



PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL.

EDITED BY
THE HONORARY SECRETARIES.



JANUARY TO DECEMBER,
1897.



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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR JANUARY, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 6th January, 1897, at 9 P.M.

DR. A. F. R. HOERNLE, Vice-President, in the chair.

The following members were present:—

Dr. A. R. S. Anderson, Rai Çarat Candra Das, F. Finn, Esq., A. Kadar, Esq., Kumār Rāmēçvar Māliab, W. H. Miles, Esq., L. de Nicéville, Esq., R. D. Oldham, Esq., Dr. D. Prain, A. T. Pringle, Esq., Paṇḍit Mahēndra Nath Vidyānidhi, Dr. L. A. Waddell, C. R. Wilson, Esq.

Visitor:—Dr. Niçikānta Chatterji.

The minutes of the last meeting were read and confirmed.

Thirty-six presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last Meeting of the Society were balloted for and elected Ordinary Members:—

Dr. Amritalal Sircar, L.M.S.

Pandit Tulsi Ram Misra, M.A.

“Shams-ul-ulama,” “Khan Bahadur” M. Zakauallah.

The following gentlemen are candidates for election at the next Meeting:—

Walter Weber, Esq., 8, Chowringhee Road, Calcutta, proposed by L. de Nicéville, Esq., seconded by Dr. G. Ranking.

H. H. Hayden, Esq., proposed by T. H. Holland, Esq., seconded by F. Finn, Esq.

Dr. Th. Bloch, proposed by Dr. A. F. R. Hoernle, seconded by C. R. Wilson, Esq.

C. W. Peake, Esq., proposed by C. R. Wilson, Esq., seconded by G. W. Kuchler, Esq.

The following gentlemen have expressed a wish to withdraw from the Society :—

C. A. Oldham, Esq., I.C.S.

Dr. V. S. Balasundra Mudaliar.

The Secretary reported the death of the following members :—

Raja Lachman Singh.

Sardar Sir Atar Singh, K.C.I.E.

The Chairman announced that he had received two essays in competition for the Elliott Prize for Scientific Research for the year 1896.

Dr. Hoernle read reports on the following finds of Treasure Trove coins :—

1. REPORT ON 452 old coins forwarded by the Deputy Commissioner of Delhi, with his No. 242, dated $\frac{12}{19}$ th March, 1896.

The Deputy Commissioner's letter only mentions 451 rupees, which are said to have been found in the village Khirki in the Delhi District : no further details are given. With these rupees, however, I found a copper coin, though how it got there, I do not know.

All the 451 silver coins are rupees of Moghul emperors, ranging from Akbar the Great down to Akbar II, of more exactly from the year 1599 A.D. (4th Ilahi year of Akbar I) to 1810 A.D. (or 1225 Hijrah). In this respect this hoard of coins is a curiosity.

The following is a detailed statement of the Rupees :—

I. AKBAR I, 963-1014 H. = 1556-1605 A.D.

Ilahi rupees of the Ahmadābād mint and the year

44, like Brit. Mus. Cat., No. 178 2

II. JAHĀNGĪR, 1014-1037 H. = 1605-1627 A.D.

Variety 1 : like Br. Mus. Cat., No. 491, Lāhōr,

1036, 22 1

Variety 2 : like Br. Mus. Cat., No. 467, Patnah,

1027; month Ardibihist 1

III. SHĀH JAHĀN, 1037-1068 H. = 1628-1658 A.D.

Type I : two square areas ; variety 1, lined areas ;

mostly in indifferent condition: mints Aḥmadābād (1 coin), Akbarābād (2), Akbarnagar (1), Bhakar (2), Barhānpur (1), Jūnahgarh (1), Kambāyat (1), Lāhōr (5, one dated 1061), Mihrpur (1), Multān (6, two dated 1046, 1061), Patnah (10, one dated 1042), Qandahār (1), Sūrat (10). Illegible mints and dates 46. One, marked with a dagger, of the 24th regnal year, but date and mint illegible: very rare.

Total	...	...	...	...	89
Variety 2: dotted areas; mint illegible, date 106*	...	...	...	...	1
Type II: one round area: dates illegible; mints Lāhōr and Multān	...	...	...	...	3
Type III: two lozenge areas: mint and date illegible	...	...	...	...	1
Type IV: one lozenge area: like Br. Mus. Cat., No. 621, mint illegible, date 1042...	...	...	...	...	3
Type V: lettered surfaces: Aḥmadābād 1037, Akbarābād (2 coins, one dated 1040), Barhānpur (1), Golkondah (1, rare), Lāhōr (date 1038), Sūrat (4, dates 1038, 1040, 1041, one illegible,) Tattah (dates 1039, 10*9, 1041, 1060, 1064, 1068)	...	...	...	...	16

— 113

IV. AURANGZĪB, 1069–1118 H. = 1659–1707 A.D.

Type I: lettered surfaces: variety 1, date in top line, over name: Ajmir (3) 1097^a, 1106, Akbarābād (2) 1097, 1107, 'Alamgirpur (1), Aurangābād (2) 1074, 1076, Azīmābād (2) 1116, Barōli (5) 1108, 1109, 1110^b, Barhānpur (1) 1101, Cināpatan (1), Etāwā (26) 1092, 1095, 1096, 1098, 1099, 1100, 1101, 1103^c, 1104^d, 1105, 1106^e, 1107^f, 1108, 1116; Golkonda (9), Jūnahgarh (1) 1101, Khujistah Bunyād (1) 1115, Kambāyat (3), Katak (1), Kulbarga (1), Lāhōr (16) 1090, 1093^g, 1095, 1099, 1101, 1102, 1103, 1106, 1107^h, Lakhnau (3), Multān (8) 1073, 1076, 1077, 1090, 1093, 1098, 1103, 1114, Murshidābād (3) 1105, 1115, 1118, Nārñōl, (5) 1098, 1099, 1102, 1105, 1106; Patnah (2) 1089, Shāhjahānābād (32) 1077ⁱ, 1085, 1090, 1096, 1097^j, 1098,

1099 ¹¹ , 1101, 1102, 1103 ² , 1104, 1105, 1107, 1111, Sūrat (37) 1090, 1092 ² , 1093 ² , 1094 ² , 1095 ² , 1097 ² , 1093 ² , 1099, 1100, 1101 ² , 1102 ² , 1104 ² , 1105 ² , 1107, 1111, 1112, 1117, Tattah (6) 1090, 1107, 1116, Ujain (1) 177	
Variety 2: date in top line, under name: 'Alamgīrnagar (1) 1083, Barēli (1) 1103, Lakhnau (2) 1089, 1098, Sūrat (3) 1089, 1096 7	
Variety 3: date in second line: Sūrat (1) 1071, 1076, 1084, 1085, 1088, 1091, 1094 ² , 1095, 1098 ² , 1106 ² , 1108, 1109 ² , Tattah (2) 1081 19	
Variety 4: date in third line: Aḥmadābād (5) 1074, 1075, 1086, 1091, 1107, Akbarābād (2) 1071, 1101, Golkonda (6) 1076 ² , Kambāyat (3) 1093, 1096, 1103, Katak (1) 1072, Lakhnau (2) 1088, 1101 19	
Variety 5: with <i>mihr munīr</i> , Akbarnagar, no date 14	
Illegible mints and dates 43	
Type II: two square areas: Akbarābād (4) 1071, 1081, 1085, 1086, Jūnahgarh (4) 1081 ⁴ ... 8	
Type III: like Br. Mus. Cat., Nos. 726 and 728: Azīmābād (7) 1070 ² , Tattah (1) 1071 ... 8	
Type IV: like Br. Mus. Cat., No. 737, dated 1071 ... 1	
	— 296
V. BAHĀDUR SHĀH, 1119–1124 H. = 1707–1702 A.D.	
Type I, like Br. Mus. Cat., Nos. 866, 867: Barēli (4) 1220, 1122 ² , Etāwā (2) 1121 ² , Shāhjahānābād (5) 1120 ² , 1122 ² 11	
Type II, like Br. Mus. Cat., Nos. 861, 862: Akbarābād (1), Akbarnagar (1) 1120, Cinā- patan (3) 111 ² , mint illegible (2) ... 7	
Type III, like Br. Mus. Cat., No. 863: Akbarābād (1), Khujistah Bunyād (1) 1120; Lāhōr (1), Sūrat (4) 1121 ⁴ 7	
	— 25
VI. JAHĀNDĀR SHĀH, 1124 H. = 1712 A.D., Lāhōr 1124 (new, very rare), Shāhjahānābād 1124 ... 2	
	— 2

VII.	MUHAMMAD SHĀH, 1131-1161 H. = 1719-1748 A.D.	
	Type: <i>Shāh Qirān</i> , Shāhjahānābād 1153	1
VIII.	SHĀH 'ĀLAM, 1173-1221 A.H. = 1759-1806 A.D.	
	Type like Br. Mus. Cat., No. 1104, Shāhjahānābād	
	1216	1
	Type: some native state (Kōtah?) (5) 1203 ³ , 1204 ³	5
	Type: E. I. Company, Farrokhābād, year 4 (2)	2
		<hr/> 8
IX.	AKBAR II.	
	Type like Br. Mus. Cat., No. 1217, Shāhjahānā-	
	bād, 1225	1
	Type, some native state (Kōtah?)	1
		<hr/> 2
	Grand Total:—	<hr/> 451 <hr/>

The single copper coin is of the Nārñöl mint, and probably belongs to Akbar's coinage; but it is in a too bad state to be identified with certainty.

II. REPORT ON 740 Silver Coins forwarded by the Deputy Commissioner of the Bannu District, Panjāb, with his No. 1430, dated 26th December, 1895.

These coins are stated to have been found in a "place called the Akra mounds, lying nine miles south of Edwardsabad in the Bannu District." They were "found, buried in one pot, by a person who had gone to the mounds to dig earth in July 1896."

They are small silver coins of the size of a modern four annā piece; and with one exception, belong to Sabaktigīn, one of the early members of the Ghaznavi dynasty, who reigned from 366-387 H. or 976-997 A.D. The exception is a coin of the Hindū dynasty of Kābul, of the Bull and Horseman type, with *Bhīma* over the horseman, and *Çri Sāmanta Dēva* over the bull.

The Ghaznavi coins belong to three different varieties:—

- 1, the common variety, figured in the British Mus. Cat., Vol. II, No. 453, on Plate V. Of this variety, there are specimens 719
- 2, another variety, which differs from the common one only in substituting on the obverse the word *Subuktigīn* for *al-Ṭāy'allah*. On this variety, therefore, the word *Subuktigīn* occurs on both sides. Of this variety there are specimens 13

- 3, a third variety which agrees with the second variety in the reading of the obverse, but further substitutes *al-Ṭāy'allah* for *Subuktigīn* on the reverse. On this variety, therefore, these two words occupy positions exactly the reverse of those on the first variety. Of this third variety there are specimens ... 8

Total ... 730

Varieties 2 and 3 are extremely rare. So far as I can discover, they do not exist in the British Museum. The Lahore Museum possesses one specimen of the second variety; it is No. 11 in its Catalogue, Vol. II, page 24. On the other hand, the Indian Museum in Calcutta possesses one specimen of the third variety; it is No. 7847 in its Catalogue, Vol. IV, page 153. There is also one of this variety in the India Office, from Masson's collection, described by Thomas in the *Journal R. A. S.*, Vol. IX, page 305. No others are known to me.

The coins are in very fair condition, so far as their circular areas are concerned. The margins, however, which give the mint and date, are in most cases wholly gone; and in the few exceptional cases, they are mere fragments and almost unreadable. In no case are either mint or date fully determinable.

III. REPORT ON 10 Old Coins forwarded by the Deputy Commissioner of Gujranwālā with his No. 392, dated 17th March, 1896.

The Deputy Commissioner's letter contains no information as to the date and the locality of the find.

The coins are of mixed metal (copper with a little silver) and belong to the early period of the Muhammadan occupation of India. They imitate the well-known early Hindū coinage of the Bull and Horseman class. They are all in a very indifferent condition, showing the merest fragments of their legends. The following is a detailed statement:—

- | | |
|--|---|
| (1) Coins of Saifu-d-din Ḥasan Qurlagh, about 625-640
H. = 1227-1242 A.D., see Thomas' <i>Chronicles</i> ,
No. 82 | 8 |
| (2) Coin of Mu'izzu-d-din Bahrām Shāh, like Br. Mus.
Cat., No. 70-72 | 1 |
| (3) Coin undetermined; obv. Horseman with traces of
𑂔𑂱𑂔: <i>hamīrah</i> ; rev. recumbent bull with traces
of a legend, of which only 𑂔𑂱 <i>puṭha</i> is legible. It
is perhaps a coin of Prithirāj of Delhi ... | 1 |

Total ... 10

IV. REPORT ON 22 Silver Coins, forwarded by the Deputy Commissioner of Lohardaga with his No. 253 R, dated 1–4th July, 1896.

The coins are stated to have been found “on the 26th September, 1895, by the Māli of Bābū Kailāsa Chandra Chatterjee, while digging a field in his garden where there was formerly a cowshed.”

They are Rupees of the East India Company’s coinage, of three different varieties, as follows:—

(1a) with oblique milling; 45th san, 1803–1819, mint Farrukhābād...	...	...	...	7
(1b) with oblique milling; 19th san, 1793–1818, mint Murshidābād...	...	...	...	8
(2a) with straight milling; 19th san, 1818–1832, mint Murshidābād...	...	...	...	2
(2b) with straight milling; 45th san, 1819–1833, mint Farrukhābād...	...	...	...	3
(3) with plain edge and plain rim; 45th san, 1833–1835, mint Farrukhābād	...	...	...	2
Total				22

V. REPORT ON 49 Old Coins forwarded by the Deputy Commissioner of Kāngrā, with his No. 996, dated 13th June, 1896.

On the 13th May last, 770 copper and 3 silver coins were found buried in an earthen pot at Machiāli, in village Momtā, Tahsil Kāngrā of the Kāngrā district. The 3 silver coins and 46 specimens of the copper coins were forwarded by the Deputy Commissioner to the Asiatic Society of Bengal, the remainder of the copper coins not being worth acquiring by the Government.

Of these coins, 28 belong to the Sūrī dynasty, and 21 to Akbar. They are all in a rather indifferent condition. The following is a detailed statement:—

I. Coins of the Sūrī Dynasty:—

(1) <u>SHĒR SHĀH</u> , H. 947–952 = A.D. 1540–1545.				
(a) <i>Silver</i> ; type, square areas, like British Museum Catalogue, No. 530, date 952...	...	...	...	1
(b) <i>Copper</i> ; type, square areas, like Br. Mus. Cat., No. 560, mints: Nārñōl, Hīṣār, Gwāliyār	...	...	...	5
(c) <i>Copper</i> ; type, lettered surfaces, like Br. Mus. Cat., No. 560, dates illegible	...	...	...	5
—				11
(2) <u>ISLĀM SHĀH</u> , H. 952–960 = A.D. 1545–1552.				
<i>Copper</i> ; type lettered surfaces; legible dates 953, 957, 959 ^a	...	...	...	9

(3) MUHAMMAD SHĀH, H. 960-962 = A.D. 1552-1554.

<i>Copper</i> ; type, lettered surfaces; legible dates				
961 ³ , 962	...	...	...	8

Total	...			28

II. Coins of Akbar, H. 963-1014 = A.D. 1556-1605.

(a) <i>Silver</i> ; with one square and one round area, like Br. Mus. Cat., No. 84, date of one 968				
...	...	...	...	2

(b) <i>Copper</i> ; lettered surfaces, Nārñöl mint, dates 968, 973, 974				
...	...	...	...	12

(c) <i>Copper</i> ; lettered surfaces, Hīṣār mint, illegible dates				
...	...	...	...	3

(d) <i>Copper</i> ; illegible				
...	...	...	...	4

Total	...			21

Grand Total	...			49

VI. REPORT ON 19 old Silver Coins forwarded by the Deputy Commissioner of the Firūzpur District with his No. 1676, dated 9th October, 1896, and No. 1571, dated 25th September, 1896.

The Deputy Commissioner states that 23 coins were found by a zamīndār while ploughing in a field in the village of Sarāi Naugā in the Mukatsar Tahsil of the Firūzpur District. One specimen was sent in September 1896, and the balance of 22 coins was transmitted in October 1896. Of the latter number, only 18 were received by the Asiatic Society of Bengal, four coins having been lost in transit, owing to the cover enclosing the coins being of a very flimsy nature and tearing on the way; efforts to recover the missing coins were made by the Post Office, but unsuccessfully. The loss is of no consequence, the coins being of no particular numismatic value.

They are small silver coins of the size of 4 annā pieces, and belong to the so-called Indo-Sassanian Class. They have been numerous found in large quantities at various times; and their exact attribution is uncertain. They are commonly known as "Gadhiya ka paisa," and are described and figured in Prinsep's *Indian Antiquities* (ed. Thomas), Vol. I, p. 341, Plate XXVII, figs. 13-16.

VII. REPORT ON 21 old Silver Coins forwarded by the Deputy Commissioner of Nāgpur, with his No. 7707-656, dated 6th December, 1895.

No information is given with regard to the date and locality of the find.

All the coins are rupees of the Moghul emperors Farrukh Siyar and Ahmad Shāh. Of the former there is only one rupee, dated H. 1125 = A.D. 1713, mint Elicpur ... 1

The remainder belong to Ahmad Shāh, and are of the two mints Sūrat and Katak, of various regnal years, the Hijrah years are not legible ... 20

Total 21

VIII. REPORT ON 24 old Silver Coins forwarded by the Collector of Bhagalpur, with his 1070 G., dated 21st August, 1896.

No information is given referring to the date and locality of the find. The coins are rupees of the old British mintage of the East India Company, of the 19th san, and mint Murshidābād.

There are two varieties; (1) of the older issue, of 1793–1818, with oblique milling ... 10
(2) of the later issue, of 1818–1832, with straight milling 14

Total ... 24

IX. REPORT ON 11 old Silver Coins, forwarded by the Collector of Kulna, with his No. 1486 G., dated 3rd October, 1896.

The Collector states that these coins were found in an earthen pot (*bhar*) by labourers while digging a tank at Bansghaṭṭā, Thānā Satkhira.

They consist of rupees of Muḥammad Shāh, Ahmad Shāh and Shāh 'Ālam. Of Muḥammad Shāh there is only one specimen, in poor condition, of the 26th year of his reign (*i.e.*, 1156 H = 1743 A.D.), and the *Bādshāh Ghāzi* type ... 1

Of Ahmad Shāh there are seven rupees, all of the 3rd year of his reign (*i.e.*, 1164 H = 1750 A.D.), and like Br. Mus. Cat., No. 1039 ... 7

Of Shāh 'Ālam, there are three rupees, like Brit. Mus. Cat., No. 1188, of the dates 1180,8 and 1181,9^a ... 3

All the coins are of the Murshidābād mint.

11

X. REPORT ON 19 old Silver Coins forwarded by the Collector of Darbhanga, with his No. 1167 G., dated 28th October, 1896, and No. 155 G., dated $\frac{24}{27}$ April, 1896.

The coins are stated to have been found in the Bāgmatī river, together with 5 "lobia pice." The former only were forwarded for report.

They are rupees of the following Mughul emperors, covering a period of nearly 100 years, from 1032 H = 1622 A.D. to 1129 H = 1716 A.D.

I. JAHĀNGĪR, 1014–1037 H = 1605–1627 A.D.			
Type: lettered surfaces, like Br. Mus. Cat., No.			
491, mint Lāhōr, date 1032 H, regnal 17	...	...	1
II. SHĀH JAĀHĀN, 1037–1068 H = 1628–1658 A.D.			
(a) type, two square lined areas, mint Multān			
1042, others illegible	...	...	4
(b) lettered surfaces, like Br. Mus. Cat., No. 608,			
but mint and date illegible	...	...	1 5
III. AURANGZĪB, 1069–1118 H = 1659–1707 A.D.			
(a) type, <i>badr Munīr</i> , Sūrat 1093, 24, Tattah 1105,			
36, Dāru-l-Khilāfat Shāhjahānābād 1105,			
37, Sūrat, Katak (dates illegible); also			
mints illegible, but 1109, 1111, 1087	...	...	9
(b) type, <i>mīhr munīr</i> , Akbarnagar, <i>jalūs</i> 27			
...	...	...	1 10
IV. FARRUKH SIYAR, 1124–1131 H. = 1713–1719 A.D.			
type, lettered surfaces, like Br. Mus. Cat.,			
No. 891, mints Mustaqīru-l-Mulk 1129,6,			
Cināpatan, <i>jalūs</i> 2	...	...	3
Total			19

XI. REPORT ON 14 old Assamese coins, forwarded by the Deputy Commissioner of Sibsāgar with his No. 694 G.I., dated the 28th November, 1896.

The coins are stated to have been found in an earthen pot in the side of a "hola" by two men of the Kacarī village while getting firewood from a jungle.

They belong to the following of the old Rājas of Assam :—

(1) RUDRA SIMHA, 1669–1717 A.D.			
Silver, octagonal coin, whole rupee, date 1621			
Çaka = 1699 A.D.	...	...	1
(2) ÇIVA SIMHA, 1718–1743 A.D.			
Silver, whole rupee, octagonal, date 1653 Çaka =			
1735 A.D. ...	...	...	1
(3) PRAMATHA SIMHA, 1744–1750 A.D.			
Gold, octagonal, $\frac{1}{2}$ coin, no date	...	...	1

(4) RĀJĒÇVARA SĪMHA, 1750–1770 A.D.			
(a) <i>Silver</i> , octagonal, whole coin, dates 1682, 1689 Çāka = 1760 and 1767 A.D.	...	2	
(b) <i>Silver</i> , octagonal, $\frac{1}{2}$ coin, no date	...	2	4
<hr/>			
(5) LAKṢMĪ SĪMHA, 1770–1779 A.D.			
(a) <i>Gold</i> , octagonal, $\frac{1}{4}$ coin, date 1695 Çāka = 1773 A.D.	...	...	1
(b) <i>Silver</i> , octagonal, whole coins, dates 1692, 1693, 1696, and 1697 Çāka = 1770, 1771, 1774 and 1775 A.D.	...	...	4
(c) <i>Silver</i> , octagonal, $\frac{1}{2}$ coins, date none	...	2	7
<hr/>			
Total			14

XII. REPORT ON 3 old Silver Coins, forwarded by the Collector of Darbhanga, with his No. 234, dated 4th May, 1896.

These coins are stated to have been found by some persons while digging earth on the banks of the Jiwac river. The date of the find is not mentioned.

They are coins of the following Independent Sultāns of Bengal:—

(1) ĀLĀU-D-DĪN ḤUSAIN SHĀH, 899–925 H. = 1493–1518. A.D.			
Type, lettered surfaces, like Brit. Mus. Cat., No. 130, mint Ḥusainābād, date 919	...	2	
(2) NĀṢĪRU-D-DĪN NĀṢRĀT SHĀH, 925–939 H. = 1518–1532, A.D., mint Dāru-l-ḡarb, date 925, like Brit. Mus. Cat., No. 143			
...	...	...	1
<hr/>			
Total			3

XIII. REPORT ON three old Silver Coins, forwarded by the Collector of Muzaffarpur, with his No. 1451 R., of 30th December, 1896.

The coins are stated to have been dug out of a hole by some children, who were grazing goats, in Majhauriā, a tolah of Paru, in the Muzaffarpur District, November 1896.

They are coins of Sultān 'Alāu-d-dān Muḥammad Shāh of Delhi, who reigned 695–715 H. = 1295–1315 A.D., of the type shown in the British Museum Catalogue, No. 164. They are all of the 'Ḥaṣrat Dehli' mint, though the mint-name is fully preserved only on one specimen. The date is lost on all three specimens.

The SECRETARY read the following note by Dr. L. A. Waddell, on the Rev. A. Sandberg's note to Mr. Gait's paper on Ahom coins.

To

THE SECRETARY OF THE ASIATIC SOCIETY OF BENGAL.

SIR,

I have just received the June number of the *Proceedings* of the Society and find that it contains a note under the above heading by Mr. Sandberg dealing with what he is pleased to consider certain 'inaccuracies' of mine, and I take the earliest opportunity of correcting its misapprehensions and mistatements.

It is amusing to see such a peaceable person as myself accused of 'much maligning Huc' and of 'accusing him of errors,' especially as I have never lost an opportunity of expressing my admiration for Huc's marvellous accuracy of observation; and few, indeed, have contributed more than I have done towards rehabilitating Huc's reputation for veracity. And certainly no hostile spirit to Huc's work was expressed or implied by me in my reply to the editor's request to revise the spelling of the names in Huc's list in accordance, if possible, with the system adopted by the Society. A glance at Huc's Tibetan names at once showed that his list stood much in need of revision. In fact the majority of his names were misspelt almost beyond recognition, thus *Cheng* for *Shiz*, *Dchak* for *Chag* and *Tchon* for *Chhu*—for Huc's weakest point was the comparatively unimportant one of spelling.

As the editor was also good enough to ask me to test if possible, Huc's spelling of the Mongolian words, I obtained the list in question from the learned Mongolian Lāma of the Bhotiya School at Darjiling who is Babu Sarat Chandra Das' chief source of inspiration on Tibetan matters; and had my accompanying note on its source and interpretation been also published, all ambiguity would have been saved.

In that note, of which unfortunately I kept no copy, I am under the impression that I clearly stated, firstly, that the Mongolian words were written down for me in Tibetan characters by the scholarly Mongol Lāma Sherap Gyatsho, who is thoroughly proficient in Tibetan; and secondly, that all I had done was to transliterate these words into Roman characters by a slight modification of the system of Jaeschke, the authority on Tibetan orthography;¹ and thirdly, that the words were pronounced according to the Tibetan style.

I could not compare the words with the forms found in the dictionaries of European lexicographers as I had at that time no library at

¹ The system adopted is almost identical with that used by the Society except that the *h* in aspirates is expressed by a comma.

hand for reference, nor had I visited Mongolia or studied that language. Now, however, I have looked up as far as I can the authorities quoted by Mr. Sandberg.¹ The Society's library contains two out of the three dictionaries quoted by him. Of these, however, only Castren's is in Romanized characters, the other by Schmidt being in Mongolian and Russian type. And it is remarkable to find that although Mr. Sandberg says he writes "in the interests of accuracy" he is most inaccurate in his quotations. So much so that the alleged differences between the versions of his dictionaries and of the Mongol Lāma have been much magnified. The few discrepancies which do exist are dialectic of a kind which are more apparent than real, as they consist mainly in the difference between the written and spoken forms of Tibetan, a fact which it is strange Mr. Sandberg did not perceive, as he has studied Tibetan.

In the following table I have arranged the various lists for comparison. The last two columns show how far the only available one of the three dictionaries quoted by Mr. Sandberg justifies his claim for accuracy. It will also be evident that, *pace* Mr. Sandberg, the Mongol Lāma's list is quite as near the dictionary version as Huc's, or even still nearer to it; while it has the merit of giving at first hand by a learned Mongol an independent version of the spoken form of the words in question.

	Mongolian Lāma's List in Tibetan Characters.		Huc's List. ²	Castren and others, according to Mr. Sandberg.	Castren's own spelling. S. = Selengin dialect. T. = Tunkin dialect.
	As pronounced.	As Spelled.			
Wood	Mot	Mod	Moto	Modon	Modo S.; Modon T.
Fire	Kal	Kal	Gal	Gāl	Gal
Earth	Sho-ra	So'-ra	Ché-ré	Shirogé	Sábar S. Ojor.
Iron	T'u-mer	T'u-mer ³	Té-mur	Temür	Tumer T.; Tömör S. Oso S.
Water	O-su	O-su	Oussou	Usun	
Mouse	Hul-kan	Hul-kan	Khouloukhana	{ Khulughana in (N. Mong.) and Hulghāna (in S. Mong.).	Xulgana S. and T.

¹ His statement too that "there is no letter 'p' in Mongol" seems remarkable as his authority Castren frequently uses 'p' in transliterating Mongol words.

² Hazlitt's translation of Huc's *Travels in Tartary, Tibet and China*, II, 212.

³ By a mistake this was printed T'uled.

	Mongolian Lāma's List in Tibetan Character.		Huc's List. ¹	Castren and others, according to Mr. Sandberg.	Castren's own spelling. S.=Selengin dialect. T.=Tunkin dialect.
	As pronounced.	As Spelled.			
Ox	U-k'er	U-k'er	Onkhere	.....	Uker T. and Uxer S.
Tiger	Bar	Par	Bara	Bars	(Not found)
Hare	Tü-lé	T'us-las	Tolé	Tolai	(Not found)
Dragon	Lu	Lwu	Lou	Lu	
Serpent	Mo-ké	Mo-kas	Mokhé		Mogoi
Horse	Mo-ri	Mo-ri	Mori		
Ram	Ho-ni	Ho-ni	Khoui		Xone S.
Monkey	Be-chi	Pe-chi	Betchi		
Fowl	T'a-ka	T'a-ka	Takia	Takiya	
Dog	No-hé	No-has	Nokhé	{ No he (in S. Mong.) and Nokhai (in N. Mong.)	(Not found)
Pig	Ka-hé	Ka-has	Khakhé	{ Ka-he, (in S. Mong.) and Khakhai (in N.).	

So much then for Mr. Sandberg's boasted accuracy in respect to the Mongolian names. As regards the Tibetan list I have already instanced how much it stood in need of revision. With such uncouth words as *spæu* and *lc'ags* it is a wonder that printer's errors are not more numerous. The other word mentioned by Mr. Sandberg should certainly be *Lug* and not *Luk* as given by him.

I would also notice here another article in this *Journal* which attributes to me statements that I never expressed. Mr. Beveridge in his paper on *The site of Karṇa-Suvarṇa*, which appeared in the *Journal* of the Society when I was absent in Europe,² and which has only lately come to my notice, makes me assert the opinion that the long lost capital of king Çaçāṅka certainly lies near the city of Burdwan. While as a fact, I only recorded some local evidence in favor of this possibility. And his discovery that this site lay probably at Raṅgamāṭi near Murshidābād is no discovery at all, as it was specially mentioned by me in that very report which he notices.

L. A. WADDELL.

Calcutta, 19th December, 1896.

Rai Çarat Candra Das Bahadur, gave an account of the early history of Chittagong.

¹ Hazlitt's translation of Huc's *Travels in Tartary, Tibet and China*, II, 212.

² *Proceedings*, December 1893, p. 172; and *Journal*, Vol. LXII, i, 1893, pp. 315 *et seq.*

The following papers were read :—

1. *Numismatic Notes and Novelties (Ancient and Mediæval India).*—
By VINCENT A. SMITH, I.C.S., (with a plate).

2. *Mēghēçvara Inscription.*—By NAGENDRANĀTHA VASU.

The papers will be published in the *Journal*, Part I.

3. *A Theory of Vegetable Antitoxins.*—By SURG.-CAPT. H. A. CUMMINS, A.M.D., F.L.S. *Communicated by the Natural History Secretary.*

Preliminary remarks.

- Sec. I. Experiments on absorption of plants—Bacteria, &c.—Symbiosis.
 - Sec. II. Unorganised ferments—Comparison between physiological processes in animal and vegetable cell.
 - Sec. III. Antiseptics—Quinine, &c.—Constitution of protoplasm in different species.
 - Sec. IV. Alteration in character of secretions by change of environment.
 - Sec. V. Contact of protophytes with roots in the soil. Transpiration.
- General conclusions.

PRELIMINARY REMARKS.

The formation of antitoxins in animals leads me to believe that an analogous process may take place naturally in plants. I am not aware that an attempt has ever been made to produce these antitoxic substances artificially in plants. The attempt would undoubtedly be attended with great difficulty as the circulation of vegetable fluids is by no means so free as in the blood vessels of the higher animals.

The soil contains numberless protophytes doubtless as poisonous in many cases to the higher plants as they are to animals. That intense poisons do exist in the soil is shown particularly in malarious countries where freshly opened ground causes severe fevers among the labourers employed, especially if they are not natives of the locality.

It would appear that as in animals so in plants antitoxins play a very important part in survival or extinction of species. Among human beings it is known that those living in a certain locality are exempt from diseases the poisons of which exist in the ground or water: as an instance of this we observe the natives of the Gold Coast who suffer little from fever of a malarial character which attacks Europeans or inhabitants of a neighbouring part of the country. We may explain

this by saying that a substance toxic to the fever poison is produced in the tissues and that in the course of years, survival of those capable of producing this antitoxin led to the existence of a fever-resisting race. In a similar manner plants capable of producing a necessary antitoxic substance now grow and flourish while those not so capable have become extinct. I shall now endeavour to explain how I think the process may take place.

SEC. I. EXPERIMENTS ON ABSORPTION OF PLANTS—BACTERIA, ETC.—
SYMBIOSIS.

We must first consider the results of certain experiments made by scientists to test the powers of absorption by the roots of plants. The red colouring matter of *Phytolacca* was absorbed by white hyacinths when poured upon the soil on which they were grown: after two or three days the red colour disappeared from the flowers (Bion). The flowers of the tuberosa (*Polyanthes tuberosa*) and snapdragon were affected in a similar manner (Sarrabat). Cut flowers take up colouring matter with rapidity, as may be easily demonstrated. The injured cells at the surface of the section become infected with bacteria (Höhnel). The osmotic action by means of which water and substances dissolved therein pass into the roots does not preclude the possibility of the entrance of bacteria. Dead albuminous substances cannot pass through a colloid membrane: the relation between living cells is different and although the cells of the root hairs may be very capricious in their action, nevertheless, living bacteria or other protophytes might gain admission. Bacteria appear to be invariably unicellular and amongst the minutest organisms observed by the aid of the microscope varying from $\frac{1}{800}$ m.m. to $\frac{1}{2000}$ m.m. (Kerner and Oliver, *Nat. Hist. Plants*, page 161).

Besides the bacteria proper there are many protophytes which consist each of a very small cell without any differentiation into cell-wall and cell contents (Sachs, *Text Book of Botany*, page 248). Bacteria are also known to exist and float about in the air so that the possibility of their entrance by the stomata of leaves must also be considered. This entrance of the hyphae of *Polypori* is known to take place (Kerner, *op. cit.*, page 163).

A certain relation is known to exist between *Fungi* and the roots of plants, especially of those of the Natural Orders *Ericaceae*, *Cupuliferae* and *Salicaceae*. Here we have a symbiotic union between the fungus-mycelium and the roots of a green-leaved plant, (Kerner, *op. cit.*, page 250). The hyphae insinuate themselves inside the walls of the epidermal cells of the root and the latter are permeated by an extremely fine meshed mycelial net (Kerner, *op. cit.*, page 249).

We can imagine without difficulty the converse of this case; hostile organisms gaining admission and damaging the tissue by causing fermentations. The host plant then throws out an antitoxic fluid from its cells to save it from destruction.

The possibility of entrance of protophytes is made easier of belief when we also think that colouring matter can pass the epidermal cells of the root and get carried through the vascular system of the plant to the flowers.

SEC. II. UNORGANISED FERMENTS—COMPARISON BETWEEN PHYSIOLOGICAL PROCESSES IN ANIMAL AND VEGETABLE CELL.

In the next place we must consider the points of analogy in the physiological processes of the animal and vegetable cell.

We find that in the vegetable cell, starch is converted into glucose or cane-sugar. This change is said to be due to the action of an unorganized ferment and of this class of ferments several have been shown to occur, *viz.*—Emulsin in almonds, diastase in barley, and myrosin in mustard seeds. A similar change of starch into sugar takes place in human saliva and by the action of pancreatic juice. Again a peptic ferment changes, in the vegetable cells, the reserve proteids into peptones (Sachs, *op. cit.*, page 708). The leaves of *Drosera* produce an acid and a ferment which act on albuminous compounds like pepsin. This is also the case with the secretion of the leaves of butterwort (*Pinguicula*) which act in a manner similar to the gastric juice of animals, (Kerner, *op. cit.*, pages 142 and 144). Asparagin which is a bye product in the oxidation of nitrogenous substances of the plant has been said to correspond physiologically with urea in animals (Sachs, *op. cit.*, page 722).

In comparing circulatory systems of plants and animals, we find in the latter arteries, veins, lactiferous vessels, &c., for the conveyance of special nutritive fluids. In the former (plants) the circulation of sap takes place thus:—In the parenchyma of the fundamental tissue which has an acid reaction, are conveyed carbo-hydrates and oil: by the soft bast the albuminoids which have an alkaline reaction. When there are lactiferous vessels they furnish an open communication between all the organs of the plant. These lactiferous vessels contain albuminoids, carbo-hydrates and oil as well as poisons and other secondary products of metastasis. Of the secondary products of metastasis such as colouring matters, acids, alkaloids, &c., many have no known physiological signification in the life of the plant (Sachs, *op. cit.*, pages 706, 711-712.)

Again some gases as sulphuretted hydrogen, carbon oxide, common

coal gas, &c., seem to have an influence on plants like that produced on animals by narcotic poisons: other gases as sulphurous and hydrochloric acid appear to resemble the action of irritants upon animals (Bentley, *Manual of Botany*, p. 806).

SEC. III. ANTISEPTICS—QUININE, ETC.—CONSTITUTION OF PROTOPLASM IN DIFFERENT SPECIES.

We next pass to the consideration of antiseptics or substances which kill or check the growth of fermentative organisms: amongst these I mention salicylic acid, thymol, and eucalyptus-oil (essential principle).

The *Eucalyptus globulus* is well known as a purifier of the soil and it is probable that the essential principle of the oil is antitoxic. If it does not exist in the plant in its ordinary form, it is very speedily converted into this form on exposure to the air, probably by the action of a ferment, as takes place in the coagulation of blood in animals.

We now turn to *Cinchona* and *Ipecacuanha*. These two plants grow in localities where the diseases for which they are used as remedies prevail. The fact is remarkable even if the two poisons cannot be shown to produce the two diseases and remedies respectively in plants and animals. The quinine being antitoxic in the plant is capable of supplying, to a certain extent, the want of antitoxin in man. We know that plants growing side by side in the same soil produce different secretions. This shows us how the constitution of protoplasm varies in different species: from this we can see how one poison may produce many kinds of antitoxins in as many differently constituted plants.

We may infer that the poisonous principles of many plants such as *Nux-vomica*, *Conium*, *Digitalis*, &c., are antitoxic substances and not altogether as has been stated a protection for the foliage of the plant against its destruction by herbivorous animals.

SEC. IV. ALTERATION IN CHARACTER OF SECRETIONS BY CHANGE OF ENVIRONMENT.

We must next consider the alteration in the character of secretion caused by change of environment. *Cicuta virosa* and *Enanthe crocata* which are poisonous in most districts in England are harmless when grown near Edinburgh. The common mushroom (*Agaricus arvensis*) when grown in England is a comestible article, but in Italy and Hungary it is avoided on account of its possessing a poisonous principle (Bentley, *Manual of Botany*, pages 824 and 825). The toxic resin of *Cannabis sativa* when grown in England is very small or altogether absent: but the variety *indica*, which is considered by most authorities

to be a variety of the same species, produces in Bengal a great quantity of the same resin.

If plants of warm or tropical regions be placed in our hot-houses, their secretions are either not formed at all or in diminished amount (Bentley, *op. cit.*, p. 824). An almost corresponding difference in disease, poisons may be noted in different countries. We find ague present to a slight extent in England, the poison being of a mild character, while in India and Africa, in many localities, the poison is most intense. Similarly tetanus is said to be very common in Lower Bengal and in the West Indies, especially among horses. Many of these instances may be explained by saying that the heat and moisture facilitate the development of lower organisms, in the same way as the higher plants grow with a magnificent luxuriance unknown in temperate climates. The poisons of Asiatic cholera and dysentery are very capricious in their choice of habitats. From all these cases we may assume that organic poisons vary greatly in power in the soil with the country in which they occur and this plainly shows the multifarious influences to which the roots of plants must be constantly subjected. We know that certain organisms are harmless or otherwise to animals and the same can be said of plants on account of the similarity of their cell-action which has been explained.

SEC. V. CONTACT OF PROTOPHYTES WITH ROOTS IN THE SOIL— TRANSPIRATION.

Lastly let us consider the probability of contact of these organisms with the roots. We know that a large amount of aqueous vapour is transpired from the leaves: in the case of the oak this amounts to eight and a half times the rainfall over the area covered by the foliage of the tree; in the *Eucalyptus globulus* it amounts to eleven times the rainfall. From these facts we clearly see that trees tend to dry the soil, and that the abstraction of water from the area penetrated by the roots, at first tends to dry it; but there would be a tendency for the water to percolate from the surrounding soil to the immediate vicinity of the roots when extraction was taking place and consequently the former area would be kept constantly moist. Bacteria require a moist or fluid medium for development and consequently we can imagine that the area of the roots would be infested with them on account of the moisture which exists there, and that they would be likely to cluster round the roots. In many cases this would probably be prevented by the exudation from the roots of toxic substances in order to help the epidermal cells of the root to resist the entrance of these organisms.

The action of light, heat and electricity are known to have an

important bearing on the production and growth of plants, but their influence does not satisfactorily account for many of the facts mentioned in this paper.

Antitoxins were obtained by Ehrlich of Berlin with some poisons not of bacterial origin but derived from the vegetable kingdom. (Presidential Address, British Association, 1896.)

GENERAL CONCLUSIONS.

So far as I know a satisfactory explanation has never been given as to the origin or use in the plant of the majority of substances, chiefly of a toxic nature, produced as the result of the secondary processes of metastasis. That these poisons are lethal to the organisms in the soil and primarily produced by their irritation of the plant by entering it and causing fermentation, seems to me a simple explanation. I have mentioned how colouring matters may gain admission to the plant's vascular system, also that the cells exercised an absorptive or destructive influence in the case of the colouring matter absorbed by hyacinths. I have also mentioned the symbiosis which takes place between certain *Fungi* and the roots of green-leaved plants: from analogy we may conclude that there may be a similar relation between bacteria and the roots favourable or otherwise to the plants concerned. The possibility of entrance by the stomata has also been mentioned. We compared the fermentive processes of metastasis in plants and animals, and we saw that the protoplasm in each case acted similarly, so we may infer that under favourable conditions antitoxins may be formed in plants as in animals by any matter capable of stimulating the cells in the required manner.

The production of many antiseptic substances which we find in plants leads me to believe that they are produced in most cases as the result of irritation of the cells of the higher plant by the entrance of organisms causing fermentation of the juices of the plant.

That organisms could have every opportunity of doing so unchecked, and of multiplying in deciduous trees is evident, as the sap lies for a long time in the cells and vessels waiting for the young buds to develop and open. If it were not for a substance which could be supplied by the cells to neutralize the effect of, or kill the fermentative organisms, the plant must die.

In plants belonging to the Natural Orders *Apocynaceæ*, *Euphorbiaceæ*, &c., the white milky nutrient juice generally possesses an acrid or poisonous principle evidently to protect it against fermentation.

That every facility is given to protophytes to approach the roots of

trees, especially those in the process of transpiration, has been explained. To combat these organisms it is probable that the roots exude a part of the poisonous principle into the surrounding soil.

Change of locality frequently alters the power of many organisms which cause disease in man, so we may infer that the absence or variation in quantity of secretion is due to the necessary organisms being absent altogether or present in small numbers.

From a consideration of all the foregoing circumstances, it seems to me almost certain that organisms do gain admission to the vascular systems of plants. The irritation which they produce on the cells causes the formation of antitoxins and these antitoxins are many of the alkaloids and useful vegetable drugs which are constantly employed as medicinal remedies and for other purposes. These may exist in the plant in the form in which we know them or in a state, a very slight change from which by the action of a ferment, converts them into substances capable of protecting the cells or into their known condition. The peculiarities of protoplasm in different species have been noted and it seems possible for one kind of protophyte to produce toxins having different characters in different plants.

It is a noticeable fact that many toxic substances are obtained from the bark through the inner layers of which albuminoids are carried.

Conclusion—Fermentative parasites gain admission to the tissues of the plant: the irritation produced causes a reaction in the cells of the host; this reaction results in the formation of a protective substance, an antitoxin; and this latter causes the death of the parasite.

In connection with this paper Dr. Prain said:—

Dr. Cummins' theory is a very interesting one, carefully thought out and clearly stated. It is at the same time more or less conjectural and some of the facts cited in support of certain of the steps in the reasoning may be said to be, if not contradictory, at all events not corroborative. Two of these may be mentioned as examples.

In the chapter on Antiseptics it is said that *Eucalyptus globulus* is well known as a purifier of the soil and it is probable that the essential principle of the oil is antitoxic. The statement is very well known and is perhaps often believed, but I most certainly do not think either that the case for the *Eucalyptus* has been made out or that the benefits derived from its culture are greater than would be attained if another tree were planted, which in Dr. Cummins' own words (in *Sect. V.*) is capable of transpiring moisture equal to eleven times the rainfall over the area covered by the foliage of the tree.

If the citation of *Cannabis sativa* var. *indica* be intended to imply that its secretion of resin in Bengal is at all a protective measure, I have

to say that the matter is open to great doubt. The process of secretion is, if not intimately associated with the formation of seeds, at least one that varies with the seed-formation. If the flowers of the female plant in the plains of Bengal be permitted to become fertilized, so that the fruits and seeds form, there is no resin to be found filling the glandular hairs on the outside of the bracts. When however by destruction of the male plant fertilisation is made impossible the fruits do not fill and the glandular hairs in question are loaded with the narcotic substance of hemp.

The theory is not one that in the present state of our knowledge I am prepared to accept. At the same time, seeing that it has been advanced as an hypothesis to explain certain facts, the significance of which is admittedly obscure and has been stated so lucidly as Dr. Cummins has stated it, we may, I think, very well publish the short paper *in extenso*. This will enable those interested to see what the theory implies and to indicate what is necessary for its experimental refutation or confirmation.

LIBRARY.

The following additions have been made to the Library since the Meeting held in December last:—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Baltimore. Johns Hopkins University,—Circulars, Vol. XVI, No. 127.
- Calcutta. Geological Survey of India,—Records, Vol. XXIX, Part 4.
- . Indian Engineering,—Vols. XX, Nos. 23-26; XXI, 1.
- . The Indian Lancet,—Vols. VIII, Nos. 11 and 12; IX, 1.
- . Maha-bodhi Society,—Journal, Vol. V, No. 8.
- . Photographic Society of India,—Journal, Vol. IX, No. 12.
- Chicago, Ill. The American Antiquarian and Oriental Journal,—Vol. XVIII, No. 5.
- Havre. Société de Géographie Commercial du Havre,—Bulletin, Vol. XIII, No. 3.
- Leipzig. Die Deutsche Morgenländische Gesellschaft,—Abhandlungen für die Kunde des Morgenlandes,—Band X, Heft 3.
- . ———. Zeitschrift, Band L, Heft 3.

- Leipzig. Die Königl. Sächsische Gesellschaft der Wissenschaften,—
Abhandlungen, Band XVII, Nrn. 5; XXIII, 4 und 5.
- London. The Academy,—Nos. 1280-84.
- . Anthropological Institute of Great Britain and Ireland,—
Journal, Vol. XXVI, No. 2.
- . The Athenæum,—Nos. 3604, 3605, 3607.
- . The Geographical Journal,—Vol. VIII, No. 6.
- . Institution of Civil Engineers,—Minutes of Proceedings,
Vol. CXXV.
- . Nature,—Vol. LIII, Nos. 1412-15; and Index to Vol. LIV.
- . Royal Astronomical Society,—Monthly Notices, General
Index to Vols. XXX-LII.
- . Zoological Society of London,—Proceedings, Part III, 1896.
- . ———. Transactions, Vol. XIV, Part 2.
- Manchester. Manchester Literary and Philosophical Society,—List of
Members, &c., from February 28th, 1781 to April 28th, 1896.
- . Memoirs and Proceedings, Vol. XLI, Part I.
- Mussoorie. The Indian Forester,—Vol. XXIII, Nos. 11 and 12.
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- Paris. Société de Géographie,—Comptes Rendus des Séances, Nos. 15
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5 Luglio, 1896.
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- . Imperial Academy of Sciences,—Proceedings, Vol. XXXII,
No. 3.
- Sydney. Royal Society of New South Wales,—Journal and Proceed-
ings, Vol. XXIX.
- Taiping. Perak Government,—Gazette, Vol. IX, Nos. 25 and 27.
- Tokyo. Imperial University of Japan,—Journal of the College of
Science, Vol. X, Part I.
- Washington. Biological Society of Washington,—Proceedings, Vol. X,
pp. 115-25, 127-32.
- Wellington. Polynesian Society,—Journal, Vol. V, No. 3.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

- MORSE, EDWARD S. On the so-called Bow-Pullers of antiquity. 8vo. Salem, 1894.
- SCHLAGINTWEIT, EMIL. Die Berechnung der Lehre, eine streitschrift zu Berichtigung der buddhist ischew chronologie verfasst im Jahre, 1591, now Sureçamatibhadra. 4to. Munich, 1896.

MISCELLANEOUS PRESENTATIONS.

- CHIJS, J. A. VAN DER. Nederlandsch-Indisch Plakaatboek, 1602-1811. Deel XV. 8vo. Batavia, 1896.

BATAVIAASCH GENOOTSCHAP VAN KUNSTEN EN WETENSCHAPPEN.

- Report on Education in the Central Provinces for the year 1895-96. Fcp. Nagpur, 1896.

- Report on the Excise Revenue in the Central Provinces for the year 1895-96. Fcp. Nagpur, 1896.

- Report on the Nagpur Experimental Farm in the Central Provinces for the year 1895-96. Fcp. Nagpur, 1896.

- Report on the Rail-borne Traffic of the Central Provinces for the year 1895-96. Fcp. Nagpur, 1896.

- Resolution on the Management by Government of Private Estates in the Central Provinces for the year 1894-95. Fcp. Nagpur, 1896.

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- Bulletin of the Department of Agriculture, Brisbane, Nos. 12 and 14. 8vo. Brisbane, 1896.

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- Report on the Land Revenue Administration of the Lower Provinces for the year 1895-96. Fcp. Calcutta, 1896.

- Resolution reviewing the reports on the working of the District Boards in Bengal during the year 1895-96. Fcp. Calcutta, 1896.

- Resolution reviewing the reports on the working of Municipalities in Bengal for 1895-96.

- WILSON, C. R. List of Inscriptions on Tombs or Monuments in Bengal possessing historical or archæological interest. Fcp. Calcutta, 1896.

GOVERNMENT OF BENGAL.

- Brief sketch of the Meteorology of the Bombay Presidency for 1895-96. Fcp. Bombay, 1896.

GOVERNMENT OF BOMBAY.

- BROWN, ROBERT. The History and Description of Africa of Leo Africanus, Vols. I-II. 8vo. London, 1896.

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The Agricultural Ledger, Agricultural Series, No. 18; Animal Product Series, No. 1; Medical and Chemical Series, Nos. 6 and 7; Veterinary Series, Nos. 15-17; Special Veterinary Series, No. 1; Vegetable Product Series, No. 28.

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Report on the Administration of the Punjab and its Dependencies for 1895-96. Fcp. Lahore, 1896.

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INDIAN MUSEUM.

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SMITHSONIAN INSTITUTION, WASHINGTON.

Tide Tables for the Indian Ports for the year 1897 (also January, 1898). 8vo. London, 1896.

SURVEY OF INDIA, TIDAL AND LEVELLING OPERATIONS, POONA.

List of the Vertebrated Animals now or lately living in the Gardens of the Zoological Society of London. 8vo. London, 1896.

ZOOLOGICAL SOCIETY OF LONDON.

PERIODICALS PURCHASED.

Braunschweig. Jahresbericht über die Fortschritte der Chemie und verwandter Theile anderer Wissenschaften,—Heft VII, 1890.

Calcutta. Indian Medical Gazette,—Vol. XXXI, No. 12.

Chicago. The Journal of Geology,—Vol. IV, No. 6.

Geneva. Archives des Sciences Physiques et Naturelles,—Tome II (4^e série), No. 11.

Leipzig. Annalen der Physik und Chemie,—Band LIX, Heft 4.

London. Numismatic Circular,—Vol. V, No. 49.

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR FEBRUARY, 1897.

The Annual Meeting of the Asiatic Society of Bengal was held on
~~Wednesday, the 3rd February, 1897, at 9 P.M.~~

Plates I and II will be issued with a
subsequent Number.

C. R. Wilson, Esq.

Visitors:—Bābu Satiṇa Candra Ācārya, Bābu Jnān Ḡaraṇ Cakravarti,
Bābu Gaurinath Cakravarti, Bābu Hṛsikēṣa Candra, Dr. Niṇikānta
Chatterji, Bābu Hariprasād Chatterjee, Bābu Iṇvar Candra Dās-Gupta,
The Rev. J. Morrison, Bābu Pratul Candra Vasu.

According to the Bye-laws of the Society, the Chairman ordered
the voting papers to be distributed for the election of Officers and
Members of Council for 1897, and appointed Messrs. W. A. Lee and
M. H. Oung to be Scrutineers.

The Chairman then called upon the Secretary to read the Annual
Report.

ANNUAL REPORT FOR 1896.

The Council of the Asiatic Society have the honour to submit the
following Report on the state and progress of the Society's affairs
during the past year:—

Member List.

During the year under review, 24 Ordinary Members were elected, 15 withdrew, 7 died, 5 were removed from the list under Rule 40, being more than three years absent from India. There was thus a net loss of 3 Ordinary Members during the year. The total number of Members at the close of 1896 being 294, against 297 for the preceding year; of these 105 were Residents, 119 Non-Residents, 11 Foreign, 23 Life, 35 Absent from India and 1 Special Non-Subscribing Member, as will be seen from the following table, which also shows the fluctuations in the numbers of Ordinary Members during the past six years :—

YEAR.	PAYING.				NON-PAYING.				GRAND TOTAL.
	Resident.	Non-Resident.	Foreign.	Total.	Life.	Absent.	Special Non-Subscribing.	Total.	
1891	101	134	10	245	21	27	2	50	295
1892	116	127	11	253	22	33	2	57	310
1893	116	123	12	251	22	38	2	57	308
1894	98	125	12	235	22	36	2	60	295
1895	108	122	12	242	23	31	1	55	297
1896	105	119	11	235	23	35	1	59	294

The seven Ordinary Members, the loss of whom by death during the year we have to regret, were Mr. O. G. Arthur, Mr. Diego Ernst, Mr. Manmohan Ghose, The Hon. Prince Sir Jahan Qudr Muhammad Wahid Ali Bahadur, Bābu Balai Chand Sinha, Sir Sirdar Attar Singh Bahadur, and Mr. W. Swinhoe.

There was one death amongst the Honorary Members, *viz.* :—Dr. Reinhold Rost. During the year, on the recommendation of the Council, the following gentlemen were elected as Honorary Members :—Sir Joseph Lister, Professor Michael Foster, Professor F. Keilhorn, and Professor C. R. Lanman. Thus the number of Honorary Members stands at 24.

The lists of Special Honorary Members, Corresponding Members, and Associate Members, continue unaltered from last year, there having been no casualties; their numbers stand at 5, 4, and 10, respectively.

No Members compounded for their subscriptions during the year.

Indian Museum.

No presentations were made over to the Indian Museum.

The Trustees on behalf of the Society were:—

Dr. A. F. R. Hoernle.
A. Pedler, Esq.
Dr. D. D. Cunningham.
C. Little, Esq.
Dr. Mahendralal Sarkar.

Finance.

The accounts of the Society are shown in statement No. 1, in the appendix, under the usual heads.

Statement No. 8 contains the Balance Sheet of the Society and of the different Funds administered through it.

The Budget Estimate for 1896 was taken at the following figures:—
Receipts Rs. 16,420; Expenditure Rs. 16,042.

The actual results were found to be—Receipts, Rs. 18,448-7-9; Expenditure, Rs. 11,992-12-8.

The receipts show an increase of Rs. 2,028-7-9, while the expenditure shows a decrease of Rs. 5,049-3-4 on the Budget Estimate.

There is an increase in Receipts under the heads of "Subscriptions," "Interest on Investments," "Rent of Rooms," and "Miscellaneous." "Subscriptions" were estimated at Rs. 7,000, while the actuals were Rs. 7,729, the excess being due to some of the arrear subscriptions from members having been realized. Owing to the unexpected sale of the Society's publications, "Sale of Publications" shows an increase of Rs. 649-3-6. During the year temporary Investments were made and there is thus an increase of Rs. 327-8-0 under the head of "Interest on Investments." "Rent of Rooms" shows an increase of Rs. 100. This is due to an additional room with an adjoining small room being leased to the Photographic Society of India. "Miscellaneous Receipts" were estimated at Rs. 100, whilst the actual receipts were Rs. 322-12-3. The difference is explained by the fact that a donation of Rs 250 was received from His Highness the Maharaja Scindia, for the printing of certain plates in the Society's *Journal*, Part I.

On the Expenditure side the items of "Commission," "Lighting," "Contingencies," "Binding," and "*Journal*, Part I" show an increase. Owing to some of the arrear subscriptions having been realized, there is an increase of Rs. 48-5-6 under the head of "Commission." "Lighting" shows a very slight increase. The amount budgetted for under the head of Contingencies has been exceeded by Rs. 110-1-10. This is due to providing the Jamadar and the Durwan with new clothing for the

cold weather, and for sundry repairs to the water connection. During the year, it was found necessary to bind many old books belonging to the English library, thus there is an increase of Rs. 281-4-0 under the head of "Binding." There is a slight increase of Rs. 153-7-6 under the head of "Journal, Part I." An expenditure of Rs. 564-5-0 only appears under the head of "Books," in consequence of the non-receipt of Messrs. Luzac & Co.'s accounts, the books purchased through the London Agents amounting to £99-16-3. *Journal*, Part II, and *Proceedings* show a decrease. This is due to non-presentation of Baptist Mission Press bills during the year.

There was one extraordinary item of expenditure during 1896, not provided for in the Budget. Rs. 581 was remitted to Mr. C. J. Rodgers in part payment for preparing the Society's Coin Catalogue.

The actual expenditure on the "*Journal*" and "*Proceedings*" was as follows:—

<i>Journal</i>	{	Part I	...	Rs.	2,253	7	6
		Part II	...	...	1,373	13	6
		Part III	...	...	457	7	9
<i>Proceedings</i>		...	...	790	12	6	
					<hr/>		
Total Rs.					4,875	9	3
					<hr/> <hr/>		

This is less than the Budget Estimate by Rs. 3,324-6-9, but all the bills for *Journal*, Part III, during the past year have not yet been submitted.

The Budget Estimate of probable ordinary Receipts and Expenditure for 1897 has been fixed as follows:—Receipts Rs. 17,800; Expenditure Rs. 16,700.

On the Receipt side, the estimated incomes under the heads of "Subscriptions," "Sale of Publications," and "Interest on Investments" is based upon the actuals of the last year. "Rent of Rooms" has been increased owing to the increased rent paid by the Photographic Society of India for additional accommodation.

On the Expenditure side, the items of "Commission," "Lighting," and "Printing Circulars" have been slightly increased. "Salaries" and "Stationery" have been increased by Rs. 100, and Binding Rs. 250. There is a new item of Rs. 100 under the head of "Petty Repairs." The other heads remain unaffected.

Beyond the Auditor's fee, no other extraordinary expenditure is anticipated during 1897.

The details of Budget Estimates are as follows:—

Receipts.

Subscriptions ...	...	Rs. 7,200	0	0
Sale of Publications ...	...	600	0	0
Interest on Investments ...	...	5,700	0	0
Rent of Rooms ...	...	1,200	0	0
Government Allowances ...	...	3,000	0	0
Miscellaneous ...	...	100	0	0
		<hr/>		
Total	Rs.	17,800	0	0
		<hr/>		

Expenditure.

Salaries ...	...	Rs. 3,500	0	0
Commission ...	...	450	0	0
Pension ...	...	52	0	0
Stationery ...	...	200	0	0
Lighting ...	...	48	0	0
Municipal Taxes ...	...	819	0	0
Postage ...	...	600	0	0
Freight ...	...	30	0	0
Meetings ...	...	80	0	0
Contingencies ...	...	150	0	0
Petty Repairs ...	...	100	0	0
Books ...	...	1,500	0	0
Local Periodicals ...	...	16	0	0
Binding ...	...	750	0	0
<i>Journal</i> , Part I ...	...	2,100	0	0
" " II ...	...	2,100	0	0
" " III ...	...	3,000	0	0
<i>Proceedings</i> ...	...	1,000	0	0
Printing Circulars, &c. ...	...	200	0	0
Registration Fee ...	...	5	0	0
		<hr/>		
Total	Rs.	16,700	0	0
		<hr/>		

London Agency.

The number of copies of parts of the *Journal*, of the *Proceedings*, and of the *Bibliotheca Indica*, sent to Messrs. Luzac and Co., during the year 1896, for sale, were 448, 214, and 610, valued at £65-14-0,

£12-10-6, and Rs. 291-12-0, respectively; other books were sent for sale amounting to £2-5-0.

Nine invoices of books purchased, and of publications of various Societies sent in exchange, were received during the year. The value of the books purchased amounted to £99-16-3.

Continental Agency.

The number of copies of parts of the *Journal*, of the *Proceedings*, of the Annual Address, and of the *Bibliotheca Indica* sent to Mr. Otto Harrassowitz, the Society's Continental Agent, during 1896, for sale, were 35, 80, 5, and 341, valued at £5-5-0, £3-11-3, £0-7-6, and Rs. 202-8-0, respectively. Other books were sent for sale amounting to Rs. 11-8-0.

Library.

The total number of volumes, or parts of volumes added to the Library during the year was 1,932, of which 516 were purchased and 1,416 presented or received in exchange for the Society's publications.

The compilation of a new edition of the Society's Library Catalogue is far advanced and it is hoped before the close of the year the Catalogue will be published.

Publications.

There were published during the year nine numbers of the "*Proceedings*" (Nos. 9 and 10 of 1895, and Nos. 1-6 and 8 of 1896), containing 172 pages of letter-press and 8 plates; four numbers of the *Journal*, Part I (Nos. 3 and 4 of 1895 and Nos. 1 and 2 of 1896), containing 421 pages of letter-press and 11 plates; four numbers of the *Journal*, Part II (No. 3 of 1895, and Nos. 1-3 of 1896), containing 801 pages of letter-press and 10 plates. The Annual Address of the President was printed separately from the *Proceedings* and contained 77 pages of letter-press. Indexes to the *Journal*, Parts I and II, for 1895, and Part III for 1893, were also published.

Barclay Memorial Fund Medal.

During the year 1896, Dr. G. Bomford, on behalf of the Surgeon-General, Indian Medical Service, offered to make over to the Society the Barclay Memorial Fund Medal, together with a sum of about five hundred rupees belonging to the Fund.

The Council resolved to accept the Medal. The conditions under which the Medal should be awarded were referred to a Sub-Committee, consisting of Colonel Waterhouse, Dr. Cunningham, and Dr. Alcock.

The Sub-Committee considered that the Medal should be in bronze

and that arrangements should be made to have it struck at the Mint and that the dies should be sent there at once for safe keeping. They also considered that it should be given for the most important piece of work done in research in any one year in Zoology or Botany specially relating to India.

The Council approved of the Report of the Sub-Committee and agreed to the award of the Medal being announced every year at the Annual General Meeting of the Society. The question of the award being brought up in the December Meeting of Council of each year.

Coin Cabinet.

During the year 54 coins were added to the Cabinet, all being of silver. They were all presented under the Treasure Trove Act, *viz.*, 41 by the Government of Bengal, 2 by the Government of Bombay, and 11 by the Government of Madras. They comprise coins of the following classes: Moghuls 27, punch-marked 11, Assamese 2, Ghaznavi (of Subaktigin) 14. Among the last-named there were two very rare varieties. The remainder belong to well-known types. Detailed notices of all will be found in the Society's *Proceedings* for January, 1897.

Office of Secretaries.

Dr. G. A. Grierson carried on the duties of the Philological Secretary and Editor of the *Journal*, Part I, till February, when he was transferred to Bankipur, and Dr. G. Ranking took charge of the Philological Secretaryship, and Dr. Grierson continued to edit the *Journal*, Part I. Dr. Grierson resigned the editorship of the *Journal*, Part I, in November owing to ill health, and Dr. A. F. R. Hoernle agreed to carry on the work as a temporary measure till other arrangements were made.

Dr. A. W. Alcock carried on the duties of Natural History Secretary and Editor of the *Journal*, Part II, till September, when he left India on furlough and Mr. F. Finn was appointed.

Mr. F. Finn carried on the duties of the Anthropological Secretary till July when he resigned and Mr. L. de Nicéville was appointed.

Mr. C. Little carried on the duties of Treasurer throughout the year.

Mr. C. R. Wilson carried on the duties of General Secretary and Editor of the *Proceedings* throughout the year except for two months, from May to June, when Dr. Alcock officiated for him.

Paṇḍit Haraprasād Ḍaṣṭri was in charge of the *Bibliotheca Indica* and the search of Sanskrit Manuscripts and carried on the duties of Joint-Philological Secretary throughout the year.

Mr. J. H. Elliott continued Assistant Secretary and Librarian throughout the year.

Paṇḍit Harimohan Vidyābhūṣhaṇa, the Paṇḍit of the Society was allowed further leave, without pay, for one year from May 1896 under the existing officiating arrangements.

There were no other changes in the office establishment.

BIBLIOTHECA INDICA.

The editing charges of 26, and the printing charges of 17, fasciculi were paid for; the total outlay being Rupees 6,744; in round numbers. The average cost of each fasciculus, including both the charges, is 324 Rupees.

A descriptive catalogue of the works published is given below :—

A. ARABIC-PERSIAN SERIES.

1. The English translation of Badaoni's celebrated work entitled *Muntakhab-ut-Tawarikh* has advanced by one fasciculus only (Fasc. II) under the editorship of Dr. George Ranking who is embellishing the text with copious notes of great historical and linguistic interest.

B. SANSKRIT SERIES.

1. The *Aitareya Brāhmaṇa*, next to the *R̥g Veda Samhitā*, the oldest Vedic work under the distinguished editorship of Paṇḍit Satya-vrata Sāmaçramī has advanced by seven fasciculi, Vol. II, 4 and 5; and Vol. III, 1 to 5. This edition contains the commentary of Sāyanā-cāryya in full.

2. *Anubhāṣyam*. A commentary on the Vedānta Aphorisms by Vallabhācāryya, the Founder of the Western or Guzarat School of Vaiṣṇavism in the Sixteenth Century, has advanced by one fasciculus only, namely, the third, under the editorship of Paṇḍit Hemacandra Bhaṭṭācāryya.

3. Professor Dr. Garbes' edition of the *Āpastamba Çrauta Sū-tras* was stopped after the publication of the first two volumes for want of MSS. to edit from. On procuring good MSS. the Doctor resumed the work during the year under review and published one fasciculus the first of volume III.

4. The English translation of the *Mārkaṇḍeya Purāṇa* under the editorship of Mr. F. E. Pargiter, C. S., has advanced by one fasciculus only, namely, the fourth. This translation is accompanied with illustrative notes.

5. *Nyāyavārtika* by Udyotakara, a commentary on Vātsāyana Bhāṣya on the Aphorisms of Gautama is an important work on the Nyāya system of Philosophy. It has advanced by one fasciculus only (Fasc. III) during the year, under the editorship of Paṇḍit Vindhyaesvarīprasād Dube of Benares.

6. **Padumwāt.** A Hindi Poem by Mir Malik Muḥammad Jaisi is an important work both as regards its poetical merits and its philological value. It has been proposed to publish a critical edition of the work with an English translation and notes. Paṇḍit Sudhākar Dvivedi the well-known Hindu Mathematician of Benares has undertaken the task of editing the text and Dr. Grierson, C.I.E., Ph. D., that of translating it. The work has advanced by one fasciculus, Fasc. I.

7. **Taittiriya Sainhitā** of the Black Yajur Veda has advanced by two fasciculi, namely, Fascs. XL and L. under the editorship of Paṇḍit Satyavrata Sāmnāgrāmī.

8. **Tattva Cintāmaṇi** by Gangeṣa Upādhyāya is the standard work on the Nyāya system of Hindu Philosophy of the Bengal School. Paṇḍit Kāmākhya-nāthā Tarkavāgiṣa, the editor has published two fasciculi of the work accompanied with the Commentary of Mathurā-nāth, Vol. V, Fasc. 2 to 4. Three parts have been published in four volumes. This is the first volume of the Fourth Part.

9. **Bṛhat-Svayambhū Purāṇa** is a standard work on Buddhism as current in Nepāl. It is a store-house of legends and traditions of that interesting valley. The edition has advanced by one fasciculus only under the editorship of Paṇḍit Haraprasād Čāstri.

List of all Societies, Institutions, &c., to which the Publications of the Asiatic Society have been sent during the year, or from which publications have been received.

* Societies, &c., which have received the Asiatic Society's publications, and have sent their publications in return.

† Societies, &c., which have received the Asiatic Society's publications, but have sent none in return.

§ Societies, &c., whose publications have been received, but to which none have been sent in return.

* Allahabad :—Editor, *Pioneer*.

† Amsterdam :—Royal Zoological Society.

* ——— :—Koninklijke Akademie van Wetenschappen.

* Angers :—Société d' Etudes Scientifiques d' Angers.

* Baltimore :—Johns Hopkins University.

* Batavia :—Society of Arts and Sciences.

* ——— :—Kon. Natuurkundige Vereeniging in Nederlandsch-Indië.

§ Berlin :—Entomologische Verein.

* ——— :—Gesellschaft Naturforschende Freunde zu Berlin.

* ——— :—Royal Academy of Sciences.

† Berne :—Société Suisse d' Entomologie,

- * Bombay :—Bombay Anthropological Society.
- * ——— :—Bombay Branch, Royal Asiatic Society.
- * ——— :—Editor, *Indian Antiquary*.
- * ——— :—Editor, *Times of India*.
- * ——— :—Natural History Society.
- † Bonn :—University of Bonn.
- † Bordeaux :—L' Académie Nationale des Sciences, Belles-Lettres et Arts.
- * ——— : Société Linnéenne.
- § Boston :—American Philological Association.
- * ——— :—Natural History Society.
- § ——— :—American Oriental Society.
- * Brisbane :—Royal Society of Queensland.
- † Brookville :—Society of Natural History.
- † Brunswick :—Verein für Naturwissenschaft.
- * Brussels :—L' Académie Royale des Sciences.
- * ——— :—Musée Royal d' Histoire Naturelle de Belgique.
- † ——— :—Société Entomologique de Belgique.
- § ——— :—La Société Royal Malacologique de Belgique.
- † Budapest :—Hungarian Central Bureau for Ornithological Observations.
- § ——— :—Royal Hungarian Academy of Sciences.
- † Buenos Ayres :—National Museum.
- * ——— :—Academia Nacional de Ciencias de la Republica Argentina.
- * Caen :—Société de Linnéenne de Normandie.
- † Calcutta :—Agri-Horticultural Society of India.
- * ——— :—Geological Survey of India.
- * ——— :—Editor, *Englishman*.
- * ——— :—Editor, *Indian Daily News*.
- § ——— :—Editor, *Indian Engineering*.
- § ——— :—Editor, *Indian Journal of Pharmacy*.
- * ——— :—Editor, *Indian Mirror*.
- § ——— :—Editor, *Indian Lancet*.
- § ——— :—Indian Meteorological Department.
- * ——— :—Indian Museum.
- § ——— :—Mahabodhi Society.
- § ——— :—Microscopical Society.
- § ——— :—Editor, *National Magazine*.
- § ——— :—Photographic Society of India.
- * ——— :—Survey of India.
- * ——— :—Tuttobodhini Shova.
- † ——— :—University Library.

- * Cambridge:—University Library.
- * Cassel:—Die Verein für Naturkunde.
- * Cherbourg:—Société Nationale des Sciences Naturelles.
- * Chicago, Ill.:—Editor, *American Antiquarian and Oriental Journal*.
- § ———:—Chicago Academy of Sciences.
- * ———:—Field Columbian Museum.
- * Christiana:—University Library.
- * Colombo:—Ceylon Branch, Royal Asiatic Society.
- * Copenhagen:—La Société Royale des Antiquaires du Nord.
- † Cuttaok:—Cuttaok Library.
- * Danzig:—Naturforschende Gesellschaft.
- * Dehra Dun:—Great Trigonometrical Survey.
- * Dresden:—Entomologischer Verein "Iris."
- † ———:—Königlich Zoologisches und Anthropologisch-Ethnographisches Museum zu Dresden.
- * Dublin:—Royal Dublin Society.
- * ———:—Royal Irish Academy.
- * Edinburgh:—Royal Society.
- § ———:—Royal Physical Society.
- † ———:—Scottish Geographical Society.
- * Florence:—Società Italiana di Anthropologia, Etnologia e Piscologia Comparata.
- † ———:—Società Africana d'Italia.
- * Frankfurt:—Senckenbergische Naturforschende Gesellschaft.
- * ———:—Naturwissenschaftlicher Verein des Reg.-Bez Frankfurt.
- † Geneva:—Société de Physique et d' Histoire Naturelle.
- * Genoa:—Museo Civico di Storia Naturale.
- † Giessen:—Oberhessische Gesellschaft für Natur und Heilkunde.
- † Graz:—Naturwissenschaftlicher Verein für Styria.
- * Hague:—Köninklijk Instituut voor de Taal-Land-en Volkenkunde van Nederlansch-Indië.
- * ———:—Netherlands Entomological Society.
- † Hamburg:—Naturhistorisches Museum zu Hamburg.
- * ———:—Naturwissenschaftlicher Verein.
- § Halifax:—Nova Scotian Institute of Science.
- † Halle:—Deutsche Morgenländische Gesellschaft.
- * ———:—Kaiserliche Leopoldinisch-Carlinische Akademie.
- * Hamilton (Canada):—Hamilton Association.
- * Havre:—Société de Géographie Commerciale du Havre.
- * Helsingfors:—Societas pro Flora et Fauna Fennica.
- † ———:—Société Finno Ongreinne.
- * ———:—Société des Sciences de Finlande.

- § Iasi:—Organul Societății Științifice și Literare din Iasi.
 § Ithaca (U. S. A.):—Cornell University.
 † Kiev:—Société des Naturalistes.
 * Königsberg:—Die Physikalische-Oekonomische Gesellschaft.
 * La Plata:—Museo de La Plata Republica Argentina.
 * Lahore:—Editor, *Civil and Military Gazette*.
 † ———:—Agricultural Society.
 § Leipzig:—Deutsche Morgenländische Gesellschaft.
 § ———:—Die K. Sächsische Gesellschaft der Wissenschaften.
 † Leyden:—Royal Herbarium.
 * Liège:—Société Géologique de Belgique.
 * Liverpool:—Literary and Philosophical Society.
 * London:—Anthropological Institute.
 * ———:—Editor, *Academy*.
 * ———:—Editor, *Athenaeum*.
 * ———:—British Museum.
 § ———:—Editor, *British Review*.
 * ———:—Geological Society.
 * ———:—Institution of Civil Engineers.
 * ———:—Institution of Electrical Engineers.
 * ———:—Institution of Mechanical Engineers.
 * London:—Editor, *Nature*.
 * ———:—Linnean Society.
 * ———:—Royal Asiatic Society of Great Britain and Ireland.
 * ———:—Royal Astronomical Society.
 * ———:—Royal Geographical Society.
 * ———:—Royal Institution of Great Britain.
 * ———:—Royal Microscopical Society.
 * ———:—Royal Society.
 * ———:—Statistical Society.
 * ———:—Zoological Society.
 † Lyons:—La Société d' Agriculture, d' Histoire Naturelle et des Arts Utiles.
 † ———:—Muséum d' Histoire Naturelle,
 † ———:—La Société d' Anthropologie.
 * Madison, Wiss.:—Wisconsin Academy of Sciences, Arts and Letters.
 † Madras:—Literary Society.
 * ———:—Government Central Museum.
 § ———:—Editor, *Indian Journal of Education*.
 § ———:—Editor, *Madras Journal of Literature and Science*.
 † Melbourne:—Royal Society of Victoria.
 § Meriden, Conn.:—Meridan Scientific Association.

- * Manchester :—Literary and Philosophical Society.
- * Mexico :—Sociedad Científica "Antonio Alzate."
- § Montevideo :—Museo Nacional de Montevideo.
- * Moscow :—Société Imperiale des Naturalistes.
- * Munich :—K. Bayerische Akademie der Wissenschaften.
- * Nantes :—Société des Sciences Naturelles de L' ouest de la France.
- † Naples :—Società Africana d' Italia.
- † New Haven :—Connecticut Academy of Arts and Sciences.
- § ——— :—Yale University.
- * Newport (R. I.) :—Natural History Society.
- * New York :—American Museum of Natural History.
- * Ottawa :—Geological and Natural History Survey of the Dominion of
Canada.
- § ——— :—Royal Society of Canada.
- † Oxford :—Bodleian Library.
- † ——— :—Indian Institute.
- * Paris :—Société de Géographie.
- * ——— :—Société d' Anthropologie.
- * ——— :—Société Asiatique.
- § ——— :—Société Philomathique de Paris.
- * ——— :—Musée Guimet.
- † ——— :—National Library.
- * ——— :—Société Zoologique.
- † ——— :—Société Académique Indo-Chinoise.
- * ——— :—Muséum d' Histoire Naturelle.
- * Pennsylvania :—University of Pennsylvania.
- * Philadelphia :—Academy of Natural Sciences.
- § ——— :—American Academy of Political and Social Science.
- § ——— :—American Philosophical Society.
- † ——— :—Editor, *Journal of Comparative Medicine and Surgery*.
- * Pisa :—Société Toscana di Scienze Naturali.
- § Prague :—K. K. Sternwarte.
- § Roorkee :—Editor, *Indian Forester*.
- † St. Louis :—Academy of Science of St. Louis.
- * St. Petersburg :—Comité Géologique.
- † ——— :—Imperial Library.
- * ——— :—Russian Geographical Society.
- * ——— :—Académie Impériale des Sciences.
- * ——— :—Horti Petropolitani.
- § ——— :—Die Russisch-Kaiserliche Mineralogische Gesellschaft zu
St. Petersburg.
- † San Francisco :—Californian Academy of Arts and Sciences.

