Schmett., p. 230, pl. lvii, fig. 1 ( $P$ 1798) ; Nymphalis assimilis, Godart, Enc. Méth., vol. ix, p. 393, n. 151 (1819) ; Hestina assimilis, Walker, Trans. Ent. Soc. Lond., 1895, p. 452, n. 28.

The larva of this species feeds in Hongkong on (hiatus in MS.)

## 25. Parhestina mena, Moore.

Hestina mena, Moore, Ann. and Mag. of Nat. Hist., third series, vol. i, p. 48, n. 3 (1858) ; Leech, Batt. from China, Japan, and Corea, vol. i, p. 143, pl. xx, figs. 3, \& male (1892); Walker, Trans. Ent. Soe. Lond., 1895, p. 452, n. 2 9; Diadema

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mena, Batler, Ann. and Mag. of Nat. Hist., vol. xvi, p. 398, n. 3 (1865) ; Parhestina mena, Moore, Lep. Ind., vol. iii, p. 36, pl. ccii, figs. 1, la, female (1896) ; Hestina nigrivena, Leech, 'T'he Ent., vol. xxiii, p. 31 (1890); Grose-Smith and Kirby, Rhop. Ex., pl. Hestina i, figs. 1, 2, male (1891) ; Hestina viridis, Leech, The Ent., vol. xxiii, p. 32 (1890).

Mr. Leech has himself sunk $H$. viridis to the rank of a variety of H. mena. From his figure of it (l.c., fig. 3) the underside of the hindwing has "the costa above the costal nervure and the abdominal fold yellow." Mr. Leech notes, however, that male specimens of var. viridis received subsequent to the description of the species have none of this yellow coloration. I am a little doubtful if this character is not sufficient to separate $H$. viridis, Leech, and $H$. nicevillei, Moore, from P. assimilis, Linnæus, and P. mena, Moore. H. mena was originally described from "North India," in 1895 Mr. Walker recorded it from Hongkong, but Dr. Moore in 1896 said the habitat is nnknown. I have seen but a single pair from Hongkong, the female of which agrees very closely with Dr. Moore's figure of that sex (not a male as stated). I would draw especial attention to $\&$ series of four or five sabmarginal piuk spots on both surfaces of the hindwing which are visible in my specimens, in Messrs Grose-Smith and Kirby's figures and in Mr. Leech's figure No. 4 of var. nigrivena. These spots occupy the same position exactly as the crimson spots in $P$. assimilis, which has led me to suspect that $P$. mena is not improbably a dimorphic form of that species. The genns Parhestina is evidently in a very plastic state, and it appears to me that the process of mimicry to species of Dauuis is now actively going on. Typical P. assimilis with its brilliant crimson spots is a conspicuous species, and it is evident tlat it would be advantageous to it to become less gandily coloured and to be able to pass itself off as a nanseous Danais. Mr. James J. Walker records the breeding of a specimen in Hongkong, but does not mention the foodplant of the larva, which still remains anknown.
26. Euthalia phemids, Doubleday and Hewitson.

Adolias phemius, Doubleday and Hewitson, Gen. Diurn. Lep., vol. ii, p. 291, n. 18 (1850) ; Itanus phemius, pl. xl, fig. 4, male (1850); id., Moore, Trans. Ent. Soc. Lond., new series, vol. v, p. 65, n. 4, pl. iii, fig. 3, male (nec femule) (1859) ; Euthalia phemius Standinger, Ex. Schmett., p. 153, pl. liv. mule (nec female) (1886); Walker, 'l'rans. Ent. Soc. Lond., 1895, p. 457, n. 47 ; Moore, Lep. Ind., vol. iii, p. 123, pl. cexxxviii, figs. 1, 1a, male; 1b, 1c, fomale (1896) ; Adolias sancara, Moore, Horsfield and Moore, Cat. Lep. Mas. E.I.C., vol. i, p. 195, n. 394 (1857) ; Trans. Ent. Soc. Lond., new series, vol. v, p. 78, n. 34, pl. ix, fig. 1, female (1859).

Mr. James J. Walker having taken a pair coupled of this bntterfly in Ilongkong finally settles the question as to the opposite sexes of the
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insect. He also obtained a pupa attached to a twig under some litchi trees (Nephelium Lit-chi, Camb., Natural Order Sapindaceæ), but that cannot be the food-plant of the larva in India, as it grows wild nowhere in this country, while the butterfly is common in the Eastern Himalayas, Assam, Upper Burma, and Indo-China. Its food-plant still remains unknown.

## 27. Limenitis (Ladaga) camilla, Linnæus.

Papilio camilla, Linnæus, Mus. Ulr., p. 304, n. 122 (1764); Nymphalis camilla, Anrivillius, Kongl. Svenska Vet.-Akad. Hand., vol. xix, n. 5, p. 101, n. 122 (1882); Limenitis camilla, Kirby in Allan's Nat. Hist., Bntterfies, vol. i, pt. 1, p. 142, p. 145, underside of normal imago, upper and underside of black variety; pl. xxiii. fig. 3, upperside of normal imago; pl. iii, fig. 7, larva (1896); Papilio prorsa, Linnæus, Mus. Ulr., p. 303, n. 121 (1764), nec Papilio prorsa, Linnæus, Syst. Nat. Ins., ed. $x$, vol. i, pt. 2, p. 480, n. 134 (1758) ; Papilio sibilla, Linnæas, Syst. Nat. Ins., ed. xii, vol. i, pt. 2, p. 781, n. 186 (1767) ; Limenitis sibylla, Leeoh, Butt. from Ohina, Japan, and Corea, vol. i, p. 185 (1892) ; Limenitis sidii, var. japanica, Ménétriès, Cat. Lep. Pét., pt. 2, p. 103, n. 566 (1855) ; Ladaga japonica, Moore, Lep. Ind., vol. iii, p. 174 (1896).

This is a new record from Hongkong, though common in Japan, Corea, Amarland and Earope. Dr. Moore keeps the Japan form as a distinct species under the name L. japanica. Mr. Leech says that in Japan the larva feeds on Lonicera japanica, Thunberg, Natural Order Caprifoliaces. In England "The White Admiral" feeds also on honeysuckle.

## 28.* Athyma sulpitia, Cramer.

Papilio sulpitia, Cramer, Pap. Ex., vol. iii, p. 37, pl. ccxiv, figs. E, F (1779) ; Herbst, Pap., vol. ix., p. 95, n. 19, pl. cexl, figs. 3, 4(1798); Athyma sulpitia, Walker, Trans. Ent. Soc. Lond., 1895, p. 456. n. 45 ; Parathyma sulpitia, Moore, Lep. Ind., vol. iii, p. 176 (1896). Nymphalis strophia, Godart, Enc. Meth., vol. ix, p. 431, n. 257 (1823).

The larva of this batterfly has never been found.
29.. Athyma pebids, Linnæus.

Papilio perius, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p; 471, n. 79 (1758); Athyma perius, Walker, Trans. Ent. Soc. Lond., 1895, p. 456, n. 43; Moore, Lep. Ind., vol. iii, p. 186 (1896) ; Papilio leucothoë, Linnæus, Syst. Nat., ed. x, p. 478, n. 122 (1758); Limenitis leucothoë, Donovan, Ins., China, new edition, p. 65, pl. xxxv, fig. 3 (1842) ; Papilio polymina, Donovan, Ins., Chiua, first edition, pl. xxxv, fig. 3 (1799).

The larva has been recorded to feed in Java on a species of Phyllanthus, Natural Order Euphorbiacess ; in South India it feeds on two species of Glochidion, Natural Order Euphorbiace:

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A. asita, Moore, Proc. Zool. Soc. Lond., 1858, p. 13, n. 8; Pantoporia asita, Moore, Lep. Ind., vol. iii, p. celxiii, figs. 2, male; 2a, female (1897); Athyma nefte, Walker (nec Cramer) Trans. Ent. Soc. Lond., 1895, p. 456, n 44.

This insect has never been bred.
31. Athima selenophora, Kollar.

Limenitis selenophora, Kollar, Hügel's Kaschmir, vol. iv, pt. 2, p. 426, n. 1, pl. vii, figs. 1, 2, male (1844); Athyma selenophora, Walker, Trans. Ent. Soc. Lond., 1895, p. 457, n. 46; Pantoporia selenophora, Moore, Lep. Ind., vol. iii, p. 205 (1897); Athyma bahula, Moore, Proc. Zool. Soc. Lond., 1858, p. 12, n. 3, pl. i, fig. 2, female.

The larva in South India feeds on Adina cordifolia, Hook. f., Natural Order Rubiacese.
32.* Neptis antilope, Leech.

Neptis antilope, Leech, The Entomologist, vol. xxiii, p. 35 (1890); Butt. from China, Japan, and Corea, vol. i, p. 197, pl. xviii, fig. 2, male (1892).

Mr. Leech records having taken two specimens of this species at Hongkong in March, 1886. It has never been bred.

## 33. Neptis columella, Cramer.

Papilio columella, Cramer, Pap. Ex., vol. iv, p. 15, pl. cexcri, figs. A, B, female (1780) ; Neptis columella, Walker, Trans. Ent. Soc. Lond., 1895, p. 454, n. 36 ; Andrapana columella, Moore, Lep. Ind., vol. iii, p. 220 (1897); Neptis ophiana, Moore, Proc. Zool. Soc. Lond., 1872, p. 561 ; Neptis martabana, Moore, Trans. Ent. Soc. Lond., 1881, p. 310; Neptis ophiana, var. nilgirica, Hampson, Journ. A.8.B., vol. lvii, pt. 2, p. 353, n. 57 (1888); Andrapana columella singa, Fruhstorfer, Berl. Ent. Zeitsch., vol. xliv, p. 286 (1899).

This butterfly has never been bred.

## 34. Neptis eurynome, Linnæus.

Papilio eurynome, (? Papilio hylas, male, nec. female), Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 486, n. 173 (1758); Limenitis eurynome, Westwood's ed. Donovan's Ins. China, p 66, pl. xxxv, fig. 4, female (1842); Neptis eurynome, Moore, Proc. Zool. Soc. Lond., 1874, p. 570 ; Lep. Ind., vol. iii, p. 244 (1897); Walker, Trans. Ent. Soc. Lond., 1895, p. 454, n. 35 ; Papilio leucothoë, Clerck, Icones Ins., vol. iii, pl. v, fig. 4 ( ); Donovan, Ins. China, first edition, pl. xxxv, fig. 3, female (1799) ; Papilio aceris, Esper, Eur. Schmett., vol. i, pt. 2, pl. lxxxii, fig. 1, female (1783); Neptis hainana, Kirby (nec Moore), The Entomologist, vol. xxxii, p. 31 (1899).

The synonymy given above is mainly taken from Dr. Moore's Lep. Ind. Linnæus' Syst. Nat. Ins., tenth edition, is not arailable, so I am

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unable to check the first entry; though apparently the name given therein on p. 486, n. 173, is hylas and not eurynome. If this be so, eurynome cannot be ascribed to Linnæus, but should be credited to Westwood, as was done by Dr. Moore in 1874. Donovan's fig. 4 of pl. xxxv applies to this insect: he called it leucothoë, mistaking the insect for the Athyma leucothoë described by Linnæus as Papilio leucothoë, which itself is a synonym of the older Papilio [Athyma] perius, Linnæus. As there is an older Neptis named leucothoë of Cramer the species under consideration cannot be called Neptis leucothoë, Donovan. Mr. Kirby records Neptis hainana, Moore, originally described from Hainan Island, China, from Hongkong, but Dr. Moore considors that species to be distinct from the Hongkong one, so as I have no Hainan specimens I have followed him in this. This group of the genus occurs almost everywhere in the East, and in my opinion has received far too many names. Wherever the seasons are markedly wet and dry, seasonal dimorphism is very strongly marked, particularly so in Hongkong. The insect in Hongkong has not been bred, but the transformations of its Indian allies are well known, N. varmana, Moore, in South India being found in the larval state on peas of various kinds, Natural Order Leguminosæ.

## 35.* Precis atlitrs, Linnæus.

Papilio atlites, Linnæus, Cent. Ins., p. 24, n. 72 (Amoen., vol. vi, p. 407), (1763) ; Junonia atlites, Walker, Trans. Ent. Soc. Lond., 1895, p. 453, n. 31, Moore, Lep. Ind., vol. iv, p. 69 (1899).

The larva in Java feeds on a species of Achyranthes, Natural Order Amarantacer, and in South India on Hygrophila and Barleria, Natural Order Acanthaces.
36. Precis orithya, Linnæus.

Papilio orithya, Linnæus, Syst. Nat. Ins, ed. x, vol. i, pt. 2, p. 473, n. 94 (1758) ; Cramer, Pap. Kx., vol. i, p. 28, pl. xix, figs. C, D, female ; pl. xxxii, figs. E, F, male (1775); Cynthia orithya, Westwood, Donovan's Ins., OLina, new edition, p. 64, pl. xxxv, fig. 2, female (1842); Junonia orithya, Walker, Trans. Ent. Soc. Lond., 1895, p. 454, n. 34 ; Moore, Lep. Ind., vol. iv, p. 71 (1899); Precis orithya, Butler, Ann. and Mag. of Nat. Hist., seventh series, vol. viii, p. 200, n. 12 (1901).

The larva has been recorded in the Himalayas to feed ou Antirrhinum Orontium Linn., Natural Order Scrophulariner ; in South India on Hygrophila, Natural Order Acanthaces ; and in Ceylon on acanthads.

## 37. Precis hierta, Fabricius.

Papilio hierta, Fabricins, Ent. Syst., Suppl., p. 424, n. 281.2 (1798); Junonia hierta, Moore, Lep. Ind., vol. iv, p. 75 (1899); Papilio œnone, Cramer (nec Linnæus),

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Pap. Ex., vol. i, p. 55, pl. xxxv, figs. A, B, female; O, male (1775) ; Cynthin cenone, Westwood, Donovan's Ins. Chinn, new edition, p. 66, pl. xxxvi, fig. 1, male (1842); Junonir œenone, Walker, Trans. Ent. Soc. Lond., 1895, p. 454, n. 33 ; Precis œnone [sic], Batler, Ann. and Mag. of Nat. Hist., seventh series, vol. viii, p. 203, n. 22 (1901).

The larva feeds in South India on Hygrophila, Natural Order Acanthaces, also on two plants of which the vernacular names are " Kolay Mooloo" and ", Byle Choolee."

## 38. Precis lemonias, Linnæus.

Papilio lemonias, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 473, n. 93 (1758) ; Junonia lemonias, Walker, Trans. Ent. Soc. Lond., 1895, p. 454, n. 32 ; Moore, Lep. Ind., vol. iv, p. 76 (1899) ; Papilio aonis, Oramer, Pap. Ex., vol. i, pp. 55, 56, pl. xxxp, figs. D, E, F, male (1775).

In India the larva feeds on Nelsonia, Hygrophila, Strobilanthes and Barleria, all Nutural Order Acunthaceæ.

## 1 39. Precis almana, Linnæus.

Papilio almana, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 472, n. 89 (1758); Cramer, Pap. Ex., vol. i, p. 90, pl. 1viii, figs. F, G, (1775); Cynthia almana, Westwood, Donovan's Ins. China, new edition, p. 67, pl. xxxvi, fig. 2 (1842); Junonia almana, Moore, Lep. Ind., vol. iv, p. 79 (1899); Papilio asterie, Linnæus, Syst. Nat., ed. x, vol. i, p. 472, n. 90 (1758) ; Cramer, Pap. Ex., vol. i, p. 90, pl. lviii, figs. D, H (1775); Junonia asterie, Walker, Trans. Ent. Soc. Lond., 1895, p. 453, n. 30.

The larva in Java has been fonnd feeding on Justicia, Natural Order Acanthaceæ; in South India on Hygrophila, Natural Order Acanthacea; in Calcutta on Gloxinia or Osbeckia, the latter Natural Order Melastomaceæ.

## 40. Vanessa canace, Johanssen.

Papilio canace, Johanssen, Amœn. Acad., vol. vi, p. 406, n. 68 (1764); Linnæus, Syst. Nat. Ins., ed. xii, vol. i, pt. ii, p. 779, n. 173 (1767); Vanessa canace, Welker, Trans. Ent. Soo. Lond., 1895, p. 458, n. 50 ; Papilio charonia, Drury, Ill. Ex. Ent., vol. i, p. 28, pl. xp, figs. 1, 2, female (1770) ; Cramer, Pap. Ex., vol. i, pp. 73, 74, pl. xlvii, figs. A, B, C (1775) ; Herbst, Pap., vol. vii, p. 42, n. i, pl. xlx, figs. 1, 2 (1794); Vanessa charoniu, Godart, Enc. Méth., vol. ix, p. 308, n. 27 (1819) ; Kaniska charonia, Moore, Lep. Ind., vol. iv, p. 94 (1899) ; Papilio kollina, Meerburgh, Afb. Zeldz. Gew., pl. xliii (1775).

Dr. Moore records this species as Kaniska Charonia, Drary, from Hongkong, but specimens from thence are identical with Indian examples of $V$. canace, Linnæus. Mr. James J. Walker has bred it in Hongkong on a species of Smilax, Natural Order Liliacess.

## 41. Vanessa indica, Herbst.

Papilio atalanta (part), Herbst, Pap., vol. vii, p. 171, n. 64, Papilio atalanta

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indica, pl. clxxx, figs. 1, 2 (1794); Vanessa indica, Walker, Trans. Ent. Soc. Lond., 1895, p. 485, n. 49; Papilio atalanta Oramer (nec Linnæas), Pap. Ex., vol. i, p. 132, pl. Ixxxiv, figs. E, F (1775); Hamadryas decora calliroë Hübner, Sarmal. Ex. Schmett. (1806-16); Pyrameis callirhoë [sic], Moore, Horsfield and Moore, Cat. Lep. Mus. E. I. C., vol. i, p. 138, n. 879 (1857); Vanessa vulcania, Godart, Enc. Méth., vol. ix, p. 320, n. 55 (1819).

The larva of this butterfly in Ceylon feeds on Urtica, and in the Western Himalayas on different nettles of the Natural Order Urticacese.

## 42. Vanessa cardui, Linnæus.

Papilio cardui, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 475, n. 107 (1758) ; Vanessa cardui, Walker, Trans. Ent. Soc. Lond., 1895, p. 457, n. 48 ; Moore, Lep. Ind., vol. iii, p. 107 (1899).

The larva has been recorded in Ceylon to feed on Artemisia, Natural Order Compositæ; at Kandahar on different species of thistles; at Jutogh iu the Western Himalayas on the common artichoke and on mallow ; in the same region on nettles, but this is a doubtful food-plant, on thistles, on Debregeasia, Natural Order Urticaceæ, and on Carduus, Natural Order Compositæ; in South India on Zornia, Natural Order Leguminosæ, and on Blumea, Natural Order Composits ; and at Lucknow on Anaphalium, Natural Order Composits.

## 43. Symbrentieia lucina, Cramer.

Papilio lucina, Cramer, Pap. Ex., vol. iv, p. 82, pl. cooxxx, figs. E, F, female (1780); Symbrenthia lucina, Moore Lep. Ind., vol. iv, pp. 113, 114 (1906); Symbrenthia hyppoclus hucina, Frahstorfer, Berl. Ent. Zeitsch., vol. xlv, p. 20 (1900) ; Bymbrenthia khasiana, Moore, Proc. Zool. Soc. Lond., 1874, p. 569 ; Symbrenthia daruka, Moore, Proc. Zool. Soc. Lond., 1874, p. 570, pl. Ixvi, fig. 18, male; Symbrenthia hyppoclus [sic], Walker [nec Cramer], Trans. Ent. Soc. Lond., 1895, p. 458, n. 51.

In Sikkim the larva feeds on the stinging nettle Girardinia sp., in the Western Himalayas on nettles, Debregeasia sp., Natural Order Urticaces.

## 44. Hypolimnas bolina, Linnæas.

Papilio bolina, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 479, n. 124 (1758); Hypolimnas bolina, Walker, Trans. Ent. Soc. Lond., 1895, p. 455, n. 39 ; Apatura bolina, Moore, Lep. Ind., vol. iv, pp. 140, 144 (1900); Papilio iacintha, Drury, Ill. Ex. Ins., vol. ii, p. 36, pl. xxi, figs. 1, 2, female, (1773) ; Nymphalis jacintha, Westwood, Donovan's Ins. China, new edition, p. 68, pl. xxxvii, fig. 1, female (1842).

Mr. Gervose F. Mathew has found the larva of $H$. holina feeding on Sida rhombifolia Liun., and Sida retusa Linn., Natural Order Malvaces, also upon a Convolvulus, Natural Order Convolvulacese, in the Australian region; in South India it feeds on Portulaca, Natural Order Portulaces, Fleurya and Elatostema, both Natural Order Urticaceæ; in J. II. 3
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Central India it has been found on Rostellulria, Natural Order Acanthacers.

## 45*. Hypolimnas misippos, Linnæus.

Papilio misippus, Linnæпs, Mus. Ulr., p. 264, n. 83 (1764) ; Hypolimnas misippus, Walker, Trans. Ent. Soc. Lond., 1895, p. 455, n. 40 ; Apatura misippus, Moore, Lep. $^{\text {L }}$ Ind., vol. iv, pp. 146, 150 (1900).

Mr. James J. Walker reports having seen a male of this species close to Kowloon in February. I have no other record of its occurrence in the colony. I do not know what form or forms of the female are found in China, three forms, diocippus, Cramer, alcippoides, Butler, and inaria; Cramer, are known from India. In India the larva feeds on Portulaca, Natural Order Portulaceæ. In Ceylon it feeds on Abutilon and Abelmoschus, Natural Order Malvacess.

## 46. Cethosia biblis, Drury.

Papilio biblis, Drury, Ill. Ex. Ins., vol. i, p. 9, pl. iv, figs. 2, 2a, male (1770); Cramer, Pap. Ex., vol. ii, p. 120, pl. olxxp, figs. A, B, male (1777); Cethosia biblis, Walker, Trans. Ent. Soc. Lond., 1895, p. 451, n. 26 ; Moore, Lep. Ind., vol. iv, pp. 185, 186 (1900).

The larva in Hongkong feeds on Passiflora fatida, Linn., Natural Order Passifloreæ. In India it feeds also on passion-flowers.

## 47. Atblla phalantha, Drury.

Papilio phalantha, Drary, Ill. Ex. Ins., vol. i, p. 41, pl. xxi, figs. 1, 2 (1770); Atella phalantha, Moore, Lep. Ind., vol. iv, p. 198 (1900); Atella phalanta [8ic], Walker, Trans. Ent. Soc. Lond., 1895, p. 451, n. 25; Papilio columbina, Ẽramer, Pap. Ex., vol. iii, p. 76, pl. corxxviii, figs. A, B (1779); vol. iv, p. 92, pl. cooxxxvii, figs. $\mathrm{D}, \mathrm{E}$ (1781).

In Java the larva feeds on Ixora, Natural Order Rubiacess; in Ceylon and on Flacourtia, Natural Order Bixineæ; on Salix, Natural Order Salicinere, in India and the Isle of Réanion off the coast of Africa on the former genus of plants.
48. Cobia erymanthis, Drury.

Papilio erymanthis, Drary, Ill. Ex. Ins., vol. 1, p. 29, pl. xv, figs. 3, 4 (1770); Cramer, Pap. Ex., vol. iii, p. 77, coxxxviii, figs. F, G (1779) ; Argynnis erymanthis, Westwood, Donovan's Ins. China, new edition, p. 64, pl. xxxv, fig. 1 (1842); Cupha erymanthis, Walker, Trans. Ent. Soc. Lond., 1895, p. 451, n. 24; Fruhstorfer, Berl. Ent. Zeitsch., vol. xlii, p. 325 (1897) ; Stet. Ent. Zeit., vol. lx, p. 844 (1899); Moore, Lep. Ind., vol. iv, pp. 205, 206 (1900).

Mr. James J. Walker has bred the larva in Hongkong on Alochidion eriocarpum, Champ., Natural Order Euphorbiacess; in South India

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the larva has been found on a species of willow, and on Flacourtia, Natural Order Bixiner.
49. Cirbhochroa mithila, Moore.

Cirrochroa mithila, Moore, Proc. Zool. Soc. Lond., 1872, p. 558 ; Cirrhochroa mithila, Walker, Trans. Ent. Soc. Lond., 1895, p. 455, n. 38 ; Cirrochroa rotundatu, Butler, Trans. Linn. Soc. Lond., Zoology, second series, vol. i, p. 543, n. 4 (1877).

This butterfly has never been bred.
50*. Cirrhochroa satbllita, Butler.
Cirrhochroa satellita, Butler, Cist. Ent., vol. i, p. 9 (1869); Walker, Trans. Ent. Soc. Lond., 1895, p. 455, n. 37 ; Cirrochroa satellita [sic], Moore, Lep. Ind., vol. iv, p. 223 (1900).

The transformations of this butterfly are unknown.
51*. Araynnis childreni, Gray.
Argynnis chilḋreni, Gray, Zool. Misc., vol. i, p. 33 (1831); Walker, Trans. Ent. Soc. Lond., 1895, p. 456, n. 42 ; Dryas childreni, Moore, Lep. Ind., vol. iv, p. 229 (1900).

This fine butterfly has never been bred.

## 52. Argynnis hyperbids, Linnæus.

Papilio hyperbius, Linnæus, Cent. Ins.; p. 25 (1763); Papilio niphe, Linnæus Syst. Nat. Ins., ed. xii, vol. i, pt. 2, p. 785, n. 208 (1767) ; Drary, Ill. Ex. Ins., vol . i, p. 12, pl. vi, figs. 1, 1a, female (1770) ; Cramer, Pap. Ex., vol. i, p. 21, pl. xiv., figs. D, E, male ; B, C, female (1775) ; Argynnis niphe, Walker, Trans. Ent. Soc. Lond., 1895, p. 455, n. 41 ; Acidalia hyperbius, Moore, Lep. Ind., vol. iv, pp. 234, 235 (1900) ; Papilio argynnis, Drury, Ill. Ex. Ins., vol. i, p. 13, pl. vi, figs. 2, 2a, male (1770).

The larva of this interesting butterfly feeds on violets and pansies, Viola, Natural Order Violaceæ.
53. Ergolis ariadne, Johanssen.

Papilio ariadne, Johanssen, Amœn. Acad., vol. vi, p. 407 (1764) ; Ergolis ariadne, Walker, Trans. Ent. Soc. Lond., 1895, p. 451, n. 23 ;-Moore, Lep. Ind., vol. v, pp. 18, 19 (1901).

The larva in India feeds on Tragia, Natural Order Euphorbiaces.
Family RIODINID雨.
Subfamily Nemeobinas.
54. Zemeros flegyas, Cramer.

Papilio flegyas, Cramer, Pap. Ex., vol. iii, p. 158, pl. colxxx, figs. E, F, male
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(1780); Zemeros flegyas, Walker, Trans. Ent. Soc. Lond., 1895, p. 459, n. 54; Papilio allica, Fabricins, Mant. Ins., vol. ii, p. 52, n. 510 (1787); Zemeros phlegyas indicus, Frahstorfer, Berl. Ent. Zeitsch., vol. xlii, p. 333 (1897); Zemeros confucius, Kirby (nec. Moore), The Entomologist, vol. xxxii, p. 31 (1899).

Papilio flegyas was originally described from China, i.e., Southern China, probably from the Canton region in which Hongkong is situated, as this is the region from which all the old writers received all the species from China which they described. Mr. Fruhstorfer doubts Cramer's locality and records Z. "phlegyas" from East and West Java only. He names the North Indian form Z. phlegyas indicus, but Indian specimens are identical with those from China. Mr. Kirby records Z. confucius, Moore, from Hongkong, a species originally described from the Island of Hainan off the coast of China. Whether this species is a good one or not I am unable to say, as I possess no butterflies from Hainan. Dr. Holland says that it is a good species. In India the larva feeds on Mæsa, Natural Order Myrsineæ.

## 55. Abisara rcherids, Stoll.

Papilio echerius, Stoll, Cramer's Pap. Ex., Suppl., vol. v, p. 140, pl. xxxi, figs. 1, 1A, male; 1B, female (1790); Abisara echerius, Walker, Trans. Ent. Soc. Lond., 1895, p. 459, n. 55; Papilio odin, Fabricius, Ent. Syst., vol. iii, pt. 1, p. 56, n. 175 (1793) ; Lycæna menodice, Hübner, Verz. bek. Schmett., p. 28, n. 174 (1816).

I have not included in the synonymy given above the Papilio coriolanus of Fabricins, as it was described from "The Indies," and is said to have a common [on both wings] ferruginous band, which does not apply to the present species. Dr. Butler says it is well figured in the unpublished "Icones" of Mr. Jones, a book not available in Calcutta. The larva of the closely-allied A. fraterna, Moore, in Southern India on Embelia and Ardisia, Natural Order Myrsiness; in Ceylon A. prunosa, Moore, feeds on Ardisia of the same Natural Order.

## Family LYCANID .

56. Gerydus chinensis, Felder.

Miletus chinensis, Felder, Verh. zool.-bot. Gesellsch. Wien, vol. xii, p. 488, n. 146 (1862) ; Reise Nov., Lep., vol. ii, p. 284, n. 364, pl. xxxv, figs. 35, 36, female (1865) ; Gerydus chinensis, Walker, Trans. Ent. Soc. Lond., 1895, p. 460, n. 57.

The transformations of no species of Gerydus is known.
57. Neopithecops zalmora, Butler.

Pithecops zalmora, Butler, Cat. Fab. Lep. B. M., p. 161 (1869); Neopithecops nalmora, Walker, Trang. Ent. Soc. Lond., 1895, p. 460, n. 58.

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The larva of this little batterfly feeds on Glycosmis, Natural Order Rutaces in South India.

## 58. Chilades laids, Cramer.

Papilio lajus, Cramer, Pap. Ex., vol. iv, p. 62, pl. cccrix, figs. D, E, female (1780); Lycæna laius, Butler, Cat. Fab. Lep. B. M., p. 171, n. 19 (1869) ; Chilades laius, Walker, Trans. Ent. Soc. Lond., 1895, p. 461, n. 63; Hesperia cajus, Fabricins, Ent. Syst., vol. iii, pt. 1, p. 296, n. 126 (1793); Lycæna cajus, Wallengren, Kongl. Svenska Fregatten Eingenies, Zoologi, pt. 1, p. 356, n. 12 (1861); Plebeius leucofasciatus, Röber, Iris, vol. i, p. 59, pl. iv, fig. 32, male, wet-season form (1886).

In India the larva feeds on Citrus, Natural Order Rutacer.

## 59. Zizera mata, Kollar.

Lycrna maha, Kollar, Hügel's Kaschmir, vol. iv, pt. 8, p. 422, n. 9 (1844); Zizera maha, Walker, Trans. Ent. Soc. Lond.; 1895, p. 460, n. 60; Lycena bohemanni, Wallengren, Wien, Ent. Monatsb., vol. iv, p. 37, n. 16 (1860); Kong. Svenska Fregatten Eugenies, Zoologi, pt. 1, p. 355, n. 11 (1861); Lycæna argia, Elves, Proc. Zool. Soc. Lond., p. 888, 1881) ; Plebeius albocæruleus, Röber, Iris, vol. i, p. 59, pl. iv, fig. 7, male (1886).

Dr. A. G. Butler in Proc. Zool. Soc. Lond., 1900, p. 107, n. 3, pl. xi, figs. 5, 6, male, gives Lycæna opalina, Poajade, with L. marginata, Poujade, and Plebeius albocæruleus [sic], Röber, from Barma, Tibet and China as distinct from Lycæna maha, Kollar, with Yolyammatus chandala, Moore, and Zizera ossa, Swinhoe, from Western India, occurring in the Lower Himalayas to Madras [? Bombay]; he also keeps distinct the Lycæna diluta of Felder, with Lycsena squalida, Butler, from the Eastern Himalayas sonthwards to Ganjam in the Madras Presidency. The latter species was originally described from Cachar, so the province of Assam must be added to the region of Zizera diluta. I am unable to follow Dr. Butler in his division of the wide-ranging Z. maha into three geographical races. No hard and fast geographical line can be drawn between them, Z. maha occurring from Kashmir at least (and probably still further to the west) on the west to Hongkong on the east. In Calcatta the larva feeds on Oxalis, Nataral Order Geraniaces.

## 60. Zizera otis, Fabricius.

Papilio otis, Frabricins, Mant. Ins., vol. ii, p. 73, n. 689 (1787); Lycæna serica, Felder, Verh. zool.-bot. Gesellsch. Wien, vol. xii, p. 487, n. 145 (1862); Polyammatus sangra, Moore, Proc. Zool. Soc. Lond., 1865, p. 772, pl. xli, fig. 8, male; Zizera sangra, Walker, Trans. Ent. Soc. Lond., 1895, p. 460, n. 59.

Dr. A. G. Batler in Proc. Zool. Soc. Lond., 1900, p. 111, retains Lycæna indica, Murray, described from Allahabad in the North-Western
L. de Nicéville-Butterflies of Hongkong in Southern Ohina. [No. 1,

Provinces, bat which Dr. Batler restricts to Central and South India and Ceylon, as distinct from Papilio otis. I have nothing to add to my note in Journ. A. S. B., vol. xlvi, pt. 2, p. 611 (1897) with regard to these two supposed distinct species. In Calcutta the larva feeds on Alysicarpus, Natural Order Leguminosæ; in South India on Zornia, Natural Order Leguminoss.

## 61. Everes argiades, Pallas.

Papilio argiades, Pallas, Reise, vol. i, app., p. 472, n. 65 (1771); Lycena argiade Walker, Trans. Ent. Soo. Lond., 1895, p. 461, n. 61.

The larva in South India feeds on Cylista, Natural Order Leguminosæ.
62. Nacaduba atrata, Horsfield.

Lyczna atratus, Horsfield, Cat. Lep. E. I. Co., p. 78, n. 13 (1828).
In Ceylon the larva feeds on Vateria, Natural Order Dipterocarpes; in South India on Wagatea, Natural Order Leguminoss ; and on Embelia and ardisia, both Natural Order Myrsineso.

## 63. Jamides siraha, Kheil.

Plebeius siraha, Kheil, Rhop. Nias., p. 30, n. 91, pl. v, fig. 35, male (1884); J. bachus, var., Distant, Rhop. Malay., p. 222, n. 1,pl. xxi, figs. 19, male ; 16, female (1884).

The larva of this butterfly has never been found, but the allied J. bachus, Cramer, in South India feeds on Butea, Pongamia and Xylia, all of the Natural Order Leguminosse.

64*. Lampides celeno, Cramer.
Papilio celeno, Cramer, Pap. Ex., vol. i, p. 51, pl. xxxi, figs. C, D, male (1775); Hesperia ælianus, Fabricius, Ent. Syst., vol. iii, pt. 1, p. 280, n. 79 (1793); Lampides ælianus [sic], Walker, Trans. Ent. Soc. Lond., 1895, p. 461, n. 64.

In Java the larva feeds on Butea, Natural Order Leguminoser; in Calcutta on Heynea, Natural Order Meliaceæ; and on Pongamia, Natural Order Leguminosæ ; in South India on Abrus, Pongamia and Saraca, all Natural Order Leguminosæ.

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66. Catochrisops cnejos, Fabricius.

Hesperia cnejus, Fabricius, Ent. Syst., Suppl., p. 430, n. 100-101 (1798).
Dr. A. G. Butler in "The Entomologist," vol. xxxiii, p. 1 (1900), places cnejus in Enchrysops, which has the eyes smooth, and strabo in Catochrysops, as it has the eyes hairy. The larva in Calcutta feeds on Phaseolus, in Orissa on Dólichos, and in South India on Ougeinia and Cylista-all Natural Order Leguminosse.

## 67. Polyommatus beticus, Linnæas.

Papilio boeticus, Linnæus, Syst. Nat. Ins., ed. xii, vol. i, pt. 2, p. 789, n. 226 (1767) ; Lycæna boetica, Walker, Trans. Ent. Soc. Lond., 1895, p. 461, n. 62.

The larva in Calcutta feeds on Crotalaria; in South India on Butea and Oajanus; in Earope on Colutea; and in South Africa on Crotalaria; and in the Hawaiian Islands on Melilotus-all Natural Order Leguminosæ.

> 68. Iraota timoleon, Stoll.

Papilio timoleon, Stoll, Suppl. Cramer, Pap. Ex., vol. v, p. 146, pl. xxxii, fige. 4, 4D, female (1790); Deudoris (Iraota) timoleon, Walker, Trans. Ent. Soc. Lond., 1895, p. 463, n. 72 ; Hesperia mæcenas, Fabricins, Ent. Syst., vol. iii, pt. 1, p. 271, n. 45 (1793); Theela mæcenas, Westwood, Donovan's Ins. China, new edition, p. 70, pl. xxxix, fig. 2, male (1842); Deudoriz (Iraota) mæcenas, Walker, Trans. Ent. Soc. Lond., 1895, p. 463, n. 73.

The larva in South India feeds on three species of Ficus, Natural Order Urticaces ; in Ceylon it feeds on the same plants.

## 69. Curetis acuta, Moore.

Curetis acuta, Moore, Ann. and Mag. of Nat. Hist., fourth series, vol. $\mathbf{x x}$, p. 50 (1877); Walker, Trans. Ent. Soc. Lond., 1895, p. 459, n. 56.

The larva of this butterfly has never been found, but closely-allied species in Calcatta feed on Heynea, Natural Order Meliacer, on Pongamia and Derris, Natural Order Leguminosæ; and in South India on Abrus, Pongamia, Derris, Wagatea and Xylia-all Natural Order Leguminosæ.
70. Ilerda pegnicoparyphos, Holland.

Ilerda phanicoparyphus, Holland, Trans. Amer. Ent. Soc., vol. xiv, p. 120, n. 52, pl. ii, fig. 1, male (1877).

This butterfly has never been bred.
71. Camena deva, Moore.

Amblypodia deva, Moore, Horsfield and Moore, Cat. Lep. Mas. E. I. C., vol. i, p. 46, n. 74 (1857).

The larva in India feeds on Loranthus Natural Order Loranthaces.
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72. Aphneus lohita, Horsfield.

Amblypodia Lohita, Horsfield, Cat. Lep. E. I. Co., p. 106, n. 38 (1829); Aphneeus esbrinus, Walker, Trans. Ent. Soc. Lond., 1895, p. 462, n. 66.

In South India the larva feeds on Zizyphus, Natural Order Rhamnes, Wagatea and Xylia, Natural Order Leguminoss, Terminalia, Natural Order Combretaces, Psidium, Nataral Ordèr Myrtaces, Lagerstrosmia, Natural Order Lythraces, Argyreia, Natural Order Oonvolvulacess and Dioscorea, Natural Order Dioscoreacess; and in Ceylon in plants of the Natural Order Convolvulaces.

73*. Tajuria cippus, Fabricins.
Hesperia cippus, Fabricins, Ent. Syst., Suppl., vol. v, p. 429, n. $43-44$ (1798); Tajuria longinus, Walker, Trans. Ent. Soo. Lond., 1895, p. 462, n. 67.

In Java and South India the larva of this butterfly feeds on Loranthus, Natural Order Loranthaceæ.
74. Tajuria jangala, Horsfield.

Amblypodia jangala, Horsfield, Cat. Lep. E. I. Co., p. 113, n. 4 (1899); Sithow jangala, Walker, Trans. Ent. Soc. Lond., 1895, p. 462, n. 68.

This species has never been bred.
75. Lehera eryx, Linnmus.

Papilio eryx, Linnæus, Mant. Plant., p. 537 (1771); Deudorix (Lehera) eryx, Walker, Trans. Ent. Soc. Lond., 1895, p. 462, n. 69.

In British Bhatan in North-Eastern India the larva of this butterfly has been found feeding on the fruit of the wild pomegranate (? Randia) Natural Order Rubiaceæ).

## 76. Deudorix epijarbas, Moore.

Dipsas epijarbar, Moore, Horsfield and Moore, Cat. Lep. Mus. E. I. Co., vol. i, p. 32, n. 40 (1857); Walker, Trans. Ent. Soc. Lond., 1895, p. 463, n. 71.

The larva in the Western Himalayas feeds on the fruit of the pomegranate, Punica Granatum, Linn., Natural Order Lythraces, and on the fruit of the horse-chestnat, Wsculus indica, Colehr., Natural Order Sapindaceæ; in Soath India on the pods of Connarus Ritchiei, Hook. f., Natural Order Omnaraces.

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biacess; in the Western Himalayas on Spirse, Natural Order Rosaces; in South India on Acacia, Natural Order Leguminoss aud Quisqualis, Natural Order Combretacess.

78*. Rapala varuna, Horsfield.
Theela varuna, Horsfield, Cat. Lep. Mus. E. I. Co., p. 91, n. 24 (1829); Deudoris orseis, Hewitson, Ill. Diarn. Lep., p. 23, n. 20 (1863); Deudorio (Rapala) orscis, Walker, Trans. Fint. Soc. Lond., 1895, p. 463, n. 70.

The larva in South India feeds on Zizyphus, Natural Order Rhamnes, Xylia, Natural Order Leguminoss and Quisqualis, Natural Order Oombretuceæ.

Family PAPILIONID压.
Subfamily Pierine.
79. Drlias hierte, Hübnor.

Delias hierts, Hübner, Zatr. Ex. Schmett., figs. 77, 78, male (1818); Mitis, Iris, vol. vi, p. 107, n. 38 (1893); Walker, Trans. Int. Soc. Lond., 1895, p. 464, n. 75.

This species has never been bred, but the larva will almost certainly be found on Loranthus, Nataral Order Loranthaces.

## 80. Dellas aglaia, Linnmus.

Fapilio aglaia, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 465, n. 44 (1758); Delias aglaia, Butler, Ann. and Mag. of Nat. Hist., sixth series, vol. xx, p. 162, n. 78 (1897) ; Papilio pasithoë, Linnæas, Syst. Nat. Ins., ed. xii, vol. i, pt. 2, p. 755, n. 53 (1767); Pieris pasithoë, Westwood, Donovan's Ins. China, new edition. p. 59, pl. xxx, figs. 2, 2a, male (1842); Deliqs pasithoë, Walker, Trans. Ent. Soc. Lond., 1895, p. 463, n. 74 ; Papilio dione, Drury, 1ll. Ex. Ins., vol. ii, pl. viii, figs. 3, 4, male (1773); Papilio porsenna, Cramer, Pap. Ex., vol. i, p. 68, pl. xliii, figa. D, E, male (1775).

Larva probably feeds on Loranthus.

## 81. Catopsilin crocale, Cramer.

Papilio crocale, Cramer, Pap. Ex., vol. i, p. 87, pl. 1v, figs. C, D, female (1775); Catopsilia crocale, Leech. Butt. from China, Japan, and Corea, p. 424 (1893); Walker, Trans. Ent. Soc. Lond., 1895, p. 464, n. 79 ; Papilio catilla, Cramer, Pap. Ex., vol. iii, p. 63, pl. coxxix, figs. D, E, female (1779); Catopsilia catilla, Walker, Trans. Ent. Soc. Lond., 1895, p. 464, n. 78.*

The larva in India feeds on various species of Cami, Natural Order Leguminosse.

[^128]
## 82. Catopsilia piranthe, Linnæus.

Papilio pyranthe, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 469, n. 66 (1758); Colias phyranthe, Westwood, Donovan's Ins., China, new edition, p. 61, pl. xxxi, fig. 1, male (1842); Papilio chryseis, Drary, Ill. Ex. Ent., vol. i, p. 24, pl. xii, figs. 3, 4, male (1773); Catopsilia chryseis, Walker, Trans. Ent. Soc. Lond., 1895, p. 464, n. 77.

The larva of this butterfly in India feeds on Cassia, Natural Order Leguminoss.

## 83*. Terias libythea, Fabricius.

Papilio libythea, Fabricius, Ent. Syst., Suppl., vol. v, p. 427, n. 698, 699 (1798); Terias libythea, Butler, Ann. and Mag. of Nat. Hist., seventh series, vol. i, p. 58, n. 3 (1898) ; Terias brigitta, Walker (nec Cramer), Trans. Ent. Soc. Lond., 1895, p. 465, n. 83.

In South India the larva of this butterfly feeds on Cassia, Natural Order Leguminosæ.

## 84*. Tbrias subfertens, Butlor.

Terias subfervens, Butler, Ann. and Mag. of Nat. Hist., fifth series, vol. xi, p. 278 (1883); seventh series, vol. i, p. 65, n. 24 (1898); Torias Leta, Walker (nec Boisduval), Trans. Ent. Soc. Lond., 1895, p. 465, n. 82.

This species has been bred in Japan on Cassia. Natural Order Leguminoss.

## 85. Terias hecabe, Linnæus.

Papilio hecabe, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 470, n. 74 (1758); Terias hecabe, Walker, Trans. Ent. Soc. Lond., 1895, p. 464, n. 80 ; Butler, Ann. and Mag. of Nat., Hist., seventh series, vol. i, p. 69, n. 36 (1898) ; Terias anemone, Felder, Wien. Ent. Monatsb., vol. vi, p. 23, n. 7 (1862); Butler; Ann. and Mag. of Nat. Hist., seventh series, vol. i, p. 69, n. 36 (1898) ; Terias mandarina, de l'Orza, Cat. Lóp. Jap., p. 18, n. 23 (1869) ; Walker, Trans. Ent. Soc. Lond., 1895, p. 465, n. 81.

Dr. A. G. Butler in his latest revision of the genas records both T. anemone, Felder, and T. hecabe, Linnæus, from Hongkong. Had he seen these common insects in life and noted the marvellous seasonal changes which takes place in them I do not think he would have wasted time in trying to make two distinct species out of them, each with wet-season, intergrade or intermediate, and dry-season forms. The larva in India has been recorded to feed on a great variety of plants of the Nataral Order Leguminoses, such as Sesbania, AHschynomene, Oassia and Albizzia.

[^129]p. 341, n. 3, pl. vii, figs. 3a, 3b, female (1839) ; Dercas verhuseli, de Nioéville, Ann. and Mag. of Nat. Hist, seventh series, vol. ii, p. 480, n. 1 (1898).

The larva and pupa of this species are unknown.

## 87. Dercas skrbtchlyi, de Nicéville.

Dercas skertchlyi, de Nioéville, Ann. and Mag. of Nat. Hist., seventh series, vol. ii, p. 481, n. 2 (1898).

The transformations of this genus are quite unknown.

## 88. Ixias pyrene, Linnæus.

Papilio pyrene, Linnæus, Mus. Ulr., p. 241, n. 60 (1764); Iaias pyrene, Walker, Trans. Ent. Soc. London, 1895, p. 467, n. 89 ; Pieris (Thestias) pyrene, Westwood, Donovan's Ins., China, new edition, p. 61, pl. xxxi, fig. 2, male (1842); Papilio enippe, Drury, Ill. Ex. Ins., vol. i, p. 11, and Index (two places), pl. v, figg. 2, 2a, male (1770); Ixias evippe (sic !), Butler, Ann. and Mag. of Nat. Hist., seventh series, vol. i, p. 136, n. 11 (1898); Papilio ænippe (ænippa in one place in text), Cramer, Pap. Ex., vol. ii, p. 13, pl. ov, figs. C, D, female (1777); vol. iii, p. 68, pl. ocxxix, figs. B, 0, female (1779).

The larva in India feeds on Capparis, Natural Order Capparidess.

## 89. Hebomoia gladcippe, Linnmus.

Papilio glaucippe, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 469, n. 65 (1758); Drary, Ill. Ex. Ins., vol. i, p. 20, pl. x, figs. 3, 4, male (1773); Hebomoia glaucippe, Walker, Trans. Ent. Soc. Lond., 1895, p. 467, n. 90; Fritze, Zool. Jahr., vol. xi, p. 259 (1898); Frahstorfer, Berl. Ent. Zeitsoh., vol. xliii, p. 174 (1898); Butler, Ann. and Mag. of Nat. Hist., seventh series, vol. i, p. 290, n. 1 (1898); Pieris (Iphias) glaucippe, Westwood, Donovgn's Ins., China, new edition, p. 60, pl. xxxi, fig. 1, male (1842)

The larva of the allied $H$. australis, Butler, in South India feeds on Cratæru and Capparis, both of the Natural Order Oapparides.

90*. Prioneris clemantere, Doubleday.
Pieris clemanthe, Doubleday, Ann. and Mag. of Nat. Hist., first series, vol. xvii, p. 23 (1846); Prioneris clemanthe, Walker, Trans. Ent. Soo. Lond., 1895, p. 464, n. 76.

The larvo of allied species of this genus in India feed on Oappars. Natural Order Capparidees.

91*. Appias albina, Boisduval.
Pieris albina, Boisdaval, Sp. Gen., vol. i, p. 480, n. 62 (1836); Tachyris (appias) albing, Walker, Trans. Ent. Soc. Lond., 1895, p. 467, n. 88.

The larva in Sout上 India feeds on Hemicyclia. Natural Order Euphorbiaces.

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## 92. Hophina nerissa, Fabricins.

Pupilio nerissa, Fabricins, Syst. Ent., p. 471, n. 123 (1775); Pieris (Huphina) nerissa, Walker, Trans. Ent. Soc. Lond., 1895, p. 466, n. 85; Huphina nerissa, Batler, Ann. and Mag. of Nat. Hist., seventh series, vol. iii, p. 212, n. 53 (1899); Papilio amasone, Cramer, Pap. Ex., vol. 1, p. 68, pl. xliv, fig. A, màle (1775); Papilio coronis, Cramer, Pap. Ex., vol. 1, p. 69, pl. xliv, figs. B, C, female (1775) ; Huphina pallida, Swinhoo, Proc. Zool. Soc. Lond., 1885, p. 137, n. 103; Pieris (Huphina) pallida, Walker, Trans. Ent. Soc. Lond., 1895, p. 466, n. 86.

The larva in India feeds on Capparis, Natural Order Capparides.

## 93*. Huphina aspasia, Stoll.

Papilio aspasia, Stoll, Suppl. Cramer, Pap. Ex., p. 148, pl. xxxiii, figs. 3, 3c, male (1790) ; Pieris (Hupina) aspasia, Walker, Trans. Ent. Soc. Lond., 1895, p. 466, n. 87 ; Huphina olga, Butler, Ann. and Mag. of Nat. Hist., seventh series, vol. iii, p. 210, n. 43 (1899).

Mr. James J. Walker records a single specimen from Hongkong in the collection of the British Museum. True H. aspasia, Stoll, appears to be confined to the Moluccas, but the variety or local race, Pontia olga, Eschscholtz, is extremely common in the Philippines, and a specimen may easily have been blown over to Hongkong from thence in a typhoon. It has apparently not been bred, bat like all Huphinas the larva probably feeds on oapers, Natural Order Capparides.

## 94. Pieris canidia, Sparrman.

Papilio canidia, Sparrman, Amcen. Acad., vol. vii, p. 604, note m (1768); Pieris canidia, Leech, Butt. from China, Japan, and Corea, p. 456 (1893) ; Pieris (Ganoris) canidia, Walker, Trans. Ent. Soo. Lond, 1895, p. 465, n. 84.

The larva of this butterfly, which is by far the commonest species in Hongkong, feeds on varions species of Brassica, Natural Order Oruciferæ.

## Subfamily PAPILIONIN 㞑.

## 95. Papilio aristolochia, Fabricius.

Papilio aristolochix, Fabricins, Syst. Ent., p. 443, n. 3 (1775); Rothsohild, Nov. Zool., vol, ii, p. 245, n. 39 (1895) ; Walker, Trans. Ent. Soc. Lond., 1895, p. 468, n. 91.

The larva in India feeds on Aristolochia, Natural Order Aristolochiaces.

## 96*. Papilio xdthos, Linnæus.

Papilio ఐuthus, Linnæns, Syst. Nat. Ins, ed. xii, vol. i, pt. 2, p. 751, n. 34 (1767); Walker, Trans. Ent. Soc. Lond., 1895, p. 472, n. 104; Rothschild, Nov. Zool., vol. ii, p. 503 (1895) ; Papilio manthus, Rothschild, Nov. Zool., vol. ii, p. 278, n. 66 (1895).

In China and Japan the larva of this butterfly has been recorded to feed on Zanthoxylum and Figle, Natural Order Rutaceæ, and on Phellodendron.

## 97. Papilio demoleds, Linnæus.

Papilio demoleus, Linnæns, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 464, n. 35 (1758) ; Westwood, Donovan's Ins., China, new edition, p. 57, pl. xxviii, fig. 2, female (1842); Rothschild, Nov. Zool., vol. ii, p. 279, n. 67 (1895); Papilio erithonius Cramer, Pap. Ex., vol. iii, p. 67, pl. cexxxii, figs. A, B, male (1782); Walker, Trans. Ent. Soc. Lond., 1895, p. 470, n. 98; Papilio epius, Westwood, Donovan's Ins., China, new edition, p. 56, pl. xxviii, fig. 1, male (1842).

The larva in India feeds on Ruta, Glycosmis, Murraya, Citrus and Agle, all Natural Order Rutaceæ, Psoralea, Natural Order Leguminosæ, while the local race P. demoleus sthenelus, MacLeay, is said to feed on Salvia, Natural Order Labiatæ, New Guinea.

## 98. Papilio helenus, Linnæus.

Papilio helenus, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 459, n. 4 (1758); Elwes, Proc. Zool. Soc. Lond., 1881, p. 873 ; Rothschild, Nov. Zool., vol. ii, p. 284, n. 72 (1895) ; Walker, Trans. Ent. Soo. Lond., 1895, pl. 469, n. 96.

The larva in India feeds on Zanthoxylum, Glycasmis and Oitrus, Natural Order Rutaces.

## 99. Papilio memnon agenor, Linnæus.

Papilio agenor, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 460, n. 13 (1758); Weatwood, Donovan's Ins., China, new edition, p. 58, pl. xxiv, fig. 2, female, second form (1842); Walker, Trans. Ent. Soo. Lond., 1895, n. 469, n. 94 ; Papilio memnon agenor, Rothschild, Nov. Zool., vol. ii, p. 816 (d) (1895); Papilio memnon, Leech, Butt. from China, Japan and Corea, p. 544 (1893).

The larva of this batterfly does not appear to have been found in India, but it almost certainly feeds on plants of the arangeaceous group, Natural Order Rutaceæ. True P. memnon, Linnæus, in Sumatra feeds on Citrus.
100. Papilio protrnor, Cramer.

Papilio protenor, Cramer, Pap. Ex., vol. i, p. 77, pl. xlix, figs. A, B, male (1775); Westrood, Donovan's Ins., China, new edition, p. 56, pl. xxvii, female (1842); Elwes, Proc. Zool. Soc. Lond., 1881, p. 872, Leeoh, Butt. from China, Japan and Cores, p. 546 (1898) ; Rothsohild, Nov. Zool., vol. ii, p. 381, n. 108 (1895); Walker, Trans. Ent. Soc. Lond., 1895, p. 469, n. 95.

The larva of this butterfly in the Western Himalayas feeds on Zanthoxylum, Natural Order Rutaceæ.

## 101. Papilio polytes borealis, Felder.

Papilio polytes, var. borealis, Felder, Wien. Ent. Monatsb., vol. vi, p. 22, n. 2 (1861); P. polytes borealis, Rothschild, Nov. Zool., vol. ii, p. 348 (b) (1895); Papilio polytes, Walker, Trans. Ent. Soc. Lond., 1895, p. 469, n. 97.

Mr. James J. Walker records the larva of this species in Hongkong feeding on orange, lime, and pumilo (Oitrus, Natural Order Rutaces).

## 102. Papilio clitia panope, Linnæus.

Papilio panope, Linnæns, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 479, n. 131 (1758) ; Papilio saturata, Moore, Proc. Zool. Soc. Lond., 1878, p. 697 ; Papilio clytia panope, Linnæus, ( $g^{2}$ ) : ab. loe. saturatus, Rothschild, Nov. Zool., vol. ii, p. 369 (1895) ; Papilio clytia, Walker, Trans. Ent. Soc. Lond., 1895, p. 470, n. 99.

In Hongkong the larva has been found on Morinda umbellata, Natural Order Rubiaces; in South India a local race of this species feeds in the larval state on Oinnamomum, Alseodaphne and Litssea, Natural Order Laurineæ; in the Western Himalayas on Litssea; in Calcutta on Antiaris, Natural Order Urticacers; and in Bombay on Tetranthera, Natural Order Laurineæ; the latter genus being apparently a synonym of Litsæa.

## 103. Papilio bianor, Cramer.

Papilio bianor, Cramer, Pap. Ex., vol. ii, p. 10, pl. ciii, fig. o (1777); Rothschild, Nov. Zool., vol. ii, p. 378, n. 142 (1895); Walker, Trans. Ent. Soc. Lond., 1895, p. 468, n. 98.

The food-plant of the larva of this butterfly does not appear to have been recorded.
104. Papilio paris, Linnæus.

Papilio paris, Linnæus Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 459, n. 8 (1758); Westwood, Donovan's Ins., China, new edition, p. 51, pl. xxii, figs. 1, 2, female (1842) ; Walker, Trans. Ent. Soc. Lond., 1895, p. 468, n. 92.

The food-plant of the larva of this common butterfly is apparently unknown.
105. Papilio antiphates, Cramer.

Papilio antiphates, Cramer, Pap. Ex., vol. i, p. 113, pl. lxxii, figs. A, B, male (1775) ; Rothschild, Nov. Zool., vol. ii, p. 410, n. 170 (1895) ; Walker, Trans. Ent. Soc. Lond., 1895, p. 471, n. 100.

I cannot find that the food-plant of this species has been recorded, though Mynheer Piepers has described the transformations of the local race Alcibiades, Fabricius, in Java.
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## 106. Papilio burypylus axion, Felder.

Papilio amion, Felder, Verh. zool.-bot. Gesellsch. Wien, vol. xiv, p. 305, n. 224, p. 350, n. 128 (1864) ; Papilio eurypylus avion, Rothsohild, Nov. Zool., vol. ii, p. 433 (h) (1895) ; Papilio surypilus [sic !], Walker, Trans. Ent. Soc. Lond., 1895, p. 471, n. 102.

The larva at Balasore near Calcutta has been recorded to feed on Michelia, Natural Order Magnoliaceze, and Uvaria, Natural Order Anonacess. In Calcatta I have bred it on Michelia, Natural Order Magnoliacess, and on Polyalthia, Natural Order Magnoliacess; while the local race yasan, Esper, feeds on Unona and Saccopetalum, Natural Order anonacess in Southern India.

## 107. Papilio sarpedon semifasciatos, Honrath.

Papilio sarpedon, var. semifasciatus, Honrath, Bnt. Nach., vol. xiv, p. 161 (1888); Papilio sarpedon semifasciatus, Rothschild, Nov. Zool., vol. ii, p. 448 (b) (1895); Papilio sarpedon, Walker, Trans. Ent. Soc. Lond., 1895, p. 471, n. 101.

The larva of different local races of $P$. sarpedon feed in Japan on Machilus, Natural Order Lauriness; in the Western Himalayas on the same plant; and in Soath India on Cinnamomum, Alseoduphne and Litsea, all of the same Natural Order.

## 108. Papilio agamemnon, Linnæus.

Papilio agamemnon, Linnæus, Syst. Nat. Ins., ed. x, vol. i, pt. 2, p. 462, n. 21 (1758); Westwood, Donovan's Ins., China, new edition, p. 55, pl. xxvi, fig. 2, female (1842) ; Rothschild, Nov. Zool., vol. ii, p. 447, n. 198 (1895); Walker, Trans. Ent. Soc. Lond., 1895, p. 471, n. 101.

The larva of this butterfly in Java and Celebes has been found on Anona, Natural Order Anonaces ; in the Philippine Isles on Arctacarpus, Unona, and Michelia; in Sumatra on Anona and Michelia; and in India on Unona, Polyalthia, Anona, and Saccopetalum-all Nataral Order Anonacess.

## 109. Leptocircos corios, Fabricius.

Papilio curius, Fabricins, Mant. Ins., vol. ii, p. 9, n. 71 (1787); Leptocircus curius, Walker, Trans. Ent. Soc. Lond., 1895, p. 472, n. 105.

In October, 1892, on the Dannat Range, Central Tenasserin, Burma, I observed a female of the allied Leptocircus mages, Zinken-Sammer, ovipositing on the anderside of the leaves of a creeper with compound leaves, each leaf consisting of three leaflets, the Illigera burmannica of King, Natural Order Combretacess. The egg is spherical, smooth, pale green, almost transparent, and of the usual papilionid form. Unfortunately I was not able to breed the larva.

## 110. Tagiades attices, Fabricius.

Hesperia atticus, Fabricius, Ent. Syst., vol. iii, pt. 1, p. 839, n. 288 (1793); Tagiades atticus, Walker, Trans. Ent. Soc. Lond., 1895, p. 475, n. 119.

In Southern India the larva of this butterfly feeds on Dioscorea, Natural Order Dioscoreaces, and Smilax, Nataral Order Liliaces.

## 111. Odontoptildm angolata, Felder.

Pherygosprdea angulata, Felder, Verh. zool.-bot. Gesellsoh. Wien, vol. xii, p. 488, n. 149 (1862) ; Achlyodes Sura, Moore, Proo. Zool. Soo. Lond., 1865, p. 786 ; Antigonus sura, Walker, Trans. Ent. Soc. Lond., 1895, p. 475, n. 120.

The larva in South India feeds on Allophylus Cobbe, Blanm, Natural Order Sapindacess.
112. Caprona alida, de Nicéville.

Caprona alida, de Nicefrille, Journ. Bomb. Nat. Hist. Soo., vol. vi, p. 894, n. 37, pl. G, fig. 40, male (1891).

The transformations of this batterfly are unknown.

## 113. Caprona elwesii, Watson.

Caprona elwesii, Watson, Journ. Bomb. Nat. Hist. Soc., vol. x, p. 674 (1897); Caprona syrichthus, var., Elwes, Proc. Zool. Soc. Lond., 1892, p. 656, pl. xliii, fig. 2.

The transformations of this butterfly are anknown.

## 114. Abtictopterds olivascens, Moore.

Astictopterus olivascens, Moore, Proc. Zool. Soo. Lond., 1878, p. 692 ; Asticopterus [sic!] olivascens, Walker, Trans. Ent. Soc. Lond., 1895, p. 476, n. 124 ; Cyclopides chinensis, Leech, The Entomologist, vol. xxiii, p. 48 (1890); Steropes nubilus, Mabille, Bull. Soc. Ent. Belg., vol. xxxv, p. lxiv (1891); Leech, Butt. from China Japan and Corea, p. 630 (1893).

This obscare skipper has never been bred.

## 115. Suastos gremios, Fabricias.

Hesperia gremius, Fabricius, Ent. Syst., a Sappl., vol. v, p. 433, n. 282-283 (1798); Suastus gremius, Walker, Trans. Ent. Soc. Lond., 1895, p. 474, n. 115.

The larva in India feeds on the leaves of palms, Areca, Oaryota, Phoonix, Calamus, and Cocos, Natural Order Palmes.
116. Iambrix stbllifrr, Butler.

Astictopterus stellifer, Butler, Trans. Linn. Soc. Lond., Zoology, second eeries,
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vol. i, p. 655, n. 7 (1877); Asticopterus [sic !] (Iambrya sic !) salsala, Walker, Trans. Ent. Soc. Lond., 1895, p. 476, n. 125.

This butterfly has never been bred, but the closely-allied I. salsala, Moore, in India feeds on bamboos and grasses, Natural Order Graminese.
117. Taractrocera atropunctata, Watson.

Taractrocera atropunctata, Watson, Journ. Bomb. Nat. Hist. Soc., vol. x, p. 676, n. 275, pl. A, fig. 9, male (1897).

Transformations unknown.

## 118. Hyarotis adrastos, Cramer.

Papilio adrastus, Cramer, Pap. Ex., vol. iv, p. 62, pl. cooxix, figs. F, G, male (1780); Hyatotis adrastu8, Walker, Trans. Fnt. Soc. Lond., 1895, p. 476, n. 122.

The larva in Sumatra feeds on Calamus, and in India on Phœenix and Calamus, Natural Order Palmeæ, and doubtless on other palms.
119. Matapa aria, Moore.

Hesperia aria, Moore, Horsfield and Moore, Cat. Lep. Mus. E.I. C., vol. i, p. 254 , n. 587 (1857) ; Matapa aria, Walker, Trans. Fint. Soo. Lond., 1895, p. 473, n. 108.

The larva in India feeds on the leaves of bamboos, Bambusa, Dendrocalamus and Ochlandra, Natural Order Graminess.

120*. Erionota thrax, Linnæus.
Papilio thrae, Linnæ日s, Syst. Nat. Ins., ed. xii, vol. i, pt. 2, p. 794, n. 264, (1767) ; Erionota thraw, Walker, Trans. Ent. Soc. Lond., 1895, p. 476, n. 121.

Mr. James J. Walker records the breeding of this large skipper at Hongkoug on banana leaves. In India also the larva feeds on species of Musa, Natural Order Scitamines.

## 121. Notocrypta feisthamellit, Boisduval.

Thymele feisthamelii, Boisduval, Voy l'astrolahe, Lep., p. 159, pl. iii, fig. 6 (1832); Plesioneura alysos, Moore, Proo. Zool. Soc. Lond., 1865, p. 789; Notocrypta. aiysos, Walker, Trans. Ent. Soc. Lond., 1895, p. 473, n. 109.

In the Western Himalayas the larva of this butterfly feeds on Hedychium, Natural Order Scitaminers; in South India it feeds on Curcuma, Hedychium, and Amomum, all Natural Order Scitamines.

## 122. Udaspes folus, Cramer.

Papilio folus, Cramer, Pap. Ex., vol. i, p. 118, pl. lxxiv, fig. F, female (1775); Udaspes folus, Walker, Trans. Ent. Soc. Lond., 1895, p. 476, n. 123.
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The larva of this species in India feeds on Curcuma, Kæmpferia, Herlychium, and Amomum-all Natural Order Scitamines.

## 123. Telicota bambuse, Moore.

Pamphila bambusæ, Moore, Proc. Zool. Soc. Lond., 1878, p. 691, pl. xlv, fig. 11, male ; 12, female ; Telicota bambusæ, Walker, Trans. Ent. Soc. Lond., 1895, p. 475, n. 116.

The larva in India feeds on the leaves of bamboos, Bambusa and Oxytenanthera, Natural Order Gramines.
124. Telicota augias, Linnæus.

Papilio augias, Linnæ日s, Syst. Nat. Ins., ed. xii, vol. i, pt. 2, p. 794, n. 257 (1767); Telicota augias, Elwes and Edwards, Trans. Zool. Soo. Lond., vol. xiv, p. 251 (1897).

This species does not appear to have been bred. Messrs Elwes and Edwards record it from Hongkong, but it is very difficult to say from examining the markings only whether any particular specimen of this group of the genus from Hongkong is T. bambusæ or T. augias; in markings the specimens seem to be intermediate. Those gentlemen apparently make out differences between the two species in the form of the clasp in the males, which from the figures given by them (l. c., pl. xxv, figs. 62, 62a, augias, and 63, bambusæ) seem to be sufficient to distiagaish the males.
125. Padraona dara, Kollar.

Hesperia dara, Kollar, Hagel's Kaschmir, vol. iv, pt. 2, p. 455, n. 4 (1844); Telicota dara, Elwes and Edwards, Trans. Zool. Soc. Lond., vol. xir, p. 255 (1897); Telicota mæsoides, Walker, Trans. Ent. Soc. Lond., 1895, p. 475, n. 117.

The larva in South India feeds on Bumbusa, Oxytenanthera, and Ochlandra, Natural Order Graminess.

## 126. Halpe ceylonica, Moore.

Halpe ceylonica, Moore, Proc. Zool. Soc. Lond., 1878, p. 690, pl. xlv, fig. 9, male; Halpe moorei, Watson, Proo. Zool. Soc. Lond., 1893, p. 109 ; Walker, Trans. Ent. Soc. Lond., 1895, p. 475, n. 118.

In South India the larva feeds on Bambusa and Oxytenanthera, Natural Order Gramines.
127. Baoris ocria, Hewitson.

Hesperia oceia, Hewitson, Desc. Hesperidæ, p. 31, p. 22 (1868) ; Baoris oceia, Walker, Trans. Ent. Soc. Lond., 1895, p. 473, n. 110.

The larva in South India feeds on Bambusa, Dendrocalamus, and Ochlandra, Natural Order Graminess.
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## 128. Chapra mathias, Fabricius.

Hesperia mathias, Fabrioius, Ent. Syat., Sappl., p. 433, n. 289-290 (1798); Chapra mathias, Walker, Trans. Ent. Soc. Lond., 1895, p. 474, n. 113.

The larva in India feeds on rice Oryza sativa, Linn., and on grasses, Natural Order Graminere.

## 129. Parnara conjuncta, Herrich-Schäffer.

Goniloba conjuncta, Herrich-Schaffer, Prodr. Syst. Lep., vol. iii, p. 75, n. 44 (1869); Hesperia narosa, Moore, Proc. Zool. Soc. Lond., 1878, p. 687, pl. xlv, fig. 4, male; Baoris naresa, Walker, Trans. Ent. Soc. Lond., 1895, p. 474, n. 111.

The larva in South India has been bred on Indian Corn or Maize, Zea Mays, Linn., and on coarse broad-leaved grasses, Natural Order Graminez.

## 130. Parnara assamensis, de Nicéville.

Parnara aseamensis, de Nicéville, Journ. A. 8. B., vol. li, pt. 2, p. 65, n. 202 (1882) ; Wood-Mason and de Nicéville, Journ A. S. B., vol. 1v, pt. 2, p. 382, n. 215, pl. xviii, figs. 5, 5a, male; pl. xvii, figs. 7, 7a, female (1886); Baoris assamensis, Walker, Trans. Ent. Soc. Lond., 1895, p. 474, n. 112.

This species has never been bred.

## 131. Parnara quttatds, Bremer and Grey.

Endamus guttatus, Bremer and Grey, Schmett. N. China's, p. 10, n. 43 (1853); Parnara guttatus, Walker, Trans. Ent. Soc. Lond, 1895, p. 474, n. 114.

The larva in India feeds on grasses and rice, Oryza, Natural Order Gramines.

## 132. Parnara contigua, Mabille.

Pamphila contigua, Mabille, Bnll. Soo. Zool., France, vol. ii, p. 232, male (1877); Elwes and Edwards, Trans. Zool. Soc. Lond., vol. xiv, p. 282 (1897).

This butterfly has never been bred.
133. Parnara pelluctda, Mnrray.

Pamphila pellucida, Murray, Ent. Month. Mag., vol. xi, p. 172 (1875).
Has never been bred to my knowledge.

## 134. Parnara colaca, Moore.

Hesperia colaca, Moore, Proc. Zool. Soc. Lond., 1877, p. 594, pl. Ivii, fig. 7, male.

In South India the larva of this batterfly feeds on soft, small grasses, Natural Order Gramines.

36 L. de Nicéville-Butterfies of Hongkong in Southern China. [No. 1,
135. Parnara bevani, Moore.

Hesperia bevani, Moore, Proc. Zool. Soc. Lond., 1878, p. 688.
The larva in South Iudia feeds on rice, Oryza, Natural Order Gramineæ.

136*. Ismene ataphus, Watson.
Ismene ataphus, Watson, Proc. Zool. Soc. Lond., 1898, p. 126; Walker, Trans. Ent. Soc. Lond., 1895, p. 473, n. 106.

The larva in Ceylon and the Western Himálayas feeds on Hiptage, Natural Order Malpighiaces.

137*. Hasora vitta, Butler.
Hesperia vitta, Batler, Trans. Ent. Soc. Lond., 1870, p. 498, Lep. Ex., p. 167, n. 3, pl. lix, fig. 9 (1874) ; Hasara vitta, Walker, Trans. Ent. Soc. Lond., 1895, p. 473, n. 107.

Originally described from Sarawak in Borneo. The sex of the type specimen is not stated by the describer. It has never been bred.
138. Parata alexis, Fabricius.

Papilio alemis, Fabricius, Syst. Fint., p. 633, n. 387 (1775) ; Papilio cramus, Cramer, Pap. Ex., vol. iii, p. 163, pl. colxxxiv, fig. E, male (1780).

This is probably the species Mr. J. J. Walker records from Hongkong as Hasora vitta, Butler. The larva in Calcutta feeds on Pangamia, Natural Order Leguminosæ, and on Heynea, Natural Order Meliacer; in South India it feeds on the first-named plant.

## 139. Rhopalocampta benjaminif, Gqérin.

Thymele benjaminii, Gaérin, Delessert's Soup. voy. dans l'Inde, vol. ii, p. 79, pl. $\mathbf{x x i i}$, fig. 2.

The larva in Sikhim in the Eastern Himálayas feeds on Sabia Natural Order Sabiacess; and in the Western Himālayas on the same plant.

140*. Cyclopides etura, Mabille.
Cyclopides etura, Mabille, Soc. Ent. Belg., vol. xxxp, p. lxxp (1891).
Described from a female from Hongkong. I have not been able to identify it, and Messrs. Elwes and Edwards omit it from their Revision of the Oriental Hesperiidæ in Trans. Zool. Soc. Lond., vol. xiv, pp. 101-324 (1897). Its food-plant is anknown.

II.-Descriptions of some new species of Orchideæ from North-West and Central India.-By J. F. Dothie, B.A., F.L.S., Director, Botanical Department, North India.

[Received 25th November, 1901. Read 4th December, 1901.]
Since the publication in 1898 of the four volumes on the Sikkim orchids by Sir George King and Mr. R. Pantling, I have been engaged during my spare time in the preparation of a similar work on the orchids of North-West and Central India. As, owing to more pressing work, there may be some delay in its completion, I have decided to publish at once the descriptions of some new species, which have been discovered within the period during which I have been able to make a special study of the subject.

For the greater portion of the material, on which the following descriptions are based I am indebted to my friend, Mr. P. W. Mackinnon, who for many years has taken a keen interest in the botany, and especially the orchids, of the Mussoorie district. Also, by his having carefully trained some intelligent hillmen in his service to work as collectors, some very interesting results have been obtained. I wish to express also my appreciation of Sir William Thiselton-Dyer's kindness in allowing me to consult Mr. R. A. Rolfe, the eminent orchidologist at the Royal Herbarium at Kew, from whom I have receíved great assistance.

## 1. Microstylis Mackinnoni Duthie, n. sp.

Whole plant $1-1 \cdot 7 \mathrm{dm}$. high. Stem $3-4 \mathrm{~cm}$., swollen below and rising from the base of the previous year's pseudo-bulb; lower portion enclosed within the leaf-sheaths. Leaves 2 or 3, horizontal, unequal in size, the larger one about 6 cm . long and 4 cm . broad, ovate, obtuse, 3-7-nerved, cordate and amplexicaul at the base, fleshy; upper surface dark brownish-green; main nerves 3-7, prominent beneath and purplecoloured, the interspaces raised above, and giving the whole leaf a bullate appearance. Scape reddish-parple, sharply 4 -angular. Raceme shorter than the scape; bracts subulate, persistent, reflexed, longer than the ovary. Flowers sessile, very small, reddish-purple, resupinate. Dorsal sepal ovate-lanceolate, subacute; lateral shorter, subfalcate, edges of all reflexed. Petals linear, shorter than the sepals, much reflexed. Basal and apical portions of lip divided by a raised rim, basal lobes falcately ovate-lanceolate, contiguous, or overlapping at the tips; apical portion of lip deeply bifid and protruded, deep crimson-purple. Colunn with fleshy rounded arms. Anther with a truncate or emarginate lip. Ovary clavate, curved, not twisted.

Western Himalaya, near Mussoorie, on the sonthern face of the Park Hill, up to 6,000 feet, P. W. Mackinnon; also on the Kalanga Hill in Dehra Dan, 2-3,C00 feet, Mackinnon's collector.

Although most nearly related to M. Wallichii, the very different leaves at once distinguish this plant from any of the many forms of that species. It has also much smaller flowers and a very differently shaped lip.

## 2. Oreorchis Rolfei Duthie, n. sp.

Pseudo-bulb globose. Leaves two or three, about 2 dm . long by 1 to 1.5 cm . broad, deflexed at the tips. 3-5-nerved, plicate. Scape about as long as the leaves, rising from near the top of the pseudo-bulb. Peduncle firm, with 3 or 4 close-fitting tubular sheaths. Raceme many-flowered, about 6.7 cm . long. Flowers sessile, rather crowded, about 1.4 cm . across. Floral bract minute, less than half the length of the ovary. Sepals about equal, $1 \cdot 4 \mathrm{~cm}$. long, lanceolate, subacute, pale yellowish-green, slightly spreading. Petals as long as the sepals, but narrower, oblanceolate, subacute, pure white with a few purple blotches. Lip obovateoblong (when spread out), narrowed at the base into s short sac-like claw, side-lobes linear, fleshy, white, half the length of the mid-lobe; mid-lobe deflexed, white, and like the petals blotched with parple, apex with a shallow sinus, base of disc with a prominent fleshy oval channelled callus. Column curved, dilated at the base, concave in front. Pollinia globular, united to a short thick conical caudicle.

Western Himalaya, on Nág Tiba in Tehri-Garhwal, at an elevation of about 8,000 feet. Mackinnon's collector. Flowers in June.

This species is most nearly allied to 0 . micrantha, but the spike is shorter and the flowers are more crowded; it differs also by having a saccate base to the lip, and both the lip and petals are pure white spotted with purple. The callus at the base of the lip is oval and not linear. I have much pleasure in naming this orchid after Mr. R. A. Rolfe, of the Royal Herbarium at Kew.

## 3. Cirrhopetalum Hooreri Duthie, n. sp.

Cæspitose. Pseudo-bulbs crowded, ovoid or nearly round, 1.5-1.7 cm . long. Leaves solitary on each pseudo-bulb, $3-4 \mathrm{~cm}$. long and $1-1 \cdot 2$ cm . broad, linear-lanceolate or falcately so, tapering to the base, hardly petioled, notched at the obliquely obtuse or acute apex, coriaceous, dark green above, paler beneath, margin narrowly hyaline. Scape equalling or exceeding the leaves, issuing from near the base of the pseudo-bulb, lower portion enclosed within sheaths. Flowers 3-4, umbellate. Floral bracts 5 m . long, lanceolate, acuminate, membranous, shorter than the long-stalked ovary, margins incurved. Dorsal sepal 5 m . long, quite
free at its base from the lateral pair, ovate, emarginate, concave and embracing the column, pale yellow with three broad reddish-purple veins; lateral sopals 2.1 m ., cohering at their base and adnate to the foot of the column, twisted and constricted above their auricled base, linear-lanceolate and with acuminate cucullate tips, yellow with three to foar bright red veins, which become indistinct upwards. Petals a little shorter than the dorsal sepal. broadly and obliquely ovate, rounded at the apex, yellow tinged with reddish-purple at the base. Lip deflexed from about the middle, oblong, with the margins incurved and forming a deep furrow on the upper surface, very thick and fleshy, yellow with reddish-parple blotches on the basal portion of the raised margins. Column thick, with a long incurved foot; apical processes 2, triangular, setaceous.

Western Himalaya: in Tehri-Garhwal, east of Tehri, epiphytic on Rhododendron arboreum, at elevations between 5 and 6,000 feet, Mackinnon's collector.

This species is most nearly related to $O$ : cssspitosum of Wallich. It differs by having almost globular pseado-bulbs and mach longer scapes, the lateral sepals cohere at the base only; the petals are obtuse and quite entire; the shape of the lip is different, as is also the colouring of the flower. I have dedicated the species to my friend and benefactor, Sir Joseph D. Hooker, G.C.S.I., F.R.S.

## 4. Edlophia campandlata Duthie, n. sp.

Height of plant $9-15 \mathrm{dm}$., the leaves and scape rising from a horizontal, oblong taber. Pseudo-stem formed by the sheaths enclosing the bases of the leaves and scape. Leaves few, linear, acuminate, $3-4.5$ dm. long, and about 3 cm . broad; veins sharply prominent. Scape exceeding the leaves, with a few long tight-fitting acaminate sheaths towards the base. Flowers 6-10, in a lax raceme, appearing with the leaves, about 2.5 cm . in diam., erect in bud, drooping and campanalate wheu open. Floral bracts lanceolate, acuminate, less than half the length of the ovary. Sepals and petals prominently veined on the back, bright yellow outside and pale lemon-coloured within. Dorsal sepal obovate, cuspidate, 2 cm . long; lateral, rather shorter, falcately oblong, obtuse, or mucronate, adnate to the base of the column. Petals obovate, obtuse, about as long as the lateral sepals. Lip 3-lobed, longer than the sepals, with a short subacute conical sac at the base ; side-lobes erect, large, rounded, pale yellow tinged with purple; mid-lobe bent upwards, and with reflexed undulate margin, suborbicular when flattoned out; the disc with 5-8 prominent ridges terminating within the apex of the apical lobe in an oblong grooved callus, and prolonged at the base into two sets of finger-
like projections. Column about 1 cm . long, oblong, narrowly winged, curving into a short foot at the base. Pollinia 2, globose, attached by a cylindric candicle to a triangular gland.

North-West India: Dehra Dun, at Karwapáni, W. Bell, and P. W. Mackinnon's collector; N. Oudh, at Chandanpar in the Gonda district. Duthie's collector.

Amongst the Indian species this very handsome orchid appears to be most nearly related to E. Mannii, Hk. f., which is found in Sikkim and in Upper Assam. It was originally discovered in Dehra Dun in 1879 by Mr. W. Bell, formerly Head Gardener at the Saharanpur Botanical Garden, after whom I have named it.

## 5. Edlophia Mackinnoni Duthie, n. sp.

Rhizome composed of a series of triangular flattened tubers. Leaves few, plicate, 5 to 6.5 dm . long and 5 to 8 cm . broad, appearing with the flowers, broadly lanceolate, acuminate, tapering into long sheaths, and with a few leafless sheaths below; nerves prominent. Scape 6-4 dm., arising from the $s$ wollen base of the pseudo-stem. Flowers, rather large, arranged in a lax raceme, spreading and afterwards deflexed. Bracts as long as, or shorter than, the ovary, linear, acuminate, persistent. Sepals and petals fleshy, yellow, tinged with reddish-brown, veins prominent outside. Dorsal sepal 1.7 cm . long, ovate, obtuse, subcordate at the base, 9 -veined, margin inflexed at the apex; lateral, a little longer than the dorsal, unequal at the base. Petals shorter than the sepals, oblong-obovate, obtase, overlapping and with their margins reflexed at the apex. Lip 3-lobed, with long erect rather shallow side-lobes, its body with 5-7 parallel purple-coloured ridges which extend into a carunculate area within the apical lobe ; apical lobe rounded, its margin undulate. Spur short, geniculate. Column rather broad, winged, with no foot. Anther bicornute at the apex, its lip 2-toothed. Stigma transverse, placed immediately under the anther. Pollinia, tranversely oval, attached by a broad caudicle to a shallow crescent-shaped gland.

North-West India: Dehra Dun, Mackinnon; Siwalik range, Vicary (in Herb. Calc.); Bahraich district in N. Oudh, Duthie's collector; Raipur district in Cent. Provinces, J. Marten. In the Saharanpur herbarium there is an old specimen named " $E$. bicolor" which is said to have been collected near Mussoorie in October 1842.

This species is evidently allied to E. geniculata, King and Pantling, an extremely rare Sikkim orchid. It differs chiefly in the shape of the rhizome, the very mnch broader leaves, the colour of the flowers, and in the shape of the lip.

## 6. Cymbidium Mackinnoni Duthie, n. sp.

Terrestrial, cæspitose. Pseudo-stem short, emitting many thick spongy roots. Leaves linear, acuminate, $3-4 \mathrm{dm}$. long and about 1.3 cm . broad; margins not serrulate, the lowest ones sheath-like and membranous. Scape 1-flowered, mach shorter than the leaves, clothed to the base with loose lanceolate acuminate cymbiform hyaline sheaths. Floral bract longer than the much carved ovary, pale yellow with purple veins. Flowers about 5 cm . across, nodding. Sopals and petals spreading, green. Sepals lanceolate, obtuse, a little longer than the petals. Petals elliptic-lanceolate, obtase, 5-nerved. Lip about as long as the petals, obovate-oblong (when spread out), 3-lobed, saccate at the base, very pale yellow blotched with purple; lateral lobes narrow, erect; the terminal one abruptly deflexed, rounded at the apex and nearly entire; the disk with two raised smooth lamellm extending from the base to a little beyond the side-lobes. Column short, stout, curved, concave in front, marked with parple blotches like the lip. Pollinia 4, obliquely obovoid, plano-convex, the segments of each pair unequal, attached to a hemispherical gland. Ripe capsule $1 \cdot 5 \mathrm{dm}$. long (inclading the long pedicel), ellipsoid-clavate, prominently ribbed.

Western Himālaya : near Mussoorie, at an elevation of about 5,500 feet, growing ander trees; in flower during February, P. W. Mackinnon.

Mr. Rolfe informs me that its nearest ally is O. virescens, Lindl., a native of Japan.' Of Indian species it most nearly resembles C. cyperifolium in habit. It is, however, a much smaller plant, the scape is always 1 -flowered, and the colouring of the lip and the shape of the pollinia and gland are very different; also the margins of the leaves are entire and not serrulate as in $O$. cyperifolium. The latter is also found in similar localities near Mussoorie, but always at a slightly higher elevation, and it comes into flower several weeks later.

## 7. Listera Inafati Duthie, n. sp.

Whole plant $1 \cdot 5$ to 2 dm . high. Roots fibrous. Stern stout, about as long as the raceme, and bearing 3-6 loosely-fitting, blunt sheaths, the two upper ones sometimes opposite and leaflike. Flowers in dense racemes, 4 m . long ; rachis glandular-pubescent. Floral bract ovate or lanceolateacuminate, a little longer than the stalk of the ovary. Sepals and petals connivent ; dorsal sepal oval, concave, about 2 m . long; lateral sepals a little longer than the dorsal, obliquely ovate, tapering to an obtuse apex. Petals about as long as the dorsal sepal, spathulate, subacute. J. II. 6

Lip twice as long as the lateral sepals, narrowly oblong, deeply cleft at the apex, with two slightly spreading obtuse lobes, midrib thickened. Column short, stout, dilated at the base and apex. Anther suborbicular, bifid at the apex. Pollinia narrowly obovoid. Ovary oval or subglobose, about as long as its stalk, glandular-pubescent.

Western Himālaya; in the Kagán valley of the Hazāra district. Discovered in July 1897 by Inayat Khán, head plant-collector of the Botanical Department of N. India (No. 22,596).

A shorter and much stouter plant than L. Lindleyana, and with shorter and more densely-flowered racemes. The shape of the sepals, petals, anther and pollinia are altogether different.

## 8. Listera microglotilis Duthie, n. sp.

A leafless parasite, $2.3-3 \mathrm{dm}$. in height. Root-fibres clylindrical, brittle, pale yellowish-brown. Stem about as long as the receme, nearly white, bearing 2-4 looseditting obtuse pale sheaths. Rachis of raceme, pedicels and bracts glandular-pubescent. Flowers crowded, about 7 m . in diameter, pale green; pedicel a little longer than the ovary; floral bract equalling or exceeding the pedicel, oblong, obtuse or subacate. Sepals ovate, subacute, about 4 m . long ; the lateral ones somewhat oblique. Petals as long as the sepals, linear, margins reflexed. Lip linearspathulate, equalling the petals in length, entire at the apex, margins reflexed. Column erect, a little shorter than the petals, dilated towards its base and apex. Pollinia 2, globose, without caudicles, extremely deliquescent. Ovary with pedicel 8 m . long. Capsule targid, its ridges thick and often bearing short, broad-based, tooth-like projections.

Western Himlãaya: in Tehri-Garhwál, east of Tehri, growing under oaks and rhododendrons at elevations between 5,000 and 6,000 feet, P. W. Mackinnon's collector; also on the wooded hillsides below Massoorie at similar elevations. Flowers during Angust and September. This plant, although resembling L. Lindleyana in general habit, differs from any known species of Listera (including Neottia) by its very remarkably restricted petal-like lip.

## 9. Aphyllorchis Gollani Duthie, n. sp.

A tall leafless terrestrial herb, from 4 to 5 dm . in height. Rhizome. with numerous far-extending fleshy roots, not scaly. Stem erect, stont, bearing several nnequal tubular blunt sheaths. Raceme about 1 dm . long, Flowers several, 2 cm. long. Floral bract a little longer than the ovary, elliptic-lanceolate, acuminate, 5-7-nerved, at first deflexed, nltimately erect. Sepals 2 cm . long, erect, ovate-lanceolate, acuminate, with spreading tips; their nerves, as also the ridges of the clavate ovary, dark
reddish-brown on a pale green ground. Petals shorter than the sepals, lanceolate, acuminate, pale green with parple veins, midrib thickened on the back. Lip shorter than the petals, somewhat deflexed from a .concave winged claw attached to the base of the column; apical portion ovate-acuminate, its sides towards the base erect and with a reflexed erose margin, with no convexity near the apex. Column 1.2 cm . long, stout, carved, narrowed towards the base. Anther 2 -celled, cells parallel. Pollinia ovate-oblong, mealy. Ovary (in flower) 1.7 cm . long, its apex with conspicuous grandular projections between the ribs; stigma with an overlapping irregularly lobulate border.

Weisern Himálaya: Tehri-Garhwál, on Nág Tiba, at elevations between 8,000 and 10,000 feet, Gollan (No. 2,062) and Mackinnon's collector (No. 23,000). The original specimens, discovered in 1881 by Mr. W. Gollan, after whom I have named this plant, were in too young a condition even for determining the genus. Its nearest ally is A. alpina, King and Pantling, a high -elevation Sikkim species. From the above it differs chiefly in the rhizome not being scaly, the bracts become erect as the flowers open, it has much shorter racemes, the lip is attached to the base of the column and does not form a pouch, the epichyle has no concavity at its apex, the colouring of the flowers is also very different.

## 10. Pogonia Mackinnoni Duthie, n. sp.

Tuber globose, annular and warted, about 1.2 cm . in diameter. Leaf and scape frequently from the same tuber, but not contemporaneous. Leaf about 5 cm . long and broad, cordate at the base, 7-lobed, terninal lobe acate, the others rounded, principal veins terminatiug at the end of each lobe, with many less conspicuous intermediate ones; petiole, 2.5 cm . long. Leaves from the flowering tabers much smaller. Scape l-flowered, about 10 cm . long when in flower, elongatng till fruiting, enclosed by two or three rather loose tubular sheaths. Flower shortly pedicelled, spreading; bract erect, shorter than the cylindrical truncate ovary. Sepals spreading, linear-lanceolate, acuminate, 1.6 to 1.7 cm . long, light green blotched with reddish-brown outside. Petals very similar to the sepals, but a little shorter and not so acute at the apex. Lip shorter than the petals, oblong when spread out, strongly 3-nerved, white tinged with green towards the base; side-lobes erect, acute; terminal-lobe blotched with purple. Oolumn slender, 7.8 m . long. Pollinia 2, narrowly clavate, connate below and without a gland.

Westrrn Himálaya: near Mussoorie, at elevations between 4,500 and 6,000 feet, P. W. Mackinnon. Flowers during May and June.

Very similar in habit to $P$. macroglossa, King and Pantling, but the
leaves are more distinctly lobed; the flowers are much smaller, andare spreading, not drooping. Leaves and fruiting scapes are sometimes found on the same tuber.

## 11. Herminiom Mackinnoni Dathie, n. sp.

Whole plant upwards of $2 \cdot 2 \mathrm{dm}$. high. Tubers narrowly oblong. Lower portion of the stem clothed with a few close-fitting tabular subacute sheaths. Leaves $\mathrm{two}, 12-14 \mathrm{~cm}$. long by $1-2 \mathrm{~cm}$. broad, oblong or linearlanceolate, acuminate, with loosely amplexicaul tubular bases, $3-5$-veined. Spike cylindric, rather broad, about 11 cm . long, many-flowered. Flowers, spreading, crowded, about 10 m . across. Floral bract, 5 m . long, broadly lanceolate, acuminate, a little shorter than the ovary. Sepals $3-4$ m., ovate-oblong, acute, subterete, green. Petals as long as the sepals, linear-lanceolate, divergent, white. Lip trifid, a little longer than the petals, deflexed from near its base, white with a slight tingeof green, margins inflexed, lower portion very thick and with a small concavity at the base ; side-lobes filiform, curved inwards; midlobe aboat half as long as the side-lobes, lanceolate, obtase. Anther-cells, diverging below; pollinia obovate; caudicles, very short, the glands discoid, naked; staminodes large, spreading. Stigmas 2, transversely oblong and lying between the pollinia-glands and the concavity of the lip. Ovary about 6 m . long, ovate-oblong, beaked.

Western Himalaya: near Musboorie, at about 6,500 feet, on oak trees, P. W. Mackinnon. Flowers in Augast.

A very distinct species, its nearest ally being $H$. angustifolium. It differs from the latter by its fewer much shorter and broader leaves, its shorter and broader flowering spike, white petals and lip, and with the mid-lobe of the latter much longer; the shape of the ovary is also very different.

## 12. Habenaria Elisabether Duthie, n. sp.

Height of plant ap to 4.5 dm . Bulbs ovoid. Leaves 2-3, approximate towards the base of the stem, with a few lanceolate finely acuminate sheaths above and a few loose ones below them, 6.12 cm . long and 1 to $\mathbf{2 c m}$. broad, lanceolate, the apper acuminate, the lowest one acute or obtase, amplexicanl at the base, midrib prominent beneath. Spike long and slender, sometimes up to 2.5 dm . Flowers sessiles, small, greeu, rather crowded, horizontal or deflexed. Bracts lanceolate, acaminate, about half as long as the ovary. Sepals erect, the dorsal one ovate, concave, the lateral ones obliquely ovate. Petals a little longer than the sepals, obliquely ovate, obtase. Lip 3 -cleft, fleshy, longer than the sepals, with a long concave claw ; lateral lobes linear, spreading, gibbons
at their basal edges; midlobe oblong, obtase, not exceeding the lateral ones. Spur a short obovate sac, $\frac{1}{5}$ the length of the ovary. Anthercells parallel. Pollinia obovate, carved, attached by a short caudicle to an oval gland. Stigmatic processes clavate. Ovary tapering upwards and carved.

Western Himālaya: Song, at $8,000 \mathrm{ft}$. Brandis; near Simla, Edgeworth, Lady E. Bubington-Smith; near Naini Tal, up to 8,000 feet, Oolonel Davidson ; Tehri-Garhwál, 7,000 to 10,000 feet., Duthie (524 and 22,990), P. W. Mackinnon; also at Mussoorie, between 6,000 and 7,000 feet, frequently as an epiphyte on oak trees.

Of the Himālayan species of Habenaria this plant appears to be most nearly related to $H$. goodyeroides. It differs principally in having mach narrower and thinner leaves, and they are placed mach lower down on the stem. The flowering spikes are longer and narrower; the flowers are much smaller and altogether green; the floral bracts are shorter, and the shape of the lip is very different. I have much pleasure in dedicating this species to Lady Elizabeth Babington-Smith, whose keen and practical interest in the botany of Simla during the Viceroyalty of her father, Lord Elgin, resalted in several interesting discoveries.

# III.-Materials for a Flora of the Malayan Peninsula.-By Sir George Kina, K.C.I.E., M.B., LL.D., F.R.S., \&c., late Superintendent of the Royal Botanic Garden, Calcutta. 

No. 13.
The present contribution carries these Materials to the end of the Calycifloræ. The orders included in it are Datiscaceæ, Droseraceæ, Passifloraceæ, Begoniaceæ, Ficoideæ, Umbelliferæ, and Oornaces. It has not been possible for me to prepare my account of the Calycifloral orders in the exact sequence followed in Hooker's Flora of British India; each order, however, bears the ordinal number given to it in that work. The species described in the present paper are 47 in number, and of these fourteen belonging to the genus Begonia, and two belonging to Mastixia, are new to science. I hope in future contribations to take up the orders belonging to the groups Corollifloræ and Incompletæ.

## Order LXVII. DATISCACEA.

Trees or herbs. Leaves petioled, simple or pinnate; stipules 0. Flowers small, diœcious in the Indian species, clustered, racemed or panicled. Male: calyx-tube short, teeth 3-9; petals 0 ; stamens 4-25. Female : calyx-tube adnate to the ovary, lobes 3-8 short; petals 0 ; ovary l-celled, open or closed at the vertex; styles lateral, alternating with as many parietal placentm, simple or 2 -partite; ovales very many, ascending or horizontal. Capsule coriaceons or membranous, opening at the vertex between the styles. Seeds very many, small, albuminous; embryo straight, radicle next the hilum.-Distrib. Species 4; natives of the Mediterranean, Central Asia, Java, and North-West America.

## Tetrameles, R. Br.

A large tree. Leaves petioled, ovate, pubescent beneath at least on the nerves. Flowers dicecious, appearing before the leaves; males panicled, females in elongate racemes, clustered near the ends of the branchlets. Male: calyx-lobes short; teeth 4, ovate, one or two smaller teeth sometimes added; petals 0 ; stamens 4 , opposite the calyxteeth, inserted round a depressed disc; rudiment of the ovary 0 or quadrangular. Female: calyx-tabe ovoid; teeth 4 short; petals 0 ; styles 4, short, stigmas simple somewhat club-shaped. Capsule ovoid, with 4 lines or slight ridges, membranous, opening at the top between the styles. Seeds very many, minate, flattened, ellipsoid, testa very lax and extending much beyond the nucleus as a loose membrane.

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1. T. nudiflora, R. Br. in Benn. Pl. Jaf. Rar. 79, t. 17; A.DC. Prodr. XV. pt I. 411 ; Bedd. Fl. Sylv. t. 212 ; Brand. For. Fl. 245 : Kurz For. Fl. 535; Clarke in Hook. f., Flor. Brit. Ind. II, 657. T. Grahamiania, Wight Ic. t. 1956 ; A.DC. l. c. T. rufinervis, Miq. Fl. Ind. Bat. I. pt. I. 726 ; A.DC. l.c. Anictoclea Graham-iana, Nimmo in Grah. Cat. Bomb. Pl. 252.-Indeterminata, Wall. Cat. 9045.

Andaman Islands; Kurz.-Distrib. Eastern Himālaya, Burma and Java.

## Order LIV. DROSERACE .

Herbs with large glandular hairs, exading a viscid flaid. Flowers hermaphrodite, regular. Petals 5 hypogynous, rarely perigynous, thin, nerved, imbricate, marcescent, free or slightly united. Stamens 4 to 20, bypogynous or slightly perigynous; filaments free or slightly monadelphous, subulate or filiform : anthers 2-celled; disc none. Ovary free or adherent by its base to the calyx, globose or ovoid, l-celled; styles 5 , sometimes 3, simple or bifid; stigmas capitate; placentas parietal, equal in number to the styles; ovriles and seeds numerous. Capsule membranous, 1-to 5-celled. Seeds with fleshy albumen; embryo cylindric or minute.-Di.trir. Species about 100 ; in temperate and tropical regions generally, bat absent frotn the Pacific Islands.

## Drosera, Linn.

Small perennial herbs. Leaves radical and rosulate, or cauline and alternate, bearing many large glandular viscid hairs, usually circinate in vernation, with scarious stipules adnate to the petiole, or exstipulate. Calyx persistent, free from the ovary, 4-to 8 -partite or sepals free. Petals 4 to 8 , hypogynous or very slightly perigynous, marcescent. Stamens equal in number to the petals, hypogynous or slightly perigynous. Ovary l-celled; styles 2 to 5 ; ovules parietal, numerous. Capsule loculicidally 2 -to 5 -valved. Seeds numerons, obovoid-ellipsoid (in the Indian species); testa black, smooth, reticulate.-Distrib. Species about 90, cosmopolitan, but absent in Polynesia; Australia.

| Leaves cuneate-spathulate, all radical | $\ldots$ | $\ldots$ | 1 D. Burmanni. |  |
| :---: | :---: | :---: | :---: | :---: |
| Leaves peltate-lunate with long narrow | petioles, some |  |  |  |
| radical the others cauline | $\ldots$ | $\ldots$ | $\ldots$ | 2 D. peltata. |
| Leaves linear, all cauline | $\ldots$ | $\ldots$ | $\ldots$ | 3 |
| .... indica. |  |  |  |  |

1. Drosera Bormanni, Vahl Symb. III, 50. Leaves all radical, rosulate, cuneate-spathulate, 5 to 1.5 in . long, stipules half as long as the petiole. Peduncles erect, 3 to 8 inches high, naked, glabrous. F'lowers racemose, their pedicels glabrous, erect in fruit; calyx minutely papillose: styles 5, simple. Don, Prod. Fl. Nep. 212; DC. Prod. I, 318; Roxb. Fl. Ind., II, 113 ; Wall. Cat. 1242; Wight, Ill. t. 20; Wight, Ic.
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944 ; W. \& A. Prod. Fl. Penins. Ind. 34; Planch. in Ann. Sc. Nat. Ser. III. Vol. IX, 190 ; Miq. Fl. Ind. Bat., Vol. 1, pt. II, 120 ; Suppl. 160 ; Hf. \& Th. in Journ. Linn. Soc. II., 82 ; Dalz. \& Gibs. Fl. Bomb., 12 ; Kurz in Journ., As. Soc., Beng., 1876, pt. II, 310; Clarke in Hook. fil. Fl. Br. Ind. II, 424; Trimen, Fl. Ceyl. pt. II, 145.

Malacca : Province Wellesley, and probably in the other provinces. Distrib. British India, Ceylon, the Malay Archipelago, China, Japan, Africa, Australia, up to elevations of 8,000 feet.
2. Drosera peltata, Sm. ex Willd. Sp. Pl. I, 1546. Stem erect, leafy, 3 to 12 in . high, simple or branched near the apex. Leaves subrosulate, also scattered and alternate on the stem, peltate-lunate, with very long glandular hairs, 2 to $\cdot 25$ in. broad (including the radiating hairs) ; the petiole much longer than the laminæ, very slender. Racemes 1 to 3 in . long, terminal or sub-terminal ; flower-pedicels 35 to $\cdot 75 \mathrm{in}$. long, glabrous. Sepals ovate, glabrous, erose or fimbrirate. Styles 3, fimbriate. Seeds as in D. indicu, III. DC. Prod. I, 319 ; Sm. Exot. Bot., I, 41 ; Don Prod. Fl. Nep., 212 ; Wight. t., 20 ; W. \& A. Prod. Fl. Penins. Ind., I, 34 ; Planch. in Ann. Sc. Nat. Ser. III, Vol. IX, 296 ; Kurz in Journ. As. Soc. Beng., 1876, pt. 2, 310 ; Clarke in Hook. fil. Fl. Br. Ind., II, 424 ; Trimen, Fl. Ceyl. pt. II, 146. D. lunata, Ham. : DC. Prod. 1, 319 ; Wall. Cat., 1243; Hook. Ic. Pl. 54; Planchon l.c., 296; Miq. Fl. Ind. Bat., II, Pt. 2, 120. D. lunata, gracilis et D. foliosa, Hook. fil. Journ. Linn. Soc., II, 82 ; 297, 298. D. Lobbiana Turcz. (fide Kurz).

Malacca, Singapore, and probably in some of the other provinces.Distrib. Malay Archipelago, British India, and Australia.
3. Drosera indica, Linn. Sp. Pl. 282. Stem 2 to 12 in. long, decumbent, usually simple. Leaves alternate, scattered, 1 to 3 in. long, linear, not much broader than the glabrous petiole, very glandularpubescent. Racemos 2 to 6 in . long, leaf-opposed; flower-pedicels • 35 to $\cdot 75 \mathrm{in}$. long, rusty-pubescent. Sepals lanceolate, minutely glandulose or sub-glabrous. Styles 3, bifid to the base. Seeds obovoid, much reticulate not scrobiculate. DC. Prod., I, 319 ; Roxb. Fl. Ind., II, 113; Wall. Cat., 1244; Wight Ill. t., 20 ; W. \& A. Prod. Fl. Penins. Ind., 34: Planch. in Ann. Sc. Nat. Ser., III, Vol. IX, 209 ; Miq. Fl. Ind. Bat., Vol. I, Pt. 2, 120; Hf. \& Th. in Journ. Linn. Soc. II, 82 ; Dalz. \& Gibs. Fl. Bomb., 12 ; Kurz in Journ. As. Soc Beng., 1876, Pt. II, 310; Trimen Fl. Ceyl., Pt. II, 146; Clarke in Hook. fil. Fl. Br. Ind., II, 424. D. Finlaysoniana, Wall. Cat., 3752. D. serpens, Planch. l.c., 204.-Rheede, Hort. Malab., X, t. 20.

Malacca: Province Wellesley, and probably in the other provin-ces.-Dıstrib. British India, Caylon, Malayan Archipelago, tropical Australia, and Africa.

## Order LI. PASSIFLOREAT.

Twining herbs or shrubs, rarely erect. Leaves alternate, stipulate, entire or lobed, penni- or palmi-nerved, frequently glandular beneath. Petiole usually bearing glands. Stipules foliaceous or minute, Tendrils axillary or 0. Inflorescence axillary, cymose, sometimes with one or more branches cirrhose, rarely flowers solitary. Bracteoles 3, minute and scattered, or foliaceous and forming an epicalyx, rarely 0 . Flowers regular, unisexual, or bisexual. Calyx tubular at the base, fleshy, subcoriaceons or membranons; segments imbricate, 5. Petals 0 or as many as the calyx-lobes, springing from the tube of the calyx, membranous or fleshy, imbricate, marcescent. Corona of one or more rows, filamentous or membranous or both, arising from various portions of the calyxtube, rarely 0 ; basilar corona urceolate or cap-shaped, surrounding the base of the androecinm, sometimes represented by five separate glands of the disc; rarely 0 . Stamens 5 , in a tube or free to the base, perigynous; anthers oblong, 2-celled, basi- or dorsi-fixed, dehiscing laterally or introsely. Ovary superior, on a gynophore or subsessile, l-celled with 3 parietal placentas, rudimentary or absent in the male flowers. Styles 1 or 3 ; stigmas reniform, capitate or flattened. Ovules numerous, pendulons, anatropus; funicle expanded into a cup-shaped arillns. Fruit baccate or capsular. Seeds numerous, ovoid or flattened, often pitted, covered with a fleshy arillus; albumen fleshy, rarely scanty; embryo straight, cotyledons flat leafy, radicle short terete.-Distrib. : Chiefly tropical; most numerous in South America. Genera about 18 ; species about 320.

| Erect shrabs, without tendrils | -•• |  | 1 Paropsia. |
| :---: | :---: | :---: | :---: |
| Scandent, with tendrils:- |  |  |  |
| Fruit pulpy, indehiscent ; flowers large |  |  | 2 Passiflora. |
| Fruit dehiscent; flowers small | ... | ... | 3 adenia. |

## 1. Paropsia, Noronh.

Shrubs. Leaves simple. Flowers in dense axillary cymes. Calyxtube short; limb 5-parted. Petals 5, springing from the base of the calyx-tube. Corona of fine threads springing from the tube of the calyx and more or less divided into five phalanges. Gynophore short; filaments flat; anthers oblong. Ovary subglobose. Siyle short, dividing into three branches; stigmas reniform-capitate. Fruit capsular.-Distrib. Species 4 or 5, natives of tropical Africa and Malaya.
P. varbciformis, Mast. in Trans. Linn. Soc., XXVII, 639. A shrub or small tree. Leaves subcoriaceous, oblong or oblong-lanceolate, acute or shortly acuminate, the base cuneate, the edges entire or (rarely) minutely serrate ; both surfaces glabrous except the glandular puberulous J. II. 7
midrib and nerves; the lower with numerous minute adpressed scales; main 6 or 7 pairs spreading, curved; length 2.5 to 5.25 in., breadth 1 to 1.75 in., petiole $\cdot 1$ to 2 in . Flowers about 5 in . in diam., on short, rusty-tomentose pedicels 15 in. long. Calyx campanulate, leathery, adpressed-villose outside like the pedicels, the lobes much longer than the tube, unequal, oblong, subacute. Petals oblanceolate, smaller than the calyx-lobes. Corona single, very short, lanate, in 5 phalnnges. Stamens 5. Gynophore shorter than the corona; ovary villose. Fruit ovoid or sub-globose, $\mathbf{5}$ to $\cdot \mathbf{7}$ in. across. Masters in Fl. Br. Ind., II, 600. P. malayana, Planch. ex Masters l.c. Trichodia vareciformis, Griff. Notul., IV, 571.

Malacca: Griffith, Manigay, and others. Prrak: Scortechini, King's Collector; a common plant.

I can find no constant characters to separate the two species into which this plant has been divided in the Flora of British India and therefore unite them under the oldest specific name.

## 2. Passiflora, Linn.

Twining shrubs. Leaves simple or palmilobed, usually with glands on the under surface and on the petiole; stipules thread-like or leafy. Flowers pedunculate; often involucrate; peduncles simple or cymose. Bracteoles 3, small, scattered. Calyx tube fleshy, limb 5-lobed. Petals 5, springing from the throat of the calyx. Corona of one or more rows of fine threads springing from the throat of the calyx-tube and of one or more membranous folds arising lower down. Gynophore surrounded at the base by a shallow membranous cap or basilar corona; filaments 5, flat; anthers oblong, 2-celled, dorsifixed; pollen-grains reticulate on the surface. Ovary l-celled; styles 3, stigmas reniform-capitate. Fruit baccate. Seeds arillate.-Distrib. A genus of about 250 species which are most numerons in tropical and sub-tropical America.

Passiflora Horsfieldi, Blume, Rumphia, I, 170, t. 52. A slender climber; young branches slightly quadrangular, slender, striate, almost glabrons. Leaves membranous, oval or oblong-ovate, subacute sometimes retuse, the base rounded and minately emarginate; apper surface pale-brown when dry, shining, glabrons, minutely reticulate; lower surface when young sometimes with sparse decidnous hairs, but more usually glabrous from the first, always dull and whitish and with a few flat dark-coloured glands, the transverse veins and reticulations very distinct; main-nerves about 5 pairs, ascending, faint; length 4 to 6 in. ; breadth 2.5 to 3.25 in. ; petiole 6 to 9 in ., with two oval flat glands near its middle. Inflorescence shorter than the leaves, axillary, about 5 -flowered, the flowers 1.25 to 1.5 in . in diam., on slender long pedicels, white tinged with green; corona double, the outer with long erect

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filamentons segments; the inner about one-fourth as long, its segments few, lanceolate, incurved. Stamens 5 ; the filaments spreading, clavate; anthers dorsifixed, oblong. Ovary ovoid, hirsute, the gynophore nearly as long as the outer corona; styles long, recurved. Fruit sabglobalar, -75 in. in diam. Disemma Horsfieldii, Miq., Fl. Ind. Bat., I, Pt. 1, 700.

Perak; Scortechini 655, 2,192; King's Oollector 3,078, 4,104, 5,936, Distrib.-Java and Madura.

This is apparently the only species really indigenous in the Malayan Peninsala. There are, however, four American species which have escaped from cultivation. These are:-
P. suberosa, L. A small species with diversely shaped leaves, flowers little more than half-an-inch in diameter and ovoid fruits abont the same in length.
P. foetida, L. A species with variable leaves, emarginate at the base, often 3-lobed; recognisable at once by its foetid flowers and 3-leaved fimbriate involucre.
P. edulis, Sims. With deeply 3-lobed serrate leaves, flowers more than an inch across; and globular edible fruit. This is often cultivated under the name of Granadilla.
P. quadrangularis, L. A large species with boldly 4-angled stems; handsome fragrant, purple flowers banded with white, 3 to 5 in . across; broadly ovate leaves and large obliqne ovate-oblong stipules.
P. laurifolia, L. A more slender species than the last and with smaller flowers of similar colour, with a large 3-leaved or 3 -partite involucre of broad segments, and of long filiform stipules; the leaves broadly oblong, entire and shortly apicalate.
3. Adenia, Försk.

Scandent. Leaves entire or palmilobed, usually with two or more flat circular glands on the under surface and with similar glands at the apex of the petiole. Oymes axillary, few or many-flowered, on long peduncles, one or more of which is sterile and tendril-like. Male flower: Calyx tubular or bell-shaped; limb 5 -lobed, lobes leathery, imbricate. Petals 5, free, membranous, l-nerved, springing from the calyx-tube. Corona a ring of threads arising from near the base of the calyx-tube, or wanting. Glands of the disc 5, opposite the sepals, strap-shaped or capitate. Aindrocium cup-shaped, membranous beneath; filaments 5, linear-subulate; anthers linear-oblong, 2-celled. Ovary rudimentary or 0. Female flowsr: Calyx and corolla as in the male. Corona a membranons fold, springing from near the base of the calyx-tube, or none. Glands of the disc 5, strap-shaped, capitate, opposite the sepals. Staminodes 5 , forming a membranous cup surrounding the base of the ovary, above dividing into barren filaments. Ovary globose or elliptic, sessile or stalked; style cylindrical or none; stigmas 3, capitate or flat and dilated. Fruit capsular, 3 -valved. Seeds numerous, attached by long funicles to parietal placentas.-Distrib. About 40 species, natives of the tropics of the Old World.

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Note.-The name used for this genus in Hooker's Flors of British Indis is Modecca, Lamk. which dates from 1797. Following Engler, I have here used Förskal's name Adenia, which dates from 1775.

| Leaves always deeply 3-lobed | 1 A. trilobata. |
| :---: | :---: |
| Leaves entire:- |  |
| Leaves minutely peltate at the base; lobes of calyx long, narrow and reflexed ... ... | 2 A. nicobarica. |
| Leaves cordate at the base :- |  |
| Base broadly and deeply cordate, main-nerves radiating from the base: flowering peduncles up to 6 in. long | 3 A. cardiophylla. |
| Base slightly cordate: main-nerves pinnate: flowering pednncles less than 2 in . long | 4. A. populifolia var. pentamera. |
| Leaver not cordate at the base or only occasionally very |  |
| slightly so : main-nerves usurally 2 sometimes 3 pairs :- |  |
| Nerves and reticulations of leaves distinct ... | 5 A. acuminata. |
| Nerves and reticulations of leaves invisible, the lower |  |
| surface of the leaves whitish ... ... | an |

1. Adenia trilobata, Engl. Jahrb., XIV, 375. Many feet in lengtb, glabrous, the bark on the old shonts cinereous, on the young smooth green. Leaves remote, membranous, broadly cordate at the base, deeply 3-lobed; the lobes lanceolate, the two outer often auriculate at the base, the sinuses wide, rounded, and each bearing a small gland; mainnerves 5, palmate; the lateral nerves and the reticulations few; length 6 to 9 in .; width 4.5 to 6.5 in . ; petioles from half as long to nearly as long as the leaf-blades, terete, smooth, not enlarged at the base, the apex with two conical recurved glands. Peduncles slender, smooth, terete, axillary, longer than the petioles, umbellulately cymose; flowers few, $\cdot 3$ to $\cdot 5$ in. long, the females somewhat longer than the males. Oalyx tubular, the lohes short, oblong, sabacate. Petals narrowly oblong, inserted near the base of the calyx-tabe. Filaments united into a tabe springing from the fundus of the calyx; aithers linear-oblong, abruptly acnte, the connective produced into a minute point. Glands narrowly oblong, blunt, incurved. Staminodes in female flower united into a membranous cap. Rudimentary ovary in male flower trifid. Fruit oblong, scarlet, from 2 to 2.5 in . long when ripe, and 1.5 in . in diam. Seeds compressed, sub-obcordate or sub-rotund, scrobiculate, the arillus thin, clear. Modecca trilobata, Roxb. Hort. Beng., 49 ; Roxb. Corom. Plant. III, t. 297 ; Fl Ind., III, 133 ; Wall. Cat., J234; Kurz, in Journ. As. Soc., Beng., 1877, II, 95 ; Masters in Hook. fil. Fl. Br. Ind., II, 602.

Andaman Islands; common.-Distrib. Northern parts of British India and Burma.
2. Adenia nicobarica, King. Slender and slightly branched, glabrous Stems minutely sulcate, thin, wiry. Leaves membranous,

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entire, narrowly elliptic-oblong or lanceolate; the base rounded and minutely bi-glandular, slightly peltate; the apex acuminate, rarely abruptly acute; both surfaces shining; main-nerves only about 4 pairs, interarching broadly and far from the edge; intermediate nerves horizontal ; reticulations wide; length 2.5 to 4.5 in .; width $\cdot 6$ to 1.8 in .; petiole 4 to 8 in., compressed, not enlarged at the base. Peduncles. longer than the petioles but much shorter than the leaves, bearing a filiform tendril and only one or two flowers. Flowers rather less than $\cdot 5 \mathrm{in}$. long, green. Female flower anknown. Mala flowbr $\cdot 4$ to $\cdot 5 \mathrm{in}$. long Calyx campanulate, deeply divided into 5 linear-oblong, subacate, much reflexed lobes. Petals shorter than the calyx and inserted into it below the middle, membranous, reticulate, oblanceolate, their apices truncate and broad. Glands short, oblong, trancate. Anthers aboat eqnal to the petals, oblong, obture, cordate at the base; the filaments united into a wide tabe. Fruit elliptic-oblong, tapered to each end, from 1.5 to 2.3 in. long, and 75 in. in diam., reddish when dry, smooth. Seeds much compressed, snb-orbicular, with a few shallow pits in the centre, and a row of short depressed radiating grooves round the edge, the aril very thin. Modecca nicobarica, Kurz in Trimen's Journ. Bot. for 1875, p. 327 ; Mast. in Hook. fil. Fl. Br. Ind. II, 603.

Andaman and Nicobar Islands; not uncommon. Malacca; Maingay (Kew Distrib.) 670. Perak; Wray 651, 2781; King's Collector 2439; Scortechini 633; Ridley 10280. Penang; Ourtis 1521.
a species distinguished by its entire oblong leaves minutely peltate at the base, by its long narruw reflexed calyz-lobes, and by its rotand seeds with shallow pits in the centre and radiating grooves at the edges.
3. Adenia cardiophylla, Engl. in Jahrb. XIV, 376. Rather stont, glabrous. Stems almost terete. Leaves membranous, remote, broadly ovate, rotund-ovate, sometimes almost sab-reniform, the base deeply cordate, the auricles rounded; the apex with a short triangalar point; both surfaces smooth; the lower with numerous distinct reticulations; main-nerves about 9 , radiating from the base; the secondary nerves sub-horizontal, numerous; length 5 to 9 in .; breadth 3.5 to 7.5 in .; petiole 2 to 4.5 in . long, not thickened at the base but with 2 sessile glands at the apex. Peduncles 4 to 6 in . long, longer than the petioles, with several widely-spreading cymose branches and usually one tendril. Male flower narrowly ovoid, $\cdot 2 \mathrm{in}$. long. Calyx leathery, spotted inside, the month with blunt short teeth. Petals thin, broadly oblong-lanceolate, sabacute, spotted, their apices level with those of the teeth of the calyx, their bases inserted about the middle of the calyx-tube. Glands short, oblong-cuneiform. Anthers linear-ovate, acute, the filaments united into a tube inserted into the fundus of the calyx. Female flower twice as
long as the male, tubular. Calyx as in the male, the teeth recurved. Petals as in the male, their apices entire or minutely serrulate. Ovary ovoid, on a short gynophore, the stigma peltate 3 -lobed. Fruit broadly fusiform, 2 to 2.5 in . long and 1 in . in diam. at the middle, dirty-yellowish when dry. Seeds compressed, sub-rotund, keeled, with prominent, sharply edged deep pits in the centre and a row of elongate pits ronnd the edges. Modecca cardiophylla, Mast. in Hook. fil. Fl. Br. Ind. II, 602. Modecca cordifolia, Kurz (not of Blume) in Journ. As. Soc. Beng., 1876, II, 132: Masters in Hook. fil. FI. Br. Ind. II, 602. M. heterophylla, Kurz, (not of Blume) Andam. Report Append. A., 39.

Andaman Islands; very common. Nicobar and Great Coco Islands; Prain.—Distrib. Cambodia, Khasia Hills and Eastern Bengal, tropical Eastern Himalaya.


#### Abstract

A species well marked by its deeply cordate leaves much reticulate on the lower surface, widely-spreading cymes and sub-rotund cancellate pitted seeds. Some confusion in nomenclature has arisen from the fact that Kurz, without having seen anthentic specimens of Blame's two species Modecca cordifolia and M. heterophylla referred this plant to both of them. Dr. Masters perpetuated part of Kurz's mistake by accepting his view as to the identity of this Audaman and Nicobar plant with M. cordifolia, Blume, whereas the whole of the Andaman material (greatly increased in bulk since he wrote) really belongs to his own species M. cardiophylla. This view was first expressed by Dr. D. Prain, Superintendent of the Calcutta Garden in a note on one of the specimens in the Herbarium there.


4. Adenia popolifolia, Engl. in Jahrb. XIV, 376, var. pentamera King. A slender and often very extensive climber (often 150 feet) Stems slender, smooth, terete. Leaves thinly coriaceous, oblong-ovate, gradually narrowed to the acute or sub-acute apex, the base slightly cordate; both surfaces smooth, the nerves and reticulations little prominent when dry: main-nerves 5 to 7 pairs, curved, spreading, rather faint; length 3 to 5 in .; breadth $1 \cdot 75$ to 2.5 in . ; petiole 75 to 1.25 in ., its apex bearing 2 large cup-shaped glands conjoined by their backs. Peduncles shorter than the leaves with 2 slender spreading branches and a single rather stout tendiril. Flowers not numerous, on slender unequal pedicels, some of them $\cdot 75 \mathrm{in}$. long. Male flower $\cdot 2 \mathrm{in}$. long, narrowly fusiform; the calyx with 5 short oblong blunt lobes. Petals springing from the calyx-tube just below its lobes, and like them but narrower. Anthers 5, broadly linear, the connective slightly produced beyond the apex, shortly sagittate at the base; filaments joined into a tube and inserted into the fundus of the calyx: rudimentay ovary linear. Female flower shorter than the male (only 15 in. long) and not so slender but with similar calyx-lobes and petals. Ovary oblong, crowned by three erect oblong rather large stigmas. Fruit double fusiform, deep red when ripe, 2.5 to 3 in . loug and from 75 to 1 in . in

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diam. Seeds broadly oblong, compressed, foveolate with a row of short radiating grooves round the edges. Modeccu populifolia, Blume Rumphia, 168 t. 50. M. populifolia, BI. : Masters in Hook fil. Fl. Br. Ind. II, 603 (amongst imperfectly known species).

Malacca; Maingay (K.D.) 668. Perak; Scortechini 1609; King's Collector, many Nos.

Blume describes and figares his Modecca populifolia plant as tetramerous and as this exactly agrees both with his text and figure, except in being pentamerous, I regard it as a variety. There are in Herb. Calcutta specimens from Perak without flower or fruit, of what appears to be a 3-lobed form of this.
5. Auenia acuminata, King. Stems slender, striate. Leaves subcoriaceous, ovate-oblong or rotund-ovate, the base asually narrowed but sometimes sub-cordate always bi-glandular; the apex shortly and abruptly acuminate; the secondary nerves and reticulations distinct on both surfaces when dry but especially on the lower; main-nerves 2 or sometimes 3 pairs, originating from the midrib near its base, all prominent: length 4 to 6 in .; breadth 2 to 4 in .; petiole 75 to $1 \cdot 35 \mathrm{in}$. long. Peduncles usually nearly as long as the leaves but sometimes much shorter, bearing a few short many-flowered spreading branches at the apex and often a short tendril. Male plower narrowly ovoid, - 25 to $\cdot 3$ in. long. Calyx leathery with 5 short ovate-lanceolate lobes. Petals thick, oblong, acute, springing from the calyx-tube above the middle. Glands small, lanceolate. Anthers linear, sub-acute, erect, the filaments short. Female flower larger than the males ( 4 i in. long), tubalar, swollen in the lower third. 'Calyx-lohes very short, broad, blunt, incurved. Petals narrowly oblong, sab-acute, incarved. Ovary fusiform. F'ruit fusiform, dull, reddish when dry, about 2 in . long and 75 in . $i_{n}$ diam. at the middle. Seeds compressed, subrotund, boldly pitted in the centre and with a marginal row of radiating grooves on each side, slightly oblique and pointed at the base. Modeccu acuminata, Blame Bijdr. 940 ; Miq. Fl. Ind. Bat. I, Pt. 1,702. M. singaporeana, Mast. in Hook. fil. FI. Br. Ind. II, 601 (in part).

Perak; Scortechini 254, 459, 629; Wray 498, 1745 ; Ridley 9462, 9632; King's Collector, many numbers. Sblangor; Ridley 7288. Malacca; Goodrich 1340.-Distrib. ; Java, Sumatra, (Beccari P.S. 743).
6. Adenia singaporeana, Eugl. in Jahrb. XIV, 376. Stems slender, striate. Leaves subcoriaceous, oblong to ovate-oblong, cuneate and biglandular at the base, the apex sub-acute or shortly and bluntly acuminate; both surfaces smooth, opaque, the lower very pale, the secondary nerves and reticulations very indistinct on both; maiu-nerves 3 pairs, the lower two pairs bold and ascending, the upper pair less bold and spreading; length 3.5 to 4.5 in .; breadth $1.7 \bar{j}$ to 2.25 in .; petiole
$\cdot 5$ to $1 \cdot 5$ in. long. Peduncles aboat as long as the petiole, few-flowered. Male flowers (fide Masters) " 25 in. long, elongate, fusiform. Calyx leathery, shortly 5 -lobed; lobes ovate, connivent (? always). Petals thick, leathery, oblong-acute, springing from the calyx-tube just beneath the throat. Corona noue (?). Glands of the disc 5, small, oblong, at the base of the calyx-tube, opposite to its lobes. Stamens 5; anthers sab-sessile, erect, linear ; connective long, thread-like. Rudimentary ovary fusiform. Fruit 2 in . long, glabrous, fusiform." Seeds compressed, subovoid, obliquely contracted to a short podosperm, the centre boldly tubercled, the edges with a row of broad grooves the tubercles between which on the extreme margin are bold and some of them black. Passiflora singaporeara, Wall. Cat. 1232. Modecca singaporeana, Masters in Hook. fil. Fl. Br. Ind. II, 601.

Singapore; Wallich. Johore; King. Malacca; Maingay (K.D.) 667.-Dibtrib. Java.

A species badly represented in collections and misunderstood. It is based on the plant collected by Wallich at Singapore and issued by him under his Cat. No. 1232 and named Passiflora singaporeana. With this agree absolutely a plant collected by Mr. Hullett and myself at Juffaria (in Johore) also some specimens collected by Mr. H. O. Forbes in the Preanger in Java (Herb. Forbes 565). Maingay collected at Malacca six specimens of a Modecca all of which in Herb. Kew, are named M. singaporeana. In my opinion five of these belong to $M$. acuminata, Bl. I have seen no flowers of M. singapo eana and the account of them given above is copied verbatim from Masters. The leaves are very opaque and of a dall pale oolour beneath, and the nerves are very faint. The frait is slightly shorter than that of $M_{\text {. acuminata, }}$ Bl. of which apecies this is I fear little more than a form.

## Order LII. BEGONIACEI屃.

Succulent herbs or undershrubs; stem often rhizomatous or tubererous. Leaves alternate (sometimes falsely whorled), more or less un-equal-sided, entire, toothed or lobed; stipules 2, free, frequently deciduous. Peduncles axillary, dichotomously cymose, the branches and bracts at their divisions generally opposite. Flowers white rose or yellow, showy, sometimes small, monœcious. MaLe : perianth (of the ouly Indian genus) of 2 outer valvate opposite sepaloid segments, and 2-0 inner smaller segments; stamens indefinite often very many, free or monadelphous, anthers narrowly obovoid. Femace : perianth (of the only Indian genns) of $5-2$ segments. Ovary inferior (in Hildebrandia half-superior), 2-3-4-celled; placentas vertical, axile (at the time of mstivation), divided or simple; styles 2-4, free or combined at the base, stigmas branched or tortuous; ovules very many. I'ruit capsular, more rarely succulent, often winged, variously dehiscing or irregalarly breaking up. Seeds very many, minute, globose or narrow-c.glindric, testa
reticulated : albumen very scanty or 0.-Distrib. Species 400 (of which 398 belong to the genus Begonia), in all tropical moist countries; not yet met with in Australia.

## 1. Begonia, Linn.

## Characters of the Order.

Group I. Capsule 3 -celled, with 3 nearly equal narrow vertically oblong wings, dehiscing by 2 oblong valves on each face between the wings :-

Small acaulescent herbs, ouly a few inches in height: leaves rotund-ovate slightly oblique ... ...
Herbs with stems 2 or $\mathbf{8}$ feet high; leaves obliquely ovateoblong or ovato-lanceolate, the base cordate and very unequal-sided :-

$$
\begin{array}{lllll}
\text { Male flowers } \cdot 2 \text { to } \cdot 3 \text { in. across ... } & \ldots & \text {... } & \text { 2. B. isoptera. } \\
\text { Male flowers } 1.5 \mathrm{in} . \text { across } & \ldots . & \ldots & \ldots & \text { 3. B. isopteroidea. }
\end{array}
$$

Group II. Capsule 2-celled, triquetrous, with 3 short unequal wings, dehiscing irregularly by the breaking up of the fragile faces between the wings; anthers obovoid, often emarginate at the apex :-

Caulescent; rootstock taberons :-
Upper surfaces of leaves with numerous adpressed white stellate hairs ; bracts of inflorescence 05 to ${ }^{-1} \mathbf{i n}$. long, densely adpressed-pubescent; male flowers $\mathbf{~} 2$ to - 25 in. iu diam. ; capsules abont 3 in. broad
4. B. sinuata.

Upper surfaces of leaves scantily adpressed hairy; bracts 35 to $\cdot 5 \mathrm{in}$. long, glabrous; male flowers 5 in . and capsules ${ }^{6} 6$ in. across ... $\cdot .$. ... 5. B. andamensis. Leaves glabrous ... ... ... ... 6. B. debilis.
Acaulescent; rhizome oreeping :-
Leaves rather thick (when dry), rotund-reniform, deeply cordate the basal lobes overlapping, the nerves beneath and the petioles rusty-tomentose
7. B. thaipingensis.

Leaves very thin (when dry), obliquely ovate-reniform, quite glabrons except for a few sparse hairs on the under surface of the nerves; petioles glabrous
8. B. guttata.

Group III. Capsule 2-celled, triquetrous with 3 wings one of which is much elongated transversely so as greatly to exceed the other two, dehiscing by the rupture of the stout membranous faces between the wings:-

Anthers cuueiform-oblong; leaves peltate ... ...
Anthers linear-oblong or linear; leaves not peltate :-
Leaves not at all or very little oblique even at the base,
not cordate; petioles very long:-
Leaves with coarse hairs on both surfaces :-
Leaves narrowly lanceolate ... ... 10. B. Scortechinii.
Leaves ovate-lanceolate ... ... .. 11. B. Kunstleriana.
J. II. 8

| Leaves glabrous :- |  |
| :---: | :---: |
| Leaves broadiy elliptic-ovate, equal-sided at the baee | 12. B. Herveyana. |
| Leaves ovate-lanceolate, unequal-sided especially at the base |  |
| Leaves very oblique, ovate to reniform, obliquely cordate at the base :- |  |
| Leaves glabrons even on the nerves :- |  |
| Male Howers less than 1 in. across ... | 14. B. paupercula. |
| Male flowers aboat 1.5 in . across | 15. B. venusta. |
| Leaves glabrous, bat the nerves hairy; male flower |  |
| 2 in . across ... ... ... ... | 16. B. megapteroidea. |
| Leaves with a few coarse compressed rusty-pubescent hairs on both surfaces; nerves beneath, petioles and also peduncles rusty-pubescent; male flowers 8 in . |  |
| across . ... ... ... ... | 17. B. Maswelliana. |
| Upper sarfaces of leaves papillose and bearing coarse hairs :- |  |
| caulesoent; petiole much longer than the lamina | 18. B. praeclara. |
| Stems 8 feet high ; petiole shorter than the blade | 19. B. Lowiana. |

1. Begonia Forbesir, King n. sp. A small plant a few inches high with densely rusty-villose rhizome. Leaves rotund-ovate shortly apiculate, sometimes blunt, the base slightly cordate, the edges subentire or remotely denticulate; upper surface glabrous: the lower with numerous white scales and a few coarse hairs on the nerves near their bases: main-nerves 9, radiating from the base, inconspicnous; length 1.25 to 2.25 in .; breadth 1 to 2 in .; petiole 1.5 to 3 in .; stipules lanceolate, villous externally, 3 in. long. Peduncles as long as or longer than the leaves, slender, glabrous, bearing a solitary flower at the apex, or 2 -branched and bearing 2 to 5 flowers; bracts absent on the lower part of the peduncle, in pairs in its upper part, small, obovate-oblong. Flowers pink, their pedicels red. Male ; sepals 2, oblong, blunt, 15 in. long; petals 2, similar but smaller; stamens numerous; anthers obovate, with emarginate apices, filaments short. Females; perianth of 4 un equal pieces, the outermost rotund-ovate: the inner oblong. Styles 3, thick, the stigmas large, flattened, rotund. Capsule 3-celled, opening on each face; the wings subequal, spreading, triangular, blunt.

Perak; Wray 2476.-Distrib. Sumatra, Forbes 2666.
2. Begonia isoptera, Dry. in Smith's Ic. 43. Caulescent: three feet high, nearly glabrous; stem and branches slender. Leaves obliquely ovate-oblong or orate-lanceolate, shortly acuminate, the base cordate, the sides very nnequal; edges remotely and usually coarsely dentate; upper surface of leaves quite glabrous, the lower minutely scaly; mainnerves mostly radiating from the base, branched, prominent; length 3.5 to 6 in.; breadth 1.5 to 3 in.; petioles slender, varying from 5 to

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$2 \cdot 25 \mathrm{in}$. in length : stipules lanceolate or oblong, $\boldsymbol{7 5}$ in. long. Inflorescence leaf-opposed, shorter than the leaves, slender; the female flowers near its base, the male on short branches on its upper half. Males 2 to $\cdot 3 \mathrm{in}$. across; sepals 2, rotund; petals 0; stamens namerous, broadly oblong or obovate, minutely apiculate; filaments short. Female perianth-segments 5. Styles three, bifid, the arms twisted. Oapsule 3-celled, about -8 in. long and equally broad, dehiscing by two slits on each face, the three wings equal, narrow, oblong, 25 in. wide. Dry. in Trans. Linn. Soc. I, 160. B. repanda, BI. Enum. PI. Jav. I, 97. Diploclinium repandzm, Klo. Begon. 72. Begonia Wrayi, Hems. in Journ. Bot. for 1887, 203.

Perak; Scortechini and King's Oollector, many numbers. Malacca; Hervey. Selangor; Ridley 8589. Pahang; Ridley 2246. Negri Sembalan ; Ridley 10028. Penang; Curtis 7094-Distrib. Sumatra, Java.
B. bombycina, Bl. (Enum. Pl. Jav. 97) is possibly identical with this; it has been reduced here by De Candolle and part of it is no doabt so reducible. Under B. bombycina however have been distribated speoimens of an allied apeoies with larger flowers in short spreading cymes. Whioh of the two plants Blume intended as his $B$. bombycina, it is impossible from his short description and in the absence of authentic specimens to determine.
3. Begonia isopteroidra, King n. sp. Caulescent, 3 feet high, glabrous. Leaves thin, very obliquely ovate-lanceolate acuminate; the base acute on one side of the petiole but with a broad round auricle on the other, the edges remotely lobulate-dentate; lower surface with very minute white scales; main-nerves 7, radiating from the base, rather prominent beneath; length 3.5 to 4.5 in .; breadth 1.2 to 1.5 in .; petioles anequal, 2 to 3.5 in long. Stipules broadly lanceolate, acute, $\cdot 5$ to - 75 in. long. Peduncles slender, axillary, about an inch long and bearing about two flowers on long slender pedicels and one sub-sessile. Flowers pink, large. Males; sepals 2, rotund-oblong, blunt, 75 in. long; petals 2 similar but only 5 in. long; stamens inserted on an elongate anthophore, the anthers quadrate, 2-groved, truncate, only about half as long as the slender filaments. Females nearly as large as the males; style short, thick, divided into 3 slender, bifid spiral spreading branches. Capsules about $\mathbf{7 5}$ in. in length and breadth, 3 -celled, its wings narrow oblong, thin, membranous, the posterior narrower than the lateral.

Perax; on Ganọng Brumban, elevation 5,000 feet; Wray 1548.

[^130]reniform and blunt, or sometimes with a short broad abrupt apiculus, the basal sinus deep and the edges wavy and minutely denticulate or crenate; or reniform-cordate, gradually tapered to the sub-acute apex, the margins slightly lobulate-dentate, the lobes denticulate, the basal sinus small : length of the reniform over 4 to 6 in ; breadth 5 to 8 in., of the ovate-reniform 1.5 to 3 in .; breadth 1 to 3 in .; petioles of the radical leaves 1 to 3 in.; of the canline $\cdot 5$ to 2.5 in .; both surfaces with numerous adpressed white stellate hairs, the lower with small oblong white scales also; main-nerves 7 to 11, radiating from the base, prominent on the lower surface; petioles nnequal, $\cdot 5$ to 3 in . long, pubescent. Stipules small, oblong-lanceolate, slightly oblique, blunt, glabrous. Influrescence 3 to 8 inches long, sparsely stellate-puberulous; the peduncle very slender; branches few, short, filiform, few-flowered; bracts minute ( 05 to ${ }^{\circ} 1 \mathrm{in}$. long) bluntly lanceolate, rather deusely ad-pressed-pubescent externally, the upper in whorls of three. Flowers small, pink, glabrous. Males about 2 to $\mathbf{~} 25 \mathrm{in}$. in diam.: sepals 2, roundish; petals 2 , narrower, obovate; stamens about 20 , monadelphous; anthers obovoid, connective not produced. Female perianthsegments 5 , the inner gradually smaller. Styles 2, combined for half their length, stigmas lanate. Capsule about $\cdot 3$ in. broad and slightly jonger, the posterior wing the largest. Seeds ovoid, shining, brown, deeply pitted. A. DC. Prod. XV, Pt. I, 354; Kurz in Journ. As. Soc. Beng., 1877, Pt. II, 108; Clarke in Hook. fil. Fl. Br. Ind. II, 650. Diploclinium biloculare, Wight Ic. 1814. Begonia guttata, elongata et subrotunda, Wall. Cat. 3671 B (not A), 6291, 6293.

Pgnang ; Wallich; Phillips ; King's Oollector 2269, 4860; Curtis 390, 481, 3098 ; Ridley 9229. Malacca; Maingay (K.D.) 674. Prbak; King's Collector 4971.—Distrib. Burma ; Griffith, Parish.
5. Begonia andamensis, Parish ex Clarke in Hook. fil. Fl. Br. Ind. II, 650. Like the reniform-leaved form of $B$. sinuata, bat the hairs on the surfaces of the leaves scanty: the iuflorescence usually longer and its peduncle and branches much stonter ; the bracts glabrous, longer ( 35 to $\cdot 5$ ia.) and blanter and the male flowers ( $\cdot 5$ in. across) and capsules ( 6 in . across) longer and more numerous than those of B. sinuata.

Andaman Islands; Parish; King's Collector.-Distrib. Burma.
This ought probably to be regarded as a variety of B. sinuata. Actual specimens of the two look more different than written descriptions lead one to suppose; I therefore retain this as a epecies.
6. Begonia debilis, King n. sp. A slender weak berb, aboat 6 to 8 inches high, caulescent. Leaves thin, narrowly reniform, blunt or subacute; the base unequal, rounded at both sides but one auriculate and

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mach longer; edges sub-entire or slightly remotely and obscurely crenate; breadth 1.5 to 3 in.; length (from base of largest lobe to apex) 3.5 to 7 in. ; upper surface glabrous, the lower minntely scaly; mainnerves 7, radiating from the base, some of them branching, rather prominent below; petioles 1 to 3 in . long. Inflorescence axillary or terminal, slender, longer than the leaves, with a few lax filiform dichotomous spreading few-flowered branches, bracts in pairs, ovate-lanceolate, $\cdot 1$ to $\cdot 15$ in. long. Flowers pare white, the stamens yellow. Male -35 in. across; sepals 2 , oblong-ovate, blunt : petals 2 , similar but smaller; stamens in a globular mass; anthers obovate, short with broad emarginate inappendiculate apices. Female perianth of 5 unequal obliquely oblong pieces; styles united into a short column, above divided into numerous crowded awns. Oapsule 75 in. broad (to the end of the wings), and 4 in. from base to apex, glabrous, 2 -celled : the 2 lateral wings triangular, acute, the posterior wing oblong, tapering a little to the blunt apex, more than twice as long as the lateral.

Perak ; King's Oollector 8289.
A species allied to B. varians, A. DC., but with more entire leavas.
7. Begonia thaipingensis, King n. sp. Rhizome long, creeping, rooting at intervals, wire-like, rusty-villous. Leaves rotund-reniform, the edges minutely and rather remotely dentate, the basal sinus mostly obliterated by the overlapping of the auricles; both surfaces scaly the lower more distinctly so and rusty tomentose on the 6 or 7 radiating sub-prominent nerves; length 1.25 to 2 in.; breadth 1.5 to 2.25 in.; petioles unequal, 1 to 4 in . long, densely rusty-tomentose. Peduncles 4 to 9 in . long, sleuder, sparsely rasty-villous, bearing one or two remote pairs of small lanceolate bracts and near the apex 3 to 5 slenderly pedicellate pink flowers on slender branches. Male flowers; sepals 2 , sub-rotund, $\cdot 15 \mathrm{in}$. long; petals 2 , smaller, oblong; stamens numerous; anthers obovate, the apex blunt and emarginate, the filaments short. Female perianth of 5 unequal pieces, the largest most external: style short, thick, with 2 stout arms and short thick twisted stigmas. Capsule 2 -celled, $\cdot 5$ in. broad (to the ends of the wings); all the wings triangular, sab-equal.

Preax ; Scortechini 1479; Wray 1774; King's Collector 2523, 8511.
A species allied to B. sinuata, Wall., bat differing by the creeping rhizome, non-apionlate leaves, rusty-tomentose petioles and peduncles.
8. Begonia gutiata, Wall. Cat. 3671 A. Stem succulent, short. weak, bearing about two thin obliquely ovate-reniform glabrous nearly entire leaves with oblique cordate bases, and subacute apices; the nerves about 5, radiating from the base, prominent, sparsely hairy;

4 to 7 in. long and 2 to 4.5 in . broad; petioles 1.5 to 4 in . Peduncles varying in length from 1 to 2 in., slender, glabrons, bearing a few flowers near the apex. Male flower; sepals 2, rotund; petals 2, narrowly oblong; stamens about 50, monadelphous; anthers obovoid. Female; perianth-segments 5, gradually smaller inwards: styles 2, with two twisted branches. Capsule 4 in . long and 75 in . broad to the ends of the wings, the smaller wings very narrow; the posterior one broad, descending. A. DC., Prod. XV, Pt.I, 352 ; Clarke in Hook. fil. Fl. Br. Ind. II, 648.

Perak; Scortechini 571. Malacca; Maingay (Kew Distrib.) 675. Penang; Wallich. Selangor; Ridley 7289.
9. Begonia Hassearlit, Zoll. et Mor. Syst. Verz. Zoll. 31 (not of Miq.) All parts glabrous. Stem a creeping rhizome. Leaves rotundovate, shortly and abruptly candate-acuminate, peltate, the edges wavy but entire; both surfaces glabrous, the upper pitted when dry, the lower with sub-rotund scales; main-nerves about ten, radiating from the insertion of the petiole, not very prominent; length 3.5 to 5.5 in.; breadth 2.25 to 3.75 in.; petiole attached to the leaf about -75 to 1.25 in. from its lower edge; stipules short, lanecolate. Peduncle usually longer than the leaves (often twice as long), about as thick as the petioles, bearing a few slender branches near the apex, ebracteate. $F^{\prime}$ lowers small, white tipped with red. Male -2 in. broad; sepals 2, reniform, the margins thick. Stamens numerous, cuneiform-oblong, their apices emarginate; filaments very short, free. Female, sepals 2, with vertical veins, reniform; style short, thick, with 4 short branches; stigmas 4, much lobalate. Oapsule 4-celled, 6 in. long, the lateral wings very narrow ; the posterior broad slightly narrowed to the blunt apex, $\cdot 5$ in. long : seeds minute, ovoid, tapering to one end, brown, shining, pitted. B. peltata, Hassk, in Hoev. et De Vriese, Tijdschr. X (1843) 133. Metscherlicia coriacea, Klotzsch in Abh. Akad. Berl. (1855) 74; Miq. Fl. Ind. Bat. I, Pt. I, 696. B. coriacea, Hassk. Pl. Jav. Rar. 209 ; B. hernandiaefolia, Hook. (not of others) Bot. Mag. t. 4676.

Perak; Scortechini 1607 ; King's Collector 4427, 8245 ; Ridley 9689. Pahang; Ridley 2442.-Distrib. Java, Zollinger 1613.

This is one of three species to which the specifio name peltata has been given. That name must however be reserved for the Brazilian species to which it was first applied by Otto \& Dietr. (Allg. Gartenz. IX (1841) 58). The MSS. name B. Hasskarliana was given by Miquel to a species near B. cosspitosa whioh he confused with Zollinger's No. 1613 (the type of the species above described), and this inaccuracy was perpetaated by Miquel on p. 1091 of his $\mathrm{Fl}_{\text {. }}$ Ind. Bat. I, Pt. I, where he describes Diploclinium Hasskarlianum.
10. Begonia Scortechinit, King, n. sp. Rhizome creeping, short, scaly.

Leaves on very long glabrous petioles, narrowly lanceolate, attenuate to the acuminate apex, and to the rounded or acute nearly equal-sided base; the edges dentate-ciliate; both surfaces with numerous scattered coarse subulate spreading hairs compressed at their bases, the lower also minutely scaly; main-nerves pinnate, 3 or 4 pairs, then ascending; length 2.75 to 4 in.; breadth 5 to 1 in .; petioles 5 to 7 in. Peduncles axillary, somewhat shorter than the leaves, glabrous, bearing at the apex 2 few-flowered branches and a few rather long bracts. Flowers white, tinged with pink and green. Male: sepals ovate, obtuse, 75 in. long ; petals narrower but nearly as long. Stamens numerons, in a short column; anthers linear-oblong, the apical appendage obtuse; filaments short. Femals with perianth-segments similar to the male (fide Scortechini) but 5. Ovary glabrons, 2-celled; styles free, 2 to 4-fid. Oapsule 75 in. broad (including the wings) the lateral wings narrow, oblong, the posterior much larger (fide Scortechini).

Perak; Scortechini 1845; King's Collector 7227.
I have seen no ripe capsules, and the above description of them is taken from Scortechini's field-note. The species is readily distinguishable by its very narrow equal-sided coarsely hairy leaves. A drawing of this, sent to Herb. Kew from Penang by Mr. C. Curtis, represents the leaf-petioles as not more than one inch long.
11. Begonia Kunstleriana, King n. sp. Rhizome creeping, very scaly. Leaves ovate-lanceolate to lanceolate, often but not always un-equal-sided, much acuminate; the base cuneate usually oblique; edges ciliate-serrate, the teeth slightly anequal; both sarfaces with coarse spreading hairs with dilated flattened bases; the lower with minute white scales also; main-nerves about 3 pairs, pinnate, densely rufescent villous like the petioles; length 5 to 7.5 in.; breadth 1.75 to 2.5 in.; petiole from half as long to nearly as long as the blade. Peduncles longer than the petioles and more slender, glabrons, 2- to 4 -flowered at the apex. Flowers large, white, tinged with red. Male; sepals 2, elliptic, obtuse, 1 in. long and 5 in. broad, vertically veined; petals similar but not half so large. Stamens numerous, linear-oblong, bluntly apiculate. Female perianth of 5 oblong blant segments; styles 2, each with two short twisted branches. Capsule (to the end of the posterior wing) 1 in . broad: the lateral wings short, narrow; the posterior elongate not tapered to the apex, 2-celled. Seeds ellipsoid, shining, brown, pitted.

Perak ; King's Collector 7194; Scortechini ; Ridley 9651.
This resembles B. Scortechinii, but has larger leaves and shorter petioles which are densely villous.
12. Begonia Herveyana, King n. sp. Glabrous except for a few
hairs on the nerves on the lower surface of the leaves: rhizome creeping, thin. Leaves broadly elliptic-ovate, shortly acuminate, slightly narrowed to the rounded almost equal-sided base; the edges slightly undulate, very indistinctly serrate; upper surface glabrous, lower very minutely scaly; nerves pinnate, about 6 pairs, ascending, branching; length 5 to 9 in .; breadth 3 to 4.5 in .; petioles much longer than the leaves, glabrous; stipules lanceolate, inconspicaous. Peduncles 5 to 10 in. long, slender, bearing near the apex 2 or 3 branches with few shortly pedicellate flowers. Male flowers; sepals 2, ovate-subrotand; petals 2, mach smaller, oblong, blunt; stamens numerous, arranged in a cone, linear, with a blunt apical appendage, the filaments short. Female perianth of 5 subrotand pieces. Capsule 1 in . broad and about half as much from base to apex, imperfectly 4-celled: lateral wings narrow oblong ; the posterior wing ovate, blant, about 65 in . long.

Malacca; Hervey; Derry.
This is a very distinct species resembling in the shape of its leaves no Asiatic Begonia that I have seen, except on nanamed species from Tonkin (No. 3763 of Herb. Balansa).
13. Begonia perakensis, King n. sp. Rhizome slender, creeping. Leaves ovate-lanceolate, slightly unequal-sided, acuminate; the base broad, rounded or very slightly emarginate or oblique, the edges obscurely and remotely dentate, or sub-entire ; both surfaces glabrous, the lower minately scaly; main-nerves pinnate, $\ddagger$ or 5 pairs, ascending; length 3.5 to 5.5 in . ; breadth 1.5 to 2.25 in . ; petiole 2.5 to 5 in . ; slender, glabrous. Peduncles usually longer than the leaves (at least when in fruit), 4-angled, glabrous, few-flowered. Flowers whitish tinged with pink, or pink. Male ; sepals rotund-ovate, $\cdot 4 \mathrm{in}$. long. Petals 2 , oblong and much smaller. Stamens numerons, linear with short blunt apical appendages and short filaments. Fsmale perianth of 5 (?) segments. Capsule (ripe) 1.2 in . broad (to end of posterior wing), and $\cdot 5 \mathrm{in}$. from base to apex, 2-celled; the lateral wings oblong, narrow ; the posterior oblong, blunt, slightly oblique, 35 in. broad; seeds small, ellipsoid, pitted, shining.

Perak ; King's Oollector 10338, 10506, 10951.
Specimens of a species closely resembling this, but insufficient for accurate determination, have been collected in Selangor by Mr. Ridleg (Herb. Ridley 8590).
14. Begonia padpercula, King n. sp. Rhizome creeping, acaulescent, every where glabrous. Leaves ovate, very nnequal-sided and very oblique at the base, or ovate-lanceolate, slightly unequal-sided and little oblique at the base; the apex always acuminate, the edges slightly sinuate-lobed, obscurely dentate; both surfaces glabrous : main-nerves 5 to 7, radiating from the base, prominent below, midrib with a few
lateral nerves, length 3.5 to 5 in.; breadth 1.25 to 3.5 in. ; petioles varying in length from 2.5 to 7 in., slender, 2 -to 3 -flowered. Flowers white, tinged with red. Males; sepals 2 , elliptic-oblong, 4 in . long; petals 0. Stamens linear-oblong, shortly and bluntly apiculate: filaments short. Female; the perianth of 5 very unequal lobes, the outermost larger than the sepals of the male. Capsules ${ }^{6}$ in. long and 1 in . broad, 2celled ; the 2 lateral wings sub-elliptic, oblique, 3 in . broad ; the posterior wing oblong, blunt, $\cdot 6$ to $\cdot 7$ in long and $\cdot 35 \mathrm{in}$. broad.

Perak; King's Collector 5952.
This has leaves resembling those of B. borneensis, bat the flowers are fewer and larger. Beccari's Sumatra specimens (P.S. 857), in fruit only, appear to belong to this species.
15. Begonia venusta, King n. sp. Rhizome slender, creeping; whole plant glabrous. Leaves reniformly ovate, shortly acuminate, the basal sinus deep; the edges sub-entire or remotely and minutely denticulate; both surfaces smooth, shining : main-nerves 7 , radiating from the base, slender; length 3 to 5.5 in.; breadth 2 to 3.5 in.; petioles unequal, slender, from 6 to 12 in . in length. Peduncles 3.5 to 6 in. long, bearing about 3 pedunculate pinkish-white flowers near the apex. Male; sepals 2, ovate-rotund, blant, 75 in. long. Petals 2, somewhat larger. Stamens narrowly oblong, with a large apiculus; filaments nnequal, the inner ones long, the outer short. Females smaller than the male, the perianth of 5 nnequal broad blunt segments; styles very short, with numerous broad depressed lobules. Capsule $\cdot 3 \mathrm{in}$. long and $1 \cdot 15 \mathrm{in}$. broad (to the ends of the wings) ; lateral wings more than half as long as the posterior, broadly triangular, blunt ; posterior wing oblong, blunt, $\cdot 7$ in. long.

Perak; at an elevation of aboat $6,000 \mathrm{ft}$., Wray 1598.
The leaves are not unlike those of B. paupercula and B. borneensis but the flowers are large and handsome.
16. Begonia megapteroidea, King n. sp. Rhizome as thick as a swan-quill, creeping on rocks. Leaves broadly and very obliquely ovate, acnminate; both sides of the base rounded but very unequal, the sinus between them wide, the edges remotely and minutely dentate, upper surface glabrous; the lower also glabrous except the rusty-pubescent nerves which, are also scaly near the base: main-nerves about 8, radiating from the base, the larger branched and all rather prominent; length (from apex of petiole to apex of blade) 4 to 5 in .; breadth 4 to 5 in .; petiole 12 to 16 in. long, glabrous. Peduncles from half as long tc nearly as long as the leaves, glabrons, ebracteate below the flowers, Male flowers : sepals rotand-ovate, very obtuse, 1 in . long and $\cdot 6$ to $\cdot 7 \mathrm{in}$. broad ; petals much smaller, elliptic : stamens numerous, in a conical J. II. 9
mass on a short thick anthophore; anthers oblong, bluntly apiculate, filaments varying in length (the inner the longest). Female perianth of 5 unequal pieces : styles 2 , rather long, combined at the base. Cupsule not seen.

Perak ; collected at an elevation of $5,000 \mathrm{ft} .$, Wray $1450,1573$.


#### Abstract

Specimens of this plant are rather soanty. They resemble B. megaptera, but are not caulescent like that species. In the Calcatta Herbarinm there is, under the name Dipiocliniun tuberosum, Miq., a specimen collected by Kurz in Weatern Java which apparently belongs to this species. There are also two plants from Sumatra collected by Forbes (Herb. Forbes 2888a and 2255) which appear to belong to this. The genus Diploclinium is inseparable from Begonia and the specific name tuberosa is pre-occapied in the latter by a species desoribed by Lamack from the Moluccas which has a rounded taberous root.


17. Begonia Maxwelliana, King n. sp. Rhizome as thick as a swan-quill, bearing many broadly lanceolate scales. Leaves broadly and obliquely ovate to ovate-rotund, more or less acuminate, the edges minutely ciliate-denticulate, the base very oblique, one side of it rounded the other rounded-auriculate, the sinus wide; both surfaces with a few coarse compressed rusty hairs, most numerous on the nerves near the base; the lower surface with minute white scales; main-nerves 7 to 9 , radiating from the base, prominent; length 5 to 6 in.; breadth 4 to 7 in.; petioles 4 to 10 in . long, compresed (when dry) like the peduncles and like them rusty-pubescent. Pedunoles unequal, those bearing only male flowers often shorter than the petioles; those bearing female and male, or females only often longer than the petioles; all ebracteate below the inflorescence, dichotomously branched and few-flowered at the apex; the bracts short, broad. MaLs flowers densely clustered; sepals 2, oblong-ovate, blunt, 4 in . long, paberulous ontside ; petals 2, similar, but much smaller. Stamens numerous, without anthophore; authers linear, bluntly apiculate, slightly shorter than the filaments. Female perianth of 5 unequal pieces diminishing in size inwards; styles 2 , short, much lobulate. Capsule 2-celled, 1.4 in. broad (to the ends of the wings) and $\cdot 6$ in from base to apex ; the 2 lateral wings sub-quadrate, obtuse; the posterior oblong, blunt, more than three times as long as the lateral.

Perak ; Maxwell's Hill, at elevation of 3,000 feet, Wray 119, 2199 ; Scortechini 1607, 1798 ; King's Collector 2038.—Distrib. Sumatra, Forbes 3119a.

The flowers of this are white tinged with pink and the leaves green, the nerves beneath being red. This resembles B. megapteroidea, King, bat the flowers are smaller, aud the leaves and inflorescence are not glabrons as in that species.
18. Begonia preclara, King n. sp. Rhizome creeping, very scaly. Leares obliquely ovate, acuminate, the base rounded on one side of the

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petiole and on the other expanding into a broad rounded auricle, the edges minutely dentate, rarely with small lobes besides : upper surface with numerous conical papille each bearing a coarse curved hair flattened at the base; under surface with a few scattered flattened hairs especially on the nerves ; main-nerves 7, radiating from the base, prominent beneath; length 3.5 to 5.5 in .; breadth $\Sigma .5$ to 3.5 in .; petioles nnequal 3 to 6 in. long, with a few flexuose hairs near the apex. Peduncles longer than the petioles, slender, glabrous, 1- to 3-flowered. Flowers on rather long slender pedicels, pink. Males; sepals 2, narrowly oblong-ovate, obtuse, 8 in . long; petals 2, narrowly oblong, blunt, 5 in. long; stamens linear-oblong, apiculate, the filaments anequal the central the largest. Female perianth unknown; styles 2, short, 2-branched, branches divided into many flat twisted lobes. Capsule $\cdot 5 \mathrm{in}$. long and about 1.5 in . broad (to the ends of the wings); the lateral wings quadrate-ovate, obtuse, about 4 in . long; the posterior oblong, blunt, 1 in. long and 4 in. broad.

Perak; at elevations of from 3,000 to 6,700 feet, Wray 318, 349, 427 ; King's Collector 8077.

[^131]19. Begonia Lowiana, King n. sp. Caulescent; 3 feet high; stems and branches covered with coarse flexuose glandular hairs. Leaves mostly very obliquely reniform; but some of the cauline ovate and nearly equal-sided acnte, the basal sinus deep, the edges with a few very shallow lobes closely and rather minately dentate-serrate and shortly ciliate ; both surfaces coarsely rusty-pubescent, the hairs flexuose compressed and with dilated bases, the lower also with small white scales; main-nerves about 9 , radiating from the base, prominent and densely villous; length 3 to 4.5 in.; breadth 4 to 7 in. ; petioles unequal, stoat, villous like the under surface of the ribs and midrib, from 4 in. long in the upper leaves, to 4 in . long in the lower. Cymes fewflowered, leaf-opposed and terminal, shorter than the leaves when in flower, much larger when in fruit; bracts;ovate-lanceolate, opposite, ciliate. Flowers pink or white, pedicellate. Male about 75 in . across; sepals 2, ovate-oblong, sub-acute, 5 in. long; petals 2, oblong, much smaller. Stamens uamerous, oblong, blunt, without apical appendages; filaments short. Female, the perianth of 5 pieces decreasing in size inwards; styles 2, deeply bifid and spiral. Capsules 65 in . long and twice as broad to the end of the wings; lateral wings very narrow (about • 15 in . broad), the posterior oblique, broadly ovate, blunt, 9 in . long and 8 in , broad.

Perak ; at an elevation of 7,000 feet on Ganong Brumber Pahang, Wray 1567; also on Gunong Batu Puleb, Wray 316.


#### Abstract

This resembles the Indian species B. Thomsonii, DC., bat differs in being caulescent, in having shorter hairs on leaves and petioles, and in the posterior wing of the capsule being mach larger. I have named the species after Sir Hagh Low, late British resident at Malacoa, to commemorate his many services towards the botanical exploration of the Province of Perak.