- † Santiago:—Deutscher Wissenschaftlicher Verein.
 § Schaffhausen:—Swiss Entomological Society.
 † Shanghai:—China Branch, Royal Asiatic Society.
 † Simla:—United Service Institution of India.
 † Stettin:—Entomological Society.
 * Stockholm:—Entomologische Tidskrift.
 * ———:—Royal Swedish Academy of Sciences.
 * Stuttgart:—Der Verein für vaterländische Naturkunde in Württemberg.
 * Sydney:—Royal Society of New South Wales.
 † ———:—Anthropological Society of Australia.
 * ———:—Linnean Society of New South Wales.
 § Taiping:—Government of Perak.
 * Toronto:—Canadian Institute.
 * Tokyo:—Imperial University of Japan.
 † Trieste:—Société Adriatica de Scienze Naturale.
 † ———:—Museo Civico di Storia Naturale.
 * Tring:—Zoological Museum.
 * Turin:—Reale Accademia delle Scienze.
 † Ulwar:—Ulwar Library.
 * Upsala:—University of Upsala.
 * Vienna:—Anthropologische Gesellschaft.
 * ———:—K. K. Akademie der Wissenschaften.
 * ———:—K. K. Geologische Reichsanstalt.
 * ———:—K. K. Naturhistorische Hofmuseum.
 * ———:—K. K. Zoologisch-Botanische Gesellschaft.
 § Washington:—American Historical Associations.
 § ———:—Biological Society of Washington.
 † ———:—Commissioners of the Department of Agriculture.
 * ———:—Smithsonian Institution.
 * ———:—United States Geological Survey.
 § ———:—United States National Museum.
 * Wellington:—New Zealand Institute.
 * ———:—Polynesian Society.
 * Yokohama:—Asiatic Society.
 * ———:—Deutsche Gesellschaft für Natur und Völkerkunde Ostasiens.
 * Zagreb:—Archæological Society.
 * Zurich:—Naturforschende Gesellschaft.
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ABSTRACT OF PROCEEDINGS OF COUNCIL DURING 1896.

January 30th, Ordinary Meeting.

On the recommendation of the Philological Secretary, a copy of the Mahabharat, in Persian, in two volumes, price Rs. 15, was ordered to be purchased for the Society's Library.

In reply to a letter from Professor H. Jacobi, stating that the Bonn University had in their possession the Society's *Journal* up to Vol. XL and asking to be supplied with a copy of the subsequent volumes, the Council ordered that, as a special case, the Lassen set should be completed, and all future publications sent to the University of Bonn.

A letter forwarding a report of the Council of the Royal Society regarding the proposed Catalogue of Scientific Literature, together with letters addressed to the Marquess of Salisbury, The Rt. Hon. Joseph Chamberlain and Lord George Hamilton on the same subject, was referred to a Sub-Committee, consisting of the President, Dr. Alcock, Dr. Prain, and Col. Waterhouse for report.

An offer by Maulvie Abdus Salam, of his services for translating the Riyāzu-s-Salātīn for the *Bibliotheca Indica*, was accepted.

At the suggestion of a Sub-Committee appointed by the Council, it was ordered that Sir Joseph Lister, Professor Michael Foster, Professor F. Kielhorn, and Professor C. R. Lanman should be proposed at the next General Meeting for Honorary Membership. Registered letters were ordered to be sent to certain corresponding members on the list, of whose continued existence the Society had no proof.

The Budget of the expenses of the *Bibliotheca Indica* drawn up by the Philological Committee for the year 1896 was approved.

At the request of Dr. Hoernle, a grant of Rs. 500 to Mr. Rodgers, in part payment for his work in cataloguing the Society's Coins, was sanctioned.

February 27th, Ordinary Meeting.

A letter from the Under-Secretary to the Government of Bengal, General Department, having been received, forwarding copies of letters from the Government of India, Home Department, covering copies of letters from the Honorary Secretary, Nagari Pracharini Sabha, Benares, requesting the Society to supply it with a copy of the lists of Sanskrit and Hindi Manuscripts when published, it was resolved to accede to this request, and to recommend to the Home Department that the Sabha be granted lists of Sanskrit Manuscripts.

The Sub-Librarian, Trinity College, Cambridge, was supplied with Vols. I—VIII of the Notices of Sanskrit Manuscripts.

Messrs. Luzac & Co. were informed that any orders received direct from England would, in future, be referred to them.

Professor Jacobi was supplied with certain numbers of the *Bibliotheca Indica*.

A copy of the Society's Library Catalogue was presented to the British Museum, London.

A copy of Tavernier's Travels in India, translated with notes by Valentine Ball, in 2 vols., was ordered to be purchased for the Society's Library.

With reference to a letter from the Master, Her Majesty's Mint, Calcutta, acknowledging the receipt of a pair of dies for the Barclay Memorial Fund Medal and stating that the reverse die was very much rusted, it was ordered that a new die should be prepared at the cost of Rs. 150.

With reference to a proposal by the Philological Secretary, to publish a very elaborate Grammar of the Kāṣmīrī language, written some years ago by the late Pandit Iṣvarakaula, it was resolved to apply to the Government of the Punjab and to the Kashmir Durbar, enquiring whether they would be disposed to give any assistance to this useful work.

The Sub-Committee appointed to consider the correspondence from the Royal Society, London, on the subject of the proposed Catalogue of Scientific Literature, submitted the following resolutions for confirmation:—

1. That the Asiatic Society of Bengal write to the Royal Society giving *cordial* support to the scheme.
2. That the Asiatic Society of Bengal suggest that the scientific publications of each country shall, in the first place, be catalogued by some institution or institutions in that country who will undertake to send in the portions of the catalogue so prepared to a central office or bureau in London.
3. That the Asiatic Society of Bengal offer to undertake this work for the countries under the Government of India.
4. That a Committee of the Council be formed to superintend this work, each member taking a section of the work to include a certain group of sciences.
5. That the catalogue should contain the titles of all scientific publications appearing in the countries under the Government of India, whether published in periodical form or independently arranged, not only according to the author's name but also according to subject matters.
6. That if the cost of clerical assistance for the work is small the Asiatic Society of Bengal will be willing to defray it, but if it is at all

large the Asiatic Society of Bengal will apply to the Government of India for assistance.

7. That if the catalogue should take the form of a card catalogue to be sent to London, the Society will keep a copy of the list so formed and publish it in its *Proceedings*.

8. That it is unnecessary to submit any more detailed scheme till further communications have been received from the Royal Society.

It was accordingly ordered that the report of the Sub-Committee be approved, and a reply sent on the lines suggested.

The Sub-Committee appointed to consider the question of the Barclay Memorial Medal, recommended that the medal should be in bronze and that arrangements should be made to have it struck at the mint, and that the dies should be sent there at once for safe keeping. They also considered that it should be given for the most important piece of work done in research in any one year in Zoology or Botany, specially relating to India. It was accordingly resolved as follows:— That the report of the Sub-Committee be accepted, that the award of the medal be announced every year at the Annual Meeting of the Society, and that the question of the award be brought up in the December meeting of Council each year.

Dr. Grierson having intimated that he would not be able to carry on the duties of the Philological Secretary as he was permanently transferred from Howrah to Bankipur, but that if there was any difficulty experienced in finding a successor, he would be happy to continue the editing of the *Journal*, Part I., the Council resolved to accept Dr. Grierson's offer to continue the editorship of the *Journal* for a year.

A Committee was formed consisting of the President, Dr. Cunningham, Dr. Alcock, Mr. Holland and Dr. Mahendra Lal Sarkar, with power to add to their number, to invite subscriptions and take such steps as they considered necessary to further the purpose of the Huxley Memorial.

The Essay on the transformation of hypochlorites into chlorates by Jyoti Bhusan Bhaduri, the recipient of the Elliott Prize for Scientific Research on Chemistry in 1895, was ordered to be read at the next meeting and published in the *Journal*.

On the recommendation of the Secretary, copies of Hunter's Orissa, and of Hunter's Annals of Rural Bengal, were ordered to be purchased for the Society's library.

March 26th, Ordinary Meeting.

The Superintendent, Baptist Mission Press, was allowed an extra charge of two annas per page throughout the translation of "Al-

Badaoni" as a special case, in consequence of the unusual number of notes in small type.

The Huxley Memorial Committee having submitted a report to the effect that circulars had been sent out to some 100 persons, that already Rs. 152 had been subscribed and Rs. 202 promised, and that the subscriptions received would be advertised in the *Indian Daily News*, it was ordered that steps should be taken to get the matter noticed in leading European and Native newspapers.

A letter from General Tennant asking the Society to take steps to collect information in anticipation of the total eclipse of the sun on the 21st January 1898, was referred to a committee consisting of the President, Colonel Waterhouse, Mr. John Eliot, and Bābu Pratapa Candra Ghōṣa with power to add to their number.

The Council resolved to thank the Agent, East Indian Railway, for his courtesy in granting a free pass for the conveyance of the Philological Secretary's box between Bankipur and Calcutta and *vice versa*, and to send him a copy of the Society's *Journal* Part I, free of charge, as long as the arrangement continued.

The Council agreed to an extra grant of Rs. 450, for the *Proceedings* for the printing of four plates illustrating Mr. Caddy's article "On two unrecorded sculptures in the Ananta Cave, Khandagiri."

On the recommendation of the Secretary, copies of Orme's *Historical Fragments of the Mogul Empire*, and of Petrie's *Ten Year's Digging in Egypt*, were ordered to be purchased for the Society's library.

April 30th, Ordinary Meeting.

A letter from the Under-Secretary to the Government of Bengal, General Department, forwarding copy of a letter from the Assistant Secretary to the Government of India, Home Department, conveying the approval of the Government of India to the name of Nagari Pracharini Sabha, Benares, being included in the list of societies to whom catalogues of Sanskrit Manuscripts are sent, was ordered to be recorded and the decision communicated to the Sabha.

Dozy's *Historia Abbadidarum præmissis Scriptorum Arabum de ea dynastia locis nunc primum editis*, Vols. II and III, price 8 florins, 5 cents, was ordered to be purchased for the Society's Library.

In reply to a letter regarding the proposed exploration of certain archæological remains on the Ratnagiri Hill in Orissa, the Under-Secretary to the Government of Bengal, Public Works Department, was informed that the Council were of opinion that the remains were worth exploration and suggested that Mr. Caddy be employed to supervise the work.

In reply to a letter about increased accommodation, the Secretary, Photographic Society of India, was informed that the Council were willing to grant the increased accommodation asked for at Rs. 40 a month, on condition that proper lease should be drawn and executed for the whole four rooms occupied, that the agreement should be terminable on six months' notice on either side, and that the Photographic Society should provide a separate water-supply for their own use.

Pandit Harimohan Vidyabhusan, the pandit of the Society, was granted further leave of one year from May 1896.

On the recommendation of the Secretary, a copy of the translation of the Memoirs of Zehil-ud-din Muhammad Babar, Emperor of Hindustan, was ordered to be purchased at a reasonable price, for the Society's Library.

Dr. Alcock consented to look to any urgent work during Mr. Wilson's absence.

It was agreed to allow Rupee 1-12 a page instead of the sanctioned rate of Rupee 1 a page for the compilation of the index to the *Tabaqat-i-Nasiri*.

May 28th, Ordinary Meeting.

Mr. C. J. Rodgers' report on the Sangla Tibba in the Gujranwala District, in connection with the question of quarrying that hill for the purpose of supplying ballast for the Wazirabad-Lyallpur Railway, was ordered to be published in the *Proceedings*.

The exchange of the Society's *Journal*, Part III. for the publications of the Anthropological Society of Australasia was sanctioned.

Permission was granted to Dr. Friedrich Schwally to retain the manuscript of "*Kitabul-Mashasinwal Masawi*" for another three or four months.

A letter was recorded from the Under-Secretary to the Government of Bengal, Public Works Department, stating that Mr. A. E. Caddy was at present away on deputation and that the work of exploring the archæological remains on the Ratnagiri Hill in Orissa, would have to wait till next cold season, when perhaps Mr. Caddy would be available or a regular archæological officer appointed to the Province, or to the Indian Museum.

The Natural History Secretary was ordered to report at the next General Meeting, that Rs. 884 had been collected for the Huxley Memorial Fund, and to remit the same to England.

June 25th, Ordinary Meeting.

On the recommendation of the Joint Philological Secretary, it was agreed to purchase Dutt's English translation of the *Çrimadbhāgavatam*, Book II, and subsequent volumes for the Society's Library.

A letter from the Under-Secretary, Government of Bengal, in charge Foreign Office, enquiring if the Society would undertake the publication of the History of the Khojas of Eastern Turkistan summarised from the Tazkārū-i-khwajagān of Muhammad Sādek, Kashghari, by the late Robert Barkley Shaw, edited with Introduction and Notes by N. Elias, was referred to Dr. Grierson.

The Photographic Society of India having accepted the terms offered them for the lease of two additional rooms on a monthly rental of Rs. 100 for the entire premises occupied by them, the lease to commence from the 1st August 1896, the arrangement was approved.

The offer of the Manager, Khadga Vilas Press, Bankipur, to print the edition of Iswara Kanla's Kashmiri Grammar at Rupee 1-10 a page, royal octavo, was approved.

The proposal of Surgeon-Leiut-Col. G. Ranking to translate "Ahsunū-l-tagāsīm fī mānifate-l-Agatim," for the *Bibliotheca Indica*, was agreed to.

July 20th, Ordinary Meeting.

A letter from Messrs. Robarts, Lubbock and Co., London, acknowledging the receipt of £ 51-4-1, on account of the Huxley Memorial Fund through the Asiatic Society of Bengal, was recorded.

An exchange of publications from 1896 was sanctioned with the Field Columbian Museum, Chicago.

A donation of Rs. 250 by His Highness the Maharajah Scindia for printing certain plates to illustrate Mr. C. Maries' paper on coins of the Native States, was acknowledged with thanks and ordered to be announced at the General Meeting.

The resignation of Mr. F. Finn as Anthropological Secretary of the Society was accepted, and the council appointed Mr. L. de Nicéville to the vacant post.

With reference to a letter from Monsieur E. Senart on the subject of the Oriental Congress to be held in Paris, 5th-12th September, 1897, it was resolved to form a Sub-Committee consisting of Dr. Hoernle, Babu Pratapa Candra Ghōṣa and Pandit Haraprasad Castrī, to comply as far as possible with the requests contained in Monsieur Senart's letter.

The draft lease of the rooms proposed to be rented by the Photographic Society of India, was ordered to be engrossed, executed, and registered.

With reference to a letter from the Under-Secretary to the Government of Bengal, in charge Foreign Office, forwarding the History of the Khojas of Eastern Turkistan by the late R. B. Shaw, edited with introduction and notes by N. Elias for publication in the Society's

Journal, it was resolved to ask the Government of India to assist in the publication.

It was agreed to thank Mr. John Eliot for the great trouble he had taken in drawing up a note in order to give the chief meteorological features of the tract of country in India through which the Solar Eclipse of January 1898 will pass.

In reply to a letter on the subject of a proposed journey to discover the sources of the Irrawady asking for certain assistance, Lieutenant Eldrid Pottinger was informed that the Society was not in a position to help pecuniarily. It was, however, resolved to write to the Government of India to recommend that sanction be given to Mr. Pottinger's proposed journey of exploration.

August 27th, Ordinary Meeting.

On an application from the Chief Librarian, Royal University of Upsala, it was agreed to send that University, Notices of Sanskrit Manuscripts, Vols. I-X, *Journal*, Parts I-II from 1893 and Proceedings and *Journal*, Part III, from 1896, in exchange for its publications.

The purchase of a copy of Whitehead's Exploration of Mount Kina Balu, North Borneo, price £2-17-6, for the Society's Library was sanctioned.

Permission was given to Mahabir Prasad to republish Dr. Mitra's translation of the *Yoga Bhashya* by Vyasa on the usual conditions, viz:—that the name of the translator be prominently mentioned with the fact that it was originally published by the Asiatic Society of Bengal, that no alteration be made in the body of the text and that if alterations are to be made they are to be given in foot-notes.

September 26th, Ordinary Meeting.

An exchange of publications with the Museo de La Plata, was agreed to.

It was resolved to prepare a copy of the manuscript of "Baudhāyana-grhyasūtra" and send it to Dr. W. Caland of Breda.

Dr. Alcock, having resigned the office of Natural History Secretary, it was ordered that the thanks of the Society be given to him for the valuable work he has done for the Society and that Mr. Finn be appointed in his place.

The question of buying a second copy of Munshi Mohamed Padshah's Arabic and Persian Dictionary, in 3 vols., was referred to Dr. Ranking.

A letter from the Deputy Secretary to the Government of India, Foreign Department, stating that it had been decided after full consideration that the permission asked for by Lieutenant Pottinger regarding the

proposed exploration in the direction of the Bor Kampti country and the sources of the Irrawady could not be granted, was recorded.

October 29th, Ordinary Meeting.

The request of Pandit Nilmoni Mukerji to be allowed to borrow more than two manuscripts at a time for the purpose of re-writing certain manuscripts in the Library of the Sanskrit College, was agreed to, with a limit of a total of five at a time.

A letter from the Assistant Secretary to the Government of India, Home Department, stating that the Government of India had pleasure in allowing the Society to print the summarised translation of the *Tazkārū-i-khwajagān* by the late Mr. R. B. Shaw with an introduction and notes by Mr. Ney Elias at the office of the Superintendent of Government Printing, India, free of cost on the understanding that the edition was limited to five hundred copies and that as many of these as the Governor General in Council might require were to be reserved for his use, was recorded.

The selling price of "Padumawāti" was fixed at Rs. 2.

November 26th, Ordinary Meeting.

With reference to a letter from the Under-Secretary to the Government of Bengal, Revenue Department, forwarding copy of a letter from the Assistant Secretary to the Government of India, Home Department, requesting that the name of Mr. Kashinath Pandurang Paral of Bombay might be added to the list of persons to whom catalogues of Sanskrit Manuscripts are distributed and that he might be supplied with copies of all past reports and catalogues so far as they could be conveniently spared, it was ordered that Mr. Paral should be supplied with all the notices of Sanskrit Manuscripts available.

Dr. Grierson having resigned the editorship of the Journal, Part I, stating that Dr. Hoernle had consented to take up the work as a temporary measure till other arrangements are made, the council by a resolution expressed their regret at Dr. Grierson's resignation and thanked him for the work he had done for the Society.

On the recommendation of the Anthropological Secretary, the purchase of a copy of Roth's *Natives of Sarawak and British North Borneo*, Vols. 1-2, price 50 shillings, was sanctioned.

Owing to the high price of grain, the menial servants who drew less than Rs. 8 a month except the duffries, were allowed an extra rupee from 1st November till further orders.

On the recommendation of the Secretary, the purchase of a copy of the "Memoir of the Life and Correspondence of John Lord Teignmouth" by his son Lord Teignmouth, Vols. 1-2, price Rs. 15, was sanctioned.

It was agreed to allow the Superintendent, Baptist Mission Press, to charge annas eight a page for reprinting 30 Extra copies of Dr. King's *Material of the Flora for the Malayan Peninsula*, No. 8.

The purchase on behalf of the Society of G. P. notes of $3\frac{1}{2}$ per cent. of the nominal value of Rs. 5,000, was approved.

December 17th, Ordinary Meeting.

A copy of the *Journal of Geology*, published at Chicago, was ordered to be subscribed for.

At the suggestion of the Natural History Secretary, it was agreed that Mr. Holland's notes on the Rocks collected by the Afghan Boundary Commission of 1896 should be made over to the Geological Survey for publication in its records.

The Report having been read, the Chairman invited the meeting to put any questions or to offer any remarks which any Member might think necessary in connection therewith.

No remarks having been offered, the Chairman moved the adoption of the Report. The motion was unanimously carried.

The Chairman then read the Report of the Trustees of the "Elliott Prize for Scientific Research."

Report on the "Elliott Prize for Scientific Research" for 1896.

The Trustees have received Essays from the following competitors for the prize:—

1. Babu Jnan Saran Chakravarti, M.A., Assistant Professor of Science, Canning College, Lucknow:—

On a few points in connection with the theory of thunderstorms due to Eales and Herschel.

2. Babu Kanti Bhusan Sen:—

On Mica and its proposed practical uses.

The Trustees, after consulting experts as provided in the scheme, adjudge the prize for the year 1896 to Babu Jnan Saran Chakravarti, M.A.

E. J. TREVELYAN, <i>Vice-Chancellor, Calcutta University.</i> A. CROFT, <i>Director of Public Instruction, Bengal.</i> ALEX. PEDLER, <i>President, Asiatic Society of Bengal.</i>	}	<i>Trustees.</i>
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CALCUTTA:
 14th January, 1897. }

The Chairman announced that the Barclay Memorial Fund Medal would be given for the most important piece of work done in research in Zoology or Botany specially relating to India during 1897.

The Chairman announced that the Scrutineers reported the result of the election of Officers and Members of Council to be as follows :—

President.

Dr. A. F. R. Hoernle.

Vice-Presidents.

Col. J. Waterhouse, B.S.C.

A. Pedler, Esq., F.R.S.

The Most Rev. Archbishop P. Goethals, D.D., S.J.

Secretaries and Treasurer.

Dr. G. Ranking, M.D.

F. Finn, Esq., B.A.

L. de Nicéville, Esq., F.E.S.

C. R. Wilson, Esq., M.A.

Pandit Haraprasād Castrī, M.A.

C. Little, Esq., M.A.

Other Members of Council.

Bābu Pratāpa Candra Ghoṣa, B.A.

Dr. D. D. Cunningham, F.R.S., C.I.E.

Dr. G. Watt, C.I.E.

Dr. P. K. Ray.

R. D. Oldham, Esq., F.G.S.

Dr. A. R. S. Anderson.

A. T. Pringle, Esq.

G. W. Kūchler, Esq., M.A.

The Meeting was then resolved into the Ordinary General Meeting.

Dr. A. F. R. Hoernle, President, in the chair.

Dr. Hoernle, on taking the chair, said :—

“Gentlemen, before we proceed to the ordinary business of this meeting, I wish to tender you my warm acknowledgment of the honour which you have done me by electing me to the responsible position of President of this Society. It is with mixed feelings that, after long hesitation, I have decided to accept the post,—feelings of diffidence in my power of doing justice to its requirements, and feelings of pride in

being permitted, at the end of my Indian career, to preside over a Society which holds such a distinguished place in the learned world, of which I am now one of the oldest resident European members, and which I have had the honour and the pleasure of serving as Philological Secretary for a long term of years. For, looking back on the years passed, I may truly say that my labours for the Society have been a pleasure to me, a relief amidst the drudgery of the ordinary Indian life. A very distinguished member of the Society, Horace Hayman Wilson, once said with regard to his own labours for the Society that they had made many hours of leisure in this country slip happily away. To have many hours of leisure for scientific work is an experience which I fear is not given to any of us in these days of professional work under high pressure. To me that will always be one of the sad reminiscences of this "land of regrets." However, it is a comfort to know that the prosperity of the Society depends not so much on its President, as on its Secretaries and other officers; and I feel sure, that I may rely on their extending to me the same measure of hearty co-operation with which they have supported my able predecessors during their terms of office. I would, therefore, now ask you to pass a cordial vote of thanks to the retiring President, the Vice-Presidents, the Secretaries and the Council, who, in the past year, have given so ungrudgingly their time and strength to the conduct of the affairs of the Society."

The vote of thanks was carried unanimously.

The minutes of the last meeting were read and confirmed.

Fifty-three presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last Meeting of the Society were balloted for and elected Ordinary Members:—

Walter Weber, Esq.
 Dr. Th. Bloch.
 H. H. Hayden, Esq.
 C. W. Peake, Esq.

The following gentlemen have expressed a wish to withdraw from the Society:—

Bābu Peary Mohan Roy.
 A. F. M. Abdur Rahman, Esq.

In accordance with Council order, the names of the following corresponding Members have been struck off from the list of Members:—

The Rev. J. Porter.
 A. Murray, Esq.
 Dr. J. Macgowan.

The Secretary reported the death of the following Members :—
Nawab Ashgar Ali Diler Jung Bahadur, C.S.I.
Prince Farrukh Shah.

The President laid on the table the Budget of expenses on the *Bibliotheca Indica* for 1897 drawn up by the Philological Committee and approved by the Council.

PROCEEDINGS OF THE PHILOLOGICAL COMMITTEE.

29th January, 1897.

PRESENT :

Dr. A. F. Rudolf Hoernle, *in the chair*.
Dr. G. Ranking, *Phil. Secy*.
Paṇḍit Haraprasād Čāstrī, *Jt. Phil. Secy*.
Rai Čaratcandra Dās, Bāhādur, C.I.E.
Bābū Pṛatāpacandra Ghoṣa.
Paṇḍit Satyavṛata Sāmaçramī.

REPORT FOR SUBMISSION TO THE COUNCIL AT THE MEETING OF 29TH JANUARY, 1897.

(1) *Resolved* : The Assistant Secretary is to be instructed to produce the despatches of the Court of Directors relating to the rules of the *Bibliotheca Indica*, published in the *Proceedings* of 1835 and 1856, for circulation to Philological Committee with reference to the consideration of the question of re-printing certain works in the *Bibliotheca Indica*.

(2) The Budget Estimate submitted by the Joint Secretary, Paṇḍit Haraprasād Čāstrī is approved, in the following revised form :

RECEIPTS.			DISBURSEMENTS.		
	RS.	AS. P.		RS.	AS. P.
Balance in hand ...	12,000	0 0	Tattva-cintāmaṇi ...	600	0 0
Government grant for 1897	9,000	0 0	Svayambhū-purāṇa ...	350	0 0
			Tul'si-satsai ...	300	0 0
Total ...	21,000	0 0	Vṛhaddharma-purāṇa ...	600	0 0
			Mārkaṇḍeya-purāṇa ...	600	0 0
			Nyāya-vārtika ...	900	0 0
			Kalpa-lata ...	700	0 0
			Onturvarga-cintāmaṇi ...	300	0 0
			Taittiriya-saṁhitā ...	600	0 0
			Çrauta-sūtra of Čāṅkhāyana	700	0 0
			Āitarāya-brāhmaṇa ...	3,000	0 0
			Translation of Muntakhabu-tawārikh ...	2,500	0 0
			Carried over...	11,150	0 0

	Rs.	As.	P.		Rs.	As.	P.
Brought forward ...	21,000	0	0	Brought forward ...	11,150	0	0
				Sher Phyin ...	600	0	0
				Translation of Akbar-nāmah ...	600	0	0
				Kālavivēka ...	600	0	0
				Nātādhamma-kathā-sutta ...	800	0	0
				Āpastamba-ṛguta-sūtra ...	700	0	0
				Padumawāti ...	1,300	0	0
				Translation of Riyāzu-s-salā-			
				tin ...	700	0	0
				Aṇubhāṣya ...	600	0	0
				Parācāra-smṛti ...	300	0	0
				(the last fasciculus was left			
				incomplete).			
				Bālabhāṭṭa ...	300	0	0
				Translation of Suçruta ...	600	0	0
					17,750	0	0
				NEW BOOKS RECOMMENDED.			
				Sad-dharma-puṇḍarika ...	350	0	0
				Vidhi-viveka ...	300	0	0
				English translation of Al			
				Maṇḍasāi ...	600	0	0
				Gadādhara-paddhati... ..	600	0	0
				Trikāṇḍa-maṇḍana ...	600	0	0
				Prayōga-pārijāta ...	600	0	0
					20,800	C	0

(3) Recommended, that the publication of the new books above named be entrusted to the following gentlemen: Nos. 1 and 2 to Paṇḍit Haraprasāda Čāstri; No. 3 to Dr. G. Ranking; No. 4 to Paṇḍit Sadāçiva Miçra, Head Paṇḍit of the Pūri Zilla School; and Nos. 5 and 6 to Mahāmahōpādhyāya Candrakānta Tarkālaṅkāra. No. 1, is a well-known standard work of the Buddhist literature. Its publication has been already sanctioned on a previous occasion by the Society. No. 3, is an important Arabic work on the Topography of Muḥammadan countries, in the fourth century of the Hijrah including Sindh, and parts of India. No. 4, is a standard work on Hindu Law and ritual in Orissa. Nos. 5 and 6 are two important works, one on the Soma-Sacrifice the other on Hindu Law and ritual. All these works satisfy the ordinary rule that three manuscripts should be available to the Editor. No. 2 is an exception to this rule. Only one manuscript of it exists, which has been lately discovered in Pūri. It is recommended, however, to be published, on account of its great interest and the exceeding improbability of another manuscript being found. Its author is Maṇḍana Miçra, the great opponent and, afterwards, convert of Čaṅkārāçārya. The details of this work and its discovery are reported in the *Proceedings* for December, 1896.

(4) The following recommendations of the Joint-Secretary are approved :—

Caturvarga-cintāmaṣi should not be continued, unless suitable MSS. are available.

The Ānandāçrama Series have undertaken to publish Aparārka. It may therefore be struck off from the list.

The following work has been stopped for various reasons :—

Lalita-vistara (English Translation).

The following list of works sanctioned and approved by the Council, but not taken in hand, has been drawn up in order of urgency :—

- | | |
|---------------------------------|---|
| 1. Hiranya-kēçi-sūtra (Çrauta). | 9. Bhaṭṭōtpala's Commentary on the Bṛhat-saṁhitā. |
| 2. Baudhāyana-sūtra (Çrauta). | |
| 3. Vipāka-sūtra (Jaina). | 10. Yājñavalkya-gītā (English Translation). |
| 4. Tawāriḥ-i-Yumīni. | |
| 5. Tawāriḥ-i-Wassāf. | 11. English Translation of Caruka. |
| 6. Tāju-l-Ma'āşir. | 12. Translation of Sāṁkhyapra. |
| 7. Naqa'idu-l-frazdaq wa Jarir. | vacana-bhāşya. |
| 8. Karaṇa-grantha. | 13. Advaita-cintā-kaustubha. |

The Secretary exhibited drawings from Mahomedan Grave Stones in parts of Kashmir, Chilas and Khagan and some sketches from the Habbakhortau Mosque in Kashmir, forwarded by Mrs. H. G. Murray-Aynsley, and read the following note on them :—

To—The Philological Secretary of the Asiatic Society of Bengal.

Dear Sir,

Kashmir would seem to be a most interesting hunting ground in a direction which has hitherto apparently not been very much studied.

Not only do we find in this country traces of Pre-historic worship, but quite recently only, it has come to my knowledge that the Mahomedan inhabitants of Kashmir and some adjacent districts, have employed both the Cross and the Svastika on some of their buildings whether as an ornament, or a symbol only, it is not easy to determine, and that they also adopt still, the Greek cross on their grave stones. Enclosed (Plate I) are some specimens of the latter from original drawings made on the spot by Dr. Arthur Neve (in West Kashmir and in Chilas) when on tour in September and October in this year (1896), Dr. A. Neve is one of the Medical Missionaries attached to the C. M. S. in Srinagar, and though he has lived there some eight years, had never discovered the Habbakhorten Mosque, situated about two miles

from his house. I have recently been there myself, and also send four drawings (Plate II) taken from the band of carving on its exterior. It is interesting to find there the double triangle as well as the Cross and the Svastika, and I am in hopes that now attention has been called to this subject in the minds of some of the permanent employés and residents, more researches may give still further results as regards the former and the present practices and beliefs of the people of "the Happy Valley." The conquests of Alexander and his armies, would seem to have left their impress on many of the countenances of the Mahomedan population of Kashmir, for we not unfrequently meet with a pure Greek type of features amongst these people; the way also, in which some of the peasants when driving their cows home or out to pasture drape themselves with their Shawl or Chuddar, in every particular recalls certain bas-reliefs in the Museums at Athens, illustrating the same occupation and scene.

I remain dear Sir,

Yours faithfully,

SRINAGAR :

November 10th, 1896.

HARRIET G. M. MURRAY-AYNSLEY.

Rai Çarat Candra Das Bahadur, C.I.E., exhibited the full size portrait (in oils) of a Tibetan Princess taken from life (an Ethnological type), also a drawing of the Grand Monastery of Tashi-lhunpo and a picture of the Buddhist Pantheon of Tibet.

The following papers were read:—

1. *An account of travels on the shores of Lake Yamdo-Croft.*—By RAI ÇARAT CANDRA DAS BAHADUR, C.I.E.

2. *Note on the identity of the Tsungpo of Tibet with the Dihong of Assam.*—By RAI ÇARAT CANDRA DAS BAHADUR, C.I.E.

3. *Nādir Shah and Muhammad Shah.*—By WILLIAM IRVINE, Late of the Bengal Civil Service.

The papers will be published in the *Journal*, Part I.

4. *Noviciæ Indicae, XV. Some additional Leguminosae (PAPILIONACEAE).*—By DR. D. PRAIN.

The paper will be published in the *Journal*, Part II.

5. *The Antiquity of the Poet Nāgarī Dās and of the Poetess Rasik Bihari alias Banī Thanī.*—By PANDIT MOHANLĀL VISHNULĀL PĀNDIĀ, M.A.S.B., M.R.A.S., M.G.V.S., late Prime Minister of the Prātāgarh State in Rājputānā.

The paper will be published in the *Journal*, Part I.

6. *Materials for a Flora of the Malayan Peninsula, No. IX.*—By G. KING, M.B., LL.D., F.R.S., C.I.E., Superintendent of the Royal Botanic Garden, Calcutta.

The paper will be published in the *Journal*, Part II.

7. *Note on the Antiquities of Chittagong.*—By RAI ÇARAT CANDRA DAS BAHADUR, C.I.E.

The paper will be published in the *Journal*, Part I.

LIBRARY.

The following additions have been made to the Library since the meeting held in January last.

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Berlin. Berliner Entomologische Zeitschrift,—Band XLI, Heft 2 und 3.
 Calcutta. Indian Engineering,—Vol. XXI, Nos. 2-5.
 ——. The Indian Lancet,—Vol. IX, No. 2.
 ——. Maha-bodhi Society,—Journal, Vol. V, No. 9.
 ——. Photographic Society of India,—Journal, Vol. X, No. 1.
 Edinburgh. Royal Physical Society,—Proceedings, Vol. XIII, Part 2.
 The Hague. Koninklijk Instituut voor de Taal,—Land-en Volkenkunde van Nederlandsch-Indië,—Bijdragen tot de Taal,—Land-en Volkenkunde van Nederlandsch-Indië, 6^e Volgr., Deel III, Aflevering 1.
 London. The Academy,—Nos. 1286-88, and Index to Vol. L.
 ——. The Athenæum,—Nos. 3608-12.
 ——. Nature,—Vol. LV, Nos. 1416-20.
 ——. Royal Astronomical Society,—Monthly Notices, Vol. LVII, Nos. 1 and 2.
 ——. The Geographical Journal,—Vol. IX, No. 1.
 Montevideo. Museo Nacional de Montevideo,—Anales, No 7.
 Mussoorie. The Indian Forester,—Vol. XXIII, No. 1.
 Paris. La Société Philomathique de Paris,—Compte-Rendu Sommaire de Séance, No. 4, 1896.
 Philadelphia. American Philosophical Society,—Transactions, Vol. XIX (new series), Part 1
 St. Petersburg. Comité Géologique,—Bulletins, Tome XV, Nos. 3 et 4.
 Sydney. Linnæan Society of New South Wales,—Proceedings, Part 3, 1896.

- Taiping. Perak Government,—Gazette, Vols. IX, Nos. 28-30; X, 1 and 2.
- Tring. *Novitates Zoologicae*,—Vol. III, No. 4.
- Turin. La Reale Accademia della Scienze di Torino,—Memorie, 2^e série, Tome XLVI
- Vienna. Die Anthropologische Gesellschaft in Wien,—Mittheilungen, Band XXVI, Heft 4 und 5.
- . Die K. K. Zoologisch-botanische Gesellschaft in Wien,—Verhandlungen, Band XLVI, Heft 9.
- Washington. Biological Society of Washington,—Proceedings, Vol. X, pp. 134-67, 169-74.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

- MACDONALD, K. S. *The Brahmanas of the Vedas.* 8vo. Madras, 1896.
- PEDLER, ALEX. *Description with Plans of the Chemical Laboratory, Presidency College, Calcutta.* Fcp. Calcutta, 1896.

MISCELLANEOUS PRESENTATIONS.

- A Descriptive Catalogue of Sanskrit Manuscript in the Library of the Calcutta Sanskrit College, No. 6. 8vo. Calcutta, 1896.

CALCUTTA SANSEKRIT COLLEGE.

- Akademische Festrede zur Feier des Jahresfestes der Grossherzoglich Hessischen Ludewigs—Universität:——
- PASCH, DR. MORITZ. *Ueber den Bildungswerth der Mathematik.* 4to. Giessen, 1894.
- Akademische Festrede zur Feier des Stiftungsfestes der Grossherzoglich Hessischen—Ludewigs Universität:——
- JORG, PAUL. *Die Reichspolitik Kaiser Justinians.* 4to. Giessen, 1893.
- Inaugural—Dissertation zur Erlangung der Juristischen Doctorwürde der Juristischen Facultät der Ludewigs—Universität zu Giessen:——
- FRIEDRICH, JULIUS. *Luther und die Kirchenverfassung der Reformatio Ecclesiarum Hassiæ von 1526.* 8vo. Darmstadt, 1894.
- GEYL, PHILIPP. *Auslegung der lex 79 pr. D de heredibus instituendis 28,5.* 8vo. Mainz, 1894.
- GLÄSSING, WILHELM. *Die condictio indebiti des deutschen Öffentlichen Rechtes.* 8vo. Giessen, 1894.
- RIEGER, BERNHARD. *Die Hessen—Darmstädtischen Landstände und der absolutismus.* 8vo. Darmstadt, 1894.
- SPOHR, CURT. *Das Beweisinteresse in Starfsachen.* 8vo. Giessen, 1894.

- Inaugural—Dissertation zur Erlangung der veterinär—medizinischen Doctorwürde der Hohen medicinischen Fakultät der Grossherzoglich Hessischen Ludewigs—Universität zu Giessen :——
- ARONSOHN, ARTHUR. Beitrag zur Kenntniss der pathologischen Anatomie des Spates beim Pferde. 8vo. Giessen, 1893.
- BACHERT, WILHELM. Ueber einen Fall von angeborener Rectovaginalfistel mit gleichzeitiger doppelseitiger Hüftgelenksluxation. 8vo. Giessen, 1893.
- BERNET, ADAM. Zur Casuistik des Echinococcus multilocularis. 8vo. Giessen, 1893.
- BRÜHL, CARL. Über Ulcus corneae rodens. 8vo. Giessen, 1893.
- DUSEBERG, GEORG. Zur Casuistik der Rückenmarkstumoren. 8vo. Giessen, 1893.
- HEID, LUDWIG. Ein Fall von hochgradiger cystenartiger Erweiterung des Ductus choledochus. 8vo. Giessen, 1893.
- HESSLER, KARL. Zur Casuistik der diffusen phlegmönösen Oesophagitis. 8vo. Giessen, 1893.
- KERSTEN, GOTTHELF. Ein Beitrag zur Lehre von den Erweichungen der Gebärmuttermyome. 8vo. Giessen, 1893.
- KLOSTERKEMPER, HEINRICH. Beiträge zur Kenntniss der Lungenmykosen der Säugethiere. 8vo. Giessen, 1893.
- KÖHLMOOS, HEINRICH. Ueber das Chalazion. 8vo. Giessen, 1893.
- KRANSHAAR, EDUARD. Ueber die Oesophaguscarcinome mit Durchbruch in den linken Vorhof. 8vo. Giessen, 1893.
- KRETSCHMAR, KARL. Über eine Geschwulst der Glandula carotica. 8vo. Giessen, 1893.
- LANG, AUGUST. Gallenstein—Statistik auf Grund der Sektionprotokolle des pathologischen Institutes zu Giessen vom Jahre 1872 bis 1892 incl. 8vo. Giessen, 1893.
- LELLMANN, WILFRIED. Ueber Leberveränderungen nach Unterbindung des Ductus choledochus. 8vo. Giessen, 1893.
- Inaugural—Dissertation zur Erlangung der Doctorwürde der Hohen philosophischen Facultät der Grossherzoglich Hessischen Ludewigs—Universität zu Giessen :——
- BEARDER, JOHN WILLIAM. Über den Gebrauch der Praepositionen in der Altschottischen Poesie. 8vo. Halle, 1894.
- BINDEWALD, WILHELM. Über die Einwirkung von Phosphorpentachlorid auf Oxyazokörper. 8vo. Giessen, 1893.
- EISENSTADT, M. Ueber Bibelkritik in der Talmudischen Literatur. 8vo. Berlin, 1894.
- FINGER, DR. HERMANN. Über Derivate des-o-Amidobenzamids und-o-Amidoberzhydrazids. 8vo. Giessen, 1894.

- JODIDI, S.** Beitrag zur Kenntniss des Hydrastins und Narceins. 8vo. Berlin, 1893.
- JUNG, DR. JUR FRICH.** Causa Finalis. 8vo. Giessen, 1893.
- KAUFMANN, HERMAN EZRECHIEL.** Die Anwendung des Buches Hiob in der Rabbinischen Agadah I. Theil Die Tannaitische Interpretation von Hillel bis Chijsa nach Schulen geordnet. 8vo. Frankfurt, a. M., 1893.
- KOLB, WILHELM.** Ueber die Einwirkung von Natriummalonsäureäthyleter auf cyanurchlorid. 8vo. Leipzig, 1894.
- KRAUSS, SAMUEL.** Zur Griechischen und Lateinischen Lexikographie aus Jüdischen Quellen. 8vo. Leipzig, 1893.
- LIEBMANN, ALBERT.** Spectrophotometrische Untersuchungen. 8vo. Köln, 1893.
- LÜCKEN, EDMUND.** Zur Syntax Montchrestiens. 8vo. Darmstadt, 1894.
- MILANI, A.** Beiträge zur Kenntniss der Reptilienlunge. I. Lacertilia. 8vo. Jena, 1894.
- MULLER, HENDRIK P. N.** Land und Volk Zwischen Zambesi und Limpopo. 8vo. Giessen, 1894.
- OTTO, EDUARD.** Die Bevölkerung der Stadt Butzbach (I. D. Wetterau) Während des Mittelalters. 8vo. Darmstadt, 1893.
- SCHLAMP, ANTON.** Zur Dissociationstheorie der Lösungen. 8vo. Giessen, 1894.
- WINKLER, ALEXANDER.** Beiträge zur Kritik des Midrasch Threni. 8vo. Kaschau, 1894.
- WOHLSTEIN, JOSEPH.** Ueber einige aramäische. Inschriften auf Thongefässen des Königlichlichen Museums zu Berlin. 8vo. München, 1894.
- WOLFSKEHL, KARL.** Germanische Werbungssagen. 8vo. Darmstadt, 1893.
- Inaugural—Dessertation behufs erlangung des grades eines Licentiaten der Theologie der Hochwürdigen Theologischen Fakultät zu Giessen: ———
- DIEHL, WILHELM.** Erklärung von Psalm 47 eine Biblisch—Theologische Untersuchung. 8vo. Giessen, 1894.
- Personal—Bestand der Grossherzoglich Hessischen Ludewigs—Universität zu Giessen, Winterhalbjahr, 1893-94. 8vo. Giessen, 1893.
- . Sommerhalbjahr 1894. 8vo. Giessen, 1894.
- Vorlesungsverzeichniss der Grossherzoglich Hessischen Ludewigs—Universität zu Giessen, Sommerhalbjahr 1894. 8vo. Giessen, 1894.
- . Winterhalbjahr 1894-95. 8vo. Giessen, 1894.

GIESSEN UNIVERSITY.

BEAZLEY C. R., AND PRESTAGE, E. The Chronicle of the Discovery and Conquest of Guinea, Vol. I. 8vo. London, 1896.

GOVERNMENT OF INDIA, HOME DEPARTMENT.

The Agricultural Ledger, Medical and Chemical Series, No 8; Mineral and Metallic Series, No. 8; Vegetable Product Series, Nos. 27, 29 and 30. 8vo. Calcutta, 1896.

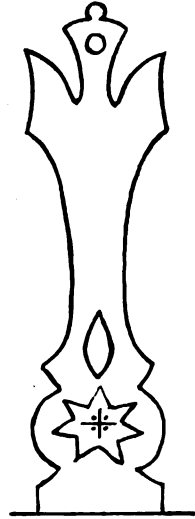
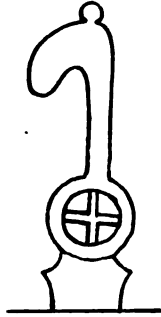
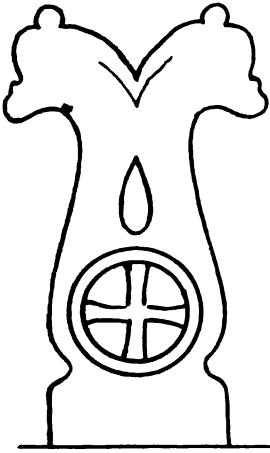
GOVERNMENT OF INDIA, REV. AND AGRI. DEPARTMENT.

PERIODICALS PURCHASED.

- Calcutta. The Calcutta Review,—January, 1897.
 ———. Indian Medical Gazette,—Vol. XXXII, No. 1.
 Geneva. Archives des Sciences Physiques et Naturelles,—Tome II (2^e Série), No. 12.
 Leipzig. Annalen der Physik und Chemie,—Band LX, Heft 1.
 ———: ———. Beiblätter, Band XX, Stück 11.
 London. Numismatic Circular,—Vol. V, No. 50.

BOOKS PURCHASED.

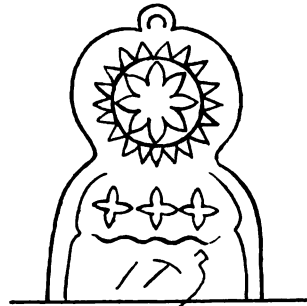
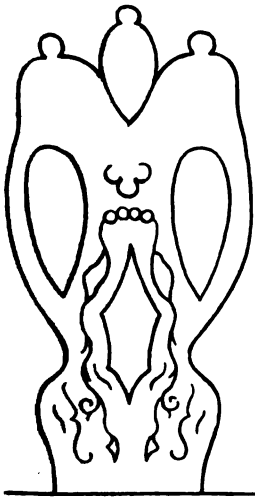
- CHATTERJEE, MOHENDRANATH. Translation of the Çrimadbhāgavatam. Book II. 8vo. Calcutta, 1896.
 HUNTER, W. W. Orissa. Vols. I-II. 8vo. London, 1872.
 PETRIE, W. M. F. Ten years' Digging in Egypt 1881-91. 8vo. London, 1893.
 RIDDING, C. M. The Kādambari of Bana. 8vo. London, 1896.
 SEWELL, R. The Indian Calendar. 4to. London, 1896.
 TAKAKUSN, J. A record of the Buddhist Religion as practised in India and the Malay Archipelago. By I-tsing. 8vo. Oxford, 1896.
 TEIGNMOUTH, LORD. Memoir of the Life and Correspondence of John Lord Teignmouth, Vols. I-II. 8vo. London, 1893.
 WHITEHEAD, J. Exploration of Mount Kina Balu, North Borneo. 4to. London, 1893.



No. 1. Grave head-stone carved in shale, from village Khel, West Kashmir; also in Khagan, IN MANSDERA DISTRICT.

No. 2. Small wooden grave post, Khel. (The Cross is cut in high relief, or often perforated.)

No. 3. Grave Post at Khagan.

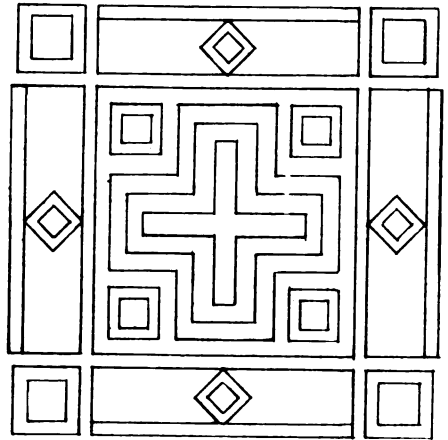
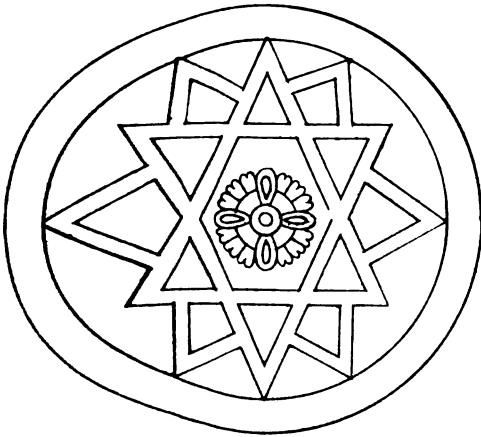
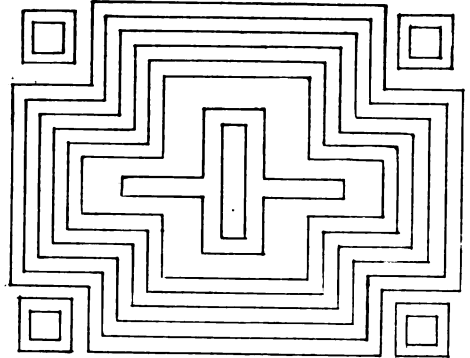
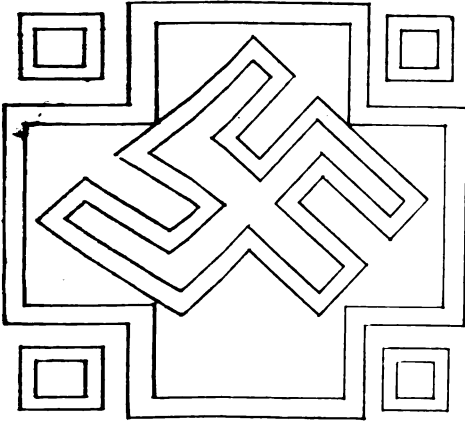


No. 4. A beautifully carved grave post near Balakhot, Khagan.

No. 5.

Copies of drawings made on the spot by Dr. Arthur Neve, a Medical missionary of the C. M. S. in Srinagar, Kashmir.

Dr. Neve states that he has not drawn in detail the elaborate and beautiful patterns of carving he saw.



These four separate designs are copied from a band of carving which extends round three sides of the old wooden Habbakhorten musjid situated about one mile above Pandrekhan, Kashmir. The Mahomedan boat people say that it was built in the time of the Emperor Jehanghir.

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR MARCH, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 3rd March, 1897, at 9-15 P. M.

DR. A. F. R. HOERNLE, President, in the chair.

The following members were present :—

Dr. T. Bloch, J. Mann, Esq., L. de Nicéville, Esq., A. T. Pringle; Esq., The Hon. Mr. Guruprasād Sēn, C. R. Wilson, Esq.

The minutes of the last meeting were read and confirmed.

Forty-four presentations were announced, details of which are given in the Library List appended.

The following gentlemen have expressed a wish to withdraw from the Society :—

A. Caspersz, Esq.
I. van Verdeau, Esq.

The SECRETARY read the names of the following gentlemen who had been appointed to serve in the various Committees for the present year :—

FINANCE AND VISITING COMMITTEE.

Dr. A. R. S. Anderson.	C. L. Giesbach, Esq.
Bābu Pratāpa Candra Ghoṣa.	A. Pedler, Esq.
The Most Rev. Archbishop P. Goethals.	Dr. P. K. Ray.
	Col. J. Waterhouse.

LIBRARY COMMITTEE.

The Hon. Mr. Justice Gurudās Bannerji.	Dr. Āçutoṣa Mukherji.
Bābu Gaurdās Baṣāk.	Paṇḍit Nilmaṇi Mukherji Nyāyā- laṅkāra.
Dr. D. D. Cunningham.	Mahāmahōpādhyāya Mahēṣa Can- dra Nyāyaratna
Bābu Pratāpa Candra Ghoṣa.	A. Pedler, Esq.
The Most Rev. Archbishop P. Goethals.	A. T. Pringle, Esq.
T. H. Holland, Esq.	Dr. Mahēndralāl Sarkār.
The Rev. H. B. Hyde.	Col. R. C. Temple.
S. C. Laharry, Esq.	Col. J. Waterhouse.
J. Mann, Esq.	Dr. G. Watt.

PHILOLOGICAL COMMITTEE.

Maulvie Ābdus Salam.	Mahāmahōpādhyāya Mahēṣa Cau- dra Nyāyaratna.
Maulvie Āhmad.	F. E. Pargiter, Esq.
Sir Saiyed Āhmad.	Captain D. C. Phillott.
Bābu Gaurdās Baṣāk.	Paṇḍit Satyavrata Sāmacrami.
Bābu Nagendra Nātha Vasu.	Rai Rāj Kumār Sarvādhikārī Bāhā- dur.
Rai Çarat Candra Dās Bāhādur.	Dr. Mahēndralāl Sarkār.
Dr. A. Führer.	Mahāmahōpādhyāya Candra Kāuta Tarkālaṅkāra.
Bābu Pratāpa Candra Ghoṣa.	Col. R. C. Temple.
J. Mann, Esq.	Dr. G. Thibant.
Dr. Āçutoṣa Mukherji.	
Paṇḍit Nilmaṇi Mukherji Nyāyā- laṅkāra.	

A. Venis, Esq.

COINS COMMITTEE.

J. A. Bourdillon, Esq.	C. J. Rodgers, Esq.
Dr. A. Führer.	V. A. Smith, Esq.
	E. Thurston, Esq.

HISTORY AND ARCHÆOLOGICAL COMMITTEE.

The Hon. Mr. Justice Āmir Āli.	The Most Rev, Archbishop P. Goethals.
Bābu Gaurdās Baṣāk.	The Rev. H. B. Hyde.
Dr. A. Führer.	Paṇḍit Mohanlāl Viṣṇulāl Pāṇḍia.
Bābu Pratāpa Candra Ghoṣa.	Col. R. C. Temple.

NATURAL HISTORY COMMITTEE.

Dr. A. R. S. Anderson.	S. E. Peal, Esq.
Dr. D. D. Cunningham	A. Pedler, Esq.
J. F. Duthie, Esq.	Dr. D. Prain.
T. H. Holland, Esq.	Dr. J. Scully.
C. S. Middlemiss, Esq.	R. E. S. Thomas, Esq.
Dr. Fritz Noetling.	E. Thurston, Esq.
R. D. Oldham, Esq.	Dr. G. Watt.

PHYSICAL SCIENCE COMMITTEE.

Dr. J. C. Bose.	Dr. Fritz Noetling.
P. N. Bose, Esq.	R. D. Oldham, Esq.
Dr. D. D. Cunningham.	A. Pedler, Esq.
J. Eliot, Esq.	Dr. D. Prain.
T. H. Holland, Esq.	Dr. P. C. Roy.
Dr. G. King.	Dr. Mahēndralāl Sarkār.
The Very Rev. Father E. Lafont.	Dr. J. Scully.
C. S. Middlemiss, Esq.	Dr. W. J. Simpson.
Dr. Aṅtōṣa Mukherji.	Col. J. Waterhouse.

ANTHROPOLOGICAL COMMITTEE.

M. L. Dames, Esq.	S. E. Peal, Esq.
Rai Charat Candra Dās Bāhādūr.	The Hon. Mr. H. H. Risley.
E. A. Gait, Esq.	Rai Rāj Kumār Sarvādhikāri Bāhādūr.
R. Greeven, Esq.	Col. R. C. Temple.
S. C. Laharry, Esq.	E. Thurston, Esq.
J. Mann, Esq.	

Dr. G. Watt.

The PRESIDENT announced that the Council had elected Dr. T. Bloch, Editor of the Society's *Journal*, Part I, in the place of Dr. Grierson resigned.

Dr. Hoernle exhibited 6 Copper Coins forwarded by the Superintendent of the Government Museum, Madras, for the Society.

The following papers were read :—

1. *Note on a find of Coins in the Wun District, Barār.*—By CAPTAIN WOLSELEY HAIG, *Officiating Deputy Commissioner of Barār.*

In July 1896, a Gōṇḍ was ploughing his field in the village of Kurali in the Kēlāpūr Ta'alluqa of the Wun District, and turned up

with his plough forty small coins. Encouraged by his find he commenced a search, and turned up coins at the rate of a few daily, until he had found 177 coins in all. He tried to keep his discovery a secret, but it came to the ears of the Paṭāl of the village, who recovered from the Gōṇḍ 136 coins and three bangles, which the Gōṇḍ had had made up for himself by the village Sonār out of the balance of the coins. The coins and bangles recovered by the Paṭāl were duly sent by him to the Taḥṣildār of the Ta'alluqa, who forwarded them to me. I have examined the coins with the following results:—

1. 'ALĀU-D-DĪN MUḤAMMAD SHĀH.	
Type as in Thomas' "Chronicles of the Paṭhān Kings of Dihlī," No. 135, p. 172. Dates ;'701, 702, 703, 704, 711, 713, 714, 715	... .. 28
2. QUTBU-D-DĪN MUBĀRAK SHĀH.	
(a) Type as in Thomas' "Chronicles," No. 147, p. 182.	
Date 716. Date on the other coin illegible	... 2
(b) Type as in Thomas' "Chronicles," No. 150, p. 182.	
Date 717. Date on the other coin illegible	... 2
	— 4
3. GHĪYĀṢU-'D-DĪN TUḠHLAQ SHĀH.	
Type as in Thomas' "Chronicles," No. 164, p. 191.	
Dates 721, 722, 723, 724, 725, 726. On six of these coins the dates are illegible and on other six they are doubtful	... .. 49
4. MUḤAMMAD BIN TUḠHLAQ SHĀH.	
Type as in Thomas' "Chronicles," No. 193, p. 216.	
Dates 732, 733, 734, 736, 737	... .. 9
Type as in Thomas' "Chronicles," No. 194, p. 216.	
Dates 733, 734, 735, 737	... .. 46
	— 55
	136

2. *Ancient Countries in Eastern India, with a map.*—By F. E. PARGITER, B.A., I.C.S.

3. *Pronominal adjuncts in the Language spoken in the Western and Southern parts of the Panjab.*—By THE REV. TREVOR BOMFORD, M.A., C.M.S., Multan. Communicated by DR. G. A. GRIERSON, C.I.E., I.C.S.

4. *Upagupta, the Fourth Buddhist Patriarch, and High Priest of Aṣoka.*—By DR. L. A. WADDELL, LL.D.

The papers will be published in the *Journal*, Part I.

LIBRARY.

The following additions have been made to the Library since the meeting held in February last:—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Berlin. Die Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte,—Verhandlungen, 15. Februar, 1896.
- Bombay. Bombay Natural History Society,—Journal, Vol. X, No. 4.
——. Indian Antiquary,—August and September, 1896.
- Bordeaux. La Société Linnéenne de Bordeaux,—Actes, Tome XLVIII.
- Calcutta. Geological Survey of India,—Memoirs, Vols. XXV and XXVI.
——. Indian Engineering,—Vol. XXI, Nos. 6-9.
——. Indian Lancet,—Vol. X, Nos. 4 and 5.
——. Indian Meteorological Memoirs,—Vols. VII, Parts 6; VIII, 2; IX, 8.
——. Maha-bodhi Society,—Journal, Vol. V, No. 10.
——. Photographic Society of India,—Journal, Vol. X, No. 2.
- Cassel. Die Vereins für Naturkunde zu Kassel,—Abhandlungen u Bericht, XLI.
- Dresden. Die Gesellschaft Iris zu Dresden,—Deutsche Entomologische Zeitschrift, Band IX, Heft 2.
- The Hague. Nederlandsche Entomologische Vereeniging,—Tijdschrift voor Entomologie, Deel XXXIX, Heft 3 und 4.
- Lawrence, Kansas. The Kansas University Quarterly,—Vol. V, No. 2.
- London. The Academy,—No. 1290-91.
——. The Athenæum,—Nos. 3613-14.
——. Geological Society,—Geological Literature added to the Library during the year ended December 31st, 1896.
——. ———. Quarterly Journal, Vol. LIII, Part 1.
——. ———. ———. General Index to the first fifty volumes, Part I, A—La.
——. Institution of Civil Engineers,—Minutes of Proceedings, Vol. CXXVI., and Brief Subject-Index to Vols. CXIX-CXXVI.
——. Institution of Electrical Engineers,—Journal, Vol. XXV, No. 125.
——. Institution of Mechanical Engineers,—Proceedings, No. 1, 1896.
——. Nature,—Vol. LV, Nos. 1421-24.

- London. Royal Geographical Society,—Geographical Journal, Vol. IX, No. 2.
- . Royal Society,—Proceedings, Vol. LX, Nos. 360 and 361.
- . Royal Statistical Society.—Journal, Vol. LIX, Part 3.
- Lyon. La Société d'Agriculture Sciences et Industrie de Lyon,—Annales, 1894 et 1895.
- Munich. Die K. b. Akademie der Wissenschaften zu Munchen,—Sitzungsberichte, Math-phys. cl., Heft III, 1896; phil. u. hist. cl., Heft III, 1896.
- Nantes. La Société des Sciences Naturelles de l'ouest de la France,—Bulletin, Tome VI, No. 2.
- Ottawa. Royal Society of Canada,—Proceedings and Transactions, 2nd Series, Vol. I.
- Paris. Du Muséum d'Histoire Naturelle,—Bulletin, Nos. 5 et 6, 1896.
- . La Société d'Anthropologie de Paris,—Bulletins, IV^e Série, Tome VI, Nos. 5 et 6; VII, 1.
- . ———. Mémoires, 3^e Série, Tome I, No. 4; II, I.
- . La Société de Géographie,—Bulletin, 7^e Série, Tome XVII, No. 3.
- . ———. Comptes Rendus des Séances, Nos. 17–19, 1896.
- . La Société Philomathique de Paris,—Comptes Rendus Sommaire de Séances, Nos. 5 et 6, 1896–7.
- Philadelphia. Academy of Natural Sciences of Philadelphia,—Proceedings, Part 3, 1896.
- . American Academy of Political and Social Science,—Annals, Vol. IX, No. 1.
- . American Philosophical Society,—Proceedings, Vol. XXXV, No. 151.
- Rome. Rivista Geografica Italiana,—Tome III, Nos. 10; IV, 1.
- . La Società degli Spettroscopisti Italiani,—Memorie, Tome XXV, No. 10.
- St. Petersburg. Russian Imperial Geographical Society,—Journal, Vol. XXXII, No. 4.
- . Die Russisch-Kaiserliche Mineralogische Gesellschaft zu St. Petersburg,—Verhandlungen, Zweite Serie, Band XXXIII, Heft 2; XXXIV, 1.
- Stockholm. Entomologisk Tidskrift, Häft 1–4.
- Taipei. Perak Government,—Gazette, Vol. X, Nos. 3 and 4.
- Upsala. Upsala Universitets,—Arsskrift, 1861–95.
- . ———. Bulletin of the Geological Institution, Vols. I; II, Part I.
- Valparaiso. Die Deutsche Wissenschaftliche Vereins zu Santiago de Chile,—Verhandlungen, Band III, Heft 3 und 4.

- Vienna. Die K. K. Geologische Reichsanstalt,—Jahrbuch, Band XLV, Heft 4; XLVI, 1.
- . Verhandlungen, Nrn. 13–15, 1896.
- . Die Kaiserliche Akademie der Wissenschaften,—Archiv für österreichische Geschichte, Band LXXXII, Heft 1 und 2 LXXXIII, 1.
- . Denkschriften, Band LXII.
- . Fontes Rerum Austriacarum, II Abth, Band XLVIII, Heft 1.
- . Sitzungsberichte, Mathem-Naturw. Cl., Abth. I, Band CIV, Heft 1–10; II A, CIV, 1–10; II B, CIV, 1–10; III, CIV, 1–10.
- . Phil.-hist. Cl., Band CXXXII und CXXXIII.
- . Die K. K. Zoologisch-botanische Gesellschaft,—Verhandlungen, Band XLVI, Heft 10.

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- REUTER, E. Über die Palpen der Rhopaloceren. 4to. Helsingfors, 1896.
- SINHA, LACHEMI NARAYAN. The Story of Virudhaka. 8vo. Calcutta, 1896.

MISCELLANEOUS PRESENTATIONS,

- Report of the Sixth Meeting of the Australian Association for the Advancement of Science. 8vo. Sydney, 1895.
- AUSTRALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, SYDNEY.
- Annual of the Trustees of the Australian Museum for 1895. Fcp. Sydney, 1896.
- AUSTRALIAN MUSEUM, SYDNEY.
- Report of the Director of the Botanical Survey of India in the year 1895-96. Fcp. Calcutta, 1896.
- BOTANICAL SURVEY OF INDIA.
- Preliminary Programme of the British Association for the Advancement of Science to be held in the city of Toronto in 1897. 8vo. Toronto, 1896.
- Report of the Sixty-sixth Meeting of the British Association for the Advancement of Science held at Liverpool in September 1896. 8vo. London, 1896.
- BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, LONDON.

Report on the Administration of the Central Provinces for 1895-96.
Fcp. Nagpur, 1897.

Returns of the Rail-borne Traffic of the Central Provinces during the
quarter ending 30th September, 1896. Fcp. Nagpur, 1896.

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STACK, E. Some Tsangla-Bhutanese Sentences, Part III. 8vo. Shil-
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Cornell Studies in Classical Philology, No. 5. 8vo. Ithaca, 1895.

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BENSON, ALBERT H. Spraying. 8vo. Brisbane, 1897.

DEPARTMENT OF AGRICULTURE, BRISBANE.

General Report on Public Instruction in Bengal for 1895-96. Fcp.
Calcutta, 1896.

Report on the Administration of Bengal for 1895-96. Fcp. Calcutta,
1897.

Report on the Rail-borne Traffic of Bengal during the year 1895-96.
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Epigraphia Indica for September 1896. 4to. Calcutta, 1896.

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Report on the Administration of the Madras Presidency for 1895-96.
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Report on Epigraphical work in the Madras Presidency from July
1895 to June 1896. Fcp. Madras, 1896.

GOVERNMENT OF MADRAS.

Annual Report on the Provincial Museum, Lucknow, for the year ending
31st March, 1896. Fcp. Lucknow, 1896.

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Catalogue of the Sanskrit Manuscripts in the Library of the India Office, Part V. 4to. London, 1896.

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India Weather Review, 1895. 4to. Calcutta, 1896.

Monthly Weather Review from June to September, 1896. 4to. Calcutta, 1896.

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Ninth Report of the Microscopical Society of Calcutta for 1896. 8vo. Calcutta, 1896.

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Den Norske Nordhavs-Expedition 1876-1878. XXIII. Zoologi. Tunicata. 4to. Christiania 1896.

NORWEGIAN NORTH ATLANTIC EXPEDITION.

Annual Report of the Sanitary Commissioner with the Government of India for 1895. Fcp. Calcutta, 1896.

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Meteorological Observations of the St. Xavier's College Observatory from July to December 1896. Sheet.

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APTE, RAGHUNATH NARAYAN. The Doctrine of Maya. 8vo. Bombay, 1896.

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Sixth Annual Report of the Zemindary Panchayet on the 25th August. 1896.

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———. Die Königl. Gesellschaft der Wissenschaften,—Göttingische gelehrte Anzeigen, Nr. 9, 1896.

———. Journal für die reine und angewandte Mathematik,—Band CXVII, Heft 1.

———. Orientalische Bibliographie,—Band VIII, Heft 1 und 2; IX, 1 und 2.

Calcutta. The Indian Medical Gazette,—February, 1897.

- Cassel. *Botanisches Centralblatt*,—Band LXVII, Nrn. 13; LXVIII, 1-4.
- Geneva. *Archives des Sciences Physiques et Naturelles*,—15th Janvier, 1897.
- Leipzig. *Annalen der Physik und Chemie*,—Band LX, Heft 2.
 ———. ———. *Beiblätter*, Band XXI, Stück 12; XXI, 1.
 ———. *Literarisches Centralblatt*,—Nrn 40-44, 1896.
- Leyden. *Internationales Archiv für Ethnographie*,—Band IX, Heft 4 und 5.
- London. *The Annals and Magazine of Natural History*,—Vol. XVIII (6th Series), Nos. 106 and 107.
 ———. *The Chemical News*,—Vol. LXXIV, Nos. 1923-27.
 ———. *The Entomologist*,—Vol. XXIX, Nos. 401 and 402.
 ———. *The Entomologist's Monthly Magazine*,—Vol. VII (2nd Series), No. 83.
 ———. *The Ibis*,—Vol. II (7th Series), No. 8.
 ———. *The Journal of Botany*,—Vol. XXXIV, Nos. 406 and 407.
 ———. *The Journal of Conchology*,—October, 1896.
 ———. *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*,—Vol. XLII (5th Series), Nos. 257 and 258.
 ———. *Numismatic Circular*,—Vol. V, No. 51.
- New Haven. *The American Journal of Science*,—October, 1896.
- Paris. *L'Académie des Sciences*,—*Comptes Rendus des Seances*, Tome CXXIII, Nos. 12-16.
 ———. *Annales de Chimie et de Physique*,—Octobre et Novembre, 1896.
 ———. *Journal des Savants*,—Septembre, 1896.
 ———. *Revue de Linguistique et de Philologie Comparée*,—Tome XXIX, No. 4.
 ———. *Revue Scientifique*,—Tome VI (4^e Série), Nos. 14-18.

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 English translation of the *Charaka-Samhitā*, Parts 15 and 16. 8vo. Calcutta, 1896.
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- HENSMAN, H. *The Afgan War, 1879-80*. 8vo. London, 1891.
- HOLMES, T. R. E. *A History of the Indian Mutiny*. 8vo. London, 1891.

- HONIGBERGER, J. N. *Thirty-five years in the East.* 8vo. London, 1852.
- KIRBY, W. F. J. *Hübner Exotische Schmetterlinge, Plates 181-220.* 4to. Brussels, 1894.
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- Lethierry, L. and Severin, G. *Catalogue Général des Hémiptères, Tome III.* 8vo. Berlin, 1896,
- LYALL, SIR. A. *The Rise and Expansion of the British Dominion in India.* 8vo. London, 1894.
- MAURICE, THOMAS. *History of Hindostan, Vols. I.-III.* 4to. London, 1820.
- ROBERTS, LORD. *Forty-one years in India, Vols. I. and II.* 8vo. London, 1897.
- The Wealth of India, Vol. IV, Parts 1-6.* 8vo. Calcutta, 1896.
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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR APRIL, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 7th April, 1897, at 9-15 P. M.

DR. A. F. R. HOENLE, President, in the chair.

The following Members were present :—

Dr. A. R. S. Anderson, Dr. T. Bloch, F. Finn, Esq., The Most Rev. Archbishop P. Goethals, H. Hayden, Esq., J. Mann, Esq., L. de Nicéville, Esq., B. D. Oldham, Esq., Dr. D. Prain, A. T. Pringle, Esq., Dr. Amṛtalāl Sarkār, Paṇḍit Mahēndra Nath Vidyānidhi, C. R. Wilson, Esq.

Visitor :—C. Saunders, Esq.

The minutes of the last meeting were read and confirmed.

Fifty-four presentations were announced, details of which are given in the Library List appended.

The following gentleman is a candidate for election at the next Meeting :—

Paṇḍit Satischandra Vidyābhushan, proposed by Bābu Gaurdās Baṣak, seconded by Paṇḍit Harimohan Vidyābhushan.

The following gentlemen have expressed a wish to withdraw from the Society :—

Dr. D. M. Moir.

Dr. D. D. Cunningham.

The PRESIDENT laid on the table the following communication:—

ROYAL SOCIETY.

BURLINGTON HOUSE,

PICCADILLY,

LONDON, W.,

February 22nd, 1897.

SIR,—Upon the invitation of the President and Council of the Royal Society, the Presidents of scientific Societies in London met the President and Officers of the Society on February 9 to consider whether any, and, if so, what, steps should be taken on the part of men of science to commemorate the present 60th year of the reign of Her Gracious Majesty the Queen, a period so rich in scientific discoveries. At that meeting, which was a very representative one, it was unanimously resolved—

that a Fund, to be called *The Victoria Research Fund*, be established, to be administered by representatives of the various scientific Societies, for the encouragement of research in all branches of science.

To raise a Fund of such a kind worthy of the occasion, the active co-operation of all the scientific Societies of the Empire is imperatively necessary; for the Fund, to be so worthy, must be a very large one.

It is not to be expected that scientific Societies would in general contribute out of their corporate funds, though some might be willing to do so; but rather that the several Societies should exert themselves to collect subscriptions to the Fund.

Nor is it to be expected that men of science would themselves furnish the required sum. It is to be hoped that they would contribute so far as each felt able. But the chief gifts are to be looked for from the public, from those who are not themselves engaged in scientific inquiry, and especially perhaps from those whose wealth has been the direct or indirect result of the scientific progress of the Victorian era.

So many demands are at the present moment being made in so many ways upon the purse for the purpose of commemorating the present year, that it may be worthwhile to point out that, the object of the proposed *Victoria Fund* being a lasting one, it is not necessary that the whole Fund should be raised at once. The Fund once established might be increased by subsequent additions, and contributions might be spread over many years, or might not be called in until some future time, so that the burden in the present year might be lightened.

It is proposed that the income of the Victoria Fund should be applied to the advancement of all branches of science in all parts of the British Empire. Should, therefore, the project of the Fund be approved, and the Fund established, its administration will necessitate an organization, the details of which will need most careful consideration in order that the Fund may be used in the best way in all future times; but such details may be left for the present.

Meanwhile, the first step to be taken is to ascertain whether the proposal meets with such general acceptance among men of science as to justify the President and Council in proceeding further in the matter.

I have therefore been requested by my Council to ask you to be so good as to bring the subject before your Society at your earliest convenience, in order to ascertain whether the proposal is approved or not, and at the same time to give the Royal Society the benefit of the advice of your Society upon the whole matter.

I am,
 Faithfully yours,
 (Signed) LISTER,
President of the Royal Society.

*To the President of the
 Asiatic Society of Bengal,
 Calcutta.*

The PRESIDENT reported that the Council recommended the acceptance of the proposal.

The proposal was accordingly accepted.

Dr. Hoernle read reports on the following finds of Treasure Trove coins :—

(I) REPORT ON 42 old coins forwarded by the Deputy Commissioner of Angul, Orissa, with his No. 1844G, dated 21st November, 1896, and with the Commissioner of Cuttack's No. 1420R, dated 28th September, 1896.

The Deputy Commissioner of Angul, in his No. 1407G, dated 15th August, 1896, and addressed to the Commissioner of Orissa reports, that these coins, together with some gold and silver bars enclosed in a cup-shaped copper vessel, were found by a lad, while grazing cattle on some "toilu" land in Pargana Talmul, Mauzah Ara, in Ara, in Angul. The date of finding is not stated.

Of the coins, 20 are of gold and 22 of silver. Most of them are of a rare kind, which gives the find a particular numismatic value.

The silver coins, resembling Rupees, belong to three different classes. Two of them belong to the coinage of the early imperial (so-called "Pathan") dynasty of Delhi, one to the later Independent Sultāns of Bengal, and 18 to the Bahmanī dynasty of the Deccan.

The following is a detailed statement:—

I. DELHI IMPERIAL COINAGE.

'Alāu-d-din Muḥammad Shāh, 695–715 H = 1295–1315 A.D.

Type, square areas within circles, like Brit. Mus. Cat., No. 164; both coins mutilated and clipped; one shows mint Dihli and date **4; a very common type of coin 2

II. BENGAL COINAGE:—

'Alāu-d-din Ḥusain Shāh, 899–925 H = 1493–1518 A.D.

Type, lettered surfaces, like Brit. Mus. Cat., No. 130; in fairly good condition, but of a very common variety 1

III. BAHMANĪ COINAGE:—

(a) Muḥammad Shāh I, 759–776 H = 1358–1375 A. D.

Type as in Numismatic Chronicle, 3rd Series, Vol. I, 1881, No. 4, date 775, mint Ḥaṣrat Aḥsanābād. 1

(b) Maḥmud Shāh I, 720–799 H = 1378–1397 A.D.

Type as in Thomas' Chronicles, p. 342, No. 303; dates 795 and 79*, mint illegible 2

(c) Firūz Shāh, 800–825 H = 1397–1422 A.D.

Two varieties: (1) as in Br. Mus. Cat. No. 449 and Marsden, Pl. 38, No. DCCLXXVIII, five coins, dates 816^a, 817, 822, 824; (2) new variety: one specimen; date 803. Mint, legible on some, Ḥaṣrat Aḥsanābād 6

(d) Aḥmad Shāh II, 838–862 H = 1435–1457 A.D.

Type as in Num. Chron., No. 16 and Br. Mus. Cat., No. 458, dates 857^a, 859^a, three illegible. Mint, on some, Ḥaṣrat Aḥsanābād 7

(e) Humāyūn Shāh, 862–865 H = 1457–1461 A.D.

Type as in Num. Chron., No. 17, and Br. Mus. Cat., No. 471, date 863, mint illegible 1

(f) Muḥammad Shāh II, 867–887 H = 1463–1482 A.D.

Type as in Num. Chron., No. 18, dates 87*, 886, mint illegible 2

Total 22

The gold coins are small round pieces of gold, very thin, averaging only 8 grains, and about $\frac{3}{8}$ of an inch in diameter. Eighteen of them have small gold loops attached to them, by which they were found threaded on a piece of string, forming probably a necklet. There are two kinds, consisting of two and eighteen pieces respectively.

The former are stamped on one side only, the back showing the hollows of the obverse stamp. One specimen shows the figure of the anthropoid Garuḍa, turned to the left, the other a rosette; both devices are enclosed by a marginal circle of dots. Possibly the two devices represent the obverse and reverse sides of a coin, and the two sides may have been stamped separately on two distinct pieces of gold to form ornaments.

Of the other kind, 18 pieces, all show on the obverse the figure of a recumbent bull, with a variety of emblems, such as the conch-shell, svastika, etc. The reverse of one has the legend (above) *ṣṛigaga* in old Nāgarī characters, and (below) the number 44 between two strokes (𑀓𑀔). The remaining seventeen pieces, show (above) an irregular oblong quadrangle between two indistinct symbols, and (below) various numbers, viz., 4 (twice), 9 (thrice), 13 (once), 19 (once), 31 (six times), 33 (thrice), 34 (once). Two of these 18, again, show traces of a legend above the oblong, which appear to make up *ṣṛi-gaga*. The numbers would seem to point to a series of years; but whether of an era or of the reign of a king is unknown. No coins of this description appear to have been noticed or published hitherto. In the *International Numismata Orientalia*, Vol. 1, "Coins of Southern India," by Sir Walter Elliot, there is one coin, No. 93 on Plate III, which bears some resemblance to the present coins, but it is too imperfect for identification. It is ascribed by him to the old Hindū kingdom of the Kākatiyas of Warangal, which was conquered by the Bahmanī Sultāns, early in the 15th century, A.D.

(II) REPORT ON two gold coins forwarded by the Officiating Superintendent of the Tributary Mahals, Orissa, with his No. 1164 P.W., dated 16th November, and 10th December, 1896.

These two coins are stated to have been found "on the banks of the river Brāhminī in the Tributary State of Dhenkanal," and to be "locally called *Hoons*."

They are coins of exactly the same type as those recently found in the Angul District of Orissa, and described in the preceding Report. They bear on their reverse the numbers 3 and 34 respectively, which may be the years of either a reign or an era.

The PRESIDENT announced that Mr. C. R. Wilson was proceeding on furlough at the end of the month and that Dr. A. R. S. Anderson would officiate.

The following papers were read:—

1. *Statement of the dialects spoken in Baghelkhand.*—By JANARDAN SINGH, Secretary to H. H. the Maharaja of Rewah. Communicated by DR. G. A. GRIERSON.

No. 47 of 1897.

FROM

THE SECRETARY TO
HIS HIGHNESS THE MAHARAJA OF REWAH,

To

THE POLITICAL AGENT, BAGHELKHAND.

DATED, REWAH DURBAR, CAMP *viâ* REWAH,

The 13th January, 1897.

SIR,

With reference to your endorsement No. 2836, dated 16th November, 1896, forwarding a copy of letter, dated 28th September, 1896, from G. A. Grierson, Esq., C.I.E., Ph.D., regarding the Linguistic Survey of India, asking a revised statement of the dialects spoken in Baghelkhand, I have the honor to inform you that a revised statement has been prepared and is forwarded herewith.

2. From the statement annexed herewith which is filled up according to the instructions, you will see that Baghēli or Baghēl-khaṇḍi and Gōṇḍi or Gōṇḍāni are the two dialects spoken in Rewah territory.

3. I do not believe that "Baghēli is nearly identical with Bundēli or Bundēl-khaṇḍi" as Dr. Grierson seems to think. Being spoken in conterminous countries and derived from the same parent stock, there is certainly a good deal of resemblance between the two. They are, however, different forms of speech. Most of the words in Bundēli and Baghēli have the same bases and roots, as is the case with almost all the dialects spoken in Northern and Central India, but a great difference is found in the postpositions and particulars and even the forms of bases of words before receiving the suffixes. This will be clear from the following sentences:—

DIFFERENT POSTPOSITIONS.		DIFFERENT VERBAL ENDINGS.		CHANGES IN THE BASIS BEFORE RECEIVING PARTICLES.	
Baghēli.	Bundēli.	Baghēli.	Bundēli.	Baghēli.	Bundēli.
For him. कोछे नीता	कोछे खाने	He said. वा कथिच	कने कची	Is coming? वावत रे	वाउत रे
Towards the river. नदी केत	नदी कनार	He had written. वा लिखिचरके	कने लिखी ऊती	Is going? वहा जाता रे	वहो जात रे
I have no money with me. मेरे कुछे रुपिया वैसा नहीं चाव	मीरे रुपैया पैसा नहीं चाव	Art thou not seeing. का नै मची	का नै मची देखत वस	What do you say? वा करत्तां रे*	वा करत पी
By me. मोरे कुछे	मोरे दिर्ना	They had already said. उरद परिसेन कथि दिदिन नै	उमने वेरखे के व दर तो	Are you giving? देता रे कि देत पीकि नहीं मची*	
		When I went. जव वस मयज वस	जव वस मची		

* *N.B.*—*च* (*ya*) is added to the bases in Baghēlkhaṇḍī before the particles.

The intonation with which the Bundēls speak is also different and there are many new words in Bundēli which are not known in Baghēli.

4. The people of Baghēlkhaṇḍ may be divided into several tribes or clans, inhabiting separate parts of the country, and giving distinct names to the tracts they inhabit. But these separate tribes do not speak separate dialects, though each has some peculiar words and expressions of its own. These variations are too few to justify us in giving them distinct names as dialects. There are variations in the pronunciation and forms of words in distances of every few miles. But these are very slight and may be found to change from village to village till they merge into the forms of speech of Allahabad or Mirzapur or other British districts that happen to be in the neighbourhood.

5. It appears to be an orthodox belief that Gōṇḍī or Gōṇḍānī is derived from the Dravidian or some other non-Aryan

language. This might be the case with the Gōṇḍī of the Central Provinces. But the dialect spoken by the Gonds of Rewah is not the non-Aryan dialect which their brethren use in the Central Provinces. They as well as other tribes, namely Kols, Baigas, &c., mostly of aboriginal descent, inhabiting the southern portion of Rewah, on the other side of the Kymore, speak what represents the widest deviation from the Baghēl dialect in the State. Herewith are enclosed a prose passage and some songs of the Gōṇḍī dialect. These will show that the language they speak is mainly Baghēli corrupted and mispronounced with an admixture of some new words, the relics of their aboriginal tongue they once spoke.

I have, &c.,

(Sd.) JANARDUN SINGH,

Secretary to H. H. the Maharaja of Rewah.

STATEMENT OF DIALECTS.

1	2	3	4
<p>Local name of the dialect or form of speech. To be written in the local vernacular character and in the Roman character.</p> <p>बघेली वा बघेलखण्डी</p> <p>Baghēli or Baghēlkhaṇḍī.</p> <p>गोंडी वा गोंडानी</p> <p>Gōṇḍī or Gōṇḍānī.</p>	<p>Name of language of which it is a dialect.</p> <p>Hindi.</p> <p>Hindi.</p>	<p>Approximate number of persons speaking the dialect in the locality to which the return refers.</p> <p>1,000,000</p> <p>500,000</p>	<p>REMARKS.</p> <p>The Gōṇḍī dialect is confined to the Gonds and other aboriginal tribes inhabiting the eastern and southern parts of the Rewah territory, on the other side of the Kymore ranges.</p>

(Sd.) JANARDUN SINGH,

Secretary to H. H. the Maharaja of Rewah.

मंडला जिह्मेमा रहन अंगरेजीमा । हमार बाप मागिस होसां । हमरे बापसंग दोऊ भाई मार कुटाई होई गइन । कहिन दाऊ अबतो नही देई होसा । तैं लै लै है । जब जियाण परी मै तो न जीरू । चाही जसकै होइ तसकै तैं लै लै है बांटा हारेसना । कहिन जठिया से मारके लै लिहिस । जठिया तेन दिहिसि तब कौनों काम कारिस । दिनाय दिहे । भात मा दयऊ व खाय लइसा गौंटिया दइस ओसहात फेर पीण जी गइन । हमरे क्यका के लइका मोखा इहां जागिन बांधिकै । कहिन कैसन जाना बांधिकै । कहिन वा बांटा मांगै त न देई । तौ फेर जहर दइस त हमार बाप मर गइस । कहिन लै जाह रौवां । फेर रौवां जागिन ॥

मखला जिह्मे अंगरेजी मे रहते थे—हमारे बापने हीखा मांगा—हमारे बापके साथ दोनों भाई ने मारपीट होगई । बापने सुभसे कहा—बेटा अभीतो हिस्सा नहीं देता—तुम लै लेना । जब तकसोप हो मै तो न जिन्दा रहूंगा । चाहे जैसे हो तैसे हिस्सा लै लेना । छोड़ना नहीं । कहा जाठी से मारके लै लेना—जाठी से न देतो कोई काम (तदवीर) करना । जहर देना । मैने भात मे दे दिया । तो उसने खाय लिया । गौंटिया ने दवा दिया सो प लिया और जी गया । मेरे काका के लइका सुभ को यहां बांध लाय । पूका कौं बांधके लाये । कहा यह हिस्सा मागताथा नहीं दिया सो जहर दिया जो हमारा बाप मरगया कहा (इसको) रौवां ले जाव—तब रौवां लाये ॥

(१) कर वहिखां आपना छाड़ वहिखां बिराना अरसरा ।

(२) घरेल टांगा काटेल वांस गोंह बैरे घरे आंवा ।

कह जेहै जवाना लैलेहूँ दावा ॥

(३) मै रघुवर संग जाहू हो नगद मोरा ।

रघ जिहेन दार भात घी अछर काय कै ।

धुक धुक खिचरी खवावै हो नगद मोरा ॥

(४) धन कहा गैली रामा लहन धन कहां गैलीहो ।

घाटा घटत रामा लहन कहां गैली ॥

2. On some new and rare Hindu and Muhammadan Coins, No. IV.—

By DR. A. F. R. HOERNLE.

The paper will be published in the *Journal*, Part I.

3. Note on the gait of the Cotton Teal, with exhibition of living specimens.—By F. FINN, B.A., F.Z.S.

Authorities on Indian birds seem to be very unanimous in the opinion that the common little Cotton-Teal or Goose-Teal, *Nettopus coromandelianus*, is unable to stand and walk like other ducks.

In G. R. Gray's genera of Birds, Vol. III, the article being dated 1844, in the remarks on the genus *Nettapus* (as there spelt) Blyth is quoted as observing "It is remarkable that the Indian species seems totally incapable of standing or walking upon the ground, but invariably flutters along it in a strange scuffling manner, like a wounded bird." Some years later, Blyth in his Catalogue of the Birds in the Museum, Asiatic Society, (1849), states in a foot-note to page 302, that the birds of this genus never stand up as represented in Mr. Gould's plates (Birds of Australia, *N. pulchellus* and *N. coromandelianus* = *albipennis*) but after walking a few steps, always squat.

Dr. Jerdon, in his Birds of India, Vol. II, Pt. ii, p. 788, observes that Blyth had noticed "the peculiar shuffling gait of these ducks when on land" and quotes the statement given above to the effect that the birds always squat after walking a short distance.

In Blyth's Commentary on Jerdon, (Ibis 1867, p. 175), the former author again says "the published figures of the species of this group, representing them as standing on the ground like ordinary ducks, are erroneous. They squat, creep, and are only able to shuffle forward a few paces."

Finally, Mr. Hume, in the "Game-birds and Wildfowl of India, (1881), Vol. III, p. 104, says "on land they seldom venture, though I have seen them occasionally feeding or resting on small grassy islands; but as Blyth long ago remarked, they cannot walk at all, they only wobble along, shuffling as if their bodies were too heavy for their legs, yet when on trees.....they stand firm enough, and betray no weakness in the lower extremities." Further on, p. 108, he says, *à propos* of the plate he gives of this species, that "its only fault is, that neither on land nor in water do the birds ever stalk about with their legs visible below them."

It is on account of this consensus of authorities that I have brought for exhibition to-night living birds of this species, to confirm the remarks I am about to make concerning it.

During more than a year past I have had many opportunities of serving Cotton-Teal in confinement, and after watching the gait and movements of numerous specimens, I can confidently assert that the inability to walk attributed to the species by the above excellent observers, is not in reality natural to it, but merely the result of fright, weakness, or injury. [The bird, when frightened, will squat where another duck would stand up.]

Captive birds, even though not perching, frequently stand up with their legs visible beneath them, in the attitude of any ordinary duck, and they also walk in this position, though they will often shuffle along a few steps without rising properly to their feet.

But when walking any greater distance than a few inches (and though prone to lie down frequently, they can on occasion walk for many yards) their gait, though laboured and awkward, is just like that of other ducks, as may be seen in the specimens now exhibited.*

The habit of walking is not an unnatural one acquired in captivity, as many birds can stand and walk when fresh from the Bazaar. Only the other day a fine male was brought in to me, which walked for several yards as soon as let out of the cage.

Many, in fact the majority of Bazaar birds, however, are frightened or crippled to such an extent that they can only scuffle along as above described; so that I do not wonder that Blyth was misled into thinking that their powers of terrestrial progression were as limited as he says, especially since, judging from his remarks in the *Ibis* paper above cited, wildfowl were even worse treated in the Bazaar than they are at present.

I never saw my birds rest on one leg, and think Blyth may be right in saying that they cannot do so. (*Loc. cit.* Cat. Birds. Mus. As. Soc.).

Mr. Hume's observations, if he actually saw the birds, "wabbling" as he calls it, on the islands, would offer a greater difficulty; but from his language he *may* only have seen them feeding or resting there, and may also have drawn his conclusions as to their gait from Bazaar specimens. I have noticed however that specimens of my own at the edge of the Museum tank frequently lay down to feed on paddy given them there, though when walking their legs showed plainly enough. Among thick grass this might not be so easy to make out, and at the tank I purposely chose the spot in order to observe the birds better.

Mr. Hume therefore need find no fault with his artist in this particular.

To sum up, this bird, though its feet are strong enough for some purposes, as it is an excellent swimmer and diver, and can cling to and climb up wire netting in a remarkable manner, appears to be certainly weak in these members when they are applied to the purpose of walking, and hence is readily disabled. Moreover, it appears normally seldom to leave the water except to perch on trees or buildings.

Nevertheless, when circumstances require it, it is able to stand and to walk like the ordinary members of the family to which it belongs, though its activity appears limited, walking being a power which from the circumstances of its life it is seldom called upon to exercise.

* Four birds were exhibited in a cage, and at this point let out on the table, where they walked about. These were captive specimens with clipped wings.

4. *Coins struck at Nāhan.*—By C. J. RODGERS.

Sarmūr is a small native state, in the lower Himalayas, not far from Simla. At the present day it is famous for its iron works where sugar mills are made which are hired out to sugar-cane-growing farmers in the plains. The Mahārāja is an enlightened ruler and has in his employ a staff of English Engineers. Nāhan, the chief town of the state is very prosperous and is lighted on European methods. But it is Nāhan at the beginning of the present century I have to deal with. In 1814 it was in the hands of the Gurkhas, and was held by Ranjor Singh Thāpa. On the 24th of December of that year, it was occupied by British troops, and Ranjor Singh retired to Jaithak, a strong fort a little to the north, which he did not evacuate till May 1815, when he was allowed to march out with the arms and accoutrements of his 200 men. This was at the end of the Nepāl War. The Gurkhas had conquered the outer Himalayas as far as Kāngra and had held possession of them for several years. There are coins in existence, struck by the Gurkhas during this occupation. I have seen small silver coins struck at Srinagar in Garhwāl on which is the name of a Mahārāja of Nepāl from which country the Gurkhas came. The coins I give below are of copper, the first was struck at Nāhan during the occupation by the Gurkhas, the second one afterwards. The legends on the first coin I read as follows :—

Obv. :—
 بکرم بہادر
 شاہ (۵)
 مہاراجہ گیربان جو (د ۵)
 ←
 ۶ سر

Rev. :—
 نامن
 ضرب ۱۲۲۷ a katār
 سبت
 ۲



i.e., سری مہاراجہ گیربان جو (د ۵) بکرم شاہ بہادر, ۶ سر

Now, I have edited this coin in my Lahore Catalogue, Pt. IV, p. 64, and have there made some extraordinary mistakes. I could not read the last lines of the obverse as they were not on the coin. They are here plain :—“سری.” The top line I read “ملزم” and in my note I

said Bahādur Shāh was the General of the Mahārāja of Nepāl. From a study of the present coin which belongs to W. S. Talbot, Esq., C. S., Settlement Officer, Jhelum, I see I was wrong and hasten to correct my mistake. On the coins of the later Nepāl Mahārājas the names and titles generally come, in Nāgarī letters, thus:—“*Çri Çri* so and so *Vikrama Śāha Deva.*” On this copper coin, reading from the bottom we have;—

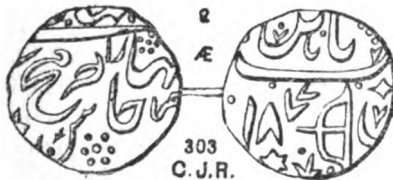
سرى مهاراجه گيربان جوده بگرم شاه بهادر

where we see some alterations:—the insertion of “*Mahārāja*” and the alteration of “*Deva*” to “*Bahādur.*” नीरवाह युद्धविजयन is changed to गिरबान जوده बगرم. I do not recollect seeing the title “*Mahārāja*” on any other coin of Nepāl. It is common on the coins of Kāngra, and the coins of Sikkim have श्री श्री श्री विक्रम पति महाराज on them, with the last word spelt महाराज, as a variant. महाराजे is also on the coins of Srinagar in Garhwāl, struck by Pradip Śah, Lallat Śah and Parduman Śah. So this coin of Nāhan follows the coins of Srinagar somewhat.

On the obverse the word I read میمنت, I now read سمیت, although, the year 1227 is the Hijri year = 1812 A. D.

The only excuse I can offer for these mistakes is that I mistook ملزم for ملزم and then, having started a theory, I made بهادر شاه a person, whereas the three words بگرم شاه بهادر are the titles of Gīrvān Yuddh. I can only plead that, in my library, I possess no history of Nāhan except the stray notices given of it, in the eleventh volume of the Gazetteer of the North-West Provinces. The Gazetteer of the Panjab takes up only the British possessions, so it was useless looking in that for anything about Nāhan. The Panjab Government would be conferring a benefit on the public by getting out a Gazetteer of the Native States, in and around the country under immediate British rule.

The second coin I give, I take to be one of Faṭḥ Shāh Bahādur Mahārāja, but I cannot make out all the legend on the obverse. He was Mahārāja of Sarmūr. The year seems to be 1877 on the reverse and if this is Samvat, it is equal to 1820 A. D. There is no doubt about the mint Nāhan.



NĀHAN COINS

Both the coins in weight approximate that of the dām of Akbar. The dāms of Akbar abounded in some of the lower Hills some years ago.

I have seen several specimens of each of these Nāhan coins, but no others from that mint.

5. *Note on the breeding of various Birds (Herons and Cormorants) in a wild state in the Alipur Zoological Gardens.*—By RAM BRAHMA SANYAL, Superintendent. With a plate.

The picturesque island with its wealth of vegetation in the middle of the broadest part of the ornamental waters of the garden has, for many years past, been the favourite resort of various kinds of animals.

But the aspect of Nature on the island has, of late, considerably changed. The trees have gradually become more and more bare of leaves, and the ground denuded of vegetation. All this has been brought about by large flocks of Night-herons (*Nycticorax nycticorax*, (L.)), and latterly of Cormorants, having taken possession of the island. Early in the winter of 1892-93, a few Night-herons were observed among the large number of Pond-herons, or Paddy-birds, (*Ardeola grayi*, (Sykes)) that hitherto inhabited the island, but their movements were not particularly watched. With the exception of a few Pond herons that remained to breed, they all left the place about the middle of February, 1893. At the beginning of the next cold weather the Night-herons began to re-appear. As far as it is remembered, one forenoon about the beginning of November, 1893, a large number of these birds were observed hovering round over the lake as if undecided where to settle. In fact, it took them three or four days before they could finally make up their minds to settle down on the island; choosing, the meantime, some of the densely-foliaged trees of the garden, mostly around the lake, as their hiding places during the day. With the approach of the hot weather their number began to diminish, till they again deserted the island about the middle of March, 1894, to find fresh fields and pastures new. It is, however, believed that some of them must have remained with the Paddy-birds to nest and breed; but as their nests were not visited nothing can be said with certainty about their breeding in that year.

In the winter following a still larger number of them re-appeared and took so complete a possession of the island that the Paddy-birds were obliged to retire in their favour, until the time for migration came, and the majority of the Night-herons left the place, affording the Paddy-birds opportunity to retrieve their lost ground. But it was to a limited extent only, as a great many Night-herons remained behind for the purpose of breeding. About this time a few Cormorants (*Phalacrocorax pygmaeus*, Pall.) appeared on the scene, and became, as will

appear later on, formidable rivals of the Night-herons as regards the possession of the island.

In point of the number of Night-herons the maximum was reached during the cold weather of 1896. From several observations made after sunset, when they would issue forth and wing their way, in parties of varying numbers, towards their feeding grounds, it was calculated that between thirteen and fifteen hundred Night-herons must have been living in the Island. The result of such a vast flock of birds congregating together within a small area and with comparatively few trees to give them shelter has been somewhat disastrous to the vegetation which, instead of being healthy and luxuriant, looks sickly and bare. For the birds, therefore, the place has lost much of its attraction. Not finding the same shelter and hiding places among the almost leafless branches of the trees, a great many of them have taken possession of other trees and shrubs bordering the waters.

It has been already remarked that a large number of Night-herons remained with the Paddy-birds during the summer of 1895, for the purpose of breeding. In the following summer (1896), the number of Night-herons that stayed for the same purpose was so great that the Paddy-birds were obliged to abandon the Island for some time. Night-herons seem to build everywhere; on trees, on shrubs and in tufts of reed-grass close to the ground. The nests are generally unsubstantial and clumsy. Eggs have been collected as early as the latter end of May, but they go on breeding till the end of July, or the middle of August.

The majority of Night-herons return long before sunrise from feeding excursions, and for some time, much fluttering and jostling goes on in the Island. Stragglers are frequently seen rapidly flying and uttering at intervals the characteristic call-note *wāk-wāk*, from which, as is well known, the species has derived its vernacular name. During the cold winter mornings, they are very fond of sunning themselves, and look very conspicuous as they occupy every sunny spot on the trees or shrubs. If the tree or the shrub happens to be thickly covered with leaves they are hardly seen during broad day-light.

Latterly Cormorants have become as conspicuous, though not as interesting a feature of the Island as Night-herons. For some time before others came to live on the Island, a pair of them could, every now and then, be seen disporting themselves in the water around the large group of pandanus growing upon a smaller Island in the lake. It is not unlikely that they attracted others, which having found the place to their liking stayed on. The most interesting event, however, in connection with the occupation of the Island by Cormorants is the coming of a few Snake-birds (*Plotus melanogaster*, (Penn.)) with them

last year. It is yet hoped that they will renew their visit and make up their minds to breed on the Island.*

6. *On some noteworthy Indian Birds, with exhibition of specimens.*—
By F. FINN, B.A., F.Z.S.

The paper will be published in the *Journal*, Part II.

* The plate illustrating part of the island is from a photograph kindly taken by Colonel J. Waterhouse. The herons only are shown, these birds and the Cormorants occupying the island rather alternately than jointly, except when both are breeding. (*Nat. Hist. Sec.*).

LIBRARY.

The following additions have been made to the Library since the meeting held in March last:—

TRANSACTIONS, PROCEEDINGS AND JOURNALS, *presented by the respective Societies and Editors.*

Alger. Société de Géographie d'Alger,—Bulletin, Tome I, No. 2.

Amsterdam. Die Koninklijke Akademie van Wetenschappen,—Verslagen van de Zittingen, Deel IV.

Baltimore. Johns Hopkins University,—Circulars, Vol. XVI, No. 128.

Berlin. Die Kon. Preus. Akademie der Wissenschaften zu Berlin,—Sitzungsberichte, XL-LIII.

Bombay. The Indian Antiquary,—October and December, 1896.

Brussels. L'Société Royale des Sciences de Liège,—Mémoires, 2^e Série, Tome XIX.

Buenos Aires. La Academia Nacional de Ciencias en Cordoba,—Boletín, Tome XV, No. 1.

Calcutta. Geological Survey of India,—Records, Vol. XXX, Part 1.

———. Indian Engineering,—Vol. XXI, Nos. 10–14.

———. The Indian Lancet,—Vol. IX, Nos. 3, 6 and 7.

———. Indian Meteorological Memoirs,—Vol. X, Part 9.

———. Maha-bodhi Society,—Journal, Vol. V, No. 11.

———. Photographic Society of India,—Journal, Vol. X, Nos. 3 and 4.

Florence. La Società Italiana di Antropologia, Etnologia e Psicologia Comparata,—Archivio per L'Antropologia e la Etnologia, Vol. XXVI, No. 2.

Giessen. Die Oberhessische Gesellschaft für Natur-und Heilkunde,—Bericht, Band XXXI.

- Havre. Société de Géographie Commerciale du Havre,—Bulletin, Tome XIII, Nr. 4.
- Königsberg. Die Physikalisch-Ökonomische Gesellschaft zu Königsberg in Pr.,—Schriften, Band XXXVII.
- Leipzig. Die Deutsche Morgenländische Gesellschaft,—Zeitschrift, Band L, Heft 4.
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- London. The Academy,—Nos. 1296–98.
- . Anthropological Institute of Great Britain and Ireland,—Journal, Vol. XXVI, No. 3.
- . The Athenæum,—Nos. 3619–21.
- . Institution of Electrical Engineers,—Journal, Vol. XXVI, No. 126.
- . Literary and Philosophical Society of Liverpool,—Proceedings, Vol. L.
- . Nature,—Vol. LV, Nos. 1425–29.
- . Royal Astronomical Society,—Monthly Notices, Vol. LVII, Nos. 3 and 4.
- . Royal Geographical Society,—Geographical Journal, Vol. IX, No. 3.
- . Royal Society,—Proceedings, Vol. LX, Nos. 362–64.
- . Royal Statistical Society,—Journal, Vol. LIX, Part 4.
- Manchester. Manchester Literary and Philosophical Society,—Memoirs and Proceedings, Vol. XLI, Part 2.
- Melbourne. Royal Society of Victoria,—Proceedings, New Series, Vol. VIII.
- Mussoorie. The Indian Forester,—Vol. XXIII, Nos. 2 and 3.
- Neuchatel. La Société Neuchateloise de Géographie,—Bulletin, Tome VIII.
- New Haven. American Oriental Society,—Journal, Vol. XVIII.
- Paris. La Société de Géographie,—Comptes Rendus des Séances, Nos. 1–3, 1897.
- Philadelphia. American Academy of Political and Social Science,—Annals, Vol. IX, No. 2.
- Pisa. La Società Toscana di Scienze Naturali,—Atti (Processi Verbali), 22 Novembre, 1896—17 Gennaio, 1897.
- Rome. L'Oriente,—Tome. II, Nos. 3 et 4.
- . La Società degli Spettroscopisti Italiani,—Memorie, Tome XXV, No. 11.

- St. Petersburg. L'Académie Impériale des Sciences de St. Petersburg,—Annuaire du Musée Zoologique, No. 4, 1896.
- . ———. Bulletin,—V^e Série, Tome VI, No. 1.
- Taiping. Perak Government,—Gazette, Vol. X, Nos. 5 and 6.
- Tôkyô. Die Deutsche Gesellschaft für Natur-und Völkerkunde Ostasiens in Tokio,—Mittheilungen, 58^{tes} Heft.
- . Imperial University of Japan,—Journal of the College of Science, Vol. IX, Part 2.
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Photo etching.

Survey of India Offices, Calcutta, April 1897.

HERONY IN THE ZOOLOGICAL GARDEN - CALCUTTA.

From a drawing by Col. J. Waterhouse S.C.

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR MAY, 1897

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 5th May, 1897, at 9-15 P.M.

COLONEL J. WATERHOUSE, B.S.C., Vice-President, in the chair.

The following members were present:—

Dr. A. R. S. Anderson, Dr. T. Bloch, Bābu Nagendra Nāth Vasu, W. B. Colville, Esq., F. Finn, Esq., J. H. Gilliland, Esq., Tom. D. La Touche, Esq., C. Little, Esq., L. de Nicéville, Esq., R. D. Oldham, Esq., Dr. D. Prain, A. T. Pringle, Esq., Paṇḍit Haraprasād Častri.

The minutes of the last meeting were read and confirmed.

Thirty-six presentations were announced, details of which are given in the Library List appended.

The following gentleman is a candidate for election at the next Meeting:—

Bābu Annadāprasād Vasu, M.A., proposed by Paṇḍit Haraprasād Častri, seconded by Dr. G. Ranking.

The following papers were read:—

1. *Notes on Coins of Native States.*—By DR. A. F. RUDOLF HOERNLE.
The paper will be published in the *Journal*, Part I.
2. *Contributions to the Theory of Warning Colours and Mimicry, No. III. Experiments with a Tupia and a Frog.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.
The paper will be published in the *Journal*, Part II.
3. *The Bajrangarh Mint and Coins.*—By RICHARD BURN, I.C.S.
4. *On the Kaçmīri consonantal system.*—By G. A. GRIERSON, PH.D.
The papers will be published in the *Journal*, Part I.

LIBRARY.

The following additions have been made to the Library since the meeting held in April last :—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—
Notulen, Deel XXXIV, Aflevering 4.
———. Tijdschrift voor Indische Taal-, Land- en Volken-
kunde, Deel XXXIX, Aflevering 5.
———. Verhandlungen, Band XLVIII.
- Berlin. Zeitschrift für Ethnologie,—Heft 1, 1897.
- Brisbane. Royal Society of Queensland,—Proceedings, Vol. XII.
- Budapest. La Société Hongroise de Géographie,—Bulletin, Tome
XXIV, Nos. 6–10.
- Calcutta. Indian Engineering,—Vol. XXI, Nos. 15–18.
———. Indian Lancet,—Vol. IX, Nos. 8 and 9.
———. Maha-bodhi Society,—Journal, Vol. V, No. 12.
———. Photographic Society of India,—Journal, Vol. X, No. 5.
———. The Wealth of India,—Vol. I, No. 3.
- Leipzig. Die Königl. Sächsische Gesellschaft der Wissenschaften,
—Abhandlungen,—Phil.-Hist. Cl., Band XVI; XVIII, No. 1;
XXIII, No. 6.
———. Berichte über die Verhandlungen, Math.-Phy. Cl.,
V, VI, 1896; Phil.-Hist. Cl., II, III, 1896.
- London. The Academy,—Nos. 1299–1302.
———. The Athenæum,—Nos. 3622–25.
———. Institution of Electrical Engineers,—Journal, Vol. XXVI,
No. 127.
———. Nature,—Vol. LV, Nos. 1430–33.
———. Royal Astronomical Society,—Monthly Notices,—Vol. LVII,
No. 5.
———. Royal Geographical Society,—Geographical Journal, Vol. IX,
No. 4.
- Mexico. Instituto Geológico de México,—Boletín, Nos. 4–6.
- Paris. Société de Géographie,—Comptes Rendus des Séances, Nos. 4–7,
1897.
- Rome. Revista Geografica Italiana,—Tome IV, Nos. 2 et 3.
———. Società degli Spettroscopisti Italiani,—Memorie, Tome XXV,
No. 12.

- St. Petersburg. L'Académie Impériale des Sciences de St. Pétersbourg,
—Bulletin, V^e Série, Tome VI, No. 2.
- . Comité Géologique,—Bulletins, Tome XV, No. 5, et Supplément au Tome XV.
- . ———. Mémoires, Tome XIV, Nos. 2 et 4.
- . Die Russisch-Kaiserliche Mineralogische Gesellschaft zu St. Petersburg,—Verhandlungen, Zweite Serie, Band XXXIII, Heft 3.
- Sydney. The Australasian Anthropological Journal,—Vol. I, Nos. 3 and 4.
- Taiping. Perak Government,—Gazette, Vol. X, Nos. 7 and 8.
- Vienna. Die Anthropologische Gesellschaft in Wien,—Mittheilungen, Band XXVII, Heft 1.
- . Die K. K. Geologische Reichsanstalt,—Verhandlungen, Nrn. 1-5, 1897.
- . Die K. K. Zoologisch-botanische Gesellschaft in Wien,—Verhandlungen, Band XLVII, Heft 2.
- Washington. Biological Society of Washington,—Proceedings, Vol. XI, pp. 1-55.
- Wellington. Polynesian Society,—Journal, Vol. VI, No. 1.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

- BLOCH, DR. THEODOR. Ueber Das Grhya-Und Dharmasūtra der Vaikhānasa. 8vo. Leipzig, 1896.
- HARCKEL, ERNST. Die Amphorideen und Cystoideen. 4to Leipzig, 1896.
- HEMPPEL, ADOLPH. Descriptions of New Species of Rotifera and Protozoa from the Illinois River and Adjacent Waters. 8vo. Springfield, Ill. 1896.
- RUBENS, MORRIS. Anti-Vivisection Exposed. Part I. 8vo. Bombay, 1894.

MISCELLANEOUS PRESENTATIONS,

- BEIJERINCK, M.W. Ueber Gallbildung und Generationswechsel bei Cynips calicis und über die Circulansgalle. 4to. Amsterdam, 1896.
- CALAND, DR. W. Die Altindischen Todten—und Bestattungsgebräuche. 4to. Amsterdam, 1896.
- HAMBURGER, DR. H. J. Ein Apparat, welcher gestattet, die Gesetze von Filtration und Osmose strömender Flüssigkeiten bei homogenen Membranen zu studiren. 4to. Amsterdam, 1895.
- . Over den invloed der intraabdominale drukking op de resorptie in de buikholte. 4to. Amsterdam, 1896.

- HELTEN, W. L. VAN. Zur lexicologie des Altwestfriesischen. 4to. Amsterdam, 1896.
- KLUYVER, J. C. Over een minimaaloppervlak van tweevoudigen samenhang. 4to. Amsterdam, 1896.
- KOSTER, W. Eene methode ter bepaling van het draaipunt van het, oog. 4to. Amsterdam, 1896.
- MULDER, E. Over verbindingen afgeleid van wijsteezuur en para-brandigdruivenzuur. 4to. Amsterdam, 1895.
- . AND HERINGA, J. Over een peroxy-salpeterzuur zilver (Eerste und Tweede Verhandeling). 4to. Amsterdam, 1896.
- OVEREEM, M. VAN. De Merkwaardige Punten van den Ingeschreven Veelhoek. 4to. Amsterdam, 1896.
- SCHOUTE, P. H. Het Vierdimensionale Prismoïde. 4to. Amsterdam, 1896.
- SURINGAR, W. F. R. Vierde bijdrage tot de kennis der Melocacti. 4to. Amsterdam, 1896.
- VOGEL, Dr. Fr. Aanteekeningen over Nederlandsche Versteeningen uit het Leidsch Geologisch Museum. 4to. Amsterdam, 1895.
- ZWIERS, H. J. Recherches sur l'orbite de la comète périodique de Holmes et sur les perturbations de son mouvement elliptique. 4to. Amsterdam, 1895.
- DIE KONINKLIJKE AKADEMIE VAN WETENSCHAPPEN TE AMSTERDAM.
- BECHMANN, AUGUST VON. Der churbayerische Kanzler Alois Freiherr von Kreittmayr. 4to. München, 1896.
- DIE K. B. AKADEMIE DER WISSENSCHAFTEN ZU MÜNCHEN.
- Australasian Anthropological Journal for September, 1896. 4to. Sydney, 1896.
- ANTHROPOLOGICAL SOCIETY OF AUSTRALASIA.
- BOULGER, DEMETRIUS C. Lord William Bentinck. 8vo. Oxford, 1892.
- COTTON, J. S. Mountstuart Elphinstone. 8vo. Oxford, 1892.
- SETON-KARR, W. S. The Marquess Cornwallis. 8vo. Oxford, 1890.
- HUNTER, SIR W. W. The Marquess of Dalhousie. 8vo. Oxford, 1890.
- MALLESON, COLONEL G.B. Dupleix. 8vo. Oxford, 1890.
- . Life of the Marquess Wellesley. 8vo. London, 1889.
- TEMPLE, SIR RICHARD. James Thomason. 8vo. Oxford, 1893.
- H. K. W. ARNOLD, Esq.
- BARTH, J. P. J. Overzicht der Afdeeling Soekadana. 4to. Batavia, 1896.
- BRANDES, DR. J. Pararaton (ken Arok) of Het Boek der Koningen van Tumapel en van Majapahit, Uitgegeven en toegelicht 4to. Batavia, 1896.

RANNEFT, W. MEIJER. Verklaring van de meest Bekende Javaansche Raadsels in Poëzie. 4to. Batavia, 1896.

BATAVIAASCH GENOOTSCHAP VAN KUNSTEN EN WETESCHAPPEN.

Guide to the British Mycetozoa exhibited in the Department of Botany British Museum, London. 8vo. London, 1895.

BRITISH MUSEUM, LONDON.

Returns of the Rail-Borne Traffic of the Central Provinces during the quarter ending 30th June 1896. Fcp. Nagpur, 1896.

CHIEF COMMISSIONER, CENTRAL PROVINCES.

Illustrated official Handbook to the Aquarium, Picture Salon, and Museum Collections under the control of the exhibition Trustees, Melbourne. 4to. Melbourne.

EXHIBITION TRUSTEES, MELBOURNE.

Triennial Report of the workings of the Charitable Dispensaries under the Government of Bengal for the years, 1893, 1894 and 1895. Fcp. Calcutta, 1896.

GOVERNMENT OF BENGAL.

Catalogue raisonné des livres et des manuscrits japonais enrégistrés, à la Bibliothèque de l'Université de Leyde. 4to. Leyde, 1896.

L'UNIVERSITÉ DE LEYDE.

PERIODICALS PURCHASED.

Calcutta. Indian Medical Gazette,—April, 1897.

Chicago. The Journal of Geology,—Vol. V, No. 2.

Geneva. Archives des Sciences Physiques et Naturelles,—Tome III, No. 3.

Leipzig. Annalen der Physik und Chemie,—Beiblätter, Band XXI, Stück 3.

London. Numismatic Circular,—Vol. V, No. 53.



PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR JUNE, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 2nd June, 1897, at 9-15 P. M.

F. FINN, Esq., B.A., F.Z.S., in the chair.

The following members were present :—

Dr. A. R. S. Anderson, H. H. Hayden, Esq., Kumār Rāmesçvar Māliāb, L. de Nicéville, Esq., A. T. Pringle, Esq., Dr. G. Watt.

Visitors :—Dr. J. W. Grant, C. Saunders, Esq.

The minutes of the last meeting were read and confirmed.

Forty-eight presentations were announced, details of which are given in the Library List appended.

The following gentleman duly proposed and seconded at the last meeting of the Society was balloted for and elected an Ordinary Member :—

Bābu Annadāprasād Vasu, M.A.

The following gentlemen are candidates for election at the next meeting :—

Surgeon-Lieutenant J. W. Grant, I. M. S., proposed by Dr. A. R. S. Anderson, seconded by R. D. Oldham, Esq.

E. Vredenburg, Esq., proposed by R. D. Oldham, Esq., seconded by Dr. A. R. S. Anderson.

G. E. Grimes, Esq., proposed by R. D. Oldham, Esq., seconded by Dr. A. R. S. Anderson.

The following papers were read :—

1. *Contributions to the Theory of Warning Colours and Mimicry, No. IV. Experiments with various Birds. Summary and Conclusions.*—By F. FINN, B.A., F.Z.S., *Deputy Superintendent of the Indian Museum.*

2. *Noviciæ Indicæ, XVI. More additional species of Labiatae.*—By DR. D. PRAIN.

3. *Description of Neptis praslini, Boisduval and two new species allied to it.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S.

The papers will be published in the *Journal*, Part II.

LIBRARY.

The following additions have been made to the Library since the meeting held in May last :—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Baltimore. Johns Hopkins University, — *American Chemical Journal*, Vols. XVII, Nos. 8–10; XVIII, 1–5.
- . *American Journal of Mathematics*, — Vols. XVII, Nos. 4; XVIII, 1 and 2.
- . *American Journal of Philology*, — Vol. XVI, Nos. 2–4.
- . *Historical and Political Science*, XIIIth Series, Nos. 9–12; XIVth 1–5.
- Bombay. *The Indian Antiquary*, — January and February, 1897.
- Brussels. *Société Entomologique de Belgique*, — *Annales*, Tome XL.
- Budapest. *A Magyar Tudományos Akadémia*, — *Ertekezések, Kötet XVI, Szám VII.*
- . *Nyelvtudományi Közlemények, Kötet XXV, füzet 3-4; XXVI, 1-2.*
- . *Die Ungarische Akademie der Wissenschaften*, — *Mathematische und Naturwissenschaftliche Berichte aus Ungarn, Band XII, Heft 2; XIII, 1.*
- . *Ungarische Revue, Band XV, Heft 5–10.*
- Buenos Aires. *Museo Nacional de Buenos Aires*, — *Anales*, Tome IV.
- Calcutta. *Indian Engineering*, — Vol. XXI, Nos. 19–23.
- . *Indian Lancet*, — Vol. IX, Nos. 10 and 11.
- . *Maha-bodhi Society*, — *Journal*, Vol. VI, No. 1.
- . *Microscopical Society of Calcutta*, — *Bulletin*, Vol. VI, No. 2.
- . *The Wealth of India*, — Vol. I, No. 5.

- Chicago. Field Columbian Museum, — Ornithological Series, Vol. I, No. 1; Zoological Series, Nos. 3-5.
- Colombo. Ceylon Branch of the Royal Asiatic Society, — Journal, Vol. XIV.
- Danzig. Die Naturforschende Gesellschaft in Danzig, — Schriften, Band IX, Heft 1.
- The Hague. Koninklijk Instituut voor de Taal—, Land-en Volkenkunde van Nederlandsch-Indië, — Bijdragen tot de Taal—, Land-en Volkenkunde van Nederlandsch-Indië, 6^e Volgr, Deel III, Aflevering 2.
- Halifax. Nova Scotian Institute of Science, — Proceedings and Transactions, Vol. IX, Part 1.
- Kiel. Die Naturwissenschaftliche Vereins für Schleswig-Holstein, — Schriften, Band X, Heft 2.
- London. The Academy, — Nos. 1303-6.
- . The Athenæum, — Nos. 3626-29.
- . Geological Society, — Quarterly Journal, Vol. LIII, Part 2; and General Index to the first fifty volumes, Part II, La-Z.
- . Institution of Electrical Engineers, — Journal, Vol. XXVI, No. 128.
- . Nature, — Vol. LV, Nos. 1434-37.
- . Royal Asiatic Society of Great Britain and Ireland, — Journal, Part II, 1897.
- . Royal Geographical Society, — Geographical Journal, Vol. IX, No. 5.
- . Royal Institution of Great Britain, — Proceedings, Vol. XV, No. 1.
- . Zoological Society of London, — Proceedings, Part IV, 1896.
- . ———. Transactions, — Vol. XIV, Part 3.
- Moscow. Société Impériale des Naturalistes de Moscou, — Bulletin, No. 3, 1896.
- Munich. Die K. b. Akademie der Wissenschaften zu München, — Almanach, 1897.
- . ———. Sitzungsberichte, Math.-Phys. Cl. Heft 4, 1896.
- . ———. ———. Phil. u. Hist. Cl. Heft 4, 1896.
- Mussorie. The Indian Forester, — Vol. XXIII, No. 4.
- New York. American Museum of Natural History, — Annual Report, 1895.
- Philadelphia. Academy of Natural Sciences of Philadelphia, — Journal, 2nd Series, Vol. X, Part 4.
- . ———. Proceedings, Part I, 1896.
- . American Philosophical Society, — Proceedings, Vol. XXXV, No. 150.

- Bio de Janeiro. Observatorio do Rio de Janeiro, — Annuario, 1896. .
 Rome. Revista Geografica Italiani, — Tome IV, No. 4.
 ———. Società degli Spettroscopisti Italiani, — Memorie, Tome
 XXVI, No. 1.
 Sydney. Australasian Anthropological Journal, — Vol. I, No. 5.
 Taiping. Perak Government, — Gazette, Vol X, Nos. 9 and 10.
 Tring. Novitates Zoologicae, — Vol. IV, No. 1.
 Vienna. Die K. K. Geologische Reichsanstalt, — Abhandlungen, Band
 XVIII, Heft 1.
 ———. ———. Jahrbuch, Band XLV, Heft 2 und 3.
 Washington. Biological Society of Washington, — Proceedings, Vol.
 XI, pp. 57-104.
 ———. Philosophical Society of Washington, — Bulletin, Vol. XII.
 ———. Smithsonian Institution, — Smithsonian Contributions to Know-
 ledge, Vols. XXX.-XXXII.
 ———. United States Geological Survey, — Bulletin, Nos. 123-26,
 128-29, 131-34.
 Zürich. Die Naturforschende Gesellschaft in Zürich, — Vierteljahrs-
 schrift, Heft 1, 1897.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

- BLOOMFIELD, MAURICE. Contributions to the Interpretation of the Veda.
 Seventh series. 8vo. Baltimore, 1896.

MISCELLANEOUS PRESENTATIONS.

- BLADEN, F. M. Historical Records of New South Wales. Vol. IV.
 8vo. Sydney, 1896.
 NEW SOUTH WALES. The mother colony of the Australias. 8vo.
 Sydney, 1896.

BOARD FOR INTERNATIONAL EXCHANGES, SYDNEY.

- BANGS, OUTRAM. Notes on the synonymy of the North American Mink
 with description of a new subspecies. 8vo. Boston, 1896.

BOSTON SOCIETY OF NATURAL HISTORY.

- Records of the Botanical Survey of India. Vol. I, No. 7. 8vo.
 Calcutta, 1896.

BOTANICAL SURVEY OF INDIA.

- BEZOLD, C. Catalogue of the Cuneiform Tablets in the Kouyunjik
 Collection of the British Museum. Vol. IV. 4to. London, 1896.

BRITISH MUSEUM, LONDON.

Annual Report of the Library Syndicate of the Cambridge University for the year 1895. 4to. Cambridge, 1896.

CAMBRIDGE UNIVERSITY.

Report of the Carmichael Library, Benares. 1896. 8vo. Benares, 1897.

CARMICHAEL LIBRARY, BENARES.

DAVIS, A. W. Gazetteer of the North Lushai Hills. 8vo. Shillong, 1894.

CHIEF COMMISSIONER, ASSAM.

Returns of the Rail-Borne Traffic of the Central Provinces during the quarter ending 31st December, 1896. Fcp. Nagpur, 1897.

CHIEF COMMISSIONER, CENTRAL PROVINCES.

Results of Meteorological Observations of the G. V. Juggarow Observatory, Vizagapatam. 1894. 8vo. Vizagapatam, 1896.

G. V. JUGGAROW OBSERVATORY, VIZAGAPATAM.

• Inaugural—Dissertation zur erlangung der Doctorwürde bei der Philosophischen Facultät der Universität Giessen:—

IPPEN, J. A. Petrographische Untersuchungen an Krystallinen Schieferen der Mittelsteiermark (Koralpe stubalpe, Possruck). 8vo. Graz, 1896.

SCHENCK, CARL ALWIN. Die Rentabilität des Deutschen Eichenschälwalds. 8vo. Darmstadt, 1896.

GIESSEN UNIVERSITY.

Returns of the Rail and River-Borne Trade of Bengal during the quarter ending the 31st December, 1896. Fcp. Calcutta, 1897.

GOVERNMENT OF BENGAL.

Progress Report of the Archæological Survey of Western India for the months September, 1895 to April, 1896. Fcp. Poona, 1896.

GOVERNMENT OF BOMBAY.

Copy of further Correspondence between the Secretary of State for India and the Government of India regarding the Leave and Pension Rules of the Civil Officers formerly termed Uncovenanted Servants. Fcp. London, 1896.

The Indian Antiquary for December 1896. 4to. Bombay, 1896.

Return of Reports of Committee appointed to enquire into the sanitary condition of certain Gaols in Bengal. Fcp. London, 1896.

Selections from the Records of the Government of India, Home Department, No. CCCXLII, Vols. I. and II. Fcp. Calcutta, 1897.

CROOKE, W. The Tribes and Castes of the North-Western Provinces and Oudh. Vols. I—IV. 8vo. Calcutta, 1896.

GOVERNMENT OF INDIA, HOME DEPARTMENT.

The Agricultural Ledger, Mineral and Metallic series, Nos. 6 and 7; Veterinary series, No. 25. 8vo. Calcutta, 1896.

Epigraphia Indica for December 1896. 4to. Calcutta, 1897.

GOVERNMENT OF INDIA, REV. AND AGRIC. DEPARTMENT.

HULTZSCH, E. Reports on Sanskrit Manuscripts in Southern India.
No. II. 8vo. Madras, 1896.

GOVERNMENT OF MADRAS.

Annual Report of the Government Agr.-Horticultural Gardens,
Lahore, for the year ending 31st March, 1896. Fcp. Lahore, 1896.

GOVERNMENT OF THE PUNJAB.

Katalog der Bibliothek der Kaiserlichen Leopoldinisch-Carolinischen
Deutschen Akademie der Naturforscher. Band II, Heft 3. 8vo.
Halle, 1895.

KAISERLICHEN LEOPOLDINISCH-CAROLINISCHEN DEUTSCHEN AKADEMIE DER
NATURFORSCHER, HALLE.

Catalogue of the Michigan Mining School. 1894-96. 8vo. Houghton,
Mich, U.S.A., 1896.

MICHIGAN MINING SCHOOL, HOUGHTON, MICH, U.S.A.

Annual Report of the Director of the Royal Alfred Observatory for the
year 1894. Fcp. Mauritius.

Results of Meteorological Observations taken during the year 1895, at
the Royal Alfred Observatory, Mauritius. Fcp. Mauritius.

ROYAL ALFRED OBSERVATORY, MAURITIUS.

Meteorological Observations of the St. Xavier's College Observatory
from January to June, 1896. Sheet. Calcutta, 1897.

ST. XAVIER'S COLLEGE OBSERVATORY, CALCUTTA.

MÜLLER, F MAX. Sacred Books of the East. Vol. XXXVIII, XLII,
XLV, and XLVI. 8vo. Oxford, 1895-97.

SECRETARY OF STATE FOR INDIA IN COUNCIL.

North American Fauna. No. 12. 8vo. Washington, 1896.

UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON.

ATKINSON, EDWIN T. Economic Products of the North-Western Pro-
vinces. Part I. Gums and Gum-Resins. 8vo. Allahabad, 1876.

Hints to Travellers. Edited by a Committee of Council of the Royal
Geographical Society, December, 1871. 8vo. London, 1871.

CHARY, C. RAGOONATHA. The Transit of Venus: A discourse. 8vo.
Madras.

CLARK, W. Tied Arches for Roofs and Floors of Buildings with some
experience in their construction and uses. 8vo. Calcutta, 1872.

FERGUSON, JAMES. Description of the Amravati Tope, on the banks
of the Kistnah in the Guntur Zillah. 8vo. Hertford, 1867.

———, On the study of Indian Architecture. 8vo. London, 1867.

LYMAN, BENJAMIN SMITH. Report on the New Red of Bucks and Mont-
gomery Counties. 8vo. Pennsylvania, 1895.

COLONEL J. WATERHOUSE.

Catalogue of Yale University for the year 1896-97. 8vo. New
Heaven, 1896. YALE UNIVERSITY.

PERIODICALS PURCHASED.

- Calcutta.** Indian Medical Gazette, — May, 1897.
Chicago. The Journal of Geology, — Vol. V, No. 13.
Geneva. Archives des Sciences Physiques et Naturelles, — Vol. III, No. 4.
Leipzig. Annalen der Physik und Chemie, — Band LX, Heft 4.
London. Numismatic Circular, — Vol. V, No. 54.
Vienna. Vienna Oriental Journal, — Vol. X, Nos. 3 and 4.
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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR JULY, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 7th July, 1897, at 9-15 P. M.

DR. A. F. R. HOERNLE, C.I.E., President, in the chair.

The following members were present :—

Dr. A. R. S. Anderson, Dr. T. Bloch, F. Finn, Esq., Captain W. Haig, L. de Nicéville, Esq., A. T. Pringle, Esq., Paṇḍit Mahēndra Nath Vidyānidhi.

Visitors:—W. K. Dods, Esq., Paul S. Quillet, Esq., C. W. Ellis, Esq.

The minutes of the last meeting were read and confirmed.

Thirty-two presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last Meeting of the Society were balloted for and elected ordinary Members:—

Surgeon-Lieutenant J. W. Grant, I. M. S.
E. Vredenburg, Esq.
G. E. Grimes, Esq.

The following gentlemen have expressed a wish to withdraw from the Society:—

Bābu Jānaki Nāth Bhaṭṭācērya.
H. C. Mullick, Esq.

The following papers were read :—

1. *Notes on the Vernacular dialects spoken in the District of Saran*,—
By GIRINDRA NATH DUTT, Superintendent, Raj Hutwa. Communicated by
DR. G. A. GRIERSON.

The paper will be published in the *Journal*, Part I.

2. *Some New Indo-Malayan Orchids*,—By G. KING, M.B., LL.D.,
F.R.S., C.I.E. and R. PANTLING.

The paper will be published in the *Journal*, Part II.

3. *A Comparative Vocabulary of the Gōṣṍḍī and Kōlāmī Languages*,
—By CAPTAIN WOLSELEY HAIG, Officiating Deputy Commissioner, Wun
District, Berar.

The paper will be published in the *Journal*, Part I.

4. *Notes on Some Butterflies from Myingan, Central Burma*,—By
CAPTAIN E. Y. WATSON, I.S.C., F.Z.S.

The paper will be published in the *Journal*, Part II.

LIBRARY.

The following additions have been made to the Library since the
meeting held in June last :—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

Berlin. Die K. P. Akademie der Wissenschaften zu Berlin,—Sitzungs-
berichte, Nrn. 1-25, 1897.

———. Berliner Entomologische Zeitschrift,—Band XLI, Heft 4.

Bombay. Anthropological Society of Bombay,—Journal, Vol. IV,
Nos. 3 and 4.

Boston. American Oriental Society,—Journal, Vol. XIX.

Calcutta. Indian Engineering,—Vol. XXI, Nos. 24-26.

———. The Indian Lancet,—Vol. IX, No. 12.

Genoa. Museo Civico de Storia Naturale de Genova,—Annali, 2^a Serie,
Tome XVII.

Hamburg. Naturwissenschaftlichen Vereins in Hamburg,—Abhand-
lungen aus dem Gebiete der Naturwissenschaften, Band XV.

———. Verhandlungen, Band III, Heft 4.

Havre. Société de Géographie Commerciale du Havre,—Bulletin,
No. 1, 1897.

Leipzig. Die Deutsche Morgenlandische Gesellschaft,—Zeitschrift,
Band LI, Heft 1

- London. The Academy,—Nos. 1307-10.
 ———. Anthropological Institute of Great Britain and Ireland,—
 Journal, Vol. XXVI, No. 4, and List of the Fellows, May, 1897.
 ———. The Athenæum,—Nos. 3630-33.
 ———. Nature,—Vol. LVI, Nos. 1438-41.
 ———. Royal Astronomical Society,—Monthly Notices, Vol. LVII,
 No. 6.
 ———. Zoological Society of London,—Proceedings, Part I, 1897.
 Manchester. Manchester Literary and Philosophical Society,—Memoirs
 and Proceedings, Vol. XLI, Part 3.
 Rome. Società degli Spettroscopisti Italiani,—Memorie, Tome XXVI,
 No. 2.
 St. Petersburg. L'Académie Impériale des Sciences de St. Péters-
 bourg,—Annuaire du Musée Zoologique, 1897.
 Sydney. Linnæan Society of New South Wales,—Proceedings, Part 4,
 1896.
 Taiping. Perak Government,—Gazette, Vol. X, No. 11.
 Toronto. Canadian Institute,—Proceedings, Vol. I, Part 1.
 ———. ———. Transactions, Vol. V, Part 1.
 Vienna. Die K. K. Zoologisch-botanische Gesellschaft in Wien,—
 Verhandlungen, Band XLVII, Heft 3.
 Washington. Biological Society of Washington,—Proceedings, Vol.
 XI, pp. 105-43.
 Yokohama. Asiatic Society of Japan,—Transactions, Vol. XXIV.

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- CASSINO, SAMUEL E. The Scientists' International Directory, 1896. 8vo.
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MISCELLANEOUS PRESENTATIONS.

- GEROULD, JOHN HIRAM. The Anatomy and Histology of *Candina*
Arenata Gould. 8vo. Boston, 1896.

BOSTON SOCIETY OF NATURAL HISTORY.

- NEEDHAM, F. J. A collection of a few Moshang Naga Words. 8vo.
 Shillong, 1897.

CHIEF COMMISSIONER, ASSAM.

- Annual Report on the Lunatic Asylums in the Central Provinces for
 the year 1896. Fcp. Allahabad, 1897.

CHIEF COMMISSIONER, CENTRAL PROVINCES.

- Annual Report on the Police Administration of the Town of Calcutta
 and its Suburbs for the year 1896. Fcp. Calcutta, 1897.

Administration Report on the Jails of Bengal for the year 1896. Fcp. Calcutta, 1897.

GOVERNMENT OF BENGAL.

Army Estimates of effective and non-effective services for 1897-98. Fcp. London, 1897.

Papers regarding the Famine and the Relief Operations in India, during the year 1896, with copy of the Famine Code for the North-West Provinces and Oudh. Fcp. London, 1897.

Return of all Loans raised in England under the Provisions of any Acts of Parliament, chargeable on the Revenues of India, outstanding at the Commencement of the Half-year ended on the 30th September, 1896. Fcp. London, 1897.

Returns of all Loans raised in India, chargeable on the Revenues of India, outstanding at the Commencement of the Half-year ended on the 30th September, 1896. Fcp. London, 1897.

Copy of Correspondence between the Secretary of State for India and the Lords Commissioners of Her Majesty's Treasury, regarding the Superannuation Allowance of Major-General Sir Owen Tudor Burne. Fcp. London, 1897.

GOVERNMENT OF INDIA, HOME DEPARTMENT.

SMITH, V. A. The Remains near Kasia, in the Gorakhpur District. 4to. Allahabad, 1896.

GOVERNMENT OF NORTH-WESTERN PROVINCES.

BASE, DANIEL. Some Double Halides of Zinc. 8vo. Easton, Pa. 1895.

BROMWELL, WILLIAM. A Study of the Nitrate and Sulphate of Orthodiazotoluene and the Action of the Sulphate on Methyl Alcohol. 8vo. Easton, Pa. 1895.

GORRELL, JOSEPH HENDREN. Indirect Discourse in Anglo-Saxon. 8vo. Baltimore, 1895.

GRAY, GEORGE WILLIAM. The Chlorides of Paranitroorthosulphobenzoic Acid. 8vo. Easton, Pa. 1895.

GREY, W. R. The Treatment of Philosophy and Philosophers by the Greek Comic Poets. 8vo. Baltimore, 1896.

HARRISON, ROSS GRANVILLE. The Development of the Median and Paired Fins of Teleosts. 8vo. Baltimore, 1895.

HAYNES, JOHN. Risk as an Economic Factor. 8vo. Boston, 1895.

HOUGH, THEODORE. On the Escape of the Heart from Vagus Inhibition. 8vo. Baltimore, 1895.

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- KEIDEL, GEORGE C. *The Evangile aux Femmes, an old-French satire on Women.* 8vo. Baltimore, 1895.
- MALTBIE, WILLIAM H. *On the Curve $y^m - G(x) = 0$, and its Associated Abelian Integrals.* 4to. Baltimore, 1894.
- MARDEN, CHARLES CARROLL. *The Phonology of the Spanish Dialect of Mexico City.* 8vo. Baltimore, 1896.
- MCKEE, SOL. REID. *A further investigation of the chlorides of ortho-sulphobenzoic Acid.* 8vo. Easton, Pa. 1895.
- MOORE, H. L. *Von Thünen's Theory of Natural Wages.* 8vo. Boston, 1895.
- MOORE, L. T. *On the changes in length produced in iron wires by Magnetization.* 4to. Baltimore, 1895.
- MUCKENFUSS, ANTHONY MAULTRIE. *Some Transformations of Parasulphaminebenzoic Acid.* 8vo. Easton, Pa. 1895.
- SHIELDS, T. E. *The effect of odours irritant vapours, and mental work upon the Blood flow.* 4to. Baltimore, 1896.
- JOHNS HOPKINS UNIVERSITY, BALTIMORE.
- Monthly Weather Review for December, 1896. 4to. Calcutta, 1897.
- METEOROLOGICAL REPORTER, GOVERNMENT OF INDIA.
- SHERBORN, CHARLES DAVIES. *An Index to the genera and species of the Foraminifera. Part II. Non. to Z.* 8vo. Washington, 1896.
- SMITHSONIAN INSTITUTION.

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- Calcutta. *Indian Medical Gazette*,—Vol. XXXII, No. 6.
- Geneva. *Archives des Sciences Physiques et Naturelles*,—Tome II, No. 5.
- Leipzig. *Annalen der Physik und Chemie*,—Band LXI, Heft 1.
- . *Beiblätter*, Band XXI, Stück 4 und 5.
- London. *Numismatic Circular*,—Vol. V, No. 55.
- Vienna. *Vienna Oriental Journal*,—Vol. XI, No. 1.

BOOKS PURCHASED.

- BUDGE, E. A. WALLIS. *Laughable stories collected by Mâr Gregory John Bar-Hebræus.* 8vo. London, 1897.
- SIMPSON, WILLIAM. *The Buddhist Praying Wheel.* 8vo. London, 1896.
- SINH SIR BHAGVAT. *A short History of Aryan Medical Science.* 8vo. London, 1896.

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR AUGUST, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 4th August, 1897, at 9-15 P.M.

DR. A. F. R. HOERNLE, C.I.E., President, in the chair.

The following members were present:—

Dr. A. R. S. Anderson, Dr. T. Bloch, W. B. Colville, Esq., Dr. J. W. Grant, The Rev. H. B. Hyde, L. de Nicéville, Esq., R. D. Oldham, Esq., A. T. Pringle, Esq., Paṇḍit Haraprasād Çāstri, Paṇḍit Mahēndra Nāth Vidyānidhi.

The minutes of the last meeting were read and confirmed.

Sixty-two presentations, were announced, details of which are given in the Library List appended.

The following gentleman is a candidate for election at the next meeting:—

Charles Saunders, Esq., proposed by L. de Nicéville, Esq., seconded by Dr. T. Bloch.

The PRESIDENT laid on the table the following draft rules on the subject of the award of the Barclay Memorial Medal:

RULES.

1. The Barclay Memorial Medal will be awarded each third year at the Anniversary Meeting of the Asiatic Society of Bengal held on the first Wednesday of February.

2. The Medal will be bestowed on that individual who, not having been a recipient of the Medal during the preceding seven years, shall be deemed by the Council of the Asiatic Society to have, up to the 31st of December next preceding the award, made the most meritorious contribution to Biology with special reference to India.

3. The Council will, at the Meeting next preceding the General Meeting in November of each year, appoint a special committee of five members of the Society who shall include the Natural History Secretary to the Society for the time being; the other four members shall, as far as is possible, consist of individuals who are not, at the time of appointment, members of Council of the Society.

4. This Special Committee shall be termed the "Barclay Memorial Medal Committee," and the Natural History Secretary of the Society, its only *ex-officio* member, shall be its convener and Chairman. The members nominated by the Council to serve on this Committee shall be persons known to be learned in different branches of Biology. Three members of the Committee shall form a quorum.

5. The Chairman of the Committee will call a Meeting of the Committee on the first convenient date subsequent to the first Wednesday of December and will deliver to the Committee the instructions of the Council. These instructions shall be:—

- (a) To assist the Council in awarding the Barclay Medal by selecting from among those known or supposed by the Committee to be eligible, the names of at least three persons, but not more than five, worthy, in the Committee's opinion, of the honour.
- (b) Members of the Committee, and Members of the Council of the Asiatic Society for the time being, shall be held ineligible for nomination.
- (c) The names need not be those of individuals living, at the time of recommendation, in India; and they may be the names of workers in any branch of Biology; *i.e.*, in Animal or Vegetable Morphology, Physiology, including Bionomics, or Taxonomy, and taxonomic work shall be held to include Palæontology.
- (d) The names selected by the Committee in any year should, as far as is possible, be names of persons eminent in different branches of Biology.

6. In the event of all five members being unable to attend the *first* meeting of the Committee convened by the *ex-officio* Chairman, that gentleman is empowered to communicate, or to depute one of the other members present at the meeting to communicate by letter with the

absent member or members with reference to the subject under consideration, and with the request that any reply to such communication be addressed, under a sealed and registered cover marked "confidential," to the Natural History Secretary, Asiatic Society of Bengal, 57, Park Street, Calcutta.

7. Having received the instructions of the Council the Committee will fix a date for a second meeting to be held on the first convenient day subsequent to the first Wednesday of January, but before the Thursday preceding the first Wednesday of February. In any communication addressed to an absent member of the Committee, the date of this second meeting will be announced.

8. At this second meeting of the Committee the Chairman will read to the other members present any communications received from members unable to be present, and the Committee will finally decide on the names to be submitted to the Council; in each case a brief statement of the meritorious work on which the recommendation is based will be appended.

9. The names recommended, together with these notes, will be placed in a sealed cover to be left in the custody of the Chairman of the Committee, in order that it may be handed by him to the President of the Society or such other officer as may act as Chairman at the Meeting of Council of the Asiatic Society, held on the Thursday preceding the Anniversary Meeting of the Society.

10. At the Council Meeting held on the Thursday preceding the Anniversary Meeting, the Members of Council present will select from among the names recommended by the Barclay Medal Committee, the name that it considers most worthy of the Medal.

The PRESIDENT announced that Dr. T. Bloch, had been appointed Philological Secretary of the Society in the place of Dr. G. Ranking, resigned.

Mr. R. D. Oldham, Officiating Director of the Geological Survey of India, exhibited and described an important collection of rude stone implements from Central India.

The following papers were read:—

1. *Three further collections of ancient manuscripts from Central Asia.*—By A. F. RUDOLF HOERNLE, PH.D., C.I.E.

The paper will be published in the *Journal*, Part I.

2. *On new or little-known Butterflies from the Indo and Austro-Malayan Region.*—By LIONEL DE NICÉVILLE, F. E. S., C.M.Z.S.

The paper will be published in the *Journal*, Part II.

LIBRARY.

The following additions have been made to the Library since the meeting held in July last:—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,
presented by the respective Societies and Editors.

- Baltimore. Johns Hopkins University,—Circulars, Vol. XVI, Nos. 129–31.
- Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—Tijdschrift voor Indische Taal-, Land-en Volkenkunde, Deel XXXIX, Aflevering 6.
- . Koninklijke Natuurkundige Vereeniging in Nederl.-Indië,—Natuurkundig Tijdschrift voor Nederlandsch-Indië, Deel LVI.
- Berlin. Die Königliche Akademie der Wissenschaften zu Berlin,—Abhandlungen, 1896.
- Bombay. Bombay Natural History Society,—Journal, Vols. X, Nos. 5; XI, 1.
- . The Indian Antiquary,—Vol. XXVI, Part 323.
- Bordeaux. La Société Linnéenne de Bordeaux,—Actes Tome XLIX.
- Brussels. La Société Entomologique de Belgique,—Annales, Tome XXXIX.
- Budapest. A Magyar Tudományos Akadémia,—Ertekezések, Kötet XVI, Szám 6.
- Cacn. La Société Linnéenne de Normandie,—Bulletin, 4^e Série, Tome IX, Nos. 2 et 3; X, 1 et 2.
- Calcutta. Buddhist Text Society of India,—Journal, Vol. IV, Parts 3 and 4.
- . Geological Survey of India,—Records, Vol. XXX, Part 2.
- . Indian Engineering,—Vol. XXII, Nos. 1–5.
- . The Indian Lancet,—Vol. X, Nos. 1–3.
- . Maha-bodhi Society,—Journal, Vol. VI, No. 2.
- . Microscopical Society of Calcutta,—Bulletin, Vol. VI, No. 3.
- . Photographic Society of India,—Journal, Vol. X, Nos. 6 and 7.
- . The Wealth of India,—Vol. I, No. 6.
- Dublin. Royal Irish Academy,—Proceedings, 3rd Series, Vol. IV, No. 1.
- The Hague. Nederlandsche Entomologische Vereeniging,—Tijdschrift voor Entomologie, Band XL, Nr. 1.
- Leipzig. Die Königlich Sächsische Gesellschaft der Wissenschaften zu Leipzig,—Berichte über die Verhandlungen, Math.-Phys. Classe, I-II, 1897.

- Liege.** La Société Géologique de Belgique,—Annales, Tome XXIV, No. 1.
- London.** The Academy,—New Series, Nos. 1311–15.
 ———. The Athenaeum,—Nos. 3634–38.
 ———. Institution of Electrical Engineers,—Journal, Vol. XXVI, No. 129.
 ———. Institution of Mechanical Engineers,—Proceedings, No. 2, 1896.
 ———. Nature,—Vol. LVI, Nos. 1442–46.
 ———. Royal Astronomical Society,—Monthly Notices, Vol. LVII, No. 7.
 ———. Royal Geographical Society,—Geographical Journal, Vol. X, No. 1.
 ———. Royal Microscopical Society,—Journal, Parts 6, 1896 ; 1, 1897.
 ———. Royal Society,—Proceedings, Vol. LXI, Nos. 365, 366 and 369.
 ———. Royal Statistical Society,—Journal, Vol. LX, Part 1.
- Lyon.** La Société d'Anthropologie de Lyon,—Bulletin, Tome XIV.
- Madras.** The Indian Journal of Education,—May 1897.
- Montevideo.** Museo Nacional de Montevideo,—Anales, VI.
- Mussoorie.** The Indian Forester,—Vol. XXIII, Nos. 5 and 6 ; and Appendix Series, Part I.
- Nantes.** La Société des Sciences Naturelles de l'ouest de la France,—Bulletin, Tome V, Nos. 4 ; VI, 1 et 3.
- Paris.** L'Académie Nationale des Sciences, Belles-Lettres et Arts de Bordeaux,—Actes, 3^e Série, Tome LV.
 ———. La Société d'Anthropologie de Paris,—Bulletins, 4^e Série, Tome VII, Nos. 2–5.
 ———. Muséum d'Histoire Naturelle,—Bulletin, Nos. 2–4 et 7, 1896.
 ———. ———. Nouvelles Archives, 3^e Série, Tome VII ; VIII, Nos. 1 et 2.
 ———. Musée Guimet,—Annales, Tome XXVII.
 ———. ———. Bibliothèque d'Études,—Tome III.
 ———. ———. Revue de l'Histoire des Religions, Tome XXXII, Nos. 2 et 3 ; XXXIII, 1 et 2.
 ———. Société de Géographie,—Comptes Rendus des Séances, Nos. 8–12, 1897.
 ———. La Société Philomathique de Paris,—Bulletin, 8^e Série, Tome VIII, Nos. 2–4.
 ———. La Société Zoologique de France,—Bulletin, Tome XXI.
- Pisa.** La Società Toscana di Scienze Naturali,—Atti, Memorie, Tome XV.
 ———. ———. Processi Verbali, 14 Marzo—9 Maggio, 1897.

- Philadelphia. American Academy of Political and Social Science,—
Annals, Vol. X, No 1.
- Prague. Die K. K. Sternwarte zu Prag,—Magnetische und Meteorolo-
gische Beobachtungen, 1896.
- Rome. Rivista Geografica Italiani,—Annata IV, Fasc V-VI.
- . Società degli Spettroscopiste Italiani,—Memorie, Tome XXVI,
Nos. 3 et 4.
- St. Petersburg. L'Académie Impériale des Sciences de St. Petersburg,
—Bulletin, V^e Série, Tome VI, No. 3.
- . ———. Mémoires, Classe Historico-Philologique, VIII^e Série,
Tome I, Nos. 1-2; Classe Physico-Mathématique, VIII^e Série,
Tome I, 9; II, 1-9; III, 1-6; IV, 1.
- Simla. Indian Meteorological Memoirs,—Vol. VII, Part 7.
- Stettin. Stettiner Entomologische Zeitung,—Nrn. 1-12, 1896.
- Sydney. The Australasian Anthropological Journal,—Vol. I, No. 6.
- Tai ping. Perak Government,—Gazette, Vol. X, Nos. 12-18.
- Turin. La R. Accademia della Scienze di Torino,—Atti, Tome XXXII,
Nos. 7-12.
- Vienna. Die Anthropologische Gesellschaft in Wien,—Mittheilungen,
Band XXVII, Heft 2.
- . Die K. K. Geologische Reichsanstalt,—Verhandlungen, Nrn.
6-8, 1897.
- . Die K. K. Zoologisch-botanische Gesellschaft in Wien,—
Verhandlungen, Band XLVII, Heft 4.
- Washington. Biological Society of Washington,—Proceedings, Vol.
XI, pp. 145-212.
- Wellington. Polynesian Society,—Journal, Vol. VI, No. 2.
- Yokohama. Die Deutsche Gesellschaft für Natur-und Völkerkunde
Ostasiens in Tokio,—Mittheilungen, 59^{tes} Heft.

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- BASTIAN, ADOLF. Festschrift für Adolf Bastian zu seinem 70. Geburts-
tage 26. Juni 1896. 8vo. Berlin, 1896.
- DHARMAPALA, H. The kinship between Hinduism and Buddhism by
Henry S. Olcott. 8vo. Calcutta, 1893.
- GODWIN-AUSTEN, LT.-COL. H. H. Notes on the Genus Euplecta. 8vo.
Hertford, 1897.
- KILIAAN, H. N. Madoeresche Spraakkunst. 8vo. Batavia, 1897.
- MANOUVRIER, L. Sur Le Nain Auguste Tuailon et sur Le Nanisme
simple avec ou sans microcephalie. 8vo. Paris, 1896.

MANOUVRIER, L. Observation d'un microcephale vivant et de la cause probable de sa monstruosité. 8vo. Paris, 1895.

———. Deuxième Etude sur le Pithecanthropus Erectus comme précurseur présumé de l'homme. 8vo. Paris, 1895.

———. Réponse Aux Objections contre le Pithecanthropus. 8vo. Paris, 1897.

MORSE, EDWARD S. Korean Interviews. 8vo. 1897.

SARASIN, PAUL and FRITZ. Ergebnisse Naturwissenschaftlicher Forschungen auf Ceylon in den Jahren 1884–1886. Text, Band III. and Atlas. 4to. Wiesbaden, 1893.

MISCELLANEOUS PRESENTATIONS.

Notes on the Annual Statements of the Government Charitable Dispensaries in the Central Provinces for the year 1896. Fcp. Allahabad, 1897.

Report on the Jails of the Central Provinces for the year 1896. Fcp. Allahabad, 1897.

Returns of the Rail-Borne Traffic of the Central Provinces during the quarter ending 31st March, 1897. Fcp. Nagpur, 1897.

CHIEF COMMISSIONER, CENTRAL PROVINCES.

Queensland Agricultural Journal, Vol. 1, Pt. I. 8vo. Brisbane, 1897.

DEPARTMENT OF AGRICULTURE, BRISBANE.

EHMANN, P. Sprichwörter und Bildliche Ausdrücke der Japanischen Sprache. 8vo. Tokyo, 1897.

DEUTSCHE GESELLSCHAFT FÜR NATUR-UND VÖLKERKUNDE OSTASIENS,
YOKOHAMA.

Annual Report on Emigration from the Port of Calcutta to British and Foreign Colonies, 1896. Fcp. Calcutta, 1897.

Annual Report on the Lunatic Asylums of Bengal for the year 1896. Fcp. Calcutta, 1897.

Report on the Legal Affairs of the Bengal Government for the year 1896–97. Fcp. Calcutta, 1897.

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The Indian Antiquary, January to March 1897. 4to. Bombay, 1879.

Memorandum of the Secretary of State relating to the Army Estimates for 1897–98. Fcp. London, 1897.

Return showing for the last Ten Years the Acreage under Poppy in India; the Amount of Advances to the Cultivators for Crude Opium; and the Quantity of Opium produced in the Factories, distinguishing between the Behar and Benares Agencies, &c. Fcp. London, 1897.

GOVERNMENT OF INDIA, HOME DEPARTMENT.

The Agricultural Ledger, Agricultural Series, No. 19; Animal Product Series, No. 2; Medical and Chemical Series, No. 9; Vegetable Product Series, No. 34. 8vo. Calcutta, 1897.

BURGESS, JAS. On the Muhammadan Architecture of Bharoch, Cambay, Dholka, Champanir and Mahmudabad in Gujarat. 4to. London, 1896.

Epigraphia Indica, Vol. III, Part VIII. 4to. Calcutta, 1897.

GOVERNMENT OF INDIA, REVENUE AND AGRICULTURAL DEPARTMENT.

Report on the Sanitary Administration of the Punjab for the year 1896. Fcp. Lahore, 1897.

GOVERNMENT OF THE PUNJAB.

Memorandum on the snowfall in the mountain districts bordering Northern India and the abnormal features of the weather in India during the past year, with a forecast of the probable character of the south-west monsoon rains of 1897. Fcp. Calcutta, 1897.

METEOROLOGICAL REPORTER TO THE GOVERNMENT OF INDIA.

GRAN, H. H. Protophyta: Diatomaceæ, Silicoflagellata og Cilioflagellata. 4to. Christiania, 1897.