Order LIV. FICOIDE用.
Herbs. Leaves simple, often fleshy, usually opposite or whorled; stipules 0 or scarious. Flowers usually in cymes or clusters, rarely solitary, regular, hermaphrodite rarely polygamons. Oalyx of 4.5 segments, united into a tube or nearly distinct, free from the ovary in the Iudian genera, often persistent. Petals usually wanting, when present small. Stamens perigynous or hypogynous, definite or indefinite; staminodes sometimes present. Ovary free (exceptin Mesembryanthemum), 2-5-celled, syncarpous (except in Gisekia); styles as many as the carpels : ovnles numerous in each carpel and axile or solitary aud basal. F'ruit usually capsular, splitting dorsally or circumsciss, more rarely the carpels separate into cocci. Seeds many or 1 in each carpel, usually reniform, compressed; embryo curved or annular, surrounding the farinaceous albumen, radicle next the hilum.-Distrib. Species 450, chiefly African, a few are scattered through most tropical and subtropical regions.
$\begin{array}{llll}\text { Capsule with circumscissile dehiscence } & \text {... ... } \\ \text { Capsule with dorsal dehiscence } & \text {... } & \text {... } & \text { 2. Mollutuo. }\end{array}$

## 1. Sesutiom, Linn.

Succulent branching berbs. Leaves opposite, fleshy; stipules 0. Flowers axillary, sessile or peduncled, solitary, rarely in cymes. Calyxtube short; lobes 5, triangular-lanceolate, persistent, often coloured. Petals 0. Stamens many or 5, inserted round the summit of the calyxtube. Ovary free, 3-5-celled; styles 3-5; ovules many, axile. Oapsule ovate-oblong, membranous, 3-5-celled, circumsciss. Seeds many in each cell, reniform; embryo annular.-Distrib. Species 4, littoral in warm climates.

Sestriom Portulacastrom, Linn. Syst. ed. 10, 1058. Creeping and rooting in the sand, glabrous. Leaves linear-spathulate almost cylindric, sometimes sub-obovate : gradually narrowed into a short petiole with dilated scariously margined base. Flowers solitary, axillary, their pedicels $\cdot 25$ in. long. Calyx rose-coloured inside. Stamens 15 to 40, free or almost free. Styles 3 to 5. Capsule 2 in. across. Seeds black, shining, smooth, not numerous. Roxb. Fl. Ind. II, 509 ; Dalz. \& Gibs. Bomb.
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Fl. 15; Kurz in Journ. As. Soc. Beng.'1877, Pt. II, 110 : Clarke in Hook. fil. Fl. Br. Ind. II, 659. S. repens, Willd. Enum. p. 5ll ; DC. Prod. III, 453: W. \& A. Prod. Fl. Pen. Ind. 361 ; Wight in Hook. Comp. Bot. Mag. II, 71, t. 23 ; Miq. Fl. Ind. Bat. I, Pt. I, 1060. Psammanthe marina, Hance in Walp. Ann. II, 660. Crithmum indicum, Ramph. Herb. Amb. VI, t. 72, fig. 1.

On the sea shores in the Andamans and the other Provinces.Distrib. B. India, Malayan Archipelago.

## 2. Molldao, Linn.

Herbs, branched, often dichotomous. Leaves often falsely whorled, or alternate, or all radical, from linear to obovate, entire; stipules fugacions. Flowers axillary, sessile or pedicelled, clustered or in panicles or racemes, small, greenish; bracts inconspicuons. Sepals 5, persistent. Petals 0 ; staminodes 0 or small in the same species. Stamens $5-3$, rarely many. Ovary free, globose or ellipsoid, $3-5$-celled ; styles $3-5$, linear or very small; ovales 'many, axile. Capsule membranous, sheathed by the sepals, $3-5$-celled, dehiscing dorsally. Seeds several in each cell, rarely 1 , reniform, appendaged or not at the hilum; embryo annular.-Distrib. Species 12, tropical and sabtropical.

Mollugo pentaphylla, Linn. Spec. Plantar. ed. 1 (1753), 89. A few inches high, glabrous; stems mach-branched, leafy, varying from oblong-lanceolate, lanceolate-acute to obovate-obtuse, contracted at the base, subsessile or sessile, from less than 5 in. to more than 2 in . in length. Panicles compound, terminal, many times longer than the leaves. Sepals elliptic or rotand, blant. Stamens 3 to 5 , short; filaments rather broad, compressed. Capsule globose, as long as the sepals, thin-walled, many seeded. Seeds dark-brown, tubercled ; embryo carved. W. \& A. Prodr. 44 ; Dalz. \& Gibs. Bomb. Fl. 16; Kurz in Journ. As. Soc. 1877, Part II, 111. M. triphylla, Lour. Fl. Cochinc. 79; DC. Prodr. I, 392 ; Roxb. Hort. Beng. 9, Fl. Ind. I, 360 ; Wall. Cat. 651; W. $\&$ A. Prodr. 44. M. Linkii, Seringe in DC. 1.c. M. stricta, Linn. Sp. Pl. ed. II, 131 ; DC. Prodr. I, 391 ; Roxb. 1.c. ; Wall. Cat. 650; W. \& A. Prodr. 44; Dalz. \& Gibs. l.c.; Clarke in Hook. fil. Fl. Br. Ind. II, 663 : Pharnaceum strictum, triphyllum and pentaphyilum, Spreng. Syst. I, 949.-Rheede Hort. Mal. x. t. 26.

In all the Provinces, near cultivated places.-Distrib. General throughont S. E. Asia.

## Order LV. UMBELLIFERTA.

Herbs (rarely in non-Indian species shrubs or trees). Leaves alternate, usually divided or dissected, sometimes simple, petiole generally
sheathing at the base; stipules 0 . Flowers hermaphrodite or polygamous, in compound umbels (simple in Hydrocotyle and Bupleurum), exterior of the umbel sometimes radiant; umbels with involucriform bracts at the base of the general one and bracteoles at the base of the partial ones (umbellules). Calyx-tube adnate to the ovary, limb 0 or 5-toothed. Petals 5, epigynous, often unequal, and with a median fold on the face, plane or emarginate or 2-lobed with the apex inflexed; imbricated in bud, in Hydrocotyle sometimes valvate. Stamens 5, epigynous. Ovary inferior, 2-celled, disc 2-lobed; styles 2, stigmas capitellate; ovules 1 in each cell, pendulous. Fruit of 2 indehiscent dorsally or laterally compressed carpels, separated by a commissure; carpels each attached to and often pendulous from a slender often forked axis (carpophore), with 5 primary ridges ( 1 dorsal, 2 marginal and 2 intermediate) and often 4 secondary ones intercalated between these; pericarp often traversed by oil-canals (vittm). Seed 1 in each carpel, pendulous, albumen cartilaginous; embryo small, next the hilum, radicle superior.-Distrib. Species about 1,500, mainly in Enrope, North Africa, West Central and North Asia; a few are North American, tropical, and natives of the Southern Hemisphere.

| Creeping nnarmed herbs | ... | ... | ... Hydrocotybe. |
| :--- | :--- | :--- | :--- | :--- |
| Ereot spinous herbs ... |  |  |  |

## 1. Hydrocotyle, Linn.

Prostrate herbs, rooting at the nodes. Leaves (in the Indian species) cordate or hastate, not peltate, round or 5-9-gonal, subentire or palmately lobed, palmate-nerved, long-petioled; stipules small, scarious. Umbels (in the Indian species) simple, small ; bracts small or 0 ; flowers white, sometimes unisexual. Calyw-teeth 0 or minute. Petals entire, valvate or imbricate. Fruit laterally compressed, commissure narrow; carpels laterally compressed or sub-pentagonal; lateral primary ridges concealed within the commissure, or distant therefrom and prominent; vittæ 0, or most slender, obscure; carpophore 0. Seed laterally com-pressed.-Distrib. Species 70; in wet places in tropical and temperate regions, more numerous in the Southern Hemisphere.

$$
\begin{aligned}
& \text { Petals aonte, valvate; fruit with no secondary ridges; } \\
& \text { pericarp thin ... ... ... ... 1. H. javanica. } \\
& \text { Petals obtuse, imbricate; fruit with prominent secondary } \\
& \text { ridges, the pericarp thickened ... ... ... 2. H. asiatica. }
\end{aligned}
$$

1. Hydrocotyle javanica, Thunb. Dissert. Hydrocot. n. 17, t. 2 : ed. Pers. II, 415, t. 2. Leaves reniform, $5-6$-lobed, the lobes irregularly crenate, sometimes sub-entire, 1 to 3 in. broad. Peduncles long, slender, often clustered. Petals acute, valvate. Fruit much compressed, the
secondary ridges absent; pericarp thin, blackish. DC. Prodr. IV. 67; Miq. Fl. Ind. Bat. I. Pt. I, 734 ; Kurz in Journ. As. Soc. 1877, Pt. II. 113; Clarke in Hook fil. Fl. Br. Ind. II, 667. H. hispida, Don Prodr. 183. H. nepalensis, Hook. Exot. Fl. t. 30 ; Wall. Cat. 561 ; DC. l.c. 65 ; Miq. l.c. 735. H. zeylanica, DC. l.c. 67 ; W. \& A. Prodr. 366; Miq. l.c. 734. H. hirsuta, Blame Bijd. 884. H. polycophala, W. \& A. Prodr. 366; Wight. Ic. t. 1003. H. hirta, R. Br. var. acutiloba, F. Muell.; Beuth. Fl. Austral. ILI. 340. H. Heyneana, Wall. Cat. 563. H. strigosa, Ham. in Wall. Cat. 7219.

Perak; and probably in all the other provinces except the Andaman and Nicobar Islands.-Distrib. The Malay Archipelago, Australia, Philippines.
2. Hydrocotyle abiatica, Linn. Sp. Pl. 234. Leaves rotund-reniform, the margins not lobed but uniformly crenate or dentate, sometimes sub-entire, $\cdot 5$ to 2 in . broad. Peduncles short, often 2 or 3 together. Petals obtuse, imbricate. Fruit compressed, secondary ridges prominent, pericarp thickened. Roxb. Hort. Beng. 31 : Fl. Ind. II, 88 ; Wall. Cat. 560 ; DC. Prodr. IV, 62 ; W. \& A. Prodr. 366 ; Wight Ic. t. 565 ; Dalz. \& Gibs. Bomb. Fl. 105 ; Kurz in Journ. As. Soc. 1877, Pt. II, 113 ; Clarke in Hook. fil. Fl. Br. Ind. II, 669. H. Wightiana, Wall. Cat. 7220. H. lurida, Hance in Walp. Ann. II, 690.-Rbeede Hort. Mal. X. t. 46 .

Andaman Islands; Perak.-Digtrib. Tropical and sub-tropical regions.

## 2. Erynaidm, Linn.

Spinescent, glabrous, erect, perennial herbs (the Indian species). Leaves spinous-toothed, entire lobed or dissected. Flowers in simple heads, each bracteolate; bracts whorled, spinulose (in Indian species). Calyx-tube covered with ascending byaline scales; teeth rigid, acute. Petals whitish, narrow, erect, emarginate, scarcely imbricate. Fruit ellipsoid, nearly cylindric : carpels dorsally subcompressed, subconcave on the inner face; primary ridges obtuse not prominent, secondary 0 ; vitter in the primary ridges inconspicuous or 0 , with some very slender scattered in the endocarp: carpophore 0 . Seed semi-terete, dorsally sabcompressed, subconcave on the inner face.-Distrib. Species 100, temperate and tropical ; plentiful in Western Asia.

Ebynaidm fetidim, Linn. Sp. Pl. 232, (in part.) Erect, unbranched below, dichotomously branched above. Leaves radical, oblong-oblan. coolate, coarsely serrate, glabrous, 4 to 9 in . long and not more than 1 in. broad. Bracts of inflorescence all spinous-toothed; the lower deeply lobed; the apper smaller (about 1 in. long), lanceolate, not
lobed, whorled. Flowers in dense cylindric spikes, less than 1 in . long DC. Prodr. IV, 94.

Singapore : King's Collector 333.

## Order LVII. CORNACEA.

Shrubs or trees. Leaves opposite or alternate, more or less coriaceous, usually petiolate, entire, rarely serrate or lobed, often unequal at the base, exstipulate. Flowers usually small, regular, hermaphrodite or unisexual, in axillary or terminal cymes, panicles or capitules. Calyx-tube adherent to the ovary; the limb truncate or 4-5-toothed or lobed, valvate or imbricate, persistent at the apex of the fruit. Petals 4.5, sometimes as many as 20, or none, valvate or imbricate. Stamens inserted with the petals and equal to them in number, rarely 2 or 3 times as many. Ovary inferior, 1-4-celled, crowned by a large fleshy or rarely small disc. Style single, long or short; stigma trancate, capitate or pyramidal, sometimes lobed. Ovules solitary in each cell (rarely 2), pendulous from the apex. Fruit baccate, (the pulp often scanty), usually 1 -celled, sometimes as many as 4 -celled. Seed oblong, pendulous, with copious fleshy albumen; embryo axile minate or often large with flat leafy cotyledons.-Distrib. Species about 90, widely scattered bat most abundant in the temperate regions of the Northern Hemisphere.


## 1. Mastixia, Blume.

Trees, young parts more or less pubescent. Leaves alternate or opposite, petioled, entire. Flowers hermaphrodite, often 2-bracteolate, small, in terminal many-flowered cymose panicles; bracts small or lengthened, pedicels short or 0 , jointed under the flower. Calyx-tube campanulate, pubescent or silky ; limb 5-4-toothed. Petals .5-4, ovate, leathery, valvate, pubescent, silky. Stamens 5-4; anthers cordate-oblong. Ovary 1-celled; disc fleshy; style cylindric, simple; ovale 1, pendulous from one side of the cell very near its summit. Drupe ellipsoid or ovoid, crowned by the calyx-teeth or a scar ; putamen grooved down one face; endocarp protruded inwards down one side. Seed ellipsoid ; albumen fleshy; embryo small, radicle elongate, cotyledons thin, elliptic.-Distrib. Species 18 ; S. India and Malaya:

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1. Mastixil bractrata, Clarke in Hook. fil. Fl. Br. Ind. II, 746. A tree 40 or 50 feet high : young branches slender, glabrous. Leaves alternate, thinly coriaceous, olivaceous-green when dry, abruptly bluntly and shortly acuminate, the base cuneate; both surfaces glabrous, the lower faintly reticulate; main-nerves 5 or 6 pairs, ascending, curved, impressed on the apper but prominent on the lower surface: length 1.75 to 3 in .; breadth $\cdot 75$ to 1.35 in ; petiole $\mathbf{2 5}$ to $\cdot 5 \mathrm{in}$. Cymes terminal, $\cdot 75$ to 1.5 in . long, branching, many-flowered, bracteate; the bracts of two sorts; those at the bases of the branches linear-oblong, blunt, l-nerved, glabrous, longer than the flowers; those at the bases of the flowers mach smaller, lanceolate, puberulons. Flowers a little over $\cdot 1$ in. long. Oalyx funnel-shaped, the tube adpressed-silky outside; the mouth expanded, glabrous, wavy but scarcely distinctly toothed, Corolla hemispheric in bud : petals adnate by their edges, broadly ovate, silky externally. Anthers 5, broadly ovate, cordate at the base; filaments short. Disc large, fleshy, 5-toothed, each tooth with an oblong depression in the middle. Style short, grooved. Fruit unknown.

Malacca: Maingay (K.D.) 710. Perax: Kunstler 6830.
2. Mastixia Scortechinif, King n. sp. A small tree; young branches slender, angled, glabrous. Leaves coriaceous, elliptic-oblong or oblanceolate, much attenuate to the base, the apex shortly and bluntly acuminate; both surfaces glabrous, pale olivaceons when dry, the lower the palest; main-nerves 4 or 5 pairs, ascending, slender ; length 1.75 to $2 \cdot 5 \mathrm{in}$. ; breadth 85 to $\mathbf{1 . 2 5} \mathrm{in}$. ; petiole $\cdot 25$ to $\cdot 5 \mathrm{in}$. Oymes corymbose, terminal, several together, 1.25 to 1.75 in. long, paberulous; the branches short, angled; bracts at the bases of the branches and of the flowers similar, small, triangular, concave, puberulous. Flowers sessile; calyx-tube narrowly campanalate, the mouth with 5 distinct triangular teeth. Corolla depressed-globose in bud. Petals 5, puberulous outside, ovate, acute. Stamens 5 : anthers broadly ovate, cordate at the base: filaments short. Disc fleshy, cushion-like, with 5 short lobes. Ovary 1-celled; style short, grooved, stigma peltate. Fruit unknown. M. bracteata Scortechini MSS. (not of Clarke).

Perak: Scortechini 1971.
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This mach resembles a leaf specimen issued by Koorders and Valeton (No. 914) from Herb. Buitenzorg as M. trichotoma, Bl. I have not seen Blume's type of this species. Bat in his Bijdragen he desoribes its flowers as tetramerous. A Samatra specimen collected by Beccari (P.S. 956) which has ripe frait but no flowers probably belong to this. These fraits are narrowly oblong, tapering to each end, smooth, slightly over an inch in length and aboat 35 in . in diam. (when dry). M. Scortechinii much resembles M. bracteata, Clarke; bat differs in having bold acate calyr-teeth, and only one kind of bracts on the inflorescence.
3. Mastixia aracilis, King n. sp. A small tree; young branches slender, angled, smooth, yellowish. Leaves thinly coriaceous, lanceolate, tapering much to the base and still more to the much acuminate aper ; both surfaces pale olivaceous-green when dry, glabrous; the apper shining, the lower somewhat dull; main-nerves 8 to 14 pairs, ascending, very little curved, faint on both surfaces; length 2.25 to 4.5 in.; breadth 8 to 1.5 in.; petioles varying from 2 to 25 in. Oymes in threes, terminal, about a third or a fourth the length of the leaves, on short angled peduncles, the branches short and crowded at their apices, many-flowered, with a whorl of minate broad bracts at the base of flower pedicels. Flowers about $\cdot 1$ in. long, their pedicels about as long, ovoid. Calyx campanulate; the tabe puberulous, slightly furrowed; the month wavy, indistinctly 5 -toothed. Petals 5, oblong-ovate, adherent by their edges, concave, leathery. Stamens 5 ; anthers oblong, bifid : filaments short. Disc small. Style short, conical : stigma concave. Fruit unknown.

Perak : at an elevation of about 5,000 feet; Wray 1528.
4. Mastixia Maingayi, Clarke in Hook. fil. Fl. Br. Ind. II, 746. A tall tree; young branches, petioles, under surfaces of leaves, branches and bracts of the inflorescence and the outer surfaces of the calyz and petals densely and softly rusty-tomentose. Leaves opposite, coriaceous, elliptic or elliptic-ovate, the apex shortly and abruptly acuminate, the base cuneate; upper surface glabrous, greenish when dry, the midrib and nerves impressed; the tomentum on the lower surface pale brown; main-nerves 6 to 8 pairs, ascending, curved, very prominent on the lower surface and connecting nerves transverse; length 4 to 6 in.; breadth 1.5 to 3 in.; petioles unequal, 75 to 1 in. Cymes branched, on peduncles 1.5 to 2 in . long, terminal, longer than the leaves; the bracts at the bases of the branches small, oblong. Flowers numerous, $\cdot 15$ in. long. Calyx campanulate, deeply 4-lobed; the lobes broadly ovate, obtuse. Petals 4, similar in shape to the sepals but smaller, concave, adnate by their edges. Stamens 4, inserted on a thick fleshy cushion-like circular disc by short filaments; anthers short, broadly ovate, cordate, introrse. Ovary one-celled, crowned by the fleshy disc. Fruit ellipsaid, not compressed, attenuate towards the apex, smooth, 1.2 in . long and ${ }^{6} \mathbf{i n}$. in diam.

- Malacca : Maingay (K.D.) 711. Singapore: T. Anderson, Kurz.

Var. sub-tomentosa, King. The tomentum minute, the panicles somewhat shorter, otherwise as in the typical form. M. Junghuhniana, Clarke not of Miq. in Hook. fil. FI. Br. Ind. II, 746.

Singapore: Ridley 6293, 63:10. Penang: Curtis 1564. Malacca: Maingay (K.D.) 709.
5. Mastixia Clarirana, King n. sp. A tree 40 to 60 feet high; young branches slender, striate, glabrous. Leaves opposite, thinly coriaceous, oblong or oblong-lanceolate, narrowed to the rounded or sub-acute base; the apex rather abruptly and somewhat bluntly acuminate; both surfaces glabrous, the upper pale olivaceous-green, the lower dull, pale brownish when dry; main-nerves 5 to 6 or 7 pairs, ascending, slightly curved, impressed on the upper surface, prominent on the lower; length 3 to 4 in .; breadth 1 to $1 \cdot 35 \mathrm{in}$. ; petiole 3 to $\cdot 35$ in. Cymes terminal, nearly as long as (or sometimes longer than) the leaves, pedunculate, with rather numerous many-flowered angular puberulous branches : bracteoles minute, opposite in pairs, lanceolate or ovate, concave. Flowers • 1 in. long, sessile. Oalyx funnel-shaped, pabescent outside, the month with 4 deep broadly ovate teeth. Corolla depressed-globular in bud. Petals 4, nearly as long as the calyx-teeth, ovate-rotund, concave. Stamens 4: anthers short, ovate-rotund, filaments short. Disc fleshy, 4-lobed. Style short, compressed. Stigma concave. Fruit unknown.

Perak: Scortechini 98, 625, 869; King's Oollector 10861.
Var. macrophylla, King. Leaves ovate-elliptic, shortly acuminate; main nerves 7 pairs: flowers as in the typical form.

Perak: Scortechini 10575.
There are in Herb. Cal. specimens belonging to four distinct species of Mastiva which are too imperfect to be named, and which I have been unable to match with any already described species. These are as follows :-
(a). Two gatherings (Wray 1234 and King's Collector 2907) of a plant collected a tan elevation of from $\mathbf{3 0 0 0}$ to $\mathbf{3 4 0 0}$ feet in Perak which is evidently a Mastixia. In their leaves these resemble M. Maingayi, Clarke, var. sub-tomentosa, King; but the under sarfaces are more glabrous and the main-nerves are rather more oblique than in that plant; the young branches are moreover of a dark colour and almost glabrons, while those of M. Maingayi are pale and rufescently tomentose. These apecimens are in fruit, and none of them has a single flower. The fruit is narrowly ellipsoid, attenaate gradually to the apex, smooth, $1 \cdot 2 \mathrm{in}$. long, and ${ }^{\mathbf{4}} \mathbf{4} \mathrm{in}$. in diam. While the leaves suggest a relationship to M. Maingayi, the remains of the calyxlobes at the aper of the fruit, which are 4 -lobed, suggest perhaps a still closer affinity to the tetramerous species M. Clarkeana, King.
(b). A specimen from Penang (Herb. Curtis 919) which is in frait only.
(c). Specimens of a tetramerous species (in fruit only) from the Andamans with leares otherwise like those of $\boldsymbol{M}$. pentandra, Bl., but obscurely serrate.
(d). Two specimens colleoted by Mr. Wray at an elevation of 6,700 feet in Perat. These are in fruit; their leaves resemble those of M. gracilis, King, bat have the main-nerves fewer but bolder.

## 2. Alanaitm, Lamk.

Shrubs or trees. Leaves alternate, petiolate, entire, persistent. Flowers in axillary fascicles or short cymes, hermaphrodite, hairy, jointed on their pedicels; bracts small or 0. Calyx-tube adnate to the ovary, the limb toothed or trancate. Petals 5 or 6 (rarely more), linear-oblong, valvate, sometimes becoming reflexed. Stamens equal in number to or twice as many as the petals or more; the anthers, long, linear; the filaments short compressed, often hairy. Ovary inferior, 1- to 3 -celled, or 1 -celled at the apex and 2 - to 3 -celled at the base, surmounted by a flesby dise: style very long often clavate; stigma large, capitate or pyramidal ; ovule pendulons. Fruit a berry, often with very scanty pulp, crowned by the slightly enlarged calyx. Seed oblong, compressed; albumen fleshy, sometimes ruminate; cotyledons leafy, flat or crumpled : radicle long or short.-Distrib. About 16 species, in tropical and sub-tropical Asia and Africa, Australia, Polynesia.

| Stamens (in Malayan specimens) more than 6 (nsually 15 to 20) : fruit only skghtly compressed ... | 1. |
| :---: | :---: |
| Stamens E or 6 ; fruit much compressed :- |  |
| Leaves oblique, membranous:- |  |
| Cymes on comparatively long peduncles, much-branch- |  |
| Leaves not oblique, coriacoous :- |  |
| Cymes on short peduncles; flowers 6 to 12, shortly pedicelled and $\cdot 1 \mathrm{in}$. in diam.; leaves glabrous above |  |
| and minutely scaly underneath |  |
| Cymes sessile, 3. to 5 -flowered; flowers 25 in . in diam.; leaves glabrons on both surfaces | 4. Ridlay |
| Cymes on very short pedancles, 4- to 8.flowered: flowers 1 in . in diam. ; leaves tomentose or pubescent |  |
| on lower surface |  |

1. Alangium Lamarciit, Thwaites Enum. Pl. Ceyl. 333 A shrub or small tree. Leaves variable in form and size, those of the Malayan specimens oblong-elliptic, elliptic to elliptic-ovate or ovate-rotund, the base rounded or elightly cordate, the apex with a short blunt apiculus; upper surface glabrous or nearly so, the lower with a few scattered hairs ; main-nerves 4 or 5 pairs, reticulations distinct; length 3 to 6 in.; breadth 2 to 3.5 in.; petiole 2 to 3 in. Flowers in short dense fascicles of 4 to 8 , about 75 in . long; peduncles, pedicels and outside of calyx rusty-tomentose. Calyz cupalar, slightly 6-toothed. Petals lanceolate,
sub-acute, externally hairy, inside glabrous but with a hairy mesial line. Stamens about 18, two opposite each petal and one opposite each sepal, free; filaments slender pilose; anthers linear reaching almost to the apices of the petals. Disc annular, wavy. Style as long as the stamens, 6-grooved; stigma 3-lobed. Fruit ellipsoid, slightly com. pressed, contracted below the disc-bearing month, densely and minately tomentose, $\cdot 75$ to 1 in . long and 65 in . in diam. Dalz. \& Gibs. Fl. Bombay 109 ; Brandis For. Fl. N.-W. India 250 ; Clarke in Hook. fil. Fl. Br. Ind. II, 741 ; Trimen Fl. Ceylon I, 285. A. decapetalum, Lamk. Dict. I, t. 174; DC. Prodr. III, 203; Wall. Cat. 6884; W. \& A. Prodr. 323 ; Wight Ic. t 194 Miq. FI. Ind. Bat. I, Pt. I, 774 ; Kurz For. Fl. I, 543. A. hexapetalum, Lamk. and DC. ll. c. ; Roxb. Hort. Beng. 38, FI. Ind. II, 502 ; Wall. Cat. 6883; W. \& A. Prodr. 326 ; Wight Ill. t. 96. A. sundanum, Miq. Fl. Ind. Bat. I, Pt. I, 774 ; Kurz. l.c. A. tomentosum, Lamk. and DC. ll. c.; Wall. Cat. 6885. A. latifolium, Miq. in Pl. Hohenack. No. 719.-Rheede Hort. Mal. IV, tt. 17, 26.

Preak: Scortechini; King's Collegtor 5590. Singapore; Ridley 6020.-Distrib. Brit. India, Malayan Archipelago, S. China, Philippines, East Africa.

Var. glandulosa, Clarke in Hook. fil. Fl. Br. Ind. II, 742. A large climber. 4. glandulosa, Thw. Enum. Pl. Ceyl. 133; Trimen Fl. Ceyl. II, 286.

Amdaman and Nicobar Islands. Distrib. Ceylon.
2. Alangiom dmiloculare, King. A tree 30 to 60 feet high; young branches minately rusty-pubescent, slender. Leaves membranous, obliquely ovate-lanceolate or oblong-lanceolate, acuminate, the base unequal, one side rounded the other acute, the edges somewhat wavy; upper surface glabrous except the tomentose midrib and pubescent main-nerves; the lower sparsely sub-adpressed pubescent and minutely glandular ; main-nerves 4 to 6 pairs, ascending, the lower on one side much branched, all slightly prominent on both surfaces; the main-veins sub-parallel ; length 8.5 to 5.5 in.; breadth 1.75 to 2.25 in.; petiole 25 to 3 in., villons. Oymes axillary, about onethird of the length of the leaves, pedunculate; the branches spreading, rusty pabescent, many-flowered. Flowers about $\mathbf{4}_{4} \mathrm{in}$. long, with subulate bracteoles and short pedicels. Oalya-tube funnel-shaped, not grooved, the mouth minutely toothed. Petals 5, linear ; anthers linear; filaments short, broad, woolly at the apex. Style cylindric, pubescent; stigma subglobose. Fruit ovate in outline, much tapered to the apex, compressed, faintly ridged when dry, 6 in. long and $\cdot 35 \mathrm{in}$. broad when dry. Marlea unilocularis, Griff. Notul. IV, 679. M. Grifithii, Clarke in Hook. fll. Fl. Br. Ind. II, 742.

Malacia: Griffith (K.D.) 3387 ; Maingay 708. Perak: Wray 2927, 3486 ; Scortechini 1914; King's Oollector-many numbers.
3. Alanguim ebenacedm, Griffith MSS. A tree 30 to 70 feet high; young branches rather slender, smooth, dark-coloured when dry. Leaves coriaceons, oblong, slightly acuminate, the base cuneate or rounded; upper surface glabrous, the lower with numerous minate pale scales; main-nerves 13 to 16 pairs, spreading, very slightly curved, prominent on the lower surface; length 6 to 10 in.; breadth 2.5 to 4 in.; petiole 35 to 8 in . long. Cymes from as long to twice as long as the petioles, on short peduncles, axillary, branched, 6- to 12 -flowered. Flowers sessile, 65 in . long, and only $\cdot 1 \mathrm{in}$. in diam. Calyx cupular slightly 'grooved; the mouth truncate, slightly toothed. Petals 6 (sometimes only 5), linear, minately pubescent externally. Stamens 6 (or 5) ; anthers about as long as the petals, linear; filaments short, compressed, woolly in front. Style cylindric-clavate, shortly hairy; stigma pyramidal. Fruit ovate in outline, compressed, faintly ridged, about 1 in. long and 6 in. wide. Marlea ebenacea, Clarke in Hook. fil. Fl. Br. Ind. I, 742.

Malacca: Griffith (K.D.) 3384. Maingay (K.D.) 706. Perak : Wray 3302; Scortechini 1963; King's Oollector 3252, 5363, 6562, 6626.
4. Alangidm Ridleyi, King. A tree; young branches covered with minute deciduous scales and hairs, rather slender. Leaves coriaceous, elliptic, sometimes slightly obovate, shortly and bluntly acuminate, the base cuneate; both surfaces glabrous; main-nerves 10 pairs spreading, slightly curved upwards, bold and prominent on the lower surface; connecting veins parallel, faint; length 6 to 8 in.; breadth 2.5 to 3.5 in.; petioles 9 to 1.3 in . Oymes as long as or rather shorter than the petioles, sessile, 3 - to 5 -flowered. Flowers nearly 1 in. long, $\cdot 25$ in. in diam, their pedicels ${ }^{2} 2$ to ${ }^{-25}$ in. long, minutely velvetytomentose like the outside of the calyx and petals. Calyx campanulate, slightly furrowed, the mouth wide truncate. Petals 6, thick, grooved and minutely hairy inside, oblong-lanceolate, sab-acute. Stamens somewhat shorter than the petals; anthers narrowly linear, with a tuft of hairs at the base; filaments short flat almost glabrous. Style slender clavate; stigma deeply furrowed, disc 6-angled cushion-like, glabrous. Fruit unknown.

Singapore, in the Botanic Garden Jungle, Ridley 4941.

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5. Alangium nobile, Harms. A tree 60 to 100 feet high : young branches and petioles velvety rusty-tomentose. Leaves coriaceons, elliptic to ovate-elliptic, rarely slightly obovate, entire, the base slightly cordate rarely sub-acate, the apex blunt or very shortly and bluntly acuminate; upper surface almost glabrous, the midrib and nerves minutely tomentose: lower surface densely and minately tomentose or pubescent; main-nerves 8 to 10 pairs, spreading, slightly curved, very bold on the lower surface when dry, the secondary nerves transverse and bold ; length 4.5 to 12 in .; breadth 3 to 6.5 in .; petiole 8 to 1.75 in. Cymes on very short pednncles, 4 - to 8 -flowered, shorter or slightly longer than the petioles. Flowers $\cdot 5$ or 6 in . long and $\cdot 1 \mathrm{in}$. in diam.; their pedicels very short and thick. Calyx narrowly campanulate; deeply 6 -grooved; the mouth with 6 deep lanceolate spreading teeth. Petals thick, narrowly oblong, sub-acute, tomentose, especially outside, sulv-glabrous inside. Stamens 6, shorter than the petals, filaments short villous inside; anthers linear. Style cylindric, adpressed villous; stigmas linear. Disc glabrous, deeply 6-lobed. Fruit, compressed, ridged, ellipsoid in outline, slightly contracted at both ends, tomentose, about 1 in. long and 65 in. broad. Marlea nobilis, Clarke in Hook. fil. Fl. Br. Ind. II, 743.

Malacca: Griffith (K.D.) 3384, 3385. Maingay (K.D.); 705, 707. Prrak: King's Collector 6047, 6116, 10892. Singapore: Maingay; Ridley 5077.

Beccari collected in Borneo speoimens (Herb. Beoc. P.B. 8611) of a specien closely allied to this, the flowers of which are however longer ( 85 in .) with the calyx-tabe mach less prominently grooved.

## 3. Nyssa, Linu.

Trees (or shrubs), innovations silky. Leaves alternate, petioled, entire. Flowers capitate, on axillary peduncles, polygamo-diocious, 1 or few females and many males in a head, each Sad-bracteolate, or the males irregularly coalescing. Male : calyx short, cap-shaped, 5-7toothed; petals 5-7, imbricate, hairy; stamens usually 10 (in the Indian species) around a large circular disc; radiment of the ovary 0 or small. Female: calyx-tube campanulate; limb 5-toothed; petals 0 or minute ; rudimentary stamens none; ovary l-celled; style cylindric, simple or shortly 2 -fid; ovule solitary, pendulous. Berry oblong or ovoid. Albumen copious; cotyledons flat, leafy, nearly as broad as the seeds.-Distrib. Species 5-6, in N. America, and from Sikkim to Java.

Nrssa sessiliflora, Hook. fil. in Gen. Plantar. I, 952. A tree. Leaves sub-coriaceons, oblanceolate or elliptic-lanceolate tapering to each end, length 4 to 8 in.; breadth 1.5 to 2.5 in. ; petiole 6 to 8 in .; both surfaces minutely panctate; main-nerves 6 to 8 pairs, spreading.

Peduncles puberulous, 5 to 1 in. long. Ripe fruit oblong-ovoid, smooth, crowned by the small circular calyx, 6 to $\cdot 75 \mathrm{in}$. long when dry. Clarke in Hook. fil. Fl. Br. Ind. II, 747. Daphniphyllopsis capitata, Kurz For. Fl. I, 240 ; and in Journ. As. Soc. 1875, Pt. II, 201, with fig. Tlex daphniphylloides, Kurz in Journ. As. Soc 1870, Pt. 1I, 72. Agathisanthes javanica, Blume Bijd. 645 ; Miq. Fl. Ind. Bat. I. Pt. I. 839. Ceratostachya arborea, Blume Bijd. 644 ; Miq. l.c.

Perak : at elevat. of 3,400 feet, Wray.-Distrib. Sumatra, Forbes 2880 : Beccari (P.S.) 17, 335 ; Java; Trop. Eastern Himalaya; Khasia Hills.
IV.-Noviciæ Indicæ XIX. A new Indian Dendrobinm.-By D. Prain. [Received February 26th ; Read March 6th, 1902.]
Among the Orchids that flowered in the Royal Botanic Garden, Calcutta, during 1901, one of the most beartiful was a Dendrobium that differs from any of the Indian species hitherto described. To be assured that the plant is in reality a previously unknown species a drawing from life has been compared with the material and drawings preserved in the great national collection at Kew. The following description of the plant is now therefore offered.

Dendrobiem reaidm Prain; caulibus erectis param compressis; foliis oblongo-lanceolatis versus apicem oblique retusum vel incisum angustatis; floribus 2.3 pedunculo brevi subracemosis, pedunculis e canlis aphylli nodis orientibus; sepalis lineari-oblongis obtusis roseo-purpureis lineis rubro-parpureis notatis; petulis ellipticis roseo-parpareis lineis rubro-purpureis reticulatis; mento brevi lato ; labio lituiformi aliquantum angustato, limbo roseo-purpureo lineis rubro-parpureis reticulato, glabro; tubo pallide flavo.

Hab. In provinciis Hindustaniæ inferioribus.
Stems 8.12 cm. long, 1.3 cm . thick; nodes 3 cm . apart. Leaves $8-40 \mathrm{~cm}$. long, 1.5 cm . wide, tips distinctly obliquely notched. Peduncles 2 cm . and pedicels 4 cm . long; bracteoles adpressed, lanceolate, under 1 cm. long. Flowers 8 cm . across, magenta with darker lines and transverse markings; mentum 1.25 cm . long; sepals 1 cm . and petals 2.75 cm . wide ; lip 4 cm . long.

[^133]V.-On some cases of Abrupt Variation in Indian Birds.-By F. Finn, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

[ Receeived Febraary 260h; Read March 5th, 1902.]

1. Albinistic fariation in Dissemurus paradiseus, Afthiopsar fuscus, Acridotheres tristis, AND Pavoncella pugnax.

The albinistic and other varieties which so frequently occur everywhere among birds are too frequently passed over by ornithologists as mere "freaks" unworthy of careful consideration; yet every now and then occurs an instance of sudden and abrupt variation, of a type which when found constantly is unhesitatingly allowed the rank of $n$ species.

It is true that the majority of albinistic specimens belong to a form which nppears no more capable of maintaining itself in nature than is the perfect pink-eyed albino ; at any rate, just as no pink-eyed species of bird exists in the wild state, so we also find that no species is splashed, pied, or mottled in the irregalar manner characteristic of many domestic birds and of the usual pied variety which occurs in wild ones.

Such a specimen is the pied Bhimraj (Dissemurus paradiseus) figured on Plate I., in contrast with the type of the species named by me (J.A.S.B. LXVIII, Pt. II. p. 119) Dissemurus atcocki; I have been indaced to refigure the latter in order to show that it is no mere albinism. The pied bird had the base of the bill partly whitish, and even some of the rictal bristles white; it is the only pied specimen of this species I have ever seen, and I have examined many, both alive and dead.

A more interesting and much rarer type of variety, however, is that in which the markings are similar to those occurring in natural species. Such an one is the specimen of the Jungle Mynah (Ethiopsar fuscus) figured on plate II ; and catalogued by Anderson (Cat. Birds, Mas. As. Soc. interleaved Museam copy) as " 577 , one, albino, Moulmein, Major Tickell."* In this bird the general plumage is white, with the quills, both primary and secondary, and the tail feathers normally coloured. The greater coverts are partly white and partly normal, and thus I am inclined to suspect that this is n similar case to one which I have recently observed in the Common Mynah (Acridotheres tristis). In this bird the plumage was originally all white, with the eyes, bill and feet normal. Mr. Rutledge kept it for some time, and it began to change

[^134]into the normal plumage, remaining for some time white with normal wings and tail, like the present bird. It is now in a very peculiar condition, being only scantily covered with feathers, some white and some normal. It has for a companion a normally-coloured bird, which, as I can personally testify, was once white, though not sa completely so.

Another case of albinism of unusual interest is farnished by the white-hended form of the Ruff (Pasoncella pugnax), which is apparontly not uncommon, at all events in Eastern speeimens of this bird. Though the male is so well known to be exceedingly variable when in summer plumage, it is as constant in colour during the winter as other birds. Yet every now and then there appears a specimen in winter plumage with the head and neck more or less white, varying from complete whiteness of these parts to merely a white nape and unusually white fore-neck. All of the birds thus characterized are adults, as is shown by their orange or flesh-coloured feet (these being olive in the young) ; and the females or Reeves are thus affested as well as the Ruffs, but far more rarely and to a less extent.

In the stuffed pair figured in Plate III., which are part of the Asiatic Society's collection, and were procured by Blyth during the years 1842-1846, the whole head and neck are white with the exception of the crown, which is mostly normal, and of some seattored brown feathers on the neck. They are nambered 1601B (the female) and 1601K (the male).

In a skin ( 2340 in the Museum Register) procured on in the Calcutta Bazaar, February 19th, 1875 evidently a male from the dimencions, the whole head, neck and upper breast are white, there are a few white feathers on the upper back, and the coverts along the fore-arm and carpus are partly white. This is figured in the plate, together with another male (Reg. No. 24005) obtained this winter (January 30th, 1902), which is even whiter, having more white feathers on the brok aad fore-arm, and one tertiary white. In this the feet and base of bill were flesh-eoloured; the ejes normal.

Six more specimens of the variation have been obtained by me in the Calcutta Bazaar during the present winter, all being adult males. One (Reg. No. 24006) is whiter than either of those figured, having the upper back largely white, as well as all the head and breast, but no abnormal amount on the wings.

The second whitest specimen, (Reg. No. 24007) procured on February 2nd, has a white head and neok, with normally coloured feathers round the face; it had the feot and base of bill orange.

Of the others, one, procured on February 16th (Reg. No. 24018) adosely resembles Blyth's male figured ; another, procured on February

3rd (Reg. No. 24024) is also similar, but has the back of the neck normal ; one, procured on Febraary 22nd (Reg. No. 24019) has the head normal and the neck white all round ; and a rather small specimen, obtained on February 11th (Reg. No. 24008) has the neck all white in front and the head and back of the neck merely mottled with white.

This nearly approaches the normal form, in which the fore-neck shows a varying amount of white; but amy white on the crown or nape may fairly be called an abrupt variation.

I have not this year been able to procure any specimens of this variety in good enough condition to keep alive, but early last year I was more fortunate, and got two pairs, most of which are still living in the Alipore Zoological Garden. Both males much resemble the mounted male figared, but one has some tertiaries white in both wings at the present time, though when obtained it only showed white in one wing. The one female which remains alive merely has the neck white all round.

Daring last winter I remember seeing one male largely white-necked, which was dead, and I therefore did not buy it, not then attaching so much importance to the variety, as I had seen so few.

It is only during the last two winters that $I$ have taken special notice of this species, but I could not very well have overlooked the conspicuons white-headed form had it ocourred commonly before; and it is to be noted that these last two winters have been noteworthy for unusually numerous occurrences of the Bronze-capped Teal (Eirnetta falcata) in the Bazaar, a bird nsually decidedly rare in India. It is possible, therefore, that these white-headed Ruffs are an Eastern strain, which, like the duck above-mentioned, only occasionally migrate in a westerly direction. It will be noticed also that during the years 1842-46 that Blyth procured his specimens, he also got the Clucking Teal (Nettium formosum) and Eastern White-eyed Pochąd (Nyroca baeri), also eastern irregular visitants to our empire.

As out of so many specimens of this variety seen by me only three were females, we may conclude that the variation is largely limited to the male, Reeves here at all events being much more numerous than Ruffs. I have above shown that it ouly occurs in old birds, and thas I am inclined to look on it as a species of senile albinism analogous to what oecurs in black varieties of the domestic fowl and duck. I have also soen an agsiag green Conury turn largely yellew about the hoad.

At the anme time, these white-marted individuals are net at all wanting in vigour ; the two white-heoded maled at the Caleutta Boological Gardens have sarvived while all the normally coloured Rafts procured that winter (1900-01) have died, though kept nader similar
conditions; and one now, although crippled to a great extent in one wing, is master of most if not all the normally coloured Ruffs again placed with him in another aviary. Yet a Reeve, which was at first his sole companion of the species, seems to have deserted him for a normally coloured bird.

The only-slightly-mottled specimen alluded to above also, though undersized and slightly lame, often attacked and bent a larger, though younger, normally-coloured male confined with it, which was sound.

In conclusion, it seems to me, that whether the unusual number of this variety which have appeared of late is due to an abnormal wescerly migration or not, it seems to be a well-marked and definable form, liable to recur again and again, and very probably hereditary; thus it would be likely to increase, anless checked by natural or sexual selection.

The Ruff could probably afford to ran a greater risk than most birds, as it is evidently $\Omega$ vigorous species, more hardy of constitution, courageous, and indiscriminate in its diet than most Limicola; this is shown by its readiness to eat vegetable as well as animal food, its habit of constantly firhtins, in which both sexes indulge as well in winter as in summer, and its power of recovering from injuries and enduring so unuatural a climate as that of Bengal.

As it is desirable to distinguish a well-marked and recurrent aberration like this by a sulspecific name, I venture to suggest that it be known as Pavoncella pragnax luacoprora.*
II. Note on the Gicllus pseudhermaphroditus of Blyth.

With the aftention that is now being paid to the variation of animals under domestication, it may not be mal à propos to recall to the memory of naturalists the curions variety of the fowl described many years ago, though doubifully, by Blyth, under the name of Gullus pseudhernaphorlitus. Thie specimen is alluded to in his catalogue of the birds in the collection of the Asiatic Society under No. 1463 as "P. Singular individnal (? ) variety, from Mergui, described as G. pseudhernaphroditıs, J.A.S.X, 925. Rev. J. Barbe (1841)."

The specimen still exists, and, unlike too many of Blyth's birds, has suffered little deterioration, and hence I have thought it advisable to give $n$ figure of it here (Plate II), as I have never seen or heard of a similar variation myself. I also reproduce below the original description from page 92: of the tenth volume of our Society's Journal, since this is not very readily accessible now-n-dags:-

[^135]" Gallus pseudhermaphroditus, Nobis, N.S. $P$ ——A very singular bird, which, if I was not positively assured, was a male in normal plumage, I should have suspected to be either an individual of mingled sex, or possibly an aged male; for that it is not a female in partially masculine attire is evident from the size of its comb and wattles, and especially of its spurs. Size of an English game cock, or larger than the male $G$. Bankivus, having much stouter legs, the spurs of which are $1 \frac{1}{2}$ inches long; comb and wattles as in the $G$. Bankivus, but the former more entire towards the front (possibly a mere individual diversity) : the tail is that of a cock bird of this genus, but scarcely more developed than in the Euplocomi (as Eu. albocristatus); in other respects the plamage is altogether that of an ordinary brown hen, having a redder cast than in the female G. Bankivus, especially on the wings; tail coloured as in an ordinary male. Length about 2 feet, of which the middle tail feathers occupy 10 inches, wing from bend 9 inches, and tarse behind, to back toe, $2 \frac{z}{4}$ inches. I am informed that this species is never clad in the usual bright plamage of other male birds of its genus."

The specimen now only shows one long central tail-feather or " sickle," the other having apparently been broken, since there is a large broken feather on the opposite side of the tail. From the look of the comb and the coarse legs with abnormally enlarged anterior scales, there can be little doubt that the bird was really a domestic one; and if its peculiarities were as a matter of fact racial, it would seem that there has existed in the east, a breed of which the cocks bore more or less feminine plumage, comparable to the "Henny" game still existing in England; which, however, are altogether hen-feathered.

I have never seen any hen-feathered cocks among the very variable domestic poultry which occupy the coops in the Calcutta Bazaar; and I should like here to draw attention to the fact that the operation of caponizing, so frequently performed in India, results in more finelydeveloped male plumage in the cockerels operated on, although their combs and wattles do not develop fully, but remain like those of hens.
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plate 1.


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PLATE II.


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PLATE III.


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# NOTE ON THE PUBLICATIONS 

OF THE

## ASIATIC SOCTETY.

The Proceedings of the Asiatic Society are issued ten times a year as soon as possible after the General Meetings which are held on the first Wednesday in every month in the year except September and October ; they contain an account of the meeting with some of the shorter and less important papers read at it, while only titles or short resumés of the longer papers, which are subsequently published in the Journal, are given.

The Journal consists of three entirely distinct and separate volumes : Part I, containing papers relating to Philology, Antiquities, etc.; Part II, containing papers relating to Physical Science; and Part III devoted to Anthropology, Ethnology, etc.

Each Part is issued in four or five numbers, and the whole forms three complete volumes corresponding to the year of publication,

The Journul of the Asiatic Society was commenced in the year 1832, previous to which the papers read before the Society were published in a quarto periodical, entitled Asiatic Researches, of which twenty volumes were issued between the years 1788 and 1839 ,

The Journal was published regularly, one volume corresponding to each year from 1832 to 1864 ; in that year the division into two parts above-mentioned was made, and since that date two volumes have been issued regularly every year From 1894 an additional volume, Part III, has been issued.

The Proceedings up to the year 1864, were bound up with the Sournal, but since that date have been separately issued every year.

The following is a list of the Asiatic Society's publications relating to Physical Science, still in print, which can be obtained at the Society's House, No. 57, Park Street, Calcutta, or from the Society's Agents in London, Messrs. Luzac \& Co., 46, Great Russell Street, W. C.; and from Mr, Otto Harrassowitz, Leipzig, Germany.

Asiatic Researches. Vols. VII, Vols. XI and XVII, and Vols. XIX and XX @ $10 /$ each Rs. 50 C
Proceredinas of the Asiatic Society from 1865 to 1869 (incl.) (@) /6/ per No. ; and from 1870 to date @ /8/ per No.
Joursal. of the Asiatic Society for 1843 (12), 1844 (12), 1845
(12), 1846 (5), 1847 (12), 1848 (12), 1850 (7), 1851 (7), 1857
$(6), 1858(5), 1861(4), 1862(5), 1864(5), 1866(7), 1867(6){ }_{r}$
$1868(6), 1869(8), 1870(8), 1871(7), 1872(8), 1873(8) r$
$1874(8), 1875(7), 1876(7), 1877(8), 1878(8), 1879(7)$,
$1880(8), 1881(7), 1882(6), 1883(5), 1884(6), 1885(6)_{r}$
$1886(8), 1887(7), 1888(7), 1889(10), 1890(9$ and 2 Sup-
plts. $), 1891(7), 1892(7$ and Supplt.), $1893(11), 1894$
$(8), 1895(7), 1896(8), 1897(8), 1898(8), 1899(7), 1900$
(7), @ $1 / 8$ per No, to Members and @ 2l per No. to Non-
Members
N. B.-The figures enclosed in brackets give the number of Nos. in euch Volume.

Centenary Review of the Researches of the Society from 1784 to 1883
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Theobald's Catalogue of Reptiles in the Museum of the Asiatic Society (Extra No., J. A. S. B., 1868)
Catalogue of the Mammals and Birds of Burmah, by E. Blyth (Extra No., J. A. S. B., 1875)
Catalogue of Fossil Vertebrata ...
Catalogue of the Library of the Asiatic Society, Bengal ... 38
Moore and Hewitson's Descriptions of New Indian Lepidoptera, Parts I-1II, with 8 coloured Plates, 4to. @ 6/each ... $18 \quad 0$

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OF THE

## ASIATIC SOCIETY OF BENGAL,

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Vol. LXXI. Part II.-NATURAL SCIENCE.

## ERRATA.

page 92 head line and line 8 from top for $K$. read $R$.
" 106 line 6 from bottom for " overleaf " read " opposite."
" 118 line 14 for "page 106 " read " page 107."
", 119 line 1 for 102 read 103.
mexausments given by Dr. Sharpe in the British Museum Catalogae of Birds. The wing, however, is only about $6 \cdot 1$ inches, and althongh its feathers are much abraded, it could never have been more than about $6 \frac{1}{2}$ inches long, whereas Dr. Sharpe gives $7 \cdot 3$ inches as the length of wing for a bird measuring only a foot and hnlf an inch in length, i.e.; about the size of this one. The tail of the Mauritius birds is $2 \cdot 5$ inches in length, whereas the British Museum specimen alluded to has the tail $2 \cdot 9$.

The most remarkable point about the present bird however is its powerful bill and feet. The beak, with frontal shield, measures $1 \cdot 65$ inches ; in thicknoss, at the proximal end of the nostril, it is $\cdot 45$ of an inch, whereas the biggest-billed Old World bird in the Indian Maneum J. I. 12


## JOURNAL

OF THE

# ASIATIC SOCIETY OF BENGAL, 

Vol. LXXI. Part II. - NATURAL SCIENCE.
No. II.-1902.
VI.-On specimens of two Mauritian Birds in the collection of the Asiatic Society.-By F. Finn, B.A. F Z.S., Deputy Superintendent of the Indian Museum.
[ Received March 26th; Read April 2nd, 1902.]
I. On a specimen of the Moorien from Mauritius.

In Blyth's catalogne of the Birds in the Museum of the Asiatio Society, p. 286, one of the specimens of Gallinula chloropus is noted as follows:-G. Var. P From the Mauritins. Presented by Willis Earle, Esq.

This specimen is still in existence, but as it is in poor condition, having lost many feathers, and the remainder being loose in places, I have deemed it well to have it figured, as it presents certain points of interest which make its appearance worthy of record. (See Plate IV).

Being a stuffed specimen it is not easy to measure exactly with regard to length, but with a tape $I$ make it out to be 1 ft . $\frac{8}{4}$ inches from tip of bill to end of tail, a fair average length judging from the measurements given by Dr. Sharpe in the British Museum Catalogue of Birds. The wing, however, is only about 6.1 inches, and althongh its feathers are much abraded, it could never have been more than about $6 \frac{1}{2}$ inches long, whereas Dr. Sharpe gives $7 \cdot 3$ inches as the length of wing for a bird measuring only a foot and half an inch in length, i.e.; about the size of this one. The tail of the Mauritius birds is 2.5 inches in length, whereas the British Museum specimen alluded to has the tail 2.9.

The most remarkable point about the present bird however is its powerful bill and feet. The beak, with frontal shield, measures 1.65 inches; in thickness, at the proximal end of the nostril, it is 45 of an inch, whereas the biggest-billed Old World bird in the Indian Maseum J. II. 12

Collection, a Kashmir specimen, has a bill and frontal shield of 1.6 inches, with the depth of bill measured in the same place, of 4 only. The wing of this bird measures 6.3.

The left shank of the Mauritius bird, measured from the upper end of the tarso-metatarse to the setting-on of the front-toes, is 2.2 inches, as against the 1.8 of the Kashmir bird; but the thickness of the shank across the front, midway down its length, is 2 in the former as against 15 in the latter. I have not measured the shanks from front to back, so as to avoid any error from the insertion of wires into the legs of the Asiatic Society's specimen. The middle toe and claw of the Mauritius bird only exceed those of the Kashmir specimen by about $\cdot 1$ of an inch, so that in the insular specimen the toes have decreased in relative length. Another remarkable point aboat the Mauritius bird is that it has the frontal shield, which is very large, trancate behind even more markedly than in the American Gallinula galeata; that is to say, judging from our two specimens of the latter, which show so mach variation in this character as to suggest that those authors who only allow the New World birds the rank of a subspecies are correct. The differences in the froutal shields will be easily be apparent from the full-sized figures given in Plate V. It will be seen that the Mauritius bird has as long a bill as the Lake St. Clair example of G. galeata, whose wing measures $7 \cdot 4$ inches.

To sum up, the present specimen of $G$. chloropus from Mauritins, when compared with normal specimens, exhibits an increase of the size of the bill and feet, and a shortening of the wings, tail, and toes, which show that it has progressed some way in the direction of the flightless forms of Gallinula separated in the British Maseum Catalogne as Porphyriornis. In colouration it does not differ from G. chloropus; it is true that the under-tail coverts are cream-colour instead of white, but this is probably due to the age of the specimen. Professor A. Newton's G. pyrrhorhoa, described from Mauritius, has these ochreous under-tailcoverts; but the tinge has been shown by Dr. R. B. Sharpe (Cat. Birds, B.M., Vol. XIII, p. 173), to exist in English specimens, and one in the Indian Museam collected by Colonel C. T. Bingham in the Shan States also exhibits it. Another character given by Professor Newton is the yellowness of the legs of G. pyrrhorhoa; but from an old specimen like the present one it is quite impossible now to say of what colour the legs originally were.

It seems to me, therefore, that the Moorhens of Marritius need re-examination; if they normally present the stontness of build and brevity of wing and tail characteristic of the present specimen, they certainly constitute a recognizable race, which might well bear the name
bestowed by Professor Newton, since that ornithologist expressly mentions a large frontal shield as one of the characteristics of G. pyrrhorhoa.

## II. On two specimens of a Tropic-bird from Madritios.

In Blyth's Catalogue, under the number 1736, we find the entry, "A.B., Adults, from the Mauritius. Willis Earle, Hsq.," in reference to two specimens of a Y'ropic-bird which he there designates Ph. candidus. This is the P. lepturus of the British Museum Catalogne, Vol. XXVI, p. 454.

I find, however, that while specimen A of Blyth's Catalogue agrees with the British Museum Catalogne description in most particulars, specimen B is distinct, and resembles Phaethon americanus in having shorter white tips to the first four primarios, and in having the outer web of the fifth entirely black to within a short distance of the extremity. Both birds also have evidently had the bill almost entirely yellow, unlike that of $P$. lepturus as described. (See figures below).



Except for this bill and for the slightly shorter white tips to the quills, 1736A is true P. lepturus, which, from the British Museum Catalogue list of specimens, occurs at Mauritius, and it may therefore, I think, be referred to that species, although not entirely agreeing therewith.

The other specimen, $B$, however, is not so nearly in agreement with P. americanus, for while it has a nearly completely yellow bill, the white tips of the first four primaries are never so little as half an inch long, and the third quill is not nearly all black, but marked like the rest, although the fifth has a good deal of black along the outer web as in $P$. americanus.

Thus these two specimens do not agree with the description of any species of Phaethon; and yet they differ far too much from each other to be referred to a separate form. I am therefore disposed to think that they are both Phaëthon lepturus; and this must be a variable species, since it can produce, in the Old World, one individuat showing a considerable approximation to the American $P$. americanus, in the

## 1902.] F. Finn-Hybrids between the Guinea-fowl and Cammon fowl. 91

colouration of the bill and quills; and another which approaches the American form in the colouration of the bill only. It is, of course, just conceivable that a specimen of $P$. americants strayed at one time to Mauritins and interbred with the local birds ; but the distribution of the form renders this anlikely, and I should be rather inclined to put down the peculiarities of these birds to simple variation.
VII.—On hybrids between the Guinea-fowl and Common fowl.-By F. Finn, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.
[ Reoeived March 26th; Read April 2nd, 1902.]
A good account of this cross, which is not by any means common, has been given by Dr. Juan Vilaro, in the Bulletin of the American Museam of Natural History, Vol. IX. (1897), p. 225.

The hybrid, as represented in the plates accompanying Dr. Vilaro's papers has a very characteristic appearance, its general form and carriage being intermediate between the Fowl and Guinea-fowl, and its head devoid of the comb and gular wattles of the one and rictal wattles and casque of the other. I was thus easily enabled to recognize as Guinea-fowl hybrids three curious fowls received by the. Calcutta Zoological Garden from Mr. A. T. Blewitt, of Kalka, early in 1899.

They had been caught in a wild state, but this is not surprising as the tame-bred hybrid between the domestic Muscovy Duck and Common Duck is known to become feral at times.

These birds all resembled Common fowls in colour, the largest being splashed with white and red-brown, and the other two (one of which is figured on Plate VI) being red-brown with black necks and fine black pencilling on many of the feathers. The characteristic spotting of the Guinea-fowl was altogether absent. All had bare fleshcoloured faces, and a pendulous dewlap, most marked in the large whitespotted specimen. There was no comb, although a bare median area at the base of the bill above seemed to indicate a rudiment; and the rictal wattles of the Guinea-fowl were just indicated at the gape ; of the horn of the Guinea fowl and gular wattles of the fowl there was no trace at all. The specimen figured was a male, the testes being about the size of haricot beans ; of the others, which have also died and been transferred to the Museum, the brown specimen has been preserved entire in spirits, and the other made into a skeleton. The taxidermist who prepared it states that it was a female, which I should certainly not have suspected from seeing the three birds alive. All were larger than a Guinea-fowl or ordinary Indian fowl, and had partioularly atrong
bills and legs, the latter of a black colour. Their behaviour was quiet; but they were never placed with other birds, so I do not know how they would have treated these. Like Dr. Vilaro's specimens, they seemed to be very sensible to heat, panting more than other birds, and their only cry was a piping, chirping sound, very different from the harsh note of the birds which came under Dr. Vilaro's observation.
VIII.-Notes on Animals kept in the Alipore Zoological Garden. No. I.By Rai K. B. Sanyal Bahadur, Superintendent of the Garden.
[Received March 26th; Read April 2nd, 1902.]
Observations on the habits of Orang Outang in captivity.
Orang Outang thinks and acts with a view to accomplishing an object. An Orang Outang and a Proboscis Monkey (Semnopithecus [Nasalis] larvatus), lived in two contiguous arges separated by iron gran tings. Although of different temperaments-the Orang Outang lively, vivacious and prone to mischief, and the monkey phlegmatic and indo-lent-they were best of friends; and enjoyed each other's company as much as the intervening partition would allow: The Orang's friendship for the monkey was, however, not altogether disinterested. They were usually fed about the same time upon the same kind of food, and as the Orang Outang was blessed with a keen appetite, he had no scruple to help himself, to as much of his friend's share as chance brought within his reach. One morning he was found making desperate attempts to annex the remnants of the monkey's breakfast by repeatedly thrusting his arms through the gratings. But all his tricks and trouble availed him not, as the light tin vessel containing the tempting morsel lay beyond the reach of his long arms. Having failed in his attempt to get at the food, he sat still for a few seconds as if to collect his thoughts, and to devise means for the accomplishment of his object, and presently made a rush into his sleeping apartment, fetched a quantity of straw, and twisted it into a sort of rough rope, and with it began striking the tin vessel containing the food, and ultimately succeeded in bringing it within the reach of his arms.

Orang Outang imitating human action. It is well known that in their wild state Orang Ontangs indulge in the habit of building platforms of twigs and branches on large trees, Given opportunities they would do the same in captivity also.

The Orang Ontang whose habits are here chronicled, was a remarkably docile animal, and was, therefore, allowed to enjoy as much free-
dom as it was deemed safe. The first use that he made of his liberty was to build himself a platform on one of the trees that stood close to his habitation. One cloudy Angust morning, while seated on his arboreal perch, he noticed some early visitors open out their umbrellas to protect themselves from a passing shower of rain, and straightway he broke off a leafy branch and held it umbrella-fashion over his own head in immitation of the human folks!

It was amusing to see him following visitors who happened to have anything tied in their cloth, or who carried a bundle on their head. Quick to observe, he had noticed some of them untying a bandle to give him a feed, and by a simple process of ratiocination he came to connect all bundles with food and feeding!

Phybiological boonomy of animals afpected by accidrnts.
A Large White Egret (Herodias alba) having-lived happily in the Garden for many years managed to break one of its legs by sustaining a fracture of its left tarsus. The fracture was set up and the wound healed nicely, butthe shock of the accident must have materially affected the physiological economy of the bird's system; as during the next two years it did not assume the full breeding plamage, or the bright green of the facial skin which it usually did in summer and which was such a characteristic feature of the bird Although in about three years after the accident it began putting on the summer dress again, there was a marked deterioration in the character of the plumes and the colour of the facial skin. This might have been due to old age also.
> IX. -On the Variation of the Flower of Ranunculas arvensis.-By I. H. Burkill, M.A.

There is a regular sequence of organs in the Phanerogamic flower, sepals, petals; stamens, carpels,-which is never departed from, and which may be said to be due to the passing of moods over the axis, -a mood for the formation of sepals, a mood for the formation of petals, a mood for the formation of stamens, and a mood for the formation of carpels. Each mood is preclusive in its time of the others and definite; and the flower axis rans through them as a matter of course.

In the flower, mood follows mood very closely; yet the tendency so widely manifest, for the floral organs to be formed in whorls is a separating of the moods each from its neighbours by concentrating on itself.

The symmetry of the flower depends firstly on this regular sequence and separation of the moods; it depends secondly on the way in .which successive rings of organs,-sepals, petals, etc.-are commonly isomerous.

I have been driven to a conviction that the separation of these moods has not yet obtained the attention it deserves. We need to know much about them; chiefly as to the conditions which lead to their separation : for the whole Phanerogamic subkingdom shows ns that the more specialised a flower is the more distinctly nre its moods separated; and the isolation of the moods is undeniably of fir-reaching importance in the growth of perfect floral symmetry.

It may be said that there are questions of four kinds to be asked regarding the moods, (i) why the moods exist, (ii) as to the reason of their sequence, (iii) as to the requirements which have made them as distinct as they are, and (iv) as to the canses leading to a determination of the number of lateral organs which belong to each of them severally.

They are questions in organography, as Goebel terms the cansative morphology of the new school, in order to distinguish it from the descriptive morphology which is subservient to the systematist. The fonndation of organography is in the Darwinian theory of evolution.

The present paper concerns questions of the fourth kind; but in preface I wish to make some brief remarks regarding the second and the third kind of question. Regarding the second: the sepals are formed outermost to protect; the petals are formed second to attract; and we have these reasons for the position of both; but why the mood for the formation of stamens should invariably precede that for the formation of carpels is a question which must remain a subject for speculation almost as long as the origin of the Phanerogams is unsolved. This only can be said, that somehow the formation of female organs puts a period to the forward growth of the axis, whereas the forming stamens have divided with the axis the available nutrition passing beyond the growing sepals and petals. This perhaps means some advantage in the matter of food to one or the other. I do not say which : but it is to be confessed that there are strong reasons for assuming that, ip nature generally, conditions of good nourishment tend more to the farmation of female than of male organs : for experiments on the lower plantsAlgø, Fungi and Vascular Cryptogams-have shown that there is a tendency for female reproductive organs to be formed when the plants are well nourished, male organs when they are starved : and extensive observations on animals indicate the same thing. A condition so widely true may well be true also of the Phanerogams; but at the present time can we produce any convincing evidence that the developing bud
gets better nourished as it progresses from the formation of sterile protective or showy organs, through male organs to fomale organs, or that the female organs appropriate two shares of nutriment because there is by them that which might belong to an elongating axis?

Regarding the third kind of question, let it be remarked that intermediate organs are apt to be useless organs and that therefore we see one reason for the distinctness of the moods; secondly, it is to be stated that if we let ourselves believe that sepals, petals, stamens and carpels are formed under conditions of nutrition which change as the axis gives rise to them, we still cannot easily assume that the conditions of nourishment change as abruptly as do the moods.

Lastly, with regard to the fourth kind of question we are bound to suppose that a certain relationship between the number of the stamens and carpels exists which is at least not prejudicial to the maintenance of the race; i.e., that enough stamens must be produced to enable $n$ safficiency of seed to be set by the carpels; and it is reasonable to believe that the petals and the sepals are required by their biological functions to bear a more or less definite proportion to the organs they protect or make conspicuous: bat it will be acknowledged that this supposition implies a force too loose in its action to produce isomerism as we see it, too loose to regulate the not uncommon orderly change of a normally tetramerous flower to pentamerism, or of a normally pentamerous flower to hexamerism, and impossible to accept as the sole factor when we glance at the general absence of intermediate conditions between isostemony and diplostemony. The view to which Schwendener's and Karl Schumann's work leads, can carry us a step beyond this supposition; for, as they have shown, we have strong reasons for believing that the symmetry of a flower is largely influenced by the mutual pressure in the bud of part on part, and that this pressure to a considerable degree compels new organs to appear in the niches between those recently formed. Thus do the sepals-the outermost members of the flower-as it were set the step and, e.g., if they are in rings of five (I use the word ring because I require a term less definite than whorl) the petalsand stamens frequently follow in fives.

The carpels too may follow the step, but their position is unique in that the axis is no longer growing forward when they form and new conditions of pressure, as perhaps of nutrition, are possibly existing.

The individual and the race are always in slight antagonism : the race asks for reproduction, and some writers such as Axell have thought that they could see in the flower the most perfect adaptation or sabservience to reproduction. Bat our flower, above conceived, J. 1I. 13
asserts the individual distinctly if we allow the possible formation of sexual organs by order according to natrition available, and the fixing of the number by the need of packing. I shall show later, at least in Ranunculus arvensis, another assertion of the individual-a setting aside of the claims of the race by allowing a kind of right of primogeniture to the moods in the flower. This right of primogeniture is the more interesting when we consider it in convection with the view that sepals and petals are sterilised stamens; for it gives preference to the mood which by origin is then supposed secondary.

The above remarks are to be taken as embodying some notion of the foundations of the Phanerogamic flower. Working apon them we may make a study of a particular species of plant in order to seek how far the fixed and definite relationships of the organs in namber to one another, which we can observe in most Phanerogams, may be due to the compelling influence of pressure in the bud acting inwards from the ontermost organs (sepals), or to the way in which nutrition becomes available in the developing axis, or to natrition and the infinence of pressure combined, or to the attempt of the plant to produce an effective and economical assemblage of reproductive members. I have proposed to approach the question by comparing the variation in adjacent sets of floral organs, and seeing how far in different types of flower any one set is free to deviate from pattern.

There are flowers where the jointing of set on set may be considered to be loose, where adjacent rings of organs are not isomerons and such flowers seemed best for my purpose. One such is Parnassia palustris where a 4 -merous ovary tops an otherwise 5 -merous flower; another is the garden Gloxinia where 2 carpels top a similarly 5 -merous (potentially in stamens) flower. It is to be asked if, as a rule, variation from uormal is more easily accomplished on the upper side of the badly fitting joint than elsewhere. If so, then the inference is obvious that pressure is playing a large part in keeping to type the moods of that flower which are well jointed.

This I found to be the case with Parnassia palustris. In 1894 and 1895 I examined over 5,000 flowers and I recorded my observations in the Journal of Botany, 1896, pp. 12-15.

I had approximately 5,152 flowers normal in the number of sepals and in only two of them did the petals, stamens and staminodes fail to keep true to symmetry; but the carpels diverged from the normal four in 450 cases. I had 36 flowers abnormal in the number of sepals, 15 with ouly four, 21 with six, and in all but three of those flowers petals, stamens and staminodes followed the lead and varied with the sopals; but in them eleven flowers had three carpels, nine had the usas
four, fourteen had five and two had six. So much for the free variation above the badly fitting line in Parnassia. In the garden Gloxinia on which I have made, when at Kew, some unpublished observations, it is the same. Gardeners have selected and raised beautiful races with more than the normal number of petals; the selection was never for the sepals or stamens, but these two sets of organs have varied hand in hand with the petals while the ovary which normally has two carpels hesitates in the improved race between two and three.

A table which I gave in my note on Parnassia shewed that when the sepals were 4, the carpels were generally 3; and when the sepals were 6, the carpels were generally 5. Herein we see a correlative increase or decrease in both. Now it is easier by $\frac{1}{80}$ of the unit to squeeze five than to expand three into the space of four and it happened in Parnassia, as I showed in a table on page 13 of the Journal, that five carpels were more common in 6-merous than three in the 4-merous flowers,-an observation in accord with ideas of pressure but of a ring on a confined area ; and not of organs compeHing others to fall into the niches between them. Towards satisfying myself in this matter, I devised a little machine for measuring divergences and succeeded in demonstrating (see Annals of Botany, XV, 1901, pp. 187-192) that, at least when near fruit-ripening, the carpels in Parnassia have no very eract relationship in position to the sepals.

After examining Parnassia I sought for a flower with worse fitting joints or better with no joints at all and took Ranunculus arvensis for my purpose.

Ranunculus arvensis is a little cornfield weed of Earope and Temperate Asia, an annual and easily grown. It is very variable in the flower and in all parts of it; it has not got that concentration of the moods for the formation of the various floral organs which occurs in all regularly whorled flowers, its moods for the formation of petals and stamens being particularly ill-defined. These irregularities seemed to me qualifications suiting it particularly to my purpose. The sepals are commonly 5 with a divergence of $\frac{8}{5}$, the petals are 5 or fewer alternating with the sepals and repeating their divergence; but the stamens and carpels have a completely different arrangement; the former are very variable in number and the latter generally 4-7.

I grew my plants in 1895 in the University Botanic Garden, Cambridge, from seed which had ripened in the Botanic Gardens of Bonn and Hiedelberg, Paris, Stockholm and Bordeanx, and in 1898 in a window box at Kew from seed which had ripened in the years 1896 and 1897 in the Royal Botanic Gardens, Kew. I made a point of examining every flower produced, counting and recording the
number of its sepals, petals, stamens and carpels, and noting any obvious abnormalities in it. For the purpose the flowers were picked when just open, and this picking, dore duily, caused the plants to continue long in blossom.

In this way I examined in 1895, 1,383 flowers from Heidelberg seed and 1,203 from Bonn seed; in 1898, 2,298 from Kew 1896 seed ( 157 plants) and 1,589 from Kew 1897 seed ( 73 plants); and also in 1895 lesser numbers of flowers from Paris, Stockholm, and Bordeanx seed-numbers too small to be of real service. I give the results of the examination of the Paris, Stockholm and Bordeaux plants here before proceeding. I shall not mention them again.

|  |  |  | No. of flowers. | A vorage No. of Sepals. | Average No. of Petals. | Average No. of Stamens. | A verage No. of Carpels. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stockholm |  | ... | 135 | 4.94 | $4 \cdot 49$ | $8 \cdot 27$ | 5.87 |
| Paris | ... | . $\cdot$ | 382 | $4 \cdot 91$ | $3 \cdot 50$ | $5 \cdot 50$ | 5.25 |
| Bordeaux | ... | ... | 167 | 4.95 | 4.10 | 6.74 | $5 \cdot 37$ |

As to the more profitable experiments I found the different sowings to vary as follows:

Table I.-Variation in Sepals.

| No. of Sepals. |  | 0 | 1 | 2 | 8 | 4 | 5 | 6 | 7 | 8 | 9 |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: | :---: |

Table II.-Variation in Petals.

| No. of Petals. |  |  | 0 | 1 | 2 | 8 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Heidelberg | $\cdots$ | ... | $\cdots$ | 5 | 128 | 486 | 417 | 845 | 8 |  |  |
| Bonn | ... | .. |  | 4 | 82 | 349 | 438 | 327 | 1 | 1 | 1 |
| Kew, Old | ... | ... | 2 | 2 | 28 | 287 | 480 | 1592 | 9 | .. | $\cdots$ |
| Kew, New | ... | ... | 3 | 2 | 19 | 182 | 289 | 1091 | 8 | . | .. |

Table III.—Variation in Stamens.


Table IV.-Variation in Carpels.


There is an obvious difference between the two German races and the Kew race and some difference between the Kew plants from 1896 seed and those from 1897 seed although they belonged to the same stock. The variation carves which may be plotted from these figures are irregular, and those for no one set of organs exactly correspond with those for neighbouring sets: the curves of the sepals are half-Galton curves : and the curves of the petals in the Kew race are alsohalf-Galton carvee, but not quite as those for the sepals; while the curves of the petals in the German races are intermediate between half-Galton and symmetric Quetelet binomial curves: the curves for the stamens are equally asymmetric, but in a different way; while the carves for the carpels are the most nearly bi-symmetric of all but are not quite so. It is evident from a comparison of them that the flower does not vary as an unit as for instance a Tulip flower may, every ring of organs changing from 3-merism to 4-merism; but each mood varies in its own manner. We shall learn more of this independence of the moods in variation by stadying their association. I cannot give tables of the combinations observed in the different races for all the four sets cf organs taken two together, without occupying a great amount of space; I therefore give tables for the "Kew Old" plants alone. They will serve as an illustration for all, as the tables which could be given for the German races and "Kew New" are not anlike them.

Table V.-Kew, Old—Correlation of Sepals and Petals.


Table VI.-Kew, Old-Correlation of Sepals and Stamens.


Table VII.-Kew, Old-Correlation of Sepals and Carpels.

| Carpels. |  | 0 | 1 | 2 | 3 | 4 | 6 | 6 | 7 | 8 | 9 | 10 | Total. | Aver- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sepals | $\cdots$ |  | ... |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | ... | $\cdots$ |  | 2 |  | $\cdots$ |  | ... | ... | ... |  |  |
| 3 4 |  |  | $\cdots$ | 2 | 21 | 20 | $1{ }^{8}$ | 0 | 8 | $\cdots$ | ... | ... | ${ }_{6}^{18}$ | 3.92 4.05 |
| 5 |  |  | 2 | 20 | 150 | 335 | 621 | 577 | 399 | 107 | 6 | … | 2,217 | 4.05 $5 \cdot 46$ |
| 6 | .. |  | ... |  | 1 | 1 | 0 | 1 |  |  |  |  | , |  |
| Total |  |  | 8 |  | 175 | 62 | 34 | 84 | 403 | 107 | 6 |  | 2,298 |  |
| Average | ... |  | ... | $4 \cdot 75$ | 4.84 | $4 \cdot 93$ | 4.97 | 4.99 | 4.99 | 5.00 |  | ... | ... |  |

Table VIII.-Kew, Old-Correlation of Petals and Stamens.


Table IX.-Kew, Old-Correlation of Pelals and Carpels.

| Petals. |  | 1 | 2 | 8 | 4 | 5 | 6 | 7 | 8 | 9 | Total. | Aver age. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carpels ... | ... | $\ldots$ | $\ldots$ | .. | .. |  |  |  |  |  |  |  |
| 0 ... | ... | ... | $\ldots$ | ... | ... | 1 | 0 | 1 | ... | ... | 2 | - 0 |
| 1 | - | $\ldots$ | $\cdots$ | 2 | $\ldots$ | $\cdots$ | ... | ... | ... | ... | 2 | $\cdots$ |
| 2 ... | ... | $\ldots$ | 1 | 4 | 14 | 2 | ... | ... | ... | ... | 26 | $3 \cdot 65$ |
| 8 ... | -0. | 2 | 13 | 71 | 88 | 52 | 12 | $\cdots$ | . 0 | ... | 237 | $8 \cdot 89$ |
| 4 ... | ... | 1 | 10 | 64 | 126 | 141 | 66 | 18 | 4 | $\cdots$ | 430 | $4 \cdot 69$ |
| 5 ¢ | ... | $\ldots$ | $\cdots$ | 80 | 134 | 4:35 | 502 | 382 | 108 | 6 | 1,582 | 5.88 |
| 6 | ... | ... | ... | $\cdots$ | ... | 3 | 4 | 2 | ... | ... | 9 | - |
| Total | - | 3 | 24 | 175 | 362 | 634 | 584 | 403 | 107 | 6 | 2,298 | - |
| Average ... | -. | ... | $8 \cdot 38$ | 3.65 | 4.06 | 4.60 | 4.85 | 4.95 | $4 \cdot 96$ | ... | 2, | ... |

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| Table X.-Kew, Old-Correlation of Stamens and Carpels. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stamens. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | Total. | Average. |
| 0 Carcels ... | $\cdots$ |  | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| 1 ... | ... | - 0 | $\cdots$ | 2 | $\cdots$ | 1 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 3 | $\cdots$ |
| 2 ... | $\cdots$ | $\cdots$ | $\cdots$ | 4 | 10 | 6 | 3 | 1 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 24 | $4 \cdot 46$ |
| 3 ... | $\cdots$ | ... | 8 | 26 | 54 | 60 | 19 | 11 | 2 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 175 | $4 \cdot 61$ |
| 4 ... | $\cdots$ | ... | 2 | 18 | 87 | 99 | 83 | 50 | 19 | 3 | 1 | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | 862 | 5.85 |
| . 5 ... | $\cdots$ | 1 | ... | 7 | 55 | 175 | 67 | 104 | 80 | 24 | 15 | 5 | 1 | $\cdots$ | $\cdots$ | - | $\cdots$ | 634 | 6.18 |
| 6 - 6 | $\cdots$ | ... | ... | 3 | 17 | 73 | 17 | 95 | 106 | 56 | 47 | 26 | 23 | 17 | 4 | - | $\cdots$ | 584 | $7 \cdot 66$ |
| 7 ... | ... | ... | ... | 1 | 6 | 17 | 116 | 89 | 55 | 48 | 58 | 52 | 35 | 86 | 12 | 5 | 3 | 408 | $9 \cdot 44$ |
| 8 ... | ... | $\cdots$ | ... | 1 | $\cdots$ | 2 | 83 | 4 | 8 | 8 | 19 | 18 | 14 | 16 | 10 | 11 | 3 | 107 | 11.05 |
| 9 . ${ }^{\text {a }}$ | ... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ | $\cdots$ | 1 | ... | ** | 1 | 1 | 3 | 6 | $\cdots$ |
| Total ... | ... | 1 | 5 | 62 | 229 | 433 | 428 | 304 | 270 | 184 | 140 | 97 | 73 | 69 | 27 | 17 | 9 | 8,298 | $\cdots$ |
| Average ... | ... | $\cdots$ | ... | 8.63 | $4 \cdot 14$ | 4.68 | $5 \cdot 16$ | $5 \cdot 86$ | 5.80 | 6.18 | 6.56 | 6.78 | 6.98 | 7.02 | $7 \cdot 30$ | 776 | $\cdots$ | ... | $\cdots$ |

If we take three absolutely symmetrical dice and tose them the probable scores obtained in 240 throws mathematically calculated are


If we take another three dice of distinguishing colour absolutely symmetrical, and throwing them with the others record the association of numbers, the resulting table will be as symmetric as the binomial curve just given, bat in two dimensions, and out of 14,400 throws there is one chance of $3+3$ being the score of the two sets of diceand one of $18+18$, one of $3+18$ and one of $18+3$; there are three chances of the score being $4+3$, and three of its being $17+3$, i.e, equal chances as far as the extremes are concerned of there being a close similarity between the figures and a wide dissimilarity. A glance at the tables just given will satisfy that this is not the case in them and that the tendency to similarity is evident; that in the matual relationship of mood to mood the adjastment is not a question of chance bat, as is indicated by the averages in the last column and lowest line of each table, is due to some loosely coercing force which will be discussed.