NORWEGIAN NORTH-ATLANTIC EXPEDITION.

Meteorological Observations of the St. Xavier's College Observatory from January to June, 1897. Sheet. Calcutta, 1897.

ST. XAVIER'S COLLEGE OBSERVATORY, CALCUTTA.

GELDNER, KARL F. Avesta, the Sacred Books of the Parsis. Parts I. Yasna. II, Vispered and Khorda Avesta. III. Vendidad. 4to. Stuttgart, 1886-96.

THE SECRETARY OF STATE FOR INDIA IN COUNCIL.

WEINEK, DR. L. Über das feinere selenographische detail der focalen mond-photographien der Mt. hamiltoner und pariser sternwarte. 8vo. Prag, 1897.

K. K. STERNWARTE ZU PRAG.

Chaitanya Library Journal, Vol. I. No. 4. 8vo. Calcutta, 1893.

The Indian Journal of Education, January to August, 1894. 8vo. Madras, 1894.

National Magazine. New Series. Vol. VI, Nos. 7, 8, 10, 11, Vol. VII. Nos. 5, 6, 8, 9, Vol. VIII, Nos. 1 to 6 and 8. 8vo. Calcutta, 1894.

C. R. WILSON, ESQ.

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Berlin. Journal für die reine und angewandte Mathematik,—Band CXVII, Heft 3.

———. Orientalische Bibliographie,—Band X, Heft 1.

———. Zeitschrift für Ethnologie,—Heft 5-6, 1896; 1-2, 1897.

- Braunschweig. Jahresbericht über die Fortschritte der Chemie und verwandter Theile anderer Wissenschaften,—Heft 3, 1891.
- Calcutta. Calcutta Review,—July, 1896.
- . Indian Medical Gazette,—Vol. XXXII, No. 7.
- Cassel. Botanisches Centralblatt,—Band LXIX, Nrn. 2-3, 11-13; LXX, 1-2, 4-10.
- Chicago. The Journal of Geology,—Vol. V, No. 4.
- Geneva. Archives des Sciences Physiques et Naturelles,—Juin, 1897.
- Göttingen. Die Königl. Gesellschaft der Wissenschaften,—Göttingische gelehrte Anzeigen, Nrn. 1-3, 1897.
- . ———. Nachrichten, Math.-phys. Klasse, Heft 4, 1896; Philolog-histor Klasse, Heft 4, 1896.
- Leipzig. Annalen der Physik und Chemie,—Band LXI, Heft 2-3.
- . ———. Beiblatter, Band XXI, Stück 6.
- . Literarisches Centralblatt,—Nrn. 52, 1896; 1-15, 1897.
- Leyden. Internationales Archiv für Ethnographie,—Band X, Heft 1.
- London. The Chemical News,—Vol. LXXV, Nos. 1938-51.
- . The Entomologist's Monthly Magazine,—2nd Series, Vol. VIII, No. 86 and 87.
- . Journal of Conchology,—Vol. VIII, No. 11.
- . The Messenger of Mathematics,—New Series, Vol. XXVI, No. 6.
- . Numismatic Circular,—Vol. V, No. 56.
- Paris. L'Académie des Sciences,—Comptes Rendus des Séances, Tome CXXIV, Nos. 1-14.
- . Annales de Chimie et de Physique,—Janvier-Avril, 1897.
- . Journal des Savants,—Janvier-Mars, 1897.
- . Revue Critique d'Histoire et de Littérature,—Vol. XLIII, Nos. 1-15.
- . Revue de Linguistique et de Philologie Comparée,—No. 1, 1897.
- . Revue Scientifique,—4^e Série, Tome VII, Nos. 3-16.

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- COLE, REV. F. T. Santali Primer. 8vo. Manbhum, 1896.
- EITEL, ERNEST J. Hand-Book of Chinese Buddhism, being a Sanskrit-Chinese Dictionary with Vocabularies of Buddhist terms. 8vo. London, 1888.
- HAECKEL, ERNEST. Lettres d'un Voyageur dans L'Inde. 8vo. Paris, 1883.
- HIRTH, FRIEDRICH. Ueber Fremde Einfüsse in der Chinesischen Kunst. 8vo. Munchen, 1896.

- KAYE, J. W. *Memoir of the Services of the Bengal Artillery, from the formation of the corps to the present time with some account of its internal organization.* By the late Captain E. Buckle. 8vo. London, 1852.
- KUBITSCHKE, WILHELM. *Rundschau über ein Quin Quennium der Antiken Numismatik, (1890-94).* 8vo. Wien, 1896.
- M'CRINDLE, J. W. *The Invasion of India by Alexander the Great.* 8vo. Westminster, 1893.
- PRATT, A. E. *To the Snows of Tibet through China,* 8vo. London, 1892.
- SCHLÉGEL, DR. GUSTAV. *Die Chinesische Inschrift auf dem Uigurischen Denkmal in Kara Balgassum.* 8vo. Helsingfors, 1896.
- STOCQUELER, J. H. *Memorials of Afghanistan.* 8vo. Calcutta, 1843.
- TOWNSEND, GEORGE. *Outram and Havelock's Persian Campaign.* By Captain E. H. Hunt. 8vo. London, 1858.
- WEST, EDWARD. *Emigration to British India.* 8vo. London, 1857.
- Zoological Records, Vols. XXXI and XXXII.* 8vo. London, 1896.
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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR NOVEMBER, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 3rd November, 1897, at 9 P.M.

DR. A. F. R. HOERNLE, C.I.E., President, in the chair.

The following members were present:—

Dr. A. Alcock, Dr. T. Bloch, W. B. Colville, Esq., The Most Revd. Archbishop P. Goethals, T. H. Holland, Esq., The Rev. H. B. Hyde, C. Little, Esq., L. de Nicéville, Esq., A. T. Pringle, Esq., C. Saunders, Esq., Paṇḍit Mahendra Nāth Vidyānidhi.

The minutes of the last meeting were read and confirmed.

One Hundred and Twenty-seven presentations were announced, details of which are given in the Library List appended.

The SECRETARY reported that the following gentlemen had been elected Ordinary Members of the Society during the recess in accordance with Rule 7.

Charles Saunders, Esq.
Bābu Sārādā Caraṇ Mitra.

The following gentlemen are candidates for election at the next meeting:—

Captain Stuart H. Godfrey, Assistant Resident in Kashmir, proposed by Dr. A. F. R. Hoernle, seconded by C. Little, Esq.

Mesroby S. Seth, Esq., Armenian Examiner to the University of Calcutta, proposed by Dr. T. Bloch, seconded by Dr. A. R. S. Anderson.

W. A. Talbot, Esq., Deputy Conservator of Forests, Dharwar, Kanara, Bombay Presidency, proposed by L. de Nicéville, Esq., seconded by Dr. A. F. R. Hoernle.

The following gentlemen have expressed a wish to withdraw from the Society :—

C. H. Bompas, Esq.
Mahārāja Sūryakānta Ācārya Bāhādur.

The SECRETARY reported the death of the following member :—

W. C. Taylor, Esq.

The PRESIDENT announced that the Council had elected Mr. L. de Nicéville to officiate as Natural History Secretary of the Society during Mr. Finn's temporary absence.

The PRESIDENT also announced that Dr. Anderson had left Calcutta and Dr. Alcock had agreed to carry on the duties of the General Secretary till Mr. Wilson's return.

The PRESIDENT laid on the table the following brief account of the Proceedings of the International Congress of Orientalists held at Paris in last September submitted by Dr. Grierson as a delegate of the Society.

From

G. A. GRIERSON, Esq., C.I.E., Ph.D., I.C.S.,

To

THE HONORARY SECRETARY, ASIATIC SOCIETY OF BENGAL,
Calcutta.

ON BOARD S.S. "SHANNON,"

13th October, 1897.

SIR,

With reference to your letter in which you did me the honour of informing me that I had been appointed to act as Delegate of the Asiatic Society of Bengal at the Oriental Congress held at Paris in last September, I have the honour to report that I attended the Congress in that capacity, and also as Delegate of the Government of India, and to give the following brief account of the proceedings, so far as they more immediately concerned India and the Asiatic Society.

2. The Congress was formally opened on Monday, the 6th September, 1897, at a meeting held at the Lycée Louis-le-Grand at 9-30 A.M., under the presidency of the *Ministre de l'Instruction et des Beaux-Arts*. The Inaugural Address was delivered by M. Schefer, the President of the Congress. It has been printed, and I have the honour to submit herewith a copy. This was followed by an address of welcome delivered by the President of the Municipal Council of Paris, and by several short speeches of various delegates of Governments and Learned Societies. The meeting then adjourned to allow the different members to form themselves into sections. The following sections were constituted:—

- I. Languages and Archæology of Aryan Countries.
 - (a) Languages and Archæology of India.
 - (b) Iran.
 - (c) Linguistics.
- II. Languages and Archæology of the Far East.
 - (a) China and Japan.
 - (b) Indo-China, Malay, and Polynesia.
- III. Musalman Languages and Archæology.
- IV. Semitic Languages and Archæology.
 - (a) Aramaic, Hebrew, Phœnician, and Ethiopic.
 - (b) Assyria.
- V. Egypt, and African Languages.
- VI. The East, Greece.—Relations of Hellenism with the East,—Byzantium.
- VII. Ethnography, Folklore of the East.

3. I joined Section I (a). Languages and Archæology of India. My report will therefore deal principally with that Section. The following gentlemen were appointed the officials of the section:—

President: Lord Reay.

Vice-Presidents: Hofrath G. Buehler, Professor Pischel, and Professor Kern.

Secretaries: Dr. Formichi, Messrs. Stickney, and Grosset.

4. The following is a summary of the proceedings of the Section:—
Monday, 6th September, Afternoon.

Professor H. Oldenberg, of Kiel, read a paper on Taine's Essay on Buddhism. He pointed out that this essay, which hitherto had been almost unknown was full of suggestion to those who were working now-a-days under more favourable conditions. Professor Rhys Davids, Dr. Buehler, M. Senart, and Lord Reay joined in the discussion which followed, and congratulated Dr. Oldenberg on his discovery of the forgotten Essay.

M. Sylvain Lévi, on behalf of M. Barth, laid on the table an important index prepared by Mr. Bloomfield of Bergaigne's well-known "Religion Vedique."

M. Ballin read a communication on the two veterinary treatises of Jayadatta and Nakula.

M. Speyer read a paper on Gambling in Ancient India.

Tuesday, 7th September, Morning.

Mr. R. Sewell read a paper entitled "Some points in the Archæology of Southern India," in which he summed up the progress made in Archæological researches during past years, and indicated the directions in which research could most usefully be made in future. In a second communication he drew attention to the importance of Ancient Tamil Literature, and informed the meeting that Dr. Pope had prepared annotated translations of the "Pura Nannuru" or "Four hundred War-Poems" and of the "Pura Porul Venba," which is a summary of the former, about two hundred years more modern. Want of funds had hitherto prevented the University of Oxford from publishing this important work. The section resolved that it was most desirable that Dr. Pope's interesting work should be published at an early date.

M. Geiger read an interesting account of the Veddas of Ceylon and their language. A discussion followed, in which Messrs. Wickremasingha, Pischel, Ludwig, Rhys Davids, and Lord Reay took part.

Count Pullé described an ancient map of India, and urged the importance of the proposal made by M. Lévi at the Geneva Congress for the preparation of a Chartography of India. Messrs. Lévi, Bushler, and Count de Gubernatis addressed the section on the subject. The following resolution was then agreed to:—

"Que le Congrès des Orientalistes de 1897 adresse aux Sociétés de Géographie des différents pays, et à l'India Office la demande d'entreprendre le classement chronologique et la publication des cartes, qui, à différentes époques, ont été tracées sur les différents pays d'Orient."

Afternoon.

M. Grosset laid on the table a copy of the first volume of his critical edition of the *Bhāratīya-nāṭya-cāstra* and gave a full account of the whole of this important work.

Prof. Hardy read a paper on the Legend of Kujjutarā and

Sāmavati in Buddhaghōṣa's *Maṅgala-sūtra*. I was unfortunately not present when the paper was read. The *Times* report of the Congress says that he discussed various Indian parallels to the story which forms the principal incident in one of Schiller's legends. Professors Ludwig, Kuhn, and Leumann gave yet other instances of the clever way in which the legends make the heroine save the life of her lover who is himself carrying the letter which seems so innocent while it is really his death-warrant.

Wednesday, 8th September, Morning.

After some remarks of Dr. Buehler on MSS. of the Jaiminiya *Grhya-sūtra*, and *Ṇrauta-sūtra*, which had been lately discovered by Dr. Hultzsch, and which were now deposited at Vienna, Dr. Waddell exhibited his fine collection of photographs of the newly excavated Græco-Buddhist Sculptures from the Swāt valley (*Udyāna*), and read a paper on the subject. After some discussion, it was resolved to draw up a resolution urging upon the Government of India the importance of carrying on its researches into the antiquities of India. This resolution was drafted by a small sub-committee, and was passed at the next day's meeting. It will be recorded in due course.

M. Cimmino read a paper on the Indian Theatre in Europe. He was followed by Dr. Winternitz who described the MSS. of the *Mahābhārata* in the Whish collection of the R.A.S. Some of the Southern MSS. showed remarkable variations from the hitherto accepted text. In the discussion which followed it was resolved that a critical edition of the great Epic should be undertaken in Europe, and that arrangements should be made for that purpose. Dr. Winternitz also laid on the table his edition of the "*Mantrapāṭha* or the prayer-book of the *Āpastambins*,—Pt. I."

Afternoon.

Count de Gubernatis made a short communication regarding "*The God Brahman and the Goddess Sāvitrī*." He was followed by M. Formichi on "*The God Bṛhaspati in the Ṛg-Vēda*," who in his turn was succeeded by Professor Kirste on *Inversion in the Direction of Writing*.

M. Foucher, who was at the time travelling in India, had sent to the Congress a paper entitled "*The Itinerary of Hiuen-Tsiang in Gandhāra*." The paper being a long one had been entrusted to M. Finot for the preparation of an abstract. This

had now been done, and the abstract was laid before the meeting. In the discussion which followed, such competent authorities as Dr. Stein and Dr. Buehler took a part.

A paper by Mr. Baynes on "La Conception de la Voie ou du Chemin dans le Mysticisme oriental," was next laid upon the table, and the day's sitting concluded with a long and interesting paper by Mr. Macauliffe on "The Religion and Sacred Books of the Sikhs."

Thursday, September, 9th, Morning.

The Sitting opened with an important notice by M. Senart of an ancient birch-bark MS. containing a portion of the Dhammapada written in the Kharoṣṭhi character. It was discovered in Central Asia by Dutreuil de Rhins, and he proposed that it should be named after that intrepid explorer who had since succumbed a victim to his devotion to science. The MS. consisted merely of fragments, but there was sufficient to show that it was a recension of the Dhammapada differing somewhat from the version at present current. The language was a Pāli, but was more nearly allied to the Pāli of the Aṣōka Inscriptions than to that of the classical books, and exactly agreed with no known variety of Pāli.

M. Senart was succeeded by Professor S. von Oldenburg, who described fragments of the same MS. which had arrived simultaneously at St. Petersburg. There was no doubt that the Paris and the St. Petersburg fragments both belonged to the same book. The character and language are the same, and both are fragments of the Dhammapada. The greatest interest was shown in the subject by the scholars present, and photographic facsimiles of this, the most ancient Indian MS. known to exist, were exhibited and distributed.

Professor Deussen next laid upon the table a copy of his latest work, "Sechzig Upanishads des Veda," translated, with Introduction and Notes. He drew the attention of the members present to the importance of the ideas contained in these old philosophical treatises, and added some remarks as to the results at which he had arrived in studying the chronological order of the texts of the different *upaniṣads*.

The session concluded with a paper by Mr. G. Oppert "On the Bharatas."

He concluded that the Bharatas mentioned in the R̥g-Vāda were not the same people as the Tritsus, but were rather a tribe of warriors of non-Aryan origin.

Afternoon.

The sub-committee appointed to draft the resolutions regarding exploration in India submitted its recommendations. The resolutions were adopted unanimously. As they are long, I cannot do better than quote the excellent abstract given in the "Athenæum."

1. Thanks to the Government of India and to Sir C. Elliott, Lieutenant-Governor of Bengal, "present at the Congress," for measures already taken for preservation of art treasures in the Swāt Valley and neighbourhood, with an urgent request for further precautions against irresponsible private collectors.
2. Recognition of the eminent services to archæology of Major Deane in this region.
3. The establishment of an international society, with head quarters in London, for the furtherance of Archæological explorations, to be called the "India Exploration Fund," with a provisional committee consisting of Lord Reay, Sir A. Lyall, M. Senart (France), Hofrath Buehler (Austria), Professor Pischel (Germany), Professor von Oldenburg (Russia), and Count Pullé (Italy).
- 4 & 5. Thanks to the Government of India and to that of Nepal for help in the recent discoveries in the Tarai of the traditional birthplace of Buddha.
6. Thanks to the Government of Bengal, especially to Sir C. Elliott, Lieutenant-Governor, for the recently established "Asoka Gallery" in the Indian Museum, in which casts of the oldest inscriptions are collected, and copies made available for other institutions.

The meeting broke up after passing a vote of regret at the absence of Professors Weber, Ascoli, Cowell, and Fausbøll.

Friday, 10th September, Morning.

Professor Bendall laid on the table a copy of his edition of the *Çikṣāsamuccaya*. This forms the first volume of a new series of works dealing with Buddhism, entitled the "Bibliotheca Buddhica," and published at the expense of the Imperial Academy of Sciences at St. Petersburg. The Section begged Professor S. von Oldenburg to convey to the Academy its thanks for the light which it is throwing on Buddhist Literature by the publication of this important Series.

M. Aymonier read a paper on the King Yaçōvarman of Cambodia. In the discussion which followed, Professor Pischel, Dr. Buehler, and M. Senart drew attention to the interest which

attached to the inscriptions which had been discovered at Cambodia, and to the fresh light which they throw upon the character of the Ancient Hindus. They did not here appear as Dreamers and Preachers, but as a Nation of Conquerors. While it was true that the first inspiration of the Indian Propaganda in foreign countries was due to Buddhism, it was necessary to note that the most ancient of the Inscriptions of Cambodia were Brahmanical.

The President laid on the table a copy of Sir W. Hunter's life of Bryan Hodgson, regarding which Professor Bendall gave some interesting particulars. The President also announced that M. Cordier intended to publish a new edition of Col. Yule's translation of the Travels of Marco Polo.

Dr. Stein laid on the table a copy of the first volume of his translation of the Rājataranḡiṇī, and explained the valuable maps which accompanied it. These maps will also appear in the Journal of this Society, and it is not necessary for me to dwell here on their excellence and importance. At the afternoon meeting the following resolution was carried unanimously regarding this work:—

“The Section expresses its thanks to the Panjab University and to the Government of Kashmir for the valuable aid which, on the recommendation of the Oriental Congress held at Geneva, they have given to the labours of Dr. Stein, in enabling him to complete his translation of the Rājataranḡiṇī and to carry out his topographical enquiries.

“At the same time, it expresses the hope that opportunities will be given to him to complete the work by adding an Historical Introduction.”

Professor Leumann read a paper on the meaning of the two Jain terms “avassiyā” and “nisiciyā.” He proposed new derivations for these two words, and drew attention to the fact that the ceremonies which they indicate have close analogies in the Roman Catholic Service. It was resolved that “the Section considers that it is of urgent importance to publish a critical edition of the sacred books of the Jains.”

Afternoon.

Mr. Sewell read a note on places in the Madras Presidency where there were Archæological remains which required investigation. Resolved that the attention of the Madras Government should be drawn to the desirability of excavating these remains.

I then had the honour of myself reading a short report on the progress of the Linguistic Survey of India, which had been first suggested by the Oriental Congress held at Vienna in 1886. A discussion followed in which Lord Reay, Prof. Pischel, Dr. Burgess, Prof. Kuhn, and Dr. Buehler joined. The following resolution was proposed by Prof. Kuhn, seconded by Dr. Buehler and carried unanimously :—

“The Indian Section of the 11th International Congress of Orientalists expresses its grateful thanks to the Government of India for having adopted the Resolution passed at the Congress held at Vienna in 1886, recommending the undertaking of a Systematic Survey of the Languages of India. It again desires to place on record the services to Linguistic Science which will be rendered by the Scheme, when it has been brought to completion.”

Baron Textor de Ravisi read a paper on “A mural Inscription in the Temple of Udaipur in Malwa.” It was resolved that, “Considering the historical importance of this inscription, and that there are two contradictory translations of it, *viz.*, that of Kamala-kanta (for the Bengal Asiatic Society), and that of Father R. P. Burtney (of the Society of Jesus), the Asiatic Society of Bengal should be requested to take steps to obtain an accurate copy of this inscription, for comparison with that published by Prinsep and published in his Essays.”

Dr. Lueders offered some remarks on King Nami, and endeavoured to prove that the prose of the Jātakas, which is certainly posterior to that of the Gāthās, was composed in Ceylon. M. Feer then read a paper on the Jātakas in the Works of Hiuen Tsiang. He was followed by Mr. Wickremasingha on the development of the Singalese Alphabet. A resolution was then passed thanking the Government of Ceylon for the publication of its Archæological Reports and of the Mahāvamṇa. The Section expressed the hope that the work so happily commenced would not be abandoned.

Mr. Dharmapala read a paper “On Thanā.” He was followed by Dr. Oertel on the Jaiminiya-brāhmaṇa. The sitting concluded with a paper by M. Lavalée-Poussin on “Une Pratique des Tantras.” He described the various Buddhist Tantric Schools (anuttarayōgatantras).

The Section before breaking up for the day passed the resolution regarding Dr. Stein’s translation of the Rājataranṅiṇī already referred to.

Saturday, 11th September.

The last meeting of the Section took place on Saturday morning. Professor Rhys Davids commenced by discussing the alleged persecutions of Indian Buddhists by the Brāhmins, and came to the conclusion that they were not proved. He incidentally discussed the meaning of the "anāgata-bhayāni" of the Bhabra Edict of Asoka.

M. Sylvain Lévi laid on the table papers by Mahāmahōpadhyāya Mahēçacandra Nyāyaratna, Mr. P. C. Mukherjee, and Pandit Haraprasād Çāstri. They were accepted with a vote of thanks "a ces collaborateurs lointains."

M. Senart then laid on the table a paper by Dr. Hoernle, C.I.E., on ancient MSS. lately discovered in Central Asia. He laid stress on the importance of the MSS., and on the interesting character of the paper.*

There followed a vote of thanks to the University of Lyons for publishing the Bhāratīya-nāṭya-çāstra in its "Annales."

The Section then closed its sittings with a vote of thanks to the President.

5. For the sake of completeness, I take the liberty of extracting the following notice of the principal papers read in the other Sections, of which I was not a member, from the excellent report given in the *Athenæum* :—

"In Section Ib. (Iran) far less work was to be done. A paper of Mr. A. W. Jackson may be mentioned, following out Darmesteter's idea of the connexion between the Indian epics and the early Persian legends.

In Section IIa. (China, &c.), may be noticed M. Dévéria's paper on the Manichæans in China. M. Boell also made some notes on the Lolo script.

In Section IIb. (Indo-China) M. Aymonier's paper on King Yaçōvarman and M. Feer's notes on illustrations of the Jātakas in Siam deserve mention.

In the far larger Section III. (*langues musulmanes*), presided over by Prof. de Goeje, the proceedings commenced by a paper proposing a new derivation of the word *zendik* from the Aramaic *zadiq*. The prominent feature of the section's sittings was, however, the announcement by Prof. Goldziher of a detailed project for the revival of the great encyclopædia of Islam originally conceived by the late Professor Robertson Smith. The President communicated notes on two MSS. of

* This paper is published in the *Society's Journal*, Part I, for 1897, No. 4.

the important work of the Arab historian Ibn-al-Mujawir. The communications of MM. Karabacek and Houdas, confirming the Indian origin of the Arabic numeral figures, were noteworthy. Mention was also made of recent works undertaken for the study of the mosques and of the basilicas existing in Tunisia.

In Section IVa. (Semitic), where Prof. Guidi presided, Dr. Ginsburg presented a fragment of a Hebrew MS. of Ecclesiasticus discovered by Mrs. Lewis and her sister. Later on M. Halévy called attention to the great importance of the discovery for the literary history of the Bible. A resolution was passed in furtherance of a critical edition of the Talmud. On the following day another resolution was passed in favour of a meeting in 1899 of Semitic scholars in Palestine. The communications of M. Schwab on the Meghillat Tavit and Dr. Haupt on the Hebrew *pluralis majestatis* also deserve mention.

In the small Section IVb. (Assyriology) the president was Dr. Tiele, with Messrs. Pinches, Hommel, and Haupt as vice-presidents. M. Scheil gave an account of his recent discoveries in the East, and Mr. Pinches spoke of his proposed series of texts from private collections. The thanks of the section were voted to Hamdi Bey, the Turkish director of excavations, for his services to archæology.

In Section V. (Egypt and African Languages) M. Naville presided. Here the great event was the description (already foreshadowed at the general sitting on Monday) by Dr. Erman of his proposed Thesaurus, to be published by the German Government and directed by a committee of the academies of Berlin, Leipzig, Göttingen, and Munich. It is to deal with words from hieroglyphic and hieratic texts, and its full publication will take some sixteen years. M. Sethe's paper on the alleged occurrence of the names of Ousaphais and Mibis on certain early vases excited considerable interest.

The sections of Grèce-Orient (VI.) and Ethnography (VII.) were presided over by M. Bikélas and Dr. Vambéry respectively."

6. In connexion with Linguistics, I wish to draw prominent attention to the Laboratory of Experimental Phonetics in the Collège de France. It is open to students of all nationalities. There is a machine there which should certainly be vigorously employed in India. It is the invention of the Abbé Rousselot, and its object is the mechanical registration of all sounds, showing graphically the component parts of each. It may most easily be described as based on the principal of the Phonograph or of the Graphophone which have frequently been exhibited in Calcutta. We know that in these machines, a stylus set in motion by a diaphragm makes certain marks on a revolving cylinder. This is exactly what is done in the Abbé Rousselot's machine, but the

marks are made on smoked paper, and the vibrations of the stylus are considerably magnified before impression. The actual forms of the marks are thus rendered visible through an ordinary magnifying glass. In this way it is seen that each vowel makes its own peculiar mark. There are separate stylus for the lips, the throat, the nose, and so on, each of which is only thrown into action when the organ with which it is connected is used. A sound can thus be most accurately analysed out, both as regards consonantal and vocalic elements. There are other appliances subsidiary to the main machine, which I have not room to mention here. For instance, there is an artificial palate, which records the exact place of the palate which is touched by the tongue in uttering a palatal or cerebral sound. I strongly recommend that the Society should obtain one of these machines if possible, and carry on investigations into the sounds employed in the various Indian Languages.

7. In this report, I have of necessity confined myself to the scientific side of the Congress, but it would ill become me if I did not refer to the gracious hospitality shown to us all by our Parisian hosts. Nothing could exceed the kindness shown to us, and, to me, personally, this was enhanced by frequent opportunities of renewing old acquaintances and of meeting old and valued friends.

I have the honour to be,

SIR,

Your most obedient Servant,

GEORGE A. GRIERSON.

CONGRÈS INTERNATIONAL DES ORIENTALISTES

XI^{ME} SESSION—PARIS—1897.

Discours D'Ouverture

de

M. LE PRÉSIDENT DE LA XI^E SESSION.

Du Congrès International.

des Orientalistes.

Mes premières paroles, dans cette séance d'ouverture du onzième Congrès international des Orientalistes, seront des paroles de remerciement pour les savants qui, de toutes les parties du monde, se sont rendus à l'appel qui leur a été adressé.

Je dois aussi, au nom du Comité d'organisation, faire agréer les expressions de notre gratitude aux chefs d'États et aux princes qui ont bien voulu, par leur adhésion, donner un témoignage de l'intérêt qu'ils portent aux progrès de nos études.

M. le Président de la République s'est déclaré le Protecteur de notre Congrès. S. M. le roi de Suède et Norvège, qui nous a, il y a quelques années, accordé une si large et si gracieuse hospitalité, S. M. le châh de Perse, S. A. R. M^r le Prince de Galles, S. A. I. et R. l'archiduc Renier, dont le bienveillant accueil demeure gravé dans tous les souvenirs, S. A. I. le grand-duc Constantin, qui porte à toutes les branches des connaissances humaines un si puissant intérêt, S. A. I. le Prince Kan-In et S. A. le Khédivé d'Égypte ont daigné accepter le titre de Présidents d'honneur. Il est de notre devoir de leur adresser en ce jour l'hommage de notre gratitude. Les ministres et les représentants d'un grand nombre d'États figurent parmi les membres d'honneur, et les Universités et les corps savants du monde entier ont désigné des délégués pour les représenter au Congrès : nous ne saurions laisser échapper l'occasion qui s'offre aujourd'hui à nous de leur donner un témoignage public de nos vives sympathies.

L'idée de réunir, à des époques fixées à l'avance, les savants qui font des langues, des croyances, de l'histoire et de la littérature des peuples de l'Orient, l'objet de leurs études, a été émise pour la première fois à Paris, il y a près de vingt-cinq ans. Je ne vous rappellerai pas le nom du professeur qui en a été l'instigateur ; il est connu de vous tous et il est le témoin du succès qui a couronné son initiative.

Le premier Congrès de Paris fut suivi, deux ans après, par celui de Londres, et les matières qui y furent traitées parurent présenter assez d'intérêt pour qu'à la demande de feu M. Grigoriew, le Gouvernement russe proposât aux différents États de l'Europe d'accorder aux Congrès internationaux d'Orientalistes un appui efficace et de s'y faire représenter. Cette proposition reçut un assentiment général et presque toutes les capitales de l'Europe ont successivement accordé aux Orientalistes une cordiale et généreuse hospitalité.

Aujourd'hui, le Congrès se réunit dans son lieu d'origine et c'est avec une satisfaction sans mélange que nous constatons les heureux résultats obtenus pendant une période de près de vingt-cinq ans.

Des relations personnelles se sont établies entre les érudits venus de différents pays : elles se sont converties, pour la plupart, en solides amitiés. Des documents scientifiques d'une grande valeur, des découvertes d'un haut intérêt ont été communiqués et mis en lumière, enfin des idées fécondes ont été émises au sujet de publications qu'il était utile d'entreprendre.

Nous pouvons aujourd'hui constater, avec un vif plaisir, les progrès accomplis dans les études orientales pendant ce quart de siècle et apprécier l'importance des travaux dont elles ont été l'objet. Les langues sémitiques ont été, comme par le passé, le sujet de sérieux

ouvrages. La publication du texte arabe d'un historien de premier ordre, celle des ouvrages géographiques que nous ont laissés des voyageurs des premiers siècles de l'islamisme, nous permettent d'avoir maintenant une connaissance exacte de l'empire des khalifes Abbassides et des événements qui s'y sont déroulés jusqu'aux premières années du 1^{re} siècle de l'hégire. D'autres ouvrages, d'une étendue moins considérable, et relatifs à l'histoire, à la poésie et à la grammaire arabes, ont aussi vu le jour tout récemment et de nombreux mémoires de numismatique et d'épigraphie ont permis de fixer quelques dates d'une manière certaine et de rectifier des inexactitudes. Les langues, la géographie, l'histoire et l'archéologie de l'Afrique du Nord ont donné naissance de leur côté à une série de publications qui ont attiré, sur cette région, l'attention des savants.

L'étude du persan n'a été négligée, ni sous le rapport de l'histoire ni sous celui de la poésie, et différents dialectes persans ont été pour la première fois le sujet de travaux sérieux : je dois, au sujet de la langue turque, signaler l'importance des découvertes épigraphiques faites dans le cours de ces dernières années, dans la région des sources de l'Orkhon et dans la Mongolie; elles ont fourni la matière de dissertations très intéressantes et elles ont jeté de vives lumières sur le dialecte des Turcs Toukioné, dont les origines et l'histoire n'ont été retracées que d'une manière très confuse par les écrivains chinois.

Les études indiennes brillent d'un nouvel éclat : la langue classique, les différents dialectes, l'organisation sociale des peuples divers fixés sur le sol de l'Inde, l'archéologie, l'épigraphie et l'étude des doctrines religieuses ont provoqué des travaux dont on ne saurait trop louer le mérite. Enfin, la langue et l'histoire des pays malais ont été l'objet de recherches approfondies.

J'ai cru devoir mentionner d'abord les langues sur l'étude desquelles se sont concentrés les efforts de nos prédécesseurs; mais, vous pourrez reconnaître, Messieurs, par le nombre et la variété des communications qui vous seront faites, combien sont considérables les progrès réalisés dans l'égyptologie depuis Champollion, de Rougé et Mariette. L'importance des faits révélés par l'assyriologie au point de vue de la chronologie, de l'histoire et des conditions sociales de l'Assyrie et de la Chaldée, fixeront l'attention du Congrès, ainsi que les monuments de l'Asie Mineure étudiés depuis peu.

Les travaux relatifs aux contrées de l'Extrême-Orient n'ont point été moins importants ni leurs résultats moins fructueux. Un jeune érudit a entrepris la traduction d'un historien qui jouit en Chine de la plus grande réputation. Nous faisons les vœux les plus ardents pour qu'il puisse reprendre bientôt un travail qu'il a interrompu à regret.

Des inscriptions chinoises ont éclairci certains points curieux d'archéologie, et un recueil épigraphique, publié grâce à la munificence éclairée d'un des membres d'honneur du Congrès, offre un nouveau champ d'investigations à la perspicacité des sinologues.

La littérature de la Corée vient aussi de nous être révélée grâce à la publication d'un ouvrage considérable, fruit de longues et patientes recherches. Il me faut enfin, en terminant ce très rapide exposé, signaler les excellents travaux dus aux recherches des agents européens en Indo-Chine.

Il me reste à rendre hommage à l'esprit qui a caractérisé les dix premiers Congrès des Orientalistes. On s'est fait une loi, toujours observée, de professer la tolérance la plus large et le respect le plus absolu pour les opinions et les idées de chacun des membres. Les croyances sont diverses, mais toutes ont droit à nos justes égards. Nous ne nous écarterons pas des sages principes de concorde et de paix, et tous nos efforts tendront à ce que la courte hospitalité que nous vous offrons, vous soit douce et laisse un souvenir durable dans vos esprits.

C'est en formant ce vœu que je déclare ouverte la onzième session du Congrès international des Orientalistes.

CH. SCHEFER,

Membre de l'Institut, Président.

The PRESIDENT exhibited a silver coin forwarded by the Revenue Secretary to the Government of Burma and read the following note on it.

This coin is one of several which were found a few months ago in the Shwebo District. Two others, of two different sizes, have been presented by the Burmese Government to the Indian Museum. They belong to the class of so-called symbolical coins. These coins have been described, and figured by Captain Latter in the *Journal Asiatic Society, Bengal*, Vol. XV, page 238, and more largely by Sir Arthur Phayre in the *International Numismata Orientalia*. The peculiar interest of these coins is that no symbolic coin of quite the same type has previously been discovered or (at least) noticed. They represent a new type, and accordingly are of considerable Numismatic value.

THE PHILOLOGICAL SECRETARY read the following communications concerning the date of an Inscription of Narasimha Dēva II., published by Babu N. N. Vasu in *Journal*, Vol. LXV, 1896, Part I, page 229 ff.):

Professor F. Kielhorn, Ph.D., LL.D., C.I.E., Göttingen writes:—

The Kēndupāṭnā plates of the Gaṅga King Narasimha II., for an edition of which we are indebted to Mr. Nāgendra-Nātha Vasu, are

dated in the Çaka year 1217, on Monday, the 6th *tithi* of the bright half of the month of Simha. According to the editor of the inscription (*ibid.* p. 230), this date corresponds to Monday, the 19th September A.D. 1295. May I venture to state that this is incorrect? In A.D. 1295 the month of Simha lasted from the 30th July to the 29th August, and the *tithi* which ended on the 19th September, 1295, was the 10th, not the 6th, of the bright half.

In reality, the original date would be wrong for Çaka 1217, both current and expired, and there can be no doubt that the year 1217 has been wrongly quoted in the plates instead of 1218 expired, and that the intended date is Monday, the 6th August A.D. 1296. We find the same mistake in the Puri plates of Narasimha IV. (*Journal*, Vol. LXIV, Part I, p. 151), where the Çaka year 1316 has been wrongly quoted instead of 1317, and I have given numerous similar dates in my paper on the Çaka era in the *Indian Antiquary*.

Babu M. M. Chakravarti writes :—

The date of this inscription does not appear to me correctly calculated. It is put down as 19th September, 1295 A.D. (p. 230), but on what grounds is not clear. On the other hand Jacobi's tables give a different date. The date of our inscription is *Simha çukla 6, Monday*. In 1295 A.D. this *tithi* fell on 17th August, which was Wednesday and not Monday, consequently 1295 A.D. could not have been the date. But in 1296 A.D. *Simha çukla 6* fell exactly on Monday, the 6th August. Hence if 1217 be taken as an expired Çaka year, the correct date is

6th August, 1296 A.D.

Again the *aṅka* has been translated as *year*, but in the note to my article on the Uṛiyā inscriptions of 14th and 15th centuries, I have pointed out what an *aṅka* really means in Orissa. It is a curious kind of regnal year in which certain figures such as 1, 6, 16, 20, &c., are omitted.

The prose portion of the grant contains several words which are distinctly Uṛiyā, and these words differ little from the modern Uṛiyā words, e.g., *nabar* (palace), *naḷa* (reed which was the standard of measurement), *bātikā* (mod. *bāti*=20 acres nearly), *māṇa* (=an acre nearly), *guṇṭha* ($\frac{1}{2}$ th of a *māṇa*), *hiḍa* (ridge of fields), *gōhari* (mod. *gohori* or low waste land used as path), *daṇḍā* (high waste land used as path), *kōmati* (mod. *kumti*, a Telugu caste), and so forth. So far as these words go, the Uṛiyā language must have been fully developed by that time. Several of the Uṛiyā words have proved stumbling blocks to Nāgendra Babu in his translation.

It is curious to find so many of the names Telugu, for instance Kōmati, Amnai, Uadai, Talang-grām, Nādi, &c. This fact clearly indi-

cates that Telingana and Orissa were under the same rule, and that many of the officers happened to be Telugu. Presumably Orissa was considered as an appendage to Kalinga.

Of the Cāṭṣvara inscription noticed in p. 234, I secured a transcript and have made a decipherment. But as Nagendra Babu promises to edit it in this *Journal*, and as I have no leisure, I leave the task to him. He ascribes the inscription to the reign of Ananga Bhīma II., and probably rightly, but he will have to get over the difficulty presented by Stanza 8, lines 6-7, in which Ananga Bhīma is described as the **सुनु** of Cōḍagaṅga. **सुनु** usually means son. But Ananga Bhīma II. is not the son but great-grandson of Cōḍagaṅga. Possibly **सुनु** may be taken to mean a descendant. Another difficulty will be found in the dates. According to the inscriptions Ananga Bhīma II., ruled from 1219 to 1242 or 43 A.D. But the raid to Lakhnauti and the first battle with Tughril-i-Tughān **Khān** took place in 642 H. or 1244 A.D., consequently neither Ananga Bhīma II. nor any of his ministers could have made the invasion recorded by the Minhāj-i-sirāj, unless either of these dates be found wrong.

The present inscription does not clear the discrepancy I pointed out in my article regarding the years of reigns. Taking Kāmārṇava to begin his reign in 1064 Çaka or 1142 A.D. (stanza 37), the total of the years of reign (152) makes the accession of Narasiṃha Dēva II. at (1142+152 or) 1294 A.D. But this is absurd, as 1296 was his 21st Anka or 17th year of reign. I trust Nāgēndra Babu will be able in his next article to find out a solution of this apparent absurdity. The early Mussulman historians rarely mention the names of Hindu kings, and until the dates are established, no reliable connection can be laid down between Hindu chronicles and Mussulman histories.

The following papers were read:—

1. *The Nongong Copper-plate grant of Balā Varman of Prāḡgyōtiṣa in Āsām. With 3 Plates.*—By DR. A. F. R. HOERNLE, C.I.E.
2. *On certain Palm-leaf MSS. in the Library of H. E. the Mahārājā of Nepal.*—By PAṆḌIT HARAPRASĀD ÇASTRĪ.
3. *Numismatic Notes and Novelties, No. 2.*—By V. A. SMITH, I.C.S. The papers will be published in the *Journal*, Part I.
4. *The Jering fruit (Pithecolobium lobatum Benth.)*—By H. N. RIDLEY, ESQ., Director of the Botanic Gardens, Singapore. Communicated by SURG.-MAJ. D. PRAIN.

In the last number of the *Materials for a Flora of the Malayan Peninsula* (*Journal*, Part II; Vol. lxvi, p. 267) several questions are proposed

by Dr. Prain concerning this fruit, and what part of it is eaten by the Natives. I have some doubts as to the tree being wild here; it is very common in and round villages, and the squirrels often carry the seed in their mouths to some distance and dropping it only partly nibbled disperse the plant everywhere, but I have never seen it far in the jungles. There is no pulp or arillus on the seed, nor is the pod eaten at all. The ripe seeds are boiled with wood ashes two or three times on successive days, before being eaten. Many Malays are very fond of it, although it exhales a foetid odour, which is communicated to the eater, and especially to his urine. The smell is so nauseous that in camp we always forbade the Malays to bring this fruit or the pods of *Parkia speciosa* Hassk., which produce the same effect, into camp. If not properly prepared the Jering produces diarrhoea and sickness, and if too much is eaten stricture, for which *Alchornea villosa*, Müll. is considered an antidote. It is always diuretic, and often causes the urine to have a milky colour. Many Malays are unable to eat it at all as it always makes them ill, and indeed it seems always to require some practice, as persons unaccustomed to it suffer. The Malays say that it tastes like chestnuts, and it is curious that they should be so fond of such a detestable food, if it is no more attractive than this. The more aristocratic Malays will not eat it, and I am told it is forbidden to Hadjis.

The pods of *Parkia speciosa* are more popular, and a more expensive dish. They are cut up and cooked with curry stuffs. Though they cause the eater to exhale a very similar nauseous odour, they are said not to be so diuretic, nor to produce sickness like the Jering, though in excess they cause diarrhoea. They are called "Petai." The tree is certainly wild here, and not very often cultivated, but wild trees are often enclosed or claimed by some Malay who makes an orchard round them.

Dr. Prain, who is unable to be present at this meeting communicates the following remarks on Mr. Ridley's extremely interesting note:—

The questions proposed by me were:—"Is it the succulent pod" (as Jack's account seems to imply), "a fleshy pulp" (as has usually been stated), "or the seed itself of *Jiring*" (as said by Koorders and Valetton) "that is eaten? And has *Jiring* any pulp at all? If so, is this pulp an arillus?"

Mr. Ridley's reply is clear. The seeds are eaten cooked, as Koorders and Valetton say, and "there is no pulp or arillus." The character of the seed of *Pithecolobium lobatum*, given by Bentham and copied by

Miguel, must be altered. I have already pointed out that, in Herbarium specimens, there is at no stage of the fruit any pulp visible, and Mr. Ridley now shows that Hasskarl's explanation of this absence of pulp from ripe pods is not only insufficient but inexact. The pulp does not disappear, it never was there.

We are thus left to face the question:—What is *Mimosa Kœringa*, the tree that Roxburgh describes as *having the seed enveloped in an edible fleshy aril*? Those best acquainted with Roxburgh's work are precisely those who are least likely to doubt that such a tree was known to Roxburgh, for if the description of the tree itself be brief, the statement regarding the seed is sufficiently precise. If that description be accurate, then certainly the tree which Roxburgh knew as *Kœringa* cannot well be the *Jiring*, which moreover Roxburgh appears to have known since, though he did not describe it, he named it *Mimosa Djiringa*. We must therefore appeal once more for help to Mr. Ridley and our other botanical colleagues in Malaya.

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———. IX-X. A Study of Slavery in New Jersey. By Henry Scofield Cooley. 8vo. Baltimore, 1896.

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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR DECEMBER, 1897.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 1st December, 1897, at 9 P.M.

DR. A. F. R. HOERNLE, C.I.E., President, in the chair.

The following members were present :—

Dr. A. Alcock, H. K. W. Arnold, Esq., Dr. T. Bloch, F. Finn, Esq., The Rev. H. B. Hyde, C. Little, Esq., L. de Nicéville, Esq., R. D. Oldham, Esq., A. T. Pringle, Esq., F. J. Rowe, Esq., Paṇḍit Haraprasād Čāstri, Paṇḍit Mahendra Nāth Vidyānidhi.

Visitor :—Professor S. Lévi of Paris.

The minutes of the last meeting were read and confirmed.

Seventy-one presentations, were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last meeting of the Society were balloted for and elected Ordinary Members :—

Captain Stuart H. Godfrey.
Mesrovb S. Seth, Esq.
W. A. Talbot, Esq.

The following gentlemen are candidates for election at the next meeting :—

Captain P. R. T. Gurdon, Deputy Commissioner, Gauhati, proposed by E. A. Gait, Esq., seconded by Dr. A. F. R. Hoernle.

W. K. Dods, Esq., Hongkong and Shanghai Banking Corporation, proposed by F. Finn, Esq., seconded by Dr. A. Alcock.

The SECRETARY reported the death of the following members :—

S. E. Peal, Esq.

Captain E. Y. Watson, F.Z.S.

The PRESIDENT laid on the table a letter from Mr. Patrick J. Donnelly, giving probable dates of sailing of the "Orotava" in connection with the observation of the forthcoming total Solar Eclipse.

The PRESIDENT announced that Mr. F. Finn had resumed charge of his duties as Natural History Secretary from Mr. L. de Nicéville.

Paṇḍit Haraprasād Čāstri exhibited some ancient Burmese Inscribed Pottery.

The Reverend Dr. K. S. Macdonald obtained these three bricks or rather inscribed pottery in Upper Burma. The large broken one was obtained at Tagoung on the river Irrawaddy half way between Mandalay and Bhamo where any number of the same kind may any day be found. The large unbroken brick was picked up by his son along with others at Pagan, the old Capital of Burma. He had a number of these at his house in Myingyan. The third smaller one was picked up by the Doctor himself from among these. There is no inscription on the smaller one. There are five figures of Buddha sitting in what is known as the *bhūmispārṣā-mudrā* the earth touching pose or witness attitude calling the earth to bear witness to his devotion. The putting together of five sacred objects of the same kind is known among the Jains as *Pancatirtha*. This is perhaps the first time that we find a *Pancatirtha* among the Buddhists. The others contain inscriptions which consist only of the well-known formula of Buddhist faith, 'ye dharmmā, &c.,' written in the character which was common in Eastern India during the reign of the Pāla kings. The peculiarity of the figure in the large unbroken brick is that Buddha is sitting with his legs hanging from his *Siṃhāsana* and resting on a foot-stool. Both the *Siṃhāsana* and the foot stool have the decoration of lotus leaves. This is rather an unusual position for Buddha. But we have in the Indian Museum in the Magadha Section of the Archaeological gallery no less than three statues of Buddha seated in the European fashion. Dr. Waddell in page 336 of his work entitled, 'Buddhism in Tibet,' says that this is the pose of Maitrēya the coming Buddha. The position of the hands indicates as if he was explaining something to his hearers with emphasis. The palm of his left hand is turned towards himself, while that of his right hand is turned towards his hearers with two fingers of the one resting on the two fingers of the other. I at first thought this to be one of the *mudrās*. But the explaining attitude accounts for the position of the hands better.

But the nature of the characters indicates that these bricks are not of Burmese manufacture. The cut of the faces of Buddha is Indian and not Burmese. It appears that these were taken away by Burmese pilgrims from Magadha and treasured up as holy souvenirs of their distant pilgrimage. I beg to draw the attention of the Society to these not so much for their intrinsic worth as for the prospect they hold out of finding things interesting to Indian antiquarians in such distant places as Pagan and Tagoung.

The following papers were read:—

1. *Notes on New Inscriptions, discovered by Major Deane.*—By M. A. STEIN, PH.D.

The paper will be published in the *Journal*, Part I.

2. *A List of the Butterflies of Bali, Lombok, Sumbawa, and Sumba.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S., and H. J. ELWES, F.R.S., F.L.S., F.Z.S., F.E.S.

The paper will be published in the *Journal*, Part II.

3. *On the Kāgmiri Noun.*—By G. A. GRIERSON, C.I.E., PH.D., I.C.S.

The paper will be published in the *Journal*, Part I.

4. *On the Manifestation of Social Instinct in the Common Babbler (Crateropus canorus).*—By B. B. OSMASTON, Indian Forest Service. Communicated by the Natural History Secretary.

The paper will be published in the *Journal*, Part II.

5. *Notes on the Language and Literature of Orissa.*—By MAN MOHAN CAKRAVATTI, Deputy Magistrate, Jajpur.

The paper will be published in the *Journal*, Part I.

6. *Notes on various species of Grebes, with especial reference to the powers of walking and digestion possessed by these birds, with Exhibition of Photograph and Specimen.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

The paper will be published in the *Journal*, Part II.



LIBRARY.

The following additions have been made to the Library since the meeting held in November last:—

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 XII, Bind, 3 Hefte.
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- Paris. Journal Asiatique,—IX^e Série, Tome X, No. 1.
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- . ———. Verhandlungen, Nrn. 9 und 10, 1897.
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BERAGHEL, DR. OTTO. Schriftsprache und Mundart. 4to. Giessen, 1896.

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FUCHS, FRIEDRICH. Über Achylia Gastrica. 8vo. Giessen, 1897.

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LIST OF MEMBERS
OF THE
ASIATIC SOCIETY OF BENGAL.
ON THE 31ST DECEMBER, 1896.

**LIST OF OFFICERS AND MEMBERS OF COUNCIL
OF THE ASIATIC SOCIETY OF BENGAL
FOR THE YEAR 1896.**

President :

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Dr. G. Watt, C.I.E.

The Hon. Mr. Justice Amir Āli, C.I.E.

Dr. P. K. Ray.

LIST OF ORDINARY MEMBERS.

R. = Resident. N. R. = Non-Resident. A. = Absent. N. S. = Non-Subscribing.
 L. M. = Life Member. F. M. = Foreign Member.

N. B.—Members who have changed their residence since the list was drawn up are requested to give intimation of such a change to the *Secretaries*, in order that the necessary alteration may be made in the subsequent edition. Errors or omissions in the following list should also be communicated to the *Secretaries*.

Members who are about to leave India and do not intend to return are particularly requested to notify to the *Secretaries* whether it is their desire to continue Members of the Society; otherwise, in accordance with Rule 40 of the Bye-Laws, their names will be removed from the list at the expiration of three years from the time of their leaving India.

Date of Election.		
1896 Mar. 4.	R.	Abdul Karim, Maulvie, B. A. <i>Calcutta</i> .
1894 Sept. 27.	N.R.	Abdul Wali, Maulvie. <i>Saalkapa, Jessore District</i> .
1895 Mar. 6.	R.	Abdur Rahman, A. F. M., Judge, Court of Small Causes. <i>Calcutta</i> .
1895 May 1.	N.R.	Abdus Salam, Maulvie, M. A. <i>Brahmanbaria, Tipperah</i> .
1888 Feb. 1.	F.M.	Adamson, Major Charles Henry Ellison, M. S. C. <i>Europe</i> .
1895 Aug. 29.	A.	Agnew, Henry De Courcy. <i>Europe</i> .
1860 July 4.	N.R.	Ahmad Khān, The Hon. Maulvie Sir Sayid, Bahadur, K. C. S. I. <i>Aligarh</i> .
1888 April 4.	R.	Ahmad, Shams-ul-ulama Maulvie, Arabic Professor, Presidency College. <i>Calcutta</i> .
1888 Feb. 1.	A.	Alcock, Surgeon-Captain Alfred William, M. B. <i>Europe</i> .
1884 Mar. 5.	L.M.	Āli, Sir Āli Qadr Syud Hassan, Nawāb Bahadur, K. C. I. E. <i>Murshedabad</i> .
1885 Mar. 4.	N.R.	Āli Bilgrāmi, Sayid, B. A., A. R. S. M., F. G. S. <i>Hyderabad</i> .
1874 June 3.	R.	Amir Āli, The Hon., C. I. E., M. A. Barrister-at-Law, Judge, High Court. <i>Calcutta</i> .
1865 Jan. 11.	F.M.	Anderson, John, M. D., F. R. S., F. L. S. <i>Europe</i> .
1884 Sept. 3.	R.	Anderson, J. A. <i>Calcutta</i> .
1893 Aug. 31.	R.	Anderson, Dr. A. R. S. <i>Calcutta</i> .
1892 Jan. 6.	R.	Arnold, Henry Kerchever Walter. <i>Calcutta</i> .
1890 July 2.	A.	Arnold, Thomas Walker, B. A., M. R. A. S. <i>Europe</i> .

Date of Election.		
1872 April 3.	N.R.	Ashān-ullah, Nawāb, Khan Bahadur. <i>Dacca.</i>
1877 July 4.	R.	Ashgar Āli Diler Jang, Nawāb Sayid, Khan Bahadur, c. s. i. <i>Calcutta.</i>
1889 Aug. 29.	N.R.	Aziz-ud-din Ahmad, Deputy Magistrate. <i>Jaunpur.</i>
1870 Feb. 2.	L.M.	Baden-Powell, Baden Henry, c. s., c. i. e. <i>Europe.</i>
1891 Mar. 4.	N.R.	Baillie, D. C., c. s. <i>Naini Tal.</i>
1892 Aug. 3.	A.	Baker, Lieutenant Donald. <i>Europe.</i>
1891 April 1.	F.M.	Baker, E. C. S. <i>Europe.</i>
1889 May 1.	R.	Banerji, The Hon. Gurudās, M. A., D. L., Judge, High Court. <i>Calcutta.</i>
1896 Mar. 4.	N.R.	Banerji, Satish Chandra, M. A. <i>Allahabad.</i>
1869 Dec. 1.	L.M.	Barker, R. A., M. D. <i>Europe.</i>
1885 Nov. 4.	R.	Barman, Dāmudar Dās. <i>Calcutta.</i>
1877 Jan. 17.	N.R.	Barman, Kishor Kumār Rādhā Dev, Juvrāj of Hill Tipperah. <i>Tipperah.</i>
1894 Sept. 27.	R.	Basu, Nagendra Natha. <i>Calcutta.</i>
1893 April 5.	N.R.	Batabyal, Umes Chunder, c. s. <i>Bogra.</i>
1864 Sept. 7.	A.	Beames, John, c. s. <i>Europe.</i>
1895 July 3.	L.M.	Beatson-Bell, N. D., c. s. <i>Backergunge.</i>
1878 Sept. 25.	A.	Beighton, T. D., c. s. <i>Europe.</i>
1876 Nov. 15.	F.M.	Beveridge, Henry, c. s. <i>Europe.</i>
1896 May 6.	R.	Bhaduri, Aghore Chandra. <i>Calcutta.</i>
1878 Oct. 4.	R.	Bhakta, Krishna Gopāl. <i>Calcutta.</i>
1892 April 6.	N.R.	Bhattacharjee, Janaki Nath. <i>Berhampur.</i>
1879 Mar. 5.	A.	Biddulph, Col. J., B. S. C. <i>Europe.</i>
1884 Feb. 6.	A.	Bigg-Wither, Major A. C., B. A., A. I. C. E. <i>Europe.</i>
1859 Aug. 3.	L.M.	Blanford, W. T., A. B. S. M., F. R. S., F. G. S., F. R. G. S., F. Z. S. <i>Europe.</i>
1893 Feb. 1.	N.R.	Bodding, The Rev. P. O. <i>Rampore Haut.</i>
1885 Mar. 4.	R.	Bolton, C. W., c. s. <i>Calcutta.</i>
1896 Mar. 4.	N.R.	Bompas, C. H. <i>Ohaibasa.</i>
1895 July 3.	N.R.	Bonham-Carter, N., c. s. <i>Mozufferpur.</i>
1890 July 2.	R.	Bonnerjee, Womes Chunder, Barrister-at-Law, Middle Temple. <i>Calcutta.</i>
1893 Mar. 1.	R.	Bose, Bhupendra Nath, Solicitor. <i>Calcutta.</i>
1895 Mar. 6.	A.	Bose, J. C., M. A., Bengal Education Service. <i>Europe.</i>
1880 Nov. 3.	N.R.	Bose, Pramatha Nāth, B. Sc., F. G. S., Geological Survey of India. <i>Asansol.</i>
1890 Dec. 3.	N.R.	Bose, Rai Nali Naksha, Bahadur, Chairman, Burdwan Municipality. <i>Burdwan.</i>
1895 April 3.	N.R.	Bourdillon, J. A., c. s. <i>Bankipur.</i>
1876 May 4.	A.	Bradshaw, Surgeon-Major-General A. F., M. D., C. B. <i>Europe.</i>
1860 Mar. 7.	L.M.	Brandis, Sir Dietrich, K. C. I. E., Ph. D., F. I. S., F. R. S. <i>Europe.</i>
1887 May 4.	R.	Burāl, Nobinchānd, Solicitor. <i>Calcutta.</i>
1896 Jan. 8.	N.R.	Burn, Richard, c. s. <i>Kasia, Gorakhpur.</i>

Date of Election		
1862 Feb. 5.	L.M.	Bysack, Gaurdās. <i>Calcutta.</i>
1896 Jan. 8.	R.	Caddy, Dr. Arnold. <i>Calcutta.</i>
1879 April 2.	R.	Calcutta, The Rt. Rev. the Lord Bishop of. <i>Calcutta.</i>
1895 July 3.	A.	Carey, H. D., c. s. <i>Europe.</i>
1895 July 3.	N.R.	Carlyle, R. W., c. s. <i>Comillah.</i>
1893 Feb. 1.	R.	Caspersz, A. A., Barrister-at-Law. <i>Calcutta.</i>
1890 June 4.	N.R.	Chakravarti, Man Mohan, M. A., B. L., Deputy Magistrate. <i>Jajpur, Cuttack.</i>
1894 Aug. 1.	N.R.	Chatterjee, M. N., Professor of Philosophy, Maharaja's College. <i>Patiala.</i>
1893 July 5.	N.R.	Chatterjee, Radhikāraman. <i>Rungpur.</i>
1892 Aug. 3.	N.R.	Chaube, Behary Lall. <i>Bankipur.</i>
1893 Sept. 28.	N.R.	Chaudhuri, Banawarilala, B. sc. Edin. <i>Sherpur, Mymensingh.</i>
1861 Mar. 1.	N.R.	Chaudhuri, Harachandra, Zemindar. <i>Sherpur, Mymensingh.</i>
1880 Nov. 3.	R.	Chaudhuri, Rāi Khirod Chandra. <i>Chinsurah.</i>
1885 Feb. 4.	N.R.	Chaudhuri, Raja Suryakānta, Bahadur. <i>Mymensingh.</i>
1890 Feb. 5.	A.	Chuckerbntty, A. Goodeve, c. s. <i>Europe.</i>
1880 Aug. 26.	F.M.	Clerk, Colonel Malcolm G. <i>Europe.</i>
1881 May 4.	N.R.	Cockburn, John, Asst. Sub-Deputy Opium Agent. <i>Allahabad.</i>
1889 Nov. 6.	R.	Colville, William Brown. <i>Calcutta.</i>
1890 Dec. 3.	R.	Connan, William, c. e. <i>Calcutta.</i>
1876 Mar. 1.	F.M.	Crawford, James, B. A., c. s. <i>Europe.</i>
1887 Aug. 25.	A.	Criper, William Risdon, F. C. S., F. I. C., A. R. S. M. <i>Europe.</i>
1877 June 6.	R.	Croft, Sir A. W., M. A., K. C. I. E. Director of Public Instruction, Bengal. <i>Calcutta.</i>
1874 Mar. 4.	A.	Crombie, Surgeon-Major Alexander, M. D. <i>Europe.</i>
1895 July 3.	N.R.	Cumming, J. G., c. s. <i>Comillah.</i>
1873 Aug. 6.	R.	Cunningham, Surgeon-Major David Douglas, F. R. S., Honorary Surgeon to the Viceroy. <i>Calcutta.</i>
1873 Dec. 3.	N.R.	Dames, Mansel Longworth, c. s., Asst. Commissioner. <i>Dera Ghazi Khan.</i>
1692 Mar. 2.	N.R.	Das. Gopal Ballabh, M. A. <i>Cuttack.</i>
1896 Mar. 4.	R.	Das-Gupta, J. N., B. A., Barrister-at-Law. <i>Chinsurah.</i>
1865 June 7.	N.R.	Dās, Raja Jaykrishna, Bahadur, c. s. I. <i>Moradabad.</i>
1879 April 7.	N.R.	Dās, Rām Saran, M. A., Secy., Oudh Commercial Bank, Limited. <i>Fyzabad, Oudh.</i>
1893 Nov. 1.	N.R.	Dē, B, c. s. <i>Balasure.</i>
1885 May 6.	N.R.	Dē, Raja Baikuntanāth, Bahadur. <i>Balasure.</i>

Date of Election.		
1895 Sept. 19.	N.R.	De, Kiran Chandra, c. s. <i>Ranaghat.</i>
1895 Dec. 4.	N.R.	Delmerick, Charles Swift. <i>Budaon.</i>
1893 Mar. 1.	F.M.	Deussen, Dr. Paul. <i>Europe.</i>
1896 Jan. 8.	N.R.	Dowhurst, R. Paget. <i>Orai, N.-W. P.</i>
1886 June 2.	R.	Doyle, Patrick, C. E., M. R. I. A., M. I. C. E. I., F. R. A. S., F. R. S. E., F. G. S., F. R. Met. S., L. S. (Exam.), M. Lond. Math. Soc., F. S. S., Fel. San. Inst., M. Aus. Inst. M. E. <i>Calcutta.</i>
1892 Sept. 22.	R.	Drury, Dr. F. J. <i>Calcutta.</i>
1889 Jan. 2.	N.R.	Dudgeon, Gerald Cecil, <i>Nunkab, W. Doours.</i>
1879 Feb. 5.	A.	Duthie, J. F. <i>Europe.</i>
1892 Jan. 6.	N.R.	Dutt, Gerindranath. <i>Hatwa.</i>
1877 Aug. 30.	R.	Dutt, Kedārnāth. <i>Calcutta.</i>
1892 Aug. 25.	R.	Dutt, Narsingh. <i>Howrah.</i>
1890 Sept. 25.	N.R.	Dutt, Romesh Chunder, c. s., Barrister-at-Law, Middle Temple. <i>Cuttack.</i>
1870 Mar. 9.	L.M.	Edinburgh, H. R. H. The Duke of. <i>Europe.</i>
1871 Dec. 2.	N.R.	Eliot, J., M. A., Meteorological Reporter to the Govt. of India. <i>Simla.</i>
1894 Dec. 5.	R.	Finn, Frank, B. A. <i>Calcutta.</i>
1886 April 7.	A.	Fleet, John Faithfull, c. s., C. I. E. <i>Europe.</i>
1893 May 3.	A.	Forbes, Major H. F. Gordon. <i>Europe.</i>
1892 May 4.	A.	Forrest, G. W., B. A., <i>Europe.</i>
1876 July 5.	N.R.	Foulkes, The Rev. Thos., F. L. S., M. R. A. S., F. R. G. S. <i>Salem, Madras Presidency.</i>
1893 Jan. 11.	N.R.	Gait, E. A., c. s. <i>Shillong.</i>
1880 April 7.	N.R.	Gajapati, Sir Ānanda Rām, K. C. I. E., Raja of Vizianagram. <i>Vizianagram.</i>
1859 Aug. 3.	L.M.	Gastrell, General James Eardley. <i>Europe.</i>
1889 Jan. 2.	R.	Ghose, Jogendrachandra, M. A., B. L. <i>Calcutta.</i>
1889 Mar. 6.	R.	Ghoshā, Bhupendra Sri. <i>Calcutta.</i>
1869 Feb. 3.	R.	Ghoshā, Pratāpachandra, B. A. <i>Calcutta.</i>
1895 April 3.	R.	Gilliland, J. H., Bengal Education Service. <i>Calcutta.</i>
1890 Aug. 6.	R.	Goethals, The Most Rev. Paul, D. D., S. J., Arch- bishop. <i>Calcutta.</i>
1861 Feb. 5.	N.S.	Godwin-Austen, Lieut.-Colonel H. H., F. R. S., F. Z. S., F. R. G. S. <i>Europe.</i>
1896 Nov. 4.	N.R.	Grant, A. J. <i>Wana, Wazirestan.</i>
1892 Aug. 25.	N.R.	Greeven, R., c. s. <i>Naini Tal.</i>
1876 Nov. 15.	N.R.	Grierson, Dr. George Abraham, c. s., C. I. E. <i>Banki- pur.</i>
1885 Dec. 2.	A.	Griesbach, C. L., C. I. E., F. G. S. <i>Europe.</i>
1888 July 4.	R.	Gupta, Rajanikānta. <i>Calcutta.</i>

Date of Election.		
1892 Jan. 6.	N.R.	Haig, Lieutenant Wolseley. <i>Yeotmal, Berar.</i>
1883 Jan. 3.	N.R.	Harding, Francis Henry, B. A., C. S. <i>Shahabad.</i>
1890 June 4.	A.	Heilgers, Robert Philip, Consul for H. I. M. the Emperor of Austria and Hungary, Knight of the Imperial Order of the Iron Crown, Commandeur Ordre Impériale de Medjidié, F. R. G. S., F. B. S. S. <i>Europe.</i>
1875 Mar. 3.	N.R.	Hendley, Brigade-Surgeon Lt.-Col. Thomas Holbein, C. I. E. <i>Jeypur.</i>
1890 April 2.	A.	Hickson, F. G. <i>Europe.</i>
1892 Aug. 3.	N.R.	Hill, Samuel Charles. <i>Dacca.</i>
1872 Dec. 5.	R.	Hoernle, A. F. R., PH. D., Principal of the Calcutta Madrasa.
1878 Mar. 6.	N.R.	Hoey, Dr. W., c. s. <i>Gorakhpur.</i>
1886 June 2.	R.	Hogg, Alexander. <i>Calcutta.</i>
1891 July 1.	R.	Holland, Thomas H., F. G. S. Geological Survey of India. <i>Calcutta.</i>
1884 Mar. 5.	N.R.	Hooper, John, c. s., Secretary, Board of Revenue. <i>Allahabad. N.-W. P.</i>
1873 Jan. 2.	L.M.	Houstoun, G. L., F. G. S. <i>Europe.</i>
1863 Jan. 15.	A.	Howell, Mortimer Sloper, c. s., C. I. E. <i>Europe.</i>
1884 May 2.	N.R.	Hussein, Sayid, B. A., Secy. to Nizam of Hyderabad's Council. <i>Hyderabad.</i>
1890 Dec. 3.	N.R.	Hyde, The Rev. Henry Barry, M. A. <i>Chaplain, Cuttack.</i>
1866 Mar. 7.	F.M.	Irvine, William, c. s. <i>Europe.</i>
1895 Dec. 4.	N.R.	Kennedy, J., c. s. <i>Comilla.</i>
1882 Mar. 1.	N.R.	Kennedy, Pringle, M. A. <i>Mozufferpur.</i>
1874 Dec. 2.	N.R.	Khudā Baksh, Maulvie, Khan Bahadur. <i>Bankipur.</i>
1867 Dec. 4.	R.	King, Brigade-Surgeon George, C. I. E., M. B., F. L. S., Supdt., Royal Botanic Garden. <i>Sibpur.</i>
1881 Mar. 2.	F.M.	King, Lucas White, B. A., LL. B., C. S. <i>Europe.</i>
1896 Aug. 27.	R.	Konstam, E. M., I. C. S. <i>Calcutta.</i>
1896 July 1.	R.	Kuchler, E. W., M. A. <i>Calcutta.</i>
1891 Feb. 4.	N.R.	Kupper, The Hon. Lala Bunbehari. <i>Burdwan.</i>
1893 July 1.	R.	Laharry, S. C. <i>Chinsurah.</i>
1887 May 4.	L.M.	Lanman, Charles R., Corresponding Secretary of the American Oriental Society, Professor of Sanskrit in Harvard College. <i>Cambridge, Mass., U. S., America.</i>
1889 Mar. 6.	A.	LaTouche, Thomas Henry Digges, M. A. <i>Europe.</i>
1889 Nov. 6.	R.	Lee, W. A. <i>Calcutta.</i>
1889 Feb. 6.	R.	Little, C., M. A., Bengal Education Service. <i>Calcutta.</i>

Date of Election.		
1886 Sept. 30.	N.R.	Luson, Hewling, C. S. <i>Manbhoom.</i>
1869 July 7.	N.R.	Lyall, Charles James, M. A., LL. D., C. S. I., C. I. E. Chief Commissioner, C. P. <i>Nagpur.</i>
1892 Sept. 22.	R.	Lyell, George. <i>Calcutta.</i>
1870 April 7.	L.M.	Lyman, B. Smith. <i>Philadelphia, Pa., U. S., America.</i>
1868 Dec. 2.	A.	Macauliffe, Michael, B. A., C. S. <i>Europe.</i>
1896 Mar. 4.	N.R.	MacBaine, F., I. C. S. <i>Nougong.</i>
1893 Jan. 11.	L.M.	MacLagan, E. D., M. A., C. S. <i>Europe.</i>
1891 Feb. 4.	N.R.	Macpherson, Duncan J., C. S. <i>Motihari.</i>
1896 Feb. 5.	A.	Macpherson, W. C. <i>Europe.</i>
1893 Aug. 31.	N.R.	Mahatha, Purmeshwar Narain. <i>Mozufferpur.</i>
1895 Sept. 19.	R.	Mahomed Abdul Kadar, Khan Bahadur. <i>Calcutta.</i>
1881 July 6.	R.	Mahomed Firukh Shāh, Prince. <i>Calcutta.</i>
1895 Aug. 29.	R.	Mahomed Gilani, Shams-ul-ulama Shaikh. <i>Calcutta.</i>
1886 Jan. 6.	N.R.	Mahomed Latif Khān, Sayid, Khan Bahadur. <i>Jullunder.</i>
1882 Aug. 2.	R.	Mahomed Yusoof, The Hon. Maulvie, Khan Bahadur. <i>Calcutta.</i>
1889 Jan. 2.	R.	Maliāh, Kumār Rameswār. <i>Howrah.</i>
1891 Aug. 27.	R.	Mallik, H. C. <i>Calcutta.</i>
1893 July 5.	R.	Mangos, C. D. <i>Calcutta.</i>
1889 Mar. 6.	R.	Mann, John, M. A. <i>Calcutta.</i>
1893 Mar. 1.	A.	Marriott, C. R., C. S. <i>Europe.</i>
1892 April 6.	N.R.	Maynard, Surgeon-Captain F. P. <i>Ranchi.</i>
1886 Mar. 3.	L.M.	Mehtā, Rustomjee Dhunjeebhoy. <i>Calcutta.</i>
1895 July 3.	N.R.	Melitus, P. G., C. S. <i>Shillong.</i>
1884 Nov. 5.	N.R.	Middlemiss, C. S., B. A., Assistant Superintendent, Geological Survey of India. <i>Hasur, Salem Dt.</i>
1884 Sept. 3.	R.	Miles, William Harry. <i>Calcutta.</i>
1870 July 6.	R.	Miller, A. B., B. A., Barrister-at-Law, Official Trustee. <i>Calcutta.</i>
1874 May 6.	N.R.	Minchin, F. J. V. <i>Aska, Ganjam.</i>
1896 July 1.	R.	Misra, Rai Lakshmi Sanker, Bahadur. <i>Calcutta.</i>
1895 Mar. 6.	N.R.	Mitra, Rajeswar. <i>Camp via Jubbulpur.</i>
1890 Dec. 3.	N.R.	Mitra, Varadā Charana. Joint-Magistrate. <i>Farridpur.</i>
1894 July 4.	R.	Moir, Surgeon-Captain D. M., I. M. S. <i>Calcutta.</i>
1895 July 3.	N.R.	Monohan, J. G., C. S. <i>Sibsagar.</i>
1896 Aug. 27.	N.R.	Mudaliar, Dr. V. S. Balasundra. <i>Chamagiri.</i>
1864 Nov. 2.	N.R.	Muir, J. W., M. A., C. S. <i>Saharanpur.</i>
1885 July 1.	R.	Mukerjea, Nilmani, Principal, Sanskrit College. <i>Calcutta.</i>
1892 Mar. 2.	R.	Mukerjea, Nrisinha Chundra. <i>Calcutta.</i>
1867 Mar. 6.	R.	Mukerjea, The Hon Raja Pearimohan, M. A., C. S. I. <i>Uttarpara.</i>

Date of Election.		
1894 Aug. 30.	R.	Mukerjee, Sibnarayan. <i>Uttarpara.</i>
1896 Aug. 27.	R.	Mukerjee, Syamdas. <i>Calcutta.</i>
1886 May 5.	R.	Mukhopādhyāya, Asutosh, M. A., D. L., F. R. A. S., F. R. S. E. <i>Calcutta.</i>
1892 Dec. 7.	R.	Mukhopādhyāya, Panchanana. <i>Calcutta.</i>
1896 April 1.	R.	Mullick, Sham Lall. <i>Calcutta.</i>
1896 Aug. 5.	N.R.	Munro, Thomas, M. <i>Calcutta.</i>
1887 May 4.	A.	Munro, Thomas R. <i>Europe.</i>
1885 June 3.	N.R.	Naemwoollah, Maulvie, Deputy Magistrate. <i>Saharanpur.</i>
1887 June 1.	N.R.	Narain, Rāo Govind Rāo. <i>Allahabad.</i>
1881 Nov. 2.	R.	Nicéville, L. de., F. E. S. <i>Calcutta.</i>
1889 Aug. 29.	L.M.	Nimmo, John Duncan. <i>Calcutta.</i>
1887 April 6.	F.M.	Noetling, Fritz, Ph. D. <i>Europe.</i>
1894 June 6.	N.R.	Nomani, Shams-ul-ulama Maulvie Muhammad, Professor of Arabic in the Muhammadan Oriental College. <i>Aligarh.</i>
1892 Oct. 27.	N.R.	Norvill, Dr. Frederic H. <i>Dibrugarh.</i>
1885 Feb. 4.	R.	Nyāyaratna, Mahāmahopādhyāya Mahesachandra, C. I. E. <i>Calcutta.</i>
1895 July 3.	R.	Oldham, C. E. A. W., C. S. <i>Calcutta.</i>
1879 Aug. 28.	A.	Oldham, Brigade-Surgeon C. F., F. R. G. S. <i>Europe.</i>
1883 Dec. 1.	R.	Oldham, R. D., A. R. S. M., F. G. S., Superintendent, Geological Survey of India. <i>Calcutta.</i>
1883 Aug. 30.	N.R.	Oliver, Edw. Emmerson, M. I. C. E. <i>Nagpur.</i>
1887 July 6.	N.R.	Oung, Moug Hla. <i>Rangoon.</i>
1880 Aug. 4.	L.M.	Pandia, Pandit Mohanlāl Vishnulāl, F. T. S., Prime Minister, Partabgarh State. <i>Rajputana via Mand- saur.</i>
1880 Jan. 7.	N.R.	Pargiter, Frederick E., B. A., C. S. <i>Cuttack.</i>
1862 May 7.	L.M.	Partridge, Surgeon-Major Samuel Bowen, M. D. <i>Europe.</i>
1871 Dec. 6.	N.R.	Peal, S. E. <i>Sibsagar, Assam.</i>
1873 Aug. 6.	R.	Pedler, Alexander, F. R. S., Bengal Education Ser- vice. <i>Calcutta.</i>
1888 June 6.	L.M.	Pennell, Aubray Percival, B. A., C. S. <i>Rangoon.</i>
1881 Aug. 25.	R.	Percival, Hugh Melville, M. A., Bengal Education Service. <i>Calcutta.</i>
1877 Aug. 1.	N.R.	Peters, Surgeon-Major C. T., M. B. <i>Bombay.</i>
1889 Nov. 6.	N.R.	Phillott, Capt. D. C. <i>Kohat.</i>
1896 Jan. 8.	N.R.	Place, G., I. C. S. <i>Motihari.</i>
1880 Mar. 6.	R.	Prain, David, M. A., M. B., L. R. C. S., I. R. S. E., I. L. S. <i>Sibpur.</i>

Date of Election.		
1892 Aug. 3.	R.	Pramanick, Asutosh. <i>Calcutta.</i>
1889 Mar. 6.	N.R.	Prasad, Hanuman, Raes and Zemindar. <i>Chunar.</i>
1896 Sept. 25.	R.	Pringle, A. T. <i>Calcutta.</i>
1880 April 7.	N.R.	Rai, Bipina Chandra, B. L. <i>Noakhali.</i>
1895 Aug. 29.	N.R.	Rai, Jatindranath, M. A., B. L. <i>Taki.</i>
1894 Aug. 30.	R.	Ranking, Surgeon-Lieutenant-Colonel George, M. D. <i>Calcutta.</i>
1895 Aug. 7.	R.	Ray, Mahendranath, M. A., B. L. <i>Howrah.</i>
1887 May 4.	R.	Rāy, Prasannakumār, D. Sc. (Lond. and Edin.) Professor, Presidency College. <i>Calcutta.</i>
1895 Aug. 29.	R.	Richardson, T. W., C. S. <i>Calcutta.</i>
1884 Mar. 5.	R.	Risley, H. H., B. A., C. S., C. I. E. <i>Calcutta.</i>
1889 June 5.	A.	Rowe, F. J., M. A. <i>Europe.</i>
1890 Mar. 5.	N.R.	Roy, Maharaja Girjanath. <i>Dinagapur.</i>
1895 Mar. 6.	R.	Roy, P. C., Bengal Education Service. <i>Calcutta.</i>
1888 June 6.	R.	Roy, Peary Mohun. <i>Calcutta.</i>
1885 Mar. 4.	R.	Rustomjee, H. M. <i>Calcutta.</i>
1893 Aug. 2.	R.	Samajpati, Suresh Chundra. <i>Calcutta.</i>
1896 Aug. 27.	N.R.	Samman, H. F., I. C. S. <i>Golaghat.</i>
1887 June 1.	N.R.	Sandberg, The Rev. Graham, B. A., Barrister-at-Law, Inner Temple. Chaplain. <i>Subathu.</i>
1867 April 3.	R.	Sarkār, Dr. Mahendralāl, C. I. E. <i>Calcutta.</i>
1885 Mar. 4.	R.	Sarvādhikāri, Rāj Kumār, Rai Bahadur. <i>Calcutta.</i>
1893 Jan. 11.	L.M.	Scindia, His Highness the Maharaja.
1874 July 1.	A.	Scully, Dr. John, F. C. S. <i>Europe.</i>
1896 April 1.	R.	Sen, The Hon'ble Guruprasad. <i>Calcutta.</i>
1886 Mar. 3.	N.R.	Sen, Hirālāl, Excise Department. <i>Darbhanga.</i>
1885 April 1.	R.	Sen, Narendranāth. <i>Calcutta.</i>
1885 April 1.	R.	Sen, Yadunāth. <i>Calcutta.</i>
1885 Feb. 4.	R.	Shāstri, Pandit Haraprasād, M. A. <i>Calcutta.</i>
1891 June 3.	N.R.	Shillingford, Frederick Alexander. <i>Purneah.</i>
1889 Nov. 6.	N.R.	Simpson, Edmund James, L. R. C. P. E., F. L. P. S. G., L. M. G. E., Civil Surgeon. <i>Rai Bareili.</i>
1887 April 6.	R.	Simpson, Dr. W. J., Health Officer. <i>Calcutta.</i>
1893 Mar. 1.	N.R.	Singh, Maharajah Kumara Sirdar Bharat, C. S. <i>Rai Bareili.</i>
1880 June 2.	N.R.	Singh, Thākur Garuradhawaya Prasād, Raja of Beswan. <i>Beswan Fort, Aligarh.</i>
1878 Oct. 4.	N.R.	Singh, Raja Lachman. <i>Agra.</i>
1895 Aug. 29.	R.	Singh, Lachmī Nārāyan, M. A., B. L. <i>Calcutta.</i>
1877 June 6.	N.R.	Singh, H. H. the Hon. Maharaja Sir Luchmessur, Bahadur, K. C. I. E. <i>Darbhanga.</i>
1892 Mar. 2.	L.M.	Singh, The Hon. Raja Oodaypratab. <i>Binga.</i>
1889 Aug. 29.	N.R.	Singh, H. H. Prabhunarin, Bahadur, Maharaja of Benares.
1859 Aug. 3.	N.R.	Singh, H. H. the Hon. Maharaja Pratap Narain. <i>Ajodhya, Oudh.</i>

Date of Election.		
1895 Aug. 29	N.R.	Singh, Rām Din. <i>Bankipur.</i>
1889 Nov. 6.	N.R.	Singh, The Hon. Raja Rameshwara, Bahadur. <i>Darbhangā.</i>
1894 Feb. 7.	N.R.	Singh, H. H. Raja Vishwanath, Bahadur, Chief of Chhatarpur.
1893 April 5.	N.R.	Siñha, Raja Bhupendra, Bahadur, Raja of Bijoypur. <i>Mirzapur.</i>
1894 July 4.	N.R.	Siñha, Kunwar Kushal Pal, M. A. <i>Narki P. O. Agra District.</i>
1872 Aug. 5.	A.	Skrefsrud, The Rev. L. O. <i>Europe.</i>
1874 June 3.	N.R.	Smith, Vincent Arthur, c. s. <i>Gorakhpur.</i>
1891 Aug. 27.	N.R.	Stein, Dr. M. A. <i>Lahore.</i>
1895 July 5.	A.	Steinberg, A. F., c. s. <i>Europe.</i>
1868 June 3.	R.	Tagore, The Hon. Maharaja Sir Jotendra Mohun, Bahadur, K. C. S. I. <i>Calcutta.</i>
1893 Aug. 31.	N.R.	Tate, G. P., Survey of India. <i>Karachi.</i>
1865 Sept. 6.	A.	Tawney, C. H., M. A., C. I. E. <i>Europe.</i>
1884 May 5.	N.R.	Taylor, W. C., Settlement Officer. <i>Khurda.</i>
1878 June 5.	N.R.	Temple, Major R. C., S. C. <i>Rangoon.</i>
1875 June 2.	N.R.	Thibaut, Dr. G., Professor, Muir Central College. <i>Allahabad.</i>
1886 Aug. 4.	R.	Thomas, Robert Edmond Skyring. <i>Calcutta.</i>
1847 June 2.	L.M.	Thuillier, Major-Genl. Sir Henry Edward Landor, E. A., C. S. I., F. R. S. <i>Europe.</i>
1889 Mar. 6.	A.	Thuillier, Colonel H. R., E. E., Surveyor-General of India. <i>Europe.</i>
1891 Aug. 27.	N.R.	Thurston, Edgar. <i>Madras.</i>
1871 April 5.	F.M.	Trefftz, Oscar. <i>Europe.</i>
1861 June 5.	L.M.	Tremlett, James Dyer, M. A., C. S. <i>Europe.</i>
1893 May 3.	N.R.	Vandja, Raja Ram Chandra. <i>Mayurbhanga, District Balasore.</i>
1890 Feb. 5.	N.R.	Venis, Arthur, M. A., Former Boden Sanskrit Scholar, Oxford, Principal, Sanskrit College, Benares, Professor, Queen's College. <i>Benares.</i>
1885 May 6.	R.	Verdeau, Ivan. <i>Calcutta.</i>
1895 Dec. 4.	R.	Vidyabhusan, Harimohan. <i>Calcutta.</i>
1896 May 6.	R.	Vidyanidhi, Mahendranath. <i>Calcutta.</i>
1894 Sept. 27.	L.M.	Vost, Surgeon-Captain William. <i>Gonda.</i>
1895 July 5.	R.	Waddell, Dr. L. A. <i>Calcutta.</i>
1889 Nov. 6.	N.R.	Walsh, Surgeon-Major J. H. Tull. <i>Midnapur.</i>
1865 May 3.	R.	Waterhouse, Col. James, B. S. C., Assistant Surveyor-General, Survey of India. <i>Calcutta.</i>
1887 Oct. 6.	N.R.	Watson, Lieut. Edward Yerbury. <i>Belgaum.</i>
1874 July 1.	R.	Watt, Dr. George, C. I. E. <i>Calcutta.</i>
1892 Aug. 3.	R.	Whitehead, The Rev. Henry. <i>Calcutta.</i>

Date of Election.		
1896 Feb. 5.	N.R.	Williams, Surgeon-Captain Charles E. <i>Yamathin.</i>
1891 May 6.	R.	Wilson, Charles Robert, M. A., Bengal Education Service. <i>Calcutta.</i>
1892 Jan. 6.	R.	Woodburn, The Hon. J., C. S. <i>Calcutta.</i>
1894 Sept. 27.	R.	Woodroffe, John George, Barrister-at-Law. <i>Calcutta.</i>
1873 Aug. 6.	A.	Woodthorpe, Col. Robert Gossett, C. B., R. E. <i>Europe.</i>
1894 Aug. 30.	N.R.	Wright, Henry Nelson, C. S. <i>Allahabad.</i>

SPECIAL HONORARY CENTENARY MEMBERS.

Date of Election.	
1884 Jan. 15.	Dr. Ernst Haeckel, Professor in the University of <i>Jena</i> .
1884 Jan. 15.	Charles Meldrum, Esq., M. A., F. R. S. <i>Mauritius</i> .
1884 Jan. 15.	A. H. Sayce, Esq., Professor of Comp. Philology. <i>Oxford</i> .
1884 Jan. 15.	Monsieur Emile Senart, Member of the Institute of France. <i>Paris</i> .
1884 Jan. 15.	Sir Monier Monier-Williams, <i>Knt.</i> , K. C. I. E., M. A., D. C. E., LL. D., Boden Prof. of Sanskrit. <i>Oxford</i> .

HONORARY MEMBERS.

1848 Feb. 2.	Sir J. D. Hooker, K. C. S. I., C. B., M. D., D. C. L., F. R. S., F. G. S. <i>Kew</i> .
1860 Mar. 7.	Professor Max Müller. <i>Oxford</i> .
1860 Nov. 7.	Dr. Albrecht Weber. <i>Berlin</i> .
1875 Nov. 3.	Dr. O. Böttlingk. <i>Leipzig</i> .
1879 June 4.	Prof. E. B. Cowell, D. C. L. <i>Cambridge</i> .
1879 June 4.	Dr. A. Günther, V. P. E. S. <i>London</i> .
1879 June 4.	Dr. J. Janssen. <i>Paris</i> .
1879 June 4.	Prof. P. Regnaud. <i>Lyons</i> .
1881 Dec. 7.	Lord Kelvin, D. C. L. <i>Glasgow</i> .
1883 Feb. 7.	W. T. Blanford, Esq., A. B. S. M., F. R. S., F. G. S., F. R. G. S., F. Z. S. <i>London</i> .
1883 Feb. 7.	Alfred Russell Wallace, Esq., F. L. S., F. R. G. S. <i>Parkstone, Dorsetshire</i> .
1894 Mar. 7.	Sir William Henry Flower, K. C. B., D. C. L. <i>London</i> .
1894 Mar. 7.	Dr. Edward Frankland, D. C. L., F. R. S. <i>Reigate</i> .
1894 Mar. 7.	Sir George Gabriel Stokes, Bart, F. R. S. <i>Cambridge</i> .
1894 Mar. 7.	Mahāmahopādhyaya Chandra Kanta Tarkalankara. <i>Calcutta</i> .
1894 Mar. 7.	Professor Theodor Noeldeke. <i>Strassburg</i> .
1895 June 5.	Dr. G. Bühler. <i>Vienna</i> .
1895 June 5.	Lord Rayleigh. <i>London</i> .
1895 June 5.	Lt.-Genl., R. Strachey. <i>London</i> .
1895 June 5.	C. H. Tawney, M. A., C. I. E. <i>London</i> .
1896 Feb. 5.	Sir Joseph Lister, P. R. S.
1896 Feb. 5.	Professor Michael Foster, F. R. S.
1896 Feb. 5.	Professor F. Keilhorn.
1896 Feb. 5.	Professor C. R. Lanman.

CORRESPONDING MEMBERS.

Date of Election.	
1844 Oct. 2.	Macgowan, Dr. J. <i>Europe.</i>
1856 July 2.	Porter, The Rev. J. <i>Belfast.</i>
1862 Mar. 3.	Murray, A. <i>London.</i>
1866 May 7.	Schlagintweit, Prof. E. von. <i>Berlin.</i>

ASSOCIATE MEMBERS.

1874 April 1.	Lafont, Fr. E., s. J., c. i. e. <i>Calcutta.</i>
1875 Dec. 1.	Bate, The Rev. J. D. <i>Europe.</i>
1875 Dec. 1.	Abdul Hai, Maulvie. <i>Calcutta.</i>
1882 June 7.	Giles, Herbert. <i>Europe.</i>
1883 Feb. 7.	Rodgers, C. J. <i>Europe.</i>
1884 Aug. 6.	Moore, F., F. B. S., F. L. S. <i>London.</i>
1885 Dec. 2.	Führer, Dr. A. <i>Lucknow.</i>
1886 Dec. 1.	Dās, Saratchandra, c. i. e. <i>Calcutta.</i>
1892 April 6.	Samasrami, Satyavrata. <i>Calcutta.</i>
1892 Dec. 7.	Brühl, P. J. <i>Sibpur.</i>

LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM
INDIA THREE YEARS AND UPWARDS.*

* *Rule 40.*—After the lapse of 3 years from the date of a member leaving India, if no intimation of his wishes shall in the interval have been received by the Society, his name shall be removed from the List of Members.

The following members will be removed from the next Member List of the Society, under the operation of the above Rule:—

Major A. C. Bigg-Wither, B. A.
Major H. F. Gordon Forbes.
C. H. Tawney, Esq., M. A., C. I. E.

LOSS OF MEMBERS DURING 1896.

BY RETIREMENT.

Colonel M. M. Bowie.
 W. Crooke, Esq., I. C. S.
 Babu Sarat Chandra Chatterjee.
 Raja Ramranjan Chuckerbutty.
 Sir C. A. Elliott, K. C. S. I., C. I. E.
 M. Finucane, Esq., I. C. S.
 Dr G. H. D. Gimlette.
 J. J. D. LaTouche, Esq.
 R. B. McCabe, Esq., I. C. S.
 Colonel E. Mockler.
 Lieut.-Col. E. H. Molesworth.
 T. N. Mukerji, Esq.
 P. Nolan, Esq., I. C. S.
 Kumar Divendra Narain Roy.
 Major J. Hayes Sadler, B. S. C.

BY DEATH.

Ordinary Members.

O. G. Arthur, Esq., I. C. S.
 Diego Ernest, Esq.
 Manmohan Ghose, Esq.
 The Hon. Prince Sir Jahan Qadr Muhammad Wahid Ali
 Bahadur, K. C. I. E.
 Babu Balai Chand Sinha.
 Sir Sirdar Attar Singh Bahadur.
 W. Swinhoe, Esq.

Honorary Member.

Dr. Reinhold Rost.

BY REMOVAL.

Under Rule 40.

Dr. F. H. Brown.

Dr. H. Martyn Clark.

Eustace John Kitts, Esq., C. S.

Colonel Sir William Francis Prideaux, K. C. I. E.

A. Mervyn Smith, Esq., C. E.

[APPENDIX.]

ABSTRACT STATEMENTS
OF
RECEIPTS AND DISBURSEMENTS
OF THE
ASIATIC SOCIETY OF BENGAL
FOR
THE YEAR 1896.

STATEMENT

Asiatic Society

Dr.

TO ESTABLISHMENT.				Rs.	As.	P.	Rs.	As.	P.
Salaries	...	...	...	3,203	2	1			
Commission	...	...	...	448	5	6			
Pension	...	...	...	48	0	0			
							3,699	7	7
TO CONTINGENCIES.									
Stationery	...	...	...	77	3	0			
Lighting	...	...	...	49	8	0			
Taxes	...	...	...	819	0	0			
Postage	...	...	...	600	8	0			
Freight	...	...	...	27	6	0			
Meeting	...	...	...	81	0	0			
Miscellaneous	...	...	...	260	1	10			
							1,914	10	10
TO LIBRARY AND COLLECTIONS.									
Books	...	...	...	564	5	0			
Local Periodicals	...	...	...	16	0	0			
Binding	...	...	...	781	4	0			
Furniture	...	...	...	1	4	0			
							1,362	13	0
TO PUBLICATIONS.									
Journal, Part I	...	...	...	2,253	7	6			
Journal, Part II	...	...	...	1,373	13	6			
Journal, Part III	...	...	...	457	7	9			
Proceedings	...	...	...	790	12	6			
							4,875	9	3
To Printing charges of Circulars, Receipt-forms, &c.	...	...	...	...			136	8	0
„ Personal Account (Writes off and Miscellaneous)	...	...	...	...			188	9	6
TO EXTRAORDINARY EXPENDITURE.									
Auditor's fee	...	...	...	100	0	0			
Registration fee of the Society for 1896	...	...	...	5	0	0			
Catalogue of coins	...	...	...	581	0	0			
							686	0	0
Balance	...	...	...				1,55,923	2	9
							1,68,786	12	11
Total Rs.				...	...	...

No. 1.
of Bengal.

Cr.

		Rs.	As.	P.	Rs.	As.	P.
By Balance from last report	...				1,49,785	11	9
BY CASH RECEIPTS.							
Publications sold for cash	...	74	8	3			
Interests on Investments	...	5,527	8	0			
Rent of rooms on the Society's ground floor	...	820	0	0			
Allowance from Government of Bengal for the publication of Anthropological and Cognate Subjects	...	2,000	0	0			
Ditto ditto Chief Commissioner of Assam	...	1,000	0	0			
Miscellaneous	...	322	15	3			
					9,744	15	6
BY PERSONAL ACCOUNT.							
Admission fees	...	1,024	0	0			
Subscriptions	...	7,474	0	0			
Sales on credit	...	735	3	3			
Miscellaneous	...	22	14	5			
					9,256	1	8
Total Es. ...					<u>1,68,786 12 11</u>		

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
MEUGENS, KING & SIMSON,
Auditors.

STATEMENT
Oriental Publication Fund in Account

Dr.

To CASH EXPENDITURE.

			Rs.	As.	P.		Rs.	As.	P.	
Printing charges	...	...	3,614	12	0				
Editing charges	...	...	3,947	3	0				
Salaries	...	...	1,163	10	8				
Freight	...	...	86	14	0				
Stationery	...	...	64	9	0				
Postage	...	...	276	3	3				
Commission on collecting bills	...	...	26	8	0				
Contingencies	...	...	11	0	6				
Advertisement	...	...	4	0	0				
							9,144	12	5	
To Personal Account (Writes off and Miscellaneous)			...				1	8	0	
Balance	...	...	...			12,542	13	1	
							21,689	1	6	
Total Rs.			...							

No. 2.

with the Asiatic Society of Bengal.

Cr.

			Rs. As. P.	Rs. As. P.
By Balance from last report	...	...		10,988 18 0
BY CASH RECEIPTS.				
Government allowance	...	...	9,000 0 0	
Publications sold for cash	...	...	481 0 9	
Advances recovered	...	...	62 10 8	
				9,543 11 0
BY PERSONAL ACCOUNT.				
Sales on credit	...	...	...	1,156 9 6
			Total Rs. ...	21,689 1 6

G. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
 MEUGENS, KING & SIMSON,
Auditors.

STATEMENT
Sanskrit Manuscript Fund in Account

Dr.

TO CASH EXPENDITURE.				Rs.	As.	P.	Rs.	As.	P.
Salaries	...	...	...	1,181	0	0			
Travelling charges	...	...	...	598	12	0			
Purchase of manuscripts	...	...	...	1,675	8	0			
Notices by contract	...	...	...	429	0	0			
Postage	...	...	...	5	6	6			
Printing charges	...	...	...	1,081	11	0			
Contingencies	...	...	...	8	12	0			
							4,980	1	6
			Balance	...	...		4,542	9	1
			Total Rs.	...			9,522	10	7

No. 3.

with the Asiatic Society of Bengal.

		Cr.			
		Rs.	As. P.	Rs.	As. P.
By Balance from last report	... ..			6,279	15 4
BY CASH RECEIPTS.					
Government allowance	... ..	3,200	0 0		
Publications sold for cash	... ..	5	0 0		
				3,205	0 0
BY PERSONAL ACCOUNT.					
Sales on credit...	... ..			37	11 3
Total Rs. ...					9,522 10 7

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
 MEUGENS, KING & SIMSON,
Auditors.

STATEMENT
Personal

Dr.		Rs. As. P.	Rs. As. P.
To Balance from last report	... ..	...	4,803 14 6
To CASH EXPENDITURE.			
Advances for purchase of Sanskrit MSS., &c.	... ..	...	950 6 3
To Asiatic Society	... ..	9,256 1 8	
„ Oriental Publication Fund	... ..	1,156 9 6	
„ Sanskrit MSS. Fund	... ..	87 11 3	
		10,450 6 5	

Total Rs.	...	16,204 11 2
-----------	-----	-------------

No. 4.
Account.

Cr.

			Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts	12,744	0	9
„ Asiatic Society	188	9	6		
„ Oriental Publication Fund	1	8	0		
						<u>190</u>	<u>1</u>	<u>6</u>

By Balance.	Due to the Society.			Due by the Society.					
	Rs.	As.	P.	Rs.	As.	P.			
Members	3,280	12	4	183	6	0			
Subscribers	0	0	0	96	10	6			
Employés	30	0	0	350	0	0			
Agents	169	2	6	0	0	0			
Miscellaneous	590	11	0	170	0	5			
	<u>4,070</u>	<u>9</u>	<u>10</u>	<u>800</u>	<u>0</u>	<u>11</u>			
							<u>3,270</u>	<u>8</u>	<u>11</u>

Total Rs. ... 16,204 11 2

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
MEUGENS, KING & SIMSON,
Auditors.

STATEMENT

Invest

Dr.

		Nominal.			Actual.		
		Rs.	As.	P.	Rs.	As.	P.
To Balance from last report	1,59,300	0	0
„ Cash	5,000	0	0
Total Rs.	<u>1,64,300</u>	<u>0</u>	<u>0</u>
					1,60,023	11	3
					5,059	9	6

FUNDS.*	PERMANENT.						TEMPORARY.						TOTAL OF ACTUALS.		
	Nominal.			Actual.			Nominal.			Actual.					
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Asiatic Society...	1,40,500	0	0	1,40,236	0	0	22,500	0	0	23,551	8	0	1,63,787	8	0
Trust Fund ...	1,300	0	0	1,295	12	9	...	...	...	...	...	...	1,295	12	9
•	1,41,800	0	0	1,41,531	12	9	22,500	0	0	23,551	8	0	1,65,083	4	9

STATEMENT

Trust

Dr.

		Rs.	As.	P.
To Pension	... ..	...	...	...
„ Balance	... ..	...	...	...
Total Rs.	...	...	...	...
		48	0	0
		<u>1,343</u>	<u>3</u>	<u>10</u>
		1,391	3	10

No. 5.
ments.

		Cr.			
		Nominal.		Actual.	
		Rs. As. P.		Rs. As. P.	
By Balance*	1,64,300	0 0	1,65,083 4 9
Total Rs.		...	1,64,300	0 0	1,65,083 4 9

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
MEUGENS, KING & SIMSON,
Auditors.

No. 6.
Fund.

		Cr.			
				Rs. As. P.	
By Balance from last report	1,343	3 10
„ Interest on Investments	48	0 0
Total Rs.		...	1,391	3 10	

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
MEUGENS, KING & SIMSON,
Auditors.

STATEMENT

Cash

Dr.				Rs. As. P.
To Balance from last report	...	...	...	3,570 2 2
RECEIPTS.				
To Asiatic Society	...	...	...	9,744 15 6
„ Oriental Publication Fund	...	...	...	9,543 11 0
„ Sanskrit MSS. Fund	...	...	...	3,205 0 0
„ Personal Account	...	...	...	12,744 0 9
„ Trust Fund	...	...	...	48 0 0
Total Rs.				38,855 13 5

STATEMENT

Balance

Dr.				Rs. As. P.
To Cash	...	...	...	5997 15 1
„ Investments	...	...	...	1,65,083 4 9
„ Personal Account	...	...	...	3,270 8 11
Total Rs.				1,74,351 12 9

No. 7.
Account.

Cr.				Rs. As. P.
EXPENDITURE.				
By Asiatic Society	...	...	...	12,675 0 8
„ Oriental Publication Fund	...	...	...	9,144 12 6
„ Sanskrit MSS. Fund	...	...	...	4,980 1 5
„ Personal Account	...	...	...	950 6 3
„ Trust Fund	...	...	...	48 0 0
„ Investments	...	...	...	5,059 9 6
		Balance	...	5,997 15 1
Total Rs.				38,855 13 5

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
MEUGENS, KING & SIMSON,
Auditors.

No. 8.
Sheet.

Cr.				Rs. As. P.
By Asiatic Society	...	...	...	1,55,923 2 9
„ Oriental Publication Fund	...	...	...	12,542 13 1
„ Sanskrit MSS. Fund	...	...	...	4,542 9 1
„ Trust Fund	...	...	...	1,343 3 10
Total Rs.				1,74,351 12 9

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
MEUGENS, KING & SIMSON,
Auditors.

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL.

EDITED BY

THE HONORARY SECRETARIES,



JANUARY TO DECEMBER,
1898.



CALCUTTA:

PRINTED AT THE BAPTIST MISSION PRESS,

AND PUBLISHED BY THE

ASIATIC SOCIETY, 57, PARK STREET.

1899.

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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR JANUARY, 1898.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 5th January, 1898, at 9 P.M.

DR. A. F. R. HOERNLE, C.I.E., President in the chair.

The following members were present :—

Dr. A. Alcock, Dr. T. Bloch, F. Finn, Esq., The Revd. H. B. Hyde, H. H. Hayden, Esq., Kumār Rāmēçvar Māliā, J. Mann, Esq., R. D. Mehta, Esq., L. de Nicéville, Esq., A. T. Pringle, Esq., F. J. Rowe, Esq., Bābu Yadunāth Sēn, M. S. Seth, Esq., Paṇḍit Haraprasād Çāstri, C. Saunders, Esq., Dr. G. Watt, C.I.E.

Visitors :—B. Aitken, Esq., W. K. Dods, Esq., Professor S. Levi, R. G. Monteath, Esq., M. R. Mehta, Esq., W. H. Wood, Esq., Bābu Surēndranāth Vasu.

The minutes of the last meeting were read and confirmed.

Forty-one presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last meeting of the Society were ballotted for and elected ordinary members :—

W. K. Dods, Esq.
Captain P. R. T. Gurdon.

The following gentlemen are candidates for election at the next meeting :—

The Revd. J. Watt, proposed by Dr. G. Watt, seconded by C. Little, Esq.

David Hooper, Esq, F.C.S., F.I.C., F.L.S., proposed by Dr. A. Alcock, seconded by F. Finn, Esq.

Bābu Amṛtalāl Vasu, proposed by Paṇḍit Mahēndra Nāth Vidyānidhi, seconded by Dr. Amṛtalāl Sarkār.

E. B. Havell, Esq., Principal, Calcutta School of Art, proposed by Dr. A. F. R. Hoernle, seconded by Dr. A. Alcock.

The PRESIDENT announced that the Council had elected Mr. G. W. Kūchler as Treasurer of the Society in the place of Mr. C. Little, resigned.

The PRESIDENT announced that he had received five essays in competition for the Elliott Prize for Scientific Researches for the year 1897.

Surgeon-Major A. Alcock exhibited some remarkable Deep Sea animals, and made the following remarks on their distribution:—

The three specimens which I am exhibiting this evening are:—

(1). A *Macrurus* fish (*Macrurus—Mystacourus—cavernosus*, Goode and Bean) belonging to the same order as the Cod-fishes.

(2). A blind deep-sea Lobster (*Phoberus cæcus*, A. M. Edw.), and

(3). A gigantic deep sea Isopod Crustacean (*Bathynomus giganteus*, A. M. Edw.).

In exhibiting them, what I wish to draw attention to is, not the numerous peculiarities of their structure, but the peculiarity of their Geographical Distribution.

The fish (*Mystacourus cavernosus*) was first discovered by the U. S. Survey Steamer "Albatross" in the Gulf of Mexico at a depth of 227 fathoms.

The Lobster (*Phoberus cæcus*) was first discovered by the U. S. Survey Steamer "Blake," off the Antilles at a depth of about 416 fms.

The Isopod (*Bathynomus giganteus*) was first discovered by the "Blake" at a depth of about 955 fathoms, also in the Gulf of Mexico.

Now the point that I think sufficiently remarkable for relation to this meeting is that these three animals (belonging to three different Orders and two different Phyla of the Animal Kingdom) first found in the depths of the Gulf of Mexico, are only elsewhere known to occur in Indian waters.

It is true that a form very closely related to, and perhaps identical with, *Phoberus cæcus*, was dredged by the "Challenger," at a depth of 800 fathoms, in the enclosed sea south of New Guinea, but that sea, as well as the Java seas and the Andaman sea, all belong to one and the same zoological region with the seas of India. So that if all three forms, instead of only one of them, were known to exist near New Guinea, the peculiarity of their distribution would hardly be affected.

Now, how can the very curious distribution of these animals be explained?

The most obvious explanation is that as they all belong to the Deep Sea Fauna, they may be expected to have an almost unlimited range. It has been fairly well established that the animals that inhabit the depths of the ocean all live under almost uniform conditions, and that therefore there is no limit to their range from one unbroken ocean-bed to another.

Numerous instances of deep-sea animals that have such an unlimited range are known; but as I prefer to confine myself to species that have been taken in Indian Seas and that, therefore, can be shown to you, I will only mention the following examples, specimens of which are here exhibited:—

Bathyactis symmetrica (Pourtales) a Fungid coral which according to the late Professor Moseley is “apparently universally distributed in deep-water.”

Porcellanaster cæruleus, Wy. Thoms., a Starfish common to the depths of the North Atlantic and of the Andaman Sea.

Freyella benthophila, Sladen, a Starfish common to the depths of the Pacific and Bay of Bengal.

Poromya tornata, Jeff., a Lamellibranch mollusk common to the depths of the Atlantic and of the Bay of Bengal.

Puncturella asturiana, Fisch., a Gastropod mollusk common to the depths of the West Indies, of the Bay of Biscay, and of the Laccadive Sea.

Calocaris macandrewæ, Bell, a little crustacean distantly related to the Lobsters, which has been found in the northern recesses of the Irish Sea, in Scandinavian deep-waters, in the Gulf of St. Laurence, off the coast of New Zealand and off the Laccadive Islands.

Parapagurus abyssorum, a Hermit crab that has been found all over the Atlantic and Pacific Oceans at great depths.

Macrurus laevis, a fish related to the Cod-fishes, whose range includes the Scandinavian, Irish and Mediterranean Seas, the depths off the coast of Brazil, and the Laccadive and Andaman Seas.

Now it is quite possible, and even probable, that in the discovery of the Gulf of Mexico species *Macrurus cavernosus*, *Bathynomus giganteus* and *Phoberus cæcus* in Indian Seas, we have merely another illustration of the wide range of species modified for life under deep sea conditions; but there is another possible explanation that should not be lost sight of.

In the Quarterly Journal of the Geological Society for August 1895 (Vol. LI. No. 203) Dr. J. W. Gregory adduces several telling

arguments, based principally upon the affinities of the fossil corals of Barbadoes with the fossil corals of the Mediterranean basin and with corals still living in the Red Sea and Indian Ocean, in support of the view that, in or shortly before Miocene times, a Mediterranean Sea extended from America eastwards, and included both the present Caribbean and Mediterranean basins. In this Mediterranean Sea, the present North and South Atlantic Oceans were represented by bays running north and south.

Now is it possible that *Phoberus*, *Bathynomus*, and *Mystaconurus cavernosus* are remnants of the deep fauna of this sea? The question seems to be a not unreasonable one, especially as it is strengthened by the curious distribution of some other forms of which specimens are exhibited here to-night. These are:—

1. *Diplacanthopoma brachysoma*, a fish distantly related to the Cod-fishes, which is only known to occur (a) off Pernambuco (at the north-east angle of Brazil) in 350 fms., and (b) in the Andaman Sea in 490 fms.
2. *Flabellum laciniatum*, a Turbinolid coral which has been found living (a) in the Norwegian and North Atlantic Seas, and (b) off the east and west coasts of India at 400 to 700 fathoms. This species is also fossil in the (Pliocene) deposits of the Mediterranean basin.

The following papers were read:—

1. *Two copper-plate grants of Ratnapāla of Pragjyōtiṣa in Āsām.*—
By DR. A. F. R. HOERNLE, C.I.E.

The paper will be published in the *Journal*, Part I.

2. *On the seasonal change of plumage in the Male of the Purple Honey-sucker (Arachnethra asiatica), and of an analogous American Bird, the Yellow-winged Sugar-bird (Coereba cyanea) with Exhibition of Specimens.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

The paper will be published in the *Journal*, Part II.

3. *On a Rain-ceremony from the District of Murshedabad, Bengal.*—
By ÇARAT CANDRA MITRA, M.A., B.L., Corresponding Member of the Anthropological Society of Bombay. Communicated by the Anthropological Secretary.

The paper will be published in the *Journal*, Part III.

4. *On a Fragment of a Manuscript of Aryadeva's Work from Nepal.*—
By PAṄDIT HARAPRASAD ÇASTRI, M.A.

The paper will be published in the *Journal*, Part I.

5. *Note on the Long-snouted Whip-snake, with Exhibition of Specimen and Drawing.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

The paper will be published in the *Journal*, Part II.

6. *On Taboo and customs connected therewith amongst the Santals.*—By THE REV. P. O. BODDING, *Mohulpahari, Santal Parganas.*

ABSTRACT.

The custom of tabooing certain names, animals, things, etc., is found amongst the Santals.

Names are tabooed in the following cases: certain brothers and sisters-in-law, viz., (1) a man and his younger brother's wife, (2) a man and his wife's younger brother's wife, (3) a woman and her younger sister's husband, and (4) a woman and her younger brother's wife; and husband and wife are prohibited from mentioning each other's names, not only when they are speaking to or of each other, but always when they may have to mention these particular names.

The custom is very strictly observed, the breaking of it being—so far as regards brothers and sisters-in-law—considered a great sin, which the Santals believe will be punished both in this world and the next.

The manner in which they seek to avoid naming these particular names is curious and fanciful; as far as can now be ascertained the custom has not, however, had any influence on the vocabulary of the Santal language; a result of this custom is, that the Santals very frequently get second names,—although not from this cause only,—and these second names are then constantly used.

The Santals consider this custom as a special manner for the relations mentioned *honoring* each other, that is to say, they are to consider each other as sacrosanct, and according to their notions the custom is also mutual honoring; but as certain other relations between whom an analogous honoring should be expected, do not observe this custom, it seems clear, that this peculiar honoring has a deeper cause.

Besides not naming each other's names these brothers and sisters-in-law have various rules imposed on them which all are to prevent these relations from seeing each other in any too familiar position and from indulging in any familiarity towards each other, i.e., to prevent them from being tempted to sexual sin with respect to each other.

Now the Santals buy their wives, and the wife is the property of her husband. As will be shown in the paper, there are many circumstances which seem to indicate, that the tabooing of names between these brothers and sisters-in-law, and all customs imposed on them in order to

prevent any kind of familiarity between them, have as their ultimate cause a wish to protect the weaker relation and his property from being encroached on, or to protect the rights of the first buyer unfringed.

As far as regards husband and wife, the custom of tabooing each other's names seems to be of another nature than with the relations just mentioned. The Santals feel the difference themselves and describe it negatively by saying, that if husband and wife break the custom it is only dishonoring each other, but if the other relatives break it, it is sin. The custom is most likely meant for honoring, but it may be, that in this instance it has originally been borrowed from the Hindoo custom, that a wife is prohibited from naming the name of her husband, the peculiar social and family position of a Santal wife having caused the custom to be made obligatory for the husband also.

Besides the tabooing of names mentioned, the Santals in some cases taboo the animals, plants, things, etc., *i.e.*, the totems which have given names to their septs and subsepts; they are prohibited from killing, eating, carrying, cutting or in some way or other using them.

Further, almost all sacrifices are taboo for the women who are in most cases forbidden even to eat the flesh of the sacrificed animals. Men of other totems are also prohibited from eating the flesh of sacrifices offered to the different totemistic gods or spirits.

The sacred trees of the holy grove are taboo for all women, and women belonging to other households are prohibited from entering the *bhitar*, a small closet found inside every Santal dwelling house, where offerings are made to the ancestors.

The paper will be published in full, in *Journal*, Part III.

7. *Note on the Occurrence in India of the Dwarf Goose (Anser erythropus) with Exhibition of living Specimen.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

The Goose which I have the honour of exhibiting to the Society to-night is a very rare visitor to India, no instance of its occurrence within our limits having apparently been recorded since the publication of Mr. Hume's "Game Birds and Wildfowl" nearly twenty years ago; and even in that work less than a dozen specimens are mentioned as having been obtained up to date.

I was therefore very pleased at being able to secure, on New Year's Day, the bird I now exhibit, together with two others, which are at present in the Duck House at the Alipore Zoological Gardens. The specimens were obtained from a bird-dealer in the Provision Bazaar who constantly imports birds from up country; I have since heard that these came from somewhere in the direction of Rawal Pindi. The

vendor, who was well aware of the value of the birds, said that these were the first which had been sent to Calcutta.

All these birds (they appear to be a male and two females) are adult and in good condition, the plumage being perfect except the primary quills, which have been clipped. This is unfortunate, as it obscures the most notable structural feature of the species, which, although the smallest member of the genus *Anser*, as commonly restricted, has proportionally the longest wings.

The small size of these birds, however, and the extension of the white patch on the forehead up to the level of a line drawn between the eyes, will at once distinguish them from the White-fronted Goose (*Anser albifrons*) another rare Indian goose, and the only one with which the present species could possibly be confounded.

In the British Museum Catalogue of Birds, Vol. XXVII, in which the Ducks, &c., are treated by Count Salvadori, no difference in the colour of the "soft parts" between the Dwarf Goose and the White-fronted is mentioned. In the bird at present before us, however, it will be noticed that the bill is of a beautiful rose-pink, not orange, as is stated to be the case with the larger species; and the eyelids, of the colour of which nothing is said in the work referred to, are lemon-yellow. In its dark eyes and orange feet this bird agrees with the description of its larger relative.

The other two birds obtained have the soft parts similar, and as they are, as above stated, adult, this might be taken as the typical colouration for the species, were it not that the colour of the soft parts is known to be sometimes variable in geese of this genus.

The identity of the present specimen having been established, it will now rejoin its companions at the Zoological Gardens, and though the species has in summer a high northern range, it is to be hoped that these birds will thrive, since Bar-headed Geese (*Anser indicus*) which Mr. Hume found did not stand the hot weather very well in his experience, have nevertheless lived for years in the Alipore Collection in the same house in which the present birds will now replace them.

8. *Contributions from the Chemical Laboratory, Presidency College, Calcutta. On Double Bisulphate of Copper and Sodium.*—By CANDRA BHUŞAN BHĀDURI, B.A., and JYOTI BHUŞAN BHĀDURI, M.A., *Prēm Cāñd, Roy Cāñd Scholar.* Communicated by ALEX. PEDLER, F.R.S.

ABSTRACT.

The authors in this paper describe principally the yellow salt obtained by the action of sodium thiosulphate on copper sulphate or acetate, and find that its formula is $7\text{Cu}_2\text{S}_2\text{O}_8 \cdot 5\text{Na}_2\text{S}_2\text{O}_3 \cdot 8\text{H}_2\text{O}$ and not

$\text{Cu}_2\text{S}_2\text{O}_3$, $\text{Na}_2\text{S}_3\text{O}_3$, 2CuS : as given by Kessel. They also find that the above double thiosulphate when treated with caustic soda yields cuprous oxide, which again is soluble in excess of sodium thiosulphate. When this solution is boiled cuprous sulphide is precipitated. The acid cuprous thiosulphate could not be obtained by the action of sodium thiosulphate on a concentrated solution of copper sulphate as mentioned by Von Hauer.

The yellow salt described above dissolves easily in dilute hydrochloric acid. On adding concentrated hydrochloric acid or acetic acid to this solution, a perfectly white stable salt is obtained conforming to the formula $9\text{Cu}_2\text{S}_2\text{O}_3$, $5\text{Na}_2\text{S}_3\text{O}_3$, 8NaCl , $12\text{H}_2\text{O}$ and not $3\text{Cu}_2\text{S}_2\text{O}_3$, $2\text{Na}_2\text{S}_3\text{O}_3$, 4NaCl , $8\text{H}_2\text{O}$ as claimed by Siewert.

The authors also obtained a faintly yellowish white salt of the composition $\text{Cu}_2\text{S}_2\text{O}_3$, $\text{Na}_2\text{S}_3\text{O}_3$, $2\frac{1}{2}\text{H}_2\text{O}$ by an altogether different method from that of Russel.

The paper will be published in full, in the *Journal*, Part II.

9. *An annotated List of the Butterflies of the Ké Isles.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S., &c., and HEINRICH KÜHN.

The paper will be published in the *Journal*, Part II.

LIBRARY.

The following additions have been made to the Library since the meeting held in December last:—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

Amsterdam. Koninklijke Akademie van Wetenschappen,—Jaarboek, 1896.

———. ———. Verslagen en Mededeelingen, Afdeling Letterkunde, 3^{de} Reeks, Deel XII.

———. ———. ———. Afdeling Natunkunde, Deel V.

———. ———. Verhandelingen, Eerste Sectie, Deel V, Nrn. 4–8; Tweede Sectie, V, 3–10.

Baltimore. Johns Hopkins University,—Circulars, Vol. XVII, Nos. 132 and 133.

Berlin. Berliner Entomologische Zeitschrift,—Band XLII, Heft 1 und 2.

———. Gesellschaft Naturforschender Freunde zu Berlin,—Sitzungsberichte, 1896.

- Bombay. Bombay Branch of the Royal Asiatic Society,—Journal, Vol. XIX, No. 53.
- . The Indian Antiquary,—July, August and December, 1897.
- Braunschweig. Vereins für Naturwissenschaft zu Braunschweig,—Jahresbericht, 1895-96 und 1896-97.
- Buenos Aires. Museo Nacional de Buenos Aires,—Anales, Tome V.
- Budapest. Aquila,—Band IV, Nr. 4.
- Calcutta. Indian Engineering,—Vols. XXII. Nos. 23-26; XXIII, 1.
- . The Indian Lancet,—Vols. X, Nos. 11-12; XI, 1.
- . Maha-bodhi Society,—Journal, Vol. VI, No. 8.
- . Photographic Society of India,—Journal, Vol. X, No. 12.
- . The Wealth of India,—Vol. I, Nos. 10-11.
- Chicago. Field Columbian Museum,—Anthropological Series, Vols. I, Nos. 1; Geological Series, 1, 2; Zoological Series, I, 6 and 7.
- Halle. Kaiserliche Leopoldino-Carolinische Deutsche Akademie der Naturforscher,—Leopoldina, 1896.
- . Nova Acta, Band LXV-LXVII.
- Havre. Société de Géographie Commerciale du Havre,—Bulletin, Tome XIV, No. 3.
- Indianapolis, Ind. Indiana Academy of Science,—Proceedings, 1894 and 1895.
- Leige. Société Géologique de Belgique,—Annales, Tome XXII, Nos. 3; XXIII, 3.
- Leipzig. Deutsche Morgenländische Gesellschaft,—Zeitschrift, Band LI, Heft 3.
- . Königl Sächsische Gesellschaft der Wissenschaften,—Abhandlungen, Band XXIV, Heft 1.
- London. The Academy,—Nos. 1333-37.
- . Anthropological Institute of Great Britain and Ireland,—Journal, Vol. XXVII, No. 2.
- . The Athenæum,—Nos. 3656-59.
- . Institution of Civil Engineers,—Minutes of Proceedings, Vol. CXXIX.
- . Nature,—Vol. LVII, Nos. 1464-68.
- . Royal Asiatic Society of Great Britain and Ireland,—Journal, July 1897.
- . Royal Astronomical Society,—Monthly Notices, Vol. LVIII, No. 1.
- . Royal Geographical Society,—Geographical Journal, Vol. X, No. 6.

- London. Royal Microscopical Society,—Journal, Part 4, 1897.
 ———. Royal Society,—Proceedings, Vols. LXI, Nos. 376–78; LXII, 379.
 ———. Royal Statistical Society,—Journal, Vol. LX, Part 3.
- Melbourne. Royal Society of Victoria,—Proceedings, New Series, Vol. X, Part I.
- Mussoorie. The Indian Forester,—Vol. XXIII, No. 12.
- New York. American Museum of Natural History,—Annual Report, 1896.
- Paris. Muséum d'Histoire Naturelle,—Bulletin, Nos. 3–5, 1897.
 ———. Société de Géographie,—Comptes Rendus des Séances, No. 15, 1897.
- Pennsylvania. University of Pennsylvania,—Americana Germanica, Vol. I, Nos. 1 and 2.
 ———. ———. Annual Report, 1896.
 ———. ———. Bulletin of the Free Museum of Science and Art, No. 1, 1897.
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- Annual Sanitary Report of the Central Provinces for the year 1896. Fcp. Nagpur, 1897.
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Return showing the Names of present Members of the House of Commons who are in Receipt of Public Money from the Revenues of India, &c. Fcp. London, 1897.

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Monthly Weather Review, July 1897. 4to. Calcutta, 1897.

Report on the Condition and Progress of the G. V. Juggarow Observatory, Vizagapatam, including the results of observations for the year 1896. 8vo. Calcutta, 1897.

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Return of Wrecks and Casualties in Indian Waters for the year 1896. Fcp. Calcutta, 1897.

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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR FEBRUARY, 1898.

The Annual Meeting of the Asiatic Society of Bengal was held on Wednesday, the 2nd February, 1898, at 9 P.M.

Dr. A. F. R. Hoernle, C.I.E., President, in the chair.

The following members were present :—

Dr. A. Alcock, Dr. T. Bloch, Bābu Annadaprasad Basu, Rai Bahadur Saratchandra Das, W. K. Dods, Esq., F. Finn, Esq., The Most Revd. Archbishop P. Goethals, J. N. Das Gupta, Esq., A. Hogg, Esq., G. W. Kūchler, Esq., C. Little, Esq., J. Mann, Esq., R. D. Mehta, Esq., Bābu Pancānana Mukhopadhyaya, L. de Nicéville, Esq., J. D. Nimmo, Esq., A. T. Pringle, Esq., The Hon. Mr. H. H. Risley, F. J. Rowe, Esq., P. C. Roy, Esq., Paṇḍit Satyavrata Sāmaḡrami, Dr. J. Scully, Bābu Hera Lal Sen, Bābu Jadu Nath Sen, M. J. Seth, Esq., Mahamahopadhyaya Haraprasad Čāstri, Bābu Lakshminarain Singh, Bābu Naḡendra Nath Vasu, Paṇḍit Mahēndranath Vidyānidhi.

Visitors :—A. Caddy, Esq., E. B. Havell, Esq., M. R. Mehta, Esq., H. A. Stark, Esq., Bābu Surendra Nath Vasu, A. G. Westertout, Esq.

According to the Bye-laws of the Society, the President ordered the voting papers to be distributed for the election of Officers and Members of Council for 1898, and appointed Dr. G. Watt and Mr. J. Mann to be Scrutineers.

The President then called upon the Secretary to read the Annual Report.

ANNUAL REPORT FOR 1897.

The Council of the Asiatic Society have the honour to submit the following Report on the state and progress of the Society's affairs during the past year:—

Member List.

During the year under review, 16 Ordinary Members were elected, 12 withdrew, 7 died, 3 were removed from the list under Rule 40, being more than three years absent from India. There was thus a net loss of 6 Ordinary Members during the year. The total number of Members at the close of 1897, was 288, against 294 for the preceding year; of these 106 were Residents, 115 Non-Residents, 9 Foreign, 22 Life, 35 Absent from India and 1 Special Non-Subscribing Member, as will be seen from the following table, which also shows the fluctuations in the numbers of Ordinary Members during the past six years:—

YEAR.	PAYING.				NON-PAYING.				GRAND TOTAL.
	Resident.	Non-Resident.	Foreign.	Total.	Life.	Absent.	Special Non-Subscribing.	Total.	
1892	115	127	11	253	22	33	2	57	310
1893	116	123	12	251	22	33	2	57	308
1894	98	125	12	235	22	36	2	60	295
1895	108	122	12	242	23	31	1	55	297
1896	105	119	11	235	23	35	1	59	294
1897	106	115	9	230	22	35	1	58	288

The seven Ordinary Members, the loss of whom by death during the year we have to regret, were Nawab Sayid Asghar Ali Diler Jang Khan Bahadur, Sir Ananda Ram Gajapati, Prince Mahomed Firukh Shah, Mr. S. E. Peal, Raja Lachman Singh, Mr. W. T. Taylor and Captain E. Y. Watson.

The lists of Honorary Members, Special Honorary Centenary Members and Associate Members, continue unaltered from last year, there having been no casualties; their numbers stand at 24, 5, 10, respectively.

The names of Dr. J. Macgowan, Mr. A. Murray and the Rev. J. Porter were removed from the list of Corresponding Members, their addresses being long since unknown. Professor E. von Schlagintweit is now the only Corresponding Member of the Society.

No Members compounded for their subscriptions during the year.

Indian Museum.

No presentations were made over to the Indian Museum.

There were two changes among the Trustees caused by the resignations of Dr. D. D. Cunningham and Mr. C. Little, in consequence of their leaving India, and Mr. R. D. Oldham and Mr. G. W. K uchler were appointed to fill the vacant offices.

Finance.

The accounts of the Society are shown in Statement No. 1, in the Appendix, under the usual heads.

Statement No. 8 contains the Balance Sheet of the Society and of the different funds administered through it.

The Budget Estimate for 1897 was taken at the following figures :—
Receipts Rs. 17,800. Expenditure Rs. 16,700.

The actual results were found to be—Receipts Rs. 16,713-10-6 and Expenditure Rs. 20,130-11-8.

The receipts show a decrease of Rs. 1,086-5-6 while the expenditure shows an increase of Rs. 3,430-11-8 on the Budget Estimate.

As only 16 new members were elected during the year, there is a reduction of Rs. 744 under the head of receipts from "Subscriptions," "Sale of Publications" shows a slight decrease of Rs. 22-14-6. "Rent of Rooms" is also below the estimate by Rs. 400. This is due to the non-receipt of rent from the Photographic Society of India for four months.

On the Expenditure side, the items of "Postage," "Freight," "Contingencies," "Books," "Binding," "Journal Part I," "Journal Part II," "Proceedings," and "Circulars," show an increase. Owing to the purchase of paulins and providing the peons with new clothing for the cold weather there is an increase of Rs. 202-3-4 under the head of "Contingencies." "Books" were estimated at Rs. 1,500, whilst the expenditure was Rs. 3,284-3-11. This was expected, as the expenditure last year under "Books" was Rs. 564-5-0 only. A remittance of £100 was sent to Messrs. Luzac and Co. for books supplied and heavy local purchases of books were made during the year. "Journal," Part I, has exceeded the estimate by a large sum of Rs. 1,579-4-6. This heavy expenditure is due to the printing of an unusual number of plates and

for payment of Baptist Mission Press bills not presented during last year. "Journal," Part II, has exceeded the budget by a large sum of Rs. 1,408-2-6 which is accounted for by the printing charges of No. 1 of 1897 amounting to Rs. 1,476-9-6. The "Proceedings" also show an increase of Rs. 186-14-0 This is due to the payment of Baptist Mission Press bills not presented during last year. "Circulars," has exceeded the budget owing to the printing of Wilson's Descriptive Catalogue of Paintings, &c., in the Society's Rooms.

There were two items of extraordinary expenditure during 1897 not provided for in the Budget. Rs. 707-10-3 was remitted to Mr. C. J. Rodgers in part payment for preparing the Society's Coin Catalogue and Rs. 50-8-0 was spent for purchasing certain coins for the Society's Coin Cabinet.

The actual expenditure on the *Journal* and *Proceedings* was as follows:—

<i>Journal</i>	{	Part I ...	...	Rs. 3,679	4	6
		Part II ...	...	3,508	2	6
		Part III...	...	699	2	6
<i>Proceedings</i>		...	...	1,186	14	0
				<hr/>		
				Total Rs.	9,073	7 6
				<hr/> <hr/>		

against a budget provision of Rs. 8,200.

The Budget Estimate of probable ordinary Receipts and Expenditure for 1898 has been fixed as follows:—Receipts Rs. 17,700. Expenditure Rs. 16,682.

On the receipt side, the estimated income under the head of "Rent of Rooms" is increased by Rs. 400, as it is expected to receive this year the four months rent due by the Photographic Society of India.

"Subscriptions" has been slightly reduced taking into account the numbers of members elected last year. "Interest on Investments" has been reduced by Rs. 200, as during the year it will be necessary to sell off Government Securities to pay for Repairs of damages caused by the earthquake.

On the expenditure side, the changes in last year's estimate are small. "Lighting" has been increased by Rs. 22, as some gas bills of last year have not yet been presented for payment. "Freight" and "Contingencies" are based upon the actuals of the last year.

There will, however, be one extraordinary item of expenditure to be dealt with during the year 1898. Extensive repairs to the Society's buildings had to be undertaken during last year owing to damage caused by the earthquake.

The details of the Budget Estimate are as follows:—

Receipts.

Subscriptions	...	...	Rs.	7,000	0	0
Sale of Publications	...	...		600	0	0
Interest of Investments	...	...		5,500	0	0
Rent of Rooms	...	...		1,500	0	0
Government Allowances	...	...		3,000	0	0
Miscellaneous	...	...		100	0	0
				<hr/>		
Total				Rs.	17,700	0 0
				<hr/>		

Expenditure.

Salaries	...	...	...	Rs.	3,500	0	0
Commission	...	...	...		400	0	0
Pension	...	...	...		52	0	0
Stationery	...	...	...		150	0	0
Lighting	...	...	...		70	0	0
Municipal Taxes	...	...	...		819	0	0
Postage	...	...	...		600	0	0
Freight	...	...	...		40	0	0
Meetings	...	...	...		80	0	0
Contingencies	...	...	...		200	0	0
Books	...	...	...		1,500	0	0
Local Periodicals	...	...	...		16	0	0
Binding	...	...	...		750	0	0
<i>Journal</i> , Part I	...	...	...		2,100	0	0
" " II	...	...	...		2,100	0	0
" " III	...	...	...		3,000	0	0
<i>Proceedings</i>	...	...	...		1,000	0	0
Printing Circulars, &c.	...	...	...		200	0	0
Registration Fee	...	...	...		5	0	0
Auditor's Fee	...	...	...		100	0	0
				<hr/>			
Total				Rs.	16,682	0	0
				<hr/>			

Extraordinary Expenditure.

Repairs		5,528	0	0
				<hr/>			
Total				Rs.	22,210	0	0
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London Agency.

The number of copies of parts of the *Journal*, of the *Proceedings*, and of the *Bibliotheca Indica*, sent to Messrs. Luzac and Co., during the year 1897, for sale, were 715, 317, and 739, valued at £98-5-0 and £12-1-9, and Rs. 516 respectively. Other books were sent for sale amounting to £1-10-0.

Twelve invoices of books purchased and of publications of various Societies sent in exchange, were received during the year. The value of the books purchased amounted to £55-19-11.

Continental Agency.

The number of copies of parts of the *Journal*, of the *Proceedings* and of the *Bibliotheca Indica* sent to Mr. Otto Harrassowitz, the Society's Continental Agent, during 1897, for sale, were 40, 59 and 511 valued at £6-15-0, £2-18-0 and Rs. 295, respectively. Other books were sent for sale amounting to Rs. 13.

Library.

The total number of volumes, or parts of volumes added to the Library during the year was 2,713, of which 1,087 were purchased and 1,626 presented or received in exchange for the Society's publications.

In the report for 1894, it was stated that the books were being checked with the present catalogue. This work has been accomplished. The slips are now being arranged and it is hoped before the close of the year the new edition of the Society's Library Catalogue will be published.

Publications.

There were published during the year twelve numbers of the "*Proceedings*" (Nos. 7, 9 and 10 of 1896, and Nos. 1-9 of 1897), containing 239 pages of letter-press and 2 plates; six numbers of the "*Journal*," Part I (Nos. 3 and 4 of 1896, and Nos. 1-4 of 1897), containing 523 pages of letter-press and 51 plates; an Extra No. 3 of 1892 consisting of 121 pages of letter-press and 7 plates, being the completion of Major H. G. Raverty's *Mihrān of Sind and its Tributaries*; also another Extra No. of 1897 consisting of 74 pages of letter-press, being Shaw's *History of the Khōjas of Eastern-Turkistān summarised from the Tazhira-i-Khwājagān of Muḥammad Ṣādiq Kāshghari*, edited with Introduction and Notes by N. Elias; four numbers of the "*Journal*," Part II (No. 4 of 1896 and Nos. 1-3 of 1897) containing 634 pages of letter-press and 5 plates; a Special No., Part III for 1896, containing 113 pages of letter-press, being the Rev. M. A. Sherring's *Index to Hindu Tribes and*

Castes as represented in Benares. There were also published a Descriptive Catalogue of the Paintings, Statues, framed Printings, Copper-plates, etc., in the rooms of the Asiatic Society of Bengal, by Mr. C. R. Wilson, and the Index to *Journal*, Part II for 1896.

Barclay Memorial Medal.

The Sub-Committee appointed by the Council, framed rules on the subject of the award of the "Barclay Memorial Medal" which were printed in the Society's *Proceedings* for August 1897. Rs. 155 was spent for making a new reverse die and hardening, &c., the obverse die.

Coin Cabinet.

During the year 35 coins were added to the Cabinet, viz., two gold, three silver, twenty copper, and ten of mixed metal. Of these, 18 were purchased, while the rest were presented under the Treasure Trove Act; viz., 13 by the Government of Bombay, 3 by the Government of Bengal, and one by the Government of Burma. They comprise coins of the following classes: Kalinga (gold) 2, Bahmani (silver) one, Durrāni (silver) one, Gujarāt (copper) one, Ahmad Shāh one, Burmese (silver) symbolical, one; Gadhia (mixed) 10, Central Asian (copper) 18. The Kalinga gold coins are rare, and a description of them will be found in the Society's *Journal*, Part I for 1897, p. 144.

Office of Secretaries.

Dr. G. Ranking carried on the duties of the Philological Secretary till June, when he resigned, and Dr. T. Bloch was appointed. Dr. A.F.R. Hoernle edited the *Journal*, Part I, for the first two months, when Dr. Bloch was permanently appointed.

Mr. F. Finn carried on the duties of Natural History Secretary and Editor of the *Journal*, Part II, throughout the year, except for three months, from August to October, when Mr. L. de Nicéville officiated for him.

Mr. L. de Nicéville carried on the duties of the Anthropological Secretary and Editor of the *Journal*, Part III, throughout the year.

Mr. C. Little carried on the duties of Treasurer throughout the year.

Mr. C. R. Wilson carried on the duties of General Secretary and Editor of the *Proceedings* till the middle of April, when he left India on furlough, and Dr. A.R.S. Anderson was appointed to officiate for him. Dr. Anderson continued till the beginning of October, when he left Calcutta, and Dr. A. Alcock agreed to carry on the work till Mr. Wilson's return.

Mahāmahopādhyāya Haraprasād Čāstri was in charge of the *Bibliotheca Indica* and the search of Sanskrit Manuscripts and carried on the duties of Joint-Philological Secretary throughout the year.

Mr. J. H. Elliott continued Assistant Secretary and Librarian throughout the year.

Paṇḍit Harimohan Vidyābhūṣaṇa, the Paṇḍit of the Society, was allowed further leave, without pay, for one year from May, 1897, under the existing arrangements.

There were no other changes in the office establishment.

Bibliotheca Indica.

During the year 1897, twenty-eight fasciculi were published, of these 5 are in Arabic-Persian, 2 in Tibetan, and 21 in Sanskrit series. These belong to 19 different works of which 4 are in the Arabic Persian, 2 in Tibetan and 13 in Sanskrit.

The editing charges of 28 and the printing charges of 23 fasciculi were paid, the average approximate cost of each fasciculus being Rupees 404. The normal number the fund can publish is 24; this year it has published four too many. A large balance Rs. (11,000) is still in hand, and greater activity should be shown in the current year, in order that the balance may be exhausted.

The following is a descriptive catalogue of the works published during the year :—

(A) Arabic-Persian Series.

1. *Akbarnāmah* on the life of the Great Mughal-Emperor Akbar by his distinguished friend and Minister Abul-Fazl. H. Beveridge, Esq., our late President, has undertaken an English translation of this work with copious illustrative notes. One fasciculus only has been published.

2. *Al-Muquaddasi* is a work on the geography of the Muhammadan world in the 4th Century of Hijirāh. An English translation of this important work has been taken up by Surgeon-Major Dr. G. Ranking. One fasciculus only has been published.

3. The translation of the first volume of the *Muntakhabu-t-twarikh* was sanctioned along with that of the second volume. The second volume has been completed, but the first was not even taken in hand. In 1896, Dr. Ranking was entrusted with the work. He published two fasciculi in 1896, and he has published two more in 1897, Fascs. III and IV.

4. The English translation of *The Tabaquāt-i-Nāsirī* was published long ago, under the editorship of Mr. Raverty, but there was no index to that work. An index has now been published under the direction of the Council.

(B) Sanskrit Series.

1. *Aitareya Brāhmana*, next to the R̥g Veda, the most ancient work of the Hindus has been completed under the editorship of Paṇḍit

Satyavrata Sāmaçramī, a distinguished Vedic scholar who has done much for the spread of vaidik scholarship in modern times. The edition is accompanied with Sāyana's Commentary. Three fasciuli have been published during the year, namely Fascos. I, II and III of the last volume. Indices only remain to be done.

2. *Aṣu-bhāṣya*, a commentary on the Vedānta aphorisms by Ballabhācāryya who flourished in Guzerat in the sixteenth century has been completed (indices excepted) under the editorship of Paṇḍit Hemacandra Vidyāratna, the Upācāryya of the Ādi Brāhma-Samāja. The fourth and the fifth fasciuli were published during the year.

3. *Āpastamba Çrauta-Sūtras* under the editorship of Dr. Richard Garbe of Tübingen has advanced by one fasciculus only, namely, the fourteenth.

4. *Bṛhad-dharma-Purāṇa* under the editorship of Paṇḍit Hara-prasād Çāstri has advanced by one fasciculus only, namely, the sixth. The work has come nearly to a close.

5. *Kālaviveka* by Jimūtavāhana, the author of the Dāyabhāga, a Bengal Brāhmaṇa of the twelfth century on the subject of the determination of the proper time for domestic and other rites, was taken up during the year by Mahāmahopādhyāya Madhusūdana Smṛtiratna, late Professor of Smṛti in the Sanskrit College, Calcutta, and two fasciuli have been published.

6. The English translation with notes of the *Mārkaṇḍeya Purāna* by Mr. Pargiter, C.S., has advanced by one fasciculus only, namely, the fifth.

7. *Nyāyavārtika* by Udyotakara on Vātsyāyana's bhāṣya commentary of the Nyāya aphorisms has advanced by one fasciculus only under the editorship of Paṇḍit Vindhyeçvariprasād Dube of Benares. The third Adhyāya of the work has been completed in this fasciculus and there has been subjoined in the form of an appendix, a short but very important work on the Nyāya Aphorisms and their text by the celebrated Vācaspati Miçra entitled Nyāya-sūci-nibandha.

8. *Parāçara Smṛti* was completed two years ago by Mahāmahopādhyāya Candra Kānta Tarkālaṅkāra. One fasciculus of the index has appeared this year.

9. The English translation of the *Suçruta Saṁhitā*, the great Medical work of the Hindus, was undertaken by the late lamented Dr. U. C. Datta, who published two fasciuli only. On his death the work was offered to many, at last Dr. A. F. R. Hoernle took up the work during the year under review and has published the first fasciculus only.

10. The *Çrauta-Sūtra* of Sāṁkhāyana has advanced by one fasciculus only, the fourth of the third Volume. This completes the commentary of all the sixteen Chapters of the original.

11. *Taittirīya Saṁhitā*, the Saṁhitā of the Black-Yajur Veda was undertaken in the year 1860. It changed hands several times and is now under the editorship of Paṇḍit Satyavarta Sāmaçramī. The Text and the Commentary have been completed. The indices yet remain to be done.

12. *Tattva Cintāmaṇi*, the Standard work of the Naiyāyikas of the Bengal School has advanced by three fasciculi, namely, Part IV, Vol. I, Fasc. V, and Part IV, Vol. II, Fascs. I and II.

13. *Tulsi Satsai*, edited with a short Commentary by Paṇḍit Vihārīlāl Chaube has been completed with a table of contents and a Hindi preface, Fasc. V.

(C) Tibetan Series.

1. Two fasciculi of the Sher Phyin or the Tibetan translation of the Çatasāhasrikā Prajnāpāramitā has been published by Babu Pratāpa Candra Ghoṣa being fasciculi III and IV of the third volume.

2. The Avadāna-Kalpalatā with its Tibetan translation under the joint editorship of Rāy Çarat Candra Dās, C. I. E., and Paṇḍit Hari-mohan Vidyābhūṣaṇa has advanced by one fasciculus only, namely, Vol. II, Fasc. V.

ABSTRACT OF PROCEEDINGS OF COUNCIL DURING 1897.

January 29th, Ordinary Meeting.

Permission was granted to the Manager, Indian Art College, Calcutta, to print and publish selected papers from the "*Asiatic Researches*" which were now out of print, and they were asked to present two copies to the Library of the Asiatic Society of Bengal.

On an application from the Librarian, Berlin Anthropological Society, an offer was made of the Society's *Proceedings* and *Journal*, Parts I and III, in exchange for their "Verhandlungen."

On the representation of the Master, Her Majesty's Mint, Calcutta, it was ordered that the original die of the Barclay Memorial Medal should be hardened and polished. If it cracked, the Society was willing to bear the cost of Rs. 100 for a new die.

The application from Maulvie Mirza Ashraf Ali, soliciting permission to prepare Indexes to Vols. I-III of the *Iṣābah*, was referred to the Philological Committee.

A letter from the Honorary Secretary, Buddhist Text Society, proposing the affiliation of the Buddhist Text Society, with the Asiatic Society of Bengal, together with a memorandum by Dr. Hoernle suggesting a scheme, were ordered to be circulated to the Members of Council.

The Budget of the expenses of the *Bibliotheca Indica*, drawn up by the Philological Committee for the year 1897, was approved.

The names of the Rev. J. Porter, Mr. A. Murray and Dr. J. Macgowan, Corresponding Members of the Society, were struck off from the list of members, their addresses being long since unknown.

It was agreed to announce at the next General Meeting of the Society that the Barclay Memorial Medal would be given for the most important piece of work done in research in Zoology or Botany specially relating to India during 1897.

Dr. Ranking was asked to make arrangements for the preparation of an Index to Low's Translation of the *Badāoni*, Vol. II, at the usual rate.

The annual increment of the Assistant Secretary of the Society was recorded.

On the recommendation of the Philological Secretary, a fee of Rs. 3-0-0 per page for translating and editing Al-Muqaddasi's work "Aḥṣanu-l-tāgāsim" was agreed to.

The purchase of a copy of I-tsing Buddhist Religion as practised in India and the Malay Archipelago, was approved.

Copies of the life of Lord Clyde, and life of Sir Hope Grant, were ordered for the Society's Library.

February 25th, Ordinary Meeting.

On an application from the Chief Librarian, Royal University of Upsala, asking to be supplied with a long list of *Bibliotheca Indica* wanting in their set, and of the back volumes of the Society's *Journal*, Part III and *Proceedings*, it was ordered to give them as many numbers of the *Bibliotheca Indica* of both series as are available according to the rules, also to complete the Society's *Journal*, Part III and the *Proceedings*.

The Librarian of the Johns Hopkins University was supplied with five fasciculi of the "Aitareya Āraṇyaka" wanting in their set.

Dr. Ranking was allowed at the rate of Rs. 3-0-0 a page instead of the sanctioned rate of Rs. 2-0-0 a page for the translation of *Badāoni*, Vols. I and III.

A letter from the Master, Her Majesty's Mint, Calcutta, stating that the obverse die of the Barclay Memorial Medal had been hardened and polished and forwarding a specimen in tin struck from it, was recorded.

With reference to the affiliation of the Buddhist Text Society with the Asiatic Society of Bengal, it was resolved that the Finance Committee should be first consulted and asked to ascertain—

- (1). The Financial position of the Buddhist Text Society.
- (2). If the Government of Bengal was willing to continue the annual grant of Rs. 2,000 to the Asiatic Society of Bengal.

and that the General Secretary should ascertain if the Buddhist Text Society was willing to sink its identity in the Asiatic Society of Bengal.

On an application from the Baptist Mission Press, asking for a revision of the rates charged by them for the Society's publications, they were offered Rs. 3 a page for the *Journal* and *Proceedings* with annas 8 extra for articles of exceptional difficulty.

The appointment of Dr. Bloch as a member of Council and Editor of the Society's *Journal*, Part I, was recorded and ordered to be reported to the next General Meeting.

The names of the various Committees for the ensuing year were ordered to be read at the General Meeting.

On the recommendation of Dr. Hoernle, the purchase of several books for the Society's Library was approved.

The purchase of several books for the Society's Library was approved.

On the recommendation of the Secretary, several books were ordered to be purchased for the Society's Library.

April 1st, Ordinary Meeting.

On the recommendation of the Philological Secretary, certain manuscripts were ordered to be purchased from Mirza Mahomed Shirāzi of Bombay for the Society's Library.

A letter from the President, Royal Society, London, stating that at a representative meeting of the Presidents of Scientific Societies in London, it was unanimously resolved to form a Fund to be called the Victoria Research Fund and to be administered by representatives of the various Scientific Societies for the encouragement of research in all Branches of Sciences, and asking whether the proposal met with the acceptance of the Asiatic Society of Bengal, was ordered to be read at the General Meeting with a recommendation that the proposal be accepted.

At the suggestion of Dr. Hoernle, it was agreed to subscribe for a copy of the *Asiatic Quarterly Review* from 1897: The back numbers were also ordered to be purchased for the Society's Library.

On the recommendation of Dr. Hoernle, the purchase of a copy of Poulton's Charles Darwin and the Theory of Natural Selection, for the Society's Library was approved.

On the resignation of Dr. D. D. Cunningham as a Member of Council and of the Trusteeship of the Indian Museum on behalf of the Society, Dr. D. Prain was asked to serve as a Member of Council, and Mr. R. D. Oldham was appointed to the vacant Trusteeship in the Indian Museum.

It was ordered to sell Government Securities to pay off the bill for Rs. 155 for making a new reverse die and hardening, &c., the obverse die for the Barclay Memorial Medal.

The Superintendent, Baptist Mission Press, was informed in reply to a letter on the subject of rates for printing the Society's publications, that on further consideration, the Council was willing to accept the original terms, viz., Rs. 3-8 a page for *Journal* and *Proceedings* and annas 8 extra a page for articles of exceptional difficulty.

In reply to a letter from Lieutenant Eldrid Pottinger, asking if the Society was willing to reconsider the question of making a grant towards re-embursing him for part of the "out of pocket" expenses which he would incur in his journey of exploration to the sources of the Irrawaddy, in the event of his journey being successful, he was informed that the Council in the event of his journey being successful, were prepared to re-consider the question of a grant towards re-embursing parts of his "out of pocket" expenses, and would also be glad to be furnished on his return with any original information he may have gained of Ethnological or other Scientific interest.

On the recommendation of the Library Committee, long lists of books were purchased from Messrs. Thacker, Spink and Co., Col. J. Waterhouse, Messrs. Cambrey and Co., and Messrs. Bannerjee and Co., for the Society's Library.

The Secretary, Buddhist Text Society was informed, in reply to a letter on the subject of the affiliation of the Buddhist Text Society with the Asiatic Society of Bengal, that the Council could not see its way to agree to the proposed affiliation.

Messrs. Meugens, King and Simson were asked to audit the accounts for 1896.

Paṇḍit Harimohun Vidyābhūṣaṇa, the Paṇḍit of the Society, was granted further leave of one year from May 1897.

The Sub-Committee for the Total Eclipse of the sun of January, 1898, submitted proceedings of two meetings, one on the 20th April, 1896, and another on the 31st March, 1897. At the first meeting the following were the Proceedings:—

I. Read a letter from General J. F. Tennant to Col. Waterhouse, and a note by Bābu Pratāpa Candra Ghoṣa.

Order.

(a) A large map should be made showing in detail the path of the moon's shadow during the Total Eclipse of the Sun, January 21st, 22nd, 1898.

(b) A list should be made of the most accessible stations situated on the path of the shadow.

(c) A short meteorological description of the different localities should be prepared showing what spots are to be avoided as likely to be cloudy.

(d) A note should be prepared as to facilities for getting skilled labour in the neighbourhood and accommodation for the observers. Probably many parties will have to camp out, and arrangements will have to be made for this.

(e) Write to the Government of India, Railway Department, asking what arrangements the Indian Railways will be disposed to make for the transport of observers with their instruments and other appliances.

(f) Write to the Government of India, Military Department, asking whether the Military Department would be able to lend tents to parties camping out.

(g) Write to the Governments of Bombay, Central Provinces, North-Western Provinces, and Bengal, asking what assistance they could give to observing parties.

(h) Notify to the Secretary of the Joint Committee of the Royal Society and Royal Astronomical Society what the Asiatic Society of Bengal propose doing, and ask if they can suggest anything further in which the Asiatic Society may be of use.

II. Resolved that Professor C. Michie-Smith, Mr. J. H. Gilliland and the Rev. Father A. de Peneranda be added to the Sub-Committee.

Order. Send them copies of these proceedings.

At the second meeting the following were the Proceedings :—

The Secretary reported that all the recommendations of the Sub-Committee made at the meeting of 20th April, 1896, had been carried out, and that he had forwarded the information collected to the Secretaries of the Joint Committee of the Royal Society and the Royal Astronomical Society.

Order. Report to the Council, also report the replies of the Secretaries, when received.

Resolved that Col. G. Strahan, R. E., Delra Dun, Major-General C. Strahan, R. E., Surveyor-General of India, Dr. A. R. S. Anderson, Mr. G. W. Kuchler and the very Rev. Father E. Lafont be invited to join the Committee.

The Proceedings were recorded.

The appointment of Dr. Anderson to officiate as General Secretary in the place of Mr. Wilson proceeding to Europe on furlough for 7 months was approved and ordered to be announced at the General Meeting.

With reference to Council order, dated 28th February, 1895, permit-

ting Rai Bahadur Sarat Chandra Das, an associate member, to take out books, &c., from the Society's Library as allowed to a full member, he was informed that the Council found that they could not under the rules continue to permit him to take out books unless he became an Ordinary Member.

April 29th, Ordinary Meeting.

A letter from the Secretary, Joint Permanent Eclipse Committee of the Royal Society, and Royal Astronomical Society, London, conveying their thanks to the Society for the valuable information contained in the Meteorological Note and copies of Correspondence on the subject of the Total Eclipse of the Sun of January, 1898, was recorded.

Dr. D. Prain being unable to accept a seat on the Council, it was approved, at the President's proposal, to ask the Hon. Mr. H. H. Risley to join the Council.

A letter from the Assistant Secretary, Government of India, Home Department, stating that the Governor-General in Council was pleased to withdraw the conditions imposed in Home letter No. 448 of the 9th September, 1882, under which copies of parliamentary papers and returns relating to India were at present supplied to the Asiatic Society of Bengal and to regard the past Blue Books as the property of the Society, was recorded.

250 copies of the Descriptive Catalogue of the Paintings, &c., in the Society's Rooms were ordered to be printed.

On the recommendation of the President, a copy of William Ramsay's Gases of the Atmosphere, the History of their Discovery, was ordered to be purchased for the Society's Library.

The purchase of a copy of the Interchangeable Index book and 500 slips, for numismatic purposes, was recorded.

On the recommendation of the Anthropological Secretary, a copy of Hamilton's Art and Workmanship of the Maori Race in New Zealand, was ordered to be purchased for the Society's Library.

May, 27th, Ordinary Meeting.

It was agreed to purchase the manuscript of "Diwani Buba Fughani of Shiraz," and a work entitled "Miratul Tarikh" from Munshi Jwala Nath Pandit of Calcutta for the Society's Library.

The acceptance by the Hon'ble Mr. H. H. Risley of a seat on the Council of the Society was recorded.

The resignation of Colonel J. Waterhouse of the offices of Vice-President and Member of Council of the Society was recorded.

Read a letter from the Chief Secretary to the Government of

Bengal, enquiring if there was any objection to Rai Sarat Chandra Das and his two assistants, named Pandit Sarat Chandra Shastri and Satis Chandra Vidyabhushan using the *Bibliotheca Indica* series and the Oriental Manuscripts, Tibetan, Sanskrit, Nepalese, &c., in the Society's Rooms during office hours. It was resolved that the letter be formally acknowledged and the Chief Secretary be informed as follows :—

(1) That the permission now sought for was accorded on the 28th February, 1895, to Rai Sarat Chandra Das Bahadur and his assistants, but that the permission was withdrawn owing to complaint having been made of the disorderly conduct and disregard of the authority of the officials of the Society by the Pandits of the Rai Bāhādur.

(2) In granting the permission, the Council acted under no written rule of the Society, but in accordance with the unwritten rule of all learned Societies to render every assistance in their power to earnest students, whether Members of the Society or not; a rule which carries with it the reciprocal obligation of good behaviour on the part of those to whom the assistance is extended.

(3) The Council, finding this obligation unrecognised and disregarded, and being unable to formally impose conditions, found themselves compelled to withdraw the privileges formerly granted.

(4) So far from wishing to oppose the progress of Rai Sarat Chandra Das Bahadur's work or that of any other, the Council has appointed a Committee with instructions to draft regulations under which persons other than Members of the Society may be permitted to consult books and manuscripts in the Society's Library.

Mr. H. B. Perie was granted Rs. 50 instead of Rs. 25 for revising the Index to Sherring's Hindu Castes and Tribes.

July 1st, Ordinary Meeting.

On the recommendation of the Natural History Secretary, an exchange of the Society's *Journal*, Part II, and *Proceedings* for the Report of the G. V. Juggarow Observatory, Vizagapatam, was sanctioned.

The resignation of Dr. Ranking of the Philological Secretaryship of the Society was accepted, and Dr. Bloch was asked if he would accept the Philological Secretaryship.

On an application from the Superintendent, Baptist Mission Press, it was agreed to allow the press to charge for any work done that may be stopped for a period of six months.

On an application from Mrs. A. S. Beveridge on the subject of the publication of a Persian manuscript of a memoir of Bābar and Humāyun written by Gulbadan Begum with English Notes in the

Bibliotheca Indica, it was ordered to ask Mr. Beveridge for a translation with notes for publication in the *Journal* of the Society.