As I have foregone the publishing of tables to give for the Kew New plants and the Bonn and Heidelberg races my exact observations on adjustment of moods, I place below the averages found omitting those derived from fewer flowers than ton.

I will briefly call attention to the chief points in the averages. Table XI shows that fewer sepals mean fewer of all other organs and it is to be noted that the reduction is greatest in the organs farthest away from the sepals. Table XII shows for the Kew race a considerable reduction of both stamens and carpels when the petals are reduced; it shows for the German races a much slighter reduction of carpels and an insignificant reduction of stamens. It shows farther that reduction in the number of petals does not act as a reflex on the number of sepals in anything like the way in which reduction of sepals may be said to promote reduction of petals. Table XIII shows that with a reduction or increase of stamens the reduction or increase of the carpels. is much greater than the reduction or increase of the organs which preceeded them. Table XIV shows that reduction or increase of carpels is accompanied by a more nearly corresponding reduction or increase in the organs closest to them. Consequently, admitting that there is an exception in the relation of petals to stamens in the German races, we may broadly state that the influence producing correlative increase or decrease chiefly acts forwards from the preceding mood to the moods which follow and that correlative increase and decrease is closest in neighbouring moods.
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Table XI.-Average No. of other organs in association with three, four and five Sopals.

|  |  |  |  | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average No. of Petals | Kewr, Old | ... | ... | $8 \cdot 46$ | $8 \cdot 71$ | $4 \cdot 60$ |
|  | Kew, New | ... | ... | 3.56 | 3.57 | 4.68 |
|  | Bonn ... | ... | $\ldots$ | 9.78 | 8.54 | 3:87 |
|  | Heidelberg | ... | ... | ... | $8 \cdot 47$ | 8.78 |
| Average No. of Stamena... | Kew, Old |  |  | 4.39 | $5 \cdot 25$ | $7 \cdot 1$ |
|  | $\left\{\begin{array}{l}\text { Kew, New }\end{array}\right.$ | ... | ... | 4.78 | 5.87 | 7.48 |
|  | Bonn ... | $\cdots$ | $\cdots$ | 3.78 | $7 \cdot 31$ | 7-83 |
|  | Heidelberg. | ... | .. | ... | 628 | $7 \cdot 27$ |
| Avestage No. of Carpelg ... | (Kew, Old | ... | - | 8.92 | 405 | 5.46 |
|  | $\left\{\begin{array}{l}\text { Kew, New }\end{array}\right.$ |  | ... | 8.67 | 4.09 | 5.94 |
|  | Bonn ... | ... | .. | $2 \cdot 11$ | 4.79 4.81 | ${ }^{5} 5.48$ |
|  | Heidelberg | $\cdots$ | ... | $\cdots$ | $4 \cdot 31$ | $6 \cdot 19$ |

Table XII.-Average No. of other organs in association with two, three, four, five and six Petals.

| Number of Petals. |  | 2 | 8 | 4 | 5 | 6. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average No. of Sepals ... |  | 481 | 485 | 4889 | 4.99 | $5 \cdot 00$ |
|  | . | 4.58 | 4.76 | $4 \cdot 87$ | 4.98 |  |
|  | ... | 4.83 | $4 \cdot 91$ | 4.92 | 4.98 | ... |
|  | ... | 4.93 | $4 \cdot 95$ | 4.89 | 4.99 | ... |
| Averaga No. of Stamens | $\ldots$ | 4.38 | $4 \cdot 91$ | 5.77 | 7.81 | $8 \cdot 55$ |
|  | ... | 4.47 | 4.87 | 6.00 | 818 | 8 |
|  | , | 7784 | 7.68 | 7.68 7.18 | 7.98 | ... |
|  | ... | $7 \cdot 17$ | $7 \cdot 20$ | 718 | $7 \cdot 85$ | $\ldots$ |
| Average No. of Carpela ... | $\ldots$ | 3.65 | $3 \cdot 89$ | 4.69 |  | 6.45 |
|  | ... | :8.37 | 4.21 | $5 \cdot 12$ | 6.36 | 5 |
|  | ... | 4.94 | 5.18 | 5.45 | $6 \cdot 88$ | ... |
|  | ... | 4.74 | 4.82 | $5 \cdot 25$ | $5 \cdot 68$ | $\cdots$ |

Table XIII.-Average number of other organs in association with 2-16 Stamens.

| Stamens. | 2 | 8 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kew, Old | ... | 4.71 | 4.89 | 494 | 4.98 | 4.98 | 4.99 | 4.98 | 4.99 | $5 \cdot 00$ | $4 \cdot 97$ | $5 \cdot 00$ | 5.00 | $5 \cdot 00$ | 5.00 |
| Kew, New ... | ... | 4.77 | 467 | 4.92 | 4.95 | 4.97 | $4 \cdot 98$ | 4.98 | $4 \cdot 99$ | 5.00 | $5 \cdot 00$ | 5.02 | $5 \cdot 0$ | 5.00 | $\ldots$ |
| $n$ | ... | $4 \cdot 88$ | 4.86 | 4.87 | 4.91 | 4.98 | 4.97 | 4.93 | 4.95 | 5.03 | 5.00 | ... | ... | $\cdots$ | ... |
| Heidelberg ... | 483 | 4.86 | 4.81 | $4 \cdot 88$ | 4.94 | 4.95 | 4.88 | 4.92 | $4 \cdot 87$ | 4.97 | $5 \cdot 00$ | ... | ... | ... | ... |
| Kew, Old | ... | 860 | 8.77 | $4 \cdot 42$ | $4 \cdot 61$ | 4.59 | $4 \cdot 89$ | 4.84 | 486 | 4.94 | $5 \cdot 00$ | 4.98 | 4.98 | 5.00 | 5.00 |
| Kew, New | ... | 3.40 | 3.81 | 4.18 | 4.49 | 4.68 | 4.83 | 4.87 | 4.87 | 5.00 | 4.98 | $4 \times 96$ | 5.00 | $4 \cdot 78$ | ... |
| Bonn ... | ... | 3.44 | 3.71 | 881 | 4.00 | 3.81 | 3.55 | 3.79 | 3.75 | 4.08 | $3 \cdot 68$ | ... | $\cdots$ | $\cdots$ | ... |
| (Heidelberg ... | 3.67 | 376 | 3.88 | 3.80 | $8 \cdot 87$ | $3 \cdot 59$ | $3 \cdot 63$ | 3.68 | 8.70 | 4.06 | 4.12 | $\cdots$ | ... | $\cdots$ | ..- |
| ew, Old | ... | 3.68 | $4 \cdot 14$ | 4.68 | $5 \cdot 16$ | $5 \cdot 86$ | $5 \cdot 80$ | 6.18 | 6.56 | 6.78 | 6.98 | 7.02 | $7 \cdot 30$ | 7778 | $7 \cdot 00$ |
| Kew, New ... | ... | $8 \cdot 80$ | 4.65 | $4 \cdot 91$ | 5•89 | $5 \cdot 79$ | 6.28 | 679 | 6.85 | 731 | 7.39 | 7-40 | 7.96 | $7 \cdot 36$ | $\cdots$ |
|  | ... | $2 \cdot 89$ | 4.14 | $4 \cdot 68$ | 4.81 | $5 \cdot 13$ | 5•54 | 5.91 | $0 \cdot 10$ | 6.58 | 6.75 | ... | ... | ... | $\cdots$ |
| LHeidelberg ... | $4 \cdot 82$ | $4 \cdot 19$ | 4.20 | 4.41 | 4.70 | 5.02 | $5.43{ }^{\circ}$ | 5-71 | 6.11 | 6.84 | $7 \cdot 50$ | ... | -.. | $\cdots$ | ... |

Table XIV.-Average number of other organs in association with 1-9 Carpelo.


I must now point out some differences between the races.
When one sepal less than the complete five is present in the Kew race there is approximately one petal less, two stnmens less and $\frac{1}{2}$ carpel less: when two sepals are wanting then we lose further $\frac{1}{8}$ petal, $\frac{2}{8}$ stamen and $\frac{1}{4}$ carpel.

In the German races one sepal less than the complete five means roughly $\frac{1}{8}$ petal less, $\frac{3}{4}$ stamen and $\frac{\frac{1}{3} \text { carpel: when two sephls are }}{}$ wanting we lose a further $\frac{3}{4}$ petal, $3 \frac{1}{2}$ stamens, $2 \frac{1}{2}$ carpels ; i.e., in the German races 4 sepaled flowers are more nearly otherwise normal than in the Kew race: and what is true for the sepals is true for the petals, i.e., that the first reduction in them from normal is much more closely accompanied by a reduction in other organs than is the case in the two German races.

Apportionment of organs in the Kevo race.-The least flower of the Kew race had 8 organs in all, the largest 36. The largest flowers were richest in stamens, the least richest in sepals. I give in table $\mathbf{X V}$ the average number of sepals, petals, stamens and carpels in flowers with varying numbers of total organs, and over leaf are carves expressing the result graphically. The result may be briefly stated thus:-if there is power to produce more than 15 organs the sepals claim their full compliment; if there is power to produce more than 20 organs, the petals also claim their full compliment; if thers is power to produce more than 28 organs the carpels begin to show signs of


Graphic representation of the apportionment of sepals, petals, stamens and carpels in flowers of Ranunculus arvensis (Kew race) with ogle the number of organs varying from 13 to 33.
satiety; extra power beyond this goes chiefly to the stamens. At 20 the flower is not far from having the formula K5 C5 A5 G5, i.e., from being regularly 5 -merous. The staminal curve shows slight irregularities at 15 and 18 the curves for petals and carpels practically touch at 15. The correspondence in the two sets of carves is most interesting.

Table XV.-Apportionment in flowers of the Kew race with the number of total organs varying from to 8 to $\mathbf{3 6}$.


Table XVI,-Apportionment in flowers of the German races with the number of total organs varying from 4 to 47.


Apportionment in the German races.-I give in table XVI the figures for the German races. As in the Kew race so here, in poor flowers the sepals are most numerous and in rich flowers the stamens are most numerous. But in these German races the petals do not claim their full number until the flower is rich enough to have 29 or 30 organs and on the part of the carpels no tendency to be satisfied can be detected.

Mathematical expression of the curves in formule seems to be by no means impossible although they are complicated.

There is no fiat which says "this will be a flower of Ranunculus arvensis, the organs may vary in number a little from the ideal." But the fiat says "this will be a flower and must ran throughout all its moods. So long as all are present let them jostle for their compliment." So they jostle and the older win as far as they may by being already established at the time when the younger begin to compete; the sepals take what they want only being forbidden from getting the whole five when that would leave too little for the other moods; and the petals following claim their portion in the same way but a little less strongly. There is left a residue for the stamens and carpels, and the larger it is, the more organs do the moods of both seta, but especially the stamens, obtain.

Nutrition.-If seeding be prevented, Ranunculus arvensis dies flowering in atter depletion. Therefore I could get from this little proletarian flowers formed under the best conditions and under the worst possible conditions of nutrition, and so seek the effect of starvation on the moods spoken of. My earlier paper (Journ. Linn. Soc., Botany, Vol. XXXI, p. 235) contained a note on this plant to show that in it, as in several other plants, the first formed flowers are richest in stamens and carpels; I can now give fuller statistics, and shall show distinctly that the flower is panperised with the ageing of the plant. I have divided the flowering period of the plants grown in 1895 into three periods and of those grown in 1898 into four periods. The decrease with age in the number of parts in the flower is shown by the following averages:-

Table XVII.-Kew, Old. Average number of organs in flowers at different periods.

|  |  |  | Period 1. 6th Jaly to 17th July. | Period 2. 18th July to 29th July. | Period 8. 30th Jaly to 10th Aagast. | Period 4. 11th Augast to 23rd Auguat. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sepals | -.. | ... | 4.99 | 4.98 | 4.99 | 489 |
| Petals | ... | ... | $4 \cdot 95$ | $4 \cdot 85$ | $4 \cdot 66$ | $8 \cdot 95$ |
| Stamens | -.. | ... | 11.58 | $7 \cdot 81$ | $6 \cdot 17$ | $4 \cdot 98$ |
| Carpels | ... | . 0 | 6.78 | 6.97 | $6 \cdot 28$ | $4 \cdot 16$ |

Table XVIII.-Kew, New. Average number of organs in flowers at different periods; periods as in Table XVII.

|  |  | Period 1. <br> 6th July to <br> 17th July. | Period 2. <br> 18th July to <br> 29th July. | Period 3. <br> 30th July to <br> 10th Angust. | Period 4. <br> 11th Angast <br> to 23rd <br> August. |
| :--- | :---: | ---: | ---: | ---: | ---: |
| Sepals | $\ldots$. | $\ldots$ | 4.99 | 4.99 | 5.00 |
| Petals | $\ldots$ | $\ldots$ | 4.97 | 4.84 | 4.67 |
| Stamens | $\ldots$. | $\ldots$ | 11.63 | 7.95 | 6.14 |
| Carpels | $\ldots$ | ... | 7.22 | 6.51 | 5.74 |

Table XIX.-Bonn. Average number of organs in flowers at different periods.

|  |  |  |  | Perind 1. June 6th to Jnly 10th. | Period 2. July 11th to Angust 29th. | Period 3. August 30th to middle of September. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sepals | - 0 | ... | ... | 4.96 | 4.92 | $4 \cdot 98$ |
| Petals | ... | ... | ... | $4 \cdot 28$ | $8 \cdot 43$ | $3 \cdot 69$ |
| Stamens | ... | ... | ... | 8.80 | $7 \cdot 74$ | 6.85 |
| Carpels | ... | ... | .. | $5 \cdot 71$ | 5.58 | 4076 |

Table XX.-Heidelberg. Average number of organs in flowers at different periods; periods as in Table XIX.

| - |  |  |  | Period 1. June 6th to July 10th. | Period 2. Jaly 11th to Angust 29th | Period 8. August 30th to middle of September. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sepals | -0• | - 0 | ... | 5.00 | 4.94 | 4.98 |
| Petala | -.. | - 0 | ... | $8 \cdot 92$ | $8 \cdot 70$ | $8 \cdot 49$ |
| Stamens . | - 0 | ... | .-. | $8 \cdot 24$ | 6.99 | 7.07 |
| Carpela | ... | ... | -•• | $5 \cdot 21$ | $5 \cdot 16$ | 6.01 |

With this reduction in number of parts there is a reduction in the size of the flower and there is also a loss of fertility in the anthers. This loss of fertility is shown in the following tables.
J. II. 15

Table XXI.-Staminodes in Kew plants at different periods; the periods the same as in Tubles XVII and XVIII.

|  | Period 1. 6th Jaly to 17th July. | Perind 2. 18th July to 29th July. | Period 3. 30th July to 10th Augnst. | Period 4. <br> 11th August <br> to 23rd <br> Angast. |
| :---: | :---: | :---: | :---: | :---: |
| (Total number | 91 | 1360 | 157 | 1777 |
| Kew, old $\left\{\begin{array}{l}\text { stame:ıs } \\ \text { duced } \\ \text { re- } \\ \text { d }\end{array}\right.$ | $2 \cdot 58$ | 21.31 | $47 \cdot 49$ | 56.48 |
| ( flower ... | 030 | $1 \cdot 66$ | $2 \cdot 91$ | 2978 |
| . $\begin{aligned} & \text { Total number } \\ & \text { Percentage of }\end{aligned}$ | 23 | 1072 | 1534 | 1178 |
| Kew, New. \{ duced | 0.78 | $25 \cdot 88$ | 64.73 | 54.09 |
| (flower $\quad$... | 0.09 | 2.06 | 3.98 | $2 \cdot 74$ |

Table XXII.—Staminodes in the German races at different periods; periods as in I'ables XIX and XX.

|  | Period 1. June 6th to Jaly 10th. | Period 2. July 11th to August 29th. | Period 3. Augast 30th to mid-September. |
| :---: | :---: | :---: | :---: |
| ( Total number ... | 24 | 82 | $\cdots 88$ |
| Bonn $\quad . . \begin{cases}\text { Percentage of stamens } \\ \text { reduced } & . . . \\ \text { Average per flower ... }\end{cases}$ | $\begin{aligned} & 2.04 \\ & 0.18 \end{aligned}$ | $\begin{aligned} & 1 \cdot 13 \\ & 0.09 \end{aligned}$ | $\begin{aligned} & 4.01 \\ & 0.27 \end{aligned}$ |
|  |  |  |  |
| ; |  |  |  |
| - TTotal number .. | 37 | 75 | 36 |
| Heidelberg ... $\left\{\begin{array}{c}\text { Percentage of stamenf } \\ \text { reduced }\end{array}\right.$ | 1.86 | $1 \cdot 13$ | $2 \cdot 61$ |
| . Average per flower ... | $0 \cdot 15$ | 0.08 | $0 \cdot 19$ |

Ithink it will be conceded that poverty of organs and sterility of stamens are alike marks of the plants becoming worn out.

Different organs are unequally reduced in numbers, the stamens frost of all and before the others. Tables XVII to XX show how the different organs are differently affected by the reduction: but to make this quite evident the following tables are given :-
1902.]

Table XXIII.-Rate of reduction of organs in the Kew plante from period to period; periods as before.

|  |  |  | Periods 1 to $2 \mid$ | Periods 2 to 3. | Periods 3 to 4. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kew, Old | (Sepals . ..i | . |  |  | 0 |
|  | ... $\left\{\begin{array}{l}\text { Petals ... } \\ \text { Stamens }\end{array}\right.$ | ... | $0 \cdot 10$ | $0 \cdot 19$ | 071 |
|  | . $\quad\left\{\begin{array}{l}\text { Ptamens ... } \\ \text { Carpels } \\ \text {... }\end{array}\right.$ | $\ldots$ | 3.17 0.81 | 1.64 0.69 | 1.24 |
| Kew, New | - Sepals | . | $\begin{aligned} & \text { Practica } \\ & 0.18 \\ & 3.68 \\ & 0.71 \\ & : 71 \end{aligned}$ | cally nit.$\begin{aligned} & 0.17 \\ & 1.81 \\ & 0.77 \end{aligned}$ | 0.23 |
|  | ... $\left\{\begin{array}{l}\text { Petals ... }\end{array}\right.$ | $\cdots$ |  |  | $0 \cdot 86$ |
|  | $\because\left\{\begin{array}{l}\text { Stamens } . . .\end{array}\right.$ | , |  |  | 1.07 |
|  | . Carpela | $\cdots$ |  |  | 1.38 |

Table XXIV.-Rate of reduction of organs in the German races from period to period; periods as before.


It is easily seen that at the beginning of the flowering period a large reduction is made in the male organs; but that the reduction in other organs is chiefly at the end. The following table shows this excess of masculinity, which occurs at the beginning of the flowering period and is soon done away with after flowering has commenced.

Table $X X V$.-The percentage which.the Stamens (fertile and infertile) make out the total of organs in the flowers, at different periods; periods as before.


It is impossible to dissociate the lack of nutrition felt, it must be believed, by the flowers of the worn out plants and the right of primogeniture spoken of. The power to satisfy the sepaline mood and the petaline mood and to form abundant stameus and carpels is in the nutrition of the flower.

On page 110, it was said that the moods jostle for their compliment of organs and that the older win by being already established when the younger begin to compete. There is a reservation to make in regard to this statement, to demonstrate which table XV has been recast in table XXVI. The latter table shows that in well and fairly well fed flowers say with 20 organs and more-the proportion falling to the carpellary mood is nearly constant, and that, as already made more or less evident, the staminal mood is residnary legatee for the extra vigour. Therefore for the richer flowers the vigour may be said to be roughly apportioned between on the one hand the sepaline, petaline and staminal moods which three jostle each other, and on the other hand the carpellary mood. In flowers poorer in organs than 20 , the carpellary mood seems less prepared for and is subject in like degree to the staminal mood to the jostling for space.

Thas do the richer flowers appear more pre-apportioned than the poorer ones and therefore more knit together into an unit in the direction in which the flowers of most Phanerogams are knit together. We may easily believe that, given a flower with its moods so knit together that they vary together, the force of pressure of organ on organ in the bud may fiuish the shaping of the whole.

We can see that the flowers of the Kew race are a little more knitted into an uuit than those of the German races. Thus the petals and sepals are mach more often equal in number, and (as is shown on p. 103) when we get a flower of the Kew race departing in the sepals from normal by losing one, then the other organs are more likely to lose in proportion than in the German races. In short there is more see-sawing of mood on mood in the German races than in the Kew race.

However there are irregularities in the carves with which I have been dealing which cannot clearly be attributed to the struggling of the moods for satiety and their relative advantages from primogeniture. These are made obvious in the recast table XV which we nọ have in XXVI.

The chief irregularities of the Kew race are:-
(i)-Between 15 and 20 the stamens are above what would seen reasonable, rather more so at $15,16,18$ and 19 than at 17 and 20.
(ii)-At 23 the stamens are a little above what would seem reasonable, the carpels below.
I do not intend to attempt any explanation of these facts, but I must observe that if we cut out of our figures all flowers which have both their sepals and their petals other than five in number, the irregularities just noted almost disappear: and they do not disappear if we cut out only those flowers with sepals other than five: and this indicates that between 15 and 20 the stamens are able to add to their number from the petals. This is done in table XXVII.

Table XXVI.-Percentuges of organs in the Kevo ruce fulling to the different moods in flowers of various numbers of parts.

| No. of Organs. |  | Kew, Old. |  |  |  | Kıw, Nsw. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sepnls. | Petals. | Stamens | Carpels. | iepals. | Petals. | Stamens. | Carpels. |
| 8 | ... | ... | ... | . 0 | $\cdots$ | - | 87-50 | 12.50 | 50.00 |
| ${ }^{9}$ | ... | ... | ... | ... | ... | $\cdots$ | $\cdots$ | $\because 00$ |  |
| 10 |  |  |  |  | . | 20.00 | 3000 | 40.00 | 10.00 |
| 11 | $\ldots$ | 8864 | 15.91 | 2273 | 22.73 | .. |  |  |  |
| 12 | . | 83-33 | $25 \cdot 00$ | 29.17 | 12.50 | $28 \cdot 33$ | $25^{\cdot} \cdot \mathrm{CO}$ | 28.33 | 18.33 |
| 13 | .. | 31.32 | 21.98 | 2362 | 23.08 | $28 \cdot 96$ | 21.26 | $26 \cdot 24$ | 23.53 |
| 14 | ... | 83.70 | 20.76 | 2483 | 21.20 | 8214 | $20 \cdot 36$ | 2643 | 21.07 |
| 15 | .. | 31.31 | 21.01 | 26.87 | 20.80 | 2857 | 22.88 | 27.63 | $21 \cdot 43$ |
| 16 | .. | 80.08 | 26.39 | $27 \cdot 11$ | 2242 | 29.43 | 19.88 | 27.61 | 23.07 |
| 17 | $\ldots$ | 28.95 | 21.89 | 26.70 | 22.45 | 28.64 | 19.57 | 27.48 | 24.30 |
| 18 | . | $27 \cdot 51$ | $22 \cdot 18$ | 27.73 | 22.57 | $27 \cdot 18$ | 20.37 | 2759 | 24.85 |
| 19 | ... | 26.22 | $22 \cdot 42$ | $27 \cdot 72$ | 23.63 | 26.19 | 21.70 | 26.70 | 2540 |
| 20 | $\cdots$ | 24.96 | $23{ }^{\circ} 0$ | $27 \cdot 86$ | , , 24.66 | 2500 | 22.59 | 2672 | 2568 |
| 21 | ... | 2373 | 22.93 | $28 \cdot 53$ | 2479 | 23.74 | 22.47 | 27.73 | 2602 |
| 22 | ... | 22.69 | 22.08 | 29.78 | 25.46 | 22.72 | 21.89 | 28.95 | 2645 |
| 23 | ... | 21.72 | 21.88 | 31.85 | 24.86 | 21.64 | 21.15 | 3102 | $26 \cdot 9$ |
| 24 | .. | 20.83 | 20.61 | 32.97 | 25.58 | 2079 | 2052 | 3200 | 26.68 |
| 25 | ... | 19.96 | 19•71 | $34 \cdot 53$ | 25.78 | 2010 | 19.59 | 33.50 | 26.89 |
| 26 | ... | 19.23 | 18.97 | 36.70 | 25.09 | $19 \cdot 19$ | $19 \cdot 19$ | 3487 | $26 \cdot 76$ |
| 27 | . | 18.47 | 18.43 | 3809 | 25.06 | 18.52 | 18.37 | 3645 | 26.65 |
| 28 | .. | $17 \cdot 81$ | 17.81 | 39-47 | 2488 | 1785 | $17 \cdot 80$ | 38.49 | 2584 |
| 29 | ... | $17 \cdot 24$ | $17 \cdot 18$ | 4170 | 23.87 | 17.24 | 17.24 | 3979 | 2572 |
| 30 | ... | 16.66 | 1666 | 4259 | $24 \cdot 67$ | 16.66 | 1653 | 40.95 | 2585 |
| 31 | ... | 16.18 | 16.01 | 4339 | 24.47 | 16.20 | 16.05 | 4262 | $25 \cdot 11$ |
| 32 | ... | 15.63 | 1563 | 44.86 | 23.88 | 15.62 | $15 \cdot 43$ | 44.14 | 2480 |
| 83 |  | 15.16 | $15 \cdot 16$ | 4587 | 23.84 | 1515 | 14.72 | 45•89 | 24.24 |
| 84 | ... | 14.70 | 14.70 | $46 \cdot 32$ | 2426 | 1373 | 13.73 | 48.04 | 24.51 |
| 85 | ... | 14:28 | 14.28 | 4571 | 25.71 | 14.29 | 14.29 | 45.71 | 25.71 |
| 86 | ... | ... | ... | ... | ... | 18.89 | 1389 | 44.44 | $27 \cdot 77$ |

Table XXVII.-Percentage of stamens present in flowers with sepals and petals any number, with sepals 5 and petals any number, and with both sepals and petals 5.


Now it comes about from this tendency of stamens to gain below 20 in percentage at the expense of the petals, and from the tendency of the carpels above 20 to show satiety, that the excess of stamens over carpels.is likely to be lenst at 20 and greator both above and below that number. Thas is the sex-proportion continually shifting along our carves.

Half staminodal petals were found in flowers of the Kew race as follows; it will be uoticed that towards the end of the flowering period they appeared but one at a time in the flowers.

Table XXVIII.-Half Staminodal petals.


Lastly I have an abnormality to notice; it consists of a lobing of the petals; one lobe being larger than the other. I found this abnormality in the Kew race to be fairly frequent and further I found it to be most abundunt when the number of staminodes was highest.

I'able XXIX.-Lobed petáls.


## Summary.

I have shown first of all (Tables I-IV) how the flowers of Ranunculus arvensis in the races stadied, vary; and how each set of organs varies in a different way; so that the carves which may be plotted for sepnls, for petals, for stamens, and for carpels are unlike, most of them neither perfect Quetelet-Galton nor perfect half Galton curves.

I have shown secondly (Tables V-XIV) that a correlative increase and decrease occurs between the different sets of organs; so that when the stamens or any other set of organs depart from normal, it is probable that all other sets of organs will depart from normal, but chiefly those whioh follow. This is important as it indicates a division of vigour among the various sets, to be distinguished from an incrense of the one at the expense of another.

In Tables XV-XVI and in the graphic representation of them on page 106 I have followed this up by showing how if we take the total number of organs in the flower as a measure of the vigour in the bad, we find that the ring of sepals, being the first-formed of the sets of organs, has the first pull on the vigour and is most likely to get a full complement, the ring of the petals being the next in order, is the next to be satisfied, and that stamens and carpels obtain the surplus the stamens chiefly so. I consider that the carves might with some little trouble be translated into formulae by a mathematician.

In Tables XVII-XX, I show that the power to produce organs diminishes as the plant grows weaker towards its death. Sometimes a slight recovery occurred at the very end: I do not feel justified in suggesting a cause for it. In Tables XXI and XXII, I show that sterility of the stameus increases towards the death of the plant.

In Tables XXIII-XXV, I show that the stamens-the organs which profit chiefly as we have seen by the extreme of vigour-lose by its loss; and consequently the flowers are most male when blossoming begins.

In Table XXVI, I have represented Table XV in a different way, so as to bring out sharply the division of vigour (i.e., number of organs) between the different sets (moods). I can show by it that the flowers with more than 20 organs, there apparently is a setting aside ab initio of so much vigour for the carpellary mood, the staminal mood becoming residuary legatee; while in flowers with fewer than 20 organs the carpellary mood has to jostle with the preceding ones for its place. I show also by it and by the Table which follows it (XXVII), that there are cortain irregularities which seem to be due to a borrowing of organs by the staminal set from the petals, which
borrowing as may be noticed in Table XII, (see p. 102) probably is a more common occurrence in the German races than in the Kew race.

The last two Tables (Nos. XXVIII and XXIX) show the relative. abundance of abnormal petals and staminodal petals at different times in the plants flowering.

The net result of the investigation is that we have in Ranunculus arvensis just a little of what (for want of a better term) may. be called foresight in the formation of the flower. We find the flower completed however scanty the natrition for it may be; and, when the nutrition is adequate, provision is, it seems, made in good time for the carpellary mood. The next problem will be to show. how far in such a flower as that of Parnassia or of any Phanerogam, the constancy of the carpels is due to provision made for them when the bud. first begins to be formed. Can the sepaline mood lead the carpellary by the nose, or is the carpellary not too important to the race to be without an assertiveness of its own $P$

It is interesting to observe that the staminal mood forms a sort of residuary legatee to the three early moods of the flower; interesting because we not uncommonly find that mood to disappear under conditions which have generally been ascribed to something disadvantageons to the plant (see Willis, On Gynodiøecism, 3rd paper, Proc. Oambridge Phil. Soc., viii., 1893, p. 129).

We have sought in passing for any indication in the flower which might suggest that pressure of organ on organ exercises an influence in shaping the flower; and we found that flowers of 20 organs did come near to having the formula $\mathrm{K}_{6} \mathrm{C}_{6} \mathrm{~A}_{6} \mathrm{G}_{6}$ : and in Table V we saw $\mathrm{K}_{4} \mathrm{C}_{4}$ and $\mathrm{K}_{8} \mathrm{C}_{8}$ to be commoner combinations than $\mathrm{K}_{4} \mathrm{C}_{8}$ or 6 (especially 5 ) and $\mathrm{K}_{8} \mathrm{C}_{4}$ or indeed any other number, and in Tables VI and VIII ten stamens to be commoner than nine or eleven in association with five sepals or with five petals. These observations do not suffice for building up any very definite statement.

It is equally advisable at present from these tabulations to make no statement regarding the possibility of female organs demanding per anit for their inception more nutriment than male organs.

One notices in regard to the variation of the flower of Ranunculus arvensis that it is always hungry, i.e., always capable to taking in more organs; the hangriest of its moods is that for the formation of stamens, next that for the formation of carpels, thirdly that for petals and least hungry that for sepals.

Just as we find sepals to tend to be constant in number throughont our larger groups such as the Dicotyledons and Monocotyledons; petals to be constant in number in lesser groups; carpels to serve by their
constancy for the deftining of orders, and stamens to be by number the least serviceable in the making of a clamsification of Phanerogams, so do we find sepals to have the greatest tendency to be constant in Raminculus arvensis, petals next so, carpels in the third place and stamens last, $i$ e., what we see in a broad view of the whole Phanerogamic Sab-Kingdom, we see again in the variation of the flower of this little weed.

I had intended to deal with variation in Nigella sativa and Delphiuism Ajacis, when writing on Ranunculus arvensis but my facts, ane insufficient. They may, however, be said to be indicative of a reduction in number of all parts with age. For the present I withhold them.

My thanke are cordially given to the Cambridge Botanic Garden Syndicate for the facilities afforded to me in the University Garden, and to all who have helped me. The tedious operation of casting my figures into tables has in Calcutta occupied the time for several months of a clerk, Babu Kanai Lall Das.
plate iv.


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plate v.


PLATE VI.


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# NOTE ON THE PUBLICATIONS 

OF THE

## ASIATIC SOCIETY.

The Proceedings of the Asiatic Society are issued ten times a year as soon as possible after the General Meetings which are held on the first Wednesday in every month in the year except September and October; they contain an account of the meeting with some of the shorter and less important papers read at it, while only titles or short resumés of the longer papers, which are subsequently published in the Journal, are given.

The Journal consists of three entirely distinct and separate volnmes : Part I, containing papers relating to Philology, Antiquities, ete.; Part II, containing papers relating to Physical Science; and Part III devoted to Anthropology, Ethnology, etc.

Each Part is issued in four or five numbers, and the whole forms tbree complete volumes corresponding to the year of publication.

The Journal of the Asiatic Society was commenced in the year 1832, previous to which the papers read before the Society were published in a quarto periodical, entitled Asiatic Researches, of which twenty volumes were issued between the years 1788 and 1839.

The Journal was published regularly, one volume corresponding to each year from 1832 to 1864 ; in that year the division into two parts above-mentioned was made, and since that date two volumes have been issued regularly every year. From 1894 an additional volume, Part III, has been issued.

The Proceedings up to the year 1864, were bound up with the Journal, but since that date have been separately issued every year.

The following is a list of the Asiatic Society's publications relating to Physical Science, still in print, which can be obtained at the Society's House, No. 57, Park Street, Calcutta, or from the Society's Agents in London, Messrs. Luzac \& Co., 46, Great Russell Street, W. O.; and from Mr. Otto Harrassowitz, Leipzig, Germany.

Asiatic Researoties. Vols. VII, Vols. XI and XVII, and Vols. XIX and XX @ $10 /$ each Rs. 500
Procredings of the Asiatic Society from 1865 to 1869 (incl.) (a) /6/ per No, ; and from 1870 to date @ $/ 8 /$ per No.
Journal of the Asiatio Society for 1843 (12), 1844 (12), 1845
$(12), 1816(5), 1847(12), 1848(12), 1850(7), 1851(7), 1857(6)$,

$$
\begin{aligned}
& 1858(5), 1861(4), 1862(5), 1864(5), 1866(7), 1867(6), \\
& 1868(6), 1869(8), 1870(8), 1871(7), 1872(8), 1873(8), \\
& 1874(8), 1875(7), 1876(7), 1877(8), 1878(8), 1879(7), \\
& 1880(8), 1881(7), 1882(6), 1883(5), 1884(6), 1885(6), \\
& 1886(8), 1887(7), 1888(7), 1889(10), 1890(9 \text { and } 2 \text { Sap- } \\
& \text { plts.), } 1891(7), 1892(7 \text { and Supplt.), } 1893(11), 1894 \\
& \text { (8),1895 (7), 1896(8),1897(8), } 1898(8), 1899(7), 1900 \\
& \text { (7), © 1/8 per No. to. Members and © } 2 / \text { per No. to Non- } \\
& \text { Members. }
\end{aligned}
$$

N.B.-The figures enclosed in brackets give the nuniber of Nos, in each Volume.

Centenary Review of the Researches of the Society from 1784 to 1883
Theobald's Catalogue of Reptiles in the Museam of the Asiatio Society (Extra No., J.A.S.B., 1868)

20
Catalogue of the Mammals and Birds of Burmah, by E. Blyth (Extra No., J.A.S.B., 1875)
Catalogue of Fossil Vertebrata
Catalogue of the Library of the Asiatic Society, Bengal
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Fins, F. General notes on variation in Birds. Calcutta, Journ. As. Soc. Bengal, LXXI, Pt. ii, 1902 (154-184).
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## JOURNAL

OF THE

## ASIATIC SOCIETY OF BENGAL,

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Page 102 column headed 6
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## JOURNAL

## OF THE <br> ASIATIC SOCIETY OF BENGAL, <br> -asoer <br> Vol. LXXI. Part II.-NATURAL SCIENCE.

No. III.-1902.
X.—On a collection of Birds from Upper Burmah.-By Lirut. H. Wood, R.E., and F. Finn, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.
(With Plate VII.)
[Received 30th April. Read 7th May, 1902.]
In the following paper Lieut. Wood is responsible for the general introduction and remarks on localities where the birds were collected; while the birds have been identified and annotated at the Indian Mnsenm by the Deputy Superintendent. Almost all of the specimens have been generously presented to that institution by Lient. Wood, and the accession is a particularly welcome one, as several mare species are represented, such as Trochalopterum erythrolaenia.

The collection is also noteworthy as containing examples of two species new to the Indian fauna, Père David's Babbler (Babax lanceolatus) and the Marsh Tit (Parus palustris). It has been deemed worth while to have these figured, on account of their interest from a distributional point of view. (See Plate VII).

The collection was made in that part of Burmah which is bounded on the west by the high range which divides the Pakokku and Minbu districts from the Chin Hills, and on the east by a parallel range which runs more or less due north and south, distant about 30 miles, and known locally under different names as the Pontang J. II. 16

Nwamatanng, Dudwataung, \&c. Latitude $22^{\circ}$ formed approximately the northern boundary and $20^{\circ} 15^{\prime}$ the southern. A few specimens were however procured outside this tract while marching from Pakokkn, the headquarters of the district of that name and situated on the River Irrawaddy.

The country within the boundaries described above is hilly, the average height of the eastern range being abont 1,500 feet while some of the peaks are higher.

From this range the country is broken up by a number of smaller ranges, each slightly lower till the foot of the western range is reached. Along the foot of the eastern slopes of this range there is nearly always a large river which breaks through the range and then turns immediately due north or south and flows in this direction for some distance till it finds a low place in the eastern range through which it can pass. The Maw, Man, Salin and Mon Rivers are all met in this way. The western range is much higher than those to the east. The average height being about 5,000 to 6,000 feet, while Mount Victoria (the highest peak in Burmah, 10,300 feet) is one of the peaks on the range within the limits. The country is heavily forested except in the valleys of the main streams, where rice is principally grown.

Pakokku, Long. $95^{\circ} 10^{\prime}$, Lat. $21^{\circ} 18^{\prime}$, height 300 feet. The headquarters of the district of that name. It is situsted on the west bank of the Irrawiddy River and is in the dry zone of Upper Burmah. Outside the cultivation which surrounds the town, the country is corered with scrub jungle.

Kanhhı, Long. $95^{\circ} 2^{\prime}$, Lat. $21^{\circ} 17^{\prime}$, height 400 feet. A small village on the Pakokku-Pauk Road; surrounding country scrub jungle.

Pauk, Long. $94^{\circ} 30^{\prime}$, Lat. $21^{\prime} 29^{\prime}$, height about 900 feet. A large village on the Pakokku-Tilin cart-road, situated just to the east of the first high range met with while marching west from the Irrawaddy River. The Yaw River flows about a mile to the east of the village. Ontside the cultivation there is scrub jungle which gradually changes to forest as the hills are approached. It is on the west edge of the "dry zone"

Kyin, Long. $94^{\circ} 18^{\prime}$, Lat. $21^{\circ} 37^{\prime}$, height about 2,000 feet. $\mathbf{A}$ small village on the Pauk-Tilin cart-road, situated to the westward of the first high range which is met with while marching westward from the Irrawaddy River. A small area of cultivation surrounds the village; beyond this is dense forest.

Ta-hnyin-taung, Long. $94^{\circ}{ }^{1} 5^{\prime}$, Lat. $21^{\circ} 37^{\prime}$, height abont 2,500 feet. A spur running westwards from the first high range met with while going west from the Irrawaddy. This high range is known locally.
under a number of different names but it runs more or less along meridian of $94^{\circ} 20^{\prime}$. It is covered with dense forest.

Tilin, Long. $94^{\circ} 8^{\prime}$, Lat. $\mathbf{2 0}^{\prime} 13^{\prime}$, height about 1,500 feet. A large village at the foot of the Chin Hills on the right bank of the Maw River. The cart-road to Gangaw from Pakokku passes through the village. Outside the cultivation the country is covered with dense jungle.

Man, Long. $94^{\circ} 17^{\prime}$, Lat. $21^{\circ} 18^{\prime}$, height about 1,500 feet. A small village on the Pank-Pasok cart-road, situated to the west of the first high range met with while going west from the Irrawaddy. The village is surrounded by dense jungle outside the small patch of cultivation.

Pontaung, Long. $94^{\circ} 18^{\prime}$, Lat. $21^{\circ} 20^{\prime}$, height 1,900 feet. 'The first high range met with while going west. from the Irrawaddy; on the lower slopes the forest is principally bamboo, which gradually changes into timber trees (teak, etc.), as the range rises in height.

Láungshé, Long. $91^{\circ} 10^{\prime}$, Lat. $21^{\circ} 0^{\prime}$, height about 1,000 feet. A large village situated at the foot of the Chin Hills just where the Salin River breaks through. A good deal of rice is cultivated in the valley and it was on the cultivation that most of the birds were shot here.

Kanpetlet, Long. $94^{\prime} 0^{\prime}$, Lat. $21^{\circ} 14^{\prime}$, height 7,000 feet. At this place on the slopes of Mount Victoria the headquarters of the Pakokku Chin Hills are being built. It at present consists of two or three houses, while barracks for about 60 sepoys are being built. Mount Victoria, the summit of which is 10,300 feet, is the highest hill in Burmah and is the culminating point of the high range which runs from Manipur southwards more or less along the meridian of 94. A long spar emanates from the summit running in an easterly direction, and it is on this spur that Kanpetlet is situated. In the valleys the forest is very dense, while on the spurs there are large open spots covered with grass alternating with tracts of fairly open fir forest. Birds labelled Mount-Victoria were shot on the way up to Kanpetlet from Saw, the village at the foot of the spur.

Dudawtaung, Long. $94^{\circ} 18^{\prime}$, Lat. $21^{\circ} 5^{\prime}$, height sbout 2,000 feet. A range of hills about 2,000 feet high ranning north and sonth, the first high one that is met while marching west from the Irrawaddy River. It is covered with fairly dense forest.

Yinkwètaung, Long. $93^{\circ} 58^{\prime}$, Lat. $20^{\circ} 44^{\prime}$, height 5,500 feet. The local name of one of the spurs which run eastward from the high range which forms the boundary between Pakokku district and the Chin Hills. Near the summit the spurs are bare of trees and covered with grass. In the valleys and on spurs below about 5,000 feet there is dense jungle.

Nwamataung, Loug. ${ }^{94}{ }^{\circ} 18^{\prime}$ ', Lat. $20^{\circ} 4^{\prime}$, height about 2,500 feet. A local name of the same range which to the north is known as Dadawtang.

Salin, Long. $94^{\prime} \mathbf{4 4}^{\prime}$, Lat. $\mathbf{2 0}^{\circ} 35^{\prime}$, height 250 feet. A large village on the Salin River about 10 miles on the west of the Irrawaddy River. It is in the dry zone and oatside the cultivation is scrub jungle.

Sidốktaya, Long. $91^{\prime} 15^{\prime}$, Lat. $20^{\prime} 25^{\prime}$, height 2,000 feet. A large village situated at the foot of the Chin Hills on the bank of the river Mon. A large area of cultivation lies to the east of the village, while to the westward dense jungle comes very close.

Dalet Choung, Long. $944^{\circ} 0^{\prime}$, Lat. $20^{\circ} 10^{\prime}$, Leight 300 feet. A river which rises in the Arakan Yomas and flows due sonth reaching the sea between Akyab and Kyaukpyn. The surrounding hills are all densely covered with bamboo jungle.

## Family Oorvidæ.

Urocissa occipitalis. Red-billed Blue Magpie.
T'wo, Laungshé, January 11th, 1902 ; one, Kyin Village, November 30th, 1901.

Dendrocitta rufa. Indian Tree-pie.
One, Laungshé, January 12th, 1902 ; one, Man, December 25th, 1901.

Crypstrina cocullata. Hooded Racket-tailed Magpie.
One, Sidôktaya, February 1tth, 1902.
Garrulus oatesi. Indo-Chinese Jay.
One, Kanpetlet, January 3rd, 1902.
Paros palustris. Marsh-Tit.
One, Kanpetlet, January 14th, 1902.
This . specimen undoubtedly belongs to one of the races of P. palustris. The dimensions are rather large, the length being 4.9 inches, wing $2 \cdot 5$, tail $2 \cdot 1$, bill from gape $\cdot 4$, and shank nearly $\cdot 6$. The colour above is olive grey, or drab; below a dirty drab-white. The cap and nape are glossy black, and the sides of head and neck pure white ; the throat black with white tips to the feathers. The bill and feet are greyish black in the skin.
['The specimen agrees perfectly with some Chinese specimens of P. palustris, recently procured by Captain Walton, I.M.S.]

F'amily Orateropodidæ.
Garrdlax ledcolophos, Himalayan White-Orested Laughing-Thrush.
Two, Laungshé, January 12th, 1902.
Garbulax pectoralis. Black-gorgeted Laughing-Thrush.

One, Dudawtang, December 26th, 1901 ; one, Laungshé, January llth, 1902. The latter has the under-surface buff throughout up to the chiu. Both liave the light tips to the tail-feathers pure white.

Garrulax moniliaer. Necklaced Larghing-Thrush.
One, Ta-hnyin-tanng, December 10th, 1901.
The ear-coverts of this bird are entirely black; tips of tail pure white.

Babax lanceolatus. Pere Duvid's Streaked Babbler.
One, Kanpetlet, January 4tb, 1902.
As this bird does not seem to be well known, I give a description of the specimen. Length about $11 \frac{1}{4}$ inches; wing $3^{\prime} 8$; tail 5 ; bill from gape 1-1; shank at front 1-2.

Plumage striated, with the exception of the visible parts of the wings and tail, which are plain olive, as also the apper tail-coverts. Centres of the feathers above blackish, shading into chestnut on each side, with the outsides edged on the neck with creamy white and on the back with olive. Lores, ear-coverts, and eye-brow, white slightly mixed with black; a strong black moustache running into a mottled black-and-white patch behind the ear-coverts. Under-surface creamy white streaked with black, the black streaks getting finer upwards and fading out on the throat, and becoming bordered with chestnut on the flauks; lower tail-coverts plain buff.

From the descriptions and figures of David and Oustalet (Oiseaux de Chine) J. Verreaux (Nouv. Arch. du Museum, Bull. VII, 1871) and Dr. R. B. Sharpe (B.M. Cat. Birds, Vol. VII.), Bubax lanceulatus would appear to have a uniformly chestnut head, the dorsal plumage edged with grey, not olive, and the ventral surface less stristed than in our hird, in which also the tarsi seem considerably shorter.

At the same time, without specimens for comparison, I do not like to regard the present bird as deserving of specific distinction; if it be so I would propose the name of Babax woodi for it.

Trochalopterdm erythrolema. Hume's Laughing-Thrush.
Two, Yinkwètanng, January 19th, 1902 ; oue, same locality, January 20th, 1902.

Trochalopterom virgatum. Manipur Striated Laughing-Thrush.
One, Kanpetlet, January 3rd, 1902; one, Kanpetlet, January 4th, 1902.

Argya gularis. White-throated Babbler.
Two, Pakokku, November 19th, 1901.
Myiophoneus temminceit. Himalayant Whistling-Thrush.
One, Yinkwètanng, January 27th, 1902.
Lioptila aracilis. Grey Sibia.

One, Yinkwètaung, January 18th, 1902 ; two, January 27th, 1902 ; one without date or locality.

Aegithina tiphia. Coasmon Iora.
One, Pakokku, Norember 21st, 1901 ; one, Pauk, November 27th, 1901 ; one no daté or locality.

Cbloropsis auriprons. Gold-ironted Chloropsis.
One, Ta-hnyin-taung, November 8th, 1901 ; one, same locality, December 2nd, 1901 ; one, samo locality, December 10th; one, Man, December 14th; one, same locality, December 20th; one, same locality, December 24th; one, Dudawtanng, January 7th, 1902.

Chloropsis chlorocephala. Burmese Chloropsis.
One, Ta-hnyin-taung, no date; one, same locality, December 3rd, 1901.

Hypsipetes psaroides. Himalayan Black Bulbul.
One, Yinkwètanng, January 29th, 1902.
Hemixus maclxllandi. Rufous-bellied Bulbul.
One, Yinkwètanng, November 2nd, 1901 ; two, same locality, January 18th, 1902; one, same locality, January 19th; one, same locality, January 27 th ; one, same locality, no date available.

Alcurus striatus. Striated Green Bulbul.
One, Yinkwètanng, January 20th, 1902.
Moipastes burmanicus. Burmese Red-crested Bulbul.
Oue, Tilin, December 12th, 1901.
Xanthixus rlavescens. Blyth's Bulbul.
Oue Kanpetlet, January 4th, 1901.
Otocompsa flaviventris. Black-crested Yellow Bulbul.
One, no data; one, Ta-hnyin-taung, December 3rd, 1901 ; one, same locality, December 6th.

## Family 8ittidæ.

Sitta himalayensis. White-tailed Nuthatch.
One, Yinkwètanng, January 20th, 1902.
Sitia nagaensis. Austen's Nuthatch.
One, Kanpetlet, January 4th, 1902.
Sitta frontalis. Velvet.fronted Blue Nuthatch.
Two, Ta-hnyin-taung, December 7th, 1901 ; one, Man, December 25th.

## Family Dicruridæ.

Dicrurus ater. Black Drongo.
One, Pakokku, November 23 rd , 1901 ; a decidedly small specimen. Dicruros cineraceus. Grey Drongo.

One, Ta-hnyin-taung, December 8th, 1901.
Bhringa remiper. Lesser Racket-tailed Drongo.
One, Ta-hnyin-tanng, December 8th; one, same locality, December 10th.

Dissemcrus paradiseds. Larger Racket-tailed Drongo.
One, Ta-hnyin-taung, December 5th, 1901 ; one, no locality.

## Fnmily Lanidæ.

Lanius colldriotdes. Burmese Shrike.
One, Pakokku, November 19th, 1901 ; one, Yinkwetanng, February 2nd, 1902. The first specimen has the two outer pairs of tail-feathers white with black shafts, and the next pair white with a long black patch on the inner web, the rest being black tipped with white; the underparts are also very pale, creamy white in fact. The dimensions are also smaller than those given in the Fauna of British Indin, Vol. I, p. 463. The crown and nape are dark ashy, and the forvhead and lores black. The second has the tail normally coloured, and pale fulrous under-parts.

Tephrodornis pelvicus. Nepal Woud-shrike.
One, Ta-hnyin-taung, December, 1901.
Pericrocotus fratercolus. Burmess Scarlei Minivivet.
One, Ta-hnyin-taung, November 4th, 1901 ; two, same locality December 4th; one, Pank, November 27th, 1901; one, Mt. Victoria, December 30th ; one, Kanpetlet, January 4th, 1902.

Pericrocotos bretirostris. Short-billed Minivet .
One, no locality or date ; one, Kanpetlet, Jannary 4th, 1902.
Pericrocotos prregrinos. Small Minivet.
Three, Man, December 22nd, 1901 ; one, Pank.Tilin Road, November 29th, 1901.

## Family Oriolidæ.

Oriolds tenuibostris. Burmese Black-naped Oriole.
One, Pank, November 27th, 1901.
Oriolus melanocephalus. Indian Black-headed Oriole.
One, Ta-hnyin-taung, December 4th, 1901; one, same locality, December 8th ; one, Pakokkn, 22nd November ; one, Tanksoh, February 9th, 1902; one, Man, December 22nd, 1901; one, Dudawtang, January 7th, 1901.

## Family 8turnidæ.

Gracolipioa bormanioa. Jetdon's Mynah.
One, Pakokku, November 20th, 1901 ; one, no date.

The birds referred to Sturnia nemoricola in J. A.S. B. 1900, pt. II. p. 116 are, I find, of this species; at least the four specimens kindly presented by Colonel Bingham to the Museum belong to it.

## Family Muscicapids.

Cyornis robecoloides. Blue-throated Flycatcher.
One, Ta-hnyin-tanng, December 2nd, 1901 ; one, Poptanng, Febrnary 2nd, 1902.

Colicicapa ckplonensis. Grey-headed Flycatcher.
One, T'a-hnyin-taung, December 8th, 1901.
Rhipidora albiprontata. White-browed Fantail Flyfatcher.
One, Pakokkn, November 20th, 1901.

- Family Turdids.

Pratincola caprata. Common Pied Bush-chat.
Three, Pakokku, November 19th, 20th and 21st, respectively; one, Laungshe, January 12th, 1902.

All have the black plumage fringed throughout with fulvous,except the bird killed on November 21st, which shows no such edgings at all except a few barely perceptible specks on the belly.

Copsychus saclaris. Magpie-Robin.
One, Pakokku, November 21st, 1901.
This is by plumage a female, and has the fulvous parts of the under-surface finely cross-barred with a lighter shade.

Petrophila erythrogastra. Blue-headed Rock-Thrush.
One, Kanpetlet, January 3rd, 1902 ; two, same locality, following day.

Petrophila solitaria. Eastern Blue Rock-Thrush.
One, Pakokku, November 11th, 1901.
Not typical, but only showing a little chestnut on the undertail coverts.

Pettophila cyanus. Western Blue Rock-Thrush.
One, Dudawtanng, January 7th, 1902; one, Laungshé, January 11th; one, Nwamatang, February 2nd, 1902. The last slows one red under-tail covert.

Oreocincla dauma. Small-billed Mountain-Thrush.
One, Dudawtanng, January 8th, 1902.

## Family Fringillids.

Passer flateolus. Pegu House-Sparrow.
One, Pakokku, November 2lst, 1901 ; one, same locality, Novem. ber 23rd.
1902.] H. Wood \& F. Finn-Birds from Upper Butwah.

# Family Nectariniida. 

Arachnecettra 1 siatica. Purple Sun-bird.
One, Salin, February 4th, 1902.

## Family Picidm.

Grcints occipitalis. Black-naped Green Woodpecker. One, Pakokku, November 19th, 1901 ; one, Man, December 24th. Hypopicus hyperythros. Rufous-bellied Pied Woodpecker. One, Kanpetlet, January 4th, 1902. Iyngipicus canicapillus. Burmese Pigmy Woodpecker.
One, Ta-hnyin-tanng, December 4th, 1901 ; one, same locality, December 7th; one, Dudawtaung, January 7th, 1902.

Tiga shorei. Himalayan Golden-backed Three-toed Woodpecker.
Two, Ta-hnyin-taung, killed on December 5th and 7th, respectively. Both have the rudimentary hallux previously described by me as characteristic of this species. (J. A. S. B. 1899, pt. II. p. 242).

Chrisocolaptes autticristatus. Tickell's Golden-backed Wóodpecker. One, Ta-hnyin-taung, December 11th, 1901.
This specimen, a male by plumage, has the red of the rump running right up to the shoulders, but shows none on the wings or scapulars.

## Family Oapitonidæ.

Thereicerti lineatos. Lireated Barbet.
Three, Ta-hnyin-taung, December 2nd, 4th and 5th, respectively; one, Pontang, December 21st.

Ctanops asiatica. Blue-throated Barbet.
One, Ta-hnyin-taung, December 4th, 1901.

## Family Ooraciidæ.

Coracias afpinis. Burmese Roller.
One, Pakokku, November 20th, 1901 ; two, Laungshé, January 12th, 1902 ; one, Man, December 26th, 1901.

## Family Meropidæ.

Merops viridis. Common Indian Bee-eater. One, Pakokku; November 20th, 1901 ; one, no date. Both very rufous on head, nape and apper back.

## Frmily Alcedinida.

Certle varia. Indian Pied Kingfisher.
One, Pakokku-Pagan Road, November 25th, 1901.
J. I. 17

Halcyon smyrnensis. White-breasted Kingfisher.
One, Pakokkn, November 20th, 1901 ; one, Kanhla, Norember 21st ; one, Laungshé, January 12th, 1902.

## Family Bucerotids.

Anthracoceros albirostris. Indo-Burmese Pied Hornbill.
One, Dalet Choung, February 27th, 1902. A smull specimen, but rather over the measurements given in the Fauna of British India for the smaller race of this species.

## Family Upupids.

Upupa indića. Indian Hoopoe.
One, Ta-lhyin-tanng, December 6th, 1901.

## Family Cuculids.

Rhopodytis tristis. Large Areen-billed Malkoha.
Two, Kyin Village, November 30th, 1901 ; two, of which the data are illegible, all the specimens being very greasy, and mostly unfit to keep. All possess oyelashes, although the genus is stated (F.B.I. Birds, Vol. III, p. 280), to want these.

Centropus binensis. Oommon Ooucal or Orovo-Pheasant.
One, Man, December 6th, 1901.

## Family Psittacidæ.

Palmornis torqjatus. Roseringed Paroquet.
One, Pakokku, November 22nd, 1901; one, Pauk-Tilin Road, November 29th.

Palizornis pasciatos. Red-breasted Paroquet.
One, Pakokku, November 21st, 1901.

## Family Asionidæ.

athinfr heama. Spoted Owlet.
One, Pakokku, November 19th, 1901.

- Family Falconidæ.

Spilornis chirbla. Orested Serpent-Eagle.
A pair of feet with a few feathers attached clearly belong to this species.

Butabtur tersa. White-eyed Buzzard-Eagle.
One, Pakokku-Pauk, November 24th, 1901.
Haliastur indes. Brahminy Kite.
One, Pakokkn,:November 22nd, 1901.
1902.] H. Wood \& F. Finn-Birds from Upper Burmah.

Faloo jogaer: The Laggar Falcon.
One, Pakokku, November 22nd, 1901.
A beantiful adult example of this species.
Tinnunoulus alaudarius. Kestrel.
One specimen without data.
Microhierax edtolmus. Red-legged Falconet.
One, Ta-hnyin-taung, December 9th, 1901.

## Family Phasianidm.

Phasianos homis. Mrs. Hume's Pheasant.
One specimen obtained at Kanpetlet, January 2nd, 1902. This is by plumage a male, and is of the typical Manipur form with steel-blue rump-feathers narrowly edged and barred with white. Only the frout of the neck, however, is steely-black, the sides and back of the neck being steely-grey, contrasting with the colour of the throat and breast.

Gennious sp.?
One female specimen obtained at Yinkwetaung on February 2nd 1902, most closely agrees with Mr. Oates' description of what he calls (Manual of the Game-Birds of India, Vol. I, p. 365,) the North-Arrakan Silver Pheasant; but it has the two centre pairs of tail feathers chestnut with dark brown pencillings, the rest being black with chestnut pencillings progressively diminishing to the outermost feathers.

Abboricola intermbdia. Arrakan Hill Partridge. One, Yinkwètaung, January 27th, 1901.

Family Oharadriidæ.
Hoplopteros ventralis. Indian Spur-winged Lapwing.
One, Kanhla, November 24th, 1901.
Abgialitis dubia. Little Ringed Plover.
One, Pakokka, November 11th, 1901.
XI.-Notes on Animals observed at the Alipore Zoological Garden, No. 2. A brief note on the "Doctrine of Telegony" with reference to facts observed in the Zoological Gardens, Oalcutta.-By Rai R. B. Sanyal, Bahadur, Superintendent.
[Received April 20th. Read May 7th, 1002.]
The doctriue of telegony as it is understood in Europe and Australia is practically nnknown in India.

There is a vague notion among some of the cattle-breeders, especially in parts of Bengal and Behar, that when first covered, a heifer ought to have a high-class bull for its mate.

Be that as it may, no scientific experiments, as far as'I am aware have ever been undertaken in India to test the correctness or otherwise of the doctrine to which I have alluded.

I have ventured to bring the following facts to the notice of the Society, not so much for the sake of throwing any light on the subject, especially as Professor Cossar Ewart has already, after a series of careful experiments, proved that there is no equiue telegony, bat as they were the results of experiments in which a most interesting species of wild cattle was concerned.

In 1898 the Zoological Gardens, Calcutta, came in possession of a small herd of Bantengs (Bos sondaicus Müller and Schleg.) a species of wild cattle which mostly inhabit the plains of Burma and the Malay Peninsula and the islands of Borneo, Java, and Bali. One of the heifers was covered by an ordinary country male, which, though not a Brahmin bull as it is ordinarily understood in India, was a sturdy young bull of a very superior character. The offspring of this pairing was a healthy brindled male calf, which already promises to be a fine bull. The opportanity which this occurrence presented of examining the theory of telegony by father experimeats was duly taken advantage of, and the dam of the brindled calf was mated, in proper time, with a healthy bull of its own species. The offspring of this union was a pure bred Banteng calf without any traces of the previous strain. The same cow has had a second pure-bred calf lately.
XII.-Note on a disputed point in the Life-History of Helopeltis theivora. -By Harold H. Mann, B.Sc.
[Received April 80th ; Read May 7th, 1902.]
As is well known, Helopeltis theivora,-the "Tea Bug of Assam" as it was called by Mr. Wood-Mason, the "Mosquito Blight" as it is generally termed-is the most alarming pest which has yet appeared on tea cultivated in India. It causes the more disquietude as it tends to increase as years go by,-fluctuating according to season, but generally increasing, and invading new areas. Daring 1901, which was a particularly bad year in almost all districts subject to the pest, a very - moderate estimate gives seven lakhs of rupees as the nett loss to the Indian Tea Industry from this cause alone.

Though we have a knowledge, thanks to Peal,* Wood-Mason, $\dagger$ Dadgeon, $\ddagger$ Watt§ and Green, $\mathbb{T}$ of the general life-history of the insect from the egg to the adult stage, yet there remain several points which have been very obscure. Of these the most important is the question as to what becomes of the insect during the time when it apparently disappears from the tea bush. So complete is this disappearance, as a rule, that most planters living in affected districts in North-East India have hardly ever seen a single insect during January, February and March. Mr. Dudgeon has suggested that it hibernates in the ground, but offers no evidence for his position, and declares frankly that he had not been able to verify his conjecture. It has also been supposed that hibernation takes place in water and swamps, but again, not a scrap of evidence in favour of the view exists, and the same may be said of the very general idea among tea planters that in the cold weather the Helopeltis goes on to varions jungle trees.

With a view of acquiring information on this point, I have spent a considerable time in January, February and March of the present year in two of the districts most affected by the pest-the Darjeeling-Terai, and Cachar-at a period when the insect was supposed to be hiberinating. As a result I have come to conclusions of which the following is a summary.

The Helopeltis theivora can be found on the tea bush in every stage of development during every period of the year. The cold weather

[^136]kills off the bulk of the mature insects and practically all the larva, but at all times sufficient remain to carry on the pest to the next season, and in addition the bushes are full of eggs. These latter were found not only in the usual position on the young shoot, but also at a much lower part of the busla than has previously been noticed, embedded in the asaal fashion in the midrib of the large mature leaves. The larve were found on 1lth January in small numbers on unpraned and sheltered bushes, then forming about $2 \frac{1}{2}$ per cent. of the total number of insects caught. By 12th February, however, a very different proportion of adults and larve were obtained, and now instead of $2 \frac{1}{2}$ per cent. the larvo formed 80 per cent. of the total catch. This proportion was approximately kept ap during several weeks from that date. The difficulty in obtaining evidence of their presence at this time is due to their attacking almost entirely the slightly shaded young leaves, the surface growth being rarely injured in the early part of the year.

The insect could, further, not be found on any jungle plant at this time. Though jungle of very miscellaneous character was system atically searched both by myself and by the children who are regularly catching the insect, and who are extremely expert at the work, not a single one was discovered in any form.

It appears, therefore, evident that there is, from present knowledge, no need to assume a hibernating stage at all for Helopeltis theivora, and that the insects remain and can be found in every stage of growth from the egg to the mature female full of eggs, in the tea-bush, at all times of the year. Whether the egg found low down in the bash, as described above, can be considered as a special hibernating egg, I can hardly say, but there certainly was no difference in structure or in method of deposition from that usual during the regular season. Inasmuch, then, as there is absolutely no evidence of the cold weather being passed by the insect in the soil, in water, or on other trees, and furthermore, as carefal observation can always detect the insects and their eggs on tea bushes in affected districts, there is no need to imagine any hibernation stage at all in India, and beyond a certain retardation in development due to the reduced temperature, the reproduction of the insect may be considered to take place in a similar manner throughout the year, and to be carried out on the tea bush itself during the whole period.

These observations have a practical interest, and may lead to a sound method of attempting to deal with the pest, and experiments in this direction are now in progress.

# XIII.-On a pair of Abnormal Deer Horns.-By F. Fins, B.A., F.Z.S., Deputy Superintendent, Indian Museum. 

[Received May 28th; Read Jane 5th, 1808.]
I am indebted to His Highness the Maharajah of Cooch Behar, and to Mr. David Ezra (who procured me the loan of them) for the opportunity of exhibiting the very remarkable pair of antlers figured below.

As will be seen they resemble those of the Sambhar (Oervus unicolor) in general appearance and in their rough and deeply furrowed surface; but the terminations are much more branched than is usual in this species, which has only two terminal tines. In the present specimen there are no less than five terminal points, and the two horns are not at all alike, the branch representing the longer terminal tine in the normal horn being palmate or flattened in the left horn of this pair. (See figure on page 135.)

The number of points in this specimen no doubt accounts for the sintement that was made to me by Mr. Erra, that the amimal which bore the horns was a hybrid between the Sambhar and the Barasingh (Cervus duvauceli). But in the absence of any information as to the appearance of the rest of this stag's body, I am inclined to put the specimen down as an abnormal Sambhar, some Sambhar horns in the collection exhibited in the Mammal Gallery also showing sapernu. merary points, though not to this extent. A very fine head in the Asiatic Society's collection, alluded to by Mr. W. L. Sclater in his pamphlet "Notes on Indian Horned Game," has nine points, both terminal tines of the right horn and the anterior or outer terminal tine of the left, being bifurcated.

Another has a third terminal tine on the right horn, directed downwards and backwards.

A third has a snag to the brow tine of the right horn, the terminal tines of the beam of which are very small.

A fourth has three small snags at the base of the beam of the right horn, and a small accessory snag on the large outer terminal tine of the left.

It is noteworthy that in all these cases the excess of points affects the right horn; but in one specimen, the single extra point, a very small one, is on the inner terminal tine of the left.


Mr. Ezra informs me that the present animal was killed in the Maharajah's territories six years ago.
XIV.-Notes on Animals observed at the Alipore Zoological Gardem. No. III. Melanic specimens of Common Palm Squirrel (Sciurus palmarum, Linn.)-By Rai R. B. Sasyál Bahadur, Superintendent, Alipore Zoological Garden.
[Read June 4th, 1902.]
Squirrels, it is well known, are subject to great diversity in size, form and colour. The upper surface of the body of the large Indian Squirrel (Sciurus indicus, Erxl.) is usaally of a maroon red colour, but darker, almost black individuals with thicker coats are not uncommon. Apart from their seasonal dimorphism, no two specimens of the Sciurus bicolor of Sparrmann are alike; and it is no wonder that the species proved a puzzle to Desmarest, Horsfield, Is. Geoff. St. Hilaire, and other naturalists of classic repate, each of whom described it under a different name. Palm Squirrels (Sciurus palmarum, Linn.) so common and abandant in Bengal, North-Western Provinces, the Panjab, and Central India, are also remarkable for great diversity of form and colour, and this tendency to variation in colour, which is so characteristic of the genus, has led, in the case of the Palm squirrels, to an increase in the deposition of pigment, resulting in the production of a definite melanic form.

Melanism as a common colour phenomenon is well known to naturalists, but as far as I remember, I have seen no case of complete melanism in squirrels recorded in the literature of the genus, and I have therefore ventared to exhibit to the Society a melanic speoimen of a Palm squirrel which lately came under my observation. The following notes sent to me by Haji Mahammud Mustapha Khan of Aligarh, the donor of the animals, will, I hope, be found interesting :
"Some time in December last [1901], so far as I can recollect, my bearer came to me in Aligarh and said he had seen four or five black squirrels in the jungle at Burhegaon. Burhegaon is the headquarter village of my estate, in Tahsil Atrauli in this district, and lies abont 25 miles east from Aligarh. I told him to try and catch them, and explained to him how best to do it by the usual basket snare. About a fortnight later, when I had gone to stay for a time at Burhegaon, he brought one of the squirrels to me. A couple of weeks after that he brought a second one. So far as I can judge they seem to be J. II. 18
a male and a female. There was a third, he told me, which eluded capture on the second occasion. They seemed to me uncommon, and remembering to have heard, at a District Board Meeting, that the Secretary of the Zoological Gardens at Alipur would be glad of help in procuring interesting additions to his family, I mentioned the matter to Mr. Brownrigg, then Collector of the District. I have always taken an interest in animals, but had never seen any black squirrels like these before. I am told that there are still, perhaps, three or four more at large in the jungle where this pair came from, but they are now very wild, and do not allow any one to approach them. I am also informed, by those who have seen them, that these black squirrels live apart by themselves on separate trees, and do not associate with their less distinguished grey-mantled brethren. The boycott is probably mutual. I have no reason to think that they came to Burhegaon from any outside source. So far as I can see they are a freak of nature."

It would be interesting to observe other forms of animal life in the jungle in which these melanic squirrels were found, and to note whether there is any preponderance of black in them also. The fact, if proved in the affirmative, will give additional support to the theory of colour change induced by environmental causes.

This is, however, not the first time that melanic squirrels are exhibited in the Calcutta Zoological Garden. In 1877, a couple of them were obtained from Assam, and lived for abont a jear.

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On Tidal Periodicity in the Earthquakes of Assam.-By R. D. Oldham, Superintendent, Geological Survey of India.

(Communicated by permission of the Director of the Geological Survey of India). [Received July 21st, Read Angast 6th, 1902.]

## I.-Introductory.

Ever since earthquakes were first studied there have been repeated and persistent attempts to trace the action of the sun, the moon, and the planets in producing them, or at the least in influencing their relative frequency. Mallet, from the discussion of his great earthquake catalogue ${ }^{1}$, found that there was a marked periodicity, which caused earthquakes to have a maximum frequency towards the end of each century, with a minor, but nearly as great, maximam a little before the middle ; and, more recently, Dr. A. Cancani has remarked a similar peculiarity in the earthquakes of Italy. 2 Periods of this length, however, have no direct and obvious connection with the movements of the heavenly bodies, and more interest attaches to variations of shorter periods. Perrey, and following him Mallet, ${ }^{8}$ believed that they had detected such variations, and that the frequency of earthquakes showed a relation to the distance of the sun and the moon from the earth, and to their relative positions in the heavens, at the syzygies and quadratures. As a result of this careful investigation it had been generally accepted that earthquakes were more frequent during winter than in summer and during the night than during the day.

In 1889 the subject was again attacked by M. F. deMontessus de Ballore, ${ }^{4}$ who started by preparing a catalogue of 45,000 earthquakes. From this he proceeded to discuss the diurnal periodicity, and found that though each individual list and record showed a distinct periodicity, there was no agreement among them and that the larger the number of shocks taken the more uniform became the resulting distribution of earthquakes throughout the day and night. In a subsequent paper ${ }^{5}$ he applied the same treatment to the seasonal periodicity with a similar result and came to the conclusion that there was no real variation in the frequency of earthquakes, which he regarded as a purely geological phenomenon, unaffected by either astronomical or meteorological influences.

About the same time Dr. Davison began his investigation of

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earthquake frequency, and in a laborious paper, ${ }^{\text {l }}$ on the annual and semiannual periodicity of earthquakes, came to the conclusion that, treating each region separately, there was a distinct variation in frequency, which was in excess of that which might be expected if the occurrence of earthquakes was in no way connected with the seasons.

From this brief review it will be seen that the question, of whether earthquakes are at all affected by extra-terrestrial influences, is at present an open one, and for this reason I made every effort, after the great earthquake of 1897, to obtain the fullest possible record of the extremely numerous after-shocks, thinking that if there was any external cause at work it should be especially easy to trace at a time when, and in a region where, the earth's crust was evidently in an extremely unstable condition. The discussion of these records is not complete but in the case of one of them it has been completed, so far as one particular phase of the frequency is concerved, and the results obtained appear to be of sufficient interest to justify some notice of them.

In July of 1897, Mr. T. D. LaTouche, who was then in Shillong reporting on the results of the earthquake, constructed a seismograph on the duplex pendulum system, which was set up by the Executive Engineer, and from which continuous records have been taken ever since. The instrument, like all seismographs, is far from a perfect one, it does not record many shocks. Which can be distinctly felt, and it does not record the time, yet the records are of great value. In the first place we know that every shock recorded attained a certain standard of range of motion of the wave particle and of violence, if such a word may be applied to what in many cases are merely slight shocks, and that all the shocks exceeding this standard are recorded. The absence of antomatic time record is more serious, but as the time of the shock was, in every case, recorded by the observer we may take it that there is no very serious error or omission in this respect. Every shock recorded represents one at approximately the time given, and the only canse likely to affect the periodicity is a possible error in the case of the night shocks: it is possible that the instrument may at times have registered a shock while the observer was asleep, and the record afterwards referred to one, felt when he was awake, which did not affect the instrument. The uncertainty due to this cause is, however, slight, as the gentlest shock registered by the instrument is sufficiently strong to usually awake a sleeper.

From this instrument we have received records from August 1897, but those discussed as yet only extend to the end of 1901; so far they have only been examined with a view to the hourly variation in

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frequency, and instead of contenting myself with a mere record of the relative frequency of the earthquakes, as has usually been done in the past, I have made an attempt to see whether there is any trace of extraterrestrial influence in this frequency.

As pointed out by me in a short note published in $1901^{1}$ any effect which the attraction of the sun and the moon may have, will be most effectively, if not solely, exerted by the Tide-producing forces they set up, and that, to trace the effect of these, it is not sufficient to merely tabulate earthquakes by the hours in which they occur. The time at which the tide-producing forces reach their maximum depends on the declination of the sun and the moon, that is to say it is subject to seasonal variations, and to determine whether these forces have any influence it is necessary to classify the records, according to the position of the sun or moon with reference to the equator, and then examine the frequency to see whether there is any variation which can be correlated with the tidal forces.

## II.-Statement of the Problem.

There is neither space nor occasion to recapitulate what is known of the theory of the tides, buta brief account of the form of the tideproducing influence of the attraction of the sun and the moon is desirable, that the nature of the effect to be looked for may be clearly understood, and the review will be simplified by the fact that we need not consider the theory of the tides themselves, but merely of the stresses to which they owe their origin. Omitting all reference to the why, it will be sufficient to point out that the effect of the attraction of a satellite-aud in this connection the sun is regarded as a satellite equally with the moon-is to produce a stress equivalent to an upward force at the spot which is at any moment directly under the satellite, and at the antipodes of that spot. Along the great circle half way between these two spots, separated from each by $90^{\circ}$ of aro, there is a force acting downwards towards the centre of the earth, and equal in amount to one half of the upward force. At spots between these two points and the great circle just referred to, the stresses produced are equivalent to forces acting in directions away from the vertical, and along a circle which is distant about $54^{\circ} 44^{\prime} 14^{\prime \prime}$ from the spots where the satellite is in the zenith or nadir the force acts horizontally.

Now if we suppose the force exerted at any point to be resolved into two separate forces, one acting vertically and the other horizontally, then the vertical force attains its upward maximum where the satellite is in the zenith or nadir, and its downward maximam along the great circle intersecting the line joining these two points and lying at right

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angles to it. The horizontal force attains its maximum along two circles distant about $54^{\circ} 44^{\prime}$ from the zenith and nadir respectively, the direction being towards the satellite in the former case and away from it in the latter. If then the tidal stresses have any influence in determining the time of origin of earthquakes we should look for the effect in connection with these circles.

Both sun and moon, as is well known, vary their position in the heavens, travelling alternately north and south of the equator, the sun moving to about $23^{\prime}$, and the moon to about $26^{\circ}$, from it. From this it follows that neither can ever be in the zenith of any spot distant more than $26^{\circ}$ from the earth's equator, that is in more than $26^{\circ}$ of latitude either north or south, and no spot situated outside those limits can ever experience the maximum upward force. Within those limits, at either one or two periods in each year, when the declination of the sun and the latitude of any given place are the same in amount and sign, the maximum upward force, due to the sun, will be experienced at midday and midnight; and similarly in each lunar month there will be either one or two periods at which the maximum upward force will be experienced, when the moon is either overhead, mid-moon-day, or nnderfoot, mid-moon-night. Outside the limits of the two $26^{\circ}$ parallels, and within them at all times when the declination of the sun or moon is different in amount or sign from the latitude, the maximum upward force will not be experienced, but, as the earth revolves on its axis, the circles of maximum horizontal and downward force sweep over its surface, and pass any given place at an interval, before and after the meridian passage of the satellite, which depends on the declination of the satellite at the time and the latitude of the place.

From these considerations it will be seen that, before discussing the frequency of earthquakes with reference to the tidal stresses, it is necessary to group them according to their place of origin, and then see whether, for any one district, there is a connection between the relative frequency of earthquakes and the times of passage, over the epicentre, of the circles of maximum tidal force.

One method of discovering whether there is any such connection would be to calculate for each, earthquake the exact time which separated the time of its origin from that of the passage of each of the circles of maximum tidal force, and then to classify the records according to these intervals, and see whether there was any preponderance of earthquakes at or about these times. The process would be a laborious one, and, in view of the want of exact accuracy in the times, did not seem worth going through, as a result within the limits of accuracy of the records can be obtained in a simpler manner.

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We may assume that the epicentres of the earthquakes now ander consideration all lie in $26^{\circ} \mathrm{N}$. Lat., without introducing any material error, and, calculating for that latitade the time intervals, which elapse between the meridian passage of the satellite and the passage of the tidal circles, we obtain, for extreme and mean values of declination the intervals given in the tabalar statement below, 1 where 0 h represents the lower, and 12 h . the upper, meridian passage, or midnight and midday in the case of the sun.
I.-Table showing the times of passage of circles of maximum horizontal and vertical Tide-producing force; calculated for Lat. $26^{\circ} \mathrm{N}$.

| Deel. | Hor. force, Direct. | Vert. force, Downward. | Hor. foroe, Indirect. |
| :---: | :---: | :---: | :---: |
| $\begin{array}{r} 26^{\circ} \mathrm{N} . \\ 9^{\circ} \mathrm{N} . \\ 0^{\circ} \mathrm{C} \\ 9^{\circ} \mathrm{S} . \\ 260^{\circ} \mathrm{g} . \end{array}$ | 12 h. $\pm$ <br> h. m . <br> 4.15 <br> 3-31 <br> 2.59 <br> 2.14 | $0 \mathrm{~h} . \pm$ <br> h. m. <br> 4.38 <br> 5-34 <br> 6 -0 <br> 6.26 <br> 7.22 | $\begin{gathered} 0 \mathrm{~h} . \pm \\ \mathrm{h}_{\mathrm{L}} \mathrm{~m} . \\ \hline \mathbf{2 . 1 4} \\ \mathbf{8 . 6 9} \\ \hline 8.81 \\ 4.15 \end{gathered}$ |

From this table it is obvious that, if the total number of shocks is divided into three groups, according to the position of the sun, the first comprising those which occurred when the sun was more than $9^{\circ} \mathrm{N}$., the second when its declination did not exceed $9^{\circ} \mathrm{N}$. or $S$. and the third when the declination was more than $9^{\circ} \mathrm{S}$., then in the first gronp the effect of the horizontal force must be looked for between $3 \frac{1}{2}$ and 4 hours before and after midday, and within two hours on each side of midnight; in the second group the effect is to be looked for between 3 and $3 \frac{1}{2}$ hours on either side of midnight and midday; while in the third the condition will be the same as in the first, with the substitution of midnight and midday. Moreover, as the effect may be due rather to the rapidity of changes in the amount, than to the actual amount, of the farce exerted, the horizontal force may have but small influence when the passage of the circles takes place at less than two hours on either side of the meridian passage, that is to say, when the intersection of the circles is oblique, and the rate and range of change in the amount of force is less than when the passage takes place at a greater time-interval than 2 hours from the meridian passage. This, combined with the much greater length of time during

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which the interval exceeds three hours, shows that in a general list of all the shocks the effect must be looked for between 3 and 4 hours on either side of midday and midnight. Further, as it is a common phenomenon in nature that the maximum of effect lags behind the maximum of canse, it may be that the effect will not be found between 3 and 4 hours on either side of the meridian passages, but at some time after that epoch. Another effect which may be looked for, which follows from the consideration of the greater efficiency of the force when its rate of variation is greater, is that we may expect the number of shocks recorded during the day to be proportionately greater when the sun is more than $9^{\circ} \mathrm{N}$., that is during the summer, and the night shocks to be proportionately more numerous during the winter, when the sun is more than $9^{\circ}$ South of the equator.