On an application from Mirza Ashraf Ali, it was agreed to prepare the Indexes to Vols. I-III of the "Isabah."

Mr. F. E. Pargiter and Dr. Ranking were informed that Dr. Grierson had been appointed to represent the Asiatic Society of Bengal at the International Congress of Orientalists at Paris in next September.

Messrs. Luzac & Co. were informed in reply to their letter on the subject of a trade discount of 25 per cent. to Booksellers for purchasing the Society's publications, that the Council resolved to stick to the existing arrangement.

The prices of the Index to the English Translation of the *Tabaqat-i-Nasiri* in two parts and *Kāçmiri Grammar, Part I*, were fixed at Re. 1 and Re. 1-8-0 respectively.

July 29th, Ordinary Meeting.

The acceptance by Dr. Bloch of the office of Philological Secretaryship of the Society was recorded.

On the recommendation of Paṇḍit Mahēndra Nāth Vidyānidhi several books were ordered to be purchased for the Society's Library.

The purchase of a copy of Cole's Santali Primer, for the Society's Library was sanctioned.

Mr. de Nicéville was asked to act for Mr. Finn as Natural History Secretary for three months.

August 26th, Ordinary Meeting.

The presentation of Verbeek and Fennema's *Description Geologique de Java et Madoura*, Vols. I-II, with atlas by the Director of the Department of Instruction, Public Worship and Industry at Batavia forwarded by the Consul for the Netherlands, was accepted with thanks.

At the suggestion of Dr. Grierson to distribute his edition of *Kāçmiri Grammar*, gratis, to those persons to whom the *Bibliotheca Indica* were presented, it was ordered to give 30 copies to Dr. Grierson and free copies to all public bodies on the distribution list of the *Journal*, Asiatic Society of Bengal.

The acceptance of Mr. de Nicéville to officiate for Mr. Finn as Natural History Secretary of the Society, was recorded.

At the request of Mr. C. J. Rodgers asking for payment of Rs. 1,062-8-0 being the balance due for cataloguing the Society's coins, it was ordered to pay him Rs. 700 on account and the balance on completion of the final proof.

Messrs. Mackintosh, Burn and Co.'s approximate estimate of Rs. 5,340-3-6 being cost of repairing damage caused by the earthquake to the Society's buildings was accepted, and they were asked if the skylight over staircase could be altered and to submit plans for altering the same.

Mr. Charles Saunders was elected a Member of the Society.

On a note by the President on the subject of the draft Rules under which persons other than Members of the Society may be permitted to consult books and manuscripts in the Society's Library, Rai Surat Chandra Das was informed that the Council were willing to favourably consider his request to work in the Asiatic Society's Library, but that he must first return to the Library all the books and manuscripts in his possession belonging to the Library, so that the matter may be disposed of at the next Council Meeting.

Certain books were purchased for the Society's Library.

September 23rd, Ordinary Meeting.

A letter from Rai Bahadur Sarat Chandra Das stating that he will settle the question of books and manuscripts out with him when he returned to Calcutta in December next, was recorded.

Paṇḍit Satyavrata Sāmaçramī was supplied at his request with notices of Sanskrit manuscripts from Vols. I to X, Part I.

Babu Sarat Chandra Mitra was elected an Ordinary Member of the Society.

A letter from the President on the subject of Archæological exploration in the Nepal Terai, was recorded.

A copy of Abel-Remusat's History of Khoten (in French) was ordered for the Society's Library.

The selling price of Mr. Wilson's Descriptive Catalogue of the Paintings, Statues, framed Prints, Copper-plates, &c., in the rooms of the Asiatic Society of Bengal was fixed at Re. 1 per copy.

October 28th, Ordinary Meeting.

On an application from the Meteorological Reporter to the Government of India, an exchange of the Society's *Proceedings* and *Journal*, Part II for the publication of the Meteorological Department was sanctioned. It was ordered to send them the back numbers as far as could be managed.

The thanks of the Council were conveyed to Dr. Grierson for his brief account of the *Proceedings* of the International Congress of Orientalists held at Paris in last September, and he was informed that his report would be laid before next General Meeting and printed in the *Proceedings*.

A copy of Cave's Ruined Cities of Ceylon was ordered for the Society's Library.

Dr. Anderson having left Calcutta, Dr. Alcock agreed to carry on the duties of the General Secretary till Mr. Wilson's return.

November 25th, Ordinary Meeting.

A letter from the President, Bikair Agency on the subject of the loan of certain manuscripts, was recorded.

With reference to a letter from Mr. Oldham, tendering his resignation of the office of Trusteeship of the Indian Museum on behalf of the Society, it was resolved to thank Mr. Oldham for his past services, and to request him to kindly re-consider his resignation as the Council did not consider it absolutely necessary that he should give his *continuous* attendance at Trustees' Meetings.

At the suggestion of the President, it was ordered to send for a copy of Lane-Poole Stanley's Catalogue of the collection of Arabic coins preserved in the Khedivial Library at Cairo, for the Society's Library.

Lieutenant Eldrid Pottinger was informed in reply to a letter forwarding a paper on certain Tribes in Burma, &c., and asking the Council to re-consider the question of a grant towards expenses of his journey, that the Society while sympathising with the unsuccessful issue of his journey of exploration, were unable to re-consider the question of a grant but as regards his paper the Society were willing to publish it if he submitted it independent of all other questions.

Mr. Finn having resumed charge of his duties as Natural History Secretary from Mr. de Nicéville, the change was ordered to be reported at the next General Meeting.

On the report of the Librarian regarding certain Library Books out with Mr. G. W. Forrest, it was ordered that the return of the books be insisted on.

December 30th, Ordinary Meeting.

A letter from Mr. Oldham expressing willingness to continue in the office of Trusteeship of the Indian Museum on behalf of the Society was recorded.

On the resignation of Mr. Little of the offices of Treasurer and Trusteeship of the Indian Museum on behalf of the Society, it was resolved to accept Mr. Little's resignation with great regret and to intimate the cordial thanks of the Council for his long continued services both as Honorary Treasurer and Trustee. It was ordered to ask M. G. W. Küchler to act as Treasurer till the election in February.

Mr. KÜchler was also elected a Trustee in the place of Mr. Little resigned.

On the recommendation of the Council, the meeting day was changed to Friday instead of Thursday.

Copies of Boulger's Central Asian Question, Hellwald's Russians in Central Asia, and Bonvalot's Through the Heart of Asia, were purchased for the Society's Library.

At the suggestion of the Secretary, the two Travelling Paṇḍits in search of Sanskrit Manuscripts were allowed travelling allowance as per Travelling Allowance Code and not double Intermediate Railway fare.

The Report having been read, the President invited its acceptance.

Mr. R. D. Mehta proposed and Mahamahopadhyaya Haraprasad Čāstri seconded that the Report be approved.

Mr. C. Little proposed as an amendment "but that the Council arrange during the coming year to prevent expenditure on the Journals exceeding the amount allowed by the Society in the estimates and report at the next annual meeting."

Mr. F. J. Rowe seconded the amendment, which was carried by a majority of one (eleven against ten).

The President then announced that the Trustees of the "Elliott Prize for Scientific Research" had awarded the prize for the year 1897 to Bābu Sarasi Lal Sarkar, and laid on the table the following

REPORT ON THE "ELLIOTT PRIZE FOR SCIENTIFIC RESEARCH" FOR 1897.

The Trustees have received Essays from the following competitors for the prize:—

1. *"An Investigation of the Properties of Numbers: and on Some Propositions relating to the Theories of Congruences and of Quadratic Residues."*—By SARASI LAL SARKAR, M.A.
2. *The Theory of the Half-tone dot.*—By UPENDRAKISOR ROY CHOWDHURY, B.A.
3. *Stylography of the English Language.*—By BROJONATH SHAHA, L.M.S.
4. *An improvement of the New Method of solving Quartics by Radicals, published in the Calcutta University Magazine, June, 1896.*—By NRIPENDRA NATH CHATTERJI.
5. *Bhuvanesa Yantra Prakas.*—By LAL TEILOKINATH SINGH.

The Trustees, after consulting experts as provided in the scheme, adjudge the prize for the year 1897 to Bābu Sarasi Lal Sarkar, M.A.

	E. J. TREVELYAN, <i>Vice-Chancellor, Calcutta University.</i>	}	<i>Trustees.</i>
	C. A. MARTIN,		
CALCUTTA : 2nd February, 1898.	} Director of Public Instruction, Bengal. A. F. R. HOERNLE, } President, Asiatic Society of Bengal.		

The President then addressed the meeting.

ANNUAL ADDRESS, 1898.

GENTLEMEN,

I now rise to deliver the usual annual address. I confess that when you did me the honour, last year, of nominating me to the post of President of your Society, it was the prospect that I should have to deliver such an address which made me hesitate before I accepted your honouring proposal. Looking over the annual addresses delivered within the last ten years, I notice that they have been gradually growing to very large dimensions. The last two addresses occupy respectively, in print, 154 and 170 of the pages of our Proceedings. The thought that possibly it might be expected of me to "break this record" caused me many misgivings, because I felt that I lacked both the ability and the leisure to do so. Indeed I felt rather inclined at one time to initiate a new departure by returning to the previous long-prevailing custom of the President making only a few brief observations on the past year's proceedings of the Society. But my courage failed me; I felt I must leave it to some one of greater weight than myself to make the change; but I cannot help thinking that a return to the old practice would be wise in the interests of the Society. At this, the busiest time of the year, there should be no stumbling-block put in the way of those whom we desire to take upon themselves the responsible post of President of our Society.

There are two preliminary remarks which I wish to make. One refers to the Report of the Council which has just been read. You will have observed that we close our accounts with a deficit of Rs. 3,417-1-2. This is a rather serious matter, considering that the regular condition

of our finances is that our income just about balances our expenditure. The deficit has been due to two co-operating causes: a decrease in our receipts and an increase in our expenditure. The main cause of the former is the reduction of Rs. 744 under the head of subscriptions from members. Only sixteen new members joined the Society during the past year. It seems to me a cause of much regret that the Society does not receive as much support as it deserves, especially from some of the scientific departments. I would earnestly impress upon our members the necessity of increasing the resources of the Society by inducing larger accessions to our numbers. The main cause of the increase in our expenditure has been the extraordinary cost of publishing our Journal Parts I. and II. In Part I. eight numbers (including Extras) have been issued instead of the usual four, and in Part II. one number, an important one, was unusually large. From one point of view, of course, this activity is very satisfactory; but it caused the budget allowance to be exceeded by nearly Rs. 3,000. I trust that our Secretaries, who so ably edit our Journals, will see the necessity of endeavouring in the ensuing year to keep within the limits of their allowances. There is a very special reason for the practice of economy. In company with the rest of Calcutta our Society suffered heavily in the late earthquake. Our premises were severely damaged, and we had to incur a heavy bill for repairs done by Messrs. Macintosh Burn & Co. This bill, amounting to upwards of Rs. 5,500, will have to be paid in the course of the year, and a strong effort must be made to meet it without crippling the resources of the Society. As one means of doing so I would suggest the advisability of selling some of our oil-paintings. There are among them, I understand, a few of considerable value, one, for example, of a rural scene by the younger Morland. Such a disposal of them, I venture to think, would be not only in the interests of the Society, but also of the pictures themselves, the proper preservation of which, in the Calcutta climate, is a matter of great difficulty.

The other point concerns a duty which it gives me very great pleasure to discharge. It is to remind you of the valuable services of our officers given by them to the Society voluntarily and at the sacrifice of their private time and leisure. Mr. C. R. Wilson was our General Secretary till the middle of April, when he was succeeded first by Dr. A. R. S. Anderson and afterwards by Dr. A. W. Alcock. Dr. Ranking acted as our Philological Secretary till June, when he left Calcutta on leave, and Dr. Bloch was appointed. Mahāmahopādhyaya Hara Prasād Shāstri carried on the duties of Joint-Philological Secretary throughout the year; so did Mr. F. Finn and Mr. L. de Nicéville those

of Natural History Secretary and Anthropological Secretary respectively. Mr. C. Little continued our Treasurer for another year with conspicuous zeal. To all these gentlemen I desire to offer my warm acknowledgments for the help afforded me in presiding over the affairs of the Society, and I would also ask you to pass a cordial vote of thanks for their services to the Society during the past year.

In thinking over what I should make the subject of my annual address to you, it has occurred to me that perhaps I might be able to say something that would interest you and at the same time not take up too much of your time, if I were to confine myself to those departments of research in which I have been to some extent a worker myself, and to review the period from 1883 up to this year. I have chosen this period, both because it is characterised by special progress in those departments, and because the preceding period of one hundred years was reviewed by me in 1883 in the Centenary Review. The departments I refer to are those of the History and Literature of Jainism and Buddhism, and of Indian Archæology and Epigraphy. To these I will add some account of the recent Ethnographic and Linguistic Surveys, as well as of the History of Old Calcutta.

Jainism and Buddhism.—A very great advance, during the period under review, has been made with respect to our knowledge of JAINISM. Jainism is the great Indian rival of Buddhism, and is as ancient an institution as the latter, though until quite recent years its very existence before the middle ages was denied by the learned world, and even at the present time, by the side of the world-wide fame of its illustrious rival, it is hardly more than a name to the general public. It owes in the main its rehabilitation as one of the most ancient monastic organizations of India to the researches of Professor Jacobi, which were seconded by Hofrath Prof. Bühler, myself, and others.¹ The results of these may be thus summarised.

The founder of Jainism is commonly known by the title of Mahāvira, under which he is usually referred to in the sacred books of the Jains. His personal name, however, was Vardhamāna. In the books of the rival Order of the Buddhists, he is designated the Nāta-putta, i.e., “the son of the chief of the Nāta clan of Kṣatriyas.” For like Buddha, Mahāvira was of high aristocratic descent, the son

¹ For detailed information see Prof. Jacobi's Translations of the Ācārāṅga and Kalpa Sūtras (1884), and the Uttarādhyayana and Sūtrakṛtāṅga Sūtras (1895), Prof. Bühler's *Indian Sect of the Jains* (1887), and my own Translation of the Upāsakadaṣa Sūtra (1888); also Prof. Jacobi's Kalpa Sūtra, published in 1879, and a paper of his on the *Origin of the Quētāmbara and Digāmbara Sects* in the *Journal of the German Oriental Society*, Vol. XXXVIII, 1884.

of a Rājā or petty king. His father Siddhārtha was the head of a Kṣatriya clan, the so-called Nātas or Nāyas, who were settled in the suburb Kollāga of the once flourishing town of Vaiçāli, whence it is that Mahāvira is occasionally designated the Vēsāliya or "the man of Vaiçāli." Vaiçāli is the modern Bēsārḥ, about 27 miles north of Patna. Anciently it consisted of three distinct portions, called Vaiçāli, Kuṇḍagāma and Vāpiyaḡāma, and forming, in the main, the quarters inhabited by the Brāhman, Kṣatriya and Baniyā castes respectively. At the present day it has entirely disappeared, but the sites of its three component parts are still marked by the villages of Bēsārḥ, Basukuṇḍ and Baniyā. While it existed, it had a curious political constitution; it was an oligarchic republic; its government was vested in a Senate, composed of the heads of the resident Kṣatriya clans, and presided over by an officer who had the title of King and was assisted by a Viceroy and a Commander-in-Chief. Siddhārtha was married to Triçalā, who was a daughter of Cētāka, the then governing King of the republic. From her Mahāvira was born in or about 599 B. C., and he was, therefore, a very highly connected personage. This accounts for the fact that, like his rival Buddha, in the earlier years of his ministry, he addressed himself chiefly to the members of the aristocracy and to his fellow castemen, the Kṣatriyas. He married, and his wife Yaçōdā bore him a daughter Anojjā who was married to Jamāli, a fellow nobleman and, later on, one of his followers. He seems to have lived in the parental house, till his father died, and his elder brother Nandivardhana succeeded to what principality they owned. Then at the age of thirty, he, with the consent of the head of his house, entered the spiritual career, which in India, just as in Europe, offered a field for the ambition of younger sons. In Kollāga, the Nāya clan kept up a religious establishment, doubtless similar to those still existing in the present day. There is one, near Calcutta, in the Maniktola suburb, which is probably known to most of us. Such establishments consist of a park or garden, enclosing a temple and rows of cells for the accommodation of monks, sometimes also a stūpa or sepulchral monument. The whole complex is not unusually called a Caitya, though this is strictly only the name of the shrine within it. The Caitya of the Nāya clan was called Duipalāsa, and it was kept up for the accommodation of the monks of Pārçvanātha's order, to whom the Nāya clan professed allegiance.

Mahāvira, on adopting the monk's vocation, would naturally retire to the Duipalāsa Caitya and join the Order of Pārçvanātha. But the observances of that order do not seem to have satisfied his notions of stringency, one of the cardinal points of which was absolute nudity.

So after a trial of one year, he separated, and discarding his clothes, wandered about the country of North and South Bihār, even as far as modern Rājmahal. Considering his tenet of absolute nudity, it is no wonder that it took twelve years before he succeeded in gaining a following that acknowledged his divine mission. It was now that he obtained the title of Mahāvira or 'Great Hero,' and was acknowledged to be a Jina and Kēvalin, *i.e.*, a holy and omniscient person. It is his title of Jina or 'Spiritual Conqueror,' from which the names Jainism and Jain, by which his system and his sect are now generally known, are derived; and it is Mahāvira's initial connection with Pārçvanātha's order which accounts for the fact that the latter saint is reckoned in the Jain hierarchy as the immediate predecessor of Mahāvira, and that his image is set up in so many Jain temples. The famous sacred hill of Pārçvanātha (or Paresnāth, as it is commonly called) with its Jain temples also takes its name from him. The last thirty years of his life Mahāvira passed in teaching his religious system and organising his order of ascetics, which was patronised chiefly by those princes with whom he was related through his mother, the kings of Vidāha, Magadha and Aṅga, *i.e.*, those of North and South Bihār. In the towns and villages which lay in these parts he spent almost the whole period of his ministry, though he extended his travels as far north as Çrāvasti, near the Nepalese frontier, and perhaps as far south as the Paresnāth hill. The area of his ministry, therefore, practically coincides with that of his great contemporary Buddha. His life on the whole, was an uneventful one. With Buddha, who, as we now see, was his most formidable rival, he does not appear to have come into any prominent conflict. The Jain sacred books hardly notice him. On the other hand, they tell us of a fierce hostility between Mahāvira and another great spiritual chief of those days. This was Gōsāla, the son of a Mankhali or beggar, who had set up as the head of a section of the Ājivika order of monks, an order which at that time and for some subsequent centuries was so important as to be mentioned in one of Açōka's pillar edicts about 234 B.C., but which has long since ceased to exist. This Gōsāla appears to have been the first who attached himself to Mahāvira when the latter commenced his naked peregrinations. But after following Mahāvira for six years, he quarrelled with his master, and set up as a chief of ascetics himself, and that, two years earlier than Mahāvira himself ventured to do. This conduct naturally enough explains the intense hostility of Mahāvira, who resented the presumption of his former disciple in taking precedence of his master.² Besides Gōsāla, the apostate, Mahāvira had

² I should mention that Prof. Jacobi holds a slightly different view of Gosāla's position. According to him Gosāla and Mahāvira were two independent sect

eleven chief disciples, who all remained true to him, and who are said to have, between them, instructed 4,200 Çramaṇas or monks; but only one of them, named Sudharman, survived his master, and it is through him that Jainism has been continued to the present day. Mahāvira died in the seventy-second year of his life, in the small town of Pāvā, in the Patna district, which is still considered one of the most sacred spots by the Jains. The traditional dates of his birth and death are 599 B.C. and 527 B.C. As modern research has shown they cannot be far wrong. The corresponding dates for Buddha, who lived to the age of eighty, are 557 and 477 B.C. It is certain that the two men were contemporaries, and that Mahāvira died some years before Buddha. The former, like his great contemporary, must have been an eminently impressive personality. This accounts for his great success as a sect founder. He certainly succeeded in eventually bringing over to his way of thinking the whole order of Pārçvanātha, so that the name of Nirgrantha or "one without any ties," which originally belonged to that order, attached itself to the order of Mahāvira. The only essential point of difference between them was the question of wearing a modicum of clothes. The followers of Pārçvanātha appear to have yielded that point for a time. The difference, however, being one on a point of the merest decency, necessarily continued to subsist in a dormant state, till a few centuries later it woke up again and, as we shall see further on, led to the great division of the Jain order into the Çvētāmbaras and Digambaras or the 'White-clothed' and 'Unclothed ones.' The term Nirgrantha or Nigaṇṭha, indeed, was the name by which the Jains were originally known. They are mentioned under that name in the same pillar edict of Açōka, about 234 B. C., which, as I have already remarked, also names the Ājīvika monks; and it remained their name for many centuries afterwards, for Hiuen Tsiang, in the seventh century A.D., still knows them under no other name. How it came to fall into disuse, and to give place to the comparatively modern name Jain has not yet been explained.

I will notice, in passing, the coincidence between Christ and Mahāvira with respect to the number twelve of their disciples which in either case includes an apostate. An interdependence of Christianity and Jainism, I believe, has never been seriously propounded, as has been done in the case of Buddhism with respect to similar coincidences. Such coincidences are apt to be urged too far; and founders, who only associated for six years with the intention of combining their sects and fusing them into one; but that at last they quarrelled, probably on the question who was to be the leader of the united sect; and thus their bitter hostility is accounted for.

the instance I have noted is an instructive one in that respect: isolated coincidences possess very little evidential force.⁸ With regard to Buddhism and Jainism there are numerous coincidences in smaller details between the lives and doctrines of Buddha and Mahāvira; and this circumstance was long considered a good reason for discrediting the story of the latter and of the early existence of the Jain sect. But the sketch of Mahāvira's life which I have given above shows that in the main it was entirely different from Buddha's.

Before touching on the alleged doctrinal and ceremonial coincidences, it may be well to point out that neither Buddhism nor Jainism are religions in the strict sense of that word. They are rather monastic organizations. They are orders of begging fraternities, in many respects similar to the Dominicans and Franciscans among ourselves. Both were founded at the end of the sixth and beginning of the fifth centuries B.C. That period was a very active one in Northern India with respect to religious matters. The times were rife with religious movements. Many monastic orders sprung up: Buddhism and Jainism were only two among them, though they were the most important and most enduring. A third contemporary order, that of the Ājīvikas, which only enjoyed a transitory existence, has been already mentioned by me incidentally. It must not be thought, however, that the institution of monasticism was any innovation on the existing religious conditions of the country. That institute formed an essential part of the original Brahmanism. The old Brahmanic religion ordained man's life to be spent in four consecutive stages, called Āśramas. A man was to commence life as a religious student, then to proceed to be a householder, next to go into retirement as an anchorite, and finally to spend the declining years of his life as a wandering Sanyāsīn or mendicant. These Sanyāsīns or Brahmanic mendicants form the prototype of the great monastic orders that arose in the sixth century B.C., the only difference apparently being that the Brahmanic mendicants never formed themselves into such large organisations as the Buddhists and Jains. The rules and observances which were prescribed for the former were either adopted or imitated by the latter. It is this circumstance which explains most of the coincidences that have been noticed between the Buddhists and Jains: they followed the same model. Thus to mention but one striking example, the rule of *ahimsā* or 'respect for life' which forms such a prominent feature in Buddhism and even more so in Jainism, is one which was binding on all Brahmanic mendicants. In course of time a tendency arose in Brahmanism to limit the entry into the stage

⁸ For another curious coincidence, relating to the parable of the Three Merchants, see Jacobi's Translation of the Uttarādhyāyana Sūtra, p. 20.



of a mendicant to persons of the Brahman caste. It is probably this circumstance which first led to the formation of non-brahmanic orders such as those of the Buddhists and Jains, which were chiefly and originally intended for persons of the second or Kṣatriya caste, though eventually other caste-men were also admitted. It is easy to understand that these non-brahmanic orders would not be looked upon by the Sanyāsins as quite their equals, even when they were quite as orthodox as themselves, and on the other hand that this treatment by the Brahmanic ascetics would beget in their rivals a tendency to dissent and even to opposition. Thus the Buddhists and Jains were not only led to discard the performance of religious ceremonies which was also done by the Brahmanic mendicants, but to go further and even discontinue the reading of the Vēdas. It was this latter practice which really forced them outside the pale of Brahmanism. The still very prevalent notion that Buddhism and Jainism were reformatory movements, and that, more especially, they represented a revolt against the tyranny of caste, is quite erroneous. They were only a protest against the caste exclusiveness of the Brahmanic ascetics; but caste as such, and as existing outside their orders, was fully acknowledged by them. Even inside their orders, admission, though professedly open to all, was practically limited to the higher castes. It is also significant for the attitude of these orders to the Brahmanic institutions of the country, that though in spiritual matters their so-called lay-adherents were bound to their guidance, yet with regard to ceremonies, such as those of birth, marriage and death, they had to look for service to their old Brahmanic priests. The Buddhist or Jain monk functionated as the spiritual director to their respective lay communities, but the Brahmans were their priests.

It will thus be seen that the points of resemblance, undoubtedly existing between the orders of the Buddhists and Jains, are the natural result of the surrounding conditions under which they both arose and lived. Their points of difference are numerous, both in regard to doctrine and practice. They are so many, and often so minute and technical, that it would be difficult for me to render them intelligible within a small compass; nor would such an exposition be of any general interest. Those whom it may interest, will find the subject fully and ably discussed by Professor Jacobi in the Introductions to his Translations (see footnote, on p. 3). I may mention, however, two points which I believe have not been elsewhere noticed, but which, to my mind, very clearly bring out the extreme difference in the character and practice of the two orders. There is a celebrated term common to both the Buddhists and Jains: the term *tri-ratna* or "the three jewels." With the former

these are Buddha, the Law and the Order; but with the latter they are Right faith, Right cognition, and Right conduct. These mottoes, as we might call them, of the two orders are significant. That of the Buddhists refers to concrete, that of the Jains to abstract things. The former shows that Buddhism was animated by a practical and active spirit, while the latter shows Jainism to have been speculative and uninterpreting. The history of the two orders proves this inference. While Buddhism, with its active missionary spirit, spread far and wide beyond the borders of India, and outgrowing the narrow bounds of a mere monastic order developed into popular religions in Ceylon, Burma, Tibet and other lands, Jainism always lived a quiet, unobtrusive life within the borders of India, travelling but little, if at all, beyond them. Again, the term applied collectively to the order both by the Buddhists and Jains was *sangha* or "the Order." But the Jains qualified it by the addition of the further term *caturvidha* or "four-fold." With them the monastic order included four classes of persons: monks, nuns, lay-brothers and lay-sisters. With the Buddhists the order included only two classes: monks and nuns; their lay-adherents stood in no essential or organic connection with them. It is obvious that no order of mendicant monks could possibly maintain its existence without some sort of relation to the surrounding secular community. It must of necessity depend for its sustenance and support on those within that community who, out of reverence for the Order, supported it with their alms. But the two orders observed a very different policy towards their respective lay-adherents. With the Buddhists they had no part and parcel in the monastic organization. They were not formally admitted into communion with the order, they had not to take any vows, there were no rules to regulate their position or conduct, no regular devotional services were held for them, neither was there any formal exclusion of any unworthy lay-person; in fact, the position of the lay-adherents was so loose and informal that a lay-adherent of the Buddhist order might at the same time be also an adherent of another order; there were no rules prohibiting such an anomalous position. The proud feeling of being a member of Buddha's great order and partaking of its spiritual benefits was not permitted to the Buddhist lay-adherent. Very different was the case of the Jain lay-adherent. His position was exactly the reverse in all the points just enumerated. He formed an integral part of the organization, and thus was made to feel that his interests were bound up with those of his order. In this matter Buddhism made a fatal mistake; for their treatment of their lay-adherents was one of the main causes of the eventual total disappearance of their order from

India, the land of their home. When in the course of time, in consequence of the change of religious tendencies which already began to operate in the seventh century A.D., at the time of the celebrated Chinese Buddhist pilgrim, Hiuen Tsiang, the recruitment of their order declined; and when, later on, the pressure of the spiritual opposition of the great Brahmanic orders, founded in the ninth century A.D. by Çaṅkarācārya and his disciples, increased; and when finally, in the twelfth and thirteenth centuries A.D., the storm of the iconoclastic Muhammadan conquest swept over India, and, as related in the histories of Tārānāth and Minhāju-d-dīn, inflicted wholesale massacre on the few still surviving monastic settlements, Buddhism simply collapsed; it utterly disappeared. Having maintained no inseparable bond with the broad strata of the secular life of the people, it had no chance of recruitment, it could neither maintain, nor recover itself. The lay-followers of Buddhism, having lost their monks to whom no paramount interest bound them, by a most natural process relapsed into Brahmanism, in which they again found, as they had done before the advent of Buddhism, not only their priests, but also their spiritual directors. Some small portions only of the former Buddhist laity, here and there, especially in Bengal, preferred to keep aloof, maintaining a caricatured form of Buddhism without Buddha and his Order, in which it is only with great difficulty that one can recognize the distorted traces of the once flourishing system of Buddha. The discovery of these caricatured survivals of Buddhism in Bengal is mainly due to the researches of our Joint-Philological Secretary, Pandit Hara Prasād Shāstri, who has unearthed them as it were in the followers of Dharma, one of the well-known units of the Buddhist Trinity, and published an account of them in the Journal of our Society for 1895. From them Dharmtolla Street takes its name, and their Dharma temple still stands in the modern Jaun Bazar Street.

Very different was the fate of Jainism which securely lived through the stormy times that shattered Buddhism. It has maintained itself quietly and unobtrusively to the present day; and its prospering monastic settlements and lay-communities are still to be found in Western and Southern India and Bengal; one of them we have close to our own doors, in the Maniktola suburb of this city. Jainism, indeed, is the only one of the almost primeval monastic orders of India which has survived down to the present day. But the history of an order of such a retiring character can necessarily offer but few points of general interest. There is really only one event in it which in its results obtrudes itself on the notice of the outside world. This is the great schism, which has been already alluded to, into the two divisions

of the *Çvētāmbaras* and *Digambaras*, the 'White-clothed' and the 'Unclothed' monks. The division took place, as indicated by the name, on the question of wearing clothes, though there are also other differences both in point of doctrine and practice, which, however, are of no general interest. The two divisions maintain an entirely separate and even antagonistic existence; they possess also almost entirely distinct literatures, and the most ancient class of sacred books, the so-called *Angas* and *Pūrvas*, have been preserved only in the *Çvētāmbara* division. Moreover both divisions are now divided into an extensive ramification of schools and lines of teachers, which gradually grew up in the course of centuries. The historical, or rather chronicling, spirit is as strongly developed in the Jains as it is in the Buddhists. They keep up regular *Paṭṭāvalis* or lists of the succession of teachers, several of which have been published by Hofrath Prof. Bühler, Dr. Klatt and myself in the *Indian Antiquary* and the *Epigraphia Indica*; and their sacred and other books are throughout interspersed with an abundance of chronicling notices, which have been extracted and recorded, in addition to the scholars already mentioned, by Professors Weber and Bhandarkar.* From all these materials the Jain tradition regarding their Order and their Sacred Books may be gathered. In its main features it is as follows.

In the second century after Mahāvīra's death (about 310 B.C.) a very severe famine, lasting twelve years, took place in the country of Magadha, the modern Bihār, beyond which, as yet, the Jain order does not seem to have spread. At that time Candra Gupta, of the Maurya dynasty, was king of the country, and Bhadrabāhu was the head of the still undivided Jain community. Under the pressure of the famine, Bhadrabāhu with a portion of his people emigrated into the *Karṇāṭa* (or Canarese) country in the south of India. Over the other portion that remained in Magadha, Sthūlabhadra assumed the headship. Towards the end of the famine, during the absence of Bhadrabāhu, a Council assembled at Pāṭaliputra, the modern Patna; and this Council collected the Jain sacred books, consisting of the eleven *Angas* and the fourteen *Pūrvas*, which latter are collectively called the twelfth *Anga*. The troubles that arose during the period of famine produced also a change in the practice of the Jains. The rule regarding the dress of the monks had been, that they should ordinarily go altogether naked, though the wearing of certain clothes appears to have been allowed to the weaker members of the order. Those monks that remained behind felt con-

* See Prof. Weber's Catalogue of the Jain Manuscripts in Berlin, 1888 and 1892; also Prof. Bhandarkar's Report on the Search for Sanskrit MSS., 1883-84. For a fuller list, see Prof. Jacobi's Introduction to his Translation of *Jaina Sūtras*, Part II.

strained by the exigencies of the time to abandon the rule of nakedness, and to adopt the "white" dress. On the other hand, those who out of religious zeal chose to exile themselves rather than admit a change of the rule of nakedness, made that rule compulsory on all the members of their portion of the order. When on the restitution of peace and plenty, the exiles returned to their country, the divergence of practice, which had in the meantime fully established itself between the two parties, made itself too markedly felt to be overlooked. The returned exiles refused to hold fellowship any longer with the (in their opinion) peccant portion that had remained at home. Thus the foundation was laid of the division between the two sections of the Digambaras or naked ones and Çvêtāmbaras or white-clothed ones. As a consequence of this difference, the Digambaras refused to acknowledge the collection of Sacred Books made by the Council of Pāṭaliputra; and they, therefore, declare that, for them, the Pūrvas and Aṅgas are lost. The difference, however, did not at once result in a definite schism: to this it does not appear to have come till a few centuries later, when the final separation took place in the year 79 or 82 A.D. On this point both sections are practically unanimous, their dates only differing by three years. At this time the Jain order had already spread far beyond the borders of its narrow home in Bihār, and ramified into numerous schools and subdivisions, some of which (as we shall presently see) possessed already flourishing settlements in Mathurā. It would seem that this spirit of expansion developed in the order principally in the time of Suhastin, who was the head of the Çvêtāmbara section towards the end of the third century B.C.; for it is just under him that the Paṭṭāvalis record an extraordinarily large number of divisions and subdivisions. It is certain that about the middle of the second century B.C. the Jain order had spread as far as the Southern part of Orissa; for the Jains are referred to in Khāravēla's inscription on the Khaṇḍagiri rock, near Cuttack.

In the course of time the collection of sacred books, or Siddhānta as it is called by the Jains, which the Council of Pāṭaliputra had established, fell more or less into disorder. It even was in danger of becoming extinct, owing to the scarcity of manuscripts. It became, therefore, necessary to reduce it to order, and to fix it in an authorised edition of manuscript "books." This was done at a Council held in Vallabhi in Gujarāt, under the presidency of Dēvarddhi, the head of one of the principal schools.

It is clear from this tradition that the collection of the Jain sacred books, as preserved by the Çvêtāmbara section of the community, goes back to the end of the fourth or the beginning of the third century

before the Christian era; for the Council of Pāṭaliputra which made the collection must have taken place about 300 B.C. The very process of a collection points to the fact of a previous existence; and the tradition of the Jains maintains that the Pūrvas, one of the two main divisions of the collection, were taught by Mahāvīra himself to his immediate disciples, the so-called Gaṇadhāras, and the latter composed the Aṅgas, the other main division. The name Pūrvā means an 'earlier' composition; and the Pūrvas were evidently called so because they existed prior to the Aṅgas. At the time of the Council of Pāṭaliputra a large portion of them, as the Jains themselves admit, had been already lost; and what still remained was then embodied in a twelfth Aṅga. The Jain traditions about these Pūrvas clearly point to the fact that there was once an original set of sacred books, the remains of which were, by the Pāṭaliputra Council, re-cast and collected in a new form, better adapted to the changed circumstances of the time.

Such is the tradition of the Jaina order with respect to its history and its sacred books. Until some thirty years ago, the prevalent disposition was to treat this tradition with great distrust. The presence of the strongly developed and curiously exact chronicling spirit, however, which I have already remarked on, as manifest throughout most of the literature of the Jains, lends but little support to that attitude; and his fact has been increasingly realised through the more intimate acquaintance with Jain literature which has been gained, during the period under review, through the publication of Jain books made by Professors Jacobi, Leumann, myself and others. Professor Jacobi, by a careful examination of the language and style of the Jain sacred books, which showed their very archaic character, contributed not a little to this result. Still so long as no independent and incontrovertible evidence could be brought forward in corroboration of the statements of the Jain tradition, no full conviction of the general reliability of it could be hoped for. The discovery of such independent corroborative evidence is the most striking feature of the period I am reviewing and is entirely due to the acumen of Hofrath Prof. Bühler of Vienna.⁵ On making a re-examination of certain inscriptions, found in 1871 by the late Major-General Sir A. Cunningham in the ruins of the Kaṅkhālī mound in Mathurā,⁶ Hofrath Bühler discovered among them some which made mention of several teachers and subdivisions of the Jains. Accordingly he arranged with Dr. J. Burgess, who was at that

⁵ His researches on this subject are contained in a series of papers published in the volumes of the *Vienna Oriental Journal* for 1887 to 1891 and 1896, and in the *Transactions of the Imperial Academy of Sciences in Vienna* for 1897.

⁶ See his *Survey Reports*, Vol. II.

time at the head of the Archæological Department, to make a thorough excavation of that mound. The work of excavation was carried out, under the superintendence of Dr. Führer, during the working seasons of 1889 to 1893, and again in 1896. An abundant yield of fresh inscriptions was obtained, impressions of all of which were sent to Hofrath Bühler. By him they were carefully examined, and a selection of the most valuable published, with facsimiles, in the Vienna Oriental Journal, as well as in the two first volumes of the *Epigraphia Indica*. What makes these inscriptions particularly valuable is the fact that many of them are dated in years of the Indo-Scythian era, that is, the era which was used by the Indo-Scythian kings Kanishka, Huvishka and Vasudēva. These kings flourished in the two first centuries of the Christian era, and their empire included North-Western India, as far down as Mathurā. The dates of the inscriptions range from the 5th to 98th year of that era, and are, according to the usually accepted interpretation, equivalent to A.D. 83-176. Accordingly they prove the existence of the Jain order in Mathurā at an as early a date as the first and second centuries of our era. Most of these inscriptions were found engraved on the pedestals of Jain statues, and recorded the dedication of these statues to some Jain temple by Jain laymen or laywomen under the direction of some Jain monk or nun, whose spiritual pedigree is carefully recorded. These dedications furnish corroborative evidence on many points of great interest.

In the first place, the divisions and subdivisions of the order to which the directing monk or nun are recorded to have belonged, strikingly agree with those, the existence of which in the first and second centuries of our era are also recorded in the *Kalpasūtra* and other books of the Jains. One of the *Gaṇas* or divisions which is most frequently mentioned is the *Kauṭika*, which was founded by *Susthita*, who was at the head of the order in the first half of the second century B.C. Moreover this division belonged to the *Ṣvētāmbara* section of the Jains. Thus we have here not only indirect evidence of the existence of the *Ṣvētāmbara* Jains in the middle of the second century before Christ, but also direct evidence of the spread of the *Kauṭika* division, in the first and second centuries A.D., as far as Mathurā, where, to judge from the frequent mention of their name in the inscriptions, they had a numerous and prosperous settlement. At that period there was also a Jain settlement in *Bulandshahar*, for the inscriptions also mention monks of a subdivision called after *Uccanagara*, or *Varaṇa*, both of which anciently were names of that town.

In the second place, the inscriptions prove the existence of Jain nuns as a regular part of the order; and they also show that these

nuns were very active in the interest of their faith, especially among the female members of the lay community, since in all cases, except one, laywomen dedicated images at the request of nuns. This fully agrees with the statements of the Jain scriptures. Moreover it affords an additional proof of the very early split of the order into the two sections of the *Çvêtāmbaras* and *Digambaras*. For the latter do not admit nuns into the order; only the *Çvêtāmbaras* do so. The inscriptions, therefore, prove that the *Mathurā* settlement was one of the *Çvêtāmbara* section, and that the split of the order was already fully established in the first century of our era.

Another point clearly brought out by the inscriptions is the position of the lay element in the Jain community. I have already remarked that that element formed an integral part of the Jain organization, and shown the very important bearing of this point on the fortunes of the Jain order. The inscriptions apply to the laymen and laywomen the terms *Çrāvaka* and *Çrāvikā* respectively,—terms which have survived to the present day in the form of *Sarāogī* by which the Jain laity are often known. Among the Buddhists the term *Çrāvaka* is also used, but there it signifies an *Arhat*, that is a monk of a particular degree of sanctity. This circumstance not only marks the position of the lay element within the Jain order, but also brings out clearly an essential difference between the two great orders of Jains and Buddhists.

Again another point worthy of notice is that the inscriptions often mention the caste of Jain lay-people. I have already remarked how erroneous the idea is that Jainism or Buddhism intended to subvert the caste system. A lay convert to Jainism does not lose his caste by his conversion. He may have to give up the exercise of the trade of his caste, but if he wants a wife for himself or his son, or a husband for his daughter, he can only get them from his old caste. Thus one inscription records a donation by a layman of the *lohār* or smith's caste. He cannot have been a smith after his conversion, because Jainism forbids that trade to a layman. The reference, therefore, must be to the caste to which he or his ancestors belonged. It appears, however, from the inscriptions that even then, as in our days, most of the lay people belonged to the mercantile rather than the artificing classes.

I might mention many more points of detail in which the inscriptions discovered in *Mathurā* corroborate the statements of the Jain books; but I must refer those who may be interested in the subject, for further information to the papers themselves of Hofrath Prof. Bühler. There is one point, however, which I must not pass over. There is hardly another thing which has hitherto been considered a more characteristic external mark of Buddhism than the well-known Wheel and *Stūpa*

and their accessories. The late Pandit Bhagwanlal Indraji was the first to point out in 1883, in a paper on the Hathigumpha inscription, read before the Sixth International Congress of Orientalists at Leyden, that the Jains worshipped stūpas. But Hofrath Prof. Bühler's investigations have now fully proved that the hitherto accepted opinion about the Wheel and Stūpa must henceforth be relegated to the limbo of popular errors. The remnants of a Jain stūpa have been discovered at Mathurā. Indeed under the influence of the old error, it was at first thought that it must be Buddhist; but when ruins of two Jain temples were found in the closest proximity and all the other numerous evidences of Jainism, such as inscriptions and images of Jain saints, came to light, the true character of the stūpa as a Jain monument could no longer be doubted. This discovery has been confirmed by the discovery of sculptured slabs, on which Jain stūpas with all their accessories are fully represented, closely resembling those hitherto known to us as Buddhist. Hofrath Prof. Bühler has even gone further and shown that the building and worshipping of stūpas was an ancient practice common not only to the Buddhists and Jains, but also to other and even orthodox Brahmanic orders of ascetics. One of the most curious discoveries is an inscribed and sculptured slab, which formed the pedestal of a Jain statue. It shows the representation of a Wheel mounted on a trident, exactly in the same way as seen on Buddhist monuments, and proves that the celebrated Wheel is not a distinctive mark of the Buddhists. The inscription states that the statue was put up by a Jain lay-woman under the advice of her spiritual director, and the portrait-figures of these are sculptured on the slab in the act of worshipping the sacred symbol. The inscription further states that the statue was put up in a year probably corresponding to 157 A.D., at a votive stūpa which was built by the Gods. That phrase "built by the Gods" shows that the stūpa must have been an extremely ancient one, since in the second century A.D. its real origin had already been forgotten, and a myth did duty for historical truth. The conclusion is inevitable that the stūpa must have been erected several centuries earlier, and this is confirmed by a tradition which Hofrath Prof. Bühler has discovered in one of the Jain books.⁷ According to that tradition, the stūpa was still in existence in the middle of the ninth century A.D., when it underwent repairs, and was encased in stone. Originally it is said to have been built of bricks, and to have enshrined a gold casket dedicated to Pārçvanātha. This gold casket had been brought, as it is said, by the gods to Mathurā, and was for a long time kept exposed to view for the worship of the Jains;

⁷ Jinaprabha's Tirthakalpa; see the Transactions of the Vienna Academy of Sciences, Vol. CXXXVII.

but afterwards, when one of the ancient kings of Mathurā attempted to appropriate it, a brick stūpa was built over it. This probably refers to the second century before Christ, when the Jains settled in Mathurā and when they may have brought the casket with them from Bihār : the king might be the Indo-Scythian Kanishka, who reigned about the commencement of our era.

While thus the period under review has been one of fundamental importance for our knowledge of the history of Jainism and its founder, it has not been altogether unfruitful with respect to the great rival organisation of Buddhism. The history, indeed, of that order and of its founder has long been well known, yet, curiously enough, until quite recently, none of the localities connected with the most important events in Buddha's personal history, such as his birth and death, had been identified. There was certainly one good reason for this curious circumstance ; for, as it now turns out, those localities are outside our borders, within the territory of Nepal, and therefore have been precluded from the search operations of our archæological surveys.

With the discoveries in this respect the name of one of the members of our Society, Dr. L. A. Waddell, the learned author of *Buddhism in Tibet*, is prominently connected. The zeal with which he has devoted a portion of his holidays and the opportunities afforded by official tours to the search for long lost Buddhist localities cannot be too highly praised. In 1891 he succeeded, on one of his tours, to discover near the village of Uren, in the district of Mungir, the site of the celebrated Hermitage of Buddha, where that saint is reported by Hiuen Tsiang to have rested for a season during the rains. The full details of this identification have been published by Dr. Waddell in our Journal.⁸ Subsequent researches enabled him to discover in the neighbourhood of Patna City what appears to be conclusive evidence of the exact position of the great emperor Aṣṭka's famous capital of Pāṭaliputra.⁹ The evidence thus furnished, in 1892, is at present being followed up, so far as financial considerations permit, by the Government of Bengal.

The most important discovery, however, to which his studies of old Buddhist history have led, is that of Buddha's birth-place in the neighbourhood of a small village called Niglivā. This is situated, just beyond the British frontiers, within the Nepalese Terai, about 20 miles north of the Chillīā Police Station in the Basti District. Rumours of the existence near that place of one or more inscribed pillars had been cur-

⁸ See Volume LXI, for 1892.

⁹ Published in his pamphlet on the *Discovery of the Exact Site of Aśoka's Classical Capital of Pāṭaliputra* ; 1892.

rent for many years. Mr. V. A. Smith had heard of one "a dozen years ago." But they took more definite shape in the spring of 1893 when a Nepalese Officer, Major Jashkaran Singh of Balrāmpur, saw and reported an Açōka pillar in the Terai. Through the information thus furnished Dr. Führer was enabled in March 1895 to visit the spot, and to find there, on the banks of the Nigāli Sāgar, a pillar, with an edict of king Açōka inscribed on it. This edict, when deciphered in April 1895 by Hofrath Prof. Bühler,¹⁰ proved that the ruins of a stūpa close by were those of the funeral monument of the mythical Buddha Kōṇāgamana. Dr. Führer also noticed in the neighbourhood "vast ruins" which clearly pointed to the existence there of a large inhabited place in ancient days. A report of these discoveries was published by him in July 1895. As soon as Dr. Waddell, who had for some time made Hiuen Tsiang's account of Buddha's birth-place a special study, read the newly-found edict, he at once saw the clue which it supplied towards fixing the site of that place in the neighbourhood of the Kōṇāgamana stūpa and its pillar. He published his discovery in June 1896,¹¹ pointing out that, in accordance with the indication given by Hiuen Tsiang, Kapilavastu, the birth-place of Buddha, must be within a few miles distance of Niglivā. Thereupon the Government of India was moved, both by Dr. Waddell and Dr. Führer, to obtain the permission of the Nepalese Darbar to explore the site thus indicated, in order to verify its being that of Kapilavastu. That permission having been secured, and Dr. Waddell's services not being available, Dr. Führer was deputed to carry out the desired verification. In November 1896 he proceeded to Niglivā, and finding that the Nepalese Government were not prepared to undertake excavations, he went on, south-eastward, to Bhagwānpur, where he had been told, in the previous year, of the existence of another inscribed pillar. He there found the looked-for pillar on the 1st December 1896, and upon it an inscription which identified the spot upon which it stood as the celebrated Garden of Lumbini in which Buddha is said to have been born. Starting from this spot as a fixed point, Dr. Führer next discovered the ruins of Kapilavastu, at a distance of twelve miles north-west of it, and five miles west of Niglivā. This places Kapilavastu practically at the point indicated for it by Dr. Waddell.¹² It still remains to explore the site of that celebrated town, and to excavate its more prominent ruins. This is a task which, as I learn from Dr. Führer, is at present in progress under his superintendence.

¹⁰ See the *Academy*, for 27th April 1895.

¹¹ In the *Englishman* of the 1st June 1896.

¹² For further particulars see Dr. Führer's *Annual Progress Reports* for 1893-97 ; also *Journal*, Royal Asiatic Society, for 1897, pp. 429, 615, 644.

With the discovery of Kapilavastu, it will now be possible also to identify definitely Kusinagara, the place where Buddha died. It is probable that it will be found to the eastward, either just within or just without the frontier-line dividing British and Nepalese territory. To discover this celebrated spot must be the next object of archæological research.

Archæology and Epigraphy.—I will now proceed to give you some account of our progress in Indian archæology and epigraphy.

The earliest specimen of Indian writing known to us is that which is found in the celebrated Açōka inscriptions. Açōka reigned in the latter half of the third century B.C. His capital was at Pāṭaliputra, the modern Patna, but he ruled over an empire which probably had the widest extension ever attained by any under a native Indian ruler. This is shown by the wide distribution of the edicts which he caused to be engraved on rocks and pillars throughout his dominions, and in which he promulgated his regulations for ordering the moral and religious welfare of his subjects. These edicts have been found as far east as Dhauli in Orissa, as far west as Shāhbāzgarhī beyond the Indus, and as far south as Siddāpur in Mysore. The northern extension of Açōka's empire is shown by the recent discovery (in 1895) of a pillar inscription of his in Niglivā, within the Nepalese frontiers. The Mysore edicts, too, are a recent discovery, having been found by Mr. Lewis Rice in 1892 near the village of Siddāpur, in the Chitaldrūg district in the Mysore State. One of these Açōka edicts forms a connected series of fourteen paragraphs. It occurs in a nearly identical version engraved on large rocks or boulders at six different places, among them at Girnār in Junāgarh, at Mansehra near Abbottabad, and at Shāhbāzgarhī. At these three places, the three last paragraphs of the edict had long been missing; but quite recently, they have been recovered, either wholly or in part. One was discovered by Major H. A. Deane, in 1887, another by a subordinate officer of the Archæological Department in 1889, and the third by Rāe Bahādūr Gopālji S. Desai in 1893.¹⁸

Until recently it had been customary to call the script used in these inscriptions the "Açōka characters," because for a long time they had not been observed to occur in any inscriptions but those of Açōka. Gradually, however, other inscriptions came to light, exhibiting the same characters. They were observed, *e.g.*, on very early coins of Græco-Indian and other dynasties; and they also appear on the sculptures of the Barhant stūpa which may be seen in one of the galleries

¹⁸ Published by Hofrath Prof. Bühler in the *Epigraphia Indica*, Vol. I, p. 16, in the *Vienna Oriental Journal*, Vol. VIII, p. 318, and in the *Journal of the German Oriental Society*, Vol. XLIV, p. 702.

of the Indian Museum. Since then they have been found, for example, in an inscription of the Pabhosa cave which was discovered in 1887 by Mr. J. Cockburn of the Opium Department,¹⁴ in another found in the same year by the late Kavirāj Syamal Dās near Nagari in Mewar, and in the curious copper-plate, discovered by Dr. Hoey in 1894 at Sohaurā in the Gōrakhpur District.¹⁵ The name "Açōka character" was, therefore, found very misleading and inconvenient. Hence, seeing that Açōka belonged to the Maurya dynasty, the term "Maurya characters" or "Maurya script" has now generally been adopted. This Maurya script is the lineal ancestor of the modern Northern Indian scripts, notably of the best known among them, the Nāgari or Dēvanāgari. There are few things so interesting in archæology as the history, with all its concomitant details, of the evolution of the modern scripts of Northern India. But unfortunately, till recently, the absence of a good text-book on the subject was felt to be a great hindrance. A very creditable attempt to supply this want was made by a native scholar Gaurishankar Hirachand Qjha of Udaipur in his *Palæography of India*, published in 1894. But still more was required, and this has now been supplied by Hofrath Prof. G. Bühler of Vienna, who is *facile princeps* in all matters appertaining to Indian epigraphy and palæography. His excellent and exhaustive *Indian Palæography* was published in 1897, and forms a portion of the Encyclopædia of Indo-Aryan Research, which is being brought out under his general editorship, and which will present a summary of everything that modern research has established in the domains of Indian philology and archæology. The name Brāhmi has been adopted by him as a general term for all the Northern Indian types of alphabet. A cursory survey of these types will show that their evolution has produced a very marked change in the form of the letters about the middle of the fourth century A.D. The oldest type of the preceding period is represented by the Maurya script of the time of Açōka. The oldest type of the second great period—that type with which this period commences—is what is known as the "Gupta characters." This script is called so because it is used by the kings of the Gupta dynasty who reigned in the fourth and fifth centuries A.D., first in Pātaliputra or Patna and afterwards either in Kōçāmbī or in Ayōdhyā,¹⁶ and whose empire was

¹⁴ Published by Mr. Cockburn in our *Journal*, Vol. LVI, p. 81, by myself in the *Proceedings As. Soc. Beng.*, for 1887, p. 103 and by Dr. Führer in the *Epigraphia Indica*, Vol. II, p. 242.

¹⁵ Published by Dr. Hoey, Mr. Smith, and myself in our *Proceedings* for 1894, p. 84, and by Hofrath Prof. Bühler in the *Vienna Oriental Journal*, Vol. X, p. 138.

¹⁶ See Mr. V. A. Smith, in *Journal*, Royal Asiatic Society, for 1897, p. 910.

for a time almost as extensive as that of Aṣṛka. The second period may be reckoned to have extended to the end of the twelfth century A.D. From that time the Northern Indian alphabets as they now exist have practically become established. The earlier period, also, seems to me to divide itself similarly into two sub-periods about the commencement of the Christian era. The later sub-period is characterised by the "Indo-Scythian characters," used under the kings of the Indo-Scythian dynasty, in the first and second centuries A.D. Their empire was in North-Western India and reached as far as Mathurā, where the numerous Jain inscriptions written in the Indo-Scythian script, referred to in the preceding part of my address, have been found.

In this connection I may note a remarkable discovery, made by Dr. W. Hoey in 1896 in Gōpālpur in the Gōrakhpur District.¹⁷ It is that of a few bricks of large size (10½ by 4½ inches) inscribed with portions of certain Buddhist sacred books. They were dug out from an underground chamber, and the circumstance of some Indo-Scythian copper coins having been found with them shows that their deposition must be referred to the third century A. D. This is confirmed by the character of the writing which is transitional between the Indo-Scythian and Gupta scripts. With the exception of the legends of the Gupta coins, inscriptions dating from the period between 250 and 400 A.D. were almost altogether lacking. The discovery, therefore, of these bricks now helps to fill up a considerable gap in Indian epigraphy. Moreover it is startling to find the Indian Buddhists using bricks, as the Assyrians did, to preserve long documents. Speaking of Gupta coins I may mention that we now possess an excellent and exhaustive monograph on the subject, published in 1889 and 1892 by Mr. V. A. Smith in the *Journal of the Royal Asiatic Society*.¹⁸ Some of the gold coins and medals, issued by the kings of the Gupta dynasty, are among the finest known in Indian Numismatics. With regard to this dynasty a very important discovery was made in 1888 at Bhitari in the Ghāzipur district. This was a large seal of copper and silver, the legend on which in 1889 I succeeded in deciphering,¹⁹ and which proved that the dynasty consisted of nine members instead of the seven hitherto known. The two new members are Pura Gupta and Kumāra Gupta II. The history of two earlier members, Samudra Gupta and Candra Gupta, has been examined in detail in three very interesting papers published by Mr. V. A. Smith in

¹⁷ Published by Mr. V. A. Smith in our *Proceedings* for 1896, p. 99.

¹⁸ Also in our own *Journal*, Vol. LIII, for 1884; see also his papers on "Numismatic Novelties" in our *Journal*, Vols. LXV and LXVI.

¹⁹ Published in a joint-paper by Mr. V. A. Smith and myself in our *Journal*, Vol. LVIII, for 1889.

the Journal of the Royal Asiatic Society for 1897.²⁰ All inscriptions in the Gupta character, known up to the year 1888, have been collected by Dr. J. F. Fleet and published by him, with facsimiles, in the third volume of the *Corpus Inscriptionum Indicarum*, in the introduction to which he has also finally settled the hitherto much disputed epoch of the celebrated Gupta era to be the year 319-20 A.D.²¹

For long the prevalent opinion has been that the introduction of the art of writing into India took place in the third century B.C., during the rule of the Maurya dynasty. This opinion was based on the fact that the earliest specimens of writing, though incised in places as widely apart as Orissa and Gujarāt, appeared on the first view to show no local varieties in the shape of their letters. More accurately made facsimiles and a more thorough and minute examination of these facsimiles, such as Hofrath Prof. Bühler and Mr. E. Senart have latterly made and published in the Journals of the German and French Asiatic Societies, have now brought to light the fact that smaller local varieties are by no means absent. The most striking evidence, however, of the existence of a well-marked local variety has been afforded by the inscriptions on the relic-casket, found in 1891 in the Bhaṭṭiprolu stūpa in the Kistna District of the Madras Presidency. These inscriptions, as Hofrath Prof. Bühler has discovered,²² show a system of writing which in some respects is radically different from that prevailing in the more Northern inscriptions of Aṣōka. Thus, to mention only one point, the Bhaṭṭiprolu alphabet contains one new letter (!) and five new forms of other letters (*gh, j, m, e, ś*). It is obvious that this discovery throws a new light on the question of the age of the art of writing in India. Such a marked variation cannot have sprung up in a short time, but must have had a long history before the time of Aṣōka. With this new light, and with the help of accurate facsimiles now available, Hofrath Prof. Bühler subjected the question of the age and origin of the Brāhmī script to a fresh searching investigation.²³ Their result is to render two facts extremely probable: first that the Brāhmī script is directly derived from the oldest Phœnician alphabet, and secondly that it was in common use in

²⁰ See Articles I, II and XXIX in that Journal.

²¹ The title of this volume is *Inscriptions of the Early Gupta Kings and their Successors*. On the epoch see also Dr. Fleet's paper in the *Journal of the Bombay Branch of the Royal Asiatic Society*, Vol. XVIII, for 1891, p. 71.

²² Published in the *Academy* for May 1892, *Vienna Oriental Journal*, Vol. VI, p. 148, and *Epigraphia Indica*, Vol. II, p. 323.

²³ Published in the Transactions of the Vienna Imperial Academy of Sciences, Vol. CXXXII, under the title: *Indian Studies*, No. III, on the "Origin of the Indian Brahma Alphabet." A very useful abstract of Hofrath Prof. Bühler's argument is given by Dr. G. A. Grierson in the *Indian Antiquary*, Vol. XXIV, p. 246.

India during the fifth, and perhaps in the sixth, century B.C. The Brāhmī script, like the English, runs from the left to right, while the Phœnician script, like the Hebrew, used to run from the right to the left. If Hofrath Prof. Bühler's theory is correct, one may expect to find in India some evidence of the change of the direction in writing. Curiously enough such evidence does exist. A coin has been found by the late Major-General Sir A. Cunningham²⁴ in Eran, in the Central Provinces, which clearly exhibits a legend in Brāhmī characters running from the right to the left. It is probably of about the same age as the Açōka edicts, that is, about the third century B.C.; and as these edicts themselves occasionally show single letters placed in that reversed direction, it becomes very probable from these isolated survivals that the great change of the direction in writing the Brāhmī characters took place in India in the course of the fourth century B.C. I may here mention another discovery made by myself, which corroborates the Indian tendency of changing the direction of writing. By the side of the Brāhmī characters, there was another, quite distinct script in use in India at the time of king Açōka. This is the so-called Bactrian or Arian-Pali, or as it is now called the Kharōṣṭhī script. Its use was limited to North-Western India, from the Panjāb westwards, while through the whole of India eastwards and southwards the Brāhmī script, in some one or other of its varieties, was current. Hofrath Prof. Bühler has shown²⁵ that this secondary Indian script is of somewhat later date than the Brāhmī, that it arose from an Aramean alphabet used in Persia in the sixth century B.C., and that it spread into India only in the fifth, or perhaps even as late as the fourth century B.C. It is a script, which like its source, the Aramean, runs from the right to the left; and it is found written in that fashion in the Açōka edicts and all other inscriptions. There is only one exception, namely two coins of the Indo-Parthian king Abdagases who probably reigned in the first century B.C. in the regions about the Indus. They were obtained by Mr. J. A. Bourdillon from the Gayā Bazar, and I discovered on them a legend in the Kharōṣṭhī characters, but running from the left to the right.²⁶ This shows that a process of change in the direction of writing those characters was beginning to spring up in India in the first century B.C.; and it is not impossible that the change might have, in the course of time, fully established itself within the borders of India, just as it did in the case of the Brāhmī alphabet, but for the circum-

²⁴ Published by him in his *Coins of Ancient India*, p. 101, Plate XI, fig. 18.

²⁵ See his paper in the *Vienna Oriental Journal*, Vol. IX, p. 44.

²⁶ Published by me in our *Proceedings*, for May 1895, and in our *Journal*, Vol. LXVI, Part I, (for 1897), p. 139, Plate VI, figs. 7 and 8.

stance that the custom of using the Kharoṣṭhī script died out in India too early to admit of any such radical change. For that script probably ceased to be used in India about the end of the second century A.D., though it continued to be current for a much longer period in the countries bordering on India in the West and North. In those regions its use probably survived until the time of their conquest by the Muhammadan Arabs in the eighth century A.D., when it was superseded by varieties of the Arabic script. On this subject some more evidence has recently come to light. In 1895, Mr. A. Caddy, who had been deputed by the Government of Sir Charles Elliott on archæological exploration, excavated a large statue of a standing Buddha at the Lorian Tangai stūpa, in the lower Swat valley, on the pedestal of which was found a short inscription in the Kharoṣṭhī characters, dated in the year 318. A similar inscription dated in the year 384 appears on the pedestal of another standing figure of Buddha, discovered in 1883 by Mr. L. White King, at Hashtanagar, in the Peshawar District, and published by Mr. V. A. Smith in our Journal. The era of these two dates is still a matter of dispute, but so much is certain that they carry us well into the fourth or fifth century A.D.²⁷

These dated inscriptions in the Kharoṣṭhī characters have an important bearing not only on the subject of palæography, but also on the question of the age of Græco-Buddhist art in the countries on the further side of the Indus. Into the latter subject, however, I cannot enter now, both because it is foreign to the matter of epigraphy and palæography which I have now in hand, and because much of it also lies outside the period I am now reviewing. For the existence of a considerable Greek influence on the Indian Buddhist art in the countries bordering on the Indus has long been known. But I will not pass on without calling attention to two masterly essays by Mr. V. A. Smith, on "Græco-Roman Influence on the Civilization of Ancient India," published by him in 1889-92, in the Journal of our Society,²⁸ and highly praised by Professor Grünwedel of Berlin in his "Buddhistic Art in India." Mr. Smith reviews the subject from every point of view, discussing principally the subject of sculpture, but also touching on

²⁷ The era may either be that of Kanishka, commencing in 78 A.D., or of Moga commencing about 40 B.C. Accordingly 318 may be equivalent to 396 or 278 A.D., and 384 to 462 or 344 A.D. The latter date has hitherto been read 284, but, as Dr. Bloch informs me, it is undoubtedly 384. See our *Journal* Vol. LVIII, p. 44; also *Indian Antiquary*, Vol. VIII, p. 257.

²⁸ See Vols. LVIII and LXI, p. 50, 107ff. Professor Grünwedel's book was published in 1893; see there, p. 79.

architecture, painting, coinage, drama, religion, mythology, science and philosophy. I may note, as two of the main results of his review, the conclusions that the Gandhāra or Peshawar school of sculpture followed the lines of Roman art, and is not the direct descendant of pure Greek art; and that the history of that school was practically at an end by A.D. 450.

All the specimens of writing which I have hitherto referred to are examples of what is called the lapidary or diplomatic style. It is the style which was peculiar to the clerks of the "kutcheries" or offices of the government or other great establishments, and which was used by them for the purpose of engrossing royal edicts, donations, etc. The manuscript copies, prepared by these professional writers, were afterwards reproduced by skilled artisans on stone or copper or other enduring material; and it is in these reproductions that the inscriptions I have referred to have come down to us. In most cases probably the original writing was made by the professional scribe on the permanent material itself. Anyhow, if any were made on perishable material, such as palm-leaf or paper, none have come down to us. The requisite of the diplomatic style of writing is that it should be calligraphic, that is, clear and legible, and more or less elegant and ornate. In these respects it differs from what is called cursive writing, or that which is used in correspondence and all the ordinary concerns of life. Here the object is not permanence but quickness; the letters are formed with a running hand, they have a tendency to join one another, and to modify their original shape. On the other hand, diplomatic writing has a tendency to conserve older and simpler forms. It represents conservatism in the history of the art of writing, while cursive writing represents progress. It follows, therefore, as a general principle in palæography, that advanced forms of letters mark cursive writing, and that if we meet with a few letters of a cursive form in a document otherwise written in older forms, they have been adopted from the fashions of the cursive writing of the period. Gradually these adoptions grow more extensive; but by the time they include the whole circle of the alphabet, the changes in cursive writing have also advanced a step further. It thus comes to pass that the diplomatic writing of any particular period represents on the whole the state of the cursive writing of the period immediately preceding. These are principles which are now generally admitted in Indian palæography, but it was Hofrath Prof. Bühler who first directed prominent attention to them.

It is obvious that cursive writing, as a rule, can only be expected to be met with in manuscripts. No manuscripts, as I have already remarked, have come down to us, dating from the earliest period of

writing in India. No manuscript has, as yet, been discovered written in the Maurya characters like those of the time of Aṣṭka. But that cursive writing did exist in those days is shown by the casual occurrence of advanced forms of letters in the Aṣṭka inscriptions, and that it cannot have been at all uncommon in the daily concerns of life is shown by numerous references to it in the oldest Indian literature. Thus we hear of a slave getting himself a rich wife by means of a forged letter, and another going to a school to learn writing together with the son of his master, who was a Seth or banker, or again of a teacher corresponding with his pupils.²⁹ The style of writing used by bankers must have been then, as it is now, of a very cursive kind. All this points to a very early knowledge of the art of writing in India. It may very well go back, as Hofrath Prof. Bühler suggests, to the sixth century before Christ.

That actual manuscript evidence of such an early age will ever be found is extremely improbable. The commonest writing material in those days were *parṇa* or leaves, that is, no doubt, the same kind of palm-leaves as those which are still occasionally used in Orissa and elsewhere. In the climate of India such manuscript materials would not conserve for any considerable length of time. It would have been different, if we had to deal with climatic and meteorologic conditions, such as we have in Egypt or Central Asia. It is not till we come to the commencement of our era that we first meet with manuscripts preserved down to our days. The oldest manuscripts, known until quite recently, were some scraps of inscribed birch-bark, found in 1834 by Mr. Masson in one of the stūpas of Afghanistan.³⁰ These were inscribed with Kharōṣṭhi letters, but were too minute to be of any service. However, we possess now a more serviceable manuscript of the same description, and of about the same age. This consists of a few detached leaves of birch-bark, inscribed with Kharōṣṭhi characters, and in the Pāli language, which appear to have once formed a portion of the Dhammapada, one of the well-known sacred books of the Buddhists. Some of them were obtained in 1891 in Central Asia, by the French explorer M. Dutreuil de Rhins, who unhappily soon afterwards was murdered at the hands of Tibetans. These leaves ultimately found their way to Paris, while others, secured by Russian explorers, went to St. Petersburg. They had evidently once belonged to the same manuscript. Photographic facsimiles of them were exhibited in 1897 at the Eleventh International Congress of Orientalists in Paris, by Mr. E. Senart

²⁹ Numerous other examples will be found in Hofrath Prof. Bühler's essay on the "Origin of the Brāhmī Alphabet" above referred to.

³⁰ It was one of the Nandāra Topos; see *Ariana Antiqua*, p. 84.

and Professor S. von Oldenburg. In their opinion the manuscript could not be of much later date than the Christian era, and might, possibly, be even older.

It is thus curious that what is probably the oldest Indian manuscript should have been obtained outside India, in Central Asia. Yet after all, it is perhaps nothing more than might have been expected. Indian civilization and Indian literature was carried by the Buddhist propaganda into Central Asia as early as the commencement of our era. Their settlements extended as far as Khotan, Kuchar and the borders of China proper. What was thus carried out of India stood a very good chance of being preserved by the dry climate and soil of the Central Asian deserts, the wonderfully conserving power of which seems to be as great as that of Egypt. Indeed, to judge from the abundant yields of recent explorations, Central Asia promises to be as fruitful a mine of epigraphical discoveries as Egypt has proved to be. In Central Asia nothing seems to decay but what is destroyed by the ignorance or the malice of men.

It is to Central Asia that we also owe our oldest manuscript in the Brāhmī alphabet. This is the well-known Bower Manuscript, the date of which cannot be later than 450 A.D., and may be much earlier. My edition of the text of this manuscript, entrusted to me by the Government of India, was completed last year. An introduction, narrating its history and discussing its age, contents, etc., is now under preparation. Its history, which is not without interest on account of its connection with other important discoveries, those of the Weber and Macartney Manuscripts, I will briefly relate. The Bower Manuscript is called after Captain Bower, who, on his tour of Central Asian exploration, in 1890, obtained it in Kuchar from a Turkī visitor. The latter also showed him the place where the manuscript had been dug out. It was the site of an ancient Buddhist *vihāra* or monastery, partly consisting of cells cut in the rock of a neighbouring hill. In connection with this *vihāra* there were also the ruins of an ancient *stūpa*, from the relic chamber of which the manuscript had been dug out precisely in the same way, as the scraps of inscribed birch-bark and other relics had been obtained by Mr. Masson in 1834 from the old *Topes* of Afghanistan.

From information received by me later on from Mr. Macartney, the British Political Agent in Kashghar, it appears that at some time in 1889 a Turkī merchant of Kuchar (probably Captain Bower's visitor), in conjunction with a friend of his named Dildār Khān, an Afghan merchant of Yarkand, undertook, secretly for fear of the Chinese authorities, to excavate the *stūpa* in question. Their object in digging into

it was to find treasure, as it was well known that in the time of Yaqūb Beg much gold had been discovered in such ancient buildings. Probably the Afghan also knew that in his own country the excavation of stūpas had occasionally yielded golden results. Whether or not they found any treasure is not known, but what they do admit to have found was a large number of manuscripts together with a quantity of bones. The hole which they made into the stūpa was excavated straight in, level with the ground, and the manuscripts, accordingly, would seem to have been found in the centre of the stūpa, on the ground level, exactly in the spot where the original deposit of relics is usually met with in such monuments. The two friends divided the spoil between them. The Turki secured as his share the Bower Manuscript, which he afterwards disposed of to Captain Bower in 1890. The Afghan received the other moiety of the manuscripts. Of this he gave, apparently in 1891, one portion to the Russian Consul Petrovski in Kashghar. The latter forwarded it to St. Petersburg where specimens of it were published by Professor von Oldenburg in the Journal of the Imperial Russian Archæological Society. The remainder Dildār Khān took away with him to Leh in 1891. Here he gave one portion of it to Munshi Aḥmad Din, who in his turn presented his acquisition to Mr. Weber, the Moravian Missionary. The latter transmitted it to me, and specimens were published by me in our Journal in 1893. The remaining portion Dildār Khān took with him to India, where he left it with a friend of his in 'Aligāh. On a subsequent visit to India in 1895, he brought it away again and presented it to Mr. Macartney. The latter forwarded it in 1896 to the Foreign Office in Simla, whence it was transmitted to me, and specimens of it were published by me in our Journal for 1897.

When I came to examine more closely the manuscripts received from Mr. Weber and Mr. Macartney in order to compare them with those sent to St. Petersburg, I discovered that between them they contained portions of the same Buddhist work. This work tells the story of a certain General Māṇibhadra, how he visited Buddha, became a convert to Buddhism, and was taught by him a wonderfully effective charm. With the two-thirds in my hands, and the one-third in St. Petersburg, it will now probably be possible to publish the entire work, and I would suggest that the British and Russian Governments combine to do so.

The principle of giving *suum cuique* is one which it is well to observe on all occasions. Accordingly I have called the manuscripts received by me from Mr. Weber and Mr. Macartney by their names, the Weber Manuscripts and the Macartney Manuscripts. Similarly I

have called some other Central Asian manuscripts which I received from Captain H. S. Godfrey, Assistant British Resident in Kashmir, the Godfrey Manuscripts. These two gentlemen, Mr. Macartney and Captain Godfrey deserve the greatest credit for the zeal and circumspection with which they have been collecting not only manuscripts but also other antiquities from that part of Central Asia which is known as Chinese or Eastern Turkistan, and assisting me in making a collection worthy of our country. Their efforts are being ably seconded by Colonel Sir Adalbert Talbot, K. C. I. E. the British Resident in Kashmir. Central Asian archaeological exploration is being more and more vigorously conducted every year. France and Russia have been in the field for some years. They have latterly been joined by Sweden, whose energetic explorer Dr. Sven Hedin has returned from a prolonged tour in Eastern Turkistan with a large collection of antiquities. Feeling that it would not do for Great Britain to be outstripped in these researches, I suggested to the Government of India the desirability of instructing their Political Agents in Kashghar and elsewhere to endeavour to collect Central Asian antiquities. This was in 1893, while I was working at my edition of the Bower Manuscript. My suggestion was heartily seconded by Sir Charles Lyall, K. C. S. I. (then the Home Secretary), and the Government of India, approving it, issued necessary instructions in August 1893. Since then a large number of such antiquities has been secured, and more are coming in. All acquisitions are transmitted to me, under the orders of the Government of India, for examination and report: their final place of deposit is to be the British Museum in London.

These antiquities consist of terracottas, coins, images and miscellaneous objects of metal, stone or other material; but the main portion is formed of manuscripts. A regular, or perhaps I should rather say an irregular, trade in such antiquities seems now to have sprung up. Captain Younghusband, in the interesting account of his travels through *The Heart of a Continent*, tells us how he advised one of his Musalmān guides, whose great ambition was to visit England, to "search about among the old ruined cities of that country and those buried in sand, in order to find old ornaments and books for which large sums of money would be given him in England." Eastern Turkistan which is now to a great extent an arid desert of sand, seems to have been a fairly fertile country about the commencement of our era. Two great trade routes passed through it from China to Western Asia. One skirted the foot of the Tian-Shan mountains, along its northern borders, running by the town of Kuchē or Kuchar; the other passed by the Kuen-lun mountains and the town of Khotan on the south. It is principally from these two towns and the intervening desert coun-

try that the antiquities we now possess have been procured. Some were obtained in Kuchar, but most of them came from the Takla Makan Desert, lying north of Khotan. That desert is, by the natives of Kashgharia, believed to have been once a fertile and cultivated country. There is a tradition that before the introduction of Muhammedanism, in the eleventh century A.D., forty-one cities flourished in that region, but that by reason of the obstinate disbelief of the inhabitants, who were mostly idolaters, their country was suddenly and miraculously destroyed by a sandstorm. It is certain that the town of Katak, which probably lay about midway between Kuchar and Khotan, was buried and destroyed by the sands about 1330 A.D. But this process of submersion under the "moving sands" as they are fitly called by the natives, has been going on for centuries, as we know from the Chinese Buddhist pilgrim Hiuen Tsiang who travelled through Eastern Turkistan in the middle of the seventh century. Very graphic accounts of the appearance and action of the moving sands are given by Dr. Bellew, Captain Younghusband and other travellers. "During the spring and summer months a north or north-west wind prevails. It blows with considerable force and persistence for many days consecutively. As it sweeps over the plain, it raises the impalpable dust on its surface, and obscures the air by a dense haze resembling in darkness a November fog in London, but it drives the heavier particles of sand before it, and on the subsidence of the wind, they are left on the plain in the form of ripples like those on the sandy beach washed by an ebbing current." In course of time there is formed "a perfect sea of loose sand advancing in regular wave lines from north-west to south-east. The sand dunes are mostly from ten to twenty feet high, but some are seen like little hills, full a hundred feet high, and in some spots higher. They cover the plain, of which the hard clay is seen between their rows, with numberless chains of two or three or more together in a line, and follow in successive rows one behind the other." It is these moving sands that have engulfed whatever of the ancient civilization of Eastern Turkistan escaped the devastations of consecutive wars and conquests.

That civilization must have been of a very mixed kind ; for Eastern Turkistan was the meeting place of the culture of India, China and Western Asia. Indian civilization was carried there by the early Buddhist propaganda about the commencement of our era. Somewhat later the semi-Greek culture of Parthia and Armenia and the indigenous civilization of China were brought into the country by the merchants and soldiers that travelled or marched by the two great trade-routes already referred to. These were followed still later, from

the sixth to the eighth centuries, by the civilization of the Nestorian Christian Missionaries, and finally, from the ninth century, by the Arab Muhammadan conquests.

It can be easily imagined that such a mixture of civilization would betray evidences of its existence in the antiquities recovered from the sand-buried tracts and towns of the country. Such is really the case. The antique objects which have now accumulated with me, owing principally, as I have already remarked, to the exertions of Mr. Macartney and Captain Godfrey, divide themselves into four classes: manuscripts, coins, terra-cottas, and miscellaneous objects. Some of the manuscripts have been dug out from old Buddhist ruins near Kuchar, and belong to the most ancient portion of the collection. But all the rest have come from the neighbourhood of Khotan, where, as Mr. Macartney informs me, "these relics are in such abundance that a few persons of that town make a regular livelihood as treasure-seekers. After a sandstorm or a flood they will proceed to such sand-buried localities as seem most promising in the hope of picking up some objects in gold or silver which had been laid bare by the wind or water."

The manuscripts obtained from Kuchar are the Bower MS., the Weber MSS., and a few of the Macartney MSS. The peculiarity of these is that they are all written in two species of the Indian Brāhmī alphabet. One of these is a species which was actually current in North-Western India up to the sixth century A.D. And it follows, therefore, that the manuscripts written in this variety of the Brāhmī, —commonly known, in a general way, as the Gupta characters—were either imported from India or written by Indian Buddhists who had settled in Kuchar. It follows further that these manuscripts cannot well be later than the sixth century, though they may be much older. In fact, the Bower MS. probably belongs to the fifth century, and one of the Macartney MSS. which has a still more archaic appearance, to the fourth century A.D. The interest of these manuscripts, apart from their great palæographic value, principally lies in two points: the direct evidence which they afford of the early existence of Indian Buddhism in Kuchar, and the light which they throw on the history of Indian Medicine. They mainly contain medical treatises, and thus not only prove the very early existence, hitherto much doubted, of the science of medicine in India, but also that the profession of medicine, in those early days, was inseparable from that of sorcery and astrology, and that, in fact the monkish owner of the manuscripts was a "medicine-man" rather than a "medical man."

The Bower Manuscript is written on leaves of birch-bark, while all the other Central Asian manuscripts are written on paper of varying

texture and colour. Paper appears to have been the usual writing material in Eastern Turkistan. The art of paper making has been known for ages in China ; it has also been practised for a long time in the Himālayan countries. It cannot, therefore, be a surprise to find that it was also known in Eastern Turkistan, which from almost the beginning of our era has been in more or less close political connection with China. The birch, on the other hand, is not known in Eastern Turkistan, while it is found in the Himālayas, and its bark is used as common writing material in Kashmīr. This is an additional proof of the Bower Manuscript being an Indian product, exported to Central Asia.

Most of the Macartney Manuscripts, as I have already remarked, come from the neighbourhood of Khotan. They were found or dug out at different places in the Takla Makan desert, generally about 50 or 60 miles distant from that town. The find-spots are sometimes described as ruins of walls of habitations, sometimes as cemeteries. One is described as a solitary mound, and circular, about 5 feet in diameter and 2 feet in height. This was evidently the ruin of an old sepulchral tumulus or stūpa ; for in it was found a skull resting on a coarse cloth bag enclosing a manuscript book ; and two small copper images of horsemen were dug up from its interior. The whole of this find was received by me exactly in the state in which it had been found.

The manuscripts from Khotan form a surprisingly varied collection, both with regard to condition and script. As to their condition, there are among them bound volumes, detached leaves, and large single sheets. The single sheets appear to have been official documents of some kind ; for they mostly bear the inked impress of seals. Many of the detached leaves appear to have originally belonged to a volume, now broken up, whether by the finder or by some other cause, is not known. Of bound volumes I now have twenty-one in my possession. They greatly vary both in shape, size and thickness. Some are nearly square, others decidedly oblong. Some are about eleven, others only about four inches square ; some measure $15 \times 4\frac{1}{2}$, others only 10 or $7 \times 4\frac{1}{2}$ inches. The number of their leaves varies between 12 and 112. Some are bound, or rather stiched, in the modern European fashion ; others are done up like Indian *pōthīs* by means of a string-hole and wooden boards, only instead of a string, a copper nail is passed through the hole. The stiching likewise is done either by means of two or three copper nails, or by twists of paper. The ink which is used is, as a rule, black ; only in two or three exceptional cases, it is white ; but in either case it is indelible ; for all the manuscripts can be washed, without injuring the writing.

With reference to the characters and the language in which these manuscripts are written I am not yet in a position to make any definite statement, as I have had no leisure to make more than a very cursory examination of them. There certainly seem to be at least seven distinct scripts, and from sixteen to twenty varieties. The scripts are all of old types and appear to be Armenian, Kharōṣṭhī, Pahlavi, Turki, Uigur (or Nestorian), Chinese, and two others as yet quite unassignable. Of course, a script is not any necessary indication of the language in which the book may be written; and so long as the scripts have not been definitely deciphered, it is not possible to determine the number of languages that may be represented in the manuscripts. I may note, however, that in one instance, the manuscript (one of the sealed documents) shows two scripts side by side, a circumstance which may possibly afford a key to the decipherment. Similar help may perhaps be given by another manuscript (one of the Turki) which seems to contain sketches of seals or coins.

Besides manuscripts, my collection of Central Asian antiquities contains, as I have already stated, a large number of coins (about 300). These, it may be hoped, will prove of great value for the purpose of determining the age of the sand-buried cities. They extend over a considerable space of time, though they are all very old. Some are Chinese, and go back to about the first century B.C.; others are Sassanian of the fourth and fifth centuries A.D. Others again belong to some of the earlier Muhammadan dynasties. Among the earliest coins there are a few of very peculiar interest, because they are bilingual, showing Chinese legends on one side and Kharōṣṭhī on the other. The Kharōṣṭhī legend, according to Dr. Bloch who has kindly examined them for me, appears to refer these coins to Gondophares in the first century A.D.

Among the terra-cottas in my collection, there are a number of pieces of pottery which show Græco-Buddhist designs of that kind which was current in Gandhāra, a portion of modern Afghanistan, in the earliest centuries of our era. Mr. Havell, the Principal of the Calcutta School of Art, has been very helpful to me in re-constructing some very fine vases of this kind from a few detached fragments. There are also numerous full figures of monkeys, from 1 to 3 inches high, in all sorts of postures, rather well made, some playing on the well-known Greek reed instrument, the syrinx, like satyrs. Very curious is one piece which shows an ornamental design peculiar to Assyria. Another piece bears a lightly incised inscription in ancient Brāhmī characters of the fifth century A.D. All this points to an extension, in those early ages, of the Grecian culture of Western Asia into Eastern Turkistan,—a fact which was until now quite unsuspected.

Altogether Central Asia seems to be a country likely to be pregnant with archaeological surprises, and it is satisfactory to know that Great Britain will not be behind other countries in securing a fair share of them.

In connection with the Central Asian manuscripts of which I have been speaking, I must mention a very important discovery which has been recently made by Major H. A. Deane. In 1894 he first discovered a number of inscriptions in an unknown script, incised more or less carefully and distinctly on detached pieces of stone. In the following years he collected further large numbers of inscriptions of the same kind. They have all been found on the northern border of the Peshawar District and in the independent territory beyond it, in the countries, therefore, which anciently were called Gandhāra and Udyāna. Some of them have been published by Mr. E. Senart in the *Journal of the French Asiatic Society*, and the rest by Dr. A. Stein, in our *Journal*.⁸¹ These two scholars have subjected them to a very careful and minute examination, the result of which is that the characters used in them, though probably closely related to one another, show distinct signs of being distributable into five different varieties.⁸² But neither of those scholars, nor indeed anyone else hitherto, has been able to discover a key to reading them. There is, however, some ground for believing that ultimately they will be found to be written in some species of Turkī script and language. For some Turkī inscriptions found on the banks of the river Orkhon in Mongolia and deciphered by Professor V. Thompson in 1893, have been compared by Hofrath Prof. Bühler with Major Deane's inscriptions, and he has observed that more than a dozen letters seem to be common to both. Further Professors Levi and Chavannes of Paris have shown from the Itinerary of the Chinese pilgrim Oukong that in the middle of the eighth century A.D. the countries of Gandhāra and Udyāna were united under a dynasty of Turkish nationality and language.⁸³ Among my Central Asian manuscripts there are several which I suspect may be written in a very early species of Turkī. The characters are of an unknown kind, but, as the result however of a mere cursory inspection, I seem to have noticed resemblances to the characters occurring in Major Deane's inscriptions. Here, therefore, there seems to present itself a possibility of unravelling the puzzle of the inscriptions as well as the manuscripts.

⁸¹ See *Journal Asiatique*, Vol. IV, pp. 332 and 504. Also reprinted as *Notes d' Epigraphie Indienne*, No. V, 1895; and our *Journal*, Vol. LXVII, 1898.

⁸² Three of them, identified by Mr. Senart, have been called by him the *Spankharra*, *Boner* and *Mahaban* varieties. The other two have been discovered by Dr. Stein who gives the name *Nurizai* to the fourth variety; the fifth he does not name.

⁸³ See *Journal Asiatique*, Vol. VI, p. 378, for 1895.

Ethnographic and Linguistic Surveys.—During the period under review two new Surveys have been added to those already existing in India and doing such splendid scientific work.

The first of these is the Ethnographic Survey, which, so far as Bengal is concerned, was under the direction of the Hon'ble H. H. Risley, C.I.E. This survey is one of the direct results of the general census of 1881. It was not commenced, however, before 1885, in Bengal, and it was completed there in 1891 with the publication of Mr. Risley's report in four volumes. In the North-Western Provinces it was taken up in 1892 under the superintendence of Mr. W. Crook, and was completed in 1896, also with the publication of a Report in four volumes. The survey of the Panjāb was started in 1894 under the charge of Mr. Longworth Dames, and is still in progress.

The scheme of these ethnographic enquiries was framed from the first so as to serve two distinct purposes, the one in the main administrative, the other principally scientific,—a distinction which is carefully maintained in the four volumes embodying the results of Mr. Risley's portion of the work. The administrative uses are subserved by his first two volumes which contain, in alphabetical order, in the form of a glossary, an enumeration and description of the tribes, castes, sects and occupations of the people of Bengal. The other two volumes give the scientific part of the enquiry, and consist of the tables of anthropometric data on which Mr. Risley's ethnographic generalisations are based. Special interest attaches to these tables; for they are the first attempt on a large scale to apply the anthropometric system, elaborated by the French school of anthropologists, to the elucidation of the problem of caste which is so prominent in India. In the introduction to his first volume Mr. Risley discusses this problem in the light which is thrown on them by the data collected in the tables. His conclusions may be thus summarised. The whole of India is inhabited by a dolichocephalic or long-headed race. The brachycephalic or broad-headed race occurs only along the northern and eastern borders of Bengal, and can hardly be deemed Indian at all. In the long-headed race, however, two extreme forms can be distinguished, the Aryan and the Dravidian; and between these two extreme forms there are a large number of intermediate groups, each of which forms, for matrimonial purposes, a sharply defined circle, commonly known as a caste, beyond which none of its members can pass. If these groups are arranged in the order of their average nasal index, or the formula indicating the proportion of the length of the nose to its breadth, so that the caste with the finest nose shall be at the top, and that with the coarsest at the bottom of the list, it is found that this order substantially corresponds

with the accepted order of social precedence. Mr. Risley, accordingly, bases the origin of caste entirely on distinctions of race. His theory is directly opposed to that of Mr. Nesfield, Ibbetson and others, who hold that caste originated from differences in the occupations of the people. There is a third theory, the traditional one, according to which caste is derived from an original fourfold division of the population into Brahmans, Kṣatriyas, Vaiçyas and Sūdras. These three theories have been reviewed by Mr. E. Senart in 1896 in a little work on *The Castes in India*. He shows that none of these theories is capable of accounting for all the facts connected with caste. The essence of the latter lies in restrictions with regard to connubium and commensality. Such restrictions, however, are by no means confined to India, nor even to Aryan races. They are known to have existed among Greeks, Germans, Russians and other Aryan peoples; and it is probable that they also existed among the races that preceded the Aryan immigration into India. It is in them that we must look for the key to the origin of caste in India. Differences of occupation, race and religion contributed to the now existing divisions of caste, but the spirit and to a large degree the actual details of caste restrictions are identical with the ancient, world-wide, and especially Aryan, customs of restricting connubium and commensality. The abatement and final removal of these restrictions among the Aryan nations of the West is due, as Mr. Senart shows, to the growth of strong political and national feelings; and it is the absence of such feelings in India which probably accounts not only for the continued existence, but occasional new creations of caste in this country.⁸⁴

A survey of Assam, more with reference to its early history and languages, than to ethnology, was initiated by Sir Charles Lyall, K.C.S.I., in 1894, under the energetic direction of Mr. E. A. Gait, who in the previous year had published in the Journal of our Society an account of the Koch dynasty, which formerly ruled in Western Assam and the adjacent districts of Bengal. The immediate object was to make a search for originals or copies of the numerous manuscript *buranjis* or histories which were believed to be in existence; but incidentally copper-plate inscriptions, coins, and other old records were also brought to light. Several very important copper-plate grants, found in Gauhaṭi, Nowgong, and Bargāon, were made over to me by Mr. Gait to be deciphered. They have been published by me in our Journal,⁸⁵ and help to clear up to some extent the obscure history of Assam in the earlier middle ages. They show that there were three dynasties, probably succeeding one another,

⁸⁴ See a Review in the *Journal* of the Royal Asiatic Society for 1897, p. 192.

⁸⁵ See volumes LXVI and LXVII, for 1896 and 1897.

in the tenth and eleventh centuries A.D. The first two of these dynasties appear to have belonged to foreign invaders, and to have included, between them, twenty-two kings. One of the grants (of Nowgong) was issued by Balavarman, one of the members of the second foreign dynasty. The third dynasty was an indigenous one and bore the surname of Pāla. Two of its members, Ratnapāla and Indrapāla, the second and fourth of the series, are represented by the Bargāon and Gauhaṭī grants.

The modern history of the Assam valley dates from the advent of the Āhōms, a Shan tribe who crossed the Patkoi and invaded Eastern Assam about the beginning of the thirteenth century, and who gradually extended their sway westwards over the whole of the Assam valley, which they continued to rule up to the time of the British occupation. It was the practice of the leading families and of the *deodhāis* or priests to maintain *burāñjis* or histories, which were handed down from father to son and were periodically brought up to date. Many of these records were destroyed by order of one of the Rājās who discovered that they contained adverse criticisms of his rule, and others were lost in the troubles which followed the incursion of the Burmese at the beginning of the present century. A considerable number, however, escaped. Some of these were examined by an Assamese gentleman, named Kāçināth Tāmuli Phukan, who compiled from them a vernacular history of Āhōm rule which was published at Sibsāgar in 1814. The present enquiries have resulted in the discovery of a number of manuscripts in the possession of the representatives of old families and of some of the tribal *deodhāis* or priests, which add very considerably to the information recorded by Kāçināth. These *burāñjis* are inscribed on oblong strips of bark of the tree *Aquilaria Agallocha*.⁸⁶ Those that belonged to old families were in the Assamese language, and were translated without difficulty. But those belonging to the *deodhāis* were in the old Āhōm language and character, the knowledge of which has almost died out and is now confined to a small number of elderly *deodhāis*. In order to obtain a translation of the latter a young Assamese was appointed to learn the language from the few *deodhāis* who can still speak it, and then with their aid to translate their *burāñjis*. This work has now nearly been completed, and when it has been brought to a close, the materials will be utilised for the compilation of a complete history of Āhōm rule.

A search has also been made for inscriptions of the Āhōm kings on temples, cannon and copper-plates, and for coins issued from their mints.

⁸⁶ For a description of the method of preparing the bark, see Mr. Gait's paper entitled "An abstract of the contents of one of the Āhōm puthis" published in our *Journal*, Vol. LXIII, Pt. I, p. 108.

In all 28 temple inscriptions, 6 inscriptions on cannon, 48 copper-plates and 69 coins have been found and examined, the earliest of which dates from 1544 A.D. The information obtained from these sources has been utilised for checking the information recorded by Kāçināth; and so far as they go, the result has been to confirm the accuracy of his chronology in a remarkable degree. The majority of the coins collected were in the Sanskrit language and Nāgari character, but some of them were in the Āhōm language and character. These latter, which have long been a puzzle to numismatists, were deciphered by the Āhōm translator, and the readings were published by Mr. Gait, in 1895, in our Journal, together with information on the Āhōm system of chronology. In the same volume of our Journal, Mr. Gait also gave some account of the coinage of the Koch kings.⁸⁷

Previous to these enquiries, very little was known of the history of the Rājas of Jaintiā who ruled over the Jaintiā Hills and the portion of the Sylhet district which lies to the North of the Surma river. Some traditions regarding these kings have been collected, and ten coins and five copper plates have been found, which prove the accuracy of a traditional list of twenty kings, so far as the last fourteen names in it are concerned, and furnish materials for forming a fairly accurate estimate of the dates when they ruled. The results arrived at were published by Mr. Gait in 1895 in our Journal.⁸⁸

The state chronicles of the kings of Manipur have been translated under the order of Colonel H. St. P. Maxwell, C. S. I., the Political Agent and Superintendent of the State. The chronicles professedly commence with the birth of the first king of Manipur in 334 A.D., but cannot be relied on for a narrative of actual fact until the early part of the fifteenth century.

In addition to the above, a number of manuscripts containing traditions of old rulers, legends and mythology, have been collected and translated, and a list has been prepared of all known books and papers bearing on the history, ethnology, &c., of the Assam Province.⁸⁹

Since the publication in 1880 of my Comparative Grammar of the Gauḍian Languages, no material progress has been made in our general knowledge of the Sanskritic languages of Northern India. In some points of detail, however, there has been a considerable advance, and this has been almost wholly due to the researches of my colleague in these studies, Dr. G. A. Grierson, C.I.E. They principally concern the

⁸⁷ See our *Journal*, Vol. LXIV, pp. 237 and 286.

⁸⁸ See Vol. LXIV, p. 242.

⁸⁹ The account of the Assam Survey is based on a note kindly supplied by Mr. Gait.

grammars of the Kāçmīri language and of the dialects of Bihār and the Panjāb, and are too technical to be of general interest. Those whom it may interest, I must refer to Dr. Grierson's learned essays published in our Journal.⁴⁰

We may, however, now look forward to a great advance over the whole field of the North-Indian vernaculars, as the result of the Linguistic Survey which is at present proceeding under the direction of Dr. G. A. Grierson. That scholar first mooted the idea of such a survey before the International Congress of Orientalists held in Vienna in 1886. As a result a vote was passed by the Congress urging on the Government of India the importance of preparing a detailed survey of the languages and dialects spoken in this country. The suggestion was favourably entertained by the Government of India, but, owing to various causes, it could not be given effect to for some years, and then only in a modified form. The scheme which was ultimately approved of, and which since 1895 is in operation, comprises the following points. First of all, a rough unscientific catalogue is being made of every known language spoken throughout India, excluding Burma and the Madras Presidency. The examination of the languages spoken in these two provinces is left to a future opportunity. The area to be investigated, therefore, consists of the Panjāb, the North-West Provinces and Oudh, the Lower Provinces of Bengal and Assam, the Presidency of Bombay, the Central Provinces, and Rājputānā. Attempts will also be made to investigate, as far as possible, the languages of Kashmir and the Himalayan States along the North of Hindustan. This large area includes practically the whole of the Aryan-speaking population of India, besides the languages of hundreds of aboriginal tribes speaking Muṇḍā and Tibeto-Burman languages. These rough lists are compiled from returns supplied by local officers. Each District Official and, in the case of Independent States, each Political Officer was given a printed form which he was requested to fill up, naming every dialect and form of language, under the appellation by which it is locally known, spoken in the tract under his charge. All these forms have already been received back from the local officers, and the Rough List is in active course of preparation.

⁴⁰ See his *Essays On Bihāri declension*, Vol. LII, 1883; *Grammar of Chhattisgarhī*, Vol. LIX, 1890; *Specimen and Analysis of Padmāvati*, Vol. LXII, 1893; *Pronominal suffixes in Kāçmīri*, and *Radical and Participial Tenses of the Modern Indo-Aryan Languages*, Vol. LXIV, 1895; *Irregular Causal Verbs* ibidem, *Kāçmīri Vowels System*, and a *List of Kāçmīri Verbs*, Vol. LXV, 1896; *Kāçmīri Consonantal System*, Vol. LXVI, 1897. See also his *Seven Grammars of the Bihāri Language* published in 1883-1887, and the Rev. T. Bomford's *essays on Western Pañjābi* in Vols. LXIV and LXVI of our *Journal*.

The lists for the Lower Provinces of Bengal, comprising Bengal Proper, Bihār and Orissa, for the Central and North-West Provinces and Oudh and for the Panjāb are complete and in the Press, while those for Rājputānā and Assam are nearly ready, but have not yet been sent to Press.

Dr. Grierson has been good enough to permit me to inspect advanced proofs of those portions which are in the Press. I am thus in a position to explain the composition of the two parts of the Rough List. In the first part, languages are arranged according to local areas. Each local area, or district, is taken in order, and each language spoken in it, together with the estimated number of speakers, is stated, family by family, as it occurs. Languages, indigenous to the district and those spoken in it by non-domiciled immigrants, are distinguished by a difference in the printed type. The second part is like a reversing dictionary. Here languages are arranged according to families and groups, and under each dialect is recorded the name of each local area in which it is spoken. Here too a difference in the arrangement indicates the localities of the dialects spoken by the settled and the immigrant populations.

These lists are being prepared with as great regard for accuracy as is possible, but they have the defects of their origin. The original returns have been prepared by persons with local knowledge, but who do not pretend to be philologists. They may be taken as representing what intelligent local people consider to be the languages of their own neighbourhood. They give names, but they are names only. We are told, for example, that Bangālī is spoken in such and such a place, but we are not told what is meant by the word "Bangālī." It is probably the language which Europeans call Bengali, but it may be something else. In the Central Provinces many thousands of Gonds have abandoned their ancestral language, and now speak a barbarous Hindī. In many cases this has been returned by local officers as Gondī, and it will be necessary, therefore, to test every entry regarding that language, in order to see whether the language referred to belongs to the Dravidian or to the Aryan family of speech.

The decision of these and similar questions is one for linguistic experts, and it is to provide experts with materials for coming to a decision, and thus to render the survey complete and of scientific value, that the second portion of the scheme has been devised and, it is hoped, will be approved of by the Government of India. As soon as the rough list of a Province is complete, translations into every language, indigenous to each district, will be called for from each local officer. One standard passage has been selected for these translations, namely the

Parable of the Prodigal Son. As these translations will in many cases be made by persons who do not know English, a collection of some sixty-five specimen translations of the parable into various Indian languages has been prepared. It is probable that the person selected to translate in each case will be acquainted with at least one of the languages of which a specimen is given. But as every translation will probably be more or less stiff, efforts will be made to procure at the same time an original folktale, song, or other naturally spoken sample of the language. When all these translations have been collected, they will have to be examined, and with their aid each language mentioned in the rough lists will have to be classified under its proper name and family. It is to be hoped that these translations, or at least selected specimens of them, may be published; for if properly edited, they will form a valuable collection of evidence as to the actual linguistic condition of India. When once the rough lists have been corrected and the translations published, we shall for the first time be able to say what languages are spoken in Northern India, and how many people speak in each. We shall also, incidentally, acquire a complete collection of specimens of all the written characters used in that country.

It is obvious that the second part of the survey which is yet to be made is the far more important of the two. In fact, the first part, by itself, with all its unverified statements, has no practical value, certainly none of any scientific character. Its value lies solely in the fact of its furnishing the basis for the scientific survey. It is, therefore, much to be hoped that nothing may occur to stop the survey at the stage which it has now reached, but that the Government of India may place Dr. Grierson in such a position as will enable him now to devote his whole time to the prosecution of the remaining scientific part of the survey, for which he is exceptionally well fitted, and thus to bring to a successful end the great undertaking which he has initiated, and which will reflect so much credit on the Government of India.

It must be remembered that such a linguistic survey, in addition to its own proper purpose, is most valuable on account of the fresh light it throws on unsettled points of history and ethnography. Thus there is the tribe of Abhirs or Ahirs, well-known in ancient Indian history. Its identity and habitat has always been a very vexed question. The linguistic survey, at last, has supplied the answer. It has brought to light the Ahirvāṭi or Ahirvāli, a dialect of Western Hindi, which is spoken in the district of Gurgāon and the neighbouring native states by as many as 300,000 people, a large number of whom are still Ahirs. These Ahirs of Gurgāon are an important tribe, from whom anciently their country took the Sanskrit name of *Abhiravartta*;

and this, in its turn, in a corrupted form, has given its name to their dialect of Ahirvāli.⁴¹ I may give another instance. The last census gives only 4,500 Kōches in Bengal. The Kōches are a strong Tibeto-Burman race, which certainly once occupied a large portion of Bengal proper. Now the linguistic survey has discovered 217,500 more of these Kōches who live in the North-Central Districts of Rājshāhi, Purnea and Malda. This illustrates how important it is to go on with the survey, and not to stop it in its present half-finished condition.

I have already remarked that we may fully expect the results of the Linguistic Survey to lead to great advances of our knowledge of the history, the inter-relation, and distribution of the languages of Northern India. In order to show what we may expect in this direction, I cannot do better than communicate to you the substance of a note which Dr. Grierson has been good enough to place in my hands.

The extensive studies which I made of the North Indian vernaculars, when I was preparing my Comparative Grammar of the Gauḍian Languages, had led me to the conclusion set out in the Introduction to that Grammar, that there must have been two consecutive Aryan invasions of India, and that the second set of invaders entered the domains of the first "like a wedge." Dr. Grierson informs me that all his studies, subsequent to that publication, have confirmed, in a most striking way, my theory, which even then was not an altogether new suggestion. He is of opinion that it will ultimately be shown that there are much plainer signs of this double invasion in ancient Indian Literature, than has hitherto been supposed. Thus he believes it can be shown that the war between Viçvāmītra and Vaçiṣṭha was a war between these two tribes, in which Vaçiṣṭha represents the first comers, and Viçvāmītra represents their new-come rivals, who had settled on the Sarasvatī, and had already driven the older tribe, partly to the East to beyond the Gaṇḍak and into Maḡadha, partly South into the Pañcāla country, and partly West to the banks of the Indus, where Sudāa, Vaçiṣṭha's master, lived. He further believes that the Kuru-Pañcāla war of the Mahābhārata was in its essence a struggle between these two tribes, the Kurus representing the new-comers and the Pañcālas the old ones; and that if this theory is borne in mind in reading the Vaçiṣṭha-Viçvāmītra hymns of the R̥g-vēda and the Mahābhārata, and if a proper study is made of the geography of the period and of the tribes mentioned and the sides they took, it will receive remarkable confirmation.

⁴¹ Mr. V. A. Smith, in the *Journal of the Royal Asiatic Society* for 1897, p. 891, following Sir A. Cunningham, places the Ahirs further south, between Jhanāi and Bhilsā in the Gwāliyār State.

From the point of view of linguistics Dr. Grierson, in his note, shows that many new facts have come to light confirming my original theory. For instance, there is his discovery of the North-Western family, which completes the "wedge" theory. Then dividing the Aryan languages of India into two main families, a Central and a Non-Central, he shows that there is a remarkable series of opposed linguistic facts in the two. The Central family represents the new comers; the non-Central represents the first comers. Thus, the Central family is in the main a set of languages which are in the analytic stage. The original inflections have in the main disappeared, and grammatical needs are supplied by the addition of auxiliary words which have not yet become a part of the main words to which they are attached. Examples are the genitive suffix *ka* and the auxiliary verbs. Languages of the non-Central family have gone a stage further in linguistic evolution. They were once, in their Sanskrit form, synthetic; then they passed through an analytic stage—some are only passing out of that stage now, and are, like Kāçmīri, so to speak, caught in the act—, and are again become synthetic, by the incorporation of the auxiliary words, used in the analytic stage, with the main words to which they were originally attached. Examples are genitive terminations like the Bangālī *ēr*, or verbal terminations like the Bangālī *ām*.

Then, again, Dr. Grierson points out that the non-Central languages evidently used enclitic pronouns from the first. Hence we find them using pronominal suffixes freely, all using them for verbs, and some for nouns. In the Central languages, on the contrary, pronominal suffixes are, so far as he is at present aware, unknown.

In pronunciation also, he shows, that the two main families are sharply opposed. It is hardly necessary to dwell on the well-known preference of the Central languages for *ō*-sounds, and of the other languages for *z*-sounds. This is as old as the Açōka inscriptions. There are other preferences to which it is quite unnecessary to refer: they will at once occur to every philologist. A very remarkable difference is the treatment of the sibilants. The Central family hardens them: every sibilant is pronounced as a hard dental *s*. The non-Central languages seem unable to pronounce an *s* clearly. In the extreme west, the Greeks found *s* pronounced like *h*; and in the east, the Prākṛit grammarians found it softened to a *sh* sound, which they represented by *ç*. At the present day we find the same shibboleth a test of nationality: in Bengal and part of Marāṭha *s* is weakened to *sh*, and in Eastern Bengal and Assam it is further weakened, till its pronunciation resembles that of a German *ch*, and again on the North-Western frontier and in Kāçmīr, it has become an *h*, pure and simple.

The limits of these two main families Dr. Grierson defines as follows. The Central main family is bounded on the north by the Himālayas, on the west by, roughly speaking, the river Jhelam, and on the east by the Kōsi. The western and eastern boundaries are very wide, and include a good deal of debatable ground in which the two main families meet and overlap. If these limits are narrowed so as to include only the pure languages of the Central main family, the western boundary must be placed at about the meridian of Sirhind in Patialā,⁴² and the eastern at about the meridian of Allahabad in the North-Western Provinces. The southern boundary is well defined. It runs east and west through a point about two-thirds of the way across the Central Provinces. On the west, the Central main family merges into Sindhi through Marwāri and Bāgri, into what Mr. Bomford names "Western Pañjābi" through Pañjābi, and into Kāçmiri through Gujarī, Dōgri, and other hill languages, so that the area covered closely corresponds with that of the ancient *madhya dēça* or Middle Country, the name of which is significant. We learn from the Mahābhārata that Kṛṣṇa, being defeated by Jarāsandha of Magadha, fled from Mathurā to Gujarāt, where he founded a colony. At the present day Gujarāt is the only place where the Central main family has burst through the surrounding wall of non-Central languages. The language is a pure Central one. Pañjābi contains many unrecorded forms, for which the only explanation is that to the west of Sirhind, or, we may say, to the west of the Sarasvatī, the country was originally inhabited by tribes belonging to the non-Central family, who were conquered or absorbed by members of the Central family, whose language gradually superseded theirs just as Hindūstāni is now gradually superseding Pañjābi. Pañjābi is a Central language, but it contains many forms which can only have survived (if they were not imported) from an original non-Central dialect.

On the eastern side, the wider boundary includes Bihāri. Most of the Bihār dialects probably belong to the non-Central main family. Hitherto they have been grouped with languages like Avadhī and Baisvāri, which also probably belong to the Central main family. Provisionally, till the linguistic survey is complete, Dr. Grierson is inclined to class the true Bihāri dialects, viz., Pūrbī, Bhojpuri, Maithili, and Māgadhī, as non-Central languages, belonging, like Baṅgālī, to the Eastern group, and Baisvāri and Avadhī and others as an Eastern group of the Central family.

⁴² Sirhind also means the head of Hindustan, and is still the recognised race-boundary point.

Thus Dr. Grierson arrives at the following classification of the languages of Northern India.

Central Family.

	West-Central Group.	{	Western Hindi (including Urdū, Braj, Bhāṣā, Rōhilkhaṇḍī, and the language of the Upper Doāb, called Pachāḍī).
Bundēlkhaṇḍī.			
Rājasthānī (including Mārvarī, Mēvārī, Bāgrī and Mālvi ⁴³).			
	East-Central Group.	{	Gujarāṭī.
Pañjābī.			
Eastern Hindi (including Baisvārī and Avadhī).			
	Northern Group. ⁴⁵	{	Baghēlkhaṇḍī.
Chattīsgarhī. ⁴⁴			
Western Pahārī (including Kulnhi, Sirmurī and other connected dialects).			
			Central Pahārī (including Garhvālī, Jaunsārī, and Kumaunī).
			Eastern Pahārī (also known as Naipālī, Khas or Parbatīā).

The Classification of the Non-Central family is simple.

North-Western Group.	{	Sindhī.
		Western Pañjābī.
		Kāṣmīrī.
South-Western Group.	{	Marāṭhī.
		Bihārī. ⁴⁶
Eastern Group.	{	Bangālī.
		Assamese.
		Oṛiyā.

History of Old Calcutta.—The last subject on which I propose to touch in my address is one which concerns us "Calcuttaites" more nearly. It is the history of old Calcutta.

⁴³ The last may, perhaps, have ultimately to be classed as a separate language, or, perhaps, as a dialect of Bundēlkhaṇḍī.

⁴⁴ Possibly Chattīsgarhī should come under the non-Central Family. Its classification under the Central Family is provisional.

⁴⁵ The language-names of this group are taken from the Census Report of 1891. The nomenclature is Mr. Baynes.

⁴⁶ In the rough lists of the Linguistic Survey, Bihārī is included in the East-Central Group. This is only provisional.

The origin of this city of ours has been the subject of investigation of two members of the Society, Bābū Gaur Das Bysack and Mr. C. R. Wilson. The former published a very interesting paper on the subject in 1891, in the *Calcutta Review*,⁴⁷ and the latter has given us an account of his researches in a separate volume on the *Early Annals of the English in Bengal*, published in 1895.⁴⁸ The results of their investigations may be summarised as follows.

Down to the commencement of the sixteenth century Sātḡāon was the centre of commerce in Lower Bengal. That town lay on the river Sarasvatī, near its junction with the Hūgli, a little to the north of the modern town of Hūgli. Early in the sixteenth century the Sarasvatī began to silt up; and in order to better meet the commerce with Europe, which then began to spring up, the native traders began to move down the river Hūgli, in consequence of which movement Sātḡāon was deserted and sank into the obscurity of an insignificant group of huts.⁴⁹ Among those who deserted Sātḡāon were one Sett and four Bysack families. They settled on the Hūgli at a place which they named Govindpur after their tutelary deity Govindji, and which stood on the site of the present Fort William and its Esplanade. At the same time they established a place of business a little higher up the river, as a mart for the sale of skeins of thread and woven cloth. It was hence called the Sūtānuṭi Hāt or "the Cotton-bale Market," or in its English form Chuttanutti.⁵⁰ This place corresponds to the northern native quarter of the present city.

The immigration of the Setts and Bysacks occurred not long before 1530, in which year the first Portuguese ship sailed up the river Hūgli, and traded with them. The first settlement of the English in these parts took place in 1651, in which year the Company established its headquarters in Hūgli, near the now decaying town of Sātḡāon. In 1686, however, they found themselves obliged to abandon it, and withdrew to the island of Hijili at the mouth of the Hūgli. On his way down the Hūgli, Job Charnock, who was in command of the Company's servants, halted for a few weeks at the Sett and Bysack settlement at Sūtānuṭi. In the following year, having failed to establish himself in Hijili, he returned to Sūtānuṭi, where he maintained

⁴⁷ See Article V, in No. CLXXXIV, p. 305, entitled "Kalighat and Calcutta."

⁴⁸ The "Introductory Account" is based mainly on the late Sir Henry Yule's edition of the *Diary of William Hedges, Esq.*, Vol. II, 1888.

⁴⁹ See Blochmann's account of Sātḡāon in our *Journal*, Vol. XXXIX, p. 281.

⁵⁰ Pronounced Shuttanutti, as in Portuguese, whence the transliteration is borrowed. See Wilson's *Early Annals*, p. 135, note 2. The name is found variously spelled: Chuttnauttee, Chuttanuttea, Chuttanutti, etc.; also Soota-Nutty.

himself for about one year, from September 1687 to November 1688; but ultimately, after an abortive attempt at Chittagong in 1689, he had to withdraw to Madras. From here he was recalled by the emperor Aurangzib, and in August 1690 came back for the third time to Sûtānuṭī, where he established the Company once more at the place they had occupied in 1688. This was just below the settlement of the Setts and Bysacks, and above their settlement at Govindpur, at a small village, called Kalikātā, or in English Calcutta, on the site of the present European commercial quarter and the Baṛā Bazār. Here the English traders lived at first as best they could in tents, huts and boats; but very soon "as the result of conciliating the Nawāb of Bengal's representatives, and of winning general confidence, Armenian and Portuguese merchants were attracted by the English, and as success followed industry, the settlement extended itself southward along the river's bank, bringing into the sphere of occupation the contiguous villages of Calcutta and Govindpur. When in course of a little time further a factory grew into existence, the Company's servants, who had learned the necessity of possessing some central stronghold, obtained permission, in 1696, from the Nawāb's Government to surround it with defensive fortifications."⁵¹ This was the old Fort William which stood on the site now comprised between Koilaghāt Street and Fairlie Place. Two years later, in 1698, through the indulgence of Prince 'Azimu-sh-Shān, the grandson of the emperor Aurangzib, they secured the leasehold rights of the three villages of "Chuttanuttee, Calcutta and Govindpur," which henceforth formed one united settlement. Thirteen years later, in 1717, they obtained from the emperor Farrukhsiyar a further grant of 38 villages, out of which several were added to the three villages already amalgamated. Afterwards others were, from time to time, brought within the bounds of the settlement, till at last these combined localities formed the city of Calcutta almost as it now is. "The designation of Calcutta is now applied not only to our city which has for its component parts many old villages with histories of their own, but to a Parganah which comprehends the city and many villages at various distances from it; and this Parganah again is one of several which pass under the name of the District of the 24 Parganahs."⁵²

The name of "Calcutta," in its English form, first occurs in two Reports submitted in March 1689, by Captain Heath and Job Charnock to the Company's Council in Madras, and refers to the second settlement of the English near Sûtānuṭī in 1688.⁵³ When they returned for

⁵¹ See Dr. Busteed's *Echoes from Old Calcutta* (3rd edition), p. 3.

⁵² See Baboo G. D. Bysack's paper, p. 320.

⁵³ See *Hodges' Diaries*, edited by Colonel Sir H. Yule, pp. lxxix and lxxxi.

the third time to Sūtānuṭī, they again settled on the lands of the "Calcutta" village; but the official designation of the settlement appears to have been "Chuttanuttee," for the "diaries" are dated from there. How the change of name originated and the little village of Kalikātā came to give its name to the city of Calcutta is not yet fully accounted for. It seems to me that the change explains itself in this wise. The early diaries of the English Settlement between 1688 and 1698 are all called "Chuttanuttee Diaries." These diaries always run from the December of the preceding year to the November of the following year. The diary for 1699, that is to say, for December 1698 to November 1699, is the first dated from Calcutta; for I find that the diary for 1704-5 is called the seventh from Calcutta.⁵⁴ It follows that the change of name, from Chuttanuttee to Calcutta, must have taken place shortly before December 1698. Now in July 1698, the Company became the revenue collector, for the Moghul Government, of the three villages Sūtānuṭī, Calcutta, and Govindpur. In the Āin-i-Akbarī, the village of Kalikātā (Calcutta) is enumerated as one of the *mahals* or revenue subdivisions of the District of Sāt-gāon.⁵⁵ As such it belongs to the fiscal survey, made in 1587, by Todar Mall, the well-known Finance Minister of the emperor Akbar. The villages of Sūtānuṭī and Govindpur, founded shortly before, in 1530, are not mentioned in the fiscal survey; they evidently lay within the fiscal subdivision of Calcutta. It is natural to conclude that when the English Company acquired the collectorate of that subdivision in 1698, they made its old and well-known fiscal name the official designation of their settlement, especially as their factory and fort lay within the limits of the village of Kalikātā.

For the very early age of that village a curious piece of evidence was discovered in 1892, by Mahāmahōpādhyaya Pandit Hara Prasād Shāstri.⁵⁶ He found in an old manuscript an account of a voyage down the river Hūgli, written in 1495 by a Baṅgālī author named Bipra Dās. That writer enumerates all the towns and villages which the voyager, a certain Cānd Sadāgar, passed on both sides of the river. Among them occurs the village of Kalikātā, but neither Sūtānuṭī, nor Govind-

⁵⁴ See Wilson's *Early Annals*, p. 236, where it is called *Calcutta Diary No. 7*. The full name of the Calcutta diaries was *Diary and Consultation Book of the London Company's Council at Fort William in Bengal*. This is accounted for by the fact that the Old Fort was completed in 1697, just before the change of name took place.

⁵⁵ See Colonel Jarrett's Translation, Vol. II, p. 140. The Āin-i-Akbarī was completed by Abul Faḥl in 1597. See also Mr. J. Beames' paper in the *Journal*, Royal Asiatic Society, for 1896, p. 102.

⁵⁶ See his paper in our *Proceedings* for 1892, p. 123.

pur, which circumstance shows that while Kalikātā existed in 1495, the other two villages did not.

The idea still much entertained that Calcutta has received its name from the celebrated shrine of Kālīghāṭ on the "Old Ganges," is altogether wrong. Not to mention the philological difficulties which are fatal to the identification of *Kalikātā* with *Kālīghāṭa*, their identity is totally precluded by the fact that in 1495 both localities were in existence and occupied the same, or nearly the same, places as they do now. Bipra Dās's voyager, having come by the town of Hūgh and other places, passed the village of Kalikātā, and journeying on reached Bētōr, near the modern Shibpur, and thence he went on to Kālīghāṭ, where he worshipped at the shrine of Kālīkā. The fact is that the derivation of Calcutta from Kālīghāṭ is one of the many utterly unfounded popular etymologies. Its real derivation is still quite unknown. The probability is that it is a word from some aboriginal language: and this would be only one more evidence pointing to a considerable antiquity for the site of Calcutta.

With regard to the origin of the Kālīghāṭ shrine, I may add that according to a current tradition it was founded, early in the fifteenth century, by an ascetic called Jaṅgal Gir Chaurāṅgī. "One evening he was performing his devotions by the bank of the "Old Ganges" which was then a great stream flowing south of Calcutta, when suddenly a bright light shone round about him, and that same night, when he had gone to sleep, the goddess Kālī appeared to him in a dream, and told him that the spot was one of those holy places which had once received a portion of her severed body. The next day he dug up the ground, and proved the truth of his vision. The sacred emblems thus miraculously found, being the toes of her right foot, were set up for worship in a small wooden house on the bank of the Ādi-Gangā."⁵⁷ From the original founder of this wooden shrine, our well-known fashionable quarter, now known as Chowringhee, but which at that time was a wild jungle, is supposed to have obtained its name. The present substantial temple was erected in 1809 by the Sāvārṇa Chaudharis of Behālā.

The story of the Black Hole, as you know, is intimately connected with the Old Fort William, which as I have already remarked, was built in 1696-97. At the time of that tragedy, in 1756, Calcutta "extended in a crescent along the bank of the river from north to south for about three miles (say from modern Chitpur Bridge to the site of the present Fort). Standing nearly midway between those limits was the little Old Fort. The houses of the English inhabitants were scattered in

⁵⁷ See Wilson's *Early Annals*, pp. 129, 130.

large enclosures for about half a mile to the north and south of the Fort, and for about a quarter of a mile to the east of it. Beyond the English houses were closely clustered the habitations and huts of the natives; the better classes of them, such as the Setts and Bysacks, dwelt to the north; the lower sort in the Bazars to the east and south."⁶⁸ The story of the tragedy of the Black Hole is well-known, and I need not repeat it, but till the commencement of the period I am now reviewing its exact site was very imperfectly known. For the exact determination of it we are indebted to two members of our Society, Messrs. R. R. Bayne and C. R. Wilson. The results of their investigations are published in our Journal,⁶⁹ and may be thus summarised. In 1880, when the new East India Railway Offices were being erected in Clive Street, the excavation made for the foundation of these Offices laid bare the remains of an old wall. Mr. Bayne, who was in charge of the works, knowing that he was working on the locality of the Old Fort William, at once resolved to utilize as well as he could the opportunity of determining its topography. In February 1883, he laid before the Asiatic Society the results of his investigations. Unfortunately they suffered under two disadvantages. In the first place, the portions of the old building actually excavated were on the northeru and least interesting side of the Fort. In the second place, Mr. Bayne had no proper plan to guide him in his conjectures as to the position and nature of the remaining portions of the Fort. When Mr. Wilson resumed the investigations in 1891, he could do so under far more favourable conditions owing to the erection of the New Government Offices in Dalhousie Square. He also had the advantage of being guided in his excavations by a detailed plan of Fort William in 1753, a photographed copy of which was presented to the Society by Mr. T. R. Munro. He thus succeeded in discovering considerable remains of the buildings on the south side of the Fort, where the Black Hole and other places of interest had been situated. In fact, his investigations were so successful that it was found possible to draw up a plan of the Old Fort, accurately showing its position with reference to the modern houses now standing on or near its site, together with the main features of its principal buildings. He first discovered the true dimensions and position of the east gate of the Fort. The gate was found to be much smaller than Mr. Bayne had conjectured it would be. Its centre lay on the central line of the road in front of Writers' Buildings, which has always been one of the principal streets of the city. In the next place, Mr. Wilson traced out, as far

⁶⁸ See Dr. Busested's *Echoes of Old Calcutta*, p. 5.

⁶⁹ See Volume LII, p. 105, and Vol. LXII, p. 104.

as was possible, the main features of the factory within the Fort, in which were situated the apartments of the Governor. This was in its day one of the finest English houses in India. It consisted of a main building facing the river, with two wings behind at right angles to the main building. Almost all the foundation walls of these wings were traced out by excavations, and the position of the walls of the main building was ascertained, although the walls themselves could not be traced out, as the site of the main building is at present occupied by the Government Opium Godowns and by the out-houses of the Custom House. Mr. Wilson also endeavoured as far as possible to ascertain the position of the south curtain, of the south-east bastion, and of that portion of the east curtain which lay between the south-east bastion and the east gate, together with the adjoining arcades and chambers. Considerable difficulty was experienced by him in coming to any definite conclusion on these points; for, in the first place, the Post Office covers the site of the south-east bastion and the adjacent south curtain wall, and so prevents any extended excavations in this region; and in the second place, the plan of the old Fort, which has elsewhere proved to be extremely accurate, seems at this point to fail. Still, in spite of these difficulties, Mr. Wilson was able to definitely fix the position of the south curtain wall and of three parallel lines of arches within it, and to show that tradition was right in asserting that the old arcade and arches which still stand in the Post Office compound were part of the old Fort. The arches of the south face of this arcade are what remains of the first line of arches within the south curtain, and the arches in the middle of the arcade are what remain of the second line of arches. The foundation wall of the third and innermost line of arches was traced out for some distance. It was found in the passage on the north of the Post Office. Starting from this wall, or, what is practically the same thing, from the north face of the Post Office, Mr. Wilson traced out the east curtain wall as far as the east gate, the inner wall containing the chambers built against the curtain, and the wall of the piazza or verandah running west of the chambers. The Black Hole prison was one of these chambers; but to fix its exact position it would have been necessary to ascertain, not merely the positions of the curtain wall and the inner wall, which formed its eastern and western walls, but also the position of the cross-walls which formed its northern and southern boundaries, and divided it off from the other chambers built against the east curtain. Unfortunately these cross-walls were run up with hardly any foundation, and hence it was found extremely difficult to trace their position. One such cross-wall was found at a distance of about 100 ft. from the centre of

the east gate, and to the south of this there is another cross-wall which Mr. Bayne discovered in 1883, and which according to his theories must have been the north wall of the prison. According to Mr. Wilson this cannot have been the case; because the space south of this cross-wall is shown by the plan of the Fort to have been occupied by the foot of the staircase leading to the south-east bastion, but he thinks it quite possible that it is the south wall of the prison. Concerning this and other points in the topography of the Fort additional information may perhaps be obtained hereafter by further excavations and by the examination of old records.⁶⁰

The history of the Company's Ecclesiastical Establishment in Bengal from its foundation in 1677 to the close of the eighteenth century has been explored by another member of our Society, the Rev. H. B. Hyde, and published in a series of ten short memoirs. The materials for these researches previous to the sack of Calcutta in 1756 were found almost wholly in the Company's archives at Westminster. Subsequent to that date a parallel series exists in the Vestry Records of St. John's Church, in the 'Ecclesiastical' records of the old Mayor's Court of Calcutta, and in the Consultations of the Public and Military Departments of the Bengal Government. The first Chaplain of 'the Bay,' John Evans, had a remarkable career which ended in the Irish Bishopric of Meath. This Mr. Evans was Chaplain of 'the Bay' at the time of the founding of Calcutta. His successors Benjamin Adams and William Anderson promoted the building of the first Presidency Church. This occupied a site now covered by the west end of Writers' Buildings and, as shown by the consecration documents which have been found in the Bishop of London's Registry, was dedicated on the 5th of June, 1709, to St. Anne, doubtless with complimentary reference to the name of the reigning sovereign. Specimens of the sermons of Mr. Anderson have been found in the British Museum; they curiously illustrate the disorderly state of the factory at that period. The next three Chaplains in succession filled the fifteen years previous to 1726, counting four intervals of two or three years each occasioned by Chaplains' deaths. The tomb of one of these victims of the climate is in the Dacca cemetery. During these fifteen years the project which resulted in the foundation of the Calcutta Charity School (now united with the Free School) was set afoot. The Parish Register of St. Anne's has been found in duplicate at the India Office, and the whole of it, from 1713 until the destruction of the Church by the Nawāb's army in 1756, has been transcribed and added to the Records of St.

⁶⁰ See the Annual Address in our *Proceedings* for 1892.

John's Church. In 1726 arrived a Chaplain who was destined to set the climate for 30 years at defiance, and then to perish not by any Indian sickness but by suffocation in the Black Hole; his name was Gervase Bellamy. He saw the old Court House, which occupied the site of the present St. Andrew's Kirk, built in about 1729. The building was first intended as a school house, but soon gave shelter to the Mayor's Court, and became the Calcutta Town Hall. Eventually Government took it over and still pay over the monthly rent of 800 sicca rupees on account of it to the Select Vestry of St. John's and the other Governors of the Free School. Bellamy witnessed also the furious cyclone of 1737, which, it appears, was not accompanied by an earthquake as is generally supposed, but in which the tall spire of St. Anne's was blown off. The traditions of this celebrated storm, as Mr. Hyde has shown, are much exaggerated. In 1743, Bellamy received a junior colleague in the Chaplaincy, the third successor of whom was Robert Mapletoft, who arrived in 1749. In the siege of 1756, this man was appointed a Captain-Lieutenant, and did good work on the defences. He perished among the refugees at Fulta, while Bellamy was found lying suffocated hand in hand with his son in the Black Hole. On the recovery of Calcutta from the Nawāb Sirāju-d-daulah, the first incumbent of the Chaplaincy was Richard Cobbe, R.N., who had accompanied Admiral Watson to Calcutta. He died after a few months' service. During his brief incumbency the Portuguese Church in Moorgilhatta was taken over for English use and remained the presidency church until 1760. Cobbe was succeeded by Butler who in 1758 welcomed into the settlement the celebrated S. P. C. K. Missionary John Zachary Kiernander. He survived to see St. John's Chapel built in the ruins of the old Fort in 1760. In January 1762, a month after his death, he was succeeded by Samuel Stavely, R.N., who died nine months later. His colleague, William Hirst, R.N., F.R.S., was one of the most accomplished men who ever belonged to the Bengal Ecclesiastical Establishment. A long communication of his, respecting the great earthquake of 1762 and also an eclipse of the sun in the same year, is to be found in the Transactions of the Royal Society. Following Hirst, William Parry succeeded as Senior Chaplain in 1765, and Thomas Yate in 1769. The latter had a singular experience in being taken prisoner by the French and confined on board a French frigate and at the Mauritius. In both situations he suffered horrible hardships, and in the latter imprisonment he even prayed "that one of the soldiers might be permitted to shoot him through the head." He survived all his misfortunes, however, and died as first Garrison Chaplain of Calcutta in 1782. William Johnson became Senior Presidency Chap-

lain in 1784, and to his efforts is due the building by public subscription of the present St. John's which was consecrated in 1787. On his retiring from India in 1788, Thomas Blanshard became Senior and John Owen, Junior Presidency Chaplain. Of the latter a large private correspondence has been discovered, dated mostly from Calcutta and is not a little curious. In 1788 the presidency chaplains in conjunction with David Brown, the Garrison Chaplain, and Robert Carr, the Chaplain to the Fourth Brigade, made an admirable effort to secure Government English Schools for the native population. Their memorial to Government on the subject is printed by Mr. Hyde in one of his memoirs. Nothing came of it, and indeed it appears to have been quite overlooked even by writers on Education in British India. In this same year the Ecclesiastical Establishment which then comprised nine Chaplains was put on a new footing. Brigade Chaplaincies were abolished and Barrackpur, Dinapur, Chunâr, Berhampur, Fathgarh, and Cawnpur became quasi-parishes, with resident incumbents. Mr. Hyde has traced out the succession of Chaplains in each appointment until the close of the century, and collected a great number of personal *notitiae* respecting each of them, especially regarding David Brown, who eventually became Senior Presidency Chaplain. He has similarly compiled in much detail the history of the Charity and Free Schools down to the close of the century.

Writers differ much in accounting for the origin of the Charity School: none seem to fix the date of its beginning early enough. Mr. Hyde points out that its establishment was a cherished project of Chaplain Briercliffe and the Society for Promoting Christian knowledge in 1713, and that in 1720 the scheme after many checks was actually afoot and Chaplain Thomlinson bequeathed Rs. 80 towards it. Mr. Hyde thinks that the school had been in existence some time before 1732: perhaps 1729 is as near a conjecture as can be made as to the date of its beginning work. It was first supported out of the income of the "Charity Stock" of the Church. The origin of this property must be sought very early in the history of the Chaplaincy. There existed in Hûgli, before the factory removed to Calcutta, an institution of "guardians of the poor," the funds of which arose from fines levied upon English officials of the factory who remained out late at night, who swore profanely, or who neglected attendance at divine worship. This institution seems to have disappeared in the dissolution of manners in the early years of the Calcutta factory, and local paupers had stipends from the Company's Cash. With the improvement of parochial organization on the consecration of the Church in 1709, such administration of charity passed, it is to be

presumed, naturally into the hands of the Select Vestry, with whom money must have slowly accumulated after the sacred building was finished and furnished; for all expenditure for repairs and establishment must have been borne by the Company, and Church Order required that alms should be collected at the Offertory for the benefit of the poor. The fund thus accumulating would have been augmented by legacies and donations, and it is known that the fees received for the use of palls at funerals went into it. The Charity Stock therefore must have been already of ancient origin, when its income became permanently devoted to the maintenance of the Charity School. In 1731, "an eminent merchant" (to be identified probably with Mr. Richard Bouchier) wrote home from Calcutta that there were eight boys on the foundation and about 40 others. The eight foundationers were "maintained and clothed after the manner of the Blue-coat boys at Christ's Hospital." After the sack of Calcutta the School was re-opened with 20 foundationers, and duplicate promissory notes for Rs. 20,000, representing the Charity Stock, were granted to "the Wardens of the Parish." Within a few years time the Court House (or rather the portion of it used for Magisterial purposes) was bringing in a rent of Rs. 2,000 a year. This in 1767 was increased to Rs. 4,160, and in 1776 to Rs. 6,180. Two years later the Government had taken over the whole building and fixed the rent at the rate still paid, *viz.*, Rs. 800 a month. Out of the revenues thus realized from the Charity Stock and the Court House 20 boys were at this time maintained on the foundation of the School. On leaving School the boys were for the most part bound out as apprentices. In 1787 there were 30 boy foundationers, and four girls. In 1789 there was 25 boys and 16 girls. In 1789 the Free School was founded which soon coalesced with the Charity School. In 1793 there were 40 boys and 30 girls on the 'Charity,' and slightly larger numbers on the "Free" foundation. In the same year the Jaun Bazar property was purchased which the United School now occupies. In 1800 the two institutions were formally united, and possessed a united capital of something over two lakhs of rupees "independent of dead stock and contingencies." Some dieting bills of this period remain, and are curious particularly as recording prices. 18 seers of milk, and 25 loaves of bread each were reckoned to the rupee, six sheep cost Rs. 7-6-0, and Rice Rs. 1-4-0 a maund. By 5th April 1813, 252 children were entirely maintained by the Free School, and about 32 day scholars were educated with the rest under Dr. Bell's system. By 1817 the number of foundationers had arisen to 205 boys and 92 girls.⁶¹

⁶¹ The account of the Chaplaincy and the Charity School is from a note kindly supplied to me by Mr. Hyde.

And now, gentlemen, I offer you my sincere thanks for the honour you conferred on me last year in electing me your President. It will always remain one of my pleasantest recollections of India that I was permitted to close my career in this country with that distinction; and I have the additional satisfaction of knowing that in the Hon'ble H. H. Risley, C.I.E., I shall have a successor who is distinguished not only by his position in his own Service, but also by his achievements in scientific research.

The President announced that the Scrutineers reported the result of the elections to be as follows :—

President.

The Hon. Mr. H. H. Risley, C.I.E., B.A., I.C.S.

Vice-Presidents.

A. Pedler, Esq., F.R.S.

Dr. A. F. R. Hoernle, C.I.E.

The Most Revd. Archbishop P. Goethals, D.D., S.J.

Secretaries and Treasurer.

Dr. T. Bloch.

F. Finn, Esq., B.A., F.Z.S.

L. de Nicéville, Esq., F.E.S.

Surgeon-Major A. Alcock, M.B., C.M.Z.S.

Mahamahopādhyaya Haraprasād Cāstri, M.A.

G. W. Küchler, Esq., M.A.

Other Members of Council.

Bābu Pratāpa Candra Ghoṣa, B.A.

Dr. G. Watt, C.I.E.

Dr. P. K. Ray.

R. D. Oldham, Esq., F.G.S.

Surgeon-Captain A. R. S. Anderson, B.A., M.B.

A. T. Pringle, Esq.

Surgeon-Lieut-Col. G. Ranking, M.D.

W. B. Colville, Esq.

The Rev. H. B. Hyde, M.A.

The Meeting was then resolved into the Ordinary General Meeting.

The Hon. Mr. H. H. Risley, C.I.E., B.A., I.C.S., President in the chair.

On account of the lateness of the hour, the minutes of the last meeting were taken as read and were so confirmed.

Sixty-eight presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last meeting of the Society were balloted for and elected Ordinary Members:—

The Rev. J. Watt.

David Hooper, Esq., F.C.S., F.I.C., F.L.S.

Bābu Amritalāl Vasu.

E. B. Havell, Esq.

The following gentlemen are candidates for election at the next meeting:—

A. Scott, Esq., proposed by F. J. Rowe, Esq., seconded by R. D. Mehta, Esq.

H. S. Barnes, Esq., I.C.S., Personal Assistant to the Chief Commissioner of Assam, proposed by E. A. Gait, Esq., seconded by Dr. A. F. R. Hoernle.

Bābu Jadu Nath Sarkar, M.A., Premchand Roychand Student, Professor, Metropolitan Institution, proposed by Dr. Aṇṇoṣa Mukerjī, seconded by Paṇḍit Haraprasād Čāstri.

Syed Hussein Bilgrani has expressed a wish to withdraw from the Society.

Dr. A. F. R. Hoernle exhibited some Central Asian Antiquities.

LIBRARY.

The following additions have been made to the Library since the meeting in January last:—

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

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- Vienna. K. K. Geologische Reichsanstalt,—Verhandlungen, Nrn. 11-13, 1897.

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- Washington. Biological Society of Washington,—Proceedings, Vol. XI, pp. 241-82.
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presented by the Authors, Translators, &c.

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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR MARCH, 1898.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 2nd March, 1898, at 9-15 P.M.

FRANK FINN, Esq., B.A., F.Z.S., in the chair.

The following members were present:—

Dr. A. R. S. Anderson, Dr. T. Bloch, W. K. Dods, Esq., The Revd. H. B. Hyde, L. de Nicéville, Esq., A. T. Pringle, Esq., Bābu Jadu Nath Sen, M. J. Seth, Esq., Mahamahōpādhyāya Haraprasād Čāstri, Paṇḍit Mahendra Nath Vidyānidhi.

Visitors:—John Bathgate, Esq., Bābu Ballabha Chatterji.

The minutes of the last meeting were read and confirmed.

Seventy-two presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last meeting of the Society were balloted for and elected Ordinary Members:—

A. Scott, Esq.

H. S. Barnes, Esq., C.S.

Babu Jadunath Sarkar, M.A.

The following gentlemen are candidates for election at the next meeting:—

Maharajah Prodyat Coomar Tagore, proposed by Surgeon-Major A. Alcock, seconded by Surgeon-Captain A. R. S. Anderson.

Herbert Stark, Esq., B.A., Head Master, Calcutta Madrassa, proposed by Dr. A. F. R. Hoernle, seconded by F. J. Rowe, Esq.

K. G. Gupta, Esq., C.S., proposed by Dr. P. K. Ray, seconded by Bābu Pratāpa Candra Ghoṣa.

Surgeon-Lieutenant C. J. Milne, M.B., proposed by Sir G. King, K.C.I.E., seconded by Surgeon-Major D. Prain.

Dr. E. J. Simpson has expressed a wish to withdraw from the Society.

The Secretary read the names of the following gentlemen who had been appointed to serve in the various Committees for the present year:—

FINANCE AND VISITING COMMITTEE.

Dr. A. R. S. Anderson.	C. L. Griesbach, Esq.
W. B. Colville, Esq.	R. D. Oldham, Esq.
Bābu Pratāpa Candra Ghoṣa.	A. Pedler, Esq.
The Most Revd. Archbishop P. Goethals.	Dr. P. K. Ray.

LIBRARY COMMITTEE.

The Hon'ble Mr. Justice Gurudās Bannérji.	J. Mann, Esq.
Bābu Gaurdās Baṣāk.	Dr. Āçutoṣa Mukerji.
Bābu Pratāpa Candra Ghoṣa.	Mahāmahōpādhyāya Nilmaṇi Mukerji Nyāyalaṅkāra.
The Most Revd. Archbishop P. Goethals.	Mahāmahōpādhyāya Mahēṣa Candra Nyāyaratna.
T. H. Holland, Esq.	A. Pedler, Esq.
The Revd. H. B. Hyde.	A. T. Pringle, Esq.
S. C. Laharry, Esq.	Dr. Mahēndralāl Sarkār.
	Dr. G. Watt.

PHILOLOGICAL COMMITTEE.

Maulvie Ābdus Salam.	Mahāmahōpādhyāya Mahēṣa Candra Nyāyaratna.
Maulvie Āhmad.	F. E. Pargiter, Esq.
Sir Saiyed Āhmad.	Captain D. C. Phillott.
N. D. Beatson-Bell, Esq.	Paṇḍit Satyavrata Sāmacramī.
Bābu Gaurdās Baṣāk.	Rai Rājkmār Sarvādhikāri Bāhādur.
Bābu Nāgēndra Nāth Vasu.	Dr. Mahēndralāl Sarkār.
Dr. A. Führer.	Dr. M. A. Stein.
Bābu Pratāpa Candra Ghoṣa.	Mahāmahōpādhyāya Candra Kanta Tarkalaṅkāra.
Dr. G. A. Grierson.	Dr. G. Thibaut.
J. Mann, Esq.	A. Venis, Esq.
Dr. Āçutoṣa Mukerji.	
Mahāmahōpādhyāya Nilmaṇi Mukerji Nyāyalaṅkāra.	

COINS COMMITTEE.

J. A. Bourdillon, Esq.	Bābu Panchanana Mukerji.
W. B. Colville, Esq.	C. J. Rodgers, Esq.
Dr. A. Führer.	Dr. J. Scully.
L. W. King, Esq.	V. A. Smith, Esq.
	E. Thurston, Esq.

HISTORY AND ARCHÆOLOGICAL COMMITTEE.

The Hon'ble Mr. Justice Amir Ali.	The Most Revd. Archbishop P. Goethals.
Babu Gaurdās Baṣāk.	The Revd. H. B. Hyde.
Dr. A. Führer.	Paṇḍit Mohanlal Vishnulal Pandia.
Bābu Pratāpa Candra Ghoṣa.	Dr. M. A. Stein.
	C. R. Wilson, Esq.

NATURAL HISTORY COMMITTEE.

Dr. A. R. S. Anderson.	A. Pedler, Esq.
J. F. Duthie, Esq.	Dr. D. Prain.
T. H. Holland, Esq.	Dr. J. Scully.
C. S. Middlemiss, Esq.	R. E. S. Thomas, Esq.
Dr. Fritz Noetling.	E. Thurston, Esq.
R. D. Oldham, Esq.	Dr. G. Watt.

PHYSICAL SCIENCE COMMITTEE.

Dr. A. R. S. Anderson.	Dr. Āçutoṣa Mukerji.
Dr. J. C. Bose.	Dr. Fritz Noetling.
P. N. Bose, Esq.	R. D. Oldham, Esq.
J. Eliot, Esq.	A. Pedler, Esq.
J. H. Gilliland, Esq.	Dr. D. Prain.
T. H. Holland, Esq.	Dr. P. C. Roy.
The Revd. E. Lafout.	Dr. Mahēndralāl Sarkār.
C. S. Middlemiss, Esq.	Dr. J. Scully.

Mr. Frank Finn, Deputy Superintendent of the Indian Museum, exhibited some living specimens of the Indian Goosander (*Merganser comatus*), and read the following note on its walking powers.

The specimen of the Indian Goosander (*Merganser comatus Salvadori*) which I have the honour of exhibiting to-night has been very kindly lent to me for the purpose by Mr. W. Rutledge of Entally, who tells me that this is the only specimen of the bird he has ever received

in the course of his long and extensive experience as a dealer in living animals.

The bird being so rare in captivity, I have thought it worth while to point out, by means of this specimen, that Mr. Hume was mistaken in thinking that the species is unable to walk. He says (*Game Birds and Wildfowl of India*, Vol. III, p. 301): "On land one only sees them resting near the water's edge, and when disturbed they shuffle on their breasts into the river. I do not think that they can walk at all. Anyhow I have always seen them just half-glide, half-wriggle, breast foremost, and I think touching the rock, into the water."*

But from the actions of the bird now exhibited, it is easy to see that the Goosander can walk like other ducks, and does so in the same attitude as they, though it is naturally not so active on land as the less aquatic species. No doubt the birds seen by Mr. Hume were simply disinclined to stand up and walk properly when they had but a very short distance to go, and preferred the lazier method of locomotion he describes in the passage above quoted.

The following papers were read:—

1. *An ancient inscribed Buddhistic Statue from Çrāvasti.*—By DR. T. BLOCH.

The paper will be published in the *Journal*, Part I.

2. *Some new species of plants from the North-Eastern Frontiers of India.*—By SIR G. KING, K.C.I.E., M.B., LL.D., F.R.S., and SURGEON-MAJOR D. PRAIN, M.B.

The paper will be published in the *Journal*, Part II.

3. *The Later Mughals (1707–1803).*—By WILLIAM IRVINE, B.C.S., (retired).

The paper will be published in the *Journal*, Part I.

4. *On certain imperfectly known Points in the Habits and Economy of Birds. No. 1. On the position of the feet of the "Picurian" Birds and of Parrots in flight.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

Although the habits of birds, more especially those connected with nidification and the care of the young, have been long and carefully

* The bird was here put down on the floor and made to walk about, which it did in the ordinary manner of ducks, though unwillingly, having probably not recovered condition after a long journey from the Hills. A specimen of the allied *Merganser*

studied, much remains to be done in the observation of living birds, even when these belong to quite common and well-known species. This consideration serves me for an excuse for introducing a few notes which I have been led to make on certain points in the economy of birds which appear to me to have been insufficiently studied, and to have, possibly, some bearing on the difficult problem of avian classification. Students of other groups of animals—I may instance Bats and Butterflies—avail themselves of peculiarities of attitude, etc., in their subjects for taxonomical purposes, and with regard to Birds I see no reason why such peculiarities as those to which I draw attention below should not be taken into consideration by systematic ornithologists equally with nidificatory, distributional, and dietetic variations.

ON THE POSITION OF THE FEET IN FLIGHT AMONG "PICARIAN" BIRDS AND PARROTS.

I will first notice a point which has lately attracted considerable attention among ornithologists—the position of the feet in certain groups of birds when the members of these are on the wing. It may be taken, I think, as fairly settled that Waders and Waterfowl, Game-birds, Pigeons, and Birds-of-Prey, carry their feet behind when in full flight, irrespective of the length of those members. But with regard to the mostly short-legged *Picariæ* and the Parrots I am not aware that any observations have been made, and I have therefore taken particular notice of these birds, with the following results:—

To take the Parrots first. I long watched the common Indian Parrakeets (chiefly *Palaeornis torquatus*) when at large, in order to discover where their legs were placed when the birds were on the wing; but owing to the swiftness of their flight, and the fact that the feet are ordinarily concealed beneath the feathers of a flying bird, I was unsuccessful, till one day a *Palaeornis torquatus* got into the Bird Gallery of the Museum, and flying to and fro overhead, gave me an excellent opportunity of observing that its feet were carried behind. As the gallery is a very large one, and the bird took long flights, I have no doubt but that this is the normal position for the species, and very probably for Parrots in general.

Among the so-called "*Picariæ*," using the term in its widest sense, I have noted the carriage of the feet in flying Hoopoes, Kingfishers, Rollers, Hornbills, Barbets, Woodpeckers, and Cuckoos, and will now

castor (not distinguished from the present species by Hume, who calls both *Mergus merganser* op. cit.), which I saw last year in the London Zoological Gardens constantly walked about quite freely, as did some Smews (*Mergus albellus*) observed at the same time and place.

take each of these groups in detail as to this point. In Hoopoes I have been unable to get a sight of the feet of a bird flying at large, but by buying specimens of *Upupa epops* in the Calcutta Bazaar, and letting them out in my quarters, I found that the feet are constantly kept drawn up to the body, as the bird flies—never extended behind, at least in a room. In Hornbills, on the other hand in spite of the supposed alliance of these birds to the *Upupidae*, the feet appear to be extended behind in flight. I saw this very distinctly at any rate in two specimens of the common black-and-white *Anthracoeros*; the bird in each case was a tame one, but flying out of doors. With regard to Rollers, I have suspected, from watching birds at liberty, that the common *Coracias indica* carries its feet behind; but I could not be certain till I let out a tame bird I had in my bedroom, and found that though the feet were at first allowed to hang like a crow's when starting, they were undoubtedly stretched out behind the bird when well under way.

Of Kingfishers I have observed more than one species. A *Ceryle rudis* I brought up from the nest and allowed to fly about at liberty for this very observation, distinctly carried its feet behind, as also do *Alcedo isipida* and *Halcyon smyrnensis*, as I have been able to observe with wild birds; though the former takes a lot of watching to determine a point like this! The Laughing Jackass (*Dacelo gigas*) carries the legs behind also, as I made out with the keeper's assistance in the fine aviary at the London Zoological Gardens, when in England on leave last year (1897).

With Barbets my only observations that were at all satisfactory were made on a specimen of *Thereiceryx zeylonicus* in a very large compartment of the Bird House in the Calcutta Zoological Gardens. Here this bird constantly kept its feet drawn up to the body when on the wing. Some Blue-cheeked Barbets (*Cyanops asiaticus*) in a smaller compartment in another house, did the same, but for reasons to be presently given I do not set so much value on this observation.

Of Woodpeckers I have observed only two individuals of our common Gold-backed Woodpecker (*Brachypternus aurantius*); a young female I kept myself and let out both in the open and in my room, and a male in the large aviary in the Zoological Gardens above referred to. Both birds carried the feet drawn up to the body like the Barbets, or like Passerine birds. In the case of Cuckoos I have observed, with wild birds, that both the Koël (*Eudynamis honorata*) and the Crow-pheasant (*Centropus sinensis*) carry their feet behind when well under way. I have seen this particularly well in the case of the last species, whose feet in flight have exactly the same position behind as I have seen in

a Pheasant and a domestic Fowl, in England. A *Hierococcyx* appeared to have its feet drawn up in a short flight.

Domestic fowls, however, in their short flights, usually carry their feet in front, and this I noticed in a young *Centropus* I had free but tame in the Museum compound, and in a Koël in the large aviary above referred to. As this is done by Pigeons also when starting, though they afterwards extend their feet behind, I do not feel absolutely certain about the Woodpeckers, Barbets and Hoopoes, but as I never saw any backward extension of the feet in these birds, I think that the forward position is really the permanent one in them, though I should have liked a good look at a bird in a long flight overhead, at liberty if possible.

With regard to the Parrot and Roller, though these birds were confined, the former had plenty of room for a long flight, and as to the latter, I have never met with any bird which *first* extends its feet behind and *then* draws them up, so that I consider the observations on these as sufficiently conclusive for the species in question, if not for their allies.

From these experiences I conclude, that supposing the same habit of carrying the feet to run through a family, the forward position of the feet in flight probably characterises Hoopoes, Woodpeckers, and Barbets, and the backward one certainly obtains among Kingfishers, Rollers, Hornbills, Cuckoos, and Parrots.

5. *On the different kinds of salutation used by the Santals.*—By THE REV. P. O. BODDING, *Mohulpahari, Santal Parganas.*

(ABSTRACT.)

The Santals have different forms of saluting each other varying according to their mutual family position. Their social position has, on account of their patriarchal organization, no influence in this respect, as, *e.g.*, even a *pargana* or overchief will have to bow to a poor rayot if this last one has a higher family position.

Equals alone salute each other in a manner equal on both sides; if one of the saluting parties has a higher family position than the other one, this is most clearly shown in their manner of saluting each other, the inferior person having to make his obeisance, the higher one *receiving* the salute. Their customs of salutation are beautiful.

The Santal name for salutation is *johar*, and they have four different kinds, *viz.* (1) *dobq̄h' johar* (lit., bow-salutation), used between all people of whom one has a higher family position than the other, and who have not to use any of the other kinds of salutation. The inferior person, whether man or woman, bows to the superior one, men in one way, women in another, and the higher one receives or acknowledges the salutation, men in their manner, and women in their.

2. *Bahōñharea jōhar*, used by *bahōñharea* (certain brothers and sisters-in-law) and by coparents-in-law, when of different sex. They bow to each other and keep their hands shadowing over their eyes.

3. *Baluaea jōhar*, used between coparents-in-law, when of same sex. Their salutation is very elaborate and rather curious; it is fully described in the paper: they draw their hands backwards and forwards between each other (when men), butt each other's shoulders, etc.

4. *So jōhar*, used when the saluting persons from some cause or other do not know each other's mutual position. In this case they do not bow, but receive each other's salutation (just as they do in the first mentioned kind of salutation).

The now living Santals use to salute each other at festivals, ceremonies, coming on or from a visit, when meeting away from home, etc., but now as a rule not when meeting in their village. They do not salute an assembly of people *en bloc*, but must salute separately every body, or as many as they think fit or necessary of those present.

Some words are added about their manner of saluting their *bongus*, which is mostly done kneeling. They keep both their hands before their face with the finger-tips joined—called *jgrhat*—and then bow. The *jgrhat* is sometimes used by people crying for mercy, supplicating, etc., and is by custom imposed on an outcasted man, when he at the entrance to his village stands to receive those coming to receive him into the tribe again.

6. *Preliminary notes on an archæological tour with the Bunēr Field Force.*—By DR. M. A. STEIN.

I have just returned from Bunēr with Sir Bindon Blood's force and hasten to send you these brief preliminary notes regarding the objects of archæological interest I was able to examine during the short occupation of that territory.

You are aware that acting upon information and advice kindly given to me by Major Deane, at present political officer for Swāt, Dir and Chitral, I had applied to the Punjab Government to be deputed with the punitive expedition against Bunēr for the purpose of an archæological survey. Bunēr which comprises the portion of the ancient *Udyāna* situated between the Swāt Valley and the Indus, had previously been wholly inaccessible to Europeans, and hence a *terra incognita* also from an antiquarian point of view. My application, thanks largely to the kind interest taken in the matter by Mr. Dane, the Chief Secretary to the Local Government, and my friend Mr. Maynard, the Junior Secretary, was readily approved by Sir Mackworth Young, our present Lieutenant-Governor.

When returning from my short Christmas tour into Lower Swāt I saw Sir Bindon Blood, the General Commanding the Malakand Field Force, who informed me of the early date fixed for the expedition, and very kindly promised me his assistance. I had just time to go down to Lahore and conduct the annual Convocation of the University. Then I hurried back and caught up the division on the 5th instant at Katlang while it was on the march to the Bunār border.

On the 6th we reached *Sunghao*, at the entrance of the Tang Pass, where there are several old sites from which interesting Græco-Buddhist Sculptures have at various times been obtained. Accompanying the General's reconnaissance up the defile I was able to trace the remains of an ancient road leading to the pass, though not so well preserved as those of the old roads over the Malakand and Shāhkōt Passes. On the following day the Tangs Pass was taken after some fighting, the main honors of which fell to my friends of the 20th Regiment Punjab Infantry whose Pathāns and Dōgrās climbed in splendid style the steep hills commanding the pass on the west. I watched the interesting engagement from the position taken up by the mountain batteries in action and climbed up to the pass soon after it was carried. With the troops of General Meiklejohn's Brigade I reached that evening the village of *Kingargalai* to the north of the pass.

From that place I was able to survey during the following two days numerous ruins of evidently old date. They cover a series of rocky spurs which descend from the higher ranges into the *Nawēdand* Valley on the west and into the valley leading down to the east towards *Bampōkha*. The ruins consist chiefly of strongly built dwelling-places raised on high masonry terraces. Their position on narrow ridges difficult of access and their massive construction make it clear that they were erected with a view to defence. Some groups of ruins resemble in fact small castles. Certain details of the construction leave no doubt as to these remains going back to pre-Muhammadan times.

Ruins of similar description I found in great number on various hill spurs visited from the next camp of the Brigade at *Juwar*. They point to the presence in earlier times of a large and well-to-do population a fact easily accounted for by the fertile character of the tract.