There is another supposition which must also be tested, that the effect, if any, of the tidal forces is not to be looked for in connection with the times when they attain their maximum, but with the times at which the rate of change, of amount and direction of the forces, is at its maximum. For any particular place the rate of change always reaches its maximum at 3 hours before and after the meridian passage, but along a great circle, passing through the place of observation and the place where the satellite is in the zenith, the maximum rate of change is at $45^{\circ}$ from the latter, and it will be useful to see what is the time interval for different declinations at which a circle $45^{\circ}$ distant from this spot passes the place of observation. The result is given in the following table.
II.-Times of passage of circles of maximum rate of change of the Tideproducing forces calculated for Lat. $26^{\circ} \mathrm{N}$.

| - Deel. | Direct. | Indirect. |
| :---: | :---: | :---: |
|  | $\underset{\text { h. m. }}{\text { 12h }}$. | $0 h \pm$ h. m. |
| $26^{\circ} \mathrm{N}$. | 8.22 | h. m. |
| $9^{\circ} \mathrm{N}$. | 2.56 | 1.56 |
| $0^{\circ}$ | 2.33 | 2.88 |
| $9^{\circ} \mathrm{S}$ | 1.56 | $2-56$ |
| $26^{\circ} \mathrm{S}$. | - | 3.22 |

It must be distinctly understood that the times given in this table are not those at which the rate of change is actually greatest, but those at which the rate is greatest, as measured along a different circle to the east and west one, along which the place of observation travels. In the solitary case where this place and the satellite are both on the equator the two agree, and in no other ; but the table is useful, for the closer the

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value in the table approximates to 3 hours the greater is that rate of change, and the closer it lies to 0 h . or 12 h . the lesm is the rate of variation of the tide-producing forces.

The passage of the circles of maximum vertical force is not subject to the same changes as that of the other circles, and never varies more than 1 h .22 m . from six o'clock; the effect of this force must therefore be looked for about that time in the morning and evening or somewhat later.

Finally, it is necessary to notice one objection, which might be raised to the preceding passages, that the effect is not necessarily to be looked for at any fixed time before or after the meridian passage of the satellite, bat that, for each place, there will be something equivalent to what is known as the "establishment" of a port in the case of marine tides. The objection, however, is not valid, for in this case we have not to do with free travelling waves, like that of the tides, which take a greater or less time to travel from the place where they originate to the place where they are felt, but with the direct effect of the stresses which produce the waves. These depend solely on the latitade of the place and the declination of the satellite, and for them there is nothing in any way analagons to the "establishment" to be considered.

## IIl. Discubsion of the Data.

After this preliminary exposition of what is to be looked for, we may pass on to a consideration of the results obtained. In the record discussed there are contained 1274 distinct shocks, and, on counting these, it was found that, in each hour of the twenty-four, the number of shocks recorded was as given in the tabular statement No. III, where all shocks recorded from 0 h . to 0 h .59 m . are placed under 0 , those between l h. and 1 h .59 m . under 1 and so on.

The most casual inspection of this table shows that the shocks are not at all aniformly distribated daring the twenty-four hours, and that there is a great preponderance during the hours preceding midnight, with a lesser increase towards 6 a.m. It may also be noted that. the night shocks seem more numerous when the sun is more that $9^{\circ} \mathrm{S}$ and the day shocks when it is more than $9^{\circ} \mathrm{N}$, but no proper comparison is possible on account of the difference in the total number of shocks in each line. For comparison they mast be brought all to the same ratio, and this may be done, either by calculating the percentage of the total number of shocks recorded in each hour, or more simply by dividing each figure by the mean value for the line; this gives a result showing the proportion of the number of shocks recorded in each hour to the average number for one hour. In this way we get the result shown in the next tabular statement.
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Here we again see that the day shocks are proportionately more numerous when the sun has declination of more than $9^{\circ} \mathrm{N}$. than when the sun is more than $9^{\circ} \mathrm{S}$. of the equator, and that in the latter case the night shocks are proportionately more numerous than in the former. It is also evident, from the irregularity of distribution from hour to hour, that the number of shocks is not enough to give a near approach to the true curve, when plotted directly, and a process of smoothing has to be adopted. This has been done by adding together the number of shocks recorded during each group of three successive hours and, by regarding them as grouped round the centre of the middle hour, obtaining a fresh series of hourly means, from which a great deal of the irregularity of the curve has disappeared. The result is represented graphically in Fig. 1, so far as the shocks which occurred when the sun was more than $9^{\circ}$ north and south of the equator respectively.

From this curve it will be seen that as regards the shocks occurring about two hours before midnight there is little difference, but that for the rest of the twenty-four hours the curve for south declination is steadily above that for north declination throughout the twelve hours of the night, and below it for the day. Moreover there is a distinct maximum in the earthquakes recorded round three hours after and two hours before midnight, while the earthquakes recorded near midnight are much more frequent than when the sun was more than $9^{\circ}$ north of the equator. Turning to the shocks recorded when the sun was north of the equator, not only are they proportionately more numerous, than when it was south but there is again a distinct pair of maxima, shortly before and three hours after midday. Among the shocks recorded when the sun was within $9^{\circ}$ of the equator we have maxima distinctly marked at about 5 hours after midnight and midday, another at about 2 hours before midnight and a less marked one at about 2 hours before midday.

There is consequently an approach to what might be expected if the tide-producing forces caused by the attraction of the sun had their effect in determining the time of origin of earthquakes, but it is also ovident that, if these forces have any effect, it is so small and so complicated by other causes, giving rise to a greater variation in frequency than they do, that it is necessary to adopt some method of discussion, which will more or less completely eliminate the effects of variation, other than those due to the tide-producing forces.

The most obvious of these would be the conversion of the solar into lunar times. The moon moves through the heavens at a rate which brings it on the average about 50 minutes in advance of the ann for each day. If, then, we consider the interval between the two
succossive similar meridian passages of the moon as representing 24 lunar hours, and convert the recorded times into lanar times, it is obvions that, in a long series of observations, any irregularity of frequency, at any particalar hour of solar time, will get spread over the whole of the lunar day, and in its place will be introduced any fresh irregularity due to the position of the moon. Now as the moon has twice the efficiency of the sun, as a tide producer, any irregalarities due to the tide producing forces shopld be double as great as in the case of the sun.

Unfortunately the test cannot be applied in this case as, on trial, it was found that the series of observations was not sufficiently long to eliminate the effect of the diurnal irregularities.

This method of elimination failing, we must fall back on the recorded times, to see whether there is no other method of eliminating the non-tidal diurnal variation, and a method appears which depends on the fact that, taking the year as a whole, the tidal effect is on the average the same all through, since the times of passage of the tidal circles during the six hours on either side of midnight are the same for a south declination as the times on either side of midday in the case of the same amount of north declination.

If, then, we take the recorded frequency of shooks for each hour, write them down in two lines, placing those for the hour after midday under those for the hour after midnight and so ou, and then add the two linas, we obtain a series of numbers representing the semi-diurnal curve of frequency. In this carve any diarnal periodicity, which is of a harmonic nature, is completely eliminated, and any non-harmonic periodicity largely reduced in amount. On the other hand any semidiurnal periodicity which is harmonic in character, or which, if not harmonic, has its irregularities similarly distributed with regard to midnight and midday, will be exaggerated; that is to say the effect. we are looking for will be increased, while that which we wish to eliminate will be reduced, in amount.

In the next tabular statement the process is illustrated as regards the total number of shocks, and four more lines given, showing the results obtained in the case of certain combinations of shocks, which will be referred to further on.
R. D. Oldham-Tidal Periodicity in Earthquikes of Assam. [No. 3,
V.-Somidiurnal distribution of Shocks.

| Hours. | 12 | 18 | 14 | 8 15 | 16 | 17 | 6 18 | 19 | 8 20 | 29 | 10 22 | 11 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All shooke 0 h . to 11 h . | 83 | 44 | 59 | 55 | 61 | 57 | 70 | 40 | 41 | 42 | 48 | 54 |
| Do. 12 h . to 23 h . | 43 | 43 | 48 | 47 | 71 | 46 | 48 | 50 | 60 | 71 | 90 | 58 |
| Sum |  | 87 | 107 | 102 | 132 | 103 | 118 | 90 | 101 | 118 | 183 | 112 |
| 8am - Mean | $\cdot 72$ | . 81 | 1.01 | $\cdot 96$ | $1 \cdot 26$ | . 97 | $1 \cdot 11$ | -85 | . 95 | 1.06 | 1.25 | 105 |
| Day shocks $>9^{\circ} \mathrm{N}$. Night shooks $>9^{\circ} \mathrm{S}$. | 80 |  | $1 \cdot 23$ | . 98 | $1 \cdot 18$ | $\cdot 84$ | 1-1] | $\cdot 67$ | 1.01 | -87 | 1.52 | 86 |
| All shocks $\mathbf{9}^{\circ} \mathrm{N}$. to $9^{\circ} \mathrm{g}$. | - 53 | . 87 | $\cdot 77$ | $1 \cdot 20$ | $1 \cdot 61$ | -84, | . 94 | .97 | -94 | 108 | 1-14 | 1-11 |
| $\left\{\begin{array}{l} \text { Day shocks }>9^{\circ} \mathrm{N} . \\ \text { All shooks } 9^{\circ} \mathrm{N} .9^{\circ} \mathrm{g} . \end{array}\right\}$ | -69 | -84 | 1.04. | 108 | 1-36 | - 84 | 1.04 | 80 | - 98 | *95 | 136 | 108 |
| Night mhooks $>9^{\circ} \mathrm{N}$ | $\cdot 77$ | $\cdot 77$ | -94 | 71 | $1 \cdot 00$ | $1 \cdot 23$ | 1.28 | 9 | . 94 | 1*9 | 1.08 | 1-12 |

Here we see two very marked maxima, in the distribution of the shocks, one daring the fifth hour after, the other daring the second hour before, the meridian passage, and these maxima may be taken as groaped around $4 \frac{1}{3}$ hours and $10 \frac{1}{2}$ hours of the morning and afternoon. That is to say they both follow by $1 \frac{1}{2}$ hours the epoch corresponding to three hours before and after the meridian passage, a time which corresponds more closely to the passage of the maximum rate of change of tidal force, than to that of the circle of maximum horizontal stress.

If we turn to the next line in the table, representing the distribution when the tide producing forces may be expected to be most effective, we find the same features, except that the maximum following the meridian passage is less marked than that which precedes $i t$, and that though the latter is proportionately greater than in the case of the whole number of shocks the former is less.

The next line shows the distribation when the san is within $9^{\circ}$ of the Equator, when on the average the conditions-so far as the tide generating forces are concerned-are the same during the day as the night. Here we find the two maxima again, but it is that following the meridian passage which is most conspicuous, the other being amall and ill defined.

The fact is that in both these cases the total number of ahocks considered is too small to get an approach to a true average, and, in this mall number of shocks, accidental variations of distribution may produce an irregalarity of the curve which exceeds its normal variation.

To some extent this difficulty may be overcome. If we refer to the tables I and II, we will see that when the sun is within $9^{\circ}$ of the equator, there is not a vers great variation in the times of passage of the tidal circles as compared with the times of passage duxing the day when the sun is north, and during the night when it is south, of the equator. On the other hand the night when the sun is north, and the day when the sun is south, of the equator, show a much greater range of time in the passage of the circles and not only is the rauge of time greater and the effect consequently less conspicuous, but during part of the time the maximum of horizontal force is not felt at all, and during the rest of the time the passage is so oblique that the rate of change is slow and the tidal forces probably less effective.

Excluding these shocks we may add together the two groups of shocks already considered and so obtain a larger one, in which the tidal effect is tolerably naiform. The result is given in the table, and shown graphically in Fig. 2. Here it will be seen that the two maxima preceding and following the meridian passage are both distiuct, and exceed. those obtained from the total number of shocks.

Shillong Seismograpt 1897-1901. Semidiurnal curve of frequency,


Fig. 2. Semidinrnal curves of frequency.

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We have consequently the effect which was to be looked for if the frequency of earthquakes is influenced, either by the amount of the horizontal tide generating force, or by the rate of change of the tide generating forces, and the fact that this effect becomes more marked the larger the number of shocks-suitably distributed as regards time of occurrence - which are taken into consideration, lends support to the supposition that the apparent relation between cause and effect is a real one.

Passing on to the last line, representing the night shocks when the declination is north and the day shocks when it is south, that is to say a time when the rate of variation of the tidal stresses is at its lowest and less effect to be looked for, we find that the marked maxima have disappeared, and that there is an almost equally distinct increase in frequency abont six o'clock, that is at a time corresponding to the passage of the circles of maximam vertical force. This has the appearance of indicating that the purely vertical stresses hare less influence than those which have a large element of horizontal stress, and that the effect of the former only becomes apparent when that of the latter becomes small. Too much stress must not, however, be attached to this conjecture, as the number of shocks dealt with is smaller than in any of the other combinations, and the possibility of fortuitous irregularities in the curve more probable in a corresponding degree, and besides this the effect here only lags half an hour behind the presumed cause, while in the case of the $4 \frac{1}{2}$ and $10 \frac{1}{2}$ hour maxima it lags $1 \frac{1}{2}$ bours behind the presumed cause.

It appears then that the tidal stresses have a distinct effect in determining the time of origin of earthquakes, though their influence is small in proportion to other causes, but at the same time it is necessary to enter a caution that, though the facts in this case seem to support the conclusion, they are far from proving it. For proof a more extended series of observations are required, not only from $\Delta$ ssam, but from other stations also, and even in the record discussed in this paper there is reason to doubt the correctness of the conclusion, inasmuch as the effect found appears to be out of proportion to the canse invoked.

When we consider that the maximum npward tidal force exerted by the moon is only $1 / 8,450,000$ of gravity, that this corresponds very closely to the difference in downward strain which would be produced by the removal or replacement of half a grain on a one-ton weight, that the maximum horizontal tide generating force is only three quarters of this, and finally that the tide generating forces set up by the sun aro a little less than half of those set up by the moon, it is surprising that they should have any effect at all. On the other hand when we consider that theeo

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forces are sufficient to give rise to the tides, and that the difference between the spring tides and the neaps is due to the forces whose effect has been searched for in this paper, it is quite conceivable that they should not be without effect in determining the moment at which a gradually increasing strain becomes too great for the resistance, and the fracture is produced which gives rise to an earthquake.

## IV.-Conclusions.

From what has gone before we may draw the following conclusions.

1. That there was a very large variation in the diurnal distribution of earthquakes in Assam during the years 1897-1901, shocks being most frequent between 10 and 11 p.m., and again between 6 and 7 a.m. This greater frequency is a real one and not merely due to a larger number of shocks happening to be recorded at those times.

No satisfactory cause can be assigned for this irregularity of distribation, which must for the present be accepted as a fact true for a limited period and area.
2. Superimposed on this large and unexplained variation in frequency, there is a smaller variation which has the appearance of being due to the tidal stresses set up by the attraction of the sun.
3. If this smaller variation is really due to tidal stress, then the horizontal stress is much more efficient than the vertical stress, and the effect is less due to the amount of the stress than to the rate and range of its variation.
4. That these conclusions must be taken as purely provisional and require verification from a more extended series of observations. For their verification we require an instrumental record from some station within or near the tropics, where earthquakes are fairly frequent, and extending over 19 or 20 years.

## XVI.-General Notes on Variation in Birds.-By F. Finn, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

## A. Some Striking Cases of Variation in Structural Characters.

I have occasionally been able to note marked deviations instructure, which might conceivably have been useful in some cases.

Thus I saw at a Pigeon show in Oxford, on October 23rd, 1891, a white Fantail Pigeon with the two inner front toes on each foot webbed. The abnormality is not common, but has been recorded by Darwin. (Animals and Plants under Domestication, Vol. I. p., 160).

I obtained in Port Said in 1894 the feet of a common fowl with a long hallux like a Curassow's but not apparently capable of flexion at the terminal joint, being more like the supernumerary hallux so often present in these birds -especially in Port Said specimens, where every gradation between this and the normal hallux may be seen.

In Zanzibar, where the fowls are usually of the long-legged Malay type, I occasionally saw a very short-legged specimen with the usual long neck. As there are some breeds of fowls, e.g., the Japanese Bantam, wherein the legs are always very short, this is probably an ensily perpetaated and abrupt variation.

At a meeting of the British Ornithologists' Club last year, Mr. W. B. Tegetmeier showed the head of a wild Rook (Corvus frugilegus) with a remarkably elongated beak approaching in form that of a Chough.

The Chough itself (Graculus graculus) in confinement is liable to an elongation of the bill which is often very regular, and makes the beak resemble that of an Ibis. This might well occur in the wild state-as overgrowth of the upper chap is known to do in some birds-and be of service. The sabjacent tissues may also penetrate the overgrowth of horn, for Mr. Rutledge found on attempting to cat back the overgrown bills of some Choughs that this could not be done, as blood was drawn in cutting off the first half inch.

Recently I procured in the Calcutta Bazaar a common Quail (Coturnix communis), possessing on each foot five toes like a Dorking fowl. In each case, as so often happens in five-toed fowls, the true hallux was higher up the shank than usual. The apper supernumerary hallux was quite distinct, but shorter than the normal one, whereas in five-toed fowls it is usually longer. One only of these extra toes had a claw, but as it was loose on the other, and ultimately came off, it had
evidently become accidentally detached from one toe. An enlarged drawing of these feet is given below.


As five-toed birds do not occur as nataral species, this instance may seem off the point, but it has its interest from the point of view of Analogous Variation.

In the London Zoological Garden last year there was a male Curassow with the yellow nasal knob on the bill double, the extra part being somewhat out of line with the normal lump, and extending behind it.

## B. Some Colour-Variations in Wild Birds.

The Garganey or Blue-winged Teal (Querquedula curcia) is very liable to produce a pallid variation, in which the usual brown markings are reproduced in a pale dan shade. These pale forms vary in pallor, but do not grade into the normal type. Males and females are about equally affected. The irides of such birds are normal, but their bills and feet are flesh-coloured instead of slaty. A white Garganey I once saw as a skin seemed, however to have had dark bill and feet. Mr. E. C. S. Baker records (J.B.N.H.S., Vol. XII., p. 446), a Garganey with orange
feet, with, I presume (as he says nothing to the contrary) normal plumage. After examining hundreds of both this species and the Common Teal (Nettium crecca), I have never seen any variation in the latter.

Snipe (Gallinago coslestis and G. stenura) frequently present pallid forms, which, as in the Garganey, vary inter se but do not grade into the type. I was fortunate last winter in procuring, in addition to a pallid specimen of the Frantailed species, a Pintail Snipe, which was a pied bird of remarkable aspect. The general plamage was normal, but the darkstreaked buff plumage of the fore-neck and breast was interrupted by a longitudinal white patch, and there was a great deal of white in both wings. The right wing had the first three primaries white, together with nearly all the wing-coverts of the outer part of the wing, forming a conspicuons patch. On the left wing all the primaries were white, and a still greater extent of the wing-coverts. The irides, bill and fect were, normal, except that the toes were fleshy orange instead of olivegreen like the shanks. (Ind. Mus. Reg. 24155, \&.)

I have thought it worthwhile to have this specimen figured (Plate VIII, fig. A), together with two pallid specimens of this species (G. stenura) (Plate VIII, figs. B, C) of different shades.

Pallid forms of the Indian House-Crow (Oorvus splendens) are not rare; one of a pale fawn, with the face and wings darker, lived 15 years in the Calcutta Zoological Garden ; this had fleshy white bill and feet. Some rather similar specimens in the Indian Museum have, however, evidently had dark bills and feet. The white specimens we have have had fleshy white bills and feet, and this has been the case with all the white Jackdaws (Corvus monedula) I have seen in England; abont lialf-a-dozen in all. (I believe, however, these white Jackdaws are a domesticated race).

I have thrice in seven years secured pallid varieties of the Rain-Quail (Coturnix coromandelica), once only of the common Quail (C. communis), though this is more abundant in the Calcutta Market. These birds have always been hens. I have now got another hen RainQuail with all the primaries and their coverts, with the two outer feathers of bastard-wing, pure white in the left wing; on the right side, all the primaries but the fourth, ninth and tenth, with the distal primary coverts, were white, but bastard-wing normal. The centre of the throat and a patch on the fore-neck, were also white. (Reg. No. 24229). The irides, bill, and feet were normal.

Grey or slate-coloured varieties are not common, but I have seen two such in the Jackdaw (Oorvus monedula), one in the King-crow or Black Drongo (Dicrurus ater) and one in the Bengal Bulbul (Molvastes bengalensis). In the lest-named bird the red under-tail-coverts persisted.

Recently Mr. Ratledge obtained a pale ash-coloared Honse-crow (Corcus splendens), a young bird, with dark-lead-coloured bill and feet, and wings and taii faintly barred with darker grey than the ground-colour.

White varieties are so well known as to need little comment; they are seldom pink-eyed like albino mammals. Red often persists in such; I have seen an albino red-whiskered Bulbul (Otocompsa emeria) retaining the red " whiskers" and under-tail-coverts, and an albino Goldfinch (Carduelis carduelis) retaining the red face and yellow wing-bars.

In India I have seen two pale varieties of the crimson-breasted Barbet or Coppersmith (Xantholæma hsomatocephala), one in the Indian Museum, and one now alive at the Alipore Zoological Garden. In the former (Reg. No. B5031) the plamage is yellowish white except the primary-coverts and several quills from the sixth onwards, which are normal. The stiff glossy frontal feathers and breast patch are pale yellow instead of scarlet. The beak is yellowish white in the skin. In the latter, captared adult, the red of forehead, breast, and feet persists. The bill is flesh-coloured instead of black. The plamage is pale yellow, irregularly marked with green. It has not changed in moulting.

The common Ring.Parroquet (Paleornis torquatus) frequently produces a yellow variety, in which the red bill in both sexes and red collar of the male persists. I have also seen, besides numerons green birds splashed with yellow, a bird of an even intermediate tint between yellow and green. Specimens shaded with green on a yellow ground are not ancommon. Mr. W. Ratledge knows of a case where two normally coloured wild birds constantly produced a yellow brood.

The large Ring-Parroquet and its races (Paleornis nepalensis, fo.), is very rarely latinistic; we liave, however, in the Indian Museum a green-tinted latino of the large-billed Andaman race still showing the red wing-patch. (Reg. No. 22071).

The Rose-hended Parroquet ( $P$. cyanocephala) is not infrequently yellow, when the head is pink (as in specimen 23981, Ind. Mus. Reg.).

In the Indian Museum there is a specimen of the Blae-crowned Hanging Parroquet (Loriculus galgulus) with primaries nearly all yellow and many other yellow feathers. The bill is black as in the normal birds, but the blue patch on the head is replaced by a faint red one. (Reg. No. B. 342).

I once, in England, saw a wild Song.Thrush (Tardus musicus) with the tip of the tail regularly white; but it had an abnormal-looking patch of white on one wing also.

The Calcutta Zoological Garden once possessed a Coucal or CrowPheasant (Centropus sinensis) with bill and feet normally black, normal
red irides and chestnut wings, and all the rest of the plumage white, where it should have been black. In the Museum is a pale dun bird of this species with pale chestnut wings, and the two central tail feathers decidedly fibrous and loose in texture. (Reg. No. B. 7220 procured in Purneah 1871). Mr. Ratledge recently had a dun-coloured male Koel (Erdynamis honorata) with fleshy-white bill and feet, but normal oyes. Its plumage faded before moulting, to cream-colour, like a dun pigeon's, the new feathers being strikingly darker.

I have discussed the question of the white-headed form of the Ruff (Pavoncella pugnax leucoprora) in J.A.S.B., Pt. II, 1902, p. 82. Both the living Ruffs mentioned there assumed pure white ruffs and ear-tufts this year ; but one had a rufous-marked back, and the otherwith the white tertiaries-a grizzled one.

## C. Reversion to Normal Colour in Abnormal Varieties.

A much-prized albino or latino specimen, taken in that condition, often disappoints its owner by moulting out into the normal colour. Mr. W. Rutledge tells me that this is always. liable to happen unless the individual has pink eyes or an abnormally white bill or feet. I have seen entire or partial resumption of the normal colour in two House-Mynabs (Acridotheres tristis), and a Babbler (Orateropus canorus) in his possession. (See paper on Variation above quoted, J.A.S.B. 1902, also Bateson, Materials for the Study of Variation, p. 43, foot note 2).

Pallid specimens are also liable to revert in this way. A male cream-coloured sparrow I recently obtained put out new feathers of a nearly normal colour, and I have seen a skin of the House-Mynah in the same condition. The grey Bengal Bulbul above alluded to, however, has never reverted; its bill and feet are normally black, as were those of the two grey Jackdaws mentioned with it.

The same phenomenon has occurred in the case of melanism. A Bullfinch (Pyrrhula pyrrhula) found as a black nestling in an otherwise normal brood, attained on moulting ordinary female plumage (Howard Saunders, Manual of British Birds, p. 188, ed. 1889).

It seems to me that such facts as these furnish a simple explanation of the case of those Herons which are white only in youth.

Variations in Relation of Immature to Adolt Plumage.
Darwin gives several cases of this on Blyth's authority, and I can add a few myself.

The skin of a young Crow-Pheasant (Centropus sinensis) in the Indian Museum (Reg. No. 11265 from Bhowra) already shows in per-
fection the rich blue-black body and chestnut wings of the adult, instead of the usual barred plumage of immaturity. Birds resembling the adult in everything except in being duller are quite common.

The young of the King.crow (Dicrurus ater) aud the small Indian Cormorant (Phalacrocorax javanicus) are supposed to be mottled with white beneath, but all the nestlings I have seen in Calcatta have been black like adalts. Yet the Dicrurus does andoubtedly have a whitespotted immatare plamage, and some young Cormarants I reared after. wards moulted out mottled below, so that apparently a reversion may take place at the moult.

Similarly, the young Pied Hornbills (Anthracoceros albirostris) frequently sold here are always coloured like the adult; but one I knew of moulted out in confinement with white tips and bars to the feathers; a white-barred feathering being given as the joung plumage of the closely-allied A. coronatus by Parker (Blanford, F.B.I. Birds, Vol. III., p. 145).

The young of the common Mynah (Acridotheres tristis), normally resemble the adult except in being duller, but I have seen two with brown heads instead of black; this is much more common in the young of the allied Bank Mynah (A. ginginianus).

The young females of the Golden-backed Woodpecker (Brachypternus aurantius), are described as having a black forehead, whereas that of the old bird is spotted with white. Often, however, young hens occur in which the forehead is spotted, sometimes as clearly as an adult's.

## D. Variation in Prepotency.

The silver-grey gander mentioned in the note on the variations of the Gray Goose was an example of spontaneous prepotency. Such a variation in the wild state might easily have prodaced the white and partially white males in the sexually dimorphic species of the genus Chloëphaga; C. hybrida-the Rock-Goose of Darwin-and C. magellanica, the familiar Magellan Goose of waterfowl fanciers, the Upland Goose of the Origin of Species, and a third species barely distinct specifically from C. magellanica-O. dispar, in which the male is barred beneath like the female.

The species C. rubidiceps, which is extremely like a small female of C. magellanica, may be taken as one in which no variation in the direction of gray-and-white ganders has appeared, or if it did occur, has not been perpetuated by natural or sexnal selection.

I have come upon some curious instances of the opposite attribute to prepotency in pigeons. In 1894 I crossed a well-developed and fullyadult Black Fantail Cock with a young and hitherto unmated Homer
hen. The Fantail had 33 tail-feathers, the Homer of course only the usual twelve. Fet the pair of mongrel squabs which resulted from their union had only 14 and 15 tail-feathers respectively. I may mention that the Homer hen's subsequent offispring by a cock of her own breed showed no trace of the Fantail ; indeed, were telegony better established than it is, so weak a sire could hardly be expected to produce any telegonic phenomena.

A similar case was the failure of the Silver chequer Homer hen, paired to a Blue chequer, to reproduce any offspring of her own colour, either directly or in the second generation, as recorded in Nature, June 12th, 1902, p. 157.

## E. Progressive Variation.

Cases of a variation carrying on the line of development of a species are probably much commoner than is supposed, the attention of naturalists having hitherto been fixed rather on reversionary types than progressive ones. (Cf. Buteson; Materials for the Study of Variation, p. 307).

Such a case is the tendency to extension of the green ocellated spots in a skin of a male Polyplectron bicalcaratum (Malay PeacockPheasant) described by me receutly from a skin (unfortunately a poor specimen) in the Indian Mnseum. (Reg. No. 21344). In this the black speckling on the upper back is in groups of spots in certain feathers, richly glossed with green, forming rudimentary ocelli in a non-ocellated region; and the black patches of the outer webs of the lower tail coverts are green-glossed to some extent, thus approaching ocelli in quite another way. (Nature, Vol. LXV., p. 367 ).

Another example is afforded by the Gold-backed Woodpecker (Brachypternus aurantius), whose orange-yellow back frequently shows a strong admixture of red, as I have often observed in joung birds at all events. (See also Blanford, F.B.I. Birds, Vol. III, p. 50).

The Bronze-Cap Teal (Eunetta falcata), which has of late years been invading India in unusual numbers, was so common last winter 1901-1902 in the Bazaar that I secured no less than a dozen specimeus, most of them females. Among these I noticed one with a strong. green gloss on the head; one with a tail as purely grey as a male's, and one with a tail as distinctly barred as a female Gadwall's, there being thus twe cases of progressive as against one of reversionary variation.

The dull male of the Gadwall (Chaulelasmus streperus) closely allied to this species, sometimes shows a green gloss on the head (see Hume; Game-birds of India, Vol. III, p. 186) : I have never seen this myself, but have seen one with a plum-coloured gloss.

The peculiar Teal of the Andamans (Nettium albigulare) is now frequently white all over the face, whereas in Hume's time it' was exceptional for the white eye-ring and white loral patch to join, and nothing is said by Count Salvadori in the British Museum Oatalogue (Vol. XXVII., p. 257) about any extension of the white. The heads of a normal (Reg. No. 18671) and a white-faced (Reg. No. 18671) bird are figured, from a photograph, in Plate IX. The white-faced specimen was one procured as many as twelve years ago, so that the variety existed then; but it is now quite frequent, though not always so white in face as the bird figured; this specimen is a male, as also is the normal bird shown with it.

## F. Variation directly indoced by Confineaent.

This is not nearly so common as currently believed among ornithologists, and most of the variations which do occur among birds kept in captivity are well-known and recorded.

In male birds of the Finch family which have a carmine or pink colour in their plumage, this hue is not stable, but usually disappears after the first moult in a cage, as I have often seen.

In the Linnet (Acanthis cannabina) the red on head and brenst leaves no trace at all; the same is the case with the Eastern race when kept in India (A. cannabina fringillirostris).

The Redpoll (4. rufescens) loses the red on the breast and rump entirely; that on the crown changes to greenish-gold.

The Rose-finch (Oarpodacus erythrinus) changes the general carmine hue of its plamage to dull ochreous yellow.

The Sepoy-finch (Haematospiza sipahi) offers a curions case; it is allied to the Rose-finch, but is a brilliant scarlet, not carmine at all; yet a bird which died half through the moult in Calcatta, had changed, where the feathers had come out newly, to bright yellow.

The Bull-finch (Pyrrhula pyrrhula) is very liable to become dull in the red coloar; and sometimes tarns completely black, asually owing to a too free use of hemp-seed. But this may occar withont the bird having tasted any, and also in a wild bird (see above p. 158).

Melanism is also common in captive Bulbuls; I have seen it in the Bengal Red-vented species (Molpastes bengalensis) the white-cheeked (Otocompsa leucogenys) and the white-eared (Molpustes leucotis) in which last I have seen it combined with albinism in the same individual.

The Gold-finch (Carduelis carduelis) kept under unfavourable conditions, is liable to have its red face become dull orange.

The Red Cardinal (Oardinalis cardinalis) becomes dull red if not kept out of doors in a good light; this has happened in Calontta.
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The common Troupial (Icterus vulgaris) becomes yellow from amber in confinement if the conditions are unfavourable.

The Pekin Robin (Liothrix luteus) is apt to fade as to its orange, yellow, and green tones in confinement; it is also liable, in the plains of India at all events, to melanism, becoming either irregularly splashed with jet-black, or regularly washed or clouded with a dark smoky hne, as if it had bathed in ink. Both these variations occarred in two birds out of about a couple of dozen kept ander exactly the same conditions in Calcatta. Their companions manifested no dislike to them.

The Rosy Starling (Pastor roseus) in confinement in Earope fades to a dirty cream-colour; in India it gets clonded with black, black edgings appearing on the feathers. A bird of mine, deposited at the Calcutta Zoolngical Gardens, and treated in the same way as about a dozen others, became almost completely black. The bird was in good condition, with the plumage glossy and sleek, and the colour looked quite natural. As these birds are always quarrelling, it was not easy to make out how its companions regarded it.

A pair of: Striated Finches (Uroloncha striata) kept by a friend of mine in England in an out-door aviary many years ago became during one season heavily mottled with black all over the white belly ; but they afterwards reverted to the normal coloar.

Conversely, a Black-backed Porphyrio (Porphyrio calous) at present in the Calcutta Zoological Garden has on one occasion moulted out with all the black parts mottled with white; but it has since become, and remained, black again.

A male Red Dove (Turtur tranquebaricus) in the same garden, living under the same conditions as many others of the same species and sex, became nearly all white over the normally vinous red part of the plumage.

One of many specimens of Turtur damarensis brought by me to the London Zoological Garden in 1892, had last year (1901) when I saw them become very largely white in big patches.*

The male Golden Oriole (Oriolus galbula) of Europe, according to Bechstein, never retains its full yellow hae in confinement, but reverts to the streaky green plumage of the female.

The red summer plumage of the barred-tailed Godwit (Limosa lapponica) is not always assumed in confinement, for of a pair in the London Zoological Gardens last year (1901) the male was in red coloar, bat the female showed no sign of it.

[^141]Similarly, the adult female Scarlet Ibises (Etudocimus ruber) in the Calcatta Zoological Gardens always remain of a rich salmon-pink, while the male shows stains of scarlet in places in the spring.

A young female bred in these gardens moulted out white feathers at first from her brown immature dress, whereas a young male's first adult plumage came out pink.

Some of the hens kept in Calcatta, on the other hand, assume in the breeding season a goitre-like onlargement of the throat; this never occurs in the cock. The fact that the species here remains red at all is noteworthy, as in Europe it becomes very pale, getting more so at each moult, whereas our adult birds here have remained equally bright for years.

The legs of Finches which in the wild state are black, become usually fleshy white after moulting in confiuement, as is well known to fanciers in the common Goldfinch (Oarduelis carduelis). I find the same thing happens with the Himalayan Goldinch (C. caniceps) when kept in Calcutta, also with the Eastern race of the Linnet (Acanthis linaria fringillirostris). The toes are first affected.

## G. Pathological Variation.

In the cases above-mentioned, the birds seem to be healthy, but when a bird is in poor health, certain variations present themselves which are more or less constant and definable. They may occur under domestication or in the wild state, but are naturally more frequently observed in the former case, since a sickly bird cannot survive long in nature.

Baldness in certain places is very common; the lores, and in bad cases the whole space round the eye, are apt to become bald in the domestic Duck and its ancestor the Mallard, in unhealthy surroundings, as when confined in a coop. The nearly allied Spotted-bill (Anas precilorhyncha) does not suffer in this way, nor does any other Duck so far as I know.

Baldness round the eyes also occurs in the Starling (Sturnus vulgarrs) and sometimes in the Rosy Starling (Pastor roseus). In the latter speciee I have seen one or two birds affected while the rest, treated in exactly the same way, were exempt. The head of a tamed specimen of the Jungle Mynah (XEthsiopsar fuscus), which has become bald-faced while living at perfect liberty, is figured below. The resemblance to the normal state of affairs in the adult Rook (Corvus frugilegus), is obvious, and suggests a hereditary incapacity to retain the facial plumage in that species.


## Head of Jungle Mynah, abnormally bare in face.

The rump becomes bald in many birds, and the tail-coverts and lesser wing-coverts drop out.

Baldness over the whole head frequently occurs in caged birds; and I have seen it in a wild House Mynah (Acridotheres tristis) more than once. In this case the whole bare skin of the head was bright yellow like the skin round the eye, which is normally bare in this species.

In caged House-Mynahs in England (bat not in India) I have seen this circum-ocalar skin faded to white, while the bill and feet remained yellow. The white facial skin characterizes the young hird naturally.

A Cassowary (Casuarius galeatus) at the London Zoological Gardens last year (1901) showed a large amount of irregular naked skin on the back, which was coloured pink and blue, in faint imitation of the hues of the bare head and neck. In a Cassowary which recently died at the Calcutta Zoological Garden I found to my surprise that the skin on the body was dull white like human skin.

The overgrowth of the bill, claws, and scales of the shank is pathologioal, and is not necessarily due to old age or absence of wear, which cannot affect the scales of the shank. I have seen a Canary become very scaly-legged in its second year, while another, ten years old, had feet and legs as smooth as a bird of the year.

The feathers frequently become more or less reverted, as in frizzled fowls, in wild gallinaceous birds kept entirely under cover; this I have seen in India in several species of Pheasants and Quails. In one case a single hen Pheasant (the species was Phasianus torquatus) was affected, while a cock and several other hens, kept under the same conditions, were not.

## H. Spontangous Variation dndri Domegtication.

While Darwin has very fully and completely gone into the question of the extent of the modifications which can be effected by selective breeding, little attention seems to have been paid to the range of spontaneons variation in birds under domestication, the material, in fact, on
which breeders have had to work. I shall therefore take a number of domestic or protected species in detail, and discuss the colour-variations to which each appears to be subject without the intervention of selection.

Ter Canary (Serinus serinus canaria). Dr. Bowdler Sharpe in The British Museum Catalogus of Birds, treats the Wild Canary of the Atlantic islands as an insular form of the European Serinfinch (Sorinus serinus); it differs from this continental bird in darker colouration and longer tail. It varies much when not bred systematically.

Birds of the wild colour, called green in the fancy, are common; they are often mistaken by people not well-acquainted with Canaries for Males or hybrids. They are the strongest in constitution. Yellow birds or lutinos are, as is well known, the commonest. They may be either " buff," i.e., pale whitish yellow, or " yellow," which is bright yellow. If " yellow" birds are continually paired, the offspring is scanty in feather.

A pallid form is not rare, in which the plamage is pale brown with slightly darker streaks; this is the "cinnamon" of the fancy. Once I have seen specimens of a dark brown form among common singing Canaries in England. These birds, although nadoubtedly pure-bred Canaries, showed in one or two instances no trace of green or yellow, being simply warm brown with dark streaks, and looking rather like hen linnets. White canaries have recently been bred. (Feathered World, June 13th, 1902, p. 1039.)

I have read of grey forms, but have never seen any such. Pied birds are very common; the marking is commonly asymmetrical. The parts most prone to exhibit dark feathers in light-pied birds are the secondary quills, ferthers round the ege, and two outer tailfeathers. Dark-pied birds run to white in the tail. Cinuamons may be pied, but no gradation seems to occur between cinnamon and green.

I have once or twice seen green birds among Chinese specimens with the central part of the quills and tail marked with yellow as in the Greenfinch. A male Green Canary I once knew for several years began to slow yellow about the head with advancing age.

The bills and feet of Canaries are horny in the green, and fleshywhite in the light-coloured types. The retention of the dark colour in the legs is noteworthy, considering the evanescence of this in wildcaught captive Finches of other species.

In view of the variability of the tame Canary, the following opposite instances in allied Finches are interesting :-

Mr. G. C. Swailes (Avicultural Magaeine, Vol. I., 1894-95, p. 118) gives his experience with the Twite in confinement (Acanthis flavirostris). A pied cock, about half-white, and a pure white hen, being paired, produced five young; the only two reared were both normally coloured.
"This" says Mr. Swailes, "I expected, as I have reared a large number during the past few years from both white, pied, and cinnamon Lesser Red-polls, and have in-bred them, but have never had one vary in the least from the normal colour."

The Japa Sparrow (Munia oryzivora) of the East-Indian Archipelago has long been domesticated in Japan, and tame and wild specimens are now both commonly kept as cage-birds. It is not a variable bird in its wild state; I have never seen any variation in wild birds of the species, nor has Mr. W. Ratledge in his very large experience.

The tame-bred Japanese birds may either be pure white or pied with the normal colour. The dark colouring in this case is confined to the opper plumage as a rule, but is not very regular. The head is almost always pure white, and the tail also. The bill, feet, and eyelids are normal. Dr. A. G. Butler, who has bred the white variety, found that a young bird he reared was grey above till its first moult; paired with a normally coloured cook (which it did not desert for white ones) it produced two young like its own first plumage, one like a young wild bird, and two iutermediate, all in the same brood. (Foreign Finches in captivity, p. 262).

Mr. F. Groser, who has also bred both forms in Calcutta, tells me that they kept distinct whenever they could find mates of their own colour.

The tame white birds are larger and stronger than the wild type. They are more phlegmatic, but also more spiteful; the small sexual distinction, in the stouter and larger head and bill of the male, is more marked. The song of the white birds is quite different, according to Dr. Butler.

The Shary-tailel Finch (Uroloncha acuticauda) of Eastern Asia has also long been domesticated in Japan, and its tame forms are the "Bengalee" of English fanciers. Dr. A. G. Butler, who in his Foreign Hinches in Captivity beautifully figures the three tame varieties, considers with the late J. Abrahams that this little domestic Finch originated in a cross between the Striated Finch (Uroloncha striatu) and the Indian Silver-bill (Aidemosyne malaharica). I cannot agree with this, as my observation of these birds leads me to conclude they are simply derivatives of the Sharp-tailed Finch (Uroloncha acutioauda); I have never seen one resembling the Silver-bill or the Striated Finch, and all three species are well known to me in life as well as in the skin. The late Dr. K. Russ, the greatest authority on small birds in captivity, gave Uroloncha acuticauda as the ancestor of the domestic bird. Some tame forms resemble the type, but they are generally pied with white, the amount of this colour varying from a few white feathers to complete
whiteness. The pied markings are irregular and annatural-looking. There is a cinnamon form, showing the markings of the dark-brown type on a fawn-coloured ground. This is generally pied with white, grading, as the dark-pied birds do, into complete whiteness, and pied irregalarly like them.

Pure white birds are less common than pied ones, but more so than dark-brown typical or pure cinnamon birds.

There is no intergradation between the brown and cinnamon forms.
The bill and legs vary as in the Canary; they are normally coloured in normal or nearly normal types, fleshy white in cinnamon, white, and light-pied forms The upper chap may be black and the lower fleshy white, in correspondence with the head-marking.

The cinnamon and white forms are smaller than the dark-brown ones.

The Collared Dovr (Turtur risorius). The exact origin of the domestic Turtle-dove is unknown; its varieties are of three types. The ordinary form is creamy-fawn with drab primaries and white tips to the tail-feathers except the central pair; a half-collar on the nape and the proximal half of all the tail-feathers below are black. The bill is black, the iris red, the feet purple-red, and the eyelids creamywhite. The sexes are similar, though the cocks are almost imperceptibly lighter about the head. The young have no distinct collar, have fleshy-coloured bills and paler red feet. This form does not vary more than a wild bird, and English- and Indian-bred specimens are alike.

There is also $n$ white form with a flesh-colonred bill and paler red eyes; the papil is often red (non-pigmented) in these. This may have a dark collar, but is generally without it.

There is an intermediate form, coloured generally as in the common type, but with the primaries white, collar drab, all tail feathers white bat the two central, which are buff, and grey at base of tail below instead of black. The bill in this form is flesh-coloured and the irides light red as in the white birds. I have only seen this in India.

Mr. D. Ezra, to whom I showed birds of this intermediate form tells me he got somewhat similar birds by crossing the white and blackcollared fawn types. He is sure they were not pied or splashed as Pigeons often are.

I have seen in cages of these Doves specimens of a drab colour with with dark ring, identical in plumage with the wild T. douraca of India, but in the absence of opportunities of studying these individuals I cannot say whether they were tame or wild specimens; I think the latter.

The Rocx-Pigeon (Columba livia and intermedia) has been so long bred selectively that it is not a good species on which to study
spontaneons variation, since it is hard to find it in a really unselected state. Both the Western and Eastern forms produce chequered individuals when wild.

By stadying Pigeons not selected for colour, or living in a semiferal state, as in towns where they pick up their living in the streets, the following leading trpes are evident :-
(a) As in wild type; common, but not the most numerous.
(b) Silver, a pallid form, greyish cream-colour with the wing-bars and tail-tip dark drab; bill flesh-colour. Not ancommon. Correct for many breeds.
(c) Blue-chequer, with the back and wing-coverts mottled with black; very common, in fact the most numerous in semi-feral pigeons, and also occurring frequently among birds in a perfectly wild state.
(d) Silver-chequer, the corresponding marking in cream and drab.
(e) A sandy-red form with grayish white primaries, rump and tail; very common. Often the wings are chequered with whitish, when the bird is a red chequer.
(f) Silver-dun; a sort of ashy-grey, with dark-reddish-brown neek and wing-bars; no tail-bar ; very common.
(g) Black, of a dull slaty shade, very common.
(h) Pure white; rare.

Intermediate pied and splashed forms are numerous, generally asymmetrical; the quills and tail are often more or less white, or again may be markedly darker than the body when this is or white. In this case the marking is symmetrioal, but ill-defined. Blue and black, blue and blue chequer, and blue chequer and black, grade into each other commonly; but not, as a rule at all events, any of the blue shades with red or silver; nor do these last grade into black as a rule.

The beak is fleshy-white in light forms, the feet and eyes remaining normal, except in whites, where the eyes are dark ("bull" of the fancy).

The pigeon certaiuly shows convincingly what can be done by careful selection of structural variations, for in its feral state it is not by any means a structurally variable bird. In form a lot of feral pigeons are as uniform as most wild birds, and much more so than some species.

Ter Budgerigar (Melopsittacus undulatus). This little Anstralian Parrakeet, known in books as the Undulated Grass:Parrakeet, has been exported only during the last half-century, and many are still brought over ; but it is largely bred in captivity.

In domestication the usual colour is the typical one, but three varietal forms cocur.

One is a pallid form, of a general greenish-yellow tint with the dark markings faintly indicated; the blue cheek spots are present in fall development. I have seen at least five of this form.

Another is a pure lutino, clear uniform yellow throughout, with pink eyes. I have seen two of this type.

Two blue specimens, in each case the offspring of yellow birds, have been known. (J. Abrahams, vide Mr. R. Phillipps, Avicultural Magazine, Vol. VIII., 1902, p. 75.)

One or other of the first two is being fixed by breeders, but I cannot say to which form the "Yellow Budgerigars" so often advertised belong. I have seen no pied, splashed, or otherwise intermediate forms.

The Blef Mountain Lobireet (Trichoglossus swainsoni) was bred yearly for about four years previons to 1890, at the Blackpool Aquarinm and Menagerie, according to Mr. W. Osbaldeston (Avicultural Magazine, Vol. VIII., p. 167, 1902). Mr. Osbaldeston, nfter giving an account of the conditions under which the birds were kept, says "One year a very curious, handsome, 'sportively' plumaged bird was reared. The head was red with lacings of white, and the shoulders were tinted with green. The greater portions of all other parts of wings, body, and tail were of a bright chrome yellow, intermixed with green feathers here and there; and the tail feathers were tipped with red ; making a really handsome, showy, and rare bird. It was a young bird in May 1891, and was alive some three yenrs afterwads to my knowledge. I went many times to look at and admire this rare-feathered Lorikeet. . . On one occasion, I noticed that its claws had grown very long. It was always kept in the same cage with the others."

Tae Priasant (Phasianus colchicus) has been more or less artificially cared for ever since the time of the Romans, and so may be fairly reckoned a protected bird. Its variations fall into two main types :-

The pallid "Bohemian" form, in which the cock's ground-colour is a lustreless buff, with the nsual dark edgings to the feathers and dark neck almost devoid of gloss. I can fiud no account of the hen.

The white form, which is found in both sexes.
Intermediates between Bohemian and normal seem not to occur. White-pied birds are common; the white marking is irregular and mostly confined to the upper surface. Pied birds will produce their like if paired, and will give some pied offspring with normal birds; but a white and a normal bird will not usually produce pieds, though some whites may be bred from such a mating. (Tegetmeier, Pheasants for Coverts and Aviaries, 3rd edition, 1897, p. 150).

White specimens are weaker than normal.
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The Golden Pheasant (Chrysolophus pictus) of China has been bred in confinement over a centary.

It is generally true to the type, bat a variety, the Black-throated Gold Pheasant, is known (C. pictus obscurus of Schlegel) in which the cock's cheeks and throat are dark brown instead of buff, and the scapulars blackish instead of bright red, while all the tail-feathers are barred, the central ones with the rest. The hen of this form is darker than that of the type, as also are the chicks. It is believed to be a variation which has arisen in captivity, as it is ouly known in that state.

As the Amherst Pleasant ( $O$. amherstis) the only near relative of the Golden species, has a dark throat and barred central tail-feathers, the peculiarities of this form seem to be more probably due to a reversion to the ancestral type of the genus than to an approach to melanism.

Mr. P. Castang, the well-known wild-fowl dealer of Leadenhall market, tells me that this variety used to be more common, bat was not liked, on account of its dull appearance.

The Silver Pheasant (Gennaeus nycthemerus) has given no variations in captivity.

The Fowl (Gallus gallus) is obviously excessively variable in colouration. As I showed some time ago (Nature, Jan. 30, 1902, p. 297) the characteristic colours of all except the highly specialized pencilled, laced and spangled breeds occur in common Indian Bazaar fowls.

I stated on this occasion that the colouration of rufons with a black tail was not recognized as correct for any breed in hens, but in making this statement I overlooked the Nankeen Bantam breed, in which both sexes are thas colonred. This colouration is perhaps the commonest met with in domestic poultry allowed to interbreed freely.

A few more details may here be added:-
The colour of the legs and feet in unselected fowls varies much, being fleshy-white, blue-grey, black, yellow, or olive-green (" willow" of the fancy). The only intermediate form which occurs is the blackmottled white or yellow accepted for Hoadans and Anconas respectively

The ear-lobe, as in the wild bird, varies from red to white; it may present a combination of the two colours. Creamy-yellow ear-lobes also ocenr. The ear-lobe is blue in the dark-skinned "Silky" breed.

The bill is dark as in the wild bird except in birds which have white or yellow legs, in which case the bill is of the same colour, sometimes marked along the ridge with black.

The naked skin of the comb and face, \&ce, is uniformly red as a rule, whereas the wild-bird's face is flesh-coloured. A dark purple face may occur, as in the Brown-Red Game, which is hence called
"gipsy-faced." The whole skin, as is well-known, is dark in the silky breed, as is also in this case the periosteum of the bones. This broed has white plumage, but usually dark-faced fowls are dark-feathered also. I have never seen a dark-faced cock in India except, of course, a "Silky."

The comb in mongrel fowls is usually single; but rose-combs often occur, and pea-combs less commonly. The single comb is always larger than in the Jangle-fowl, and higher and more arched in outline in the cocks. The wattles are also larger, and are developed in the hens, which is not usually the case in the wild bird. Small orests and a muff of feathers on the throat occur in mongrel fowls of both sexes, bat not together as a rule. Tame hens are also often spurred, which is rarely the case in the Jungle-fowl, though Blyth obtained such a specimen. The legs and feet are always larger and coarser in tame fowls than in wild, and the tail is carried more erect.

The wattles may be occasionally aborted, and a median dewlap take their place. This tends to be the case in the Indian Aseel or fight-ing-cock ; and in two fighting-cooks of a larger breed, from Saigon, I saw at Mr. Ratledge's establishment some time back, not only were the wattles absent and replaced by a dewlap, but there were no earlobes either. Their combs were small and non-serrated, and as the nect and head were all bare and red, the general appearance strikingly recalled that of a Condor (Sarcorhamphus gryphus).

The Peacoce (Pavo cristatus) varies at times in its wild state in India. Mr. Hume (Game-birls and Wild-fowl of India, Vol. I., p. 89) records, on Sanderson's authority, two hens of a dirty yellow. Mr. W. Rutledge once received a cock of the colour of a new copper coiu, as he described it.

Most tame Peafowl conform to the ordinary wild type.
White specimens are not rare, with fleshy-white bills and feet. Pied specimens are also not uncommon ; the colouration, though not quite regalar, and unlike a natural marking, follows certain rules, the neck, primary quills and belly being white, and the rest of the plumage coloured.

Most important of all is the Japan or Black-winged form (Pavo nigripennis of Sclater) in which the male has all the wing, excopt the primaries, black, glossed at the edges with blue and green; the primaries are chestnut with clouding of black along the shaft and edge. The thighs are also black in this form, and the train more glossed with copper than in the type. The hen in this variety is white with the upper surface grizzled with black, and longitudinal central black splashos on the rumpfeathers ; the tail is black, and the primaries chestnat as in the male.

The feet are fleshy-white in both sexes.

The young are all white in the down and first feather; with a pink flush on the wings; but the young cocks soon beoome dark. The variety has been abundantly shown by Darwin to arise in either sex as a sport from the type in domestication; it seems in one instance to have occurred wild. It is smaller and weaker than typical birds, and not a match for them; yet when they are allowed to interbreed indiscriminately the black-winged form swamps the other. Mr. Castang tells me that blackwinged birds will throw back to the type, but generally speaking the variety breeds true.

The Guinea-powl (Numida meleagris), althongh so recently domesticated, varies a great deal. I have discussed the colour-variations in Nature (June 5th, 1902, p. 126). Since then I have seen two or three of a type I had only previously seen in one pied bird, i.e., lavender withont spots. I find self-coloured birds of this type have barred primaries like the dark-purplish self-coloured birds.

Mr. L. Wright (loc. cit. infra) says that pied birds are the result of crossing white and coloured specimens.

There is also a form with white ground-colour and dark spots, but this I have never seen. (L. Wright's Illustrated Book of Pouliry, Cassell \& Co., 1890, p. 511). In all the forms the white of the lower cheeks invades most of the sides of the head and neek; and in most birds, even the normally coloured ones, the toes and more or less of the shanks are orange yellow. The white of the face also often invades the wattles, and both these and the face may be stained with blue.

The loose naked skin of the throat is much more developed in Indian than in English Guinea-fowls, often forming a dewlap an inch deep, and frequently coloured a bright sky-blue instead of dull parple.

I procured some time ago a normally-coloured male specimen with a pendulous throat-tuft of feathers colopred like the adjacent feathered part of the neck, of a plain purplish-slate.

Tee Turkey (Meleagris gallopavo) of Mexico was found domesticated when the Spaniards invaded America, and very soon was kept in Europe. It has not been bred selectively till lately.

The colour-variations in domestication are few and well-defined. The typical bronze form is not very common in Earope; and in India I bave only seen it once in seven years' residence. This bird in colour exactly resembled the plate of this species in Elliot's Monograph of the Phasianidse. The commonest type is one in which the bronze part of the plumage is replaced by black, bronze only in certain lights, the brown and white markings being retained.

The pure black form is also not uncommon.

A white form with the body and tail-feathers subterminally barred with black in a very regular manner is not infrequent; the primaries in this are smoky-black on the inner and white on the outer web, not barred as one would expect. Pure white, fawn, and grey varieties occur in Europe, but apparently not in India.

The legs of dark forms of domestic birds are horn-colour, not pink as in the wild bird; in light forms they are pinky-white.

The occurrence of a downy crest in tame Turkeys has been discussed by Darwin ; I have never come across an instance.

The tame Turkey shows a distinct increase in the size of the naked head processes and carunculations as compared with the wild bird; and the tame Turkeys of India, as Blyth long ago remarked, similarly show a marked increase of development of these parts as compared with European domestic specimens.

The feet are also coarser than in the wild bird.
The Mute Swan (Cygnus olor) of Central Europe and Asia has been tame for many centuries in Europe, but has practically lived the life of a wild bird, largely shifting for itself, and often, when left unpinioned, reverting to the wild state, so that its exact natural range is doubtful.

The species has continued true to type except for the production of one well-marked variety :-

The Polish Swan (Oygnus immutabilis of Yarrell). In this the plamage is white at all ages; and the nestling-down is white. The feet are flesh- or clay-coloured instead of black, and the frontal knob is smaller. Sometimes the cygnets are fawn-coloured in this form.

The variety is kuown to be propagated truly for at least one generation. It has occurred in a wild or feral condition, and has been bred from the ordinary type both in England and of late years on the continent.

Intermediate forms occur, for the characters are not sufficiently constant to allow of this type ranking as a species, to say nothing of its origin. Those few specimens which I have seen were, however, all readily recognizable and typical. The variation is not recorded to be at all sexually limited.

The Moscory Duck (Cairina moschata) of Tropical America, was, like the Tarkey, found in a domesticated state by the Spaniards, but it also exists wild.

Domestic birds are often nearly true to the wild type, bat seldom completely so, as they usually show a few white feathers about the head. The head and apper neck are often grizzled thranghout with black and white, ending very definitely, while the rest of the body remains normal.

Pied birds are common, the black being usually mostly restricted to the crest, back, and tail, but the marking is not very regular. The
primaries are always white in pied birds. A variety with white body and black crest occurs, and has been fixed as the "Peruvian" breed.

A slate-grey variety occurs, but is rare.
Pure black and pure white specimens are not uncommon.
The bill and feet in the latter are pale sickly yellow, and the irides light blue, instead of the usual orange-brown.

The bill and feet remain normal in most birds, but the terminal portion of the toes and webs are often pale yellow in pied birds, the rest of the limb remaining normal. The bare face of the drake varies much in extent and development, being either moderate and smooth, or excessirely carunculated. It is sometimes nearly all black instead of red, even in white birds. The duck has the bare face and carunculations like the drake, hat on a smaller scale, and the development varies similarly.

The form is often heavy and clumsy, but the birds can generally fly, and ofteu display a strong perching instinct.

The Grey-Lag Goose (Anser ferus) of the temperate parts of the Old World is the oldest of all domesticated birds, a white tame variety having been known in the days of Homer. It is unusually variable in the wild state, according to Mr. Hume (Game Birds of India, Vol. III., $p p .63,64$ ). I have not noticed the variations he mentions, the comparatively few birds I have seen having been very uniform, but I have several times seen a slight difference of colour which he does net appear to have found, viz., the nail of the bill being horn-coloured instead of white. Mr. J. G. Millais (Wild-fowler int Scotland, p. 31) records a white Grey-lag which for four winters frequented the Tay Valley with others of its species-thison the authority of a Mr. C. M. Innes, who ultimately wounded but lost it.

This goose has varied very little in colour, presenting only the following types:-
(a) Resembling the wild form; correct for Toulouse breed.
(b) Silver-grey ; only known as a sport in Toulouse ganders. The case, as reported by a well-known water-fowl breeder, Mr. J. K. Fowler, in Mr. L. Wright's Illustrated Book of Poultry (Cassell \& Co., 1890), p. 559, is so important that it may be given in full :-" Some time ago I bought for a cliange of blood a fine gander from a celebrated fancier, which differed from my own strain in colour, being of a beantiful silvergrey instead of dark like my own, though otherwise the markings were exactly similar. I bred from him that year some splendid stock, which all took after their maternal relatives in colour with one exception, consisting of a gander, which came of exactly the same hue as his sire. Since that time, in each succeeding year, I find.one or two-seldom
more-come silver-grey; and strange to say, they are always ganders, and generally remarkably fine, and superior to their brothers. I have never yet bred a single goose of this lighter shade."
(c.) Pure white, correct for Embden and Sebastopol breeds.
(d) Sandy-coloured; never seen by me. "Sandy-coloured (common) geese are not infrequent in some parts." (Rev. Dr. Goodacre on The Question of the Identity of Species of the Common Domestic and the Chinese Goose, P.Z.S., 1879, p. 711.)

The bill and feet in all tame birds are usually orange, but still a good many have flesh-coloured feet. The irides are dark except in white or light-pied birds, wherein they are blue.

Pied intermediates are common, ranging from white-quilled birds to the more common type of white body with grey neck and head, patch on back, and one on each flank. Ganders are almost always white in rough-bred geese; seldom grey, and still more seldom pied.

Mr. Hewitt found that in crossing the Embden and Toulouse, for which he preferred females of the latter and a male of the former, that the goslings came "'saddle-backed' in the feather, with the head and upper portion of the neck grey, and a patch of the same colour on the thighs, the whole of the remainder of the plumage being white. Singularly enough, the majority of the young ganders and a fair proportion of the geese thus bred are slightly crested, though this pecnliarity is not possessed by either parent." (Cassell's Illustrated Book of Poultry, p. 562.) Tame geese are much henvier in bnild than wild, but can fly.

The Pink-footrd Goose (Anser brachyrhynchus) produces a variety with the feet and band across the bill orange instead of pink in the wild state (see Sir R. Payne-Gallwey, Letters to Young Shooters, p. 69, foot-note). The same variation occurs in semi-domestication.

Mr. Cecil Smith, in Mr. H. E. Dresser's Birds of Europe (pp. 71, 72, published 1878), writes :-
" My original pair were perfectly true Pink-footed Geese, there $b_{\text {eing no suspicion of ornnge about the bill or legs and feet of either; }}$ the colour on these parts, however, became very pale and faded after the breeding-season, and continued so long into the autumn, but towards the end of autumn it got mnch brighter, the colonr being most intense at the beginning of the breeding-season; it is the same with those of their joung which liave orange legs and bills. This pair hatched three young in 1872 ; of these only one reached maturity. The legs and bills of the young were all alike, very dark olive-green, showing no trace of pink as long as they were in the down; but soon after they began to assume their feathers the colour on the legs and bills began to disclose itself, and those parts in the only survivor of this brood were
and still are orange. Since then the old ones have bred every year, some of the young having orange legs and bills, and some pink like their parents. This year the first orange-legged one, a female, had a brood, some of which had orange and some pink bills and legs. I have never seen any mixture of the colours, the legs and bill being either bright orange or bright pink; there seems to be no gradation between the two. As to the bills, the dark portion (that is, the nail and the base) remains the same whether the other part is orange or pink; in fact, the only part of the bill that shows any change is the part which in the Pinkfooted Goose is usually pink."

The Chinese Goose (Cygnopsis cygnoides) of Eastern Asia has long been domesticated in China and has been known as a tame bird in Europe for more than a century.

This Goose as usually seen in England shows two varieties. One in which the colour of the wild type is preserved throughoat, and a pare white type, with bill as well as feet orange. I do not remember seeing intermediate pied forms, which no doubt occur.

The bill is shorter than in the wild type, and at the base there is a fleshy knob, lerel with the forehead above, and noticeably betterdeveloped in the male. The form is of course heavier than would be the case in a wild bird.

The species can be modified to a greater extent, for the large Swatow breed, while typical in colour, has a very large knob, a pendulous feathered dewlap and abdominal fold.

A smaller lighter breed is imported to India from China, inferior in size to the type and much darker and greyer in colour, with the feet as well as the bill black, only just tinged with orange. There is no gular or abdominal flap, but the frontal knob is well developed, and the beak short.

The geese kept in India were considered by Blyth to be hybrids between the Chinese and the common goose, but so far as I have seen they show, in colour at all events, no trace of the latter. Their colour is not very often completely normal, as they frequently sliow some orange at the base of the beak, a white band of feathers round the base of the upper mandible, and a more or less perfect white belt across the breast. White birds are as described above. Pied birds are common, and usually have the dark colour on the back, flanks, and head. They are just as often ganders as geese, so that white is not sexually limited in this race.

The nasal knob is never very large, and grades into complete absence. Two young specimens imported direct from China, and normally coloured, had each a small round tuft at the back of the head.

The Mallard (Anas boschas) of the Northern Hemisphere has been domesticated since the beginning of the Christian era, and has given rise to several distinct breeds. It varies to some extent when wild, and a great deal in an unselected condition, as when kept in India; the varieties are best considered separately as to sex.

The leading variations in drakes are as follows:-
(a) As in wild type; rare; correct for Ronen breed.
(b) As above, but no bay breast or white collar, the pencilled-grey of the under-surface running up to the green neck; common; said to supervene with old age in domesticated birds of recent wild stock.
(c) As in wild type, but bay of breast running clondily along flanks; common.
(d) Black with a white patch on breast.
(e) Blue grey but with the usual markings; breast warm brown.
(f) Pure white; correct for Aylesbury, White Call, and Pekin breeds, the last-named being tinged with yellow.

Intermediate types are very common, generally irregularly marked; the breast is the first part to show abnormal white feathering, then the wings. I have never seen a pure black duck among mongrel Indian birds.

One pied type recurs so frequently, in various colours, that it deserves special mention. In this the head, breast and shoulders, and hinder part of body are coloured, the rest white. This is the correct marking for the new Indian Runner breed, in which the coloured part of the plumage must be fawn in tint.

As in the fowl, the female varies more than the male :-
(a) As in wild type; rare.
(b) As above, but light and dark head-markings obsolete, all head being uniformly speckled; speculum often whitish or brown like rest of wing.
(c) As in wild type, bat lighter ; throat and eyebrows white, belly. shading into white ; speculum normal ; common.
(d) As in wild type, but ground-colour much darker, rich warm brown, correct for female of Rouen breed; common.
(e) Black with white patch on breast; speculum often whitish; common.
( $f$ ) Blue-grey, often with dark edgings to the feather; not uncommon.
(g) Pure white ; correct for Aylesbury and other white breeds.
(h) White, with coloured speculum and some dark colour on rest of wings. Drakes are never marked like this.

The intermediate typen are very numerous; the markings in pied J. II. 23
ducks are the same as in pied drakes, which is remarkable when the great natural difference between the sexes is considered. For instance, the type with white neck, wings, and belly, and coloured head, breast and stern, corresponds closely with the drake so marked, and is correct for the fomale of Indian Runners.

The colour of the bill varies much; the iris, however, is not noticeably rariable, being always dark as in the wild form. The legs and feet are always orange except in black and dark black-pied birds, where they are black or black with orange toes respectively; I have also seen some light brown types with dark olive feet, in females. The female's beak is extremely variable, usually a mixture of orange and black in varying proportions; but it may be black-and-slate in the darker and some of the lighter types. In white birds it is generally orange, hut should be fleshy white in the Aylesbury, a colour not seen in Indian mongrels.

The drake's bill varies much as the duck's, being most commonly yellow or orange, often pied with black at the ridge and base. I never saw dark olive legs in a drake; except in black or black-pied birds they are always orange. The legs and general form are always coarse.

The Ostrich (Struthio camelus) has been domesticated for thirty years in Cape Colony (Mr. C. Schreiner, Zoologist, 4th series, Vol. I., 1897, pp. 99, 100).

An abrupt variation occurs in the colour of the naked skin, which is fleshy in some individuals, and grey of a dark or light shade in others. This difference of skin colouration is the main point relied npon to distinguish the various wild races now ranked as species. The plamage of the cocks varies from jet-black to rusty brown, the latter hne predominating in the moister coast districts. They may be more or less spotted with white, and in some the body feathers are curled. The hens vary from dark rich brown to light brown, grey, or ash; they may hare wing and tail-plumes white, or be barred with white; and a male-plamaged specimen was in Mr. Schreiner's possession.

## I. Moral Variability.

Variation in disposition is rery familiar to bird fanciers, and as examples I may perhaps be allowed to detail some observations I made recently on two members of the Babbler group (Timeliidae or Crateropodidae) the Red-billed Liothrix (Liothrix luteus) and the striated ReedBabbler (Argya earlii).

I had a couple of dozen of the former and one of the latter in a large cage together. Before the Babbler had been many days in the cage I began to notice the Liothrix often tickling and scratching its head, as
they habitually do to each other, but the recipient of this kind attention did not try to retarn it.

After a little time I introduced eight more Reed-Babblers into the cage, six adults and two young birds. They fraternized with each other and the other member of their species, bat before long I had to remove one bird, a young one, for bullying the Liothrix. Twice I caught it holding a Liothrix by the nape and keeping it suspended in the air as it perched, in one case the victim losing many of its feathers on escaping. It also drove the Liothrix from the food in sheer wantonness, whereas the other Babblers displayed no such selfish spirit. The bird was amicable enough with members of its own species. The Liothrix bore no gradge against these for the bad behaviour of their compatriot, for after its removal I saw one of them caressing one of the remaining Reed-Babblers in the usual way. Bat I never saw these take any troable to return the compliment, any more than did the solitary individual. However, I did not long keep them in the company of smaller birds.

The Liothrix itself varies in temperament, although asually to be described as tame though nervons, harmless and good-natured; of the two dozen birds alluded to, one, a fine male with a large stont bill and somewhat clouded with black below ( $A$ ) was inquisitive, always coming near me when I approach the cage; but he wonld not nsually take food from my fingers. He was fonder of seed than any of the rest, and was not mischievous, though well able to hold his own. The others did not dislike him on account of his colour variation, unsightly as it was. Very likely his fondness for seed was responsible for the change.

Another bird ( $B$ ) also a male, with a very short bill, was tame, would feed from the fingers, and was slightly inclined to be mischievous. When I put in an unfledged Paradise Flycatcher ('Terpsiphone paradisi), this specimen made several attempts to pull it off the perch by the tail. $B$ was not spiteful, bat $A$, in spite of his bigger beak, was afraid ' of him.

A third male ( $O$ ) normally coloured, with largish bill, was very tame, alighted on a food tray while I had it in my hand, and would peck from my fingers. It pecked several times at the head of the young Flycatcher above alluded to, and also bullied a young Tailorbird (Orthotomus sutorius) I put in experimentally. The second bird mentioned made no attempt to molest this little creatare, in spite of his inhospitable behaviour towards the Flycatcher a few days previously. Nor did most of the other specimens touch either young bird, so that the interference was unusual in this species. On one occasion I saw $C$ mischievously jerking and palling $B$ by the tail, while another was combing $B^{\prime}$ ' feathers.

Here, then, we have in two species of the same natural group considerable variation in dispositiou, both individual and specific.

## J. Variation in Mental Powere.

It is familiar to bird-fanciers that some individuals of a species learn to speak or sing with greater faoility than others.

In talking Hill-Mynahs (Eulabes intormedia) and Parrots of various species everyone must have noticed how few specimens can clearly enunciate words. I have only seen two of tbe above Mynahs which I should call good talkers, and one of these was more perfect than the other.

Sex may be supposed to make some difference, but two out of the only three clearly-speaking Parrots I have known were females; these were a red-and-zellow Macaw (Ara macao) and a common Ring-necked Indian Parrakeet (Paleoornis torquatus). The other was an African grey Parrot (Psittacus erithacus) whose sex I do not know.

I also noticed in a brood of young Cormorants (Phalacrocorax javanicus) I reared siome years ago, that one was so tame that I could carry it about on my hand, while another was so wild and vicious that it was difficult to handle it at all.

[^142]
## K. Varition in Taste.

A few instances of special preferences or the reverse in diet seem worth recording.

Mr: Meldrum of this city tells me that a Bhimraj (Dissemurus paradiseus) in his possession will not eat cockroaches; the specimens I have kept have usually done so readily, although supplied, as his bird is, with other insects.

I have noted above ( $\mathbf{p} .179$ ) in one Liothrix ( $L$. luteus) out of two dozen kept under the same conditions, a strong appetite for canary-seed. I have heard of a pair which altimately killed themselves by too much indulgence in this article of food, although they had a choice.

Sexual variations in taste have been fully dealt with by Darwin, and it is plain that individual inclination to breed outside the species frequently occurs. (Descent of Man, 2nd edition, 1899, pp. 414, 415).

The aversion to particular males, however, often alladed to, is very
probably due in many cases to the male in question not being strong enough to coerce a refractory female. Darwin mentions this (Descent of Man, second editiou, 1899, p. 417) with regard to the fowl; and in the case of the Pigeon and Canary, the more frequent occurrence of the phenomenon seems to be connected with the greater equality of the sexes.

I once witnessed a case in which a male domestic collared dove (Turtur risorius) confined in a hutch with a recently wild caught Turtledove (T. auritus) female, bullied the unfortunate bird till she was nearly scalped, with the result that ultimately she laid, although no young were hatched from the eggs.

Had she been the stronger bird, this would certainly not have happened; I have seen a female Muscovy duck repulse ignominiously a male common drake which tried to pair with her.

The converse case, of a cock strongly objecting to a particular hen, has been recently recorded with the fowl by (Bateson, Royal Society Reports to the Evolution Oommittee, I., 1902, p. 100).

## L. Variation in Habits.

Some habits of birds, such as the method of slowing off to the female, of manipulatiug food-with or without the use of the feet-seem remarkably constant, but the ordinary way of living is sabject to considerable variation. Darwin and Wallace have given a good deal of evidence on this head, and perhaps it will not be considered out of place if a little more be added.

The Pariah-kite of India (Milvus govinda), habitually takes cooked vegetable food in default of meat, such as boiled rice, bread, \&c.

The White-breasted Kingfisher (Halcyon snyyrnensis), a bird of varied general feeding-habits, as it takes both fish and land-animals such as earthworms, occasionally practises piracy; one which haunts the tank in the Museum grounds has taken to robbing the Dabchicks (Podicipes albipennis) living there of their fish; I have seen it make several attempts, one at least successfully.

The King-crow (Dicrurus ater) of India, although usually preying for itself, also practises piracy at times; and though normally insectivorous, it will also attack small birds and fish.

The Indian House-crow (Oorvus splendens), though usually carrying objects with its beak like Passerine birds generally, may be occasionally seen carrying something in its feet like a bird of prey. As the object is always according to my experience, valueless, a leaf, bit of dry cowdung, or a stick, it would seem that the prudence of the crow prevents the bird from experimentiug ou articles of food in this way, lest they be lont.

This crow certainly does learn new habits; those at the Musenm are afraid to fish things out of the tank, but down by the Hooghly they take objects off water readily. At the Grand Hotel in Calcatta they have learnt to catch food on the wing, owing to being fed by residents in this way.

Mr. A. L. Butler observed in the Andamans one individual of the Chesinat-headed Bee-eater (Melittophagus swinhoii) capturing small beetles while clinging to a bank, while others of the species were hawking insects on the wing in the ordinary way. (Journ. B.N.H.S., Vol. XII., p. 561).

I had a common domestic drake which learned to fly up and perch on a seat iu company with two Muscovy ducks kept with him. His general power of flight also improved mach by his association with these birds, which, as usual with the species, were much more powerfal and ready with their wings than common ducks.

Rai R. B. Sanyal Bahadur records that some Wigeons (Mareca penelope) and White-eyed Pochards (Nyroca africana) kept in an aviary with many other birds learned in this way to fly up to the perches and sit there. (Hand-book to the Management of Animals in Captivity in Lower Bengal, p. 309, Calcutta, 1892).*

I observed that some common Teal (Nettium creccu) confined in another aviary at the same garden (Calcutta) ased to perch on the narrow ridges of nest-boxes. This was also in all probability an acquired habit, as this Teal seems never to perch when wild. No other non-perching ducks in the same aviary acquired the habit, not even the Garganeys (Querquedula circia), nor the Wigeons or White-eyed Pochards, though perching ducks were confined with them.

## Conclusions.

In most of this paper I have merely tried to record some facts which may be useful to students of variation, bat with regard to the facts concerning the range of variation in domesticated birds given in Section H. (p. 164), the following conclusions seem justifiable:-

Domestication seems not to induce variation directly; it merely gives varietal individuals a better chance of surviving and multiplying, and of producing secondary varieties by crossing with each other or with the type. The frequent occurrence of varieties in the wild state shows that the tendency to produce them is there just as strongly.

Were domestication to act in iuducing variability by the change of conditions, we should expect to find our protected species varying more

[^143]in proportion as they were more unnaturally treated. But this is not the case ; the Java Sparrow and Collared Dove, bred for generations in small cages, do not vary more than wild birds; whereas the Pheasant, which lives almost a completely natural life, is more variuble than these.

Climate does not directly induce colour-variation. The same colours constantly recur in domestic birds in Europe and in India, without variation in intensity. But some types of colouration may be absent altogether in one or the other country. Here an indirecl action of climate, weeding ont colours which are correlated with an unsuitable constitution, may be reasonally suspected.

For so soon as a correlation between colour and some constitutional quality is detected, it will probably be found that selection steps in even in domesticated birds not bred for colour. Fighting cocks are very variable in colonr, being judged solely by conrage and prowess in the pit, and hence not selected deliberately for colour-points. Yet the quasi-natural selection to which they are exposed seems to net in suppressing some few colours; cuckoo-coloared (barred-gres) birds-so common among unselected fowls-were rare in English fighting game, and I have never seen a cuckoo-coloured Aseel or Indian game-cock. In this breed, which is even more coarageous than the English game, and has to fight under more trying conditions, the range of colour is altogether more limited than among English birds; the hen, for instance, is never of the wild "partridge" colour, and very rarely shows any approach to it, though the cock asually has some likeness to the male of Gallus gallus, the Red-Jungle Cock, his ancestor.

On the other hand, the dack, domesticated in so unnatural a climate as that of India, shows mach the same variations as it does in England.

Every species we have taken under our protection varies in its own way; the two tame geese, Grey and Chinese, so nearly allied that they produce a fertile hybrid, have not an identical range of variation.

The variations of domestic birds have mostly an abnormal and unnatural appearance, like casual variations nmong wild forms; this may in some cases be explained. For instance, most domestic species produce a white variety, and albinoes are common among wild birds; yet these are usually unfitted for the struggle for existence on account of their colour, and accordingly we find few white species. Those we do find may reasonably be supposed to have originated as albinistic sports; in the family where white species are commonest-the Heronswe still find yet other species which commonly produce temporary or permanent albinoes. A bird with the primary quills only white at once looks unnatural, and yet it is an extremely common variation among both tame and wild birds. Examination of the white quills, either in
pied or pure white varieties, will very commonly show them soft and abraded at the tipe, a serious matter for a wild bird. Accordingly we find that white-quilled species, like white ones, are almost always large and strong, and well able to defend themselves.

Why no species is mottled or splashed or irregularly pied, as tame forms and varieties commonly are, is less easy to understand. But the fact that constitutional disturbance seems to cause a bird to become temporarily so marked, may afford a clue. Such birds may be weak in constitution, and unfitted to live in a wild state. The hens do not appear to object to them, witness the case given by Darwin of Sir R. Heron's pied Peacock, and that of the pied Black bird recorded by Mr. Bucknill in his Birds of Surrey. This latter was evidently weakly; his whiteness increased with age, and he died from natural causes.

At the same time, some species seem incapable of producing mottled or irregularly pied varieties; I have never seen such in the Tarkey or Collared Dove, and the Guinea-fowl is never mottled or splashed, although its pied markings are not quite as regular as a wild bird's. The Canary, on the other hand, is particularly prone to be asymmetrical and irregular in its markings, as also is the Pigeon.

The tendency of so many domestic birds to become coarse and heary. looking, especially marked in the Water-fowl, is probably due to the adding up of small variations in that direction; these would, especially on birds performing long and perilous migrations, be weeded out in each generation; but if allowed to breed, would, in accordance with a tendency well-known to fanciers, produce offspring coarser and heavier even than themselves, till a conspicuous difference in appearance resulted.

It is possible that the tendency to the increased production of fleshy out-growths, like the combs and wattles of poultry, is connected with this assumption of a course habit of body; but it must be remembered that such processes are peculiarly susceptible to external influences and constitutional changes, and, hence, if the environment is ever proved to produce an inherited effect on any bird, might be expected to show this effect early and conspicuously.

PLATE VII.


Babax lanceolatus. Parus palustris.

PLATE VIII.


Variations of Pintail Snipe (Gallinago stenura).

PLATE IX.


[^144]A. Normal form.
B. W'hite faced variety.

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# NOTE ON THE PUBLICATIONS 

OF THE

## ASTATIC SOCIEIY.

The Proceedings of the Asiatic Society are issued ten times a year as soon as possible after the General Meetings which are held on the first Wednesday in every month in the year except September and October; they contain an account of the meeting with some of the shorter and less important papers read at it, while only titles or short resumés of the longer papers, which are subsequently published in the Journal, are given.

The Journal consists of three entirely distinct and separate volumes: Part I, containing papers relating to Philology, Antiquities, etc. ; Part II containing papers relating to Physical Science; and Part III devoted to Anthropology, Ethnology, etc.

Each Part is issued in four or five numbers, and the whole form three complete volumes corresponding to the year of publication.

The Journal of the Asiatic Society was commenced in the year 1832, previous to which the papers read before the Society were published in a quarto periodical, entitled Asiatic Researches, of which twenty volumen were issued between the years 1788 and 1839 ,

The Journal was published regularly, one volume corresponding to each year from 1832 to 1864 ; in that year the division into two parts above-mentioned was made, and since that date two volumes have been issued regularly every year. From 1894 an additional volume, Part III, has been issued.

The Proceedings up to the year 1864, were bound up with the Jotirnal, but since that date have been separately issued every year.

The following is a list of the Asiatic Society's publications relating to Physical Science, still in print, which can be obtained at the Society's House, No. 57, Park Street, Calcutta, or from the Society's Agents in Loudon, Messrs. Luzac \& Co., 46, Great Russell Street, W. C.; and from Mr. Otto Harrassowitz, Leipzig, Germany.

[^145]1858 (5), 1861 (4), 1862 (5), 1864 (5), 1866 (7), 1867 (6), 1868 (6), 1869 (8), $1870(8), 1871$ (7), 1872 (8), 1873 (8), $1874(8), 1875(7), 1876(7), 1877$ (8), 1878 (8), 1879 (7), 1880 (8), 1881 (7), 1882 (6), 1883 (5), 1884 (6), 1885 (6), 1886 (8), 1887 (7), 1888 (7), 1889 (10), 1890 ( 9 and 2 Supplts.), 1891 (7), 1892 ( 7 and Supplt.), 1893 (11), 1894 (8), 1895 (7), 1896 (8), 1897 (8), 1898 (8), 1899 (7), 1900 (7), 1901 (7), @1/8 per No. to Members and @ 2/per No. to Non-Members.

N:F.-The figures enclosed in braclets give the number of 1883
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Catalogue of the Mammals and Birds of Burmah, by E. Blyth 20 (Extra No., J.A.S.B., 1875)

Moore and Hewitson's Descriptions of New Indian Lepidoptera, Parts I-III, with 8 coloured Plates, 4to. @6/ each
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## J OURNAL

OF THE

# ASIATIC SOCIETY OF BENGAL. 

VOL. LXXI.<br>PART III. (ANTHROPOLOGY, \&C.)<br>(Nos. I and II.-1902) : with Index.<br>EDITED BY THE<br>Anthropological Secretary.

" It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science in different parts of Asia, will commit their observations to writing, and send them to the Asiatic Society of Calcutta. It will languish, if such communications shall be long intermitted; and it will die away, if they shall entirely cease." SIR Wu. Jones.

## CALCUTTA:

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    AND POBLI&HED BY THE
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## ASIATIC SOCIETY OF BENGAL.

## Vol. LXXI. Part III.-ANTHROPOLOGY AND COGNATE SUBJECTS.

$\qquad$
No. 1.-1902.

Dhelai-oandī. A form of tree vorship.-By Mabámaropãdhyàta Haraprabãd Shābtrí.
[Received 29th April 1899 ; read 3rd May 1899.*]
Abont twelve years ago, while taking a stroll in the fields to the east of Naihāti in the district of 24 -Perganas, I was struck by seeing people picking up clods of earth and throwing them at a date tree close to the road on the left. In the course of half an hour I noticed four or five persons doing that.

Being carions to know why they did so, I asked one of them, and he told me that a Candi, a female deity -a form of Durgā, Çiva's consortresided in the tree, and is propitiated by offerings of those lamps of clay. I use the word "offering," but he ased the word Naibedya, that is, an offering of uncooked eatables; so the Candi is supposed to eat the lamps of clay. Unlike the propitiation of other deities who grant boons enjoyable only in the world to come, the propitiation of this deity is followed immediately by a great relief, and the relief is that children crying at home are at once pacified. I had then a child about a year old whose cries often vexed the whole family, so I took a clod and threw
*This paper was kept back from publication as the Author hoped to add to it.
J. III. 1
it at the date tree. On approaching the tree, I marked two thingsthat the lumps of earth had covered several square yards of the ground to a height of eight or ten feet all round the tree, and that the tree was never tapped, so that it appeared like a giant among the oftertapped, indented, moribund date trees.

What the consequences of my offering to the date tree were, I do no remember, but I told the thing to several of my friends; and one of them informed me of the existence of a similar tree about half a mile north of Naihāți on the road leading from the Gourepore Mills to Mājipārā. Curiosity led me to pay a visit to that tree also, and I foand the same thing there too.

Ten years later, when I resolved to write on the subject of this carious worship, I thought it proper to pay visits to my old friends again. The new kutcha road from Naihāti to Amḍangā had been made, and the āsthān, or seat of the deity, has fallen to the right and a few yards away from it. I had no difficalty in reoggnising the mound of earth. The old tree at the centre of the mound was dead, and its dried stamp only occupied the old position, but by its side another tree had grown up to the height of the old one and was enjoying the offerings of the passers-by.

On asking a rastic, whose house was situated in the next village, I learnt that, instead of lumps of earth, sweets are often offered, sweets sach as sandeś and vātāsā, and that the propitiation of the deity is followed, not only by the pacifying of the crying child, but also by other boons such as the birth of a child, the obtainment of a situation, success in litigntion, \&c. lasked him if any mantras were used with the offerings and was answered in the negative. I also asked him whether there was any priest of the deity, and received a similar answer. Then I asked him what becomes of the sweets that are offered, and he said, they are picked up by cow-herd boys.

The old man gradually became communicative and told me of many miracles displayed by the presiding deity of the tree. He said that a neighbour of his once ventured to tap the old date tree (and he pointed oat to me the mark of the tripping on its dry stump), but the man who ventured to commit such a sacrilege died in the course of a month by vomiting blood. He also told me of a hooded serpent which often came to the tree and which is really the Candi.

Thus in the course of ten years I fond there were great changes in. this very simple tree worship, the offerings liad improved, the sphere of usefulness of the deity had expanded, a myth had grown up, and it only remained for a priest to appear in order to raise the worship to the dignity of a cult.

When I visited the other date tree, I found the same improvements, there too.

Since my attention was directed to this form of newly growing tree worship, I have been informed of several other date trees in the same neighbourhood enjoying the same considerntion and worship. There are two near the Kānchrapārā station, one to its north-east, on the khāl which is an old bed of the Jamna, at a place named Kantäganj, and the other to the south-west of the station and to the west of the locomotive workshops, near the Shäh-dighi, an old tank with huge banian trees, said to have been excavated by Malik Sähib about two hundred years ago wheu he founded the old mosque at Bāg. There is a third tree near Mājipāra on the road which rans from the Gauripur Mills to that village. There are a fourth at Candigarh on the Amdāngà road, a fifth on the old road leading to Nàrāyaṇpur, (now very little used because of the constraction of a pucca road from the Kankiuārā Station to that village), and a sixth at Mandalpārā.

I cannot refrain from relating an instance of a practical joke, played by one of my Brahman neighbours on the credulous villagers of Kāmta in the Jhenida sub-division of the Jessore district. He was very fond of goat's flesh, but in a remote place like Kāmtā goat's flesh is a rarìty. One must one's self have a goat killed if one wishes to partake of its flesh. My neighbour had a small garden attached to bis residence, and in it were some clumps of plantain trees. He cut one of the plantain trees to the ground level and covered it with clean earth. As soon as a new leaf came out, he cut it to the ground level and covered it with clean earth. After this process continued for some months, it was time for the plant to shoot out its large flower-stalk which is called mocã. The young man one night cried oat, as if in a dream, that Candi came to him and told him she would appear in the form of a mocà in his garden. At first nobody believed him, but when in the course of a few days the dark red flower-stalk began to make its appearance, the credulous people thought it was the living Candi. He then declared that Candi would be propitiated only with goats' flesh, and would grant any boon when so propitiated. Many poor kids were sacrificed and the Brahman had meat to his fill, bat in the course of two or three months when young plantains began to make their appearance, lis trickery was exposed and he was discredited. This Canḍì was named the Mocīi Cundī.

On North Indian Folk-tales of the "Rhea Sylvia" and "Juniper Tree" Types.-By Sarat Chandra Mitra. Communicated by the Anthropological Secretary.
[Received 31st December 1898; read 1st March 1899; and sabsequently revised by the Author].
English folklorists have classified all folk-tales hitherto published under seventy heads or types, each type or story-radical being based on the characteristic elements of a particular group of tales.

One group of folk-tales has the following incidents for its essential features. A wife, being jealous of a child born to her husband by a co-wife, substitutes a stone, a bird or an animal for the new-born child, and causes the new-born child to be abandoned in a forest or cast adrift in a river; the child is discovered by a low-born man, and is saved and brought up by him ; the step-mother, hitherto supposing the child to be dead. accidentally discovers one day that he is alive, and therefore sets him to perform some difficult task in the hope that he will perish in the attempt; but the youth surmounts the difficulty and accomplishes the task, to her discomfiture; ultimately, by accident, the father discovers that his wife, the child's mother, whom he has neglected or banished and has cruelly treated, had given birth to a real child, and how the jealous co-wife had duped him; the youth is finally recognised, and his deserted mother is reinstated in her position and restored to her hasband's love.

The story-radical or type fixed by the Folklore Society of Loudon, that makes the nearest approach to this group of tales, is the Rhea Sylvia type, of which the essential elements have been thus stated :*1. The mother is either killed, or leaves the children for a few minutes;
2. They are suckled by a wild beast ;
3. They pass through various adventures; and -
4. Are finally recognised and raised to the throne.

But the group of folk-tales referred to above, the North Indian variants of which I describe and discuss below, is not classifiable nuder the Rhea Sylvia type. The elements of the former group differ in many essential features from those of the Rhea Sylvia type, as will appear from the following specimen of a Bihari folk-tale of this group, which is now published for the first time.

A Raja had two wives ; the elder Rani had no child, and he had

[^146]therefore married the jounger in the hope of having a son and heir by her. In course of time, the younger Rani became enceinte. As the time of her confinement drew nigh, he gave her a bell, with the instraction that she should ring it when she should be taken with the pangs of childbirth, so that he might know from its tinkling and come to assist her. One day shortly afterwards the younger Rani, in one of her listless moments, rung it violently, and the Raja hearing it hasted to her palace and enquired whether she had been taken ill. Being answered in the negative, he left in a great huff, telling her not to ring the bell so wantonly any more. After that she was more careful. But the elder Rani, who was jealous of her, and the more so because the latter was about to become a mother, rang the bell one day in the younger Rani's absence. Hearing the bell ringing, the Raja went to the younger Rani's palace, expecting to find her in the pangs of parturition, and was very much displeased to find that he had been hoaxed again. In reply to his enquiry, she declared that she had not rang the bell; but he would not listen to her protestations and left her in high dudgeon, swearing that he would foot come to her assistance when she should really be in travail.

When the time of her confinement drew near, the younger Rani, who was quite unsophisticated, enquired from her elder co-wife how she should act when she should be taken with the pangs of childbirth. The elder Rani, who was secretly plotting to bring about the latter's estrangement from the Raja, advised her that, when she should begin to feel the pangs, she should blindfold herself with seven folds of cloth and lie down hiding her head in an empty kitchen-oven, and that she would in that position have a very easy delivery. As soon as the younger Rani began to feel the pains she acted according to the elder Rani's advice without any distrust. The elder Rani had arranged beforehand that, as soon as the baby should be born, it should be placed in an earthen vessel and set adrift in the river, that some stones should be sabstitated for it, and that information should be given to the Raja that the younger Rani had given birth to some stones. Finding that she was really in labour, the younger Rani violently rung the bell to apprise the Raja of her confinement; bat having been twice duped before he did not listen to the bell-ringing, nor come to her assistance; and his absence greatly favoured the elder Rani's designs. Shortly afterwards, the younger Rani gave birth to a son, without seeing the child, as she had blindfolded herself; and the elder Rani's agents secretly placed the boy in an earthen vessel and set it adrift in the river, and, substitating some stones for the child, went to the Raja and informed him that the younger Rani had given birth to some stones, contrary to all expecta-
tion. Hearing this, the Raja was greatly disappointed, and his affection for the younger Rani began to wane.

In the course of years, the younger Rani gave birth to three more boys, but the elder Rani disposed of them also in the same way, that is, she caused them to be placed in earthen vessels and set adrift in the river, after having substituted stones for them, and gave the unsuspecting Raja to understand that, as on the first occasion, the younger Rani had given birth to stones. The Raja, whose affection for the younger Rani had already been very much estranged, became greatly enraged with her at the successive disappointments, and at length banished her from the palace, and relegated her to the position of a cow-keeper.

The earthen vessels containing the new-born babes floated down the stream and were discovered by a potter, who, having had no children of his own, took them home and made them over to his wife, telling her to bring them up with care and affection. In the course of years, the four foundlings grew up to boyhood. The potter, who doted on them, made four wooden horses with reins of jnte, and gave one to each of the boys to play with. He had in the meantime become acquainted with the boys' parentage and the circumstances in which they had been cast adrift, and therefore told them to go to the village well (where all the women-fulk of the village used to go to draw water) and play there by making a pretence of watering the wooden horses. The boys accordingly went to the well and, taking the horses to the water's edge, called out:

Kāthe ke ghodan, pāte ke lagām, pañi pih.
" Ho! wooden horses with reins of jute, drink water!"
As this pretence of giving the horses a drink of water cansed mueh delay to the women who had come to draw water, the women all remonstrated with the boys upon the foolishness of their errand. Becoming angry with their remonstrances, the boys broke the women's earthen pitchers, and went on as before watering their horses. One of the women, who was bolder than the rest, said,-"Well, boys, how is it possible for wooden horses to drink water." The boys replied,"How was it possible for your younger Rani to give birth to stones? If it was possible for her to do so, it is quite possible for wooden horses to drink water." It must be explained here that the potter had instructed the boys to give this reply, in case the womenfolk at the well should taunt them with the ridiculousness of watering wooden horses, That woman having been thus silenced, all the women went in a body to the Raja and complained of the conduct of the potter's fosterchildren.

The Raja sent men to prevent the boys from obstructing the
women from drawing water from the well, but without success. At last, the Raja himself went to the well and, being struck with their handsome appearance and noble bearing, enquired of the boys who they were. They replied that they were the sons of a potter. Therenpon the Raja sent for the potter and learnt from him their true history. Discovering that they were bis own lost sons, he took them to his palace and invested them with all the dignity and rank of princes of the royal blood. Regretting the cruel tieatment he had inflicted on the younger Rani, be sent for her and restored her to her former high position and treated her with the same affection as he had formerly borne to her. He also ordered the wicked elder Rani to be placed in a pit and buried alive, with thorns above her head and beneath her feet.

Closely parallel to the above story is the Kashmiri folk-tale of "c The Wicked Queens," which is to be found in Knowles' Folk-tales of Kashmir, pp. 405-408. In that tale, the favorite queen is delivered successively of two boys, but her jealous co-wives contrived, with the nssistance of a wicked midwife, to substitute two pups for the boys and to take the boys away and drop them in a carpenter's shop. As in the Bihari tale, the disappointed king banished the favorite queen. The boys were brought up by the carpenter, unknown to the king. On one occasion, the king found the boys playing with a wooden horse and pretending to feed it with rice and make it drink water; and he taunted them with the absurdity of their action. But they retorted that, if it was possible for the banished queen to have given birth to pups, it was equally possible for a wooden horse to eat and drink. Struck with the absurdity of the story that he had been led to believe about his favorite queen, he made enquiry and found out how he had been duped, and how the favorite queen had been victimized by the other queens. The two reputed sons of the carpenter were proved to be his sons. The story (as is usual with this class of folk-tales) ends happily with the recall of the banished queen and the children, and with the banishment of the wicked queens.

From a comparison of the Bihari and the Kashmiri variants, it appears that they bear a striking similarity in the main incidents, and that the differences are ouly in the minor incidents. What is most remarkable in these stories is that the denoument is brought about by the "watering of wooden horses," and that the taunt about the younger Rani's having given birth to stones or pups arouses the Raja to the absurdity of what he had believed about her. They differ in the absence of the " bell-ringing" incident from the Kashmiri variant; and in some minor features, namely, in the thing substituted for the new-born child, and in the foster-father's occupation.

The " bell-ringing" incident occurs in a Bengali variant of the tale, known as "The Boy with the Moon on his Forehead." In this variant," a Raja gave his favorite queen a golden bell, telling her to ring it only when she will be taken with the pangs of child-birth, in order to apprise him of her confinement. The jealous co-wives prevailed upon her to ring it twice before her time; and he was greatly displeased, so that he did not attend her accouchement when she was really taken ill, although she rang the bell then. She gave birth to twins-a boy with a moon on his forehead and stars on the palms of his hands, and a girl As in the preceding versions, the co-wives, aided by the midwife, sabatituted a pair of pups for the twins, put the children in an earthen vessel and placed the vessel among the unburnt clay-vessels of a potter, in the hope that they would be burnt to death, when the potter should set fire to his kiln. By the merest accident, the potter discovered the babes and brought them up.

Coming to know that the twins were living, the co.wives hatched another plot to destroy them. They contrived to inform the girl, the potter's reputed daughter, of the existence of a wonderful ketaki flower (Pandanus odoratissimus), which was to be found on the other side of the ocean and was guarded by terrible Rāksasas. Seized with the desire of obtaining the flower, the girl induced her brother to go and fetch it. The boy crossed the ocean, dived into a tank, brought np a wooden box containing a couple of bees which were the life-index of the Räkşasas, and killed all the Räksasas by crushing the bees to dentli. He also released from their thraldom a captive lady named Puṣpavati and triumphantly brought her home with the flower. It was Puspavati who brought about the dénoument by telling the duped Raja the truth about his children, and the punishment of the wicked coqueens and the happy recall of the banished Rani and her children followed as usual.

We have now to discuss two variants of this story, in which the bell-ringing incident occurs, but in which the part of the foster-parents of the cast-off children is played, not by haman beings, bat by members of the brute creation. The first variant is the story called "Truth's Triumph" from Western India, and the other is the folktale entitled "The Boy who had a moon on his forehead and a star on his chin," from Bengal.

In the variant from Western India, $\dagger$ the Raja gives his favorite Rani Guzra Bai, who was a gardener's daughter, a golden bell for the same purpose as in the Bengali variant. As in the Bengali version,

Guzra Bai rings the bell thrice before her time, and the Raja does not attend at the time of her confinement, notwithstanding the ringing of the bell. Twelve co-wives sabstitate stones for the handred boys and one girl, to whom Guzra Bai gives birth, and the children are thrown out on a dust-heap to be eaten by the beasts of the field and the fowls of the air, but are protected and cared for by some bandicoot rats which take them into their holes.

Coming to know of this, the wicked Ranis send men to dig up the bandicoots' holes and kill the children, but the good bandicoots remove the children to a well. This fact also happens to reach the ears of the wicked queens, and they send men to dig ap the well and the children. Bat the children pray for help to the god Gan-pati, and he metamorphoses the handred boys into a handred little mango trees and the girl into a little rose tree. Coming to know of this, the wicked Ranis order the one hundred and one trees to be burnt down, bat the god Gan-pati miraculonsly raises a storm which puts out the fire and floods the country, and canses the trees to be carried by the flood to a distant country. There they resume their haman form and effect a landing in the midst of a forest, but an ogress there transforms the handred boys into as many crows.

At this time a soung Rnja appears on the scene, takes the girl (Draupadi Bai) with her one hundred crow-brothers to his home and marries her. A boy, by name Rām-chandra, is horn of this union. Räm-chandra, learning of his uncles' sad history, goes to the ogress, and carries off from her a couple of jars of magic water, a magic wand and a little of her hair. She parsues him. He conjures ap, by means of the magic wand, obstacles to impede her progress, but she surmonnts them all. Ultimately, the pursued prince scatters her hair to the wind, and it immediately produces a great conflagration in which she is burnt to death. On reaching home the prince sprinkles the magic water on his crow-unoles, and they at once resume their haman shape.

Thereafter Draupadi Bai and her husband give a great feast, to which they invite both the banished Rani Gazra Bai and her duped hasband, and bring about the denoument by disclosing to the latter the whole story of the crime of the twelve wicked Ranis. A happy reanion between Gazra Bai and her husband take place, and punishment is meted out to the wicked Ranis.

In the second variant, the version from Bengal," the Raja gives his favorite Rani, who is, as in the Western Indian variant, a gardener's daughter, and who is about to beoome a mother, a kettle-dram for the same parpose. Her four wicked co-wives prevail upon her to beat it
*Stokes' Indian Fairy Tales, No. 20, pp. 119-137.
J: III. 2
twice before her time, and that mightily annoys the Raja; hence, when she is really taken ill, he does not go to her, notwithstanding the vigorous tapping of the kettle-drum. She gives birth to a boy with a moon on his forehead and a star on his ohin. With the help of a narse, the four wicked Ranis substitute a stone for the boy, and he is placed inside a box and buried, but the mother could not see all this, as she had been induced by her co-wives to blindfold herself.

The Raja's dog S'ankar digs up the box, and saves the boy's life by hiding him in his stomach for one year: Coming to know of this, the wicked Ranis resolve to kill the dog, and the dog therenpon makes over the prince to the Raja's cow Suri, who likewise hid the prince in her stomach for two years. The wicked Ranis determine to kill the cow, and she in her turn makes over the prince to the Raja's horse Katar, who hides him in his stomach for another two years. The wicked Ranis, coming to know of this, resolve to kill the horse, but he flees with the prince to another Raja's country. There the prince twists Katar's right ear, and in consequence the horse is changed into a donkey; and the prince himself is changed into a poor ugly youth by twisting his own right ear.

The foreign Raja's youngest daughter falls in love with the disgaised prince and marries him. Thereupon the prince is transformed into a handsome young man by twisting his own left ear, and she recognises her husband, in his transformed state, with difficulty. The horse Katar tells the prince the whole story of the banishment of the favorite Rani and the wicked Ranis' machinations. The prince then visits his father's country and gives a great feast, to which he invites his father, the four wicked Ranis and his own mother-the banished Rani. The dénoiment is effected by the horse Katar, namely, the execution of the wicked Ranis, and the recall of the bauished Rani and her son.

I may notice here that the most interesting featares of the variant from Western India, known as "Truth's Triumph," are these: (1) the aiding animals; (2) the metamorphosis of human beings into trees and crows by witchcraft. The incident of the Helpful Beast is of frequent occurrence in folk-tales. Animals aid the hero or heroine out of gratitude for some kindness done to them. In the Kashmiri folk-tale of "The Charmed Ring," a cat, a snake and a dog help the hero. In the North Indian folk-tale entitled "Princess Labam," ants and a tiger aid the hero out of gratitude for saving the lives of the former and for extracting a thorn from the latter's foot. The same theme of the Grateful Animals occurs in the South Indian folk-tale of "The Soothsayer's Son." In the variant last described bandicoots are the animals which render assistance to the heroine and her brothers out of sheer pity for
their forlorn condition, and in the Santali folk-tale of "The Girl who always found helpers,"* a snake, a tiger, a bear, a frog and some pigeons aid the heroine in performing the tasks set her by her cruel sisters-in-law.

The metamorphosis of human beings into animals is a common incident in Indian folklore, and the instances are too namerous to be cited here. The victims are sometimes changed by the witch or magician into inanimate objects like stones and trees, as will appear from the North Indian tale wherein the ogre Punchkint transforms the objects of his wrath into stones and trees, and from the Kashmiri variant of "The Wicked Queens" to be discussed next, in which the heroes are changed into stones because they looked back at the foot of the magic mountain. The most remarkable incident in the variant, " The Boy who had a moon on his forehead and a star on his chin," is the way in which the aiding animals preserve the deserted child's life by hiding him inside their stomachs. The incident of Living in Animals' bellies also occurs in other Indian folk-tales, as in the story in which the hero lives four days and four nights in a crocodile's belly; the heroine lives for twelve years in the belly of a monster fish called the Rohu (Labeo rohita), and a crow, a jackal and a snake go into the fish's belly to see what creature is in there. $\ddagger$

The presence of a moon on the hero's forehead is also noteworthy, considering that the same characteristic of the hero is found in the Bengali variant, wherein the hero has stars on the palms of his hands instead of the chin. This trait points to the Hindu origin of the variants, because in Hindu mythology the god Siva is represented as having a moon on his forehead, and almost all Hindu tribes and castes have their distinctive caste-marks there.

The incident of the heroine's selecting the hero, disguised as a menial, for her hasband is also frequently mentioned in Indian and European folk-tales, for details of which the curions reader is referred to Jacobs' List of Incidents (8. v. Menial Disgnise) in Transactions of the Folklore Congress, 1892, pp. 87-98.

I must now return to the main subject of this essay. The absence of the bell-ringing incident is altogether remarkable in the two following variants from Kashmir.

In the second variant§ from Kashmir, the favorite Rani gives birth to two sons, and to twins, namely a boy and girl, in succession in the

[^147]course of several years. The two co-wives substitute a crow for each of the first two boys, and a couple of pappies for the twins; and patting the children into boxes, cast them into the river, expecting that they will be drowned. But the boxes are picked up by a gardener, and he adopts and brings up the children as his own offspring. Being sorely disappointed with his favorite Rani, the Raja banishes her.

The wicked Ranis, coming to know that the children are living, egg on the girl to send her brothers to fetch a beantiful bird that speaks and sings like a human being. The eldest brother goes in his search for the bird, and comes across a holy mendicant who gives him instructions for bringing the bird. But he acts contrary to the jogis instructions and is turned into a pillar of stone. The second brother meets with a similar fate. The youngest brother succeeds in fetching the bird and some of the golden water which has the magical power of transforming men to their original shapes. The two brothers, who are pillars of stone, are sprinkled with the golden water and transformed back into their human shape. The three brothers return home with - the bird and the golden water. The bird discloses the whole story of the wicked Ranis' crime to the Raja, and he thereupon exiles them and restores the banished queen to her former position and honor.

In the next variant from the same conntry, the favorite queen gives birth to a son, who is disposed of in the same way as in the preceding variant, a stone being substituted for him. He is picked up by a holy man and brought up by him. On hearing of this, the wicked Ranis persuade the boy's adoptive mother to send him to fetch the sandalwood tree with branches of gold and flowers of pearls. He goes in search of it, and on the way meets a woman who comes ont of a spring and gives him instructions how to procure the tree. He follows her directions and, surmounting the difficulties that stand in his was, succeeds in bringing the tree home. He is again sent to fetch the covering for the tree, and brings it home, accompanied by the wise woman. The dénoúment is brought about by this woman, and is followed by the usual exiling of the wicked Ranis, and recall of the banished queen.

The most remarkable incident in the last mentioned variant is the bringing of the sandal-tree with branches of gold and flowers of pearls. Such an incident occurs also in the folk-tale from Western India, in which the heroine Seventoe Bai finds beneath the waters of the lake a garden, in the centre of which grows one tree, more beautiful than all the rest, with stem of silver, leaves of gold, and clusters of fruits of pearls. $\dagger$

* Knowles' Folk-tales of Kashmir, pp. 408-414.
† Frere's Old Deccan Days, p. 27.

It would appear from the incidents in the North Indian folk-tales discussed above, that the story-radical fixed by the Folklore Society of London for tales of the Rhea Sylvia type does not fit in with these North Indian tales. I, therefore, propose to fix the following new story-radical for the folk-tales discassed above and to name it "The Wicked Step-mother's Type": -

1. A ling, having one or more wives bat no son by them, marries another wife in the hope of having a son by her.
2. The wicked co-wife or co-wives, being jealous of the youngest queen, substitute some animate or inanimate object for the new-boru babe, and cast the babe away with the intention that it shall perish.
3. Some man in humble position, or a holy man, or even some animal, finds the new-born babe and brings it up.
4. The wicked step-mothers, discovering that the child is alive and grown up, set the young prince dangerous tasks to perform, in the hope that he will be killed in attempting them.
5. The prince sacceeds in performing the tasks.
6. Then in some wonderful way the whole story of the stepmothers' wickedness is discovered and is revealed to the king, and the king learns that the prince is his son.
7. The king receives his son and repairs the injustice which he had committed; he banishes the wicked elder queens, restores the youngest queen to her former position, and lives happily with her and their newly-found son.

Juniper Tree Type.
The next type of folk-tales which I deal with in this paper is the Juniper Tree type. The story-radical fixed by the Folklore Society of London for folk-tales of this type is the following* :-

1. A step-mother hates her step-child, and accomplishes its death.
2. Marvellons incidents follow, through the transmigration of the child's soal into 1st, a tree; and 2ndly, a bird.
3. Panishment of the step-mother.

The chief differences between the Rhea Sylvia and the Juniper Tree types is that in the former type the step-mother tries to bring about the death of the step-child bat fails; whereas in the latter type, she accomplishes it.

The only folk-tale of the Juniper Tree type, which I have come across in my survey of the field of Indian Folklore literature, is the following one from Bengal, entitled "The Seven Champā Brothers," which is now published for, I believe, the first time:-

A Raja had two wives. The eldest queen not having had any * Handbook of Folklore, p. 121.
children, he married the younger Rani in the hope of having children by her, and is therefore mach attached to her. In course of time, the younger queen becomes enceinte, and he is very happy at the thought of haring an heir. When the time for her confinement has well-nigh arrived, she enquires of her elder co-wife how she shall behave during her travail. The elder wife, who is very jealous of her, tells her to blindfold herself with a cloth folded seven times, and hide her face in the empty fire-place, and assures her that, if she remains in this position, she will have a very easy delivery. The younger Rani, who is unsophisticated and does not see through the other's sinister motives, consents to act up to her saggestions. In the meantime, the elder Rani arranges that, as soon as the child shall be born, it should be strangled and buried in the backyard of the kitchen, without the younger Rani's knowledge.

In time the younger Rani, being taken ill with the pangs of childbirth, blindfolds herself in the way suggested and hides her face in the empty fire-place. She is delivered of a son without knowing of it. As soon as it is born, the older Rani bas it strangled and buried in the backyard of the kitchen, and informs the younger that she has given birth to stocks and stones, and actually shows her some stones. She also informs the Raja of the strange birth. He is very mach disappointed ; and his affection for his favorite wife begins to wane. In course of several years, the younger Rani gives birth to seven sons in succession, and all of them are destrojed by the elder Rani, and buried in the backyard. Last of all, the younger queen is delivered of a babygirl, which too is disposed of in the same way by the wicked Rani. The Raja becomes so much displeased with the younger Rani that he relegates her to the position of a cow-keeper, in which capacity she has to tend the cows and do menial work in the cow-shed. Thus fallen from her high position, she murmurs at her sad lot, but performs her daties.

In the meantime, the seven sons who had been killed and baried have grown into seven champä trees (Michelia champaca), and the girl into a lovely creeper called pärul; and all of them bear a profusion of sweet-smelling flowers. Sometime afterwards, the srädh ceremony of the Raja's father is to be performed, and flowers are required for it. A servant of the Raj household goes to pluck flowers from the champa trees and the parul creeper, and the latter cries out:-

Sât bhäi campā jago re.
" $O$ seven champā brothers, wake up !"
The seven champā trees reply :-
Kyano bon pārul dakko re.
"Why; sister pārul, are you calling as $\rho$ "

Therenpon the pärul rejoins:-
Rajār büper śräddha, phül debe ki nā?
"It is the sräddha ceremony of the Raja's father; will you allow your flowers to be plucked or not?"
The seven champā brothers reply :-
Na diba cämpāri phūl
Uțhe jäba anele dür
Age äsuk goalkadùñ ma
Tabe diba phūl.
"We won't allow our Champā flowers to be plucked.
We will shoot very far upwards.
Let our mother who is now a cow-keeper come,
Then we will allow our flowers to be plucked."
So saying, the champā trees, refusing to allow their flowers to be plucked, grew up to the sky.

The servant, being unable to reach them, went to the Raja and informed him of what had taken place. The Raja, very much surprised, sent all his principal officers of state one after another to gather flowers from the trees and the creeper, but when they stretched their hands to gather the flowers, the trees and creeper shot up to the sky, refusing to yield their flowers. The officers returned and informed the Raja of what had happened. He then went in person to the trees and the creeper and was astonished at their strange conduct, the meaning of which nobody could interpret. At last he sent for the discarded younger Rani, from the cow stalls, and as soon as she came and went to pluck the flowers, the trees and the creeper bent towards her feet and twined their branches and tendrils about her face and arms, and allowed her to gather the flowers. On seeing this, the Raja asked the trees and the creeper about their strange conduct, and they thereupon regained their human forms and told him the whole story. The Raja was wroth with the wicked elder Rani and had her buried alive in a pit with thorns and brambles above and below her. He restored the younger Rani to her former position, and embracing the children took them to the palace. Thereafter he lived happily with her and their children.

The most remarkable incident in this tale of the "Juniper Tree" type is the growth of the seven dead boys' souls into seven champā trees, and of the girl's soul into a pärul creeper. This pretty conception that the souls of dead men may spring up into trees or blossom forth as flowers is very common in poetry and folklore. It is a sarvival, in refined form, of the cardinal doctrine of savage philosophy which attributes souls not only to man and animals, but also to trees.

According to the ideas of men in the most primitive state of culture,
trees have their in-dwelling spirits, since they exhibit the phenomena of life, though in a lesser degree than man and beasts. They cast waving shadows and reflectious; their leaves make soft sighing sounds when gently agitated by breezes; and their juices have sometimes soporific and sometimes maddening effects. These evidences confirm the sarage's belief that trees must also have souls. This belief assumed among the Greeks the form of the beautiful fable that the Dryads die together with the trees in which their lives begin, and in which they dwell. This idea survives to the present day in poetry and folklore in the shape that flowers grow or blossom from the souls of the dead. It was from the blood of dying Adonis, who had been wounded by the boar he was chasing, that the flower anemone sprang. Based on this belief is the pretty poetical concept of flowers springing up from the graves or ashes of buried lovers, of which an instance occurs in the ballad of "Fair Margaret and Sweet William."

In the story of Tristram and Ysonde, an eglantine springs up from the grave of Tristram and winds its arms about the image of the fair Ysonde. The great bard of Avon has immortalized this concept in the words of Laertes over Ophelia :-
" Lay her i' the earth,
And from her fair and unpolluted flesh
May violets spring;"
and Tennyson says :-
"And from his ashes may be made
The violet of his native land."
This idea also occurs frequently in folk-tales. In the Santali tale of "The Magic Fiddle," the Santal girl, who is, at the instigation of her seven jealous sisters-in-law, drowned by the water-spirit Bonga, is transformed iuto a bamboo growing on the bank of the tank in whioh she was drowned." In "The Story of Two Princesses" from the same part of the country, the younger princess is eateu up by an old monkey who then went to the Raja's garden and died. The dead princess' soul, contaived in the dead monkey, grew up into a gourd-plaut and bore fruit. The shell of the gourd was made by a $j u g i$ into a banjo, and out of that she came forth in human shape.t The same incident also occurs iu the tale of the "Magic Fiddle," iu which the dead heroine comes forth from the fiddle made out of the bamboo, into which she had been transformed after death. In a third Santali folktale, that of "The Seven Brothers and their Sister," the heroine was offered as a sacrifice by her seven brothers to the water-spirit in the

[^148]hope that the tank which they were excavating might be filled with water. The sacrificed heroine blossomed forth into an upel flower of wondrons beauty and color, and this again tarned into the heroive.*

In a Western Iudian folk-tale, the heroine Süryă Bai, who is thrown into the tank by her jealous co-wife and drowned, becomes transformed into a bright golden sun-flower. The jealous co-wife burns the sunflower; and, from the ashes springs a mango tree with only one mango, which falls into a milk-woman's can and turns into the heroine. $\dagger$

The next important incident in the above tale is the refusal of the champa trees and the parul creeper to allow their flowers to be placked, and their ultimate denunciation of the wicked elder Rani. This incident frequently occurs in a large group of folk-tales belonging to the "Singing Bone" type, in which a child is robbed by a brother or sister of an apple, or some coveted article, and is then murdered and buried or hidden away. A plant springs ap on the spot where the child is buried ; and afterwards, when an attempt is made to pluck a flower from the plant, the voice of the murdered child blazons forth the story of his murder, and denounces the criminal. Sometimes this incident assumes a slightly varied form in which it is a bone of the vistim, or a reed growing on the grave, which, when blown through, reveals the crime.

The central theme of the North Indian folk-tales of both the " Rhea Sylvin" and "Juniper Tree" types is the revengeful jealousy of the elder wives towards the favourite younger wife. These classes of tales enn have originated in polygamous countries only. The youngest wife, being endowed with the charms of youth, naturally attracts most of the attention of her lord and master, and excites the jealonsy of the less fortunate wives, and they try their best to supplant her in their husband's affection.

The story-radical fixed by the Folklore Society of London for a story of the "Juniper Tree" type fits exactly into the unpublished folktale from Bengal narrrated above.

Hathea.

* Campbell's Santal Folk-tales, p. 108.
$\dagger$ Frere's Old Deccan Days, pp. 65-66.


## Marriage Customs of the Khonds.-By J. E. Friend-Pereira, B.A. (Communicated by the Anthropological Secretary.)*

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The practice of early marriage is not prevalent among the Khonds. It is only some time after young people have attained puberty that a solemn betrothal takes place; and the ceremony of marriage proper is performed a year or two afterwards. Often a girl never marries at all; and yet her family do not incur any social opprobrium in consequence.

An essential condition of marriage is that the contracting parties be not of the same tribe or sept; and even when they are of different tribes or septs, consanguinity up to the seventh generation is strictly prohibited. As there are no professional bards or genealogists among them, they resort to an ingenions device to guard against marriages within the forbidden degrees. When a neighbouring tribe, from which they have been in the habit of procuring wives, begins to show signs of blood relationship in the course of time, a ban is placed on further marriages, and the two tribes, as is becoming among kinsmen, enter into a closer bond of friendship which is to last for fourteen generations. After that lapse of time a general council of the elders of the tribes is held, the interdict is removed, and intermarriage is once more resumed, to continue for another indefinite period.

## Preliminaries.

When a boy attains puberty, the head of the family-it may be his father, or an uncle, or an elder brother-sets

Sūjinārā palla (the divining rice) or Dōrōm kīṭā (the just divina. tion). about to find him a wife. On his hearing of a likely match, the kinsmen and relations are invited to witness the ceremony of sūjināra palla or $d \bar{\sigma} r o ̄ m k \bar{u} t \bar{a}$ (divination) in order to determine whether the destinies of the prospective groom and bride promise to coincide.

Süjināra palla.-Two handfuls of rice are thrown, one in the name of the boy and the other in that of the girl, into a new earthen vessel filled with water, and it is set over a blazing fire. The contents are not

[^149]stirred with a ladle. If the rice boils over and spills, there is an absence of compatibility in their destined lives; but if it does not bubble up, and if it cooks cleanly, their lives will course along harmoniously together.

Dōrōm kütā.-Two little children, one in the name of the boy and the other in that of the girl, drop a grain of rice into an earthen vessel of freshly drawn water. If both the grains of rice float on the water, or if one floats and the other sinks, there is a clashing in their fates; if both sink quietly to the bottom of the ressel, their union will blend well.

If the divination results propitiously, the boy's mother or aunt or

S6ri süra (seeing the bride) or Sēri kā̀ngāri (watching the bride). other near female relative contrives on some pretext to visit the village where the prospective bride resides, and to watch the unsuspecting girl stealthily in order to discover whether she is likely to make a suitable wife. This is called the sēri sūra (seeing the bride) or seri kängari (watching the bride.)

If the result of the seri sūra is satisfactory, the head of the family séri däh'pa (search- commissions two or three of his kinsmen to proing for the bride.) ceed to the village and open negotiations-seri dah'pa (soarching for the bride). The seri daik'pa gáfäru (searchers for the bride) watch carefully for an omen (päheri ro'i ane, lit., whether the road is bad) while they are on their way to the village. Should they see a hare or a rat or a partridge or a suake or a frog or a lizard or a scorpion, the sign is inauspicious, and they turn back in haste. Should they meet a woman carrying a pitcher full of water, the omen is favourable; but should the pitcher be empty, it forbodes evil. Similarly, a bullock (but not a buffalo), a bear or tiger (but not a leopard) is a propitious prognostic; but a jackal, a deer, and a wild-dog are all portents of evil.

The omens being propitions, the commissioners proceed to the Siţēñju (the go-between village and camp outside in a suitable spot. or marriage broker). At night they approach the house of an acquaintance, or that of any other person who is likely to consent to become the sit̄ñju (the go-between or marriage broker), and after a little prelimmary conversation confide to him the object of their visit. The sitfenju may go at once and sound the parents of the girl, or he may put the matter off to the next or some other night. If the girl's parents look with favour on the suit, the sīfenju sends word to the seri dah'pa gafaru, and they proceed once more to the village carrying two kupi. (small earthen vessel) of site kālu (liquor for the go-between), and an axe or a bow and arrows.

At the sifanju's house an oblation is performed with a portion of the site kalu for the success of the enterprise. Then fortifying themselves with a little of the wine, the sēri däh'pa gätäru go in company with the sitfanju to the girl's house. They are not received with any marks of welcome, nor are they invited into the house; but are kept waiting in the raha (front courtyard) while her father holds a solemn conclare with his kinsmen and friends inside the house. He puts before them the proposal, and asks for their formal consent. The women are consulted, and often theirs is not the least important voice in the matter. Finally, when it has been decided satisfactorily that the boy's family is not tainted with biddo or kēpa (witcheraft)-a most importaut con-sideration-that the boy's mother is not.bad-tempered or quarrelsome, that in fact there is no objection to the alliance from a worldly point of view, one of the most influential kinsmen says, "She is merchandise that has come into thy possession; thou canst not keep her all the days of thy life ; sold she must therefore be; and as well to this one as to any one else."

The axe is now carried into the house as a sign that the suit is acceptable, and tobacco and fire are placed before the visitors. After an exchange of courtesies the seri dāh'pa gãtāru broach the sabject through the sitenju. The girl's people at first feign they do not comprehend the proposal, but afterwards the negotiations proceed in somwhat the following manner. The sitêiju says, "We have come to demand the müla seri (betrothal) of your daughter with the son of such-a-one." The girl's father replies, indifferently, "The matter is not a trifling one; you must not be too sanguine of success; the girl istoo young as yet for us to entertain any serious thoughts of her marriage." The sitēnju rejoins, "True, she is young : that is why we want her; we do not want her at once; we have no money to pay down for her ; we must collect the sēri mālà (bride-price) ; and that will take some time." The girl's people respond, "Let it be as you will; she was born to be sold; sold she must be, and as well to you as to anyone else ; we shall deem it an honoar to enter into an alliance with your family; we are confident we can entrust our daughter's fature happiness to yon; well, since you wish it so much, we will consider the matter as settled." The seri dah'pa gataru express their deep sense of the honour that is being conferred on them. The girl's people continue, "You have made proper enquiries about us: we have also asked a few questions about yon; should any idle stories reach your ears and induce you to break off the ongagement, remember there is proñju (damages in the shape of a buffalo for a feast) to be paid ; should we give heed to any rumours, we on our part promise to pay the same to you."

The remaining $k \bar{u} p i$ of site $k a l l u$ is now brought forward and placed

Siṭe gaṭi kāla (liquor for the go-between who has settled the contract). in the middle of the assembly, and the leading men on either side dip donika (little gourd cups) into the jur and pour out libations* to the tutelary demons. The remainder of the liquor is drunk by the people, and the solemn compact, that neither side shall recede from its word, is once more ratified. The sēri däh'pa gātāru then press on the girl's father the acceptance of a part of the seri mald in order that the contract may be published among the people. More liquor is provided by the girl's father, and after a convivial night the assembly breaks up in the small hours of the morning.

Before their departure in the morning a delli kātanni gati (a knotted

Delli kāṭāni gați (knotted string showing the number of days after which they should return with a portion of the sẹri mālă).
string showing the number of days) is put into the hands of the sēri däh'pa gãtãru, while a similar gati is kept by the girl's people for their own guidance.

Betrothal.
The reckoning of the days is kept by undoing a knot in the string every morning. On the day on which the last knot is untied, the sēr $i$ dāh'pa gātā̃ru, accompanied by a small party, go for the third time to the village of the bride-elect with two or three head of cattle as part payment of the sëri mäla, and a large pot of liquor. The liquor is known as mala ita kalu (liquor for leaving the bride-price). The men are received with every demonstration of hospitality by the girl's father, and after an exchange of compliments and enquiries concerning the health of their respective families, all unite in offering libations of liquor to the tutelary demons in the rāh $\bar{a}$ or front courtyard. The liquor that remains over is drunk; and then more liquor in a large jöba (earthen pot) is brought out by the girl's father. At night there is a feast of pig's or goat's flesh and rice, which is washed down with copious draughts of wine; and the young people of both sexes pass the time in dancing to the weird music of the hereditary low-caste Pān musicians of the tribe.

In the morning the guests are supplied with kdinika rupa (eye-wash,

Màli tōbga (vearing of the engagement chain or bangle). a pick-me-up in the shape of double distilled liquor!) in the back courtyard; and then the men perform their morning ablutions. At noon there is a feast to which all the kinsmen are invited. At the conclusion of the feast a large naude or teke (earthen pot) of mäli tōbga kālu (liquor

[^150]for the wearing of the engagement chain) is brought forth, and while the assembled people are quaffing it, the bashful and struggling bride is led np to the principal sēri dah'pa gatañju (singular), who pats a string of beads round her neck or a bangle of brass or bell-metal on her wrist, and utters words suitable to the occasion. The múla seri (formal betrothal) being now completed, the girl goes round and makes obeisance to each one in turn, while the elders pour ont libations of wine to the tutelary demons. At night there is another feast ; the wine flows unstintedly; and the young people indulge in dances.

For this feast there may be tispa gäti, that is to say, one of the

Tispa gäṭi (present that is fed ). buffaloes brought by the sëri dāh'pa gattāru is are kept for the feast, while the carcase is sent back to the groom's father who gives another feast to his own knismen in his village. Should the marriage contract not be carried out for any reason, the boy's people cannot claim back the tispa gati that has gone to feast the people.

## Interval between the betrothal and marriage.

During the next year or two the boy's people send, in an informal manner, from time to time, some cattle in part payment of the sēri mälā, the amount of which, however, has not yet been determined.

The boy does not visit his fiancée-he has never yet been to her house; but there is no objection to his paying court to her openly. In fact, if he expects a successful termination to his suit he must contrise to meet her as often as he can at the numerous impromptu dances in the neighbouring villages and in the various jatrās and häts. He is generally too shy to converse with her directly; but he attaches himself to her party, jests with her younger sister or aunt, and bashfully offers her a present of a brass ring, or beads, or lia (sweetmeats.)

During this interval also, on a a pre-arranged day, a feast of buffalo's Mräun boji (daughter's or pig's flesh and rice is given by the girl's father feast.) to his kinsmen and male friends. This is called the mrāun boji (daughter's feast). The same evening the party go to the groom's house, where a similar feast is spread out for their entertainment by the groom's father. The night is spent in dancing and merriment.

The next morning after kã̀ika rupa the party proceed to the gäta (place where the village cattle are collected before they are taken out to graze for the day), and a selection is made of the cattle that are considered acceptable for the sठri malà. This being satisfactorily accomplished, there is the usual libation to the tutelary demons. After their morning ablations the men return to the house Two large joba of
liquor are placed by the groom's father in the guidi (third or sittingroom of the house), and another libation is poured out to the manes of the ancestors. Thereafter a young cock, a little rice, and some liquor are taken to the outskirts of the village, and a sacrifice is offered to the tutelary demons of the village, such as the village-god (naju pernu), the
 penus). The day is given up to feasting and masic and merriment. Enormous quantities of liquor are consumed, and the young men go round from door to door to beg for rice or other grain, which they take to the liquor shop and barter for more liquor. The women play practical jokes on the intoxicated visitors by drenching them with kädo (muddy water) and pelting them with mud and filth.

The next morning, after a parting cup and $\Omega$ courteons leave-

Sēri mālā tūh'pa (the leaving of the brideprice). taking, the men depart with the cattle they have selected. On the pretext that the buffaloes are wild and unmanageable, the groom is persuaded to lend a hand, and thus, stage by stage, is prevailed on to accompany the party to their village. On reaching the village (this is his first visit to the village since his betrothal) he has to undergo the disagreeable ordeal of saluting every one, men, women, children, and even the lowcaste Pān serfs. But two of his intimate friends, who have followed him, help him with their support daring the trying performance. This visit to the bride's house is known as the sêri mäla tūh'pa (the leaving of the bride-price). The groom remains for some days feasting and enjoying the hospitality of his future wife's relations. And every night there are the usual music and dancing, and the drinking of much wine. Before his return home the groom receives a present of a silver bangle and a piece of cloth from his father-in-law elect; and similar marks of favour are bestowed on his two companions.

## Marriage.

A year or two after the betrothal a commission is sent to the girl's parents in order to fix a day for the tappa séri (marriage).
The marriage must not take place during the waxing or waning lanation of the month in which the groom or bride was born, nor during the period the girl is rendered unclean by the occurrence of what is peculiar to her sex. The month in which the ceremony will take place is first decided on, and after farther matual arrangements the day is fixed. The commissioners are entertained hospitably, and are dismissed next morning with a delli kātāni gatiti.

Every morning a knot on the string is untied, and ou the last day
a great feast is given by the youth's father to his own people. The same evening they all proceed to the bride's house, where they find the people assembled and drinking. After a mutaal exchange of compliments, the groom's people join them. Some of the girl's people then bring a sīhūri (basket) containing pieces of charcoal (ängęra), clods of earth (dekkali), and bits of stone (váli); the stones represent the number of pigs that are demanded for the seri mala, the clods the number of bullocks, and the charcoal the buffaloes. The basket is carried and placed with mach ceremony in the midst of the groum's people, and after a little consultation they take out a certain number of the symbols to show what amount they are disposed to gire, and return the basket. A few additions are made by the elders and the basket is taken back. Thus it passes backwards and forwards until the representatives on both sides come to an agreement. All the bullocks, buffiloes, pigs, and also brass atensils, that have been sent from time to time, including the tīspa gãti, are added up. If anything is found to be due, the groom's people jest and say the cattle they were bringing with them fell into a hole and were maimed or killed.

The groom is then led up to the bride's father or other principal relative, who takes his hand and kisses him on the cheek. Then, while the people pour out libations of liquor, he approaches each one and makes obeisance. This ceremony being ended, all sit down to a sumptrous feast provided by the bride's father. Wine flows freely, and the night is passed in music and dancing. The bride remains inside the house surrounded by her mother and aunts, who weep loudly at the coming separation. In the morning the people disperse, leaving the groom and one or two of his intimate friends as guests in his father-in-law's house, where he remains for a day or two.

When the morning comes for the newly wedded conple to depart to their home, the bride's girl-friends take her to a stream and help her to perform her toilet. They bathe her, wash her hair, rub an unguent of turmeric and oil on her body, and clothe her in the new garment given her by her father. Meanwhile she weeps copiously, often genvine tears. The same office is performed for the groom by his intimate friends. After a hasty breakfast, during which there is much weeping and wailing among the women, the bridal pair are led out to the front courtyard. The bride. wears the ornaments that her father has given her as a portion of her dowry. The youth dons the national gäji (loin cloth) and throws a red blanket across his shoulder; in his right band he grasps a taingi (battle-axe), in his left he holds a bow with three or five arrows, all of which are gifts from his father-in-law. The girl is made to stand on a jomba (block of wood used as
a stool) facing her father's house, and her husband takes his place by her side, bat a little behind her, on a jüeli (ploagh).* The women bring paddy in a küla (winnowing-fan) and scatter it on the young couple's feet. The girl's mother then comes forward with a sökeni (leaf-cap) of tarmeric and rice, and pours it out on the young people's heads. All now press forward and salute or kiss the newly wedded pair. An old woman suddenly rushes forward, seizes the bride, flings her on her

- back, and carries her off. A man comes to the front similarly, catches the groom, and places him astride on his shoulder. The haman horses neigh and prance about like the live quadruped, and finally rush away to the outskirts of the village. This is a signal for the bride's girlfriends to chase the conple and pelt them with clods of earth, stones, mud, cow-dung, and rice. When the mock assaultt is at an end, the older people come up, and all accompany the bridal pair to 'the groom's village. Servants or relations carry the presents made to the happy couple by the bride's parents in large baskets.

For people in good circumstances the following may be the bride's dowry: one or two gold güna (nose-rings), a number of kiseni (silver rings worn along the auricle of the ear), a pair of süna (gold earrings for the lobes of the ear), some patänga or küslanga or matinga (brass or bell-metal bangles for the arm), some silver gübia (hair-pins, or ornaments for the hair), some silver gagla (necklace), some vïsänga, (brass or bell metal toe-rings that jingle in walking) and jütanga (rings for the first toe), a pair of gadōli (anklets of brass or bell-metal) and jütinga (armlets of the same), mali (beads for the neck, which are sometimes of gold), a dipēni (loin-cloth), a kapta (cloth with red or coloured bands at either end), two lüga (oloth of check design), some güranga (brass water-pots), some madringa (brass cups) and kasiniga (small brass caps). The following may be presents to the groom: a pair of süna (gold earrings), a mali (string of gold beads), a pair of karu. (silver bangles for the wrist), a gan, a sword, a bow and quiverful of arrows, a dram, a tängi (battle-axe), a gäji (narrow loin cloth some 30 cabits long), a red blanket, and an era punga (bead-dress of egret's feathers).

On arriving at the village the groom's mother or annt or sister comes and washes his feet, and then his bride's. And, as at the girl's honse, the conple are made to stand on a $j \overline{m b} a$ and $j u \bar{\epsilon} l i$, and paddy is scattered on their feet, and turmeric and rice poured on their heads. A piece of cloth is spread across the doorway, and another stretched

[^151]overhead, and the groom leads his bride into the bouse. A feast of great splendour is prepared ; the flesh of fattened buffaloes, pigs, and sheep is spread out, and large jars of liquor are handed round. All the tribesmen are cordially invited, and the Pān serfs are not forgotten. Dancing and music follow at night, and much merriment. The next

Sēri kālu (bridal afternoon there is another feast when the seri liquor).
kalu (bridal liquor) is drunk as a bumper, and the guests depart, each with a little parcel of rice or other delicacy.

For seven days the bride remains as a guest in her father-in-law's house, her husband continuing to sleep in the dängri iddu (yonths' dormitory). On the eighth day the couple take a pig, a cock, some paddy, and a jar of liquor, and proceed to her parents' house. They take , up their quarters in the $\mathbb{d i n d a} i d d u$ (detached out-house) where she cooks a meal for themselves. At noon the pidari giru (the priest who sacrifices to the manes of the ancestors) husks the paddy in the $g \bar{u} d i$, and feeds the pig and cock with a portion of the rice. A portion of the rice is placed in three little heaps on the ground. The pig and cock are sacrificed, and then blood is sprinkled on the grain, with libations of liquor, in the name of pidra pita (the manes of the ancestors). The remainder of the rice is cooked by the bride and shared among all the kinsmen and friends.

The young couple stay on for a day or two as guests of her parents; or, it may be, the youth returns home and leaves his wife with her people for a few days. On her return she resides with his parents. After four or five days the groom gives a little farewell supper to the youths in the dangri iddu, which he is about to quit for good. The same evening his father drinks himself to intoxication, and in that state lies in the dinda $i d d u$; and at midnight his mother slips away from the side of the sleeping girl. At a given signal the groom is brought silently and cautionsly by his bachelor friends; they push him into the room where his bride lies in slumber, and close and bolt the door behind him.

## Invocation used with a libation of wine.

O Ispor Pārbati ṇe-eñjū sīţeṇi $\bar{a} h \bar{a}$ siţe gațī kālū tāsānāi samdi sāhāṇi ţaki vājāmānāmū.

0 Iswar Pärbatī, to-day haring caught the sitanju, and baving brought the site gati kālu, we have come to the samdi sahani (i.e., the girl's father and mother who become related to the boy's father and mother by marriage).*

[^152]Ờē bōlē kūṇāgaṇ̣̣ā vā vā siḍe.
Mātā pitā peńka mañga, māţi mā, grām-sēni, tūrki pēṇu, gōberi peṅka-gaṇ̣̣̄rū̆, sāndi jōrī giḍu.

## Krāṇ̣i olin siḍ'a'kāri.*

Sāpū gūțā siḍ'a'kāri.
Pāpo ḍañgi siḍ'a'kāri.
Pūţūṇi jãñjãni siḍ'a'kārri.
Mōmēri duko siḍ'a'kāri.
Gaṭi mãdā gipki mānāmū, pāns lōko koksā nāi.

Siki ina'kāri, pōkū ina'kēri.
Ne-eñjū tekkā māi piḍāri pitā āţe.

Inēţi țikka ennetui țikka lāīti kūīti ā ${ }^{\text {àānekā }}$ sa'r'dū, va'a'dū.

Mãi tlāă gāṇ̣i àţe.
Gați mūdā gitāmū.
Samdi вйhāpi gitāmū.
Pūrba bidi api bainke samdēni, āmànke sāsū gitāmū.

Sగ̃rbō sāhạ̣̄i giā iṭāmū.
Māṇākāi Ispor Pārbatiṇḍi.
Ne-eñju țikkā samdi gitāmū.

We heve not come on this visit for health or for wealth.

0 ye ancestor gods and goddesses, (i.e., the manes of the ancestors), earth-goddess, village-god, god of the refuse-heap, gods of the dung-hill, be ye propitious !

Keep away (lit., let there not be) tigers and bears!

Keep away thorns and splinters!
Keep away sin and hatred!
Keep us from tripping against stones and boulders !

Keep away the fever affliction!
We five men sitting together are propitiating all of you.

Protect us from worms, protect us from vermin!

From to-day she has become our pēdari pita (i.e., she has become related by marriage to the manes of our ancestors).
( 0 ye manes of ancestors), from our side and from her side, wherever ye be, below or above, do not be disagreeable and absent yourselves.

She has become ours, head and body.

We have made propitiation.
We have made samdi sahäni.
According to ancient usage we have made our api and bai (sisters) her samdi, our father's sister her säsu (mother-in-law).

All of them having been made sahaini, keep ye them so.

Let all of us remain well, 0 Isivar Parbati!

From today we have made samdi.

[^153]IVārū kūtē-kã proñjū sinn̄rū.

Āmū kūtē-kē āmū proñjū sīnāmã.

Kālū siki jānāmā ; undu, tiñju
Porrū silā siḍ'a'kāri.
Mómāri duko sid'a'kāri.
Māți mā, grām-sēni, tūrki penū, gõberi peñka-ganḍ̄rū, mātā pitā peńka mān̄gā, Ispor Pārbatindi.

If they should recede from their promise (lit., deny), they shall give proñjū (damages in the shape of a buffalo for a feast).

If we should recede from oar promise, we will give proñjū.

We are pouring out liquor ; eat, drink!

Keep away quarrels and fights!
Keep away the fever affiction!
O earth-goddess, $\mathbf{O}$ village-god, 0 god of the dust-heap, 0 gods of the dung-hill, $O$ ancestor gods and goddesses, 0 Iswar Pärbati!
[Note.-Two illastrations are added of Khond men and Ehond girls in dancing attire.]

## plate i.



Khond Men.
PLATE II

Khond Giris.
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Some rough Anthropological Notes on Calcutta Juvenile Criminals.-By Major W. J. Bochanan, I.M.S., Inspector-General of Jails, Bengal.
[Read 7th May, 1902.]
It is an important fact that in every civilised country at the beginning of the present centary the proportion of habitual criminals in the population is steadily on the increase.

It is also generally agreed by all who have studied the subject that the habitual offender is the man who takes to crime as to a trade, and he begins young. Therefore if society is ever to get rid of the habitual criminal it must be by removing or ameliorating the conditions which produce the juvenile offender.

The following notes on youthful Calcutta criminals as seen in the Alipore Central Jail are rough and imperfect, but may be taken as a contribution to a subject so far but little studied in India.

The facts to follow are the results of an examination of some $\mathbf{1 2 0}$ boy criminals in Alipore Jail. A mere glance at some of them is sufficient to see the "degeneration" which is plainly written on their faces.

The juvenile criminals whom these notes refer to are "habituals," not boys who have been sent to prison for some single offence, but J. III. 5
youths from 16 to 22 with four, five or six convictions against them. Many of them owing to the lenient sentences passed by the Presidency Magistrates come two or three times to Jail in one year, some have commenced their career of crime very early and have spent five years in the Reformatory, and of all boys the Reformatory failure is the worst, there is no vice which he does not know, but fortunately failures from the Reformatory are the exception rather than the rule.

The criminal can be studied from two points of view, (1) as regards his environment, and (2) his anatomical peculiarities.

As regards environment it is unfortunately by no means easy to get at anything like an accurate history of persons of this class in India. Inquiry, especially by a Government officer, arouses suspicion, and questions as to existence and habits of a father or mother are apt to be met by silence or falsehood, as they cannot believe that the information will not be used against the family. Of course when one knows them well they are more communicative, and one fact which struck me forcibly in my inquiries was that many of these youthful criminals had lost one or other parent. In other cases the parents were alive, but the boy had been turned ont of the house for theft. I could very seldom elicit any history of the father's having been in Jail. Nearly all the boys confessed to having been led astray by older boys, and there can be no doubt that life in the slums of Calcutta is far from conducive to strict living. Living in the street all day and half the night a boy is brought up from his arliest youth to sights and scenes which soon spoil him. In many parts of Calcutta there exist regular gangs of youths, with sardars at their head, they have secret signals and passwords, and from what I learn they specialise their thievery to a ligh degree. One gang goes in for clothes stealing, auother for watches, another for umbrellas, and one gang will seldom or never invade the prescribed territory of the other.

I do not find that pauperism is a motive for crime among these youths. We know of course the observation of Becky Sharpe that "it is easy to be honest on $£ 5,000$ a year," but these Calcutta youthful criminals are certainly not driven to crime by poverty. Many, and by far the majority have been in the enjoyment of regular pay as messengers, assistants to gäriwalas, or, as is often the case, employed in various Printing Presses, and have often obtained the rudiments of education.

In Europe drink plays a large part in the etiology of crime, but this is not the case in Calcutta, or to a small extent only. No doubt these youths have early learnt the use of other intoxicants and narcotics, such as opium, Indian hemp, and cocain, but opiam does not incite to
crime, and gānja is uot, in my experience, a stimulant indulged in by these jouths, though common among older oriminals. The peculiar vice of the Calcutta youths is indulgence in cocain, an up-to-date form of vice which I have elsewhere written on (Indian Medical Gasette, October 1901). This pernicious habit is unfortunately not confined to youths of the criminal class, but is far too common among boys of good family, students at school and at the Calcutta University. It is certainly very common among the Calcutta criminal population and it certainly leads to crime. Many boys have told me that once the habit is commenced they must continue it, and as it is an expensive habit, they find they can easily steal enough to purchase this stimulant. Cocain as sold till recently by the pänwallas in every street cost one anna a grain and as habitués take six, eight or ten grains and more a day it must become a very expensive indulgence for them. I believe it is ouly in this way it is au excitant to crime, its immediate effect on the constitution being a sense of lightness, pleasure and general well-being, followed soon by a corresponding depression which is met by taking another duse. The recent action of the Bengal Government in making it penal to sell cocain except at a druggist's shop is good, but druggist's shops of sorts are found in every street aud bye-way in Calcutta.

But environment, though of the greatest importance in making or marring a human life, is not everything, and I was much struck when I took over clarge of the Alipore Jail, a year ago, to find how these boys differed from the gouths I had seen in Jails in Bihar where the prisoners are chiefly of the cultivator class, or villagers.

The Calcutta boy criminal is different and one at once notices the physioal and anatomical peculiarities which have been described as characteristic of the Enropean habitual or born criminal.

At this stage it may be well to state that I do not for a moment think that we can measure crime in millimetres or decide that a man is a criminal because he has some well marked anatomical peculiarities. None of those who have studied the subject have made this extravagant claim. This is only a sample of cheap criticism made by those who have not understood it. The utmost claim made is that the peculiarities, measured and recorded, are found in far greater number in the individual criminal, and among criminals as a class than among normal individuals.

Few of us are absolutely normal, indeed the normal man, "born to consume the fruits of the earth" is a very poor person after all, but the number of anatomical peculiarities seen in the criminal, the lunatic or the idiot is far in excess of that of the normal man, and nearly all that has been described in the Enropean or American criminal can be found in the convicts of our Indian Jaila.

Take a couple of cases like the following :-
(1) Shaikh Dukha, aged 18, third conviction for theft, a resident of Calcutta, father dead, has worked in a printing press, can read and write in vernacular. Height 4 ft .10 in ., weight 971bs. Head markedly "sugarloafed" marked gynaecomastia, thick bulbons nose, marked temporal hollows ; ears irregular and prominently outstanding, thick lower lip, prominent orbital ridges, left mastoid process more prominent than right, left shoulder higher than right, left handed. Face much wrinkled. Flat-footed, second and third toes longer than great toe, great gap between first and second toe.
(2) or another, Shaikh Kalna, aged 22, with six convictions, hairy body, broad bulbous nose, much wrinkled forehead, prominent cheeks, irregular bumpy occiput, marked hollows over the mastoid bones, ears outstanding, with Darwinian tubercles on both, forehead low, hair coming down to within an inch of eyebrows, small receding chin, bulbous second and third toes.
We may now consider these anatomical peculiarities in turn.
Head.-I have not ventured to give any figares as to their cranial indices. Till we know more of the racial importance in India of the cranial index it is useless to apply it to criminals.

Probably the most common type of head among Calcatta Javenile criminals is the oxycephalic or "sugarloafed" head. This is the type of head depioted as Satanic by old scalptors and painters. It is certainly abnormal, but may indicate genins, for Shakespeare's head was of this shape.

Another common type of head among these boys is one with a high vextex sloping downwards and forwards to the chin, giving the owner a "Jackal" like appearance-indeed one of the boys in Alipore Jail with such a head is called "gidar" by his companions.

A want of symmetry of the skull is very common. Few person's heads are absolutely symmetrical, but the heads of these boys show very often marked asymmetry. Ottolenghi, who stadied this point in Italy states that over three abnormalities should put a head in the degenerative class. The most common abnormalities I have found to be-irregular protuberances at the occipat, and in the mastoid region, the parietal kollows, so much so that the one side of the head is plainly different from the other.

Facial anomalies are also very common, a receding small pointed chin is very common, also the heary square lower jaw of the violent
criminal. Prominence of jaw or progenism is less often seen. It is inherited in the Hapsburgs of Austria, and according to Sir William Turner it is found in the higher apes, and among Anstralian aborigines.

Teeth.-I have found few pecaliarities among the teeth of these Calcatta boys. The teeth are usually good, bat often stained by use of pan and cocain. Abnormalities of the palate are rare, and I think Surgeons in India are agreed that they are rare in Indians generally.

The ear in peoples of all countries is subject to much variety. Large outstanding ears are more common than any other anatomical character among criminals of all nations. Not less than 40 per cent. of Calcutta juvenile convicts have abnormal ears. Every peculiarity which has been noted of the human ear can be seen among these youths.

The nose is a feature which has been less studied by criminologists bat I have very frequently noted a short brond bulbous nose, with prominent patent nostrils in these youths, and I think this shape of uose is characteristic of them.

Wrinkles are another feature, very soon noticed among these youths. It is not ancommon to find boys of $\mathbf{1 6}$ or 18 with faces as wrinkled as is normal to men of 60 . This is most marked on the forehead and temples, and I find it often associated with (and doabtless caused by) a persistent habit of contracting and moving the facial mascles. Scanty growth of hair of head and beard I have often noted, but one knows so little of the growth of hair of ordinary natives of India that it is not possible to come to any conclasion on this subject.

As regards height and weight-I have made many observations, bat I can find no observations among normal individuals to compare them with. Some years ago I collected the heights and weights of some 28,000 Bihari adult prisoners. Their mean height was only 5 ft. 3 in., and the mean weight of this large number only 110 lbs ., and $I$ found a practical rule to be as follows-Taking 5 ft . to have a weight of 1001bs, I found that for every inch above 5 ft . about 3lbs. should be added-for examplea man of 5 ft .4 ins , should weigh abont 112 lbs. This will be found on the whole fairly accurately to apply to the class of man we get in Bengal Jails.

The means given, 5 ft .3 in . height and llolbs. in weight are small compared with European averages, bat I think it will fairly represent the mean height and weight of men of the Bengal peasant class. At Elmira Reformatory, New York, the average height of 529 men was only 5 ft . $5 \frac{1}{1}$ ins., and average weight only l331bs.-figures far below those of the average American adult.

Gynaecomastia is pretty common among Caloutta yonths-I show
photographs of some typical cases. There not infrequently come to the Surgeons at the Medical College to have their breasts removed, as their companions tease them about their feminine peculiarity.

Heart Disease is relatively common among criminals, and Major Jackson, I.M.S, of the Yerroada Jail, near Poona, has written on this subject. I have also found, in a series of cases examined post-mortem, that the heart on the average weighed two ounces more than the normal.

Among other peculiarities of these Calcutta yonths are "Knocknees," but the most common peculiarity of their feet is the large space between the first and second toes. Flat-foot is also very common, and another peculiarity which I have not seen elsewhere described is the length of the second toe which is very frequently $\frac{1}{4}$ to $\frac{1}{2}$ an inch longer than the great toe. Ottolenghi and Carrora have examined the space between the first and second toes in Italian criminals and find that a space or gap of over 3 mm . is three times more common than in normal men. Idiots also show this anomaly.

The prehensile toe of the barefooted Native of India is well known. It appears to be uncommon among Europeans, and Ottolenghi takes some pride in describing two cases he has met with.

Left-handedness is common among these Calcutta youth. This can often only be tested in throwing a stone. I do not know to what extent it is common among the normal population of India.

Epilepsy is not uncommon among criminals, two per cent. of them I have estimated to be subject to epeleptic fits, often of a mild degree ouly (petit mal). Eye defects, squint, etc., are not very common, but a one-eyed or squinting man is proverbially not trusted in India.

There can be little doubt of the physical insensibility of the Calcutta criminal. Tatuing is not very common among them. They are loud in complaint of trivial ailments, generally hoping thas to get off task-labour, but on the other hand they slrink at no amonnt of self-torture if thereby they gain an ensy time in hospital. They will eat anything raw or irritant to produce diarrhoea or dysentery-they will introduce a needle and thread soaked in lime to produce lameness or a swollen hand, they are adepts at producing haemoptysis, nose-bleeding or bleeding as if from piles. They will infliet the severest injuries on themselves to throw the blame on others.

Their eyesight is generally good, colour blindness is very rare, and ear disease is very common.

This paper is already long, otherwise, mach could be said as to many other points in the criminal's character. He of course is incorrigibly lazy, he would not be in Jail if he was not so ; the intelligence of the habitual criminal is sometimes great, very often the
mauvais sujet is le bon detenu, and some of the worst men morylly are first class workmen. Their vanity is notorions, and many breaches of Jail discipline are committed from a feeling of bravado or desire to be distinguished from the rank and file. Like that distingaished degenerate Oscar Wilde they would rather be pelted than not noticed. A peculiarity also is their periodical outbursts. A man may be working well for months and then suddenly do some stapid act which he knows he must be panished for, and on talking to him he will often say he could not help himself, and such a case, when gennine, is best not punished.

We need say nothing here as to his addiction to vices and immoralities. The boy habitual has no vices to learn, he is adept at them all, and strict watch has to be kept over him to prevent the worst forms of immorality. But the habitual is not without a sentimental side to his nature; he is easy moved to tears, he is very fond of pet animals (birds or squirrels), and he is a first-rate attendant on the sick. This I find to be the most satisfactory trait in his otherwise gloomy character.

I say nothing here as to the proper management of this class of unhappy youth; big manufacturing Jails are not the best place for him, but a consideration of his proper treatmeut would lead me too far afield to-night, and in India there are difficulties greater even than in Earope as to the proper management of this unfortunate class.

# The Sacred Caves of Oachar.-By Frank Eds, Esq. <br> (Communicated by the Anthropological Secretary.) <br> [Read 18t May, 1901.] 

[The Ainthor has sent to the Society an account of a visit paid by him to the temples and caves on the hill bordering Cachar on the east and known as the Bhoban Pahār; the following extracts from it are of interest :]

The ascent of the hill itself takes about two hours, it heing not more than 3,000 feet high. There is a fair path the whole way up; it is in bad repair in places, and is very steep. We broke our journey at a convenient stream about half-way up the hill, and pitched our campimmediately on the crest, where the path bifurcates to the caves and temples.

We first visited the sacred temple and groves to the south. There is a fair path winding along the water-shed, and the distance is about two miles and a half. We were mach surprised to find Hinda and Mohammedan priests with their temples and pirs in such propinquity, viz., within a hundred yards of one another, and drawing water from the same well. This well is of fair size, situated in a hollow just below the lower temple. It is of modern construction and is said to have been built by a person called Rām, a wenlthy contractor to local Boards and Municipalities. It is lined with undressed stones.

The temples and images are prettily situated among clusters of screw-pines, philodendrons, and ferns. There are four images in all; two are apparently very old, the other two are more modern. Of the two older images one represents Ganeça, and the other Hanumān. The other two are much larger and cruder; one of them represents Pārviti. A year or so ago a mad man in Silchar had a delusion that the gods were displeased with him; he visited the hill and gave Ganega a very bad time of it, for Gapeça's image is at present in three pieces; and both Ganeça and Hanumān have had their features considerably damaged, but some people say the latter injury was done by some Nāgas.

The Mohammedan Pir is on higher ground than the Hindu temple, and is immediately on the top of the watershed, at a point where the drop is sheer to the west, and from where on a clear day a magnificent view over a considerable portion of Cachar is obtained. This particular spot on the hill is visible from many miles distant, because of the white sheen of the scarp in the sun.

We returned to camp about dusk, and the next morning started with rope-ladders, \&c., for the sacred caves. They are situated about three miles to the north-east of the point where the path up from the
plains reaches the crest, and are in a spur of the main hill at a much lower level than the temples. There are two of them, apparently in no way connected, and of the type known as pot or swallow holes.

We visited the smaller cave first. It is approached by a rough rocky path terminating in a hollow or punch bowl, which has been formed by the collapse of the roof rock in the form of a circle, by reason of the removal or shifting of the underlying strata to a lower level by the action of water or some other agency. The cave or pipe descends from the bowl very rapidly for some distance, then rises and forms a saddle, again descends very rapidly and finally empties itself into the Barak or one of its tributaries. We were unable to find its outlet, as it becomes far too narrow to allow a man to pass. In the rains the cave must be more or less full of water, which can only get away very slowly (through cracks and fissures forming minor pot holes) until it rises above the level of the saddle, when it has a much freer outlet and flows away fairly rapidly. We were not able to find any stone implements, or bones, fossil or recent, in this cave. In some places the rocks were rounded and coated with pearl sinter. With the exception of a few bats, it is doubtful if this cave was ever inhabited by man or beast.

The second cave is much larger and has many ramifications, most of which we were unable to explore for want of time. It is approached by a narrow path, that passes between two hage black laterite rocks which are almost touching, and then suddenly emerges into a huge basin or panch bowl, picturesque in the extreme, thickly overgrown with rich tropical vegetation.

From the punch bowl there is a vast rapidly descending funnelshaped chamber which is connected with the care proper, and the cave consists of a series of chambers connected by long narrow fissures or passages, apparently formed by running water aloug the lines of rock-jointing. These passages, and the floor of the cave generally, have a very rapid fall, and the rush of water in them must at times be very considerable. It is a very pretty sight to see the pilgrims climbing slowly down the funnel, and gradually appearing smaller aud smaller, until, as they disappear into the cave itself, they look no bigger than sparrows; and their chanting, as it reverberates in the hollows and gradually wells ap from below, has a peculiarly pleasing effect.

I would add that the caves are far more popular and held in more reverence than the idols, and although they cannot be entered without danger to life and limb, many thousands of men and women visit them annually. In spite of this, their sanitary condition is perfect compared with the immediate surroundings of the temples and the well, which are insanitary in the extreme.
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E. M. Gordon-People of Mungeli Tahsil, Bildspur Distriet. [No. 2,

Some Notes concerning the People of Mungeli Tahsil, Bilaspur District.By Rev. E. M. Gordon.
(Communicated by the Anthropological Secretary).
[Read 6th Augast, 1902.]
A. Notes on Castis.
1.-Chamär.

The Chamārs of this Thhsil are divided into four distinct sec-tions:-

1. Satnāmi.
2. Kanaujifà.
3. Changiyā.
4. Ahirwār.

The Satnamis take the first place in consideration becanse of their
Satuāmi. numerical importance and also because of their interesting peculiarities. In the Journal of the Asiatic Society of Bengal, Volume LIX, Part I, Nos. 3 and 4, 1890, will be found a brief historical sketch regarding this people. The assassination of one of the Satn̄̄mi garbs at Aurābanda near Mungeli has been merely mentioned in the above sketch. The Satnamis invariably accused the Rājputs of having murdered their gurū. This gurū had exasperated the Hindūs by wearing the janevā. He died at a village named Näri on his way to Raipur where he was being taken by the Police Dărogā from Mangēli. The following is the list of Satnàmi Guruis in order of succession:-1. Ghāsi-dās, 2. Bālak-dās, 3. Agar-dās, 4. Sāhib-dās, 5. Ajab-dās.

The practices and views noted below are peculiar to the Satnāmis :-
The Tabru.-Ghāsi-dās enjoined his followers to abstain from the use of intoxicating drinks, from flesh of every kind, and from the use of tobacco. The Satnāmis taboo masur-ki-dal (Ervum Lens) and läl-bhaji because of the reddish appearance resembling blood. The use of taroi (Luffa Acutangula) is forbidden becanse of its supposed resemblance to the horn of the buffalo and brinjal (Solanum Molongena) is repagnant because of its resemblance to the scrotum of the same animal. During the recent years of famine these restrictions have been given up to a great extent. In the out-lying villages of Bilaspur District the Satnāmis will be found much more staunch in their beliefs and practices than along the Railway line. A great change is coming over these people who unanimously state that they are quickly drifting away from the position taken up by their first gurū, Ghäsi-dās.

Yoking Cattle.-Ghāsi-dās forbade the yoking of oxen for ploughing purposes after the mid-day meal. This injunction is still heeded by great numbers of Satnāmis. In cases of necessity I have known them to continue ploughing from early morning to late in the afternoon

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in order that they may not break away from the old practice. The original idea seems to be that of compassion for their cattle.

Amongst the Satnāmis there may be found a select few who are known as Jahariyās. The prevailing opinion in regard to them is that they are the best of the Satnāmis. According to one story when the Chamārs were being boiled in the rice caldron, the Chamars who stuck to the bottom of a caldron and were burnt are the Chańgiyās. Those who were boiled in the centre are the Satnāmis, while those at the top are the Jahariyās. They are held in high esteem by the Satnamis. They have the chief characteristic of never sleeping on a bed but always on the ground. They are said to wear coarse, uncoloured clothes, and some say that they eat only dal and rice. The ohildren of Jahariyas intermarry with other Chamārs and are not necessarily of the same section as their parents. This seems to be a vow taken by certain Satnámis. The Order is said to have arisen after the time of Ghāsi-. dās. When one is found fastidions in food and drink he is taunted withthe saying "You wish to be a Jahariyà."
2. The Chungiyã Chamārs may also be termed "the smoking

Changigā. Chamārs" for it is principally in regard to smoking that they differ from the Satnamis. The word Chungiya is applied to a pipe made of a rolled leaf. It is said the Changiyās are back-slidden Satnãmis, those who found the' restrictions imposed by Ghāsi-das altogether too severe for practice. A Chungiyā may become a Satnāmī by breaking a cocoanut in the presence of the Gurū and by the payment of a rupee (more or less according to status). The Chungiyās consider the Satnảmis as superior to themselves and sometimes endeavour to pass off as Satnāmis. As a matter of fact these two sectious of Chamārs intermarry frequently but the more striet Satnamis are opposed to intermarriage with Chungiyãs. Smoking and idolatry are the chief points of demarcation between these two sections. The Chungiya village iuvariably contains stones covered with vermilion while no settlement of staunoh Satnamis will show any signs of idolatry. Both the Satnämis and Chuágiyăs wear the necklace of wooden beads known as a kanţhi (from the word meaning 'neck'). This neck-lace is said to be placed round the child's neck soon after birth and it is broken immediately a person expires. It may be renewed when it is old. The glass bangles worn by women are also broken before burial.

They rear no poultry, goats or pigs. They eat the flesh of cattle
Peonliarities of the which hare died a natural death. I know Changiya. many who use intoxicants. They may ben considered to represent the Satnamis in their former state, that is, as

Ghäsi-dās found them before his great reformation. Together with the Satnāmis, the Chungiyās are chiefly agriculturists. These two sections of Chamärs are Chamärs only in name for they do not work in leather as in other parts of India. They call themselves Chungiyā and Natnāmi respectively. A Chuñgiyā calls himself Chamār, Chamrā Sitāramiyā and Chuńgiyā. The Kanaujiy ${ }^{\text {a }}$ Chamār calls the Saināmis and Chungiyās, Jheriya, a word which I think may bave come from the word jhäri. Is it not probable that when the Kanaujiya Chamārs immigrated into these nncivilized parts they found other Chamārs in these places whom they called the Jangli or Jhāri Chamārs? This term is very mach disliked by those to whom it is applied and it is a torm of contempt used by the Kanaujiyā Chamārs only. It may be noted here that there are also Jheriya Telis, Jheriya Marārs, etc.

The Hindūs term all the Chamārs alike as Chamrā. Of the different kinds of Chamārs, the Hindus appear to hold the Satuänis in higher esteem because of their many restrictions as to food and their general cleanliness of person and habitation as compared with the other Chamārs; this is worthy of notice whell we consider that the Chungiyà and Kanaujiyā Chamārs are religionsly more closely allied to the Hindüs and worship the same deities which the Satnämis entirely ignore. While Satnämis observe most of the Hindu festivals I find that they do not take part in the Holi. It should be remembered, however, that my remarks with regard to the Satnāmis apply only to the stannch nembers of this sect. As I have already noted, there is an increasing indifference amongst them.
8. The Kanaujiyā Chamārs are the Chamārs proper, for, they

Kanaujià. are the leather-workers. Their villages and houses are invariably most dirty and disagreeable. In appearance these Chamārs are far iuferior to the Satnāmis for they usually have a dissipated appearance. They are much given to the use of intoxicants and daring $n$ marriage or after a burial they meet together and drink large quantities of liquor. They eat pigs' flesh but do not rear the pigs. They make shoes of a peculiar type. In some portions of the Bilāspur District, I am told, there are Kanaujiya Chamārs to whom the above remarks do not apply. My observations are mostly confined to the Mungèli Tahsil.
4. Ahirwār Chamārs are very similar to the Kanaujiyā Chamārs though they do not intermarry. I have not
Ahirwār. made very detailed enquiries into this sec-
tion. They appear to be small in numbers. I am told that they make shoes of a different type to the Kanaujiyas. The Kanaujiya shoes are of one single piece of leather. The Ahirwär shoes

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have a separate portion for the front. The Alirwarrs moreover make shoes with much fancy work, silver thread worked in red cloth. This work is done by the women. Before an Ahirwār girl can be taken in marriage she must show herself efficient in this kind of needle work. The Kananjiya fancy work on shoes is not as elaborate as the Ahirwār work. Kananjiyā shoes are named "Nirjāhi" (probably from Nirjor, meaning without joint) also Munda, meaning plain or bare. Ahirwār shoes are called "Salāhi." The Ahirwār shoes are considered the more lasting.
2.-The Kurmis.

The Sub-castes are as follows :-

1. Deśhā.
2. Chandaunā.
3. Gabel.
4. Sarāti.
5. Manwã.
6. Ekbahiyān.
7. Kanaujiyā.
8. Phuljhariyā.
9. San-boyā.
10. The Deşhā Karmis are found mostly in the Mangeli Tahsil. They are peculiar in that they do not rear poultry and avoid residing in villages in which their neighbours would keep poultry. They will not tease cotton, their women do not wear a nath (a nnse ornament). The Deśhā Kurmi may not have two wives who are sisters. If a Deśhā Kurmi should purchase a pair of shoes which prove too small for him he cannot on any account sell the shoes to another. He may make a gift of the shoes to some poor Brähman. If he should sell the shoes his caste people will demand a Bhät for this offence. The Deśhā Kurmis are all of one Gotra, known as Kāshi Gotra (this word may be a corruption of Kaśyap).

Amongst Ekbahiyãn Kurmīs, as their name signifies, the women wear bangles on one arm only, glass bangles on one arm and metal bangles on the other.

Phaljhariy $\bar{a}$. This word means the withering of the flower; phäl, flower and jharns, to wither, or droop.

The Sanboyā Karmis are those who cultivate San (or hemp). This cultivation is usually confined to the Mulhā and Gond castes but the Sanboya Kurmis are also permitted to engage in it.

The Kurmis both barn and bury their dead. If in good circumstances the Kurmi will undoubtedly be burnt.
3.-Teli.

Mr. Risley in his "Tribes and Castes of Bengal" mentions two distinct kinds of Telis. The one soaks up the oil from the ghani (oil
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mill) and the other allows the oil to trickle down through a hole in the side of the ghani. The former he says regards the latter as greatly inforior. The Telis of Mungeif Tahsil appear to be entirely of the latter class, and they know nothing of the Telis who soak up the oil from the ghani. The Tell sub-castes are :-

1. Jheriya, most numerous in Biläspar.
2. Ekbehiyān, who wear glase bangles on the right arm and Rāng bangles on the left.
3. Madpotwa, in former days used to distil intoxicants. They are found near the bills. They keep pige and poultry. Jheriya Telis do not rear poultry and pigs though they keep goats and eat thair flesh. If a Teli should have worms in a sore he will call together the Telis of the Sanwāni Gotra and give them a feast, for by so doing he removes his impurity. When the ghani is first placed in the ground five pieces of haldi (turmeric) some cowries and a supari (areca nut) are placed under it. The Teli's Ghanior oil-press, in common with mills of every kind amongst all the castes, is invariably turned from the right to left.
4. The Çri Bāsnā Telis and the Ekbahigén Telis in marriage processions take the bridegroom on a pallki, whereas the Madpotwa, the Desh ${ }^{\circ}$ and the Dhimar Telis take the bride and bridegroom in a gari or cart.
4.-Mardr.

The sub-castes are as follow :-

1. Kosariyă.
2. Kachi.
3. Bhoira.
4. Jheriyā.
5. Hardiya.
6. Pabiyă.

The Marārs are gardeners or vegetable-growers. The Kosariyi Maràrs do not eat Rengaiya bhat, that is, food which has been carried from one place to another. Most Marers are obliged to employ a dold or palki in their marriage processions even when the bride's house is next door. The Marars do not rear poultry but they may rear goats. They use tobaceo but not intoxicating drinks. A Brähman's presence and service are required at the marriage ceremony. Both burial and cremation are practised in this caste. The Bhoir\& Marārs are considered the lowest. They use intoxicants freely and do not necessarily employ a palki in the marriage procession. The favourite gods in this caste are Dulhā Dev and Thakur Dev.

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5 \text {-Garariy ãs. }
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The sub-castes are as follows :-

1. Jheriyā.
2. Nikhar.
3. Deth
4. Dheñgrā.

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The Garariyās are the shepherds of this Tahsil. Their sole occupation is to tend sheep and to weave blankets of the wool from their flock. The Jheriyā Gararijās weave blankets in three separate patis or strips and these are sewn together length-wise. They use only a small loom. The Nikhar and Dhengrā Garariyas weave the whole blanket on a large loom. The Gararigās do not keep poultry and pigs. They will not eat the flesh of sheep which have died a natural death.

> 6.-Kumhar.

The sab-castes are :-

1. Deśhā. . 2. Jheriyā.
2. Phuljheriya.

The Kumhērs make earthen vessels and also tiles. I am told that no Knmhärs keep poultry and that only the Deśhā Kumhārs use intoxicants.
7.-Baret.

There are four sub-castes, vis. :-

1. Jheriya.
2. Deshā.
3. Kanaujiyà.
4. Dhobahā.

The Barets are the washermen and are found in every village where there are Hindūs. The Kananjiya Barets are considered the best. The keeping of poultry and goats is not forbidden in this caste. They use both intoxicants and tobacco. They may both burn and bury. They wash for all the castes except Chamärs and Ghasiyäs. The Barets all employ Brāhmans in their marriage ceremonies. The Kanaujiya Barets require his presence at the circumvention of the marriage pole but the other Barets employ a Brāhman merely to fix an anspicious day for the marriage ceremony.
8.-Badhaĩ.

It is worthy of notice that there is no Badhai (carpenter caste) in these parts. The Chamārs have many of their own people practising carpentry but those who belong to the true Badhai caste are all of them immigrants from the United Provinces. I am told that the few pardeshi (foreign) carpenters in this District came from up-country together with the Kāyasths after the Mntiny of 1857.
9.-Ghasiya.

The sub-castes are :-

1. Lariyà.
2. Dingkuchiyē.
3. Rāmgariya.
4. Mandarchāwā.
5. Oriyā.
6. Dolbohā Lariyā

The Ghasiyās are also known as the Thanvārs. The chief occupation is that of a groom or grass-cut. They also trade in buskets and
supas (winnowing fans), combs made of bamboos and marbles. They do not make these articles but carry them a long distance in order to make a small profit. Lariyà Ghasiyàs are considered the best. Together with all the other sub-castes, they rear pigs. The Oriyā Ghasiyās often do the work of sweepers. The Dingkuchiyā Ghasiyàs as their name intimates are employed chiefly to castrate bullocks, bnffaloes and horses. The word kuchiyà means to crush, while ţhe first syllable in this name probably means the testes of an animal. The Mandarchāwā are emplojed in making drums. They do not object to disposing of the carcasses of cattle. Dolbohā Ghasiyass as their name indicates carry the dold or palki for several castes. The Ghasiyãs mostly worship Dulbā Der, whose altar is invariably found near the cooking place. The Rāwats will not wash the plates of the Ghasigās. This caste is very much given to the use of intoxicating drinks and drags. Their women frequently go out as midwives. There is one peculiarity amongst the Ghasiyäs which requires special notice. They will never take salt from the house or hand of the Kāyasth. If a Ghasiyā should be employed as a syce in the service of a Kāyasth he will not, on any account, hold the stirrap for his master, neither will he handle his master's bedding or clothing. The Ghasiyās say that these restrictions are due to some Kryà or vow taken by their ancestors in connection with the Kāyasths.

The Ghasiyā may take salt from the honse or hand of a Chamar but he would be out-casted if he should take salt from the Käyasth.

Since writing the notes concerning the Ghasiyās, I have heard the following story in two widely separated portions of the Tahsil. It explains the cause of the feeling of the Ghasiyās toward the Kājasths. It is said that away back in the distant past the Kāyasths invited all the Ghasiyās to a feast with the object of poisoning them. The Ghasiyāß responded to the invitation in large numbers. During the feast, in some way, two of the Ghasiyäs a man and a woman (some say a boy and a girl) discovered that the Ghasiyās were being poisoned and they made their escape and hid themselves under the loom of a weaver, or Pankà. It is from these two who escaped that all the Ghasiyās have descended and they have taken a vow never to receive even a pinch of salt from the treacherous Káyasths, who all but exterminated their caste.

> 10.-Razoat.

There are seven sub-castes, viz. :-
1 Jheriya.
4. Phuljhariyā.
2. Deśhā.
5. Kosariyà.
3. Kanaujiyā.
6. Kauriya.
7. Dharbhol.

The Rāwats are the watermen and cattle-gracers. Excepting the three last-named sub-castes the Rāwats may cook for each other but one may not add salt to the food for another. Each kind of Rāwat will add the salt for himself. The Kosariyā, the Kaurai and the Darbhol Rēwats are said to eat with the Gonds and to rear pigs. These three sub-castes are found mostly in the hills. The Kananjiyā Rāwats are considered the best. They do not fill water for others, nor will they wash plates. A Kanaujiyā Rawat will not graze the Burdi. They will graze only the Gorhi. The Gorhi, I am told, contains no bullocks or buffaloes while Bardi means an indiscriminate herd of cattle. Pähat is a term applied to a herd of cattle owned by one man and the Rāwat who grazes the pähat is called the pahatiya.
B. Somr Beliefs and Practices common to various castes.

1. Marriage by Capture.-During a Chamār wedding I noticed the remains of the old practice of "Marriage by Captare." When the bridegroom's party was approaching the house of the bride for the marriage ceremony there was a sham fight between the friends of the bride and bridegroom. The boy's friends lifted him up on their shoulders and, surrounding him on every side, approached the bride's home swinging around theeir lāthis in a threatening manner. On reaching the bride's house they crossed sticks with the bride's friends who gradually fell back and allowed the bridegroom's friends to advance. The women of the house gathered with baskets in their hands and some threw about rice or Murra in pretence of self defence. When the cudgels of the bridegroom parties struck the roof of the bride's home (or the Madwa) her friends considered themselves defeated and the sham fight was at an end. This practice is known as Parghauni dhata. It is common to all castes in the Mangeli Tahsil.
2. Marriage restrictions.-W hen a husband dies his wife considers it proper to go to her Dewar, her husband's younger brother. She will never go to her husband's elder brother whom she respects as a father-in-law. Amongst the Chamārs a man may have two wives who are sisters. Except amongst the Gonds and Ghasiyās the marriage of cousins is forbidden. The Ghasiyās and Gonds allow the marriage of cousins on the mother's side because they are of different gotras, but the cousins on the father's side are considered as brother and sister. They are of the same gotra, and may not intermarry.
3. Māma $B h \bar{a} c \bar{a}$. -It is said amongst the ordinary people of this District that Māmā and Bhācā (maternal uncle and nephew) should never cross a river in the same ferry. During a storm if they shonld be in the same house there is danger of the place being destroyed by a

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thander-bolt. The nephew must not tonch the ancle's head nor must he touch his shoes, nor eat the food left by his uncle. The uncle should never strike or beat his nephew. If he should stumble against him by accident the uncle will ask the nephew's pardon. I know a man who is afflicted with palsy and it is attributed to his having beaten his sister's son.
4. Trwelve-and-half Castes. -In these parts all the different castes are said to have $12 \frac{1}{2}$ seotions. The Chamars unanimously declare that there are 12t kinds of Chamārs bu't they are nnable to name the whole number. They say that fallen women make up the half.
5. Aversion to killing a cat. -There is a strong aversion to the killing of a dog or cat. A dog may be killed, but to remove a dead dog will out-caste the remover. A sweeper alone should do this. To kill a cat means that the offender makes himself responsible for all the sins committed by that animal, and these are numerons because of the many lives of birds and rats which have been taken by the offending cats. The killing of a cat will out-caste the offender.
6. Graves.-Amongst the people of this Tahsil the grave is always dug from north to south. One reason assigned is that the head of the earth is to the North. Another reason is that, in the Satyuga, the sun rose in the North and in each succeeding Yuga it has risen at a different point of the compass till, in Kaliyuga, it rises in the East.
7. Names.-Despicable names are very frequently given to children especially when the parents have lost one or more by sickness or miscarriage. A woman expecting a child will sometimes go through the performance of the sale of a child to a neighbour. She is given five or ten cowries for which she promises to make over her child on its birth to a neighbour. The child is nominally her neighbour's child and is named Pāchkānr or Daskānr as the case may be.

It is considered inadvisable to expose a young child to the gace of a large number of persons. There is a desire to secrete a child up to a certain age. The result is frequently disastrous to the health of the infant who pines for light and fresh air. In this connection it may be mentioned that the giving of nick-names after some chief characteristic is exceedingly common and hence we find the following names of men and women :-Kanwà (blind), Bhirā (deaf), Kondà (dumb); Khorwā (lame), Kariyā Kāri (black), Bharwā, bhuri (fair). It does not follow that one who is named dumb is speechless. He may have been late in speaking.
8. Miscarriage.-Miscarriage is almost invariably attribated to the Tonhi or witch. If the supposed witch should touch the woman with child, or hand her some eatable, or in bathing if a drop of water
should splash, on to the expectant woman, from the garment being washed by the Tonhi, the results are said to be disastrons. This last cause of miscarriage is said to be most common and may be attributed to a woman having injured herself while bathing or washing at the river side or tank.
9. Birth practices.-Midwives are mostly Chamars of the Kanaujiyā and Chungiȳ̄ sub-castes or Nagārchis. Ordinarily a woman receives two annas for delivering a girl, four annas for a boy, as well as a piece of cloth. The barber and the washerman also receive presents. Amongst the better class of Chamārs and farmers, it is customary for the new-born infant to be placed in a supa or winnowing fan. $A$ bed is made of rice and the infant is placed in the nest of rice and this grain is then given to the nurse. The nurse will also go to the house of the head-man of the village, and to the near relatives of the new born infant, and make a mark with cow-dung before the main entrance. On seeing this sign the master of the house presents the nurse with grain or money. It is usual to withhold food for six days from a woman after confinement. Liquid of every kind is withheld for three days.
10. Bhandarnā,-The still-born infant or one which passes away before the Chatti or sixth day, the day of purification, is not taken away to be buried. It is placed in an earthen vessel or ghara and is buried in the door-way or in the yard of the house. By so doing some say that the mother is likely to bear another child, but others give no reason for this practice; a prominent Satnārni, who undoubtedly knew of ${ }^{\circ}$ this practice, stontly denied all knowledge and declared he had never heard of it. A feast is required of the relatives of the deceased only if the body is taken to the burial ground, and the idea of burying in the yard may have arisen from a desire to avoid giving a feast. Others maintain that the stillborn or young infants are especially sought after by the Tonhi or witch and to avoid their being made into Makha Dev (or the dumb spirit) the infants are buried in the house or yard. This practice is known as Bhandärnā. It is common to all castes in this Tahsil. I am not prepared to say that it has any connection with infanticide.
11. Witches.-The fear of evil spirits is very firmly fixed in the minds of the people. Some declare that spirits are not as numerons now as they were formerly. They are not so much talked about; in other words, the people are finding more topics of conversation; the belief in the evil-eye is still prevalent and a volume might be written on this fruitful subject. Those who practise witch-craft are nearly always women. The Gunai or remover of the evil-influence, on the other hand, is almost invariably a man. The witch is said to do her work with two and a half letters "Arhài Akshar." The Gunai requires seven letters.

I do not understand the force of this saying. Any one who is practising witch-craft is said to experiment on trees by causing them to wither and revive sccording to his will. He first throws some rice at a tree and mutters certain words which will cause it to wither. He should then revive it. This is the crowning test of having acquired the tricks of witch-craft. If one should try to learn the practices of a witch and fail he is said to become insane and is called anshiki. In order to bring a familiar spirit under control the spiritualist is said to go and sit near the grave of a recently bnried person. He must go there naked and, lighting a small lamp, must sit near the grave, nodding the head, in fact swaying the whole body, most persistently and perseveringly till the spirit of the dead appears. The spiritualist then commands the spirit to come under his control to obey his alightest wish or inclination. From that time forth the familiar spirit may be used for any parpoee, even for the killing or sickening of a neighbour. Both the old and young women are said to have familiar spirits, but the evil influence of the young women is much greater than that of the old. With adrancing years the power of the witch is said to diminish. A clod of earth taken from a newly dug grave will suffice to enable a spiritualist to call up the spirit. Hence for three days after a burial graves are closely watched and women are never found attending a burial. The witches are said to prefer, as familiar spirite, those who have been hanged, or such as have had the head severed from the body. There is a spirit or ghost known as Murkäta or the headless ghost. There is a small goblin known as Matiya (See Crooke's Folklore, Vol. II, 266). He is said to be very short in stature, and of a fair, reddish appearance. He appears with a $k a h o a r$ or bamboo with suspended ropes for carrying goods. This Matiyn is sent by a witch to destroy the prosperity of certain homes. He has but to carry away a small portion of the food of the house and from that time forth, however much grain may be prepared, it will always prove insufficient. In order to keep away the Matiya a small kieoar is made of an empty pumpkin and this is suspended from the roof of the house. It is supposed that the Matiyä, on entering the house, will see the karoar and depart with the impression that the house is occupied by ono of his own kind. The belief is very prevalent that the spirit of the deceased returns to the house the first night after burial, and, in order to know whether he or she has been to the house, there is a preotice of spreading ashes in the door-way so that the foot-prints may be seen in the morning.
12. Botlagãna.-I find a practice amongst the Chamāre which is known as Botlagāna. Before a prominent member of a family is buried, it is customary amongst the Chamars to make a mark on the body of
the deceased, with either ghi or oil or soot, and this same mark is sought for on the body of infants who may in the near future be born into the family. If a child should be born with a mark similar to that made on the ancestor's person he is considered a re-incarnation of that individual.
13. Sickness.-The belief is very prevalent that if a woman during her period of sickness should take part in any affair it will undoubtedly prove unfortunate. If she should approach a man with opthalmia it is believed that he will lose his eye-sight by ulceration. This superstition applies to small-pox also, though in this case it is on account of the $D=0 i$ being annoyed and giving her victim increased suffering by greater violence in the symptoms. $\mathbf{A}$ woman in this condition will also avoid entering the house of one in labour. Her presence is said to increase, unnecessarily, the labour pains and, if the child is born, it is said that her presence will bring on infantile jaundice.
14. Burha Mai.-A person with small-pox is said to be troubled by the Davi or goddess, Mātā or Burhā Māi, hence outsiders, if they approach the house of one with small-pox, do so with much reverence, taking off the shoes and turban, holding their hands together in a supplicating manner and doing obeisance.
15. Iros and Oholera.-During a cholera epidemic there is a desire to avoid the use of the name of the disease. This sickness is often called H $\overline{6} w \bar{a}$ (wind) or simply Bimari (sickness), or Duhkhi. The idea prevails amongst the lower castes that the presence of inon wards off the disease or the goddess, hence during the epidemic people are frequently seen moving around with an axe or sickle.
16. Pregnancy.-Pregnant women are considered specially liable to the evil influence of witches, because of there being two lives "Dojiva." They therefore take special pains to avoid them. In the event of a woman having died in child-birth or daring pregnaney, her spirit is considered to be specially sought after by the witches. Increased precantions are therefore taken after the death of a woman in child-birth.
17. Worms.-Amongst all castes if worms should be found in a sore or ulcer the person so afflicted is considered an out-caste. It is necessary to feed the caste people and to perform vacious other rites to be re-admitted to caste. When there are worms in a sore, the expression used is "Phul par gayā."
18. The winnowing Fan.-There is a firm belief that if a "Supa," or winnowing fan, should be placed on a cart, it will canse the cart to move slowly, and will considerably increase the weight. Hence all household goods are placed on a cart, excepting the "Supā" which is carried in the hand of those going on foot.

Some Notes on the Rajvaingi Caste.-By Babt Monnohan Rot, DeputyMagistrate, Rangpur. Communicated by the $\boldsymbol{A n t h}^{2}$ ropological Secrotary.
[Read 5th November, 1908.]
In the discussions on the Rajvanigi caste, it is too readily assumed that "Koch" and "Rajeasigi" are synonymous terms like, for example, Candal and Namagindra and that the Koch, having founded the kingdom of Koch-bihar, blossomed into a Rajvanigi and assumed that high sounding title. It is, however, significant that in all previous Censusee, Kock and Rajeasing were, to a certain extent, separately returned. In the present Census, the statistics have been compiled on the assumption that they are one and the same.

Apart, however, from any theory as to their origin, it is a patent fact that so far at least as the Rangpur district is concerned, Kock and Rajvaingi form distinct castos. I have enquired from a large number of competent persons-the District Engineer, Sub-Divisional Officers, Police Sub-Inspectors, School Sub-Inspectors, educated natives of the district, inhabitants of villages where both Koches and Rajeawifis reside-and I have found a consensus of opinion on the point that, as a matter of fact and irrespective of any question as to identity or difference of origin, the Rajuancgis and Koches form entirely distinct castes. I beg to point out some of the differences between the two castes and the subject will be found to open out into one of wider interest and importance, vis, the general characteristics of the major portion of the Rajvaingi population of the Rangpur district as contrasted with those of the minority living in the northern part of the district bordering on Koch-bihār and the Rajvaingis of Koch Bihār and Jalpaigari.

The Koches like the Rajuanigis are in the main agriculturists by occupation. There is a well-known Koch named Resmdhan Mandal, of Bhendäbäri in thana Pirganj, who is a petty zemindar and the proprietor of a Mela (fair). In village Tamphat, Thana Mahiganj, there is a Koch named Hari Das who is a teacher in the local Primary School. But though there are many Koches whose calling is not of a degraded nature, still, taking the caste as a whole, there is one occupation which constitutes a badge of inferiority. A Rajvaingi will never consent to be a palki-bearer. He considers that to be an occupation too low and degraded for his caste-but there are many Koches who are palki-bearers by profession. There is, however, a difference between them and other palloi-bearing castes, in that they will not carry any but high-caste Hindus, such as Brāhmans, Vaidyas, Kāyasths.

The Rajuaingis and Koches are of course, different endogamous groups. They do not intermarry nor dine together. The social status of the Koches is distinctly inferior to that of Rajoasingis. The latter affect greater ceremonial purity than the former. With rare exceptions the Rajvaminis have got Brähman priests. These priests are, for the most part, Kāmrupi Brāhmans; there are also many local patit Brāhmans; of late, they have also got a few Maithil Brähmans as purohits. I am informed that the same Brāhmans serve the Rajvanhis, Kliyāns, Kumhārs and Nāpits. Some of the Koches have not yet adopted Brähman priests, but most have done so and there is a growing tendency towards the general adoption of Brāhman Purohits. I am informed that in village 'Tamphat, there is a degraded Brāhman, whom the local Koches have recently dubbed as their priest. Kāmrupi Brāhmans served Räjvanipis and Koches indiscriminately but local Brāhmans who serve Koches occupy a distinctly lower position than the Brāhmans who serve Rajvaniçis. The Koches have also in most cases secured the services of the Nāpit, though not so generally as the Rajvaninis. The eating of pork is widely prevalent among the Koches, though a growing tendency to eschew it is discernible. This giving up of pork marks one of the stages in the gradual advance to the standard of Hindu orthodoxy. The vast majority of the Rajvaringis have passed this stage long since, though, among a very small number in the northern part of the district, there is still some lingering attachment to pork. To a certain extent, the same is true of the practice of Nika or widow-remarriage. 1t widely prevails among the Koches. Among the higher class Rajvamingis, widow-marriage is strictly forbidden, thongh, among the lower class, it still obtains to a large extent in the northern part of the district, and to a slight extent in the other parts. The Rajuamingis are, practically speaking, all Vaispavas. The Koches may be considered as Çaivas, though Vaięnavism has made great progress among them. Both the Rajuanhgis and Koches worship all the various gods and godlings of the Hindu pantheon. There is, however, one important reapect in which the influence of Çaivism is clearly discernible. The worship of "Sannyãsi Thakur" widely prevails in these parts, but it has not so large a hold on other castes as on the Koches. The image is stuffed with straw and resembles a male person, with a beard and big belly, constantly occupied with smoking ganja. The principal article of offering is ganja. The worship of this Devatd is supposed to protect people from disease, chiefly fever. It is clearly a corruption of the worship of Çiva; this worship has a wide vogue among the Koches. There is an image in almost every house and the worship goes on in all scasons. Many Koches sacrifice pigs before Sannyäsi Thäkur. It is a
curious relic of some old tribal faith superseded by, and motamorphosed into, Çaivism. Thangh Sannyäsi Thakur is worshipped to some extent by the Rajvaingis, and for the matter of that by other castes also, still he is not a principal object of worship among them, bat is relegated to a position of minor importance. The fact is that the catholic and tolerant spirit of popular Hinduism does not refuse admittance to strange gods into its pantheon, not even to a Mahammadan saint like Satya Pir, provided that the worship is cast into the mould of Hinduism ; and when a Devata is once admitted, he is worshipped by all sorts of people in the locality concerned. The worship has, however, a apecial hold on the caste or tribe to whom it originally belonged. Thus though Sannyasi Thakur is now worshipped by all castes in Rangpur, still he is in a special manner the Devata of the Koches and the fact, that this wrorship is a corrupt form of Çiva worship, shews the predominance of Çaivism among them. The Koch has a great partiality for pigs. It appeare that many Koches sacrifice pigs at the sltar of another Devate called Burhi. Burhir paja (literally the worship of the old woman) prevails in the Rangpar District to a large extent, among all castes, but while the Koohes (or many of them) sacrifice pigs before her, other castes do not do so. This Burhir Paja is nothing but a corrapt form of the worship of Candi (a form of Cakti worship). It is supposed to protect infant-life from various diseases, especially convulsions. Spindles and horses made of pith are offered. In the northern part of the district and in Koch Bihār, the goddess is called Burhi or Burhicandi.

I have said above that the Koch is more degraded than the Rajcanigi. I may observe in this connection, that the higher castes take water from the hands of the Rajvaingis except, of course, for drinking or cooking parposes. They will also use Kacchi sweet-meats carried by Rajuanigis. These concessions are, however, denied to the Koches. The number of the Koches in the Rangpur district is very small, as compared with the Rajoamgis, who form the great body of the Hindn popalation of this district. The Sub-Inspector of Kurigram estimates the number of Koches in his police circle as one quarter that of Rajoanigis. The barber of a certain village in thana Mahiganj informs me, that in his village there are about twenty houses of Koches and 100 houses of Rajivangis. But taking the district as a whole, the number of Koches cannot, I think, be more than five per cent. that of Rajuawigis.

The physiognomy of the great majority of the Rajvaingis of the district-except the northern part bordering on Koch Bihār-is distinctly Dravidian. One sometimes meets with the Aryan type also. This is due to the fact that Aryan immigrants came at varions times by the tide of conquest, or for trade or service, and there were frequent liaisons
between them and the Rajvaingts. The physiognomy of the Rajvancis, however, over the greater part of the district is markedly Dravidian. As we proceed northward, the Mongoloid type appears. The facial characteristics of the Koches are decidedly Mongoloid. Competent observers who have seen villages containing a large Koch population inform me that they have been struck by what they call the Paharia-like (resembling Hill tribes) appearance of the Koches-their short staturomuscular frame, low broad nose and high cheek bones. The nasal index is specially marked. The nose is very low in the bridge.

I am inclined to think that the distinction between the Rajuangis and Koches in the Rangpur District is not of recent growth, bat points to a real ethnological difference. The theory that the term Rajoaningi is merely a recent title of the Koch who assumed it on the establishment of the kingdom of Koch Bihār does not, on a close examination of the existing facts, appear to be a tenable one. It is important to observe that the Rajvaingis of Rangpur look down npon the Koch Bihar Räj family and the connected Rajj families of Pāngā add Jalpaiguri from a social point of view. They consider them to be Koches. It appears that a Rajranigi family near Nilphamāri was outcasted for contracting an alliance with the Jalpaiguri Räj family ard had to remove to Jalpaiguri. Some time ago a scion of the Koch Bihar Raj family sought the hand of a Rajvainçi girl, the daughter of a clerk in the Rangpur Registration Office, bat the latter declined the offer, though otherwise advantageous, from caste considerations. These are but a few instances of the belief widely entertained by the Rajuanucis here that they are socially superior to the members of the Koch Bihār Raj family and most Rajuangis of Koch Bihär whom they look down npon as Koches. This could hardly be the case if the origin of the term Rajvanigi had been connected with the establishment of the kingdom of Koch Bihär by the Koches-for then the Malıārājā of Koch Bihär would, ipso facto, be the social head of all Rajvaingis. The fact that Rajvaingis and Koches live in the same locality and in many cases in the same village is also inconsistent with the assumption that they come from the same stock and that the Koch has evolved into a Rajvainçi. Had Rajvaingis and Koches inhabited different parts of the district, then it might have been argued that owing to local conditions the Koches in one place had developed into Rajounigis while those in another place remained Koches. But, as already stated, Koches and Rajuamgis may be found in the same village. It is highly improbable that some Koches in the same local area should have developed into Rajvamigis while others remained as Koches. It cannot be argued that wealth and education have helped the development in some cases and the lack of
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them has retarded it in others-for we find Koches like Rämdhan (a petty zemindar and owner of a fair) and Haridas (a pandit)-while there are large numbers of poor and illiterate Rajoamgis. It is also important to observe that the affinities of the Rajvamgis are with the south and south-west while those of the Koches are with the east and north-east. There are many Rajvamigis in the Pabna and Rajshahi districts. They are fishermen. The District Engineer of Rangpar, who is a native of Pabna District, tells me that there are numerous Rajvangis there, and that the Jaliyas (fishermen) of Pabna are for the most part Malos and Rajuaingis. These Rajvamigi fishermen of Pabna, Rajshahi and some other parts of Bengal have been identified with the Tiyars, a Dravidian fishing caste (Risley's Tribes and Castes: Vol. II, page 328). I am inclined to think that there are close racial affinities between the Rajuampis of Rangpur and those of Pabna and Rajshahi. It is true that the Rajvamcis of Pabna and other districts are fishermen while those of Rangpur are for the most part agriculturists. The nature of their occupation is however determined by local conditions. In districts like Pabna and Rajshahi fishing is an important occupation, owing to the existence of large rivers and lakes. There are also many agricultural castes. The contrary is the case with Rangpur.

It appears that even in Rangpur fishing was formerly to a certain extent one of the traditional occupations of the Rajuaingis, and Dr. Buchanan Hamilton gives a description of the mode of Rajeawigi fishing (vide Hanter's Statistical Account of the Rangpar District, page 171). The rivers of the Rangpur District having silted up and fishing having become unprofitable the Rajuaingis have for the most part given up their traditional occupation and taken to agriculture. I may observe by the way that this change of hereditary occapation by a caste, or the section thereof inlabiting a certain local area, is a thing of common occurrence in Bengal and has been a main factor in the creation of sab-castes. It is responsible for a good deal of the obscurity which surrounds the origin of several castes, and throws great difficulty in the way of correlating with each other various facts and phenomena connected with the caste system of Bengal, which, though apparently diverse, are really allied. There is a tradition which links the Rajvaingis of North Bengal with those of more southerly parts. The tradition is to the effect that some Rajvaingis in the course of hunting killed some cows which were grazing in the forest. For this they suffered excommanication and emigrated southward. One meets with the term Rajvamgi in Birbhum and other districts. It would be interesting to enquire what is the origin of the term Rajuaingì Nal
which is a well known sub-caste of Mā1. In fact wherever the term Rajuamesi occurs we find it attached to people belonging to the I)ravidian stock. On the other liand one meets with Koches in the east, in the Assam Valley, and also in the Garo Hills and Dacca. All this shews that the affinities of the Rajvampis and Koches are in different directions. The affinities of the Rajvamiçis lie in the direction which points to a Dravidian origin. It is the Dravidians. who inhabited the Gangetic Delta at the time of the Aryan immigration and some of whom were pushed northwards by the tide of the Aryan conquest. The affinities of the Koches lie in the direction which points to a Mongoloid origin. The Koch and Mech appear to be allied races.

Various canses have operated to obscure the distinction between Rajvamigis and Koches. They both lay claim to a Kshatriya origin. These pretensions are not very old, but still they have cast a veil of obscurity on the real origin of the tribes. They rest on a very slender foundation indeed. There are certain passages in the Manusamhitā to the effect that some Kshatriyas lived in Paundrak, Odra, Drābir, Kamboj, Chin, Kirāt and other tracts, but that owing to the want of Brāhmans they could not perform the ceremony of investiture with the sacrificial thread and other ceremonies. Hence they were degraded into Çudras. There is a passage in the Tithitatva of Raghunandan in which the classic stream of the Karatoyā is described as watering the land of the Paundra. As the river Karatoyà traverses the districts of Rangpur and Dinajpur it is inferred from these passages that some Kshatriyas formerly lived in these districts and as the word Rajvamgi literally means "descendants of kings" and as the Kshatriyas formed the royal caste it is concluded that the present Rajivamigis are descended from the Kshatriyas who, according to Manu had settled in the Paundra land. Manu describes the Kshatriyas who had been degraded into Çūdras under the circumstances stated above as Brātya Kshatriyas. Hence the Rajvariçis claim to be Brātya Kshatriyas. The term Brātya Kshatriya as applied to the Rajuamecis of Rangpur only dates from the Census of 1891 but the tradition of the alleged Kshatriya descent is somewhat older and was formerly embodied in the phrase "Bhanga Kshatriya." On such sleuder foundation is reared the superstructure of the alleged Kshatriya descent. . By parity of reasoning the present inhabitants of Cin or China, Odra or Orissa and various other tracts mentioned in Manusamihita as containing outlying Kshatriya settlers may lay claim to Kshatriya descent. The disproportion between the few scattered Kshatriya settlers and the large number of Rajivamgis who form the bulk of the population of this district, for $95 \%$ of the Mahammadans are mere Rajvaingi converts, must strike everybody.

Even in those parts of India where the Kshatrigas were numerous in former days their number is now practically insignificant and it is strange that in these remote and outlying tracts the Kshatriya caste should be so strongly represented.

The Koches or so-called Rajvamigis of Koch Bihār and Jalpaiguri, rely on a certain passage in the Kälそkā Purän which is to the effect that some bands of Kshatriyas fled from fear of Paraçurama, took refuge in that part of the country and sought the protection of the Mahader of Jalpef. The genuineness of this text is questionable, and an ethnological theory cannot be based on what appears to partake more of the character of a legend that of a historical fact. These pretensions of both commanities to a Kshatriya descent have thrown obscurity on the real origin of the tribes and tended to obliterate the distinction between them. In regard to the Koches and the so-called Rajvamiçis of Koch Bihar this new fangled theory bas superseded the older legend of descent from Çiva. I am informed that leas than twenty years ago the Koches of Rangpar District usually described themselves Çivavainos but now most of them give a wide berth to that title. The new legend of a Kshatriya descent has, both in the case of Rajramicis and Koches given a great impetus to 'the movement against un-Hindu practices like pork-eating and Nika. Both Rajuanini and Koch will before very long have made such an advance towards the standard of Hindu orthodory that all distinction between their manners and customs will disappear. The disintegrating influence of Hindaism has already destroyed or absorbed many of their old tribal beliefs and forms of worship. Still in the existing state of things there can be no doubt that the manners and customs of the Rajoamisis represent a stage of progress towards Hindu orthoduxy considerably more advanced than that which the Koches have reached. This appears to be due to two causes. In the first place the Dravidian races, generally speaking, shew a greater aptitude for embracing Hinduism than the Mongoloid races. In the second place the Rajoanigis owing to their more southerly position came into contact with the Aryans earlier than the Koches. The Hinduism of the Rajeramgis took a Vaispava tinge, while the Koches and the so-called Rajvainçis of Koch Bihär shewed a decided leaning towards the worship of Çiva, a tendency which is reflected in the tradition which traces the origin of the Koch Bihūr royal family to a liaison between Çiva and Hajo's daughter Hira, who however appears to have married a Mech. Mongoloid races when coming under the influence of Hinduism shew a deoided partiality for Çiva worship and its complement Çakti worship. And in fact the region near the Himalayas is represented as
sacred to Çiva whose abode is on Kailās, one of the peaks of the Himalayas.

Another fact which has tended to obliterate the distinction between the Rajvaingeis and Koches (or the Dravidian and Mongoloid elements of the caste now known as Koch or Rajuamigi) is crossing with the Aryan immigrants. The Aryans have immigrated in cousiderable numbers at various tines. 'I here appear to be some trath in the popular tradition that bunds of Kshatriyas immigrated in very early times. We find in the Mahäbharrata that Bhagadatta, king of Prāgjyotishapura or Kāmarnpa, which incladed the present district of Rungpur, entered into a close alliance with Duryodhan, the king of the Kurus, gave him his danghter in marriage and fought in the battle of Kurukshetra where he was slain by Arjan, the hero of the Pāudavan. During the long period of the rule of the Pāla kings many Aryans came by the tide of conquest or for trade or service. This wae also the case during the rule of the Kamatapur Rājas the Mahammadan kings or subadars and the Koch Bihār kings and the early period of the British rule. The facility of communication afforded by the railwass gave a great impetus to the Aryan immigration and up.country men from the congested districts of Bihār and the United Provinces began to pour in in large numbers. Liaisons between the Aryan immigrants and the Rajvaricgis and Koches were of fruquent occurrence and were facilitated by the loose nature of the social organisation of the latter. The result is that Aryan blood flows in the veins of a large number of Rijuamigis and Koches and their physiognomy has to some extent been modified accordingly. It is not unusual to meet Rajuamígis or Koches whose physiognomy is distinctly Aryan.

But the most powerfal of all the canses which have operated to obliterate to a great extent the difference between Rajjvaricgis and Koches is the mixture of these two tribes-and the difference between the characteristics of the Rajuarigits of the greater part of the Rangpar district and those who live in the northern part bordering on Koch Bihär and in Koch Bihār itself is due to the rarying extent to which this mixing together of the two tribes has taken place. The line of cleavage between the Koches and Rajvaingis of the Rangpur district is to a certain extent (not wholly-as other causes have operated as disturbing factors) the line which separates the Rajvaingis of the south (i.e., the sonthern and central part of Rangpur) from those of the north. As we advance northwards the distinction between the Rajuamicis and Koches gradually censes, the physiognomy become more and more Mongoloid, the manners and customs recede more and more from orthodoxy, and Vaiṣnavism gradually gives place to Caivism and Çakti worship. The change is of a striking nature and has attracted the
attention of many observers. In the district Census report of 1891 it is remarked that "among the Rajvaíçis there is a distinction between those who have adopted the Vaiṣnava faith and the followers of the god Civa. The latter appear to be Koches proper, being of Mongoloid origin, and having come from the north; they are closely allied to the Karis and form a small minority of the tribe of Rajuaingis. The former are of Dravidian stock, and are more numerons and respectable, forming the main body of agriculturists in the district." Hunter remarks "the characteristic features of these people-flat faces, broad nose and high cheekbones clearly shew that they belong to the Mongolian race . . . . . . and the marked Mongol physiognomy of the people is unmistakeable in the portion of the district bordering on Koch Bihār" (Hanter's Statistical Account of the Rangpar district, page 211). I have already stated that in the greater jart of the Rangpar district the distinction between the Rajvaingis and Koches is clear and recognised on all hands. In the northern part of the district (Thanas Kulaghat, Nageswari, \&c.); we find large numbers of persons who may be regarded as Kochied Rajuamiçis. There the Koches and Rajuamiçis are to a great extent intermired but still the distinction is sufficiently clear. The separate existence of the class created by the alliance between Koches and Rajuam̧cis marks a stage in the process of the amalgamation of the two races. There we find three classes: (1) the Rajvaingis proper or pure Rajjvameçis who consider themselves superior, (2) the Rajvamicis who have been socially degraded by contracting alliance with the Koch chiefs or with families connected with them, (3) the Koches. The second group are known by varions titles Içar, Naik, Kor, Kärji, Deo, \&c. Their number may be roughly fixed at about one-tenth of the total Rajvainçi population. They have some peculiar customs, viz. :-
(1) In many cases the Chhaya Mandap (wedding canopy) is supported by bamboos and not by plantain stems.
(2) Pork is used in the Baubhat or pakā-sparsa ceremony (the feast given by the bridegroom after the marriage in which his kinsmen, relations, and friends are supposed to eat rice prepared by the bride herself.
(3) In the Navanna (or new rice) ceremony rice is boiled and offered as a Pinda to propitiate deceased ancestors.

It is said that the pure and the intermixed (or Kochised) Rajuaingis mix together in Harirlut only and in no other ceremony.

I am told that in the northern part of the district and in Koch Bihār, Bansbibaha (or the practice of nsing bamboos instead of plantain stems in the marriage canopy) prevails to a great exteut. Pork is ased in some ceremonies or Yagnas though there is a growing tendency to
eschew it. Among the Rajvamgis in the greater part of the Rangpar district there is a marked predominance of Vaispuavism as is evidenced by the existence of the numerons Vairägis among them and a decided tendency to eschew meat of all sorts. In the north goat's lesh is very often used in Sradilha ceremonies. In Koch Bihār I am informed that the habit of drinking prevails to a great extent. This is an indication of the Çakta spirit-the reverse of the Vaig̣ava spirit. I am informed that special respect is paid to the relations of the wife. The wife's elder sister is greatly respected-on the death of the father-inlaw, the daughter and son-in-law have ten days Açauc (period of mourning) instead of the Teratra (three days mourning) of the daughter only. Speaking of Açauc I may say that while in the greater part of the Rangpur district the period of mourning is $\mathbf{3 0}$ days like that of the Çudras, in Koch Bihār and the parts of Rangpur adjoining it and in Jalpaiguri the period is in many cases ten or twelve days. In Jalpaiguri and the Darjeeling Terai, and I think in parts of Koch Bihār also, the custom of having Brāhman priests is not yet very wide spread. In the Jalpaiguri Terai, Babu Açu Toṣ Lāhirì has seen Rajuamigi girle married clandestinely to Meches. They are not taken in sxciety but are allowed to visit their parents. One of the gods whose worship has considerable vogue in Koch Bihār and also prevails to some extent in the parts of Rangpur adjoining it is Mahākāl. I am informed that he is the special object of worship of Meches. He appears to be a tribal god supposed to protect people against tigers now sublimated into a form of Çiva. Çaiva and Çākta forms of worship such as Sannyāsi Pujā and Burhi Candi Pujà widely prevail. Candi Pujă has a great vogue and there are two forms of the image-Mangalchandi-four-handed, white coloured, seated on a lion; no fixed time of worship but usually in Jaista on Tuesdays-Dhanbar Candi : image the same as that of Durga; there is no fixed time for the worship which generally continues for seven days both morning and evening. Dharma Pajā greatly prevails-it is a form of Çiva worship. It is celebrated in Baisākh and Kārtik. I have said above that in the northern part of the Rangpur district the process of the blending of Kochesimed Rajivampis, though sufficiently advanced, is not complete, there being a sort of connecting liuk in the shape of a considerable body of Rajuamgis who are regarded as socially degraded on account of marriages with Koch families. Further north however the distinction between Koches and Rajvamiçis disappears, and the amalgam may be called Koch or Rajvamiçi. It is difficult to say what proportion is represented by pure Rajvamçis, what proportion by pure Koches, and what proportion by the cross between the two. I am informed that in Julpaigari and Koch Bihär there is no distinction
between Koches and Rajvamigis. They practically form one caste. Some Rajvamgis in Koch Bihār however represent themselves as pure Rajuamicis and look down upon the Koch Bihär Raj, and many other so-called Rajuamgi families. One of them is Babu Panchānan Sarkār, a pleader of the Judges Court, Rangpur. He is a native of a village in thana Sitalkuchi in Koch Bihär. He says that in the sadar subdivision of Koch Bihār the so-called Rajvamings are for the most part really of Koch origin while in the other sabdivisions the majority are pure Rajvaingis. I have not however sufficient information to enable me to say what is the proportion of pure Rajeamigis or in what localities they are to be found. One can only say in a general way that as one proceeds northward and eastward the Koch element in the composition increases. There is also a Mech strain in the composition. Every one whom 1 have asked says that as one proceeds northward the facial characteristics become more and more Mongoloid The nose is short and broad-very low in the bridge-cheek bones are high and there is a deficiency of beard and whiskers. The physingnomy of the Koch of Kooh Biliar as described by a medical officar resident in Koch Bihär (page 432 of Mr. Risley's Tribes and Castes, Vol. I), is distinctly Mongolian "flat square facer; eyes black and oblique ; nose flat and short; cheek bones prominent." It is true that the Koches have generally a dark colour. But coluur is an affair of climate and is not a sure criterion of race. Mongoloid races wh:o live in the terai and further sonth have dark skins, while those who live higher ap are fair. Much depends on the date of the immigration from the monntain slopes and higher latitudes. The reason why the Koches who fonnded a kingdom and were for a considerable time the dominant race shewed such eagerness for mixing with the Rajvanigis and assuming their name was their desire to embrace Hinduism coupled with the fact that the Rajoumgis had already entered the Hindu pale. It is not the Koches alone who have given up their tribal religion and become Hinduised by a process of silent conversion. The general cause appears to be the attraction of a lower to a ligher form of religion especially when the latter form is catholic and tolerant. When the Koches were thos attracted to Hinduism and found themselves in the midst of another tribe who had already entered the Hindn pale they naturally wanted to blend themselves with that people. Their position as the dominant race, coupled with the loose nature of the then social organisation of the Rajvaincis, gave them the desired opportunity and the merging of the Koch in the Rajjvamgi became an easy and rapid process. The progress however varied according to the distance from the centie of the Koch influence and the seat of the Koch authority. In the northern part
the fusion of the two races was practically complete. Further south it was less so, owing to the weakening of Koch influence by distance and to the fact that the Rajvaingis were there in touch with other Hindn castes. When the Koch power collapsed the process of blending suffered a check.

There are no sab-castes among Rajuaingis or Koches, but an affectation of ceremonial purity and a tendency to conform to the standard of Hindu orthodoxy have split up the Rajoamicis of the Rangpur District into two classes : the Pakahars and Kachahars. The distinction does not exist in the northern part of the district or in Koch Bihār. The Pakahars affect greater ceremonial purity and look askance at widow marriage; the test of social superiority is the length of time and the number of generations during which there has been no instance of widow marriage in the family. They scrupulously avoid all unorthodox practices. It is among the Pakahars only that the Gotra system has been generally adopted. Among the Kachähärs there are I think many families ignorant of the Gotra system. 'i'here is, so far, only one Gotru the Kägyapa Gotra and the most essential element in the conception of the Gotra system, viz., exogamy is wanting. Still all this shews that the trend towards orthodoxy among the Rajvariogis is very rapid. Intermarriage with the Kachahars is tabued among many Pakahar families. Whether the Kächahärs and Pakahärs will harden into separate subcastes or whether the Kachähärs will in the race for orthodoxy overtake the Päkahars cannot be predicted with certainty.

In Mr. Risley's Tribes and Castes; Vol. 1, page 493, mention is made of Madafic as a sub-caste of Rajvampi in the Jalpaiguri District. I am informed that there are Madafi Koches in a tract north-east of Dhubri in Assam. They eat pork and drink spirits distilled from rice. Their religion is of the animistic form and they sacrifice ducks, pigeons, goats, and pigs to propitiate the spirits. I am inclined to think that the so-called Räjvaingi of Jalpaiguri like those of Koch Bihär are really Koches of the same stock as the Kochmändais at the foot of the Garv Hills and the northern parts of the Dacca District and the Madäci Koches of Assam. There is of course a considerable proportion of pure Rajuaniçis who belong to the sonthern or Dravidian type among them. The blending of races and the evolution of the Koch iuta the Rajvamgè is in Koch Bihārand Jalpaiguri so complete that the name Koch is utterly tabued and is practically obsolete, while in the greater part of the Rangpar District Koches and Rajvamets live in the same village forming distinct social units. This is a cardinal fact and taken with the other fact that we find Rajvaingis in the districts farther south-whils we meet Kochmandais and Madacis Koches in the Garo Hills and Assam-furnishes the key to the whole question.
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# Folklore of the Kolhän.-By C. H. Boypas, Esq., C.E. (Communicated by the Anthropological Secretary.) 

## [Read 5th November, 1902.]

Introduction.
The Kollãn forms the western half of the distriat of Singhbhum in Chota Nagpur. The Hos or Larica Hos who form the bulk of the inhabitants are a branch of the Mundas of the Chota Nagpar Platean. They are one of those Kolarian tribes of which the Santăls are perhape the best known. I have collected some of the Folklore stories current among them, the recollection of which would, however, appear to be dying out.

The Rev. A. Campbell of the Free Charch of Scotland, Santil Mission, has printed a volume of Santsl Folk Tales collected by him in Manbham, a neighbouring district to Singhbhum. As might be expected there is considerable resemblance between those Santāl Tales and those now reproduced. I have heard some of Mr. Campbell's Santal stories told by Hos precisely as he relates them, and there are many incidents common to both collections. On the other hand there is no resemblance between these Kolarian talea, and the Beagal stories published by Rev. Lal Behari De. In the latter I only notice one incident which appears in the Kollean stories, the bringing together of two lovers through a long hair floating down a stream, bat in Bengal it is the lady's hair that floats to her lover, while in the Kolhēn it is always the long hair of the hero which inspires love in the heart of the Rājā's daughter.

The stories may be divided into two groups, the animal stories in which the principal characters are animals, for the most part denizens of the jungles, and the stories which deal with a settled state of Suciety with Rājās, priests and members of the different Hindu castes following their usual occapations. It is interesting, but perhaps soarcely profitable, to try and deduce from the latter some hints of the previons history of the Hos, who as we know them are a strongly demorratic race, with a well developed tribal system. They look on themselves as the owners of the soil and are unwilling to admit the claims of any overlord.

I have made no attempt to put the following stories into a literary dress; I merely bring them as a few stones to the hands of the builders who build the structure of comparative mythology.

## (1)-The River Sinake.

Once npon a time a certain woman had been on a visit to a distant village. As she was going home she reached the bank of a flooded river. She tried to wade across but soon found that the water was too deep and the current too strong. She looked about but could see no signs of a boat or any means of crossing. It begau to grow dark and the woman was in great distress at the thought that she would not be able to reach her home.

While she thus stood in doubt, suddenly out of the river came a great snake and said to her: "Woman, what will you give me if I ferry you across the river"? She answered: "Snake, I have nothing to give you." The snake said I cannot take you across the river unless you promise to give me something. Now the woman at the time was pregnant and not knowing what else to do, she promised that when her child was born, if it were a danghter she would marry her to the river snake and if it were a son that, when the boy grew up he should become the " juri" or " name friend" of the snake. The woman swore to do this with an oath and then the snake took her on his back and bore her safely across the flooded stream. The woman safely reached her home and in a little time a danghter was born to her. Years passed away and the woman forgot all about the snake and her oath. One day she went to the river to fetch water and the snake came out of the stream and said to her : "Woman, where is the wife whom you promised to me $P$ " The woman then remembered her oath and going back to her house she returned to the river with her daughter. When the girl came to the bank of the river the snake seized her and drew her underneath the water and her mother saw her no more. The girl lived with the snake at the bottom of the river and in the course of years bore him four snake sons.

Afterwards the girl remembered her home and one day she went to visit her mother. Her brothers when they came home were astonished to see her and said : Sister, "We thought that you were drowned in the river." She answered : "No, I was not drowned, but I am married and have children." The brothers said: "Where is this brother-in-law of ours P" Their sister said: "Go to the river and call him." So they went to the river and called and the snake came up out of the water and went to their house with them. Then they welcomed the snake and gave him great quantities of rice beer to driuk. After drinking this the snake became sleepy and coiling himself in great coils went to sleep. Then the brothers who did not like a snake brother-in-law took their axes and cut off the head of the snake while he slept, and afterwards their sister lived in their house.

## 「(2)-The Sons of the Tigress.

Once upon a time a cow and a tigress lived in a jangle and were great friends, they were never separated. Now in those days tigers did not eat flesh, but grazed like cattle, so the tigress never thought of doing any harm to her friend the cow. The tigress had given birth to two men children who were growing up fine and sturdy lads. One afternoon the cow and the tigress went down to a stream to drink, the cow went into the stream and drank and the tigress drank lower down. The cow fouled the water of the stream and the tigress tasting the water found it sweet and thought if the cow can make the water so sweet how sweet the flesh of the cow must be. So on the way back from the stream the tigress suddenly sprang on the cow and killed her and ate her up, leaving nothing bat the bones. When she got home her sons asked her where the cow was, but the tigress said that she did not know and that the cow must have deserted them, but afterwaris the boys found the bones of the cow and they guessed what had happened. Then they thonght, if our mother has killed her friend the cow, she will surely kill and eat ns next. So when the tigress was asleep they killed her with axes. Then they ran away and after going for many days through the jungle they reached a city and they found all the people in great distress becanse a tiger was devastating the kingdom and killing all the inliabitants and no one could kill the tiger. The Rājä of the city made a proclamation that any one who could kill the tiger should have half the kingdom and his danghter in marriage. The two boys being the sons of a tigress were able by their knowledge of tiger ways to kill the tiger. So they were given half the kingdom and the elder of them married the king's daughter and they lived happily ever after.

## (3)-The Tiarr's Marriage.

Once npon a time there lived a Raja who had one son and many daughters. One day the Rājā went into the jungle ta cut grass. He cut a great deal of grass and tied it up in a big bundle and then he found that he had cut so much that it was more than he could carry. As he was wondering what he should do a tiger came by that way and seeing the Rājā in difficulties asked what he could do to help him. The Rajā explained that he had cuta bundle of grass which was too heavy to carry. The tiger said that he would carry the grass if he were rowarded for it: the Rajja asked him what reward he wanted. The tiger said that he wished for one of the Rajjàs danghters in marriage. The Bajja reflected that be had many daughters and agreed to the proposition. Thereupon the grass was placed on the tiger's back and he carried it to the Raja's palace. Now the Rajjā was ashamed to give
his danghter openly to the tiger so he told the tiger to wait by the water hole, and sending for one of his daughters bade her go and fetch water; the girl went to the water bole where the tiger was waiting and was carried off by the tiger. But the Rājā's son missed his sister and went in search of her. After searching some time he came to a cave in the jungle and looking in he wsa the tiger finishing the remains of the girl whom be had killed. Tben the Rājàs son ran home as quickly as he could, and told the Rajā what he had seen.

The next day the tiger came openly to the Rajja's palace aud asked to see the Rājā. He was taken to the Rājā and treated politely. Then thie tiger said to the Rājā : "I am sorry to say that the wife whom you gave me has died, so you must give me another." The Rajjā said he would think about the matter and invited the tiger to stay at the palace. So the tiger was given a good bed, and quickly went to sleep. In the night the Rājä's son boiled some large vessels of water and poured the scalding water over the sleeping tiger and killed him. Aud in this way the tiger died.

## (4) -The Jackal and His Neighbours. ${ }^{-}$

Once upon a time a jackal killed a kid in a village and taking it to a little distance began to enjoy a good meal. But the crows who always make a noise about other people's business, gathered in a tree over his head and made a great cawing, so the villagers went to see what was the matter and beat the jackal severely and deprived him of his feast. On this account the jackal was very angry with the crows and determined to be revenged.

Shortly afterwards a great storm came on with wind and heavy rain and all the birds and animals were in danger of being drowned. Then the jackal pretended to be sorry for the crows and invited them all to come and take shelter in his house. But when the jackal had got them safely into his house he killed and ate them all; all except one milkanth bird which he decided to keep for his breakfast the next day, so he tied the nilkasth bird, on to his tail and went away from that part of the country. But the rilkanth bird pecked and pecked at the jackal's tail until it not only pecked itself loose but burt the tail so mach that it became festered and swollen.

As the jackal went along with his swollen tail he met a potter going to market with earthern pots for sale. Then the jackal put on

[^154]a ballying air and said thnt he was a sipalii of the Raja, and one pot of those being taken to market must be given to him; at first the potter refused, but being frightened he in the end gave one to the jackal.

Into this the jackal pressed the matter which had accumulated in his swollen tail and covered it over with leaves. Going on, the jackal met a boy tending goate, he told the boy that he had arranged with the boy's father to buy one of the goats in exchange for a pot of ghee, the boy believed this and took the chatty with its contents from the jackal and gave him a fine goat.

The jackal went off to his home in triumph with the goat.
His friends and neighbours were very jealons when they saw that he had so fine a goat and waiting till his back was turned, they killed and ate the goat, and then they filled the skin with stones and gravel so that it might seem that the whole goat was still there. The jackal found out what his neighbours had done, and he took the goat skin to a muchi and got the muchi to make it into a drum. Then he went to the banks of a deep river and began to play the drum. All the other jackals collected round and were lost in admiration of the tone of the drum. They wanted to know where so beantiful a drum was got, the first jackal said that there were many drums as good at the bottom of the river, and if they tied stones round their necks and jumped in they would find them. So the other jackale in their anxiety to get such drums jumped into the river and were drowned, and the jackal was revenged on all his enemies.
(5)-The Jackal and the Tigars.

Onde upon a time a pair of tigers lived in a jungle with their two cubs and every day the two tigers used to go out hanting deer ind other animals that they might bring home food for the cabs. Near the jungle lived a jackal, and he found it very hard to get enough to live upon; however, one day he came upon the tiger's den when the father and mother tiger were out hunting, and there he sav the two tiger cubs with a large piece of venison which their parents had brought them. Then the jackal put on a swaggering air and began to abuse the tiger cubs for having so much venison, baying: "I am the sipahi of the Rāja and the Raja has demanded venison and none can be found, while low people like you have a fine piece like this: give it at once or I will take it and report against you to the Rāja." Then the tiger cubs were frightened and gave up the venison and the jackal went off gleefully and ate it. The next day the jackal came again and in the same way took off more meat. The jackal continued taking
their meal from the tiger oubs every day till the cabs became very thin: the father tiger determined to find out why this was, so he hid himself iu the bushes and-watched: he saw the jackal come and take away the meat from the cubs. Then he was very angry and ran after the jackal to kill him and the jackal ran away very fast and the tiger ran aftar as fast as he could: at last the jackal ran into a cleft between two rocks and the tiger ranning after him stack fast between the two rocke and could not come out and so was starved to death. Bat the jackal being smaller ran out on the other side.

Theu the jackal went back to the tiger's den and told the tigress that her husband had been caught by the Raja and thrown into prison for iuterfering with his sipalhi. The tigress and her cabs were very unliappy at this news for they thought that they would starve. Then the jackal comforted them and told them not to be afraid as he would stay with them and proteot them, and help them with their hanting. So the next day they all four went hunting. They arranged that the jackal should wait at a cortain place, while the tigers beat the jungle and drove the game towards him. The jackal had boasted about the amount of game that he could catch and when a herd of deer broke by him he tried to seize one but they easily escaped: then the jackal was ashamed but in order not to be deteched he lay down and pretended that he had been suddenly taken very ill. And when the tigers came up they were sorry for him and forgave him for catching no game. The next day it was arranged that the tigress should be in wait and the jackal aud the two young tigers should beat : the tigress soon killed a fine deer. When the others came up the tigers wanted to eat it at once but the jackal would not let them and said that they must go to a little distance while he did puja to make the food wholesome. The tigers obeyed and under preteuce of doing puja the jackal ate up all the tit bits and then allowed the tigers to come and eat the rest. This happened daily and the jackal lived in comfort all his days.

## (6)-The Wild Buppalors.

There was once a man so poor that he had no land, no plough and no plough cattle : all that he had was a pair of fine goats. This man determined to plough with the goats, so he made a little plongh and yoked the goats to it, and with it he ploughed a piece of barren upland. Having ploughed he had no seed paddy to sow; he went to try and borrow some paddy from the neighbours, but they would lend him nothing. Then he went and begged some paddy chaff, and a neighbour readily gave him some. The man took the chaff and sowed it as if it had been seed. Wouderful to relate from this chaff
grew up the finest crop of paddy that ever was seen. Day by day the man went and watched with joy his paddy grow and ripen. One morning when he went to see it he was horrified to find that in the night wild buffaloes had come and eaten and destroyed the whole crop. Haring now no other resource the man determined to follow the wild buffaloes into the jungle : he readily tracked them and came to a large open space where every night the wild buffaloes used to sleep. As it was very dirty he made a broom of twigs and brushed the place clean. At night. fall he heard the buffaloes coming back and he went and hid in a hollow tree. When the buffaloes saw how clean their sleeping place had been made they were very pleased and wondered who had done it. The next morning the buffaloes all went away into the jungle to graze, and the man came ont of his bollow tree and again swept up the place: the buffaloes on their return saw that the place had again been swept and decided to leave one of their number to watch and see who did this They left a buffalo who was lame to watch : when the day got hot how. ever the lame buffalo went to sleep and the man then came out of his tree and swept up the place and hid himself again without being discovered. So the next day the buffaloes left a blind one behind.

The blind buffalo was of very acute hearing nnd he heard the man come out and sweep the place and return to the tree: so when the other buffaloes came back he told them of the man's hiding place. The buffaloes made him come ont and arranged that they would provide for him if he would stay with them and sweep their sleeping place daily. The next day the buffaloes lay in wait for a band of merchants who were travelling through the forest and saddenly charging down upon them put the merchants to flight : they fled leaving behind them all their goods and provisions: these the buffalues took on their horns and carried to the man and iu this way they from time to time supplied him with all he needed. As he was alone all day they gave him a pair of horms and said that wherever he was if he blew on the horns all the buffaloes in the forest would come to bis assistance. But one day when he was bathing lie put the horns down on the bank of the stream and crows flew away with them and he did not care to tell the buffaloes that he had lost them.

One day he went to bathe in the river and after bathing he sat and combed his hair on the bank. Now his hair was so long that it reached to his knees. One of his long hairs came out and so he took it and splitting open a loa fruit he coiled the hair inside and closed the fruit up and then set it to float down the river. A long way down the stream a Rājàs daughter happened to be bathing and the loa fruit floated past her: she caught hold of it and when she opened it she fonud the
long hair inside. At once she went to her father and vowed that she would marry no one except the man to whom the long hair belonged. As nothing would alter her determination the Rāja sent men up the river to search for the owner of the long hair. One of them found the man at the home of the buffaloes and brought him to the Räja. He was at once married with great grandeur to the princess and promised the succession to the kingdom. So our hero began to live in great luxury. One day as he was standing in the courtyard of the palace some crows flew overhead and dropped the pair of horns that he had lost. He picked them up and boasted that if he blew on them the whole town would be at once destroyed. The bystanders langhed at him, whereupon he got angry and blew on the horns. Then there was a great noise and an enormous herd of wild buffaloes was seen rushing down to destroy the town. However before they could do any damage he ran out and assured them that he was unhurt : at this the buffaloes were pacified : then all the straw and grain in the palace was brought out and given to the bnffaloes to eat : after eating alt they wanted they went back into the jungle; all except one pair which stayed behind in the palace and from this pair are descended all the tame baffnloes which we see to-day.

## (7)-The Gratrfol Con.

Once upon a time there were two brothers who were very poor and lived only by begging and gleaning. One day at harvest time they went ont to glean. On their way they came to a stream with muddy banks and in the mad a cow had stuck fast and was unable to get out. The young brother proposed that they should help it out, but the elder brother ohjected saying that they might be accused of theft : the younger brother persisted and so they pulled the cow out of the mud. The cow followed them home and shortly afterwards produced a calf. In a few jears the cow and her descendants maltiplied in a marvellons manner so that the brothers became rich by selling the milk and ghi. They became so rich that the elder brother was able to marry: he lived at home with his wife and the younger brother lived in the jungle grazing the cattle. The elder brother's son used every day to take out his uncle's dinner to the jungle. This was not really necessary for the cow used to supply her master with all sorts of dainties to eat, so the younger brother, when his nephew brought out the rice used to give the boy some of the sweetmeats with which the cow supplied him, but he charged him not to tell his parents about this nor to take any home. But one day the boy hid some of the sweetmeats in his cloth and took them home and showed them to his mother. His mother had never seen such sweetmeats before and J. III. 10
was convinced that her brother-in-law wished to poison her son. So she took the sweetmeats away and the next day she herself took out the dinner to her brother-in-law and after he had eaten it she said that she would comb his hair and pick out the lice from it; so he put his head on her lap and as she combed his hair in a soothing way he went off to sleep. When he was asleep the woman took out a knife and cut off his head. Then she got up and leaving the head and body lying at the place went home. But the cow had seen what occurred and with her horns she pushed the head along nntil it joined the neck : wherenpon the man immediately came to life agnin and learned what had happened to him. So he drove off all the cattle to a distant part of the jungle and began to live there.

Every day he milked his large herd of cows and got a great quantity of milk; he asked his friend the cow what he was to do with it and she told him to pour it into a hole in the ground at the foot of a pipal tree Every day he poured the milk into the hole and one day as he was doing 80 out of the hole came a large snake and thanked him for his kindness in supplying the milk and asked him what reward he would wish to receive in return. Acting on a hint from the caw the man anid that he would like to have all the milk back again. Wherenpon the snake vomited up all the milk which it had drunk and died on the spot. But the milk mingled with poison fell over the man and imported to his body a glorious and shining appearance, so that he seemed to be made of fire.

After this the man used every day to go and bathe in a river, and each day when he bathed he threw one of his hairs into the water: and his hairs were very long. Lower down the river a princess used to bathe and one day she saw one of the hairs come floating down and vowed that she would marry no one but the owner of the hair. So the father of the princess sent a Brähman up the river to look for the man with the long hair. The Brāhman was a very thin man with his ribs showing through his skin. After some days he found our hero and was amazed at his shining appearance. He told him that a princess wished to marry him : he was invited to stay some days; he did so living on the milk from the herd of cows and in a short time became very fat. The cow told the man to take a basket and creep into the hole from which the snake had come he did so and at the bottom he found a heap of gold and silver : he filled his basket with this and came back and gave it all to the Brāhman and told him to go home and inform his master that be would come in a few days and marry his danghter. When the Rājā saw the gold and silver and how fat the Brāhman had got he was very pleased to think what a son-in-law he was getting.

In a few days the cow said that it was time to start and as he had no other conveyance he set out riding on the cow. When they reached the boundary of the Rājás kingdom the man woke up one morning and found that a great retinue of elephants and horses and pālkis and sipähis had appeared during the night. This was owing to the magic of the cow. So the man mounted an elephant and went in state to the Bājà aud married his daughter with great ceremony. After staying some days he decided to return home and started off with his wife and grand retinue. When they reached the boundary of the kingdom all the elephauts and horses and palkis and sipähis vanished into air, and the princess found that she and her husband had nothing but an old cow to ride npon. At this she was very unhappy but she was ashamed to go back to her father, so she went on with her husbend and helped to tend the cows in the jungle.

One morning they woke up and found that in the night a grand palace had sprung up fitted with wealth of every kind, this was the last gift of the cow which soon afterwards died. Thns the man became a Rajaa and founded a kingdom and he gave a rupee to every one who would come and settle in his kingdom. Many people came and among others his brother and sister-in-law who had fallen into great poverty. When they saw their brother they were afraid and thought that they would be killed, but he forgave them and gave them clothes and land and they all lived happily ever after.

## (8)-The Belbati Princess.

Once upon a time there were seven brothers the youngest of whom bore the name of Lita. The six elder brothers were all married but Lita refused to marry and when questioned he said that he would not marry any one but the Belbati Princess. His sisters-in-law laughed very much at the idea that he would marry a princess and worried him so much that at length he decided to set out in search of the Belbati princess. So one day he started off and after some time came to a jungle in which was sitting a holy muni. Lita went to him and asked if he knew where he would find the Belbati princess. The muni said that he did not know but that a day's journey farther on was another muni who might be able to tell him. So Lita travelled on for a day and found another muni who was in the midst of performing a three month's spell of fasting and meditation. Lita had to wait till the muni returned to thoughts of this world and then made his enquiry. The mwni said that he did not know but that three days' journey farther on was another muni who might be able to help him. So Lita went on and found the third muni who was in the midst of a six months' fast

When this muni came to himself and heard what lita wanted he said that he would be very glad to help him. The Belbati princess was at the time imprisoned in the biggest bel fruit growing on a bel tree which was guarded by Räkshasas. If he went and plucked this fruit he would secure the princess, but if he took any but the biggest fruit he would be rained. Lita promised to bear this in mind and then the muni changed bim into a biti bird and told him the direction in which to fly. Lita flew off and soon came to the tree, which was covered with fruit; he was very frightened when he saw the Rakshasas there, so in a great hurry he went and bit off the first fruit that he came to ; but this was not the biggest on the tree and the Rākshasas immediately fell npon him and ate him np. The muni, when Lita did not come back, knew that something must have happened to him so he sent 2 crow to see what was the mattcr. The crow came back and said that one bel fruit had been picked but that he could not see Lita. Then the mwni sent the crow to bring him the droppings of the Rākshases. The crow did so and from the droppings the muni restored Lita to life. The manai reproved Lita for his failure and told him that if he wished to make a second attempt he must remember his behest to pick only the biggest bel fruit. Lita promised and the muni turned him into a parroquet. In this form Lita again flew to the bel tree and picked the biggest fruit on the tree. When the Ragkshasas saw the parrot making off with the fruit they pursued him in fury; but the muni turned the parrot iuto a fly so small that the Rākshasas could not see it, so they had to give up the chase. When they had departed Lita recovered his own form and went to the muni with the bel fruit and asked what more was to be done in order to find the princess. The muni said that the princess was inside the fruit; that Lita was to take it to a certain well and very gently break it open against the edge of the well. Lita hurried off to the well and in his anxiety to see the princess he knocked the fruit with all his force and split it suddenly in two. The result of this was that the princess burst out of the fruit in such a blase of light that Lita fell down dead. When the princess saw that her brightness had killed her lover she was very distressed and taking his body on her lap she wept over him. While she was doing so a girl of the Kāmār caste came by and asked what was the matter. The princess said: "My lover is dead, if you will draw water from the well I will revive him by giving him to drink," but the Kāmār girl at once formed a wicked plan. She said that she could not reach the water in the well. Then said the princess: "Do you hold this dead body while I draw the water." "No," said the Kāmār girl, "I see you mean to ran away leaving me with the dead body and I shall get into trouble." Then
said the princess: "If you do not believe me take off my fine clothes and keep them as a pledge." Then the princess let the Kamär girl take off all her jewellery and her beantiful dress and went to draw water from the well. But the Kämar girl followed her and as the princess leant over the edge she pushed her in, so that she was drowned. Then the Kamar girl drew water from the well and went back to Lita and poured some into his mouth, and directly the water tonched his lips he came back to life, and as the Kämar girl had put on the dress and jewellery of the Belbati princess he thought that she was the bride for whom he had sought. So he took her home to his brothers' house and married her.

After a time lita and his brothers went to hunt in the jungle; it was very hot and Lita grew very thirsty; he found himself near the well at which he had broken the bel fruit and went to it for water. Looking down he saw floating on the water a beantiful flower; he was so pleased with it that he picked it and took it home to his Kāmar wife; but when she saw it she was very displeased and cut it up into pieces and threw the pieces out of the house. Lita was sorry and noticed shortly afterwards that at the place where the pieces of the flower had been thrown a small bel tree was spronting. He had this planted in his garden and carefully watered. It grew well and after a time it produced ripe fruit. One day Lita ordered his horse and as it was being brought it broke loose and run away into the garden : as it ran under the bel tree one of the bel fruits fell on to the saddle and stayed there. When the syce canght the horse he saw this and took the frait home with him. When he went to cut open the fruit he found inside it a beantiful woman : he kept the woman in his house. At this time the Kāmăr woman fell ill and was like to die. Lita was very distressed at the thought of losing his Belbati princess. At last the Kāmārin said that she was being bewitched by the girl who was living in the syce's house and that one or other of them must die. Lita at once ordered the girl to be taken into the jungle and killed. Four Ghäsis took her away and put her to death. Her last request to them was that they should cut off her hands and feet and put them at the four sides of ber grave. This they did. After the death of the girl the Kämar wife recovered her health.

After a time lita again went hunting and at nightfall came to the place where the girl had been put to death. There he found standing a fine paiace. He went in but the only living oreatures he saw were two birds who seemed to live there; he lay down on a bed and went to sleep. While he slept the birds sat by him and began talking. One told the other the story of the search for the Belbati princess and how
the Kämar girl had thrown her into the well and taken her place. When Lita beard this he awoke and was very unhappy. The birds told him that once a year the Belbati princess visited the palace in which he was ; her next visit would be in six months. So Lita stayed there and at the end of the six months he hid behind the door to await the princess. She came and as she passed through the door he caught her by the hand, but she wrenched herself away and fled. Lita was very depressed but the birds told him to be more careful the next time. So he waited a year and when the princess was expected he hid himself : the princess came and seeing no one entered the palace and went to sleep. While she slept Lita secured her. They were married and lived happily ever after, and the wicked Kāmär girl was put to death.

## (9) -The Bread Tree.

There once was a boy who lived with his mother aud was engaged all day in tending cattle. Erery morning when he started his mother gave him two pieces of bread called "hanger bread" and "staffing bread," -one to satisfy hunger with and the other to over-eat oneself on. One day the boy could not eat all his bread and he left the piece that re mained over on a rock. When he went back the next day he was surprised to see that from the piece of bread a tree had grown which bore loaves of bread instead of fruit. After that the boy no longer took bread from his mother, but lived on the fruit of his tree.

One day he had climbed his tree to pick a loaf when an old woman came by with a bag over her shoulder and saying that she, was very poor begged for a piece of bread. The old woman was really a Rākshasi, The boy was kindhearted and told her that he would throw her down a loaf, but the old woman objected that it would get dirty if it fell on the ground. Then he told her to hold out her cloth and he would throw it into that: but she said that she could not see well enough to catch the loaf : he must come down and give it to her : so the boy came down to give her the loaf and when the Rākshasi had him on the ground. she seized him and put him in her bag and went off with him.

After going some way she came to a pool of water and as she was rather thirsty from carrying such a burden, she put down her bag and went to drink. Opportanely some travellers came by and hearing the boy's shouts let him out of the bag. The boy filled the bag with stones and tied it up as before and made the best of his way home. The old Häkshasi went off with the heavy bag and when she got to her abode told her daughter with whom she lived that she had captured a fine dinner but when the daughter opened the bag she found in it nothing but stones : at this she was very angry and abused her mother:
then the old woman said that the boy had escaped on the road : so the next day she went back to the place where the boy was tending cattle and by the same trick she caught him and pat him in her bag and this time went straight home. She made him over to her daughter and went out to collect fire wood with which to cook him. The boy being left alone with the daughter began to ask how he was to be killed ; she said that his head was to be pounded in a Dhenki. He pretended not to understand and asked how that was to be done. The girl not understanding such stapidity pat her head ander the striker of the Dhenki to show him what would happen. Then the boy at once pounded her head in the Dhenki and lilled her: he then put on her clothes and cat her body np in pieces ready for cooking. When the old woman came back with the fire wood she was pleased to find that her daughter, as she thought, had got every thing ready; and the meal was soon cooked and eaten. After the old woman had thus made a hearty meal off the remains of her own daughter she felt sleepy and took a nap. While she slept the boy struck her on the head with a large stone and Eilled her; thus he saved his life and took all the property of the old Rākshasi and lived happily ever after.
(10)-The origin of Sabai grass (Isohemom angustifolió).

Once upon a time there were six brothers who lived with their sister. The brothers used to spend their days in the jangle hanting while the sister minded the honse and cooked the dinner against their return.

One day while the brothers were hanting the girl went to cat herbs to cook with the dinner: as she was doing so she chanoed to cut her finger and some drops of blood fell on the herbs, which were put in the pot. When the brothers came home to dinner they noticed how very sweet the food was and asked the reason. The girl said that she was afraid that it must be because some drops of her blood had fallen on it. Then the brothers took counsel together and agreed that if a few drops of her blood were so sweet, she must be very nice to eat. So they agreed to murder her and eat her. But the youngest brother named Lita, though he did not dare to oppose his elders, was sorry for the decision. The next day when the brothers came from the jangle they brought with them a beantiful flower of seven coloars and gave it to their sister. She was delighted with it: she had never seen so beantiful a flower before and wanted to know where it grew and whether there were others like it. They said that if she liked to come with them they.would take her to the tree on which the flowers grew and she could pick as many as she liked. So the next morning
she gladly went with them and they took her to the tree with the seven-coloured flowers. She climbed the tree to pick the flowers and when she was up in the tree they shot arrows at her to kill her ; but though they shot many arrows they could not kill her. Then they compelled Lita to shoot and he with his first arrow killed his sister.

Then they cut up the body of the girl ready for cooking and sent Lita to a well to fetch water in which to cook the flesh. Lita went to the well and overcome with sorrow sat down and wept. As he wept a large frog came to the surface of the water and asked him what was the matter; he said that he had been made to kill his sister and that now they were going to cook her fiesh. The frog told him to be comforted and gave him a large rohu fish. Lita took this back and when his brothers told him to cook the food, he hid the pieces of his sister's body and cooked the rohu fish. The brothers ate this thinking that it was their sister. Then they went on into the jungle hunting. After going a short way Lita said that he had forgotten to recover his arrow and that he must go back and fetch it. He went back to the place, and taking his sister's body buried it and bnilding a hat near, spent the days in weeping over the grave. After he had spent some time thas the girl appeared alive out of the ground. Lita was overjoyed and be and his sister remained happily in the jungle.

One day a Rāja hunting in the jungle passed that way and seeing the girl at once fell in love with her and took her away and married her. Lita he also took with him and made him ruler of half the kingdom.

In honour of his marriage the Rājā resolved to construct an enormons tank: and people came from far and near to work at it. Among others came Lita's five elder brothers, who had fallen into great poverty, owing to their wickedness. When their sister saw them she forgave them and sending for them bestowed on them food and clothing. But they were so ashamed and repentent that they could only kneel on the ground and beat the earth with their hands. As they continued to do so the earth opened and swallowed them ap: only their hair stuck ont of the ground and that became sabai grass, and'this was the origin of all the sabai grass which exists.

## (11)-The Faithless Sister.

Once upon a time there was a man who had a son and daughter: he used to cultivate his land and his son and daughter used to take his dinner to him. One day the man went to plough and while plonghing he stack the spear which he had brought with him into the
ground. As the man ploughed a tiger came and waited an opportunity. to spring upon the man: but from whichever side the tiger approached the spear which was stuck in the ground bent its point towards the tiger and so protected its master. Just then the boy and girl came along with their father's dinner. The baffled tiger was hiding in soms bushes by the field. As the children went along they saw a paddy. bird on the ground. The boy of course had his bow and bird arrows with, him and he shot an arrow at the paddy bird : he missed the bird, but it happened that the tiger was just-in the line of fire; the arrow pierced the eye of the tiger and killed it instantaneously. When the girl saw the tiger lying dead she said that it was clear that their father had enticed them there in order that the tiger might kill them when they brought him his dinner : clearly the only way for them to save their lives was to leave their home at once. The boy agreed: drawing his arrow from the tiger's head and taking the tiger's eyes with him, he went away with his sister as fast as they could rav. After going some little distance they met in the way two tigers. The boy threw at the tiger the eyes of the first tiger which be had brought with him. The tigers at once fell down dead, but from the body of one proceeded, a hare, and from the body of the other, two dogs which peaceably followed the boy and his sister. Having escaped to a distance they lived in the jungle happily for some time with their three auimal friends. One day the hare said that he would like to have a. spear, so the boy went with him to a blacksmith and got a spear made. As they were returning they met in the way a giant Rakshasa who wished to devour them, but the hare holding the spear kept jumping in and out of the giant's mouth with such speed that the Rakshasa was dumbfounded and surrendered at discretion, promising. to be a faithful servant to them henceforth. With the help of the Rakshasa they had great suocess in hanting. The boy with the hare and the two dogs used to beat the jungle and drive the game towards the Rakshasa who caught it in his month. One day they thas canght a monkey, whose life they spared and who joined their band. The monkey took a large drum and caught in it a nest of wild bees, which he preserved.

One day while the others were away a Rajã who was hunting in the jungle found the girl sitting alone and at once fell in love with her and wanted to marry her. The girl said that she was willing but that she was sure that her brother would never consent. The only thing was to kill her brother and the Rāja could never do that as the faithful animals would protect him. At last the girl consented to try and compass her brother's death. To this ond she became very

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melancholy and ceemed to pine away : her brother asked what was the matter and she said that she would never recover unless he could fetch her a certain flower which grew in the midst of a certain lake. Now this lake swarmed with gigantic fish and poisonous suakes. But the brother, never daunted, went to the lake and began to swim out to the centre where the flower grew. Before he got half way there one of the gigantic fish swallowed him up. The Rākshass however saw this and set to work to drink the lake up: he soon drank the lake dry and not only caught the big fish but also was able to gather the flower that had grown in the lake. They then cut open the fish and took the boy unharmed from its belly. The Rikshasa then vomited up the water he had swallowed and filled up the lake again. Meanwhile the Raja thinking that the boy had died, carried off his sister. But the boy setting out with the hare and the dogs and the Raksshass aud the monkey proceeded to attack the Bajjà's capital and recover his sister. The monkey opened his drum and the bees issued forth and attacked the Rāja's army so that it fled. The Rāje had to capitulale and give the boy half his kingdom and his own daughter in marriage. then peace was declared and the animals all disappeared into the jungle and our hero lived happily ever after.

## (12)-The Crual Sisters-in-law.

Once upun a time there lived six brothers who had one sister. The brothers were all married and their wives hated their sister-in law. It happened that the brothers all weut away to trade in a far country and her sisters-in-law took the opportanity to illtreat the girl. They said "If you do not obey us and do what we tell you we will kill you." The girl said that she would obey their behests to the best of her ability. They said "Then go to the well and bring this earthen pot back full of water." The khalsi had a large hole in the bottom so that as fast as it was filled the watar ran out. The girl took the pot to the well and sitting down began to weep over her fate. As she wept a large frog rose out of the water and asked her what was the matter. She said' "My last hour has come:If I caunot fill this pot with water I shall be killed and it has a hole in the bottom." The frog said, "Be comforted, I will cure that: I will sit on the hole and stop it up with my body and you will be able to fill it." This it did and the girl took the water back to the house. The sisters-in-law were. very angry but could say nothing so they set her another task. They told her to go the jungle and bring home a full bundle of sticks: but she was not to take any rope with which to tie them. The girl collected a large quantity of sticks aud
then sat down and cried because she was nnable to carry them home: as she cried a large snake came up and asked what was the matter. The girl told him, whereupon the snake said that he would curl himself round the sticks and serve as a rope. This he did and the girl was able to carry the sticks home on her head. Defeated in this attempt the sisters-in-law the next day told the girl to go to a field of pulse which had been sown the day before and bring back all the grain by the evening. The girl went to the field and picked up a few grains but it had been sown broadcast and the girl soon saw that the task was hopeless : she sat down and cried and as she cried a flock of pigeons flew to her and asked her what was the matter : she said that she could not pick up all the grain in the field. They said that that was easily managed, and the pigeons spreading over the field soon picked up all the grain and put it into the girl's basket, so that by evening she returned with the basket fall. The sisters-in-law were more than ever enraged. They gave her a pot and told her that she must go to the jungle and bring it back full of bear's milk. The girl went to the jungle and being very frightened sat down and began to cry : a large she bear came by and asked what was the matter. The girl explained and the she bear, sorry for her distress willingly allowed herself to be milked without doing the girl any harm. The sisters-inlaw then reeolved to make a more direct attempt on the girl's life. They took her into the jungle and told her to climb a certain tree and pick them the fruit. The tree had a tall smooth trunk and the girl had to climb the tree by driving pegs into the trank. When she reached the branches the sisters-in-law pulled the pegs out of the tree and went home leaving the girl to starve. Night came on and the girl stayed in the tree: it so happened that that day the six brothers were returning home and being benighted stopped to sleep under that very tree. The girl thought that they were dacoits and stayed still. She could not help crying in her despair and a warm tear fell on the face of one the brothers sleeping below and woke him up. He looked up and recognized his sister. The brothers soon rescued her and when they heard of the cruelty of their wives they went home and put them all to death.
(13)-The Falbe Rīnī.

Once upon a time a Rajā who had just married was returning with his bride to his kingdom. It was hot weather and a long journey and as they passed through a jangle the Rājā and all his men went down to a stream to drink leaving the brido sitting in her palki. As the bride thus sat all alone she was frightened at seeing a she-bear come up. The bear asked the bride who she was and wher she was going.

When she henrd, she thought that she would like to share so agreeable a fate, so by threste she made the Rani get out of her pallai and give her all her fine olothes and jewellery and go away into the jungle. The bear dressing berself in the Rani's olothes, got into the palli, and when the men came back they took up the palki and went on their way without noticing any change, nor did the Rajā detect the frand: he took the bear to his palace and installed her as his wife. Meanwhile the real bride had picked up the walking stick of the Rajes and a oloth which he had left on the road when he went to the stream, and ran into the jungle. She made her way to the house of a Ghasi woman who lived by the Raja's palace with her daughters. The daughters carned a living by selling flowers and one day one danghter, as she sold the Rajja a garland, told him that his real bride was living in their honse. The Raja was very distressed and at once went to see his bride and was satisfied of her identity when she produced his stick and cloth. The real Rāni refused to go to his palace antil the she bear had been put to death. Thereupon the Rajja gave instructions to hie followers and sent word to the palace that he wes dead. The officers and servants at the palace then prepared a big pit and lit a large fire in it: they then sent for the she bear and told her that she must perform the funeral ceremonies of her husband. They made her take off her fine clothes and told her to kneel down by the barning pit and make salasm to it. As she was doing so they pushed her into the pit and she was burned to death. Then the Raja brought home his real bride in triumph. But from that time bears attack men when they get the chance.
(14)-Thie Jaceal and the Kite.

Once upon a time a jackal and a kite agreed to join forces and get their food together. In pursuance of their plan they sent word to a prosperous village that a Rajā with his army was marching that way and intended the next day to loot the village. The next morning the jackal took an empty kalsi and marched towards the village drumming on the kalot with all his might and the kite flew along overhead screaming as loud as he could. The villagers thought that tho Rāja's army was approaching and fled into the jungle. The jactal and the kite began to feast on all the good things that had been left in the houses. There was however one old woman who was too infirm to run away with the other inhabitants: and had hid herself inside her house. When she saw that no army came but only a jackal and a kite she crawled away into the jungle and told her friends. They came back, and surrounding the village, canght the jackal : they begen
to beat the jackal with sticks to kill it: the jackal nttered no sonnd and pretended that it did not mind being beaton: after a time it began to jeer at its captors and told them that they could never kill it by beating. They asked how it could be killed and it said by burning. So they tied a bunch of old cloths on to its tail and poured oil over them and set them on fire: the jackal ran off with the barning bandle at the end of its tail and jumping on to the nearest house set fire to the thatch : the fire spread and the whole village was burnt down The jackal then ran to a tank and jumping into the waber extinguished its blaxing tail. But if you look you will see that all jackals have a. burnt tip to their tail to this day.

## (15)-The Sons of the Raban Riji.

There was a Rājā who used to bathe daily at a certain tank. In the tank was a great fish: as the R̄̄jă washed his month this fish used daily to swallow the rinsings of his mouth. In conseqnence of this the fish after a time gave birth to two human children. As the two boys grew up they used to go into the village near the tank and play with the other children. One day however, 2 man beat them and drove them away from the other ohildren jeering at them becanse they had no father. Much disturbed at this they went to the fish and asked whether it was true that they had no fatleer. The fish told them that their father was the Räban Rajjā. The two boys resolved to go in search of the Rāban Rajā: they set out and after a time met a man and asked him if he knew the Rāban Rajjā. The man asked why they wished to know. They said that they were his sons. Then the man at once killed them because the Räban Raja was an enemy of his country. From the place where the bodies of the dead boys lay, two large bamboos grew np. When the bamboos had grown very big, a Jogi came by that way and cut them down, making from them two flutes. These flates produced such beantiful music that every one was charmed and the fame of the Jogi spread far and wide: so when in his wanderings the Jogi reached the kingdom of the Rāban Rāja the Rāja sent for him and the Jogi came to the palace with his two bamboo flutes. When the flutes were brought into the presence of the Raja they burat open and from them appeared the two boys. When the Rajaz heard their history he recognized them as his sons, and sent the Jogi away with large rewards.

> (16) 〇The Pottra's Son.

Once upon a time there was a Kumhār whose wife was about to have a child. As they were very poor the pair resolved that if the
child should prove to be a boy they would abnndon it, but if it were a girl they would bring it up. When the child was born it was found to be a son so the Kumhăr took it into the jangle and left it there. There it was found by a tiger and tigress whose cubs had just died and who determined to bring up the man-child as their own. They accordingly fed it and looked after it; the boy grew up strong and healthy. When he got big the tiger went to a blacksmith and had made for him a bow and arrows of iron with which he used to hunt. When the boy became a young man the tiger decided that his marriage must be arranged for. So he went to the capital of a neighbouring Raja, and when the Rāja's daughter came to a tank to bathe the tiger seized her and carried her off into the jungle, where she was married to the Kumhär's son. The princess was very pleased with her new hasband bat found the life with the tigers in the jungle very irksome. She constantly begged her husband to run away, until at last he agreed. One day when the tigers were at a distance they started off and soon arrived at the palace of the princess' father. Leaving her husband by the palace tank, the princess went ahead to see how matters stood and to prepare a welcome for her husband. He being left alone decided to bathe in the tank. Now a dhoba was there washing the palace clothes, and seeing a stranger he concluded that it was a thief come to steal the clothes. He accordingly killed him and then in fear threw the body into the water. When the princess returned she was distressed to find no sign of her husband but his iron bow and arrows. Search was made everywhere and the tank was netted but no trace could be discovered of her missing spouse.

Shortly afterwards a Ghăsi girl came to catch chingris in the tank, and while doing so suddenly laid hold of a large fish. In great delight she took it home. When she came to cut it up she found inside the belly of the fish a living child. Pleased with its appearance she decided to adopt it. She put it in a basket and tying the basket under her cloth pretended to be pregnant, and shortly afterwards announced that she had given birth to a child. The boy grew with marvellous rapidity.

Meanwhile the father of the widowed princess insisted that she should marry again. But she was faithful to the memory of her husband and declared that she would only marry the man who could draw the iron bow. Many suitors came but they all failed to draw the bow. At length the reputed son of the Ghēsi woman came and pulling the bow with ease annonnced himself as the true husband of the princess with whom he lived happily ever after.
(17)-The Wonderful Cowrerd.

Once upon a time there was a Rājā who had seven daughters. The seven princesses used to bathe daily in a tank and when they bethed they used to put the scrapings from their bodies in a hole in the ground. From this hole there grew a tree, and the eldest prinoess announced that she would marry the man who could tell her what had cansed the tree to grow; many suitors came and made gaesses but none divined the truth ; her father was anxious that she should be married, aud insisted on every one in the kingdom being questioned. At last a miserable poverty-stricken and sickly cowherd was asked; he had always graved his cattle on the banks of the tank and had often seen the princesses bathing so he knew from what the tree had spring. The princess being bound by her oath had to marry the miserable cowherd and go and live with him in lis hut.

All day long the cowherd nsed to be groaning in sickness and misery; but at night he used to come out of his skin and appear as a beautiful and shining man ; in this form he used to go and play and dance in the moonlight in the court yard of the Raja's palace. One night the princess's maid-servant saw her master return and oreep into lis ugly skin; she told her mistress who resolved to keep watch the next night; when she saw her hasband assume his shining form and go ont of the house leaving his ugly skin lying on the ground, she took the skin and burnt it in the fire. Immediately her husband came rushing back declaring that he was suffering the agonies of burning; but the skin was burnt and the former cowherd retained his glorions and shining appearance; and on the application of oil the pain of the burning ceased. The princess then began to live with pleasure in the company of so glorious a husband, who however only went out of the house at night as his body was too bright for ordinary ejes to look apon.

It began however to be whispered about among the neighbours that a shining being was to be seen at the princess's house and the rumour eveutually reached the ears of the Rājā. The Rājà sent a messenger to see who the being was, but when the messenger saw the shining man he was blinded and driven out of his senses and returned to the Rāja in a state of madness. Two or three other messengers successively met the same fate. At length the Rajja resolved to go himself; when he saw the shining form of his son-in-law be fell down in a faint; the princess's husband ran and lifted up the Rāja in his arms and revived him. After this the former cowherd became only bearably bright, and being recognized as the heir to the kingdom went to live with his wife in the Rājä's prace.
(18)-The Strong Peince.

There was once a king who, though he had two wives, had no son. He was very anxious to have a son and heir and went away into the midst of the hills and jungles and there began a course of worship and sacrifices. His prayers were heard and while he was away it was found that both his wives were pregnant. In due time the senior Räni gave birth to a son and sent a Brabhman to the king with the welcome news. The Braliman was a very holy man and he had to pray and bathe so often that he made very slow progress on his journey. A day or two later the younger Rāni also gave birth to a son and she sent a low casta Ghasi to give the newa to the Rājā. The Ghasi travelled straight ahead and reached the Raja some time before the holy Brāhman. On hearing the news that the younger Rani had given birth to a son the Raja had at once declared that this boy should be his heir. He was therefore much put out when the Brahman arrived with the news that the senior Resni had given birth to a son first.

The Rajā returned home and entering the palace saw the senior Rani sleeping with her babe beside her. The boy had sore eyes and the Rajā, declaring that the child bore no resemblance to himself said that it was not his son and that the Rāni had been unfaithful to him.

The Raxi indiguantly denied the accusation and said that if the two brothers fought her son would prove his parentage. Accordingly the two boys were set to wrestle with each other. The struggle was an even one. As they swayed to and fro it happened that the elder boy caught hold of the Raija and pulled him to the ground. This incensed the Rājā more than ever and he ordered the senior Rāni to leave the kingdom with her child. . On the road by which they had to pass the Rājā stationed a mast elephant in order that they might be killed, but when in due course the elephant attacked them the boy caught hold of it and threw it to a distance of four kos. After this feat the prince and his mother journeyed to another kingdom. There they took up their quarters near the ground where the Bajja's palwdins wrestled. The prince went to wrestle with them and easily overcame the most renowned palwans. In many ways he showed his strength. One day he went to a mahajjan's shop and the mahãjan instead of serving him promptly kept him waiting. In indignation the boy took up the entire building and threw it to a distance; hearing of these feats the Raje of the country sent for him and took him into his service; but here also he caused trouble. He insisted on being treated with deference. Going up to the highest officials he would tell them not to twist their moustaches at him, and knock them down. On the throne in the pelace when the Rajjà was absent a pair of the Bajje's shoes was
placed and every one who passed by had to salaam to these. This our hero flatly refused to do. In fact he became such a nuisance that he was promised that he would be given his pay regularly if he would only stay away from the palace. After this he spent his days in idleness and by night he used to go to the shore and disport himself in the sea.

One night the godess Käli came to the Rajjà's palace and knocked at the gate : but no one would come to open it. Just then the prince came back from bathing in the sea. Seeing him, Kāli Mã, said that she was so hangry that she must eat him, though she had intended to eat the people in the palace. She, however, promised him that though eateu he should be born again. The boy agreed to form a meal for the godess on these terms and was accordingly eaten. Afterwards gaining admission to the palace $\mathrm{K} \bar{a} l i \bar{M} \mathrm{M}$ ate up everyone in it except he Rājā's danghter. Then our hero was born again and marrying the Rajà's daughter suceeeded to the kingdom, and lived happily ever after.
(19)-The Prince who brcame King of the Jackals.

Once apon a time there lived a Rāja whose son formed a great friendship with a barber. For some reason the Rājà quarrelled with his son and ordered him to leave the kingdom. Accordingly the prince departed to a far country in company with his friend, the barber. In order to earn a living the barber opened a school and the prince took service with a mahäjan. They were in such straits that the prince had to submit to very hard terms, it was arranged that his wages were to be one leaf-plate full of rice a day: and that if he threw up the service he was to lose a piece of his skin a span long. After a short time the prince who had been brought up in laxury found the work so hard and the food so scanty that he resolved to leave the mahajan: but before he went he had to submit to a piece of skin being cut off, in terms of the agreement. The prince then went to the barber and told him how ill he had fared. The barber vowed that he should be avenged. So he went and offered himself as a servant to the mabājan : he was engaged and it was agreed that whichever party first proposed to terminate the contract should lose a piece of skin a span long. The barber worked so badly and ate so much that one day the mahājan in a fit of rage ordered him to leave the place and in consequence forfeited a piece of his skin.

Having repaid the mahājan in his own coin the prince and the barber left those parts and journeyed to the land of the king of the jackals. They found the king of the jackals asleep in front of him J. III. 12
cave. While he still slept the barber shaved all the hair off his tail. Then the two friends hid in the cave, drawing a cart in front of the entrance. When the jackal awoke and found that he had been shaved he concluded that there were bongas (spirits) about, and ran away in terror. After going a short distance he met a bear who asked where he was going in such a hurry. The king of the jackals said that some bongas had taken possession of his cave and shaved off his hair. The bear agreed to go back with the jackal and see if he could exorcise the spirits. Going to the cave the bear climbed on to the cart to offer a sacrifice. As he sat there the barber caught hold of his tail and held on to it while the prince began to stab the bear with a knife. The bear howled and groaned but could not get away. The king of the jackals who was looking on was delighted, for he concluded that the bongas had taken possession of the bear who would learn who they were and how they were to be exorcised. At last the bear broke free and ran away : the jackal ran after him and asked him what the bongas had told him : but the bear only said 'ugh' 'ugh' and ran into the jungle. Then the jackal met a tiger and telling his story persuaded the tiger also to try his hand at exorcising the spirits. The tiger was treated in the same way as the bear had been and ran off without giving the jackal any information.

I'hen the king of the jackals resolved to try himself and mounted on to the cart. But the barber stabbed him through the bamboos and killed him. Then the prince succeeded to the kingdom of tho jackals, and not only so, but replaced the piece of skin which he had forfeited to the mahajan by a piece of the skin of the dead jackal.

## (20)—The Mongoose Boy.

Once upon a time there was a Rāja who had seven wives bat $n 0$ children. In hope of issue he retired to the jungle and began a cours of prayers and sacrifices. While he was so engaged a Brähman came to him and told him to take a stick and with it knock down seven mangoes from a neighbouring tree, and catch them before they reached the ground : he promised that if the Rānis ate these mangoes they would bear children. The Rājā did as he was directed and took the mangoes home and gave one to each of his wives.

The youngest Rāni happened at the time to be sweeping out a. room and so she put her mango in a niche in the wall. Just then a neighbour sent a mongoose, who was her servant, to ask for a light. While the REni was fetching a firebrand from the hearth the mongoose saw the mango and climbing up nibbled part of it without being seen. After this the Rani ate the mango. In due time the seven Rinis
each gave birth to a son : but the son of the youngest Ranni was the most beantiful with a face like a mongoose. The eldest Rāni was jealous of the beauty of the youngest Räni's son so one day she sent the youngest Rani to fetch some water: and during her absence took up the mongoose boy and putting a stone and a broom in its place took the child away and buried it in the pit from which the potters dig their earth. When the Rājā heard that his youngest wife had given birth to nothing but a stone and a broom he was very angry and turned her out of the palace.

Meanwhile a potter had found the mongoose boy still alive and had taken him to his home. There the child grew ap and became a strong boy. One day he asked the potter to make him an earthenware horse. On this horse he used to ride about, for directly he mounted it, it was endowed with life. One day the mongoose boy took his earthenware horse to water it at a tank near the palace and there his six brothers saw it and insisted that they also should have earthenware horses to ride. Horses were accordingly made for them but when they mounted, the horses would not budge an inch. Enraged at this the princes complained to their mothers. The Rānis at once suspected the identity of the potter's boy and told their sons to kill him.

So one day when the young princes met him at the tank they killed the mongoose boy and buried his body. At the place where the body was buried there grew up a bamboo of extraordinary size and a bush with sweet and beantiful flowers: many people tried to cat down the big bamboo and to pluck the beantiful flowers but every arm that was raised to do so was restrained by some unseen power. Eventually the news of this portent reached the ears of the Rājā who went to see what was happening. When the Raja trid to pluck a flower he succeeded at the first attempt. The Rajja then cut down the bamboo and out of it stepped the mongoose boy who told of the illtreatment which he had received at the hands of the six Ränis and their sons. The Rājā wished him to come to the palace but he insisted that his mother should first be sent for. This was at once done.

Then the Rāja had a wide and deep well dug and announced that a Paja was to be performed at the opening of the well. To the ceremony came the six Rānis and their sons. As they all knelt at the edge of the well doing puja the Rājā had them pushed into it, so that they were all drowned. Thus the wicked were panished and the mongoose boy eventually succeeded to his father's kingdom.
(21)-The Prince and the Tiaress.

Once upon a time there was a Rājà who had seven sons. One day
a tigress came to the palace and asked the Rijaj to allow one of his sons to be her servant and look after her cattle. The Rājā consented and ordered his eldest son to go with the tigress. The young man took his axe and bow and arrows and went with the tigress to her cave. When he got there he asked where were the cattle which he was to tend. The tigress pointed out to him all the bears which were roaming in the jungle and said that they were her cattle. By the cave stood a large rock and the tigress told the prince to take his axe and cut it in two The prince tried, but the rock only turned the edge of his axe and he quite failed to cut it. The tigress being thus satisfied that the prince had no superhuman powers sprang upon him and killed him and devoured his body. Then she went back to the Raja and said that she had too much work to be done, that she wished him to give her a second son. The Rāja agreed, but this prince met the same fate as the first; and in auccession, all the sons of the Rājā, except the youngest, went with the tigress and were devoured by her. At last the youngest son went with the tigress: when bidden to cut the rock in two, he easily accomplished the task. Then the tigress knew that she had met her master and ran into her cave. Looking into the cave, the prince saw the bones of his dead brothers. Gathering the bones together, he prayed for fire to burn them, and fire fell from above and barned the bones.

Then he climbed a tree in order to be out of the reach of the tigress, and the tigress came and sat at the foot of the tree so that he could not descend. Then he prayed again and wind arose and wafted him away and set him down by a house where lived an old man and his wife. The tigress followed in parsuit, but the aged conple hid the prince and assured the tigress that he had not been seen; so the tigress returned disappointed. The prince stayed with the old people and worked on their land. One day as he was ploughing, the tigress came and killed one of the bullocks that were drawing the plough. The prince at once ran to the house to fetch his bow and arrow that he might kill the tigress. When he returned, he found that seve ral tigers were sucking the blood of the bullock and with them a wild boar. He shot an arrow which wounded the boar. The boar maddened by the pain turned on the tigers and killed them all; including the tigress which had killed the Rājā's sons.

The prince then being no longer in danger from the tigress returned to his father's palace.

## (22)-The Cunning Pottrr.

Once npon a time there lived at the gate of a Rājā's palace a

Potter who had a pretty wife. The Rājā fell in love with the Potter's wife and schemed to get rid of the hasband. He could not bring himself to commit a cold blooded marder, but he tried to accomplish his object indirectly by setting the Potter impossible tasks which he was to accomplish on pain of death. The Rajà accordingly sent fur the Potter and ordered him to bring him the heads of twenty-forr jackals.

The Potter went away to the jungle and began to dig a large hole in the side of a hill. A jackal presently came by and stopped to ask why he was digging the hole. The Potter said that it was going to rain fire from heaven, and that every one who had not such a shelter would be burnt. At this the jackal became very frightened; the Potter thereupon said that he was so sorry for them that he would allow the jackal and his friends to share the hole which he was digging. The jackal gratefully ran away and returned with a number of other jackals. They all went into the hole and the Potter closed the entrance. After a time the Potter looked out and said that the fire was over; he then stationed limself at the mouth of the hole and as the jackals came out he cut off their heads with a knife ; in this away he beheaded twenty-three jackals ; but the last jackal saw what was happening and dodged the knife and escaped. The Potter took the twenty-three heads to the Rajjā ; but the Rāja pretended to be angry and said that if the Potter did not at once procare a twenty-fourth head, he would be beheaded himself. The Potter took a pot of gur and went to a pool of water which lay in the direction in which the twenty-foarth jackal had fled. Smearing his body all over with gur, he lay down by the water and pretended to be doad. Presently the jackal which had escaped passed that way with a friend. Seeing the body the second jackal proposed at once to go and eat it ; but the first jackal warned the other that there was probably some plot and related how twenty-three of his friends had lost their lives at the hands of this very Potter. But the second jackal would not listen to advice and going to the sapposed corpse smelt it and then began to lick it; finding the taste of the gur very pleasant it set to work to lick the body all over beginning at the feet; it licked the feet and then the legs, when it reached his waist it was within reach of his hand and the Potter stabbed it with his kuife and took the head to the Rajā.

Foiled in this design, the Rājā next ordered the Potter to bring him a jar of tiger's milk. Taking some loaves of bread, the Potter went into the jungle and soon found a cave in which was a pair of tiger cabs whose parents were away linnting. The Potter told the cabs that he was their uncle and gave them the bread to ent; they liked the taste of the bread very mach. Then the Potter hid himself
in a tree near the cave. Presently the tigress came back but her cubs refused to suck her milk as usual, the tigrees asked the reason of this and the cubs said that their uncle had come and fed them with something nicer than milk and they were no longer hangry. They then pointed out the Potter in the tree and the tigress wanted to know what he had given her cubs to eat. He told her that it was bread : the tigress said that she would like to try some herself, wherenpon the potter replied that he would give her some if she would first give him some of her milk. The tigress,agreed and also consented that her legs should be tied while she was being milked in order that she might not be able to harm the Potter. The tigress having been milked, the Potter gave her a loaf of bread and then ran away as fast as he could.

Finding that he would not be able to get rid of the Potter by any such devices, the Raja then persuaded the faithless wife to put the Potter to death. She accordingly set up an idol in her house and prayed daily to this that her husband might become blind and die. One day the Potter overheard her prayers: the next day he hid behind the idol and when the woman came and prayed he answered from behind the idol that her prayer was granted and that in two days her husband would become blind. Accordingly, two days later the Potter pretended to become blind. Then the woman sent word to the Raja that her husband was blind and that they had nothing to fear from him. The Rājē accordingly came one night to visit the woman, and the Potter killed them both with an axe. He buried the body of his wife, but he was in great trouble as to how to dispose of the body of the Raja : for he knew that there would be a hue and cry when the disappearance of the Rāja was discovered. At last he decided to put the body in a field of brinjals belonging to a neighbour. Towards morning, the owner of the field came to see that his property was all right, and seeing some one among the brinjals, thought that it was a thief. He accordingly hit the supposed thief on the head; and when he came to examine the body, he was shocked to find that he had, as he thought, killed the Raja. In great distress he went to consult his friend, the Potter; the Potter advised him to put the body among the buffaloes belonging to a Goālā. At dawn the Goàlà came to look at his buffaloes and seeing the body of the Rājā thonght that it was a thief stealing the milk of the buffaloes: catching np a clab, he inflicted a blow which cansed the body to fall over. When the Goala, found that the body was that of the Rajjä and that he had apparently killed him, he was in great fear and went to his friend, the Potter, for advice. It was finally decided to dispose of the body by putting it down a well. The next day great search was made for the missing

Rajjă and the body was found in the well by a Brāhman. Preparations were made for the obsequies and a funeral pyre erected. The Potter saw his opportunity and digging a hole in the gronnd under the pyre hid himself in it. When the body had been cremated and the mourners were still collected at the spot, the Potter began to speak from the hole in which he was concealed: the bystanders thought that they heard the voice of the Rājā declaring that the Potter had always been his true friend and that he desired that he should be given half the kingdom and the band of his daughter in marriage. The supposed wishes of the late Rajā were obeyed and the Potter lived in luxury for the rest of his life.

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[^0]:    1 The Rev. J. Long, as Mr. Ghose points out, mentions Nubkissen's assistance of the English as an undoubted fact. Governor Verelst in his "View of the English Government in Bengal" writes: "Nabkissen is a native Hindu, who had been extremely zealous in the English cause daring the troubles preceding Meer Jaffer's elevation to the subahdarry." This, I think, is as near as we can get to a complete confirmation of the family tradition.

    2 Mahabat Jang or Alawardi Khan, Nawab of Bengal.
    3 Rayrayan. A title bestowed by the Muhammadang on Hindu noblemen.

[^1]:    1 Fashretujjar, i.e., the pride of merchants. This name is mentioned in a letter from Mr. John Young, Prussian Agent at Chandernagore, dated July 10th, 1756.

    * Arpooly in Calcutta.

[^2]:    1 Panchet in the Manbhum District.
    2 The English account is that Rajbalar's son Krishna Das took refuge at Calcutta with all his father's treasures.

    8 Harkara, one who doen every business. Here a messenger or apy.

[^3]:    1 The English retired only to Fulta where they were reinforced from Madras.
    2 Colpy or Kalpi, about 20 miles below Falta.
    8 Tanna Muckwa in Rennell's Map. Hanter's Gazetteer says :-"An old port on the Hughli River, opposite Fort Aligarh in Garden Reaoh; an old subarb in Calcutta." It is said that the old Fort of Tanns was on the site of the house occupied by the Superintendent of the Botanical Gardens.

    4 Better known as Omichand, the great banker, who threatened to betray Clive and the English to Seraj-ud-dowlah and was himself outwitted.

[^4]:    1 The only faithfal general of Seraj-nd-dowlah. The Hindus olaim him as originally a Hindu, which is inconsistent, I believe, with the title of Mir Serajud. dowlah was present at the battle and fled when he heard Mir Madan was killed.

    2 Miran, himself killed by lightning about three jears later.

    - The official accounts say that Mir Jafer employed Jagat Seth as his Agent with the English.

    6 Mr. Henry Vansittart was Governor, from July 27th, 1760, to November 1764.

[^5]:    1 Raja Ram Narain, Deputy Governor of Bihar.
    8 i.e., Major Adams.
    8 2ud August, 1763.

[^6]:    1 Munsub Punjhusares, a title bestowed with a kbilat of 6,000 rapees valne Palky Jhalerdar Tope, a fringed and covered palankeen. Nuharah, the right to have a kettle drum.

    2 i.e., 6,000.
    J. I. 2

[^7]:    1 i.e., of ten pieces. The Khilat or dress of honour was compared of different pieces and the number of the latter was graduated in accordance with the honour intended to be bestowed. Chow Kurah, a four cornered cap. Jeggah, a feather on the Serpaith, which is a bund olasping the forehead. Murussa, a turban. Assa, a straight silver staff. Sotta, a shorter silver rod with a bent handle. Bullum, an arrow. Chowry, a silver rod with a horse-tail attached. Morechul, a silver rod with peacock feathers. Ghury, a kind of plate which was supposed to break when poisoned food was placed upon it. These were manufactured at Ghore, near Candahar.

    8 Mr. Harry Varelst was Governor, from Janunry 29th, 1767, to Docember, 1769.

[^8]:    1 The Cühri (female of Cührā) displays a facility in saying the thing which is not.
    2 Bhängiz, food given on the occasion of a marriage; the host gives it expecting to receive as much or more when he in turn is guest at a marriage feast. The delicate hamour of comparing the joys of eating carrion to the rejoicings at a wedding will be appreciated.

    8 The fathers of the girl and boy to be married are 'Kurm' to each other. Here 'Karm' (pl.) inclades all the guests who have come with the 'Karm.'

    - A fat-tailed sheep is called 'dumba;' 'Khurdumbe' means ' full of fat,' rich like the tail of a 'dumba.'

[^9]:    - In Proceedings of the Asiatic Society of Bengal, No. II, February 1908, p. 80, my name is mentioned in connection with the pablication of the late Dr. Marz's three Documents relating to the History of Ladakh! This is a greater honor than I deserve. Our thanks for this publication are entirely due to Dr. Marx. Even as regards the third MS. (O-MS.) published in this number of the journal, the preparation of the Tibetan text is his own. The language of O-MS. is not exactly that deacribed in my Ladakhi grammar, ante, Vol. LXX, part I, Bxtra Vol. 1901. The language of my grammar is that of daily life whilst that of O.MS. is the style of modern Ladakhi letter-writing, which leans more or less towards the classical language. Becanse a summary of the first part of O.MS. has already been given in Vol. LXIII, mostly on pages 106 and 107, the accompanying transla. tion gives only the second part of O.-MS.

    A. H. Francke.

[^10]:    1 L. A. Waddell in J.R.A.S., 1894, p. 57 sqq.
    2 İtude sur l'iconographie Bonddhique de l'Inde Paris, 1900, p. 178 sq.
    8 Travels, I, p. 193 sq.
    6 Kangra Gazetteer, Part III, p. 18. It is therefore atrange to find that only three pages further on in the same volume the word Triloknàth is maid to indicate,

[^11]:    1 Kooloo, Lahoul and Spiti (London, 1871), p. 205 sq.
    ${ }^{2}$ Grünwedel. Buddhistische Kunst in Indien (Berlin, 1900), p. 6.
    ${ }^{\text {© }}$ Harcourt, l.c., p. 318 sqq.

[^12]:    1 Not Padma Pani as given in the Gasetteer, Part III, p. 18.

[^13]:    1 An amusing scene cocurred on one occasion with reference to the pronunciation of the name of chess, at a Court of Bequests at Poonah in 1851 of which I was a member, when the Assistant Bäzär-Master, who acted as Interpreter ta the Court, mistook the word Shatrang-Chese-for Shatranji-a Oarpet. A native, one of the professed chess players, had made a olaim on a young Queen's officer totally ignorant of the langaage, for money lost to him while playing chess, and which the Interpreter rendered, "money, the price of a curpet." When the President was about to give the claim in the native's favour-and the Interpreter had had ample time to correct his mistake, had he known of it-I ventured to observe that the Interpreter had made " a slight mistake," and that the claim was not for a carpet, but for money lost at chess, and which, on being again asked, the native confessed. On this the President, a hot old Colonel, thundered out to the claimant: "Get away you insolent rascul! I have a great mind to order you a floggiug, coming here and taking up the time of the Court with your gambling clains!"

[^14]:    1 A weight varying from one pound to one pound fourteen ounces in different parts.

[^15]:    1 See my " Mihrăn of Sind," in the "Journel," Vol. LXI., Part LII. for 1892, and "Extra Number," for 1895.

[^16]:    - This would be in Gádi :-Mhá gowár mere herne má ná á

    No fool like this came within my seeing.
    (Observe-" herna," to see,
    " a," 3rd singalar past tense of ánd," to come "=áyá).

[^17]:    1 In Bagar district (pargana Khemlasa), on the Bina river, 6 miles 8. of Bina Railway Station (I.M. Railway). (For an acoount of the ruins here see Cunningham's Archeeological Reports).

    2 In Gwalior on the Sindh river 40 miles S.-W. of Gwalior.
    8 One of the ohief seats of Chandel rule in Hamirpur district.
    ${ }^{4}$ Near Jaipur.
    532 miles W. N.WW. of Jalann in Gwalior State.

    - Probably identioal with Vakpati.

[^18]:    1 Probably the capital of the State in the Bundelkhand Agency of that name.
    2 Probably the town 10 miles N.-W. of Chatharpar.
    8 . A town in the Sagar district (pargana Shahgarh) 40 miles N.-E. of Sagar.

    - Said by the author to be probably Man-Ranipar in the pargana of that name (district Jhansi), 40 miles $\mathbf{I D}$. of Jhansi, bat I am rather inclined to believe it is the Man mentioned in note 14.
    ${ }^{5}$ As to this place I am not sure, there is a Mahoni in Gwalior adjoining a Mau in Jalaun district on the Pahnj 23 miles 8. W. of Jalaun Town.

    6 In pargana Balabehat (distriot Jhansi) 19 miles S.-W. of Lalitpar, on the Betwa, for an account of the rains, see Cunningham's Arohæological Reports and Baba Chandar Mukarji's Report on the Antiquities of Lalitpar.

    7 In pargana Maraura (distriot Jhansi) 86 miles S.-E. of Lalitpar-for an account of its Antiquities, see the works quoted in note.

[^19]:    1 This the anthor eays is in the Mirzapar district near its Western border.
    \& Gazetteer of N.-W.P. I, 20.
    $s$ Better known as Katera, the seat of a jagirdar and titular Rnja in pargana Mar (Jhansi distriot) 26 miles S.-E. of Jhansi.

    - In Gwalior 16 miles W. of Jhansi.

    6 In Orchha 20 miles E. N.-E. of Jhansi.
    6 In Gwalior 27 miles W. of Jhansi.

[^20]:    1 The account of the origin of the Bundelas and the overthrow of the Kanghar Raja of Kurar here given, is very different from, and much more oreditable to the Bundelas than that given in the Gazetteer of the N.-W.P. (I, 20), whence it wonld appear that the overthrow of the Kanghars preceded the origin of the Bundelas. The account given in Crookes "Tribes and Castes" (II, 163) is intermediate between the two, but would seem to be certainly incorrect as regards the mention of a Raja of Panna, as Panna was first made the seat of a Raja by Chatharsal about 1675 A.D. At this time that part of the conntry was in the hands of the Gonds.

    2 In pargana Jhansi, 18 miles E. N.-F. of Jhansi.
    3 A sacrifice of goats to Mahadeo after certain proliminary offerings and ceremonies.

    4 According to the Gazetteer N.-W.P. (I. 21). Bäm Chand was the son of Prithwi Raj and Madnipàl his mon.

[^21]:    1 The author tells me this is any great gift. A Māhadan of gold is not less than 82 mäshas, (i.c. 214 grs . or about $\mathbf{2} 2-0.0$ ) ; an elephant, a maiden, a complete house, all one's possessions, are other examples.-(This would seem to imply a very mach higher value of gold than at present).

    2 Reigned 1451-1488.
    8 1517-1526.
    4 1514 Keane (History of India I. 102) gives 1527 A.D. for this event.
    6 The author cannot tell me where this is and thinks it probably an error.

    - In Pargana Bansi (Jhanai district) 16 milea N. of Lalitpur. There are here two large Chandel tanks, (one ruined).

    7 In Datia, 6 milen S. of Datia.
    8 See note 23.

    - In Orohha 11 milen S.-E. of Man-Rīnipur.
    J. 1. 15

[^22]:    1 Assumed the Empire of Delhi 1542, and was killed at the siege of Kalinjar 1545.

    8 This the anthor tells me may be offered to any deity; it lasts for 21 days during each of which varions ceremonies and offerings are performed oulminating in a sacrifloe of 21 goate on the 21 st day and the gift of varions things including seven elephants.
    ${ }^{8}$ Close to Oroltha.

    - In Datiä, 5 miles W. of Datiă town.

[^23]:    1 In Gwalior, 19 miles E. N.. E. of Datiä town.
    8 Said to be in Datia State.
    3 See note 26.
    ${ }^{4}$ In Pargana Mïdhogarh (Jalann diatrict) 18 miles N..W. of Jalaun.
    6 In Pargana Indarkhi (Gwalior) 25 miles W . of Jalann:

[^24]:    1 Doubtless identical with the ' Seiyid Raja of Barlà, of Gazetteer, N..W P. I, 656.

    2 Of Ahmadnagar.
    8 Said by the anthor to be in Bhapal nenr the Narbada, © . of Sagar town and B. E of Bhapal.

[^25]:    1 Better known at Sipri.
    2 In Sägar district, nome 27 miles 8 . E. of Sàgar.
    8 In Gwalior 5 miles N.-E. of Piohhar and 27 S..W. of Jhanci.
    \& In pargana Garotka (Jhansi district) $\mathbf{3 6}$ miles E. N.- E. of Jhansi.
    5 See note 42.
    6 The Gazetteer N.-W.P. (I, 556) gives 1593.
    7 The atate in the Baghelkhand Agency B.-E. of Kalinjar.
    8 In Sägar district, 18 miles S. of Sāgar.

    - In Sägar district 6 miles N. N.-W. of Bägar.

    10 Said by the author to be near Cheripar (note 50).
    It Said by the author to be between Gana and Narwar, in Gwalior.
    12 In Sagar district, 26 milos E. of Bägar.
    18 The Jagir of that name on the borders of Jhansi and Hamirpar, (not of course as bounded at present).

    14 Said to be in Jalaun district.
    15 Said by the author to be near Kalinjar.

[^26]:    1 Probably in Gwalior on the Sindh river 15 miles N.-W. of Datia.
    ${ }^{2}$ Probably in $G$ walior between Pachhor, Narwar and Bhärwar.
    8 In pargana Motli (Jhansi distriot) 39 miles N.-Tt. of Jhanai.

    - Keane (History of India, I, 141) gives 13th Augast 1602.
    b 11 miles S.-E. of Gwaliur.

[^27]:    1 Now known as Ghāt Lachüra, 11 miles N.E. of Mar-Rānipnr in Jhana distriet.

    8 The ancestor of the present Bhndoria Raja of the Agra dietriot.
    8 Of Gohad, ancestore of the present Raja of Dholpür.

    - Thia is obviously a mistake, as Jahangir succoeded in 1605.

[^28]:    1 Almost certainly wrong, see preceding note.
    2 In pargana Bānpūr (Jhansi district) 17 miles N..E. of Lalitpar. The ruins of a fort and palace and several Mubbaras still mark this former seat of rule.

    8 This is a penauce which conaists in fasting by day for a month, only eating when the stars are visible.

    4 In Orchha, 12 miles S. S.-E. of Orchha town.
    ${ }^{6}$ In Jhansi diatrict, 12 miles E. of Jhausi.

[^29]:    1 In Orchha, 27 miles E. N.-E. of Jhansi.
    8 The present capital of Orohha state.
    8 In Orehha 20 miles E of Teliri.

    * In Orchha, 14 miles S. of Orchha.

    6 In Orohha, 18 miles S..E. of Man-Ränipur.
    6 In pargana Jhansi, nine miles E. N.-E. of Jhansi.
    1 In pargana Moth (Jhansi district) 17 miles N.E. of Jhansi.
    8 The former state of that name west of Mahoba now part of the Hamirpar distrist.

    - In pargain Garotha (Jhansi district) 50 miles N.,E, of Jhąnsj,
    J. 1. 16

[^30]:    1 There would seem to be some mistake here, as the only Khin Jahan apparently known at this time was Khān Jahăn Lodi, who revolted but was defeated and killed in 1631.

    2 In 8agar district, 25 miles N. of Sägar. This was later the most important seat of Muhammadan rale in South-Western Bundelkhand, and there are fine rains of a very extensive fort externally somewhat of the style of that at Agra, and also maine of a large walled town. The place now is almost entirely uninhabited and over-grown with jangle.

    Balf in Jhansi and half in Orchha, 18 miles E. 8. E. of Jhansi.

    - According to the Gazetteer it was founded by his mother, the Rani Hiradeva

[^31]:    1 Now forms the N.-E. part of pargans Jhansi in the Jhansi district.
    \& The anthor elsewhere states that when Birsingh Deva founded Jhansi fort he garrisoned it with Sanyãsis, whose successors these will probably have been. As to militant Sanyäsis in Bundelkhand, compare the fact (quoted in Crooke's "Castes," IV. 276) that 2,000 Sanyāeis attacked Col. Goddard in his march through Bundelkhand (1778).

    8 Named Mahendra Rāni.

    - In Orohha, 20 miles N.-W. of Tehri.

    6 Then Raja of Samthar.

    - In Samthar, 26 miles N.-E. of Jhansi.

[^32]:    1 In Orchha, 17 miles S. of Orohha town.
    : Raja Bikramajit entered into treaty with the British in 1812.
    8 See note 102. Elsewhere the anthor states that Aghota Singh bestowed this jagir on his mon in 1703, and that the Peshwa assisted him against Bikramajit of Orchba and gave him a sanad for Khanya-Dana in 1751, the two accounts are not neoessarily discrepant.

    Widow of Sãnwant Singh Raja of Orchha,
    ${ }^{5}$ See p. 87.

[^33]:    1 See note 84,

[^34]:    1 The quarrel as to the succension on the death of Aarangseb.
    2 The commander was Zulfikar, commander of the army of the Deocin.
    1710-1748,

[^35]:    1 See p. 84.
    2 This pargana consists of several isolnted portions imbedded in Gwalior territory a short distance west of Jalann district ; and is still held by Holkar.

    8 In Datia, 18 miles N. N.-E. of Datia town.
    4 This must be Danlat Rao Sindhia, as Mahadaji Sindhia had died in 1794:
    ${ }^{6}$ A place in the neighbourhood of Indargarh.

    - In Datia on the Sindh Biver, 40 miles N.-E, of Datia.

[^36]:    1 In pargana Balabehat (Jhansi district) 19 miles S. of Lalitpur. There are a large number of Chandel ruins and a large Chandel tank here. For decoription 00 Mukarji's "Beport on the Antiquities of Lalitpur" and Cunningham's "Archacological Reports."

    - See note 86.

    8 An old deserted fort lying Rast of Imagarh in Gwalior.
    © On the Betwa in Gwalior, 28 miles 8.-W. of Lalitpur.
    5 In pargana Bansi (Jhansi distriot) 12 miles, N. of Lalitpar.
    6 The well is a large baoli on which is an insoription dated 1628 A.D.
    7 A large village in Talbehat pargana (Jhanvi diatriot) 19 milea N. of Lalitpur, still held by his deccendante.

    8 In Lalitpur pargana (Jhansi distriot) 8 miles S. W. of Lalitpur; the deccendant of the original grantee has recently been sold up.

    - Jimandina Kalan, in Lalitpur pargana (Jhansi district) 18 milea B. by W. of Lalitpar. Still held by his deacendents.

    10 Kareara Kalan, pargana Talbehat, (Jhansi distriot) 28 miles N. of Lalitpur. Still held by his descendante.

    Il Baroda Dīng, pargana Bảnpūr (Jhangi district) 18 miles N. N.-I. of Lalitpur. still held by his descendante.
    $18 \ln 1646$.
    18 An ancestor of the author.
    14 This tract forms the S.-W. of the Sägar district and the native territory adjoining it.

    - Garola, Khomlasa, IDtawh and Mālthon are now in Tahsil Khorai Sagar district. Bahatgarh is in Sägar Tahail, Sägar distriot.

[^37]:    1 In Gwalior, 10 miles $N$. of Mnngaoli.
    2 Masora Khurd, 8 miles, S..T. of Lalitpur.
    ${ }^{8} 1787$.
    43 milea, N.-F. of Lalitpur.
    5 A village 2 milea, N.- K. of Lalitpur.
    6 Ec. the battle just mentioned. In the Gasetteer (I. 351). Parjapal is maid to have been murdered, but the author tells me he, when young, met survivors from the battle who relate that Parjapal was wounded in the battle and survived it 16 or 20 daya dying in Lalitpur where a Makbara in his honour stande now.

[^38]:    1 Pargana Tälbehat, Jhansi district, 88 milea N. N.-E. of Lalitpur.
    221 miles N. N.-W. of Lalitpur.
    8 On the Betwa 18 miles N.-W. of Lalitpur.
    4 miles W. N.-W. of Lalitpar.
    63 miles N.-W. of Lalitpur; the man's name was Budh Singh, not of Chanderi as stated in the Gasetteer (I. 352). The anthor tells me he actually met him in his yonth.

    6 The ohief of whioh was Kelgawan 23 miles N.-E. of Lalitpar.

[^39]:    1 Now part of Khorai Tahsil in Sägar diatriot.
    2 These villages lay in the 8..W. of Lalitpur sub-division, around Jäkhlon, Deogarh and Datia, at which last named is a ruined fort on the Betwa three milea above Deogarh.

    8 See note 168.

    - 8ee page 28.
    ${ }^{6}$ Near Deogarh (note 169).

[^40]:    1 A cave ip the pliff under the fort at Deogarh over-looring the Betwa, it contains a rook cat insoription recording that Sohanpal took Kurir in Sambat 1846 (1288 A.D.).

    2 Baroda Swami, 3 miles E. of Nanora, still held by the descendants of Enawar Umrao Singh.

    - 88 miles B. S. W. of Chanderi.
    - See note 151.

    6 Is Nai Sarai in Gwalior 26 miles N.-E. of Gnna.
    6 In Gwalior 38 miles 8.W. of Guna.
    1 Now in Gwalior 6 miles S. of Gwalior.
    ${ }^{3}$ This Piprai is in pargana Balabehat (Jhanai district) 19 miles 8. by. W. of Lalitpar.
    ${ }^{9}$ On the Narain river in the extreme sonth' of pargana Balabehat.
    in In Gwalior 5 miles N..E. of Mungaoli and 7 miles 8.aW. of Deogark. J. I. 18

[^41]:    1 See p. 37.
    2 Soe note 180.
    8 See note 152.

    - 16 miles N. of Lalitpar.

    6 Jamandina Knlan. Soe note 187.
    6 Said by the anthor to be near Pachhor in Gwalior.

[^42]:    1 On the W. bank of the Betwa opposite Deogarh.
    2 In the Bälabehat pargana a few miles S.-E. of Dudhai.
    8 In Gwalior 4 miles S.-E. of Chanderi.

    - 23 miles N.N.-E. of Lalitpur.

    6 A rooky hill N. of Bhuchera.
    6 In Gwalior 3 miles N.-W. of Ieagarh.
    I See note 169.
    89 milea N. W. of Lalitpar.

    - In Gwalior 9 miles N. N.-E. of Chanderi.

    10 The author canrot say where this is, beyond that it is not the Kisalwins on the Betwa 17 miles N.•W. of Lalitpur.

[^43]:    1 Sigala Jataka of the Pali Jitaka, edited by Dr. Fausboll, Vol. It.
    2 Beal's Buddhistic Records, Vol. 1I, p. 67.
    8 MoCrindlo's Ptolemy, pp. 263, 267, 306, 308, 309, 324, 828.
    . MoCrindle's Ancient India as described by Megasthenes , and Arrian', pp. 178-79.

[^44]:    ${ }^{1}$ Dr. Fleet, 'Inscriptions of the early Gupta Kings, p. $2 \dot{2} 8$.

[^45]:    
    
    

[^46]:     औौन होपः।
    
     प्राष- होपः।
    ममाख मश्रकाष्चैं मालसा मन्द्यालाधा।
    मसा प्राज्मयभूषिक्षा मश्रका: चनियाब ते।
    
    प्रस्तर. होपः।
    
    

[^47]:    - Vide Utpala's commentary on the Frihat-Samhita, and alco Dr, Kern's proface to his edition of the book.
    + MoCrindlo's Ptolemy, p. 170.

[^48]:    * Beferring to the Indian people living beyond the Indus, Arrian in his Indika (McOrindle p. 179) observes:-
    "They were in old times subject to the Assyrians, then after a period of Median rule submitted to the Persians, and paid to Cyras, the son of Cambyses, the tribute from their land which Oyrus had imposed."

[^49]:    म्टगा त्राष्मयभूसिष्ठा: बंकर्मेंगिरताश्रथा।
    
    मालसास्ष महाइए वैश्यध्रम्मोपजीविशः ।
    बर्बंकामसमायुताः प्राश धर्मार्थनिस्रयाः ॥
    সूकास मन्द्यासन पुरषा धर्म्नशीषिगः। 80
    ( मघंभारत, मोष्मपर्ज, १९प्य बघ्यायः) ॥

    * MoOrradle's Ptolemy, p. 264.
    $\dagger$ Arrian in his Indika (second centary A.D.) observes:-
    "In the dominions of the Assakenoi there is a great city called Massaka (probably the name an Maisoka, Masaka, or Massoi), the seat of the fovereign power whioh controls the whole realm " (MoCrindle, p. 180).
    J. 1.21

[^50]:    - बं तु देश्रमतिक्षम्य पूरोदा काम निद्बगा । डभयोषीरयोष्तस्य कोचका गाम वेखवः ॥ ते गयन्ति परं तोरं सिड्वान् प्रत्याणयक्ति च।
    उत्कराः कुरवसज घसपुख्यप्रसित्रयाः ॥ ( रामायब, किस्थिम्याकायद, 8₹। हO.) ॥
    $\dagger$ नस्माद एतस्याम् उदौच्यां दिशि ये के प परेगा द्मवक्तं जवपदा उत्ताुतरव उक्तरमद्रा हति वैरा््याय ते बभिषिघन्ते। बिएाड़िब्बेवान् घभि-
    

[^51]:    - Referring to the region comprising Sogdiana and Baotriana, Heoron (Aniatio Nations, 2nd edition, Vol. I, p. 424) writes :-
    "It etood on the borders of the gold country, "in the road of the confinence of nations,' according to an expression of the zend-avesta ; and the conjecture that in this part of the world the human race made its first advance in civilisation, eeems highly probable."

[^52]:    - In this connection vide Mahämahopādhyãya Hara Prasad Sästri in the Proceedings of the Aaiatic Society of Bengal, December 1901, and Babu Nagendra Nath Vasu in Banger Jātiya Itihäsa.
    
    
    $\ddagger$ The Sarajupari Graha-vipras oame to Bengal from Ondh (vide their Kalapañji).

[^53]:    * रतेक वे ... ... तभाव् कौपोतकोगां र कषन बतोव किसोते
    
    
    
    
    
    
    
    $\ddagger$ बोषो बस्स मूणवक्त बोषो वस्स महाहपाः।
    
    
    

[^54]:    * सड़ यस्येवं विद्बान् व्रात्ब एकों राँनसतिचिर्म्टे वसति ॥ २॥

    ये परिय्यां प़एया बोकाधतनेव तेकावखन्ब । श ॥
    
    ये घन्तरिके पुष्या बोकासानेब तेगावरन्ध : 8
    
    ये दिवि पुएय कोका स़ानेव तेगावखन्बे ॥ (1.
    तड़ बस्यें विधान् व्रालसतुर्थों राचिमविचिर्टंशे वसति ॥० ॥
    
    तदु यसंबं बबान् ध्रालोडपरिमिवा राचोरतिधिर्टे वसति ॥E: य एवापरिमिताः पुस्या बोकाधानेष तेगाबइन्बे ॥ २०।
    
    

[^55]:    * MoCrindle's Megasthenes, p. 136.
    † Beal's Buddhistic Records, Vol. II, p. 67.
    $\ddagger$ Sherring's Hindu Tribes and Castes, Vol. I, p. 887, and Vol. II, p. 227.
    § Kanishka was king of the Yuei-chi, and the rise of bis dynasty is placed by Ohinese anthorm in the lut centary B.C. On his coins be is atyled in the corrupt

[^56]:    Greek logends as Kanyski Korano, and in the Bactrian Pali legends and Mani Kyalo insoription he is called Kanishka the Kushänn, or "of the Gushāna family" con. necting him with the tribe called by Chinese Kwei-shwang. Korano and Kushāna are only different forms of the same word. (Beal's Becords, Vol. I, p. 50, noter)

    - MoCrindle's Ptolemy, p. 334.
    + Sherring's Hindu Castes and Tribes, Vol. I, pp. 242.43,

[^57]:    - McOrindle's Ptalemy, pp. 288-84.
    + Wilson's Viąṇap̣urāna, p. 875.
    $\ddagger$ MoCrindle'm Ptolemy, p. 198;

[^58]:    - MoCrindle's Ptolemy, p. 140.

[^59]:    - The Monghyr inscription, whici belonge to the earlier part of the 8th centary, also names the Meda as a low tribo of this region (Asiatic Rewearcher, Vol. I; p: 126, Caleutta; 1788\% and, what is remarkable, their mame is found joined to that of the Andhra, precisely an in the text of Manu (McCrindle's Megasthenen, pp. 133-134).

[^60]:    * McOrindle's Megastlienes, p. 149.

[^61]:    * G. Buhler's Manusnmihita, Book X (translated in S.B.E. series).
    † G. Buhler'm Manusańhita, Book IX.

[^62]:    Ficpür Mint, Moghal copper coins from, 64 ff .

[^63]:    - Since the above was printed "The Life of Abdur Rahman, Amir of Afghanistan, G.C.B., G.c.8.I.," edited by Mir Munshi Sultan Mahomed Khan, London, 1800, has been published.

    The following is an extract from pages 291, 292 :-
    "I intend to make the Fort of Kullum (which is situated in the heart of Kāfiristann in the most impregnable part of the country, owing to its atrong position) the military station for the main body of my army on the northern frontier.

[^64]:    - If it is thought by an European critic that the spelling herein adopted in words such as $d r g r$, mristh, prêlr, is defective, it mas be mentioned that, according to the Oriental notions of orthography, all words like " stiok," "stamp," "string " are in need of a vowel. According to their notions the proper spelling would be, "istick," " ishtamp," " ishtring" ; the initial " $i$ " appearing to them as indispensable, as some vowel appears, to our Western perceptions, desirable, in the three Kafir words above quoted.

[^65]:    * The Agent case is the case with ree in Urdū, when the post-position ko is not need with the Noun, which is the objeot.

[^66]:    * Kafiry often dispense with suffixes and post-positions when the meaning is quite olear without them.

[^67]:    - The Adjective qualifying putt is sometimes masculine.

    It has been saggested to me that the first $\boldsymbol{r}$ is pronouncod like the Sanskri vowel $r$.

[^68]:    * If he is right, a portion of my para. 22 is wrong. In Sir G. Robertson's manuscript collection there are many adjectives ending in $l, m, n, r$, as kakhir, hatram, damtbl, etc.

[^69]:    * See foot-note to centence 726.

[^70]:    * In Sir G. Robertson's manuscript collection the Infinitives end in sta, bat he is "donblful whether they are really. Infinitives or a form of 'from eating,' from going,' etc."

[^71]:    * I never heard the terminal lik which Dr. Trumpp gives.
    $\dagger$ The $l$ is sometimes not pronounced; sometimes the pronunciation is enlr, $\delta_{n l} l r, \bar{u} n l r$, if such a sound can be pronounced by Englishmen.

[^72]:    - Compare the Sanmerit of this tense asmi, asi, asti, swasjeffa; santi.

[^73]:    *The following numerals, differing from the above, are in the Colleotion of the

    - Beverend Worthington Jukes, vix., 40, dust ; 60, twä ditus; 60, chatwäts; 70, pacheodts; 80, shotsa; 90, sudat; 100, huelawts.

    Note a Freneh nimilarity " quatre vingt."

[^74]:    - Mr. C. Rose, after making enquiries, says there are $\mathbf{3 8 0}$ days in a year, vis., 200 sammer days and 180 winter days. There are seven days in a week, and Friday is a day of rest.

[^75]:    - As Kafirs use the fewest possible words to express their meaning, they would, in talking to one another, omit many of the pronouns and post-poaitiona which have been given in these sentences.

[^76]:    - This form is probably for euphony in connection with the word preoeding it.

[^77]:    - It appears there are no words, except the evidently Persian words, for heaven and hell.

    In "Acconnt of the Kingdom of Caubul" (Elphinstone) the words "Burryle boola" and "Burry duggar boola" are given for heaven and hell. Lる bola means "is good," and digar bola "is bad," In the Bashgali there is a word bare which means "fate, hope, luck."

[^78]:    *The last word of the sentence seems pleonastic: see also sentences Nos. 868, $1055,1081,1177,1422,1423,1483,1628$. There are other sentences of similar construction (e.9, 819, 930, 1356), in which this last word is not used. This is one of the many points on which the Kafirs, who were employed to translate, disagreed.

[^79]:    * As in Chitralis.

[^80]:    - Chitralif

[^81]:    - These are all vegetables which grow wild on the monntains and are good for food. Their botanioal names are not known. Badrai, in Ohitrali, is rendered by simmon.

[^82]:    * Apparently the idioms in this and the next sentence are Coitratl.

[^83]:    - Which the Emperor Brbar took from the Kafirs. On that ocoasion the Kafirs of Pich came to their assintance.

[^84]:    - I heard this word more often pronounced $p \overline{o g}_{\boldsymbol{s} h}$ than $p \bar{u}_{\mathbf{u}} h$.

[^85]:    - In Colonel Tanner's lecture on the Chuganis, (B.G.S., London), it is observed that it is quite impossible to make out the geography of Timur's routes in Eafiristian.

[^86]:    - Mullah Najib made a vocabulary of Káfir words which was said to have been translated by Irvine. I have failed to trace this. Some writers have asserted that the Mullah never penetrated beyond the Nimoha country.

[^87]:    * Sir H. Rawlinson (Journal R. G. S. XLII of 1872) says the Sanscrit Kalika, "dark-coloured," (from which possibly the word Kalāsha arises), may be the origin of the term $\boldsymbol{S i a h} p$ osh (wearing black) and possibly may be the Calcias of Goes.

[^88]:    - Traieguma in his map is 16 miles north of Chigar Serai, and Waigul is 16 miles farther north.
    + Some say the Komedai whose valley was located in $130^{\circ}, 39^{\circ}$ were the ancestors of the Kafirs. A critic in the Times says the Kafirs may be identical with the 8ibae of Strabo. See the article Sibae in Dictionary of Greek and Roman Geography by W: Smith, D.C.L., LL.D.
    $\ddagger$ Mose Gothic Maiza and Yuetchi Getor.

[^89]:    - The central syllable is the Turkish word Tagh, mountain,
    $\dagger$ If so, it is close to Kherwah and on the fringe of, if inside, Kafiristin.

[^90]:    * Maeson thinks this cannot be the case.

[^91]:    - Pich, is believed to be Kama in modern maps.
    $\dagger$ Colonal Yule says the Pashais, though now Mahomedans are reckoned among the aboriginal tribes of the country, which the Afchanes are not.

[^92]:    - See Grammar, paras. 22, 23.

[^93]:    Ujralyy, Ch. E. dg.-Les Kafirs Siapochs. Bulletïns de la Société d'anthropologie de Paris, Sér. III. Vol. VI, 1883, p. 621.-Les soldata . d'Alexandre réfugiés dans les régions inaccessibles de la vallée du Kuner sont du domaine de la Fable, comme l'assertion d'un certain savant russe; M. Térentieff, qui voulait y voir des proches parents des aïeux des Slaves.

    La vérité se dégage de toutes ces fictions et nous voyons que nous avons affaire, dans ces régions, à nne espèce de Caucase, où les peuplades les plus différentes d'origine, de type, et de langro, se sont refugiées pour se soustraire aux hordes barbares qui ont envahi successivement la Bactriane et la vallee de Caboul, etc. Pour le moment il y a quelque chose qui se détache nettement de toutes ces recherches; l'Hindou Kouch constitue une ligne de démarcation absolue entre deux groupes d'Aryens, qui, possédant certains points de contact an point de vue de la langue, sont séparés les uns des autres d'une façon absolue, par rapport à leur type physique. Leur patrie primitive n'a donc pas été dans ces régions et nous avons à chercher maintenant quelles sont les causes de cetto similitude de langage à côté d'une dissemblance physique aussi prononcée.

    Ujfalfy, Cbarles E. de.-Les Aryens au Nord et au Sud de l'Hindou Kouch. Paris, 1896.—Contains an interesting account of Kāfiristān, otc. Därdistän in ancient times vas part of the kingdom of the Saces, or Grunaioi of Ptolemy, who adopted the Greek writing. This circumstance explains admirably the traces of Greco•Buddhist sculpture and those of Greek traditions in Baltistān and Kāfiristān.

    Vigne, G. T.-Personal Narrative of a visit to Ghazni, Käbul and Afghänistān, 1840.-The Kāfir custom of exposing their dead appears to bespeak for them a descent from the Guebers of Persia, In the appendix is a vocabulary of 50 words and 30 numerals, including "one thousand," $20 \times 20$. Many of the words agree with my collection.

    Wilford, Captain F.-On Mount Oaucasus. Asiatic Researches, Vol. VI, 1801. -The term Caucasus, Coh-cas, applied to the mountains extending from India to the Enxine sea. The range was inhabited by Chasas. The monntains north-east of Cabul are the real Caucasus of Ptolemy. Cash-gar, or Chitrāl, (as well as Badakhabān), is in the possession of the Chinese. Cash-gar is also Cashtwār, Katwār or Cattore, which, however, differs from Kitwer or Catowr, whioh is 15 miles north-west of Chigerserai.

    Wolff, Revd. J. (D.D., LL゙.D.).-Narrative of a Mission to Bokhära, 852.-The language of the Kāfir Seeah-posh s eems to be derived from the Sangkrit. A list of 9 words follows, most of which are in my collection.

[^94]:    " Upon the heights of Badakhabān, (the border land between Badałh.sbbăn and Kāfiristān), are four free tribes of Israel, 'those of Naphtali, Dan, Zebalon, Asher."

    Wourp, Rsvd. J. (D.D., LL.D.)-Travels and adventures of, 1861."The Käfir Seeah-posh call themselves "Seema." Wolff cannot help thinking they are the remnants of the tribes of Israel, for the Jews in Bokhāra, * * * * (who assert that they belong to the ten tribes), say tbat these Käfir Seeah-poagh are their brethren, whose ancestors had entirely forgotten their law and fallen into idolatry, but into the ancient idolatry of the Philistines." They call God "Imrah," and worship the figare of a fish called Dagon. They have in their mountains the ten commandments written in stone, and their women observed the law of parification.

    WOOD, JонN.-Journey to sources of the Oxus, 1872.-He concludes that the Kä firs are probably of the same race as the Tājike, the points in which they differ being the resalt of physical causes, not of blood.

    Yole, Coronel H., C.B.-In preface to "Journey to source of Oxus, (Wood), 1872."-This gives a description of the expulsion of the Yuetchi Thibetans, about 162 B.C., by the Hiongnu to the Valley of Ili; and, about 1 A.D., one of their princes. Kueiabwang extends his rule over oertain countries south of the Hindũ Kuab-(the Indo-Scythic dominion). About 300 or 400 A.D., the Yuetchis or Yethas revive: a great warrior, King Kitol or Kitaur, conquers five nations north of Peshäwar, including Swāt, and probably including Kāfristān.

[^95]:    !

[^96]:    * Since the above was written, a copy of tine translation into the so-cealled Bolor or Sishpösh language has boen kindly submitted by Dr. Grierson, C.I.E., to Professor I. Kuhn, of Munich, for examination. He has prononnoed an opinion, that it seems to be an incorreot copy of the version of the Lord's Prayer in the language of the Ama-llosa Kiffirs of South Afrios (see, for instance, Friedrieh Muller's Grundriss der Sprach wissenschaft, 1 Band, I A Abtheilnng (Pt. II), pp. 261-262). Acoording to Muller'n transoription( the sign) || representa the so-called " lateral elick " of the Boath $\mathbf{A}$ frioan languages.

[^97]:    ${ }^{1}$ He is often called by the title kabi-kaikay," the ornament of poets."

[^98]:    * Candi (pronounced in English Chundi) is one of the forms of the goddess Uma or Durgaं (the wife of Çiva), who is especially worshipped in Bengal.

[^99]:    *See his "Note on the Languages of India," p. 108. There is a good acoount of "Candi" in R. C. Datt's "Literature of Bengal."

[^100]:    - The Ghatak is the professional arranger of contracts of marriage.

[^101]:    * Cf. the lobster brought as a present by the sailors in "David Copperfield." The other ed. reads some flower.

[^102]:    - Viçvakarman.
    t These are good omens for a woman.
    $\ddagger$ The division of the world which includes Mount Meru.
    § This refers to the seven or eight Çaktis or personified powers of Çiva.

[^103]:    - The fruit of Momordica monadelpha.
    $\dagger$ Indra's wife.
    $\ddagger$ A celebrated Apsaras, or nymph.
    § In this description of her husband there is a series of veiled allusions to Çiva as the religious mendicant of the Tantras.
    * The thorn-apple (Datura stramonium).

[^104]:    *The Ricinus communis, or castor-oil plant, is in India a tree which is often thirty or forty feet high.
    $\dagger$ Half April and May. I have in this passage chiefly followed the text of the 1867 edition; the last edition begins the list with Āsarh.
    $\ddagger$ Half May. and June.

[^105]:    * For this proverb cf. Wilson's translation of the Särikhyakärika, p. 113. It also occurs in Don Quixote, pt. ii, ch. 53.
    + This is a frequent abbreviation of Käaketu.

[^106]:    - I remember a Calcutta pupil talling me that an old pandit came one day to his father's house, and as he was about to take his seat on the ground his old drees gave way, and he at once quoted this couplet from our poem.

[^107]:    - I follow the text of the 1867 edition.

[^108]:    * Girls should be only married in their odd years.

[^109]:    *The day of the asterism Uttaraphalgoni.

[^110]:    - The grahas are properly nine, as the ascending and descending nodes are included in the number.
    $\dagger$ Sasthi, i.e. Durga, as guarding on the sirth day after birth, when the chief danger for mother and child is over.
    $\ddagger$ The sirteen Mätris.
    $\$$ A particular class of deceased ancestors, in whose honour a special sign is traced with ghi on the wall.

[^111]:    * Two other ingredients are mentioned about which I am doubtful, päkudi-gadohhe (or, as in the other edition, käkadi-gächh) and häi ämaläti; they may mean 'hemp-stalks' (pakafi) and some preparation of myrobalans.
    $\dagger$ The second edition has 'snakes' curds.'

[^112]:    - A star in the Great Bear, also the wife of the seven rehis.
    $\dagger$ The moon.
    $\ddagger$ The first, and also the last, meal which the husband and wife eat together.
    These are the five precious things-gold, silver, pearls, crystal, and copper. See Kathäs. S., ch. 77.

[^113]:    - Turdus salica. These two birds are often mated in Hindu legends. For a similar mating compare the traditional attachment between the coulewvre (adder) and the murime in Provence, see Mr. J. B. Andrews (Revue des traditions populaires, tome ix, p. 335, 1894). Cf. infra, p: 30.

[^114]:    - A colloquial abbreviation of Durbalä.

[^115]:    - This is the iron ring always worn on the left hand of a married woman; it is laid aside in widowhood.

[^116]:    - In the original there here follows a long list of the names of the goats, filling ten lines-Mälatī, Bimalä, Dhūli, etc. It is an interesting illustration of St. John, $x, 3$, "he calleth his own sheep by name."

[^117]:    - The original has a description of the cräddh which I omit. A full account of the various caremonies is given in Colebrooke's Essays, vol. i.

[^118]:    - The mahals are the different compartments into which a Hindu mansion is divided, each containing its garden with rooms round it on all four sides.

[^119]:    - "The karafija flowers are pretty large, of a beautiful mirture of blue, white, and purple."-Roxburgh.

[^120]:    - The second edition here adds the account of another ordeal with panai water. A Bengali friend, whom I consulted on this obscure phrase, writes as follows: "Panae is a plant which overspreads every foul tank; it is very common in Calcutta, and so is the word ; panai means 'covered with pänä.' Wator so covered is very cold, because it never feels the sunlight, and any person bathing in a tank covered with panā is liable to have cutaneous diseases. The word is pronounced and written pänāi now." As the passage is omitted in the first edition, I have ventured to leave it out in my translation.
    $\dagger$ See the Institutes of Vishpu, x (Jolly's transl., Sacred Books of the East, vol. vii); the innocent man weighs lighter at the second trial.

[^121]:    - The architect of the gods.

[^122]:    * Hindu women often wear rings on their wrists made of shell-lac.

[^123]:    - This book is written by a Çäkta, i.e. a worshippor of Durgā according to Täntric rites; and Çäktas eat fish and kid's fleeh.

[^124]:    *Vide de Nicéville, Journal A. S. B., vol. kiv, pt. 2, pp. 366-367 (1895).

[^125]:    7. Danais (Parantica) melanoides, Moore.

    Parantica melanoides, Moore, Proc. Zool. Soc. Lond., 1883, p. 847, n. 1 ; Danais (Parantica) melanoides, Walker, Tran Ent. Soc. Lond., 1895, p. 445, n. 4.

[^126]:    65. Catochrysops strabo, Fabricius.

    Hesperia strabo, Fabricius, Ent. Syst., vol. iii, pt. 1, p. 287, n. 101 (1793); Catachrysops [sic] strabo, Walker, Trans. Ent. Soc. Lond., 1895, p. 462, n. 65.

    The larva in Orissa feeds on Dolichos, Natural Order Leguminosæ; and in South India on Schleichera, Natural Order Sapindaces, and on Ougeinia and Cylista, Natural Order Leguminosas.

[^127]:    77. Rapala schistacea, Moore.

    Deudorie schistacea, Moore, Proc. Zool. Soc. Lond., 1879, p. 140.
    In Calcutta the larva feeds on Antidesma, Natural Order Euphor-

[^128]:    * Mr. James J. Walker keeps these two species distinct, and has reversed the references to them; moreover one of his dates is incorrect.
    J. II. 4

[^129]:    86. Dercas verhollal, van der Hoeven.

    Colias verhuelli, van der Hoeven, Tijdsch. voor Nat. Gesch. en Physe, vol. F,

[^130]:    A apecies in leaves capsules and habit resembling B. isoptera, but with mach larger flowers.
    4. Begonia sindata, Wall. Cat. 3680. Shortly canlescent (from $2 \cdot 5$ to 12 inches high) the rootstock tuberous. Leaves either broadly

[^131]:    The upper surface of the leaves is dark green, the nerves being coloared; the under surface is red of various tints and the flower-stalks are pale crimson.

[^132]:    Ridley's epecimens are without fruit. Mr. Wray has sent from Perak some specimens (Herb. Wray 3632) of a plant in fruit which in spite of its congiderably larger leares (nearly a foot long), may be conspecific with this. Theee fruits are parrowly ellipsoid, moch compressed and deeply furrowed, narrowly to the base, ess so to the truncate apex. A. costata, Boerl. MSS. is the nearest ally of both.

[^133]:    This species is very nearly related to $D$. nobile Lindl. bnt is quite distinct from any of the known varieties of that somewhat variable species. In the nearly uniform coloration of the sepals and petals (though not in the colour iteslf) it approaches most closely the form of D. nobile distingaished and figared by Lindley, Sertum $t$. 18, as D. coerulescens. That plant, however, has a lip with purple throat and yellow margin; the present species has a cream-coloured tabe and throat with a magenta limb coloured and marked like the petale and sepale. The lip of D. regium a, more over, narrower than in any form of $D$. nobile and is not pobeccent.

[^134]:    * 'Ihis colouration of white body and dark quills and tail is normal in the Jaran Graculipica melanoptera. a bird which I was able to study in life in the London Zoological Gardens in 1901. Since writing this paper I have seen another grizzled s!ecimen of Dissemurus paradiseus.
    J. II. 11

[^135]:    * Diagnosis-Exemplis hibernis P. pugnacis similis, sed capite et nucha ant omnino albis ant albo variegatis distinguenda.

[^136]:    - Tea Cyclopedia, 1881.
    + The Tea Bug of Assam, 1884.
    $\ddagger$ Indian Museum Notes. Vol. III pp. 83.38.
    § The Pests and Blights of the Tea Plant 1898.
    II Royal Botanic Gardens, Ceylon. Circular, No. 21 (1st Series), 1901.

[^137]:    1 Rep. Brit. Ass, xxviiii, (1858).
    ${ }^{2}$ Boll. Soc. Sismol. Ital. vii, 205-209 (1901).
    8 Brit. Ass. Rep., $\mathbf{x x v i i i}$ ( 1858 ).
    ${ }_{4}$ Arohives des Sciences Physiques et Naturelles, 3. Ser., xxii, 409, (1889).
    5 Arohives des Sciences Physiques et Natarelles, 3. Ser., xxp, 504, (1891).

[^138]:    1 Phil. Trans, clxxxiv, A, 1107 (1893).

[^139]:    I Geol. Mag. 4. Decade, viii, 449, (1901).

[^140]:    1 The intervals are not exactly the same on either side of the meridian passage on acconnt of the motion of the sun and moon in the heavens, bat the inequality is not sufficient to be of importance in this connection.

[^141]:    * By some accident these birds have never been registered in the Zoological Society's list, but I am quite certain about the species; I took specimens of the live Pigeons I brought home, to Count T. Salvadori who kindly identified them, being then at work on the group for the British Maseum Catalogne of Birds.

[^142]:    Two young Bayas or Weavers (Ploceus atrigula) which I recently reared varied exceedingly in intellectual powers. Both were confiding, bat one was also nervous and stapid, dashing off in aimless flights, and when coming to me settling sometimes on my nose; while the other's excarsions were much more parposefal, and it would freely alight on my head or shoulder, or on those of othere, hardly ever trying to settle on the face.

[^143]:    * The writer inclades the Mandarin Duck (4. galericulata) as one of the specioe that acquired the perohing habit; but this bird is natarally a percher.

[^144]:    Netticm Albiguliare.

[^145]:    Aslatic Researches. Vols. VII, Vols. XI and XVII, aud Vols. XIX and XX@ 10/ each ... ... R8. 50 0 Proembinas of the Asiatic Soeiety from 1865 to 1869 (inel.) @ 6/ per No. ; and from 1870 to date (c) $8 /$ per No.
    Jubrall of the Asiatic Society for 1843 (12), 1844 (12), 1845 (12), 1846 (5), $1847(12), 1848$ (12),1850(7), 1851(7), 1857 (6),

[^146]:    *The Handbook of Folklore. London: David Nutt. 1890,'p. 121.

[^147]:    *Campbell's Santal Folk-tales, pp. 119-124.
    $\dagger$ Jacobs' Indian Fairy Tales, p. 31.
    $\ddagger$ Stokes' Indian Fairy Tales, p. 66 ; pp. 75ff.
    § Knowles' Folk-tales of Kashmir, pp. 397-405.

[^148]:    - Campbell's Santal Folk-tales, p. 63.
    $\dagger$ Loc. cit., pp. 108-105.

[^149]:    * With this desoription of Khond Marriage Castoms compare the accounts in Dalton's Ethnology of Bengal, p. 299 (published in 1872), in Hunter's Statistical Acconnt of Bengal, vol. XIX, p. 225 (pablished in 1877), and in Mr. Risley's Tribes and Castes of Bengal, vol. I, p. 400 (published in 1891). From these it will be seen that the castoms and ceremonies described in the present article are not primitive, yet this nccount indicates the manner in which the Khonds have been Hinduizing their customs, [Ed.]

[^150]:    * At the end is given a specimen (with a free translation in English) of the invocation used when wine is poured out in libation to the tatelary demons.

[^151]:    * This ceremony is symbolical of the respective ocoupations of a husband and wife: the husband is to till the fields, and the wife to sit at home and oook the food.
    $\dagger$ A relic of the times when marriage by capture prevailed.
    J. III. 4

[^152]:    * Samdi is a corruption of the Bengali sambandhi, "a relative, connexion," which is valgarly pronounced samdhi or sumdi.

[^153]:    *The sign'shortens the vowel whioh it follows by a sharp stoppage of the breath during its enunciation, as ma's, "I am."

[^154]:    - This is quite in accordance with Ho notions. If a man buys a wife there is an implied warranty that she is to last a reasonable time. If she dies shortly after marriage a sister or cousin has to be given to replace her.