The resignation with which the Bunār tribes accepted their defeat and their ready submission to the terms of Government made the progress of the expedition through the country far more rapid than I might have wished for the purposes of my search. But this made it at least possible for me to move with a small escort to considerable distances from the camps,—a thing which among other border tribes

like the Āfridis or Waziris would manifestly have been out of question. I was thus able, at the expense of a good deal of hard marching and climbing, to visit most of the places on either side of the main valley of Bunēr where the information previously collected or ocular observation led me to expect ancient remains. The independence I thus enjoyed did yet, of course, not enable me to make up in the point of thoroughness for the disadvantages arising from want of time.

Among the objects examined in the side valleys to the north were rock-cut sculptures representing Çiva and other Hindu deities. They were found in two places at the foot of spurs descending from Mount *Ilm* which rises on the watershed between Swāt and Bunēr, and forms a very striking feature in the landscape of both territories.

These sculptures show that Buddhism which we know to have been prevalent in these regions for so long a time, was here as elsewhere in India closely associated with all popular features of the Hindu religious system. In connection herewith it is a matter of interest that my enquiries have shown Mount *Ilm* to be still a place of pilgrimage for the scanty Hindu population (chiefly Khattri traders) scattered through Bunēr and Swāt. The *Tirthas* visited by the pilgrims are situated close to the now snow-capped summit of Mount *Ilm*. Owing to the great height of the latter they could unfortunately not be reached from the nearest camps at Juwar and Pādshāh. Curiously enough the most sacred Muhammadan shrine of Bunēr, the Ziārat of Pir Bābā Şāhib, lies at the latter place, close to the foot of *Ilm*. Does the position of this shrine presuppose—as it certainly would were it found in Kashmir,—the previous existence of a popular Hindu or Buddhist place of pilgrimage in the neighbourhood ?

Remains of stūpas I found at *Bhai* close to Pādshāh and at *Girarāi* further to the west. But the more numerous and important ruins of this kind are situated in the main valley of Bunēr, that of the *Barandu* river. From Bampōkha down to Bājkatha in the east I traced a series of such ruins, some of them having monasteries of considerable size attached. Conspicuous among these remains are the great Stūpa and Sanghārāma, about $1\frac{1}{4}$ miles below *Tursak*, the largest place of modern Bunēr. A trial excavation conducted here during the few available hours with the assistance of a small party of sappers brought to light a corner of the stucco-ornamented stūpa-base, and showed the great depth to which the original level of the several courts has been filled up with masses of débris. Weeks of work would be required for the proper clearing of this and similar sites.

That *Tursak* was an important place also in old times is made evident by the numerous ruins of fortified dwelling-places on the neighbouring heights.

Another place of importance for the ancient topography of Bunēr is undoubtedly the site near the present *Sunigrām*. This village which bears an old Hindu name, occupies a position on the right bank of the Barandu River where it enters the broad open portion of the valley known as *Panjpau*. To the South of the village rises a high mound of rough masonry which must have once formed a Stūpa of at least 150 feet diameter. Close by is a remarkably well preserved ancient well with stairs leading down to the water. On a rocky ridge above the village and overlooking the valley are the comparatively well preserved ruins of a large monastery, built partly on high walled-up terraces. The walls and vaulted roofs of the several halls are of massive construction, and have stood the test of time and of other destructive agencies better than any other old buildings examined in Bunēr. Unfortunately, treasure seekers have been at work here too. The Stūpa in front of the monastery has been dug into long ago, evidently for the sake of the relics deposited below it.

This fate has overtaken also the fine Stūpa which stands near the village of *Takhtaband*, a short distance to the east of *Sunigrām*. It still reaches to a height of over 50 feet from the ground. A broad cutting has been made to the centre of this mass of masonry and through its whole height.

All the Stūpas and other important structures were carefully measured with the help of the Surveyor supplied to me from the Public Works Department, and their plans will be given in the Report I am now preparing. It is very probable that some of these structures must be connected with the several sacred Buddhist sites which are mentioned by the Chinese pilgrims, in particular *Hüen Tsiang*, as situated at some distance to the south of *Mungali*, the old Capital of *Swāt*, the present *Manglaur*. The survey now made of them will thus help to establish with greater certainty the ancient topography of the regions once comprised in *Udyāna*.

The rapid surrender of the Bunēr tribes and of those of the neighbouring *Chāmā* valley had made a further advance to the east towards the Indus unnecessary. The early withdrawal of the force by the route of the *Ambēla* Pass deprived me of the opportunity I had eagerly hoped for, to visit the heights of Mount *Mahāban*. It has always appeared to me that of the various locations suggested for Alexander's *Aornos*, that proposed by the late General Abbott who identified that famous stronghold with Mount *Mahāban*, was by far the most probable. But without a close examination of the actual topography of that mountain which has not yet been surveyed, no decisive evidence can be expected.

If *Mahāban* itself remained still inaccessible I had at least the

satisfaction of approaching it closer than has apparently been possible on any previous occasion. A rapid ride down the Chamla valley, close up to the border of Amazai territory did not reveal much of antiquarian interest, but enabled me to collect useful information about an extensive group of ruins, known as *Shāhkōt*, which crown the summit of the mountain. It would be hazardous to express an opinion as to their character or origin until they have actually been surveyed. But when will this time come?

It was on the last day of the occupation that I made this ride towards the snow-covered slopes of Mount Mahāban. When I returned in the afternoon to the Ambēla Pass, the rear guard of the force had already far advanced into that famous defile. What I saw last of Bunēr territory had thus also the charm of historical associations, not less stirring because they were modern.

With reference to the above I may safely say that I have spared no effort to utilize to the full the brief twelve days I could spend on Bunēr soil. What makes me regret more than anything else the shortness of the time allowed, is the fact that I was unable to see a single one of Major Deane's puzzling inscriptions *in situ*. My article published in the Bengal Asiatic Society's Journal (Part I, 1898, No. 1) shows that a number of these inscriptions "in unknown characters" have been found in Bunēr territory. Several of the stones bearing such inscriptions, being of small size, have been removed by Major Deane's agents and deposited in the Lahore Museum. Others known as yet only from impressions, may be supposed to be still in their original localities. Three of the places where impressions had been taken, could actually be reached by me.

At *Tursak* where an impression had been obtained of an inscribed stone walled into a Mulla's house, almost the whole population had fled at the approach of the troops. No local information was thus available as to which of the twelve Mulla's houses contained this epigraphical relic, and the prolonged search made by myself and my people failed to bring to light the desired stone from the mud-plastered walls of the deserted dwellings. At *Nawakili* and *Mullaisap*, two villages towards the Malandri Pass, which I visited from one of the last camps by a forced march of over 25 miles, the result was equally disappointing. The few villagers who had not taken to the mountains, could or, would not show the position of the stones. Considering the combined fanaticism and ignorance of the population, it can scarcely surprise that information of this kind which might be supposed to lead to the discovery of hidden treasures, etc., was withheld from one of the invaders. The limited time available and the smallness of my escort

made at the same time a thorough search of the neighbourhood quite impracticable. At neither of the two localities could I trace any ancient ruins overground.

I cannot conclude this brief account of my visit to Bunēr without referring to the very great consideration which all the military authorities from General Sir Bindon Blood, the commander of the force, downwards have shown for my work. On no occasion did I apply to them in vain for needful assistance and personally I doubt whether a civilian on a similar mission could ever have met with a kindlier reception than that which was accorded to me among the officers of the Bunēr Field Force. I feel particularly grateful to General Meiklejohn, Commanding the First Brigade, and his staff for the free scope they allowed for my movements. Nor shall I forget the excellent marching power of the escort furnished to me by his old regiment, the 20th Punjab Infantry, which enabled me to make full use of the freedom thus allowed to me.

I intend to complete here at Mardan, in the centre of the old Gandhāra my detailed report before I return to Lahore and the cares of the University office.

7. *Note on the date of the composition of the Kavitta Rāmāyaṇa of Tulsi Das.*—By G. A. GRIERSON, C.I.E., PH.D., I.C.S.

Any fact which helps us to fix the date of the writings of Tulasi Dāsa is of importance to the history of Indian Literature.

The *Kavitta Rāmāyaṇa* of this poet is a collection of *Kavittas* written at different times. On page 97 of Vol. XXIII (1893) of the *Indian Antiquary*, I was able to show, from astronomical calculations, that the 171st *Kavitta* of the Uttara Kāṇḍa was written between 1612 and 1614 A.D.

Kavittas 163 to 177 are usually considered as forming a group by themselves referring to the plague which invaded India in the reign of Jahāngir.

In *Kavittas* 163–166, the poet addresses Çiva, interceding on behalf of Benares, which is suffering from a terrible calamity, the people dying, as if from poison. In Nos. 167 and 168, he addresses Pārvatī in the same strain, and in both, he distinctly mentions the plague (*mahāmāri*). In 169, he addresses Hanumān, and again mentions the plague. In 170 he addresses Hanumān and Rāmacandra and again mentions the plague by name. In 171–173, he addresses Rāmacandra alone. In 171, he does not mention the plague. He refers to the oppressions which Benares is suffering from the Musalmāns. The astronomical reference in this *Kavitta* enables us, as I have shown elsewhere, to fix the date of its writing, as between 1612 and 1614 A.D.

In 172, he simply adores the name of Rāma, and in 173, he describes a terrible mortality which is occurring in the holy city. No. 174 admittedly has nothing to do with the plague. It is a *kavitta* in praise of a falcon. In No. 175, he entreats Hanumān and Rāmacandra to save the city from an epidemic. In 176 he entreats Rāmacandra to save the city from calamities under which it is suffering.

Finally, in 177 he describes how the city had been punished for its sins by an epidemic of plague, and how it had been saved by Rāmacandra in answer to the Poet's prayers.

Regarding this plague, I here give the following extract from the *Times'* Weekly Edition for January 28th, 1898 :—

How important these improvements in treatment are may be learned from the records of an outbreak which took place at Agra in the year of the reign of the Mughal Emperor Jahāngir (1605-1627). Its origin is narrated in the Emperor's autobiography as "a strange and wonderful tale," of which, however, his Majesty, after direct inquiry, vouches for the truth. The daughter of a family that had fallen victims to the plague saw one day in the courtyard "a mouse falling and rising in a distracted state. It was running about in every direction after the manner of drunkards and did not know where to go." A cat to which it was thrown nearly died, and soon afterwards the plague or bubo appeared in one of the female slaves and spread through the household, killing 17 people in the space of eight or nine days. The correspondence of this story with the supposed propagation of the plague in Bombay by infected rats brought in ships from China is significant. But even more striking is a preceding passage in the Royal autobiography, translated by Mr. Alexander Rogers for the *Indian Magazine* of the present month of January, 1898 :—

At this time those who were loyal represented that the disease of the plague (*ṭā'ūn*) was prevalent in the city of Agra, so that in a day 100 people, more or less, were dying of it. Under the armpits, or in the groin, or below the throat a lump comes and they die. This is the third year that it has raged in the cold weather and disappeared in the commencement of the hot season. It is a strange thing that in these three years the infection has spread to all the towns and villages in the neighbourhood of Agra, and there has been no trace of it in the Faṭḥpur Sikrī, and as far as for $2\frac{1}{2}$ *kōs* from Amānābād to Faṭḥpur. The people of that place have forsaken their own homes and gone to other villages.

So great was the terror of infection that those stricken were left to their fate, "and at last it came to such a pass that through excessive suspicion no one would come near them." If the origin of the disease

seems to present a resemblance, the difference in the treatment of the sufferers is more apparent. In both cases the popular instinct hit upon the precaution of segregation. But under the Mughal empire the segregation was effected by abandoning the victims; in our day it is in some measure secured by carrying off the victims to hospitals, where they receive the utmost alleviation that their malady permits and the best chance of recovery.

I have no materials at hand to check the dates given in this extract, but we may assume that the plague was at its height in Agra in the year 1618 A.D. We have thus a terminus before which the *kavittas* referring to the plague cannot have been written. We are also able to assert that the 171st *kavitta* cannot refer to the plague, as is generally supposed by native scholars, for it is written at least four years before A.D. 1618.

There is no reason to suppose that the *kavittas* were arranged in their present order by the poet himself. Even if they were, it is plain from the analysis given above that he did not group them rigorously according to subjects. We have the *kavitta* in praise of the falcon inserted amongst a number referring to the plague. I may note that this *kavitta*, in praise of the auspicious bird, is said to have been uttered by the poet when at the point of death. The bird flew across his vision, and he accepted it as a good omen.

NOTE:—The passage referring to the Plague is taken from the *Juzak-i-Jahāngīrī* (Sayyid Aḥmad's edition, page 259). More references may be found in Elliot-Dowson's, Vol. VI, pages 346, 357, 405. The Plague first appeared in the Panjāb in the eleventh year of Jahāngir's reign (commenced 10th March 1616), or rather in the middle of the preceding year. When the Emperor came to Agra in the thirteenth year of his reign (= A.D. 1618), he found the plague at its height, and in connection with this the stories of the mouse and female slave, etc., are related. The plague is said to have lasted for 8 years.—T.B.

8. *Human Sacrifices in Ancient Assam.*—By E. A. GAIT, I.C.S.

The paper will be published in the *Journal*, Part I.



LIBRARY.

The following additions have been made to the Library since the meeting held in February last:—

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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR APRIL, 1898.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 6th April, 1898, at 9-15 P.M.

DR. A. F. B. HOERNLE, C.I.E., Vice-President, in the chair.

The following members were present :—

Dr. A. Alcock, Dr. T. Bloch, W. B. Colville, Esq., W. K. Dods, Esq., F. Finn, Esq., E. B. Havell, Esq., H. H. Hayden, Esq., D. Hooper, Esq., The Rev. H. B. Hyde, D. J. Macpherson, Esq., J. Mann, Esq., Dr. F. P. Maynard, L. de Nicéville, Esq., J. D. Nimmo, Esq., R. D. Oldham, Esq., Dr. D. Prain, A. T. Pringle, Esq., Babu Jadu Nath Sen, M. J. Seth, Esq., The Rev. J. Watt.

Visitors :—John Bathgate, Esq., Captain B. Novitsky, Babu Ram Brahma Sanyal, C. M. Z. S.

The minutes of the last meeting were read and confirmed.

Thirty-one presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last Meeting of the Society were ballotted for and elected ordinary members :—

Maharajah Prodyat Coomar Tagore.
Herbert Stark, Esq.
K. G. Gupta, Esq.
Dr. C. J. Milne.

The following gentlemen are candidates for election at the next meeting:—

R. N. Mookerjee, Esq., of Messrs. Martin & Co., proposed by Babu Jadu Nath Sen, seconded by R. D. Mehta, Esq.

J. Bathgate, Esq., proposed by F. Finn, Esq., seconded by W. K. Dods, Esq.

The following gentlemen have expressed a wish to withdraw from the Society:—

Dr. A. Crombie.

T. W. Richardson, Esq.

Maulvie Abdul Kader.

Bābu Ram Brahma Sanyal, Superintendent of the Alipore Zoological Gardens, exhibited living specimens of the Egyptian Jerboa (*Dipus jaculus*).

The following papers were read:—

1. *A note on some Block-Prints from Khotan.*—By DR. A. F. R. HOERNLE, C.I.E. Plates I-II.

In my Presidential Address, published in the *Proceedings* for February last (page 68), I mentioned that I had in my possession twenty-one volumes, which had come from Khotan, in Chinese Turkestan. There is one point with regard to these volumes that I omitted to state, which I will now supply. They are not all *manuscript* books as it might appear from the connection in which I spoke of them. Some of them are block-prints. I had noticed this circumstance long ago, as well as two others, that the block-printed matter repeated itself on every page of the books, and that it was printed in different positions on their alternative pages. As this is a point of considerable interest, the notice of which I had unfortunately missed out in my Address, I will now enter into it a little more fully.

Most of the twenty-one volumes are certainly manuscripts. With regard to some I am not certain what they are, manuscript or block-print; but there are others which are undoubtedly block-prints. For on many pages the smudges of the square straight-lined margins of the blocks can be distinctly seen. Occasionally the block was provided with a square of raised straight lines enclosing the type, and this marginal square is printed off along with the enclosed type.

The printing was not always carefully done, occasionally the blocks were inked too much, and the prints are smudgy; at other times they were inked too little, and the print is almost illegible. When the print

is repeated on the same page, the impressions were sometimes taken so close together that the margins of the prints run into one another.

The books which I shall describe in this Note fall into two varieties. One of them shows a text arranged in two columns, the other has a text in three columns, of which, however, two are identical with those of the first variety. The two varieties of text are shown in figures 1 and 2 of Plate I. To the first variety belong three of the five block-prints described in this Note; and one of these three forms a sub-variety, as will be shown below. In printing these books, accordingly, at least two distinct blocks must have been used; but the types cut on the two blocks exhibit a very striking similarity, as if one were copied from the other, so far as the identical portions of the text are concerned. The various modes in which the prints were taken from these two blocks will be explained under the description of each book.

(1) Block-print *a*. This was received by me from Captain Stuart H. Godfrey, along with two other volumes, on the 25th February last. It is, therefore, not included among the "twenty-one volumes" mentioned in my Address. Its pages measure $8 \times 10\frac{1}{2}$ inches. It consists of 32 "forms"; each form is made up of one sheet of paper, which is folded in the middle, thus making two leaves. Each form, accordingly, consists of two leaves, or four pages. The book is provided with two covers, each made up of four layers of paper pasted together to make a thick paste-board. The forms are stitched together, to make up a book, along the longer side of the leaves. The stitches are made with copper nails, held in position by small thin copper plates, attached to the two ends of the nails.

The block of type (Plate I, fig. 1) which is printed on the pages of this book measures, between the edging lines, nearly $3\frac{1}{4} \times 6\frac{1}{2}$ inches. Each page bears three impressions of it, placed side by side, parallel to the longer side of the page, and so that the head of the block is always turned to the outer edge of the page. The latter circumstance makes it necessary to turn round the book entirely, when, in reading, one passes from one page to the next following, though, of course, owing to the constant repetition of the same text, there was no need, in reading, to observe any particular order of the pages. On the right and left of each page there is left a blank margin of about one inch on either side. This reduces the space on the page to about $8\frac{1}{4}$ inches; and as three impressions of the block had to be accommodated within that space, they were placed so close together that the co-terminous edges of their type almost touch one another. To admit of this close printing, the enclosing straight lines had to be left uninked; and the edging lines of the block, therefore, (excepting occasional smudges) are not seen on the pages.

Only two pages, towards the middle of the book, make an exception to this arrangement. On these the impressions are placed the other way, parallel to the narrower side of the page. In this way only two impressions could be accommodated side by side; for these there was plenty of room; and accordingly the edging lines of the block were inked, and are seen on the page. On the other hand, with this arrangement there was not space on the page enough for four impressions; the space was too much for two, and too little for four impressions. Hence the other alternative was adopted of accommodating only three impressions on each page, by arranging them differently, and thus utilising the whole of the available space on the page. It seems natural to conclude that those two exceptional pages were the first trial pages. They form together the outer side of a folded sheet. The *modus operandi* seems to have been, to take a sheet, and fold it in the middle; then unfold it and place on it as many impressions as the two halves of it would take; then, after printing, to fold it again; and finally to bind the folded sheets into a book.

(2) Block-print β . This book was received by me in October last, together with 13 others, from Mr. G. Macartney. Its pages measure $5 \times 6\frac{1}{4}$ inches; and it consists of 35 forms, each made (as before explained) of one folded sheet, there being altogether 70 leaves. It has no special covers; only the two outside leaves are not imprinted. It is stitched with three copper nails, which are held in position by two copper slips, one in front and the other at the back of the book, along its longer side. These slips measure $6 \times \frac{3}{8}$ inches.

Each page bears one impression of the block (Plate I, fig. 1). The edging lines of the block are not shown, excepting occasional smudges. The impression of the type just fills the whole page, leaving only narrow margins on all four sides. The block must have been badly inked; for the impressions are only faintly visible. Column I, line 7, letter 1 exhibits a different reading; see pages 128 and 130.

(3) Block-print γ . This is also one of the thirteen books received from Mr. Macartney in October last. Its pages measure $11\frac{1}{2} \times 4\frac{1}{4}$ inches, and it consists of 40 forms, each made up of one folded sheet. It has no special cover: of the two terminal leaves, one is not imprinted at all, while the other is only imprinted on the inner side. It is stitched, in three places, along its longer side, with twists of paper. Each of these three twists is passed through two adjacent holes and tied into a knot.

Each page bears one full impression, and the major portion of another. Of the latter, the two first lines are wanting, for which the page afforded no space. The two impressions are placed so as to turn their heads to the edges of the page; their foot-lines (line 12 in fig. 1) accordingly meet in the middle of the page.

A curiosity of this book is that it shows a few letters, apparently written in an altogether different script, inscribed in the middle of the blank space, which separates line 7 from line 8 of the text. See Plate I, fig. 3. They cannot have been, of course, on the block of the text; they might have been imprinted from separate small blocks; but they rather look as if they were inscribed by hand. They are shown on Plate II, in facsimile, and occur at irregular places in the book, as follows:—

Nos.	Sheet.	Leaf.	Page.	Nos.	Sheet.	Leaf.	Page.
(1)	1	2	4	(22, 23)	19	37, 38	73, 76
(2, 3)	3	5, 6	9, 12	(24, 25)	20	39, 40	77, 80
(4, 5)	5	9, 10	17, 20	(26, 27)	21	41, 42	81, 84
(6, 7)	6	11, 12	21, 24	(28, 29)	26	51, 52	101, 104
(8, 9)	7	13, 14	25, 28	(30, 31)	27	53, 54	105, 108
(10, 11)	11	21, 22	41, 44	(32, 33)	28	55, 56	109, 112
(12, 13)	12	23, 24	45, 48	(34, 35)	30	59, 60	117, 120
(14, 15)	15	29, 30	57, 60	(36, 37)	31	61, 62	121, 124
(16, 17)	16	31, 32	61, 64	(38, 39)	32	63, 64	125, 128
(18, 19)	17	33, 34	65, 68	(40, 41)	36	71, 72	141, 144
(20, 21)	18	35, 36	69, 72				

On each of the pages, above enumerated, two of these additional inscriptions occur. For each page has two impressions of the block and, therefore, two intermediate blank spaces. It will also be seen, from the numbering of the pages, that if a "form" is unfolded into an open sheet, the additional inscriptions all show on the same side of the sheet. Thus the "form" or sheet 3 folds into the leaves 5 and 6; then, the outer pages (or the obverse of the sheet) number 9 and 12, while the inner pages (or the reverse of the sheet) number 10 and 11. Here the additional inscriptions stand on the obverse side, on pages 9 and 12, while there are no additional inscriptions on the reverse side of the sheet, *i.e.*, on pages 10 and 11. Accordingly, the obverse side of the sheet bears four additional inscriptions, *i.e.*, two on each page. These additional inscriptions consist of 4 or 5 or 6 letters.

(4) Block-print δ . This is again one of the 13 books received from Mr. Macartney in October last. Its pages measure $5\frac{1}{2} \times 7\frac{1}{4}$ inches, and it consists of 37 forms, each made up of one folded sheet. It has no special cover; the first and last leaves are blank; so is the first page of the second leaf, and the second page of the penultimate leaf. It is stitched in three places, along the longer side, by means of three copper nails fixed with small copper plates, exactly like block-print *a*. The printing is not very well done, the cause apparently being the rather indifferent quality of the ink.

Each page bears one impression of the block. With the exception of a few pages the edging lines of the block-type are not shown. There is a blank margin round the type, on all four sides of a page, about an inch, or an inch and a quarter, wide.

The impressions in this book were taken from a different block, which is shown in Plate I, figure 2. It differs from the block used in the books previously described, by having a third column of text inserted in the vertical blank space, and an additional line of text inserted in the horizontal blank space between lines 7 and 8. The text also agrees with that of book β , in exhibiting the same *varia lectio* in column I, line 7, letter 1, see pages 126 and 130.

(5) Block-print ϵ . Again one of the thirteen books, received from Mr. Macartney, in October last. Its pages measure $4\frac{1}{4} \times 9\frac{1}{2}$ inches; and it consists of 33 forms, of one folded sheet each. In point of cover, stitching and printing it is exactly like block-print δ .

The block used in printing this book was the same as that for printing book δ . The text, accordingly, also possesses the additional column and line.

Each page bears one full impression of the block and the minor portion (lines 8 to 12) of another, inclusive of the additional line. In this case the two impressions are not placed, as in book γ , with their foot-lines adjoining, but in regular order. The full impression stands at the bottom of the page; and above it, is placed the mutilated impression, with its additional line, so that the whole page commences with the latter line.

All the five books, above described, are printed on paper of a coarse quality and a dirty, darkish buff colour. Dr. D. Prain, the Superintendent of the Royal Botanic Gardens in Sibpur, who has kindly examined it for me, says that it is of the same kind as the ordinary Nepalese paper, made of the fibres of the *Daphne* plant. The colour of this paper is yellow, but darkens with age.

The edges of the books are not cut, but frayed.

There is nothing to distinguish the beginning and end of a book; and the pages are not numbered. Nor am I certain what is the top and what the bottom of a page. The figures on Plate I show what I take to be the top and the bottom. I have been guided in this arrangement by the curious resemblance of some of the letters to *Kharoṣṭhi*.

There are evidently two versions of the text, a simpler and a fuller. The former is shown in figure 1; the latter in figure 2. In the fuller text the vertical blank space between the two columns of the simpler text is filled up with additional writing, making up, in fact, a third column, and the horizontal blank space is also filled up with an additional line.

The insertion of the additional column would seem to indicate that each column of the simpler text must be read by itself, the third column forming an additional text. The horizontal blank space, dividing the column into halves of seven and five lines respectively, would seem to show that each column consists of two formulae. The simpler and fuller texts would thus contain four and six formulae respectively. Of course, they might be connected with one another.

The text, to judge from its repetitions, would seem to be some formula, perhaps a charm or an invocation or a so-called "creed." The repetitions seems to suggest a system of praying like that of the Tibetans with their prayer-wheels or flags. The Khotan devotee may similarly have sent up a long string of prayers by simply turning the leaves of his book as rapidly as possible.

I have already remarked on the resemblance of some of the signs to letters of the Kharoṣṭhī alphabet. Accordingly I suspect that the lines are to be read from the right to the left, and that the letters belong to the Semitic class of alphabets. It will be noticed that the letters are written in different sizes, apparently only for the purpose of utilising the available space to the fullest extent. Here and there the forms of the letters in the two texts do not fully coincide. This seems to be due to imperfect inking of the block, or to inequalities in the execution of the block. What the correct form of the letter may be must remain, for the present, uncertain.

In the following references the letters of the three columns are counted separately, and, in each column, from the right to left.

Col. II, line 10, letter 4 (the last) resembles the Kharoṣṭhī letter *khu*. The same letter (*kha*) occurs in col. II, line 3, letter 2.

Col. I, line 2, letter 5, resembles the Kharoṣṭhī *ḍa*. It is also written diminutively. It also occurs in col. II, line 4, letter 3; col. II, line 12, letter 3; and col. I, line 8, letter 5 (*ḍu*).

Col. I, line 4, letter 1 resembles the Kharoṣṭhī *ya*. It also occurs in col. I, line 3, letter 1 (*yā*); col. III, line 8, letter 1; col. II, line 3, letter 4.

Col. I, line 4, letter 3 resembles the Kharoṣṭhī *mō*; the bottom of the letter is open owing to imperfect inking of the type. The same letter occurs in col. II, line 12, letter 4 (*ma*), and in col. III, line 5, letter 3 (*man*).

Col. II, line 4, letter 1 resembles the Kharoṣṭhī *na*. It also occurs in col. III, line 6, letter 2, and col. I, add. line, letter 3.

Col. II, line 9, letter 1 resembles Kharoṣṭhī *tra*. It also occurs in col. III, line 6, letter 3.

Col. II, line 9, letter 4 resembles the Kharoṣṭhī *ba*; and in diminutive form, it occurs in col. III, line 11, letter 4.

Col. I, add. line, letter 4 resembles the Kharoṣṭhi *va*; so also col. I, line 10, letter 4; also col. I, line 5, letter 4 (*vu*), and col. II, line 7, letter 2 (*vu*); col. I, line 11, letter 4 (*vu*); also col. II, line 9, letter 3 (*və*).

Col. III, line 11, letter 1 resembles Kharoṣṭhi *ra* or *ta*. It occurs also in col. II, line 8, letter 2, and, in diminutive size, in col. II, line 3, letter 3.

Col. I, line 1, letter 3 resembles the Kharoṣṭhi *ṣa*; and in col. I, line 4, letter 4 there is *ṣu*.

Col. I, add. line, letter 6 resembles the Kharoṣṭhi *sa* (or *sō*).

Col. II, line 8, letter 5 resembles the Kharoṣṭhi *dha*. With the preceding letter, the word might be *budha* (*buddha*).

Col. III, line 1, letter 3 resembles the Kharoṣṭhi *am*.

A letter which occurs several times is in col. II, line 2, letter 3; col. II, line 4, letter 4; col. II, line 5, letter 1; col. I, add. line, letter 5; col. I, line 2, letter 3.

Col. I, line 6, letter 4 has some resemblance to the Greek capital A, and col. I, line 6, letter 3, col. II, line 7, letter 3, col. III, line 12, letter 1 to the Greek capital U (V); and col. III, line 7, letter 4 is exactly like the obsolete Greek ϐ of the Kanerki coins. It also occurs in col. I, line 7, letter 1, where, however, the loop is omitted in the simpler text. There are also some other signs which remind one of Greek letters, thus *omega* in col. II, line 11, letter 4; *omikron* in col. II, line 2, letter 2, and elsewhere; *sigma* in col. I, line 4, letter 2; col. I, line 12, letter 2; col. I, line 11, letter 2 (or 3). Another sign, like *sigma* reversed, occurs in col. I, line 8, letter 4; and with a side-stroke, in col. I, line 2, letter 7; col. III, line 2, letter 1; col. II, line 4, letter 2. *Iota* occurs in col. I, line 2, letter 2, and col. I, line 12, letter 1.

With reference to the facsimile legends shown on Plate II, I should explain, that they are shown on a uniform plan: their heads point to line 7, and their foot to line 8, as shown in figure 3 of Plate I. It will be noticed, however, that the same symbol often occurs in reversed positions, which seems to suggest that occasionally the legend is turned on its head.

In each numbered group, there are shown two legends, marked *a* and *b*. These occur on the same page of the book; thus *a* and *b* of No. 1 occur on page 4. Each page, as already explained, bears two imprints of the block (fig. 1, Plate I). Each imprint, of course has the horizontal blank space; and in these two blank spaces the two legends *a* and *b* are placed.

It will be noticed that the same letter or group of letters is often repeated. I cannot yet identify them; but some of them suggest Greek

Georgian, or Cyrillic forms. I quote below a few of the most striking examples.

Single letters.

- (1) E Nos. 18a, b, 20b, 37b (Cyrillic e).
- (2) Э Nos. 8a, 9b, 11b, 13b, 19ab, 20a, 25b, 31b, 38b, 39b, 40b; (Cyrillic z).
- (3) ζ Nos. 2a, 12a (Greek or Cyrillic s).
- (4)) Nos. 14a, 36a, 41a.
- (5) ყ Nos. 11a, 12b, 15a (Georgian q or Russian tsch).
- (6) † Nos. 6a, 10a, 27b, 34a.
- (7) † Nos. 1b, 5a, 13a, 26a, 28b, 33a, 37a.
- (8) 6 No. 6a (Georgian κ).
- (9) 9 Nos. 11b, 15a.
- (10) Ө No. 14a.
- (11) 3 No. 30b (Georgian m).
- (12) 3 No. 13a.
- (13) R No. 18b (Greek r).
- (14) Φ Nos. 18b, 22b, 29b, 34a, 38b (Georgian, Cyrillic f).
- (15) Φ Nos. 27a, 32a (Georgian p).

Groups of letters.

- (16) ლჳ Nos. 2b, 8b, 36a (cf. Nos. 2 + 7).
- (17) ლე Nos. 5b, 25a, 26b, 31a, 35a (cf. Nos. 1 + 6).
- (18) ლე No. 22b (reverse of No. 17).
- (19) ლჳ Nos. 3b, 4b, 6b, 9a, 15b, 16ab, 19a, 22a, 29b, 32ab, 33b, 34b, 35b, 38b, 40b (reverse of No. 16).
- (20) ლჳ No. 29b (cf. Nos. 4 + 7)
- (21) ლჳ No. 4a.
- (22) ლჳ No. 6b.
- (23) ლე(No. 28a (cf. Nos. 6 + 3, and 22)
- (24) ლე(No. 29a (cf. Nos. 12 + 6 + 3).

I may add that two block-print books of the same kind as those described in this note have been taken to Paris by M. Dauvergne for presentation to the French Archæological Society. They were given to him by Captain Godfrey with the permission of the Government of India.

2. *Materials for a Flora of the Malayan Peninsula, No. 10.*—By SIR GEORGE KING, K.C.I.E., M.B., LL.D., F.R.S., *Lately Superintendent of the Royal Botanic Garden, Oaloutta.*

The paper will be published in the *Journal*, Part II.

3. *On the Lizard in Indian Superstition and Folk-Medicine.*—By ÇARAT CANDRA MITRA, M.A., B.L., *Corresponding Member of the Anthropological Society of Bombay. Communicated by the Anthropological Secretary.*

The paper will be published in the *Journal*, Part III.

4. *Note on Dr. Hoernle's paper on New and Rare Hindū and Muḥammadan Coins, No. IV.*—By O. CODRINGTON, M.D., F.S.A. *Communicated by the Philological Secretary.*

No. 15, plate VI, 1897, is a well-known Hindū coin. Marsden figured it No. LXVIII in *Numismata Orientalia* and correctly read the legend.

The coins are known in Western Indian bazars as Chatrapati or Satara pice, are found commonly in almost any collection of copper coins met with in the Konkan or Western Dekkan, and are said, I think quite rightly, to be the coins of the Satara State founded by Çivāji. Two varieties are recognized and called the old and new paise. The one figured by Marsden is one of the former sort, the lettering on the latter sort is bolder and the coins are larger. The legend which as usual is seldom or never complete on any one specimen is—

Obv.	श्री	Rev.	छत्र
	राजा		पति
	शिव		

It does not vary on any of the older sort, but on some of the newer the last line of the *Obv.* is a little different. I have some on which it is श्रीव and one which reads राज. The older are, I think, coins of Çambhāji Chatrapati (A.D. 1681–88) son of Çivāji, if not of that great man himself, the newer may be attributed to Çivāji Çahū, the third ruler (A. D. 1708–49) and his successors, the coin having the last line राज being possibly one of Rām Rāja the fourth king (1750–77).

A large number of the official Seals of the Satara kings and their ministers were deposited in the Museum of the Bombay Asiatic Society in 1875 by order of Government, of which I gave a full description in Vol. XVI, of that Society's *Journal* after having made a good deal of search and enquiry at the Alienation Daftar at Poona where a large collection of documents connected with the Satara State is stored. On these seals the name of Çivāji is always शिव नोत शिवाजी; the title Chatrapati is on many of them, and the dynasty is commonly spoken of as the Chatrapati Rajas.

H. H. Wilson, Grant Duff and the *Bombay Gazetteer* all state that Çivāji struck silver coins, Wilson adding that in all probability the *larin* was the form adopted by him, for that was the chief silver currency

in the Konkan and Western Dekkan in his time. I have been on the look out for years for any silver piece which might be attributed to Çivāji without any success. All *larins* I have seen bear some Persian legend, Çivāji would not have tolerated that I think.

No. 13 in the same plate is a coin of the Porbandar State, known in the bazars as *rana shai*. In my paper on the Coinages of Cutch and Kathiawar, published in the Numismatic Chronicle for 1895, Vol. XV, I described the coins of the Muzaffar Shāh of Gujarat pattern issued in these States of which this is one.

5. *New species of Entada from Singapore and Borneo.*—By H. N. RADLEY, M.A., F.Z.S., Director of the Botanic Gardens, Singapore. Communicated by SURGEON-MAJOR D. PRAIN.

The paper will be published in the *Journal*, Part II.

6. *Patiyālah coins, origin of the legend thereon.*—By W. IRVINE, C.S., (retired.)

On referring to Mr. C. J. Rodgers' "Catalogue of the Coins in the Indian Museum," Part II (1894), pp. 200, 201, it will be seen that the coins of the Patiyālah State bear the following curious inscription :

حکم شد بر قلدر بیچون باحمد بادشاہ
سکہ زد برسیم وزیر اوج مہدی تابناہ

It is the same as that borne by the coins of Ahmad Shāh Durrānī, see the same work, Part IV (1896), p. 165. I do not know that anyone has ever called attention to the curious fact that a Sikh should adopt and retain a motto from the coins of one of the hated Mahomedans. The point is not referred to either in J. D. Cunningham's "History of the Sikhs" or in Sir Lepel Griffin's "Panjab Rajas." The following account is to be found on folio 54 a, b, of the work *Husain Shāhi* (British Museum, Ms. Oriental, No. 1662), composed in the year 1213 H. (1798) by Mu'innu-d-din, Cishtī. The occasion referred to must have been after 1176 H. (1761-2) and before 1770, the year of Najib Khān's death; Cunningham and Griffin attribute this last invasion to the year 1767. If this chronicler is to be relied on, then Mr. Rodgers will have to assign the coin No. 11,119 (p. 200) to Amr Singh instead of to Alah Singh, his grandfather. According to Mu'innu-d-din Lāhori's *Tarikh-i-Panjāb*, Rājah Amr Singh succeeded his grandfather in 1764 and died in 1780.

These men were not particularly well pleased at the Durrānī King's reappearance to disturb them in their ease. Most of them sent presents and humble petitions full of frivolous excuses for non-attendance. Najibu-d-daulah was the only one that put in an appearance, and he reported that in Hindūstān all was peace and His Majesty might return

to Qandahār and there take his rest and repose. Meanwhile the government of Sihhind was made over to Najibu-d-daulah and he took possession of its castle.

Now Amr Singh was the grandson of Alah Singh Jāt, the first of the Sikhs who rose to power. One day Najibu-d-daulah said to Amr Singh, "Rājah! This foot of yours, Paṭiyālah, is nothing, I will show you a much better one, Shērgaṛh, which I have made at Najibābād, it "is very strong." Amr Singh inferred that it was intended to send him as a prisoner to Najibābād; his heart sunk, and the colour left his face. But Fato, widow of Alah Singh and grandmother of Amr Singh, was a clever woman. She went secretly and fell at the feet of Shāh Wali Khān (Aḥmad Shāh's chief minister), placed her shawl on his feet, and bare-headed petitioned that for God's sake he would rescue her grandson from the claws of Najibu-d-daulah, promising to present a fitting tribute (*nazarānah*). Shāh Wali Khān was a man of probity and of very kindly disposition, and during the night at a private interview made some statement to the king.

In the morning the king sent for Amr Singh from the encampment of Najibu-d-daulah, gave him a robe of honour, and conferred on him the title of *Rāja-i-Rājagān*, which is held by his descendants to this day. And the coinage of Aḥmad Shāh, shelter of the faith (*Dīpanāh*), is current in Paṭiyālah; and whoever sits in the throne of that territory issues his coin in the name of that exalted king (i. e., Aḥmad Shāh), and announces himself as a servant of that exalted house. Amr Singh caused the words *Rāja-i-Mānizāi* to be engraved on his signet ring, Aḥmad Shāh being a Mānizāi. In return for the kindness of Shāh Wali Khān, Amr Singh counted himself a servant of Aḥmad Shāh.

7. *On a third invasion of India by Baer's Pochard (Nyroca baeri).—*
By F. FINN, B.A., F.Z.S., *Deputy Superintendent of the Indian Museum*
(with exhibition of specimens.)

[Received and Read April 6th, 1898.]

In the Society's *Proceedings* for 1896 (p. 61), and in the *Journal* for 1897 (Pt. II, p. 525), I have already recorded two incursions into India on the part of the East-Asiatic duck mentioned in the title of this paper.

I have now to communicate the fact that *Nyroca baeri* has again visited India, during the past cold season, in numbers, which, if they do not compare with those recorded on the last occasion (see *Journal*, *loc. cit.*), at any rate show that the bird was not at all uncommon. The two specimens exhibited to-night form part of a series of seven secured

for the Museum collection, while twelve living birds were purchased for the Alipore Zoological Gardens, whence some have been despatched to the London Zoological Society; and in addition to these I saw others which I did not buy. In fact, taking into consideration the rather poor supply of water-fowl in the Calcutta Provision Bazaar this winter, *Nyroca baeri* might have been fairly called a common duck there.

I saw the first specimen in the Bazaar on November 8th, 1897, and the last on March 23rd of the present year, so that the species has been present for some time; longer, apparently, than before, the latest date on which I have previously recorded it being February 27th. Among the specimens I observed there were very few males, and none of these were in full-plumage, all being immature. Of the nineteen specimens above recorded as obtained for the Museum and Zoological Gardens, only six were drakes, and I do not remember seeing any others among those which I did not buy. Among the females also, few or none were in full-plumage, (though I only saw a very few in the complete brown plumage of immaturity) so that these also were apparently nearly all young birds.

In one of the females procured for the Alipore Zoological Gardens, however, I observed that the iris was almost as white as a male's, so that this at any rate was probably an old bird, if the colour of the eye in the female of this species becomes lighter with age. Certainly brown is the usual colour of the iris in those females of this species I have seen so far, though I have noted exceptions.

It is curious that even yet no sportsman appears to have met with this species;* probably the fact that most of the birds do not strikingly show the characteristics of the species accounts for this; though I find that the market dealers can distinguish them from the common white-eye (*Nyroca africana*). The full-plumaged male is, of course, quite unmistakable, but appears to be rare here. One female I saw, but did not buy, had a large white patch at the base of the throat in front, in addition to the usual spot at the base of the beak beneath.

With regard to the habits of the species, I may add to what I have previously recorded that the note of the female is a harsh "karr," and that she sometimes jerks back her neck much like the male.

8. *An Unrecorded Governor of Fort William in Bengal.*—By C. R. WILSON, M.A.

* With the exception of the Messrs. Dods, who, from the account given me, appear to have done so; but by an unfortunate mischance the specimens were not preserved.

9. *A new Inscription of Makārāja Bhōja I., from Murwar, dated Harsa Samvat 100.*—By DR. T. BLOCH.

The papers will be published in the *Journal*, Part I.

10. *Materials for a Carcinological Fauna of India.—No. III. The Brachyura Cancroidea.*—By A. ALCOCK, M.B., C.M.Z.S.

The paper will be published in the *Journal*, Part II.

11. *Numismatic Notes and Novelties, No. III.*—By V. A. SMITH, I.C.S.

The paper will be published in the *Journal*, Part I.

12. *Scraps of Hindu Folk-lore.*—By PANDIT RAMGHARIB CHOUKE, Late Pandit to W. CROOK, Esq., I.C.S., (Retired) Editor of the "*North Indian Notes and Queries.*" Communicated by the Anthropological Secretary.

The paper will be published in the *Journal*, Part III.

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### LIBRARY.

The following additions have been made to the Library since the meeting held in March last.

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*presented by the respective Societies and Editors.*

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Block Type.

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| <p>୧୪<br/>୨୮</p> | <p>26<br/>କଳାମୂଳ<br/>ପୁଣ୍ୟମୂଳ</p> | <p>32<br/>ତରଳ<br/>ତରଳକା</p>     | <p>38<br/>ସୁଧାମୂଳ<br/>ତରଳକା</p> |
| <p>୧୫<br/>୨୯</p> | <p>27<br/>ଗଜମୂଳ<br/>କୃଷ୍ଣମୂଳ</p>  | <p>33<br/>କଳାମୂଳ<br/>ତରଳକା</p>  | <p>39<br/>କଳାମୂଳ<br/>ତରଳକା</p>  |
| <p>୧୬<br/>୩୦</p> | <p>28<br/>କକାମୂଳ<br/>କଳାମୂଳ</p>   | <p>34<br/>କଳାମୂଳ<br/>ତରଳକା</p>  | <p>40<br/>କଳାମୂଳ<br/>ତରଳକା</p>  |
| <p>୧୭<br/>୩୧</p> | <p>29<br/>କଳାମୂଳ<br/>କଳାମୂଳ</p>   | <p>35<br/>କଳାମୂଳ<br/>କଳାମୂଳ</p> | <p>41<br/>କଳାମୂଳ<br/>କଳାମୂଳ</p> |
| <p>୧୮<br/>୩୨</p> | <p>30<br/>କଳାମୂଳ<br/>କଳାମୂଳ</p>   | <p>36<br/>କଳାମୂଳ<br/>କଳାମୂଳ</p> |                                 |



PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR MAY, 1898.

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The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 4th May, 1898, at 9-15 P.M.

THE HON. MR. H. H. RISLEY, C.I.E., President, in the Chair.

The following members were present :—

Dr. A. Alcock, Babu Aghore Chunder Bhaduri, Dr. T. Bloch, W. B. Colville, Esq., J. N. Das-Gupta, Esq., W. K. Dods, Esq., F. Finn, Esq., Captain P. R. T. Gurdon, Dr. A. F. R. Hoernle, D. Hooper, Esq., W. A. Lee, Esq., Babu Panchanana Mukhopādhyāya, J. D. Nimmo, Esq., A. T. Pringle, Esq., Babu Jadu Nath Sen, M. J. Seth, Esq., Mahāmahōpādhyaya Haraprasād Shastri, The Revd. J. Watt, C. R. Wilson, Esq.

*Visitors* :—W. F. Reynolds, Esq., Jas. Wyness, Esq.

The minutes of the last meeting were read and confirmed.

Sixteen presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last meeting of the society were balloted for and elected ordinary members :—

B. N. Mookerjee, Esq.

J. Bathgate, Esq.

The following gentlemen are candidates for election at the next meeting :—

Babu Bepin Behari Gupta, M.A., Professor of Mathematics, Presidency College, Calcutta, proposed by Babu Jadu Nath Sen, seconded by C. Little, Esq.

M. le Docteur Palmyr Cordier, Médecin des Colonies, Lauréat de l'Académie de Médecine, Chandernagor, proposed by Dr. A. F. R. Hoernle, seconded by Surgeon-Major A. Alcock.

Surgeon-Major H. J. Dyson, I.M.S., proposed by the Hon. Mr. H. H. Risley, seconded by Surgeon-Lieut.-Col. J. Scully.

Donald Sunder, Esq., Provincial Civil Service, proposed by the Hon. Mr. H. H. Risley, seconded by Surgeon-Major A. Alcock.

The Secretary reported the death of the following members:—

Pandit Harimohan Vidyabhushan (Ordinary Member).

Sir Syed Ahmad, Bahadur, K.C.S.I. do.

Dr. G. Bühler (Honorary Member).

The President announced that the Council had sanctioned for *Journal*, Part I, a special grant of Rs. 1,600 for printing text and plates of Dr. Hoernle's paper on Assam Copper-plate Inscriptions, out of the accumulations of Assam Government Grants for Ethnological Research.

The President presented to Babu Sarasi Lal Sarkar the Elliott Gold Medal for his Essay on an Investigation of the Properties of Numbers: and on some Propositions relating to the Theories of Congruences and of Quadratic Residues.

The following papers were read:—

1. *An Epigraphical Note on Palm-leaf, Paper and Birch-bark.*—By A. F. RUDOLF HOERNLE, C.I.E., PH.D.

The paper will be published in the *Journal*, Part I.

2. *On some imperfectly known points in the Habits and Economy of Birds, No. II. On the Use of the Feet for Prehension by certain Passerine Birds, especially Babblers.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

Considering the perfect organization of the feet of Passerine birds for grasping, it is somewhat astonishing that so many of them appear to have no notion of using these members for holding their food, or for transporting any object after the manner of Birds of Prey.

It would appear, however, that our common Crow (*Corvus splendens*) does occasionally do the latter, for I have on two or three occasions seen one flying with a stick or other nesting material in its foot, thus imitating a Kite.

Curiously enough, Kites themselves frequently carry nesting material in their beaks, though food is carried by them in the feet.

Among Passerine birds other than Crows, I have seen a Brown Shrike (*Lanius cristatus*) in the Museum compound, carry off in its foot a dragon-fly on which it was preying when disturbed; and a King-crow (*Dicrurus ater*) in a large compartment in one of the aviaries of the Alipore Zoological Gardens similarly transported a butterfly I had given it, when persecuted by other birds which wanted the insect. I have also noticed that Bhimrajs (*Dissemurus paradiseus*) which I have kept, when disturbed with food in their foot, will still thus retain it when shifting their position.

This habit of grasping the food in one foot is just as characteristic of the Drongos as of the true Shrikes, judging from what I have seen of *Dissemurus paradiseus* and *Dicrurus ater*; I have even seen the latter bird apparently trying to eat something from its feet in the air. *Ohibia hottentotta* appears also to grasp its food with its foot when feeding, at times. I have distinctly seen recently a Piping-crow (*Gymnorhina*) both grasp its food with its foot like a Shrike and put it under one foot like a Crow, in quick succession.

The habit of using the foot as a hand (with the leg resting on the ground or perch) would thus seem to be common to various Shrike-like birds; but it is rather surprising to find it markedly characteristic of many of the Babblers, as I have done after studying many species in captivity.\*

In the case of *Crateropus canorus*, *Argya earlii*, *Garrulax leucolophus* and *albigularis*, *Pyctorhis sinensis*, *Lioptila capistrata*, *Siva cyanuroptera*, *Liothrix luteus*, *Mesia argentauris*, and *Ægithina tiphia*, this action was to be remarked, though some of these birds, at all events, frequently employ the corvine method of putting the food under the foot simply, and this was specially the case with *Pyctorhis*. *Trochalopterum lineatum* and a species of *Zosterops* I kept very seldom used their feet in feeding and *Ianthocincla rufigularis* and *Pomatorhinus erythrogeus* apparently not at all, though I thought I saw a sign of this in the last species.

None of the various species of Bulbuls, however, which I have kept from time to time, have ever shown any disposition to use their feet in feeding, and in this respect *Ohloropsis* also agrees with them rather than with its obviously nearer relative *Ægithina*.

*Myiophoneus temminckii*, the only member of the *Brachypterygiinae*

\* Blyth, however, as quoted by Jerdon (*Birds of India*, vol. IV., pt. I., pp. 16 and 36,) has recorded the use of the foot in feeding by *Pyctorhis sinensis* and *Dryonastes sinensis*. I have alluded to the habit in some of these birds in my papers on the Theory of Warning Coloration and Mimicry, J. A. S. B., 1895 and 1897.

which I have been able to examine in this regard, does not seem inclined to use its foot; as indeed one would not expect it to do, seeing its manifestly close relationship to the typical Thrushes, *Merula* and *Turdus*, which in its gait and appearance it so much resembles. For the Babblers, when on the ground, generally move with a quite different action from the true Thrushes, standing less erect and progressing by more or less bounding hops only, without running as a rule. But *Argya earlii* appears to be more Thrush-like in its gait than other Babblers, though typical enough in most respects. The New Zealand Thrush (*Turnagra*) though somewhat resembling a Babbler in gait and tail action, does not, according to the testimony of the keeper of the Western Aviary at the London Zoological Gardens, who watched it for me, use its foot in feeding.

These differences between Babblers and Thrushes may seem very trivial matters to insist upon, but it must be remembered that the former group is generally admitted to be a very difficult one to define, and this habit of using the foot in feeding, like a Crow or a Shrike, will certainly differentiate most Babblers, large or small, from either Thrushes or Warblers, none of which, so far as I have seen, ever act in this way; and I have had opportunities of observing, besides other Thrushes and Warblers, *Copsychus saularis*, *Cittocincla macrura*, and *Orthotomus sutorius*, under conditions which should have made them show this action, if it were habitual.

This distinction in habit is paralleled by the fact that the Troupials, as I have observed in the case of *Icterus vulgaris*, though simulating the Starlings in form and the Orioles in colour, differ from both these groups in readily making use of their feet when feeding, generally in corvine fashion.

Of course, habits of this kind may vary in allied groups even; I do not remember seeing Sparrows (*Passer domesticus* and *montanus*) ever use their foot to retain any object, as some Finches, e.g., the Canary will do. And among Cuckoos, while the Crow-Pheasant (*Oentropus sinensis*) uses its foot like a true Crow, the Guira (*Guira guira*) does not appear to do so, though a bird of similar habit in some respects. Nor do all Parrots even, characteristic as the gesture is, use their feet as hands; the Budgerigar (*Melopsittacus undulatus*), does not do so, as far as I know. I would not, therefore, press this character too hard. But a habit certainly does seem very persistent in many cases, and the present one should, I think, be allowed a certain amount of weight, in conjunction with other characters.

Curiously enough, the typical Babblers are strikingly marked off from allied groups by other peculiarities only observable in the living



bird. Thus, they are usually, from *Garrulax* to *Zosterops*, remarkably and demonstratively sociable, exhibiting an intense love of company, and being given to cuddling up to and caressing other birds, including those of another species, or even group, if the latter permit. *Ohloropsis*, however, and apparently *Ægithina*, is not thus disposed.

This social disposition, which, by the way, is less noticeable among Bulbuls, is obviously different from that of Thrushes and Warblers, and though a mental or moral character, should be allowed its due weight in considering the relationships of such difficult and closely-related groups as the Thrush-like *Passeres*.\*

3. *A further note on Tulasī-dāsa and the Plague in Benares.*—By G. A. GRIERSON, C.I.E., PH.D., I.C.S.

In my Notes on Tulasī-dāsa published on p. 253 of the *Indian Antiquary* for October, 1893. I referred to the *Hanumān-bāhuka* as an appendix to the *Kavitta-rāmāyaṇa* written when the poet was suffering from a severe sore in the arm.

A note by me on the date of the composition of the *Kavitta-rāmāyaṇa* appeared in the *Proceedings* of the Society for last March. In it I mentioned the references made in that poem to the Plague which devastated Benares in the first half of the 17th century. A copy of this note was sent by me to Mahāmahōpādhyaya Paṇḍit Sudhākara-dvivēdī of Benares, and he now points out to me that it is most probable that the poet himself died of the disease, and that the *Hanumān-bāhuka* was composed by him while suffering from it. The following remarks are based on his communication.

Tulasī-dāsa died in Sambat 1680, equivalent to 1623 A.D. The plague appeared in India in 1616 A.D., and lasted for eight years. It is therefore not impossible that the poet should have fallen a victim to the pestilence.

One of the most characteristic symptoms of the disease is the extremely painful boils or bubos, which commonly first appear in the groins or armpits. In the 25th verse of the *Hanumān-bāhuka*, the poet says in so many words that his sore is in his armpit, *bāhu-taru-mūla*, the root of the tree of his arm. In the 37th verse he tells how the pain cannot be borne by night or by day, and that it is in the arm which Hanumat had once grasped as a friend, i.e., in his right arm. In the last line of verse 35 he thanks Hanumat for having relieved his pain, in accordance with the prayers which he commenced in verse 30.

\* I may also mention, in this connection, that I found that being confined and watched in a cage, *Ægithina tiphia* and *Argya earlii* did not produce "castings" from insects given, while *Cittocincla macrura* did so.

In that verse he cries, 'Is it from my own sin, or from fate, or from some curse? I cannot tell, I cannot bear, the pangs I suffer in my arm. Drugs, charms, spells, simples, all are unavailing. I pray to God, and he only adds fuel to the fire. Who, in this universe, whether he be Creator, Preserver, Destroyer, Fate or Time, heedeth not thy commands, O Hanumat? Tulasī is thy slave. Claim him as thine. Thy delay addeth pangs upon his pangs.'

In the 36th and the following verses, the language of the poet becomes confused. His relief had been but temporary. He no longer calls only upon Hanumat. He commences a verse by addressing that deity, and finishes it with a prayer to Rāma-candra. This confusion continues to the last or 44th verse. His disease increases in severity, and in the 41st verse, he tells us that his body is now covered all over with ghastly sores. This is borne out by a tradition that when the poet was at the point of death he became a leper. The sores of the plague are evidently referred to. Mahāmahōpādhyāya Sudhākara-dvivedī adds that in his boyhood he used to hear from his father and from Vandana-Pāṭhaka, the great authority on Tulasī-dāsa, that the poet had composed the *Hanumān-bāhuka* in four days, and from the data now before us it seems to be extremely probable that the verses were uttered by him on his deathbed, during the four days he was suffering from plague.

The only other possible explanation of the poem is the traditional one, that he was suffering from a carbuncle; but from all we know of the high character of this great man, it seems improbable that he should have used such vivid language regarding what, after all, was not an uncommon complaint, and which was a curable one. Moreover, if the poet had recovered from such a carbuncle, surely the poem would have concluded with some words of thankfulness to the deity whom he had been addressing in such impassioned language. Other works of Tulasī-dāsa show that he was the reverse of an ungrateful man, and I am only able to account for the omission of thanks by supposing that he never did recover from the disease which he laments, that he really was suffering from the plague which Jahāngīr described, and that the *Hanumān-bāhuka* was his swan-song, recorded by his friends as he lay at the point of death.

It is historically true that the poet died in Benares, and that the plague was rife in that city at the time of his death. It also appears that the symptoms of the disease from which he died, so far as the poet has described them, agree with the symptoms exhibited by patients suffering from that terrible pestilence.

4. *Mint Rules in 1126 A.H. (1714-15 A.D.)*—By W. IRVINE, B.C.S. (retired).

The following extract from a small work (19 folios of 16 lines each) that I have lately acquired, the *Hidāyat-ul-qawā'id*, by Hidāyat-ullāh Bihārī, may be of interest to those numismatists, such as Dr. Edgar Thurston, who have taken up the history of Indian mints. The work was written in 1126 H. (16th January, 1714—5th January, 1715), falling in the second and third years of Farrukhsiyar's reign. The following verses fix the year:—

|                                    |                                    |
|------------------------------------|------------------------------------|
| هدایة القواعد کردم بیان متصل       | اطلاع مردم باشد از آن مکتل         |
| در الف و مئة و عشرين و مئة هجري    | مرفوم شد قواعد دستور از انامل      |
| قدرت بر این ندارم گریم چنانچه باید | گفتم بر آنچه دانم باشد نه این معطل |
| بر عالمان کامل و از عارفان این فن  | امید صحر گردد تا از سهر مهتل       |

As we are able to fix thus precisely the date of composition, the remarks are of historical value, and although they are far inferior in detailed information to Book I of the *Āin-i-Akbarī*, *āin* 4 to 12, they give some things that cannot be found there. I insert the text, as many of the expressions have baffled me.

خدمت داروغگی دار الضرب روپیه و اشرفی

داروغه دار الضرب را باید که از مشرف و چودهری دستور و ضابطه هر یک بمهر مشرف و بدستخط چودهری مذکور نویسانیده بگیرد که سکه و اشرفی و روپیه و غیره بچه عنوان وزن میشود و اجوره داران و گداز گران طلا و نقره و گدازی حق النار و خرچ نمک و ابلی و مکش نیاره و حاصل مسلمین و هندو چگونگی بعمل می آید و از کدام جاها بصیغه ابواب الجمع گرفته داخل سرکار باید کرد و کدامی را موجب از سرکار بکدام جا باید داد لازم که از دستور هر یک مکان مطلع گردیده مطابق ضابطه و معمول و مطابق حکم حضور پرنور هر چه مجددا رسد انجام دهد و افزون سکه تاریخ دارد و محصول خرچ دار الضرب بیکان صوبه ادا مازد هرگاه بیوپاریان طلا و نقره بوی مسکوک می آرند و بمواجه ابواب دخل وزن نموده حواله گداز گران مینمایند و گداز گران گداز کرده بارباب دخل مینمایند و بملاحظه می درآرنه اگر طلا بر صحت و نقره بگداز و تاب کم عیار میشود باز بگدازی دهند - چون قابل سکه پسندیده میشود \* گداز گران باز گداز کرده مطلس که بزبان هندی مالا میگویند میسازند درست داشته باشد و بمواجه خود قرش های سکه را علحده علحده تیار داشته بسکه زنان بدهد که اشرفی بوزن نه ماشه شش سرخ و روپیه بوزن ده ماشه دو سرخ و نیم آن و نیمه نیم آن تا نیم رنی بر وزن

آن تیار نمایند و محصول باین حساب و شرح بگیرد که از مسلمین فی مهر پنج آنه و پنج گندله و در روپیه فی صد دو نیم روپیه و از هندو دو طریق یکی مهاجنان که مقرری باشند از آنها فی مهر پنج آنه و در روپیه فی صد دو روپیه و دو آنه و از صرافان و غیره که صوای مقرری می آیند از آنها فی مهر هفت آنه و در روپیه فی صد سه روپیه و بصیغه ابواب الجمع که در سرکار ضبط میگردد از گداز گران بابت نیاره ها که گداز گران ریژی از خاکستر انگشت می برانند و آنرا کسب میگویند فی هزار سکه دوازده آنه و از چاندی گران در ماه دو روپیه و از گداز گران در ماه یکروپیه بصیغه پیشکش در خزانه سرکار والا بصوبه دیوان جمع نموده باشد و گداز گران و دارابان از مهاجنان و غیره فی صد سکه شش آنه بصیغه حق النار فی هزار هفت آنه برای خرچ نمک و ابلی علیحده میگیرند و خرچ از سرکار آنکه فی صد سکه اجوره درابان دو نیم آنه و صرمت گهن و موصله فی هزار نیم آنه و انگشت فی هزار هشت آنه و مواجب پیشکار و داروغه و تحویلدار و گداز گران و سکه زنان و صاحب عیار و پیاده ها متعینه دار الضرب منجمده محصول می یافتند و ضوابط هر یک مکان اگر یک عنوان باشد مطابق آن سر انجام دهد و الا مطابق ضوابط هر یک مکان و سکه زن را فرماید که نام بادشاه و سنه جلوس و اسم مکان دار الضرب در سکه منقوش و روشن باشد و کنار فرشی سکه بسبب کم گدازی و کم عیاری ترقیده نشود \*

OFFICE OF THE SUPERINTENDENT OF THE MINT FOR GOLD COINS AND  
RUPEES.

The Superintendent (*dārōgha*) of the Mint should obtain from the *mushrif* (manager) and the *caudhrī* (head workman) the rules and regulations in writing, causing the first to affix thereto his seal and the second, his signature. This statement should show the manner in which the dies (*sikkah*), and gold coins (*ashrafi*), and silver coins (*rūpaiyah*) etc., are weighed; what wages are paid to the labourers and the melters of the gold and silver; the payment for the cost of the fire used in melting (*haqqu-n-nār*); and the expenses for salt and for *able* (P); the *maukash* (query read, *pēghkash*, the present or offering) of the scoria-sifters (*niyārah*);\* and what is collected from Mahomedans and from Hindus. Also whence the items are obtained that come under the heading "To be credited to Government." Also the persons to whom pay from the Government should be given and to what amount. He (the superintendent) should become acquainted with the rules of each place (i.e. each Mint), and should carry out everything according

\* From either Hindi, *niyārā*, separate, or A. P. *niyār*, plural of *nār*, fire.

to rule and custom, and in obedience to such new instructions as may be issued by the Emperor.

He should keep a daily account of the stock of coins. [*Afzūn* is the total of an account, and here I take it as meant for a statement of receipts and issues, showing (1) balance of previous day, (2) receipts, (3) issues, (4) *Afzūn* or balance at end of the day]. He should pay the dues and expenses of the Mint at the office of the provincial governor. When traders bring gold or silver to be coined, it should be weighed in the presence of the receiving officials and then be made over to the melters. The melters having melted down the metal return it to the receiving official. He (the superintendent) should inspect it. If the gold on the touch stone (*miḥakk*) and the silver by melting and *tāb* (lustre?), appear below the standard of fineness (*kam-'iyār*), they must be given back to be melted over again until they are fit for approval for minting.

When the melters have re-melted the metal, the *muṭallis* ("round pieces of "the size of coined money," Blochmann, *Āin*, I, 22, line 31) which in Hindi are called *mālā* (rosary? garland? necklace?) are prepared. And in his own presence he (the superintendent) causes the separate *fargh* (blanks or discs?) for the coin to be prepared and makes them over to the strikers. The *asharfī* is of 9 *māshah* and 6 *surkh*, the rupee of 10 *māshah* and 2 *surkh*. The Half and Quarter, down to half a *rattī*, are made according to these weights.

The expenses are levied in the following manner and by the following rules:

MAHOMEDANS.—Per *muhr* (gold coin) 5 annas, 5 *gandah* (-20 *kaurī*?)  
Per 100 rupees (silver coin), Rs. 2½.

HINDUS.—For these there are two rates:

I. Merchants who are permanently employed.

Per *muhr*, five (5) annas

Per 100 Rupees, Rs. 2-2-0.

II. Money changers and others who are not on the fixed list.

Per *muhr*, seven (7) annas.

Per 100 Rupees, Rs. 3-0-0.

The items which come under the heading "Receipts to be credited to "Government" are as follows. The first item is that from the melters, on account of the sifters (*niyārah*), the fragments of metal being collected by them out of the charcoal ashes. These are called *kusb* (sediment?). For this the melters pay in 12 annas per 1,000 coin. The silver men pay 2 rupees monthly and the melters one rupee monthly under the head of Present (*peshkash*) into the government

treasury. The payments are made over to the *Diwān* (the chief revenue official) of the province (*ṣubāh*.)

The melters and the *dārrāb* [query read, *ṣarrābān*, the strikers, or preferably *darā-bān*, literally "hammer-man," from *darā*, a smith's hammer, Steingass, 506] take from the merchants (*mahājān*) and others under the head of *ḥaqqu-n-nār* (literally, "right of fire?" that is fee for melting?) seven (7) annas in every thousand [coins]. Over and above this sum they take for the cost of salt and *able* (?).

The expenses met by government are :

|                                                                                                                                                                  |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Wages of the <i>darābān</i> (striker ?) per 100 coins ...                                                                                                        | 2½ annas. |
| Repairs of the <i>ghūn</i> (anvil or sledge hammer)<br>and <i>mūṣlah</i> (query for <i>mūsil</i> , a pestle, or<br><i>maṣālah</i> , ingredients ?) per 1,000 ... | ½ anna.   |
| Charcoal ( <i>angīshī</i> ), per 1,000 ...                                                                                                                       | 8 annas.  |

The pay of the *peḡhākār* (head clerk), the *dāroḡhūh* (superintendent) the *taḥwildār* (store-keeper and cashier), the melters, the strikers (*sikkahgarān*), the testing officer, and the watchmen posted to the Mint, are provided out of the dues. If any place has a particular rule, that rule is followed. Otherwise the general regulations apply. The coin strikers must be ordered to see that each coin is clearly stamped with the Emperor's name, the year of the reign, and the name of the Mint, also that the edge of the *fursh* (disc) of the coin is not cracked through insufficient melting and bad testing.

## LIBRARY.

The following additions have been made to the Library since the meeting held in April last:—

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Leipzig. Annalen der Physik und Chemie,—Band LXIV, Heft 3.

———. ———. Beiblätter, Band XXII, Heft 3.

London. Numismatic Circular,—Vol. VI, No. 65.





PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR JUNE, 1898.

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The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 1st June, 1898, at 9-15 P.M.

SURGEON-MAJOR L. A. WADDELL, M.B., LL.D., in the chair.

The following members were present:—

Dr. A. Alcock, Dr. A. R. S. Anderson, Dr. T. Bloch, W. K. Dods, Esq., F. Finn, Esq., D. Hooper, Esq., Dr. F. P. Maynard, M. J. Seth, Esq.

Visitor: Dr. Christie.

The minutes of the last meeting were read and confirmed.

Fifty-three presentations were announced, details of which are given in the Library List appended.

The following gentlemen duly proposed and seconded at the last meeting of the Society were balloted for and elected Ordinary Members:—

Babu Bepin Behari Gupta.  
M. le Docteur Palmyr Cordier.  
Surgeon-Major H. J. Dyson.  
Donald Sunder, Esq.

The following gentleman is a candidate for election at the next meeting:—

James Wyness, Esq., proposed by Dr. G. Watt, C.I.E., seconded by W. A. Lee, Esq.

Surgeon-Lieut.-Col. G. Ranking has expressed a wish to withdraw from the Society.

The SECRETARY reported the death of the following member :—  
Rao Govind Rao Narayan.

The Numismatic Reporter read Reports on the finds of the following Treasure Trove coins :—

I. REPORT ON 141 old coins forwarded by Deputy Commissioner of Hoshangabad, with his No.  $\frac{962}{\text{G. V. 29}}$ , dated 29th February, 1897.

The coins are stated to have been found in the house of a certain Nemichand in Mauza' Jharlera, Tahsil Seoni (Malwa). They are 1 gold coin, and 140 silver coins, all in very fair condition. They belong to the Mughal Emperors Akbar, Jahāngir and Shāhjahān, and may be thus classified :—

AKBAR (A.H. 963–1014 = A.D. 1556–1605) :

Silver Rupees of the following types :—

- (1) Square issues, with *kalimah*; usual type, as in Brit. Mus. Cat., No. 122 foll.  
Hijrah years : 998 (Mint. *Dāru-l-khilāfat*)<sup>1</sup>; 990<sup>8</sup>  
(on one : Mint Aḥmadābād); 992<sup>1</sup>; 994<sup>1</sup>;  
997<sup>1</sup>; 1000<sup>8</sup> (on two : Mint *Urdū-i-ḡafar-qarīn*) 10
- (2) With Ilāhi years; two varieties :
  - (a) square, as in Brit. Mus. Cat., No. 199;  
Mint Tattah, Ilāhi year 4<sup>8</sup>;
  - (b) round, as in Brit. Mus. Cat., No. 204, Mint Aḡrah, I. y. 44<sup>1</sup>; as in Brit. Mus., No. 178; Mint Aḥmadābād, I. y. 14<sup>1</sup> ... 4
- (3) Imitation of Gujarat Fabric, as in Brit. Mus. Cat., No. 254 ... .. 1 : 15

JAHĀNGIR, (A.H. 1014–1037 = A.D. 1605–1628) :

- (1) Gold coin, type similar to Brit. Mus. Cat. No. 311, Mint Aḥmadābād, Ilāhi month Āzur, year gone 1  
Silver Rupees of the following types :—
- (2) With Ilāhi years :
  - (a) New variety : *Obv.* square area, with semi-circles in margin;  
*Rev.* within wavy border. Legend similar to Brit. Mus. Cat., No. 441;  
Mint Aḡrah, Hijrah year 1021, Ilāhi year 7, month Amardād ... .. 1
  - (b) as in Brit. Mus. Cat., No. 447, Lāhōr, I. y. 6 and 7 ... .. 2

- (c) as in Brit. Mus. Cat., No. 467, Tattah, I. y. 10 1  
 (d) similar to Brit. Mus. Cat., No. 473, Mint  
 Burhānpur, year gone ... .. 1
- (3) With couplet :  
 (a) as in Brit. Mus. Cat., No. 491, Lāhōr,  
 1032 (18) and 1036 (21) ... .. 2  
 (b) as in Brit. Mus. Cat., No. 470-72, Qandahār  
 [10]31 ... .. 1
- (4) With name of Nūr-Jahān : as in Brit. Mus. Cat.,  
 No. 516, Lāhōr, 1034 (20 *julās*) ... .. 1 : 10
- SHĀHJAHĀN (A.H. 1037-1068 = A.D. 1628-1658) :

Silver Rupees of the following types :

- (1) With two square areas, as in Brit. Mus. Cat., No.  
 605, Mint Burhānpur 1042<sup>4</sup>, 1043<sup>18</sup>; one coin  
 is from a new Mint Zafarnagar (a place near  
 Burhānpur), H. year 1043; one coin struck at  
 Burhānpur 1042, adds to legend on *Rev.* (to  
 name of king) the formula: *Khallada-llāhu*  
*mulkahu* and regnal year 5 ... .. 24
- (2) *Kalimah* in circle or *Obv.*, type of Brit. Mus. Cat.,  
 No. 588; Mint Akbarābād 1039<sup>7</sup>, 1040<sup>5</sup>, Bur-  
 hānpur 1040<sup>2</sup>; Delhi 1040<sup>1</sup>; Multān 1041<sup>1</sup>,  
 1042<sup>2</sup> ... .. 18
- (3) Similar type, but *kalimah* within six-foil, as in  
 Brit. Mus. Cat., No. 594, Mint Akbarābād 1040 1
- (4) *Obv.* within diamond border, as in Brit. Mus.  
 Cat., No. 536; Mint Burhānpur 1040<sup>12</sup>, one  
 coin of same mint, but no Hijrah year ... 13
- (5) Type as in Brit. Mus. Cat., No. 585-6; Mint  
 Aḥmadābād 1038<sup>1</sup>; Burhānpur 1037<sup>1</sup>, 1038<sup>1</sup>;  
 one of same mint, no date, very crude, perhaps  
 forgery; Sūrat 1038<sup>9</sup>, 1040<sup>8</sup>; Dāru-l-khilāfat  
 Āgrah 1038 (as in Brit. Mus. Cat., No. 581)<sup>1</sup>;  
 on two coins of Lāhōr Mint (1037 and 38) the  
 legend of *Rev.* differently arranged, as in Brit.  
 Mus. Cat., No. 621 ... .. 19
- (6) An apparently new type :—  
*Rev.* in three lines : centre line : *Kalimah* with  
 date (Hijrah year); above and below : first  
 and second hemistich of the verse begin-  
 ning with : *bi-ṣidq-i-Abī-Bakr* ;  
*Obv.* legend as on Brit. Mus. Cat., No. 625, but

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|      | regnal year above <i>ṣā</i> in third line. Mint Akbarābād 1039 <sup>2</sup> , 1040 <sup>1</sup> ; Burhānpur <sup>4</sup> (date 1040 on one coin, on others gone); Mint gone on others, date 1041 <sup>2</sup> , 1042 <sup>2</sup> , on one gone ... ..                                                                                                                                                                                                                                                 | 14     |
| (7)  | With Ilāhi years, type as in Brit. Mus. Cat., No. 589, Mint Akbarnagar I. y. 2 (H. y. 1038) <sup>1</sup> , I. y. 3 (H. y. 1039) <sup>2</sup> , I. y. 4 (H. y. gone) <sup>1</sup> ; Burhānpur I. y. 2 (H. y. 1038) <sup>1</sup> , I. y. 3 (H. y. on one 1040, on two gone) <sup>2</sup> , one coin of same mint is probably a forgery; Delhi (I. y. and H. y. gone) <sup>2</sup> ; Multān I. y. 2 (H. y. 1039) <sup>2</sup> , I. y. 3 (H. y. 1039) <sup>1</sup> ; Zafarnagar I. y. 2 <sup>2</sup> ; ... | 17     |
| (8)  | Similar type, but <i>Obv.</i> legend in 3 lines only, Mint Multān I. y. 3 <sup>1</sup> , on others gone ...                                                                                                                                                                                                                                                                                                                                                                                            | 3      |
| (9)  | Subvariety of same type: Mint Akbarnagar 1037 <sup>1</sup> , Delhi 1037 <sup>2</sup> , Patnah 1738 <sup>1</sup> ...                                                                                                                                                                                                                                                                                                                                                                                    | 4      |
| (10) | One coin, with Ilāhi year ( <i>aḥād</i> ) on <i>Obv.</i> , and Mint Burhānpur on <i>Rev.</i> ; two coins with Ilāhi 5 on <i>Obv.</i> , Mint gone ... ..                                                                                                                                                                                                                                                                                                                                                | 3: 116 |
|      | Total ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 141    |

II. REPORT ON 40 old Silver Coins, forwarded by Deputy Collector of Bhagalpur with his No.  $\frac{G}{2525}$ , dated 19th February, 1897.

The coins were found on the 27th February, 1896, by one Munshi Mundar of Jogsur, Thana Kotwali, Town Bhagalpur, while digging earth in his own compound. They are Rupees of the Mughal Emperors Akbar, Jahāngir and Shāhjahān; most of them are in an indifferent condition.

They may be thus classified :—

AKBAR (A.H. 963–1014 = A.D. 1556–1605) :

Ilāhi Rupees of Aḥmadābād Mint, as in Brit. Museum Cat., No. 178. Date (in Ilāhi years) 41<sup>4</sup>, 43<sup>1</sup>, 44<sup>2</sup>; all other specimens show only fragments of the date ...

20

JAHĀNGIR (A.H. 1014–1037 = A.D. 1505–1628) :

(1). Ilāhi Rupees of Patna Mint, as in Brit. Mus. Cat., No. 467; Date in Hijrah and Ilāhi years : 1024 (10)<sup>1</sup>, 1026 (12)<sup>1</sup>, 1029 (15)<sup>1</sup>, 1031 (16)<sup>1</sup>, 1032 (17)<sup>1</sup>, 1032 (18)<sup>1</sup>, 1033 (19)<sup>1</sup>, on one coin, date illegible ... ..

8

- (2). With *Kalimah*, Mint and Date on *Obv.*, as in Brit. Mus. Cat., No. 403. Only one coin shows traces of mint, probably Aḥmadābād ... 3: 11

**SHĀHJAHĀN** (A.H. 1037–1068 = A.D. 1628–1658) :

|                                                                                                                                                                                                                                                                                                                                                                         |     |     |     |     |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|----|
| Square areas, regnal year within square area of <i>Rev.</i> , above letter <i>ghā</i> ; Hijrah year within square area and margin of <i>Obv.</i> Name of Mint gone on all specimens. Date: H. y. <sup>2</sup> (R. y. 15) <sup>1</sup> ; H. y. 1052 (16) <sup>1</sup> ; 1053 (17) <sup>2</sup> ; 1054 (18) <sup>2</sup> ; 1054 (18) <sup>2</sup> ; on one coin illegible | ... | ... | ... | ... | 9  |
| Total                                                                                                                                                                                                                                                                                                                                                                   |     |     |     |     | 40 |

**III. REPORT ON 20 old coins, forwarded by Maulavi Faḡl-ullāh, Sub-Registrar of Gaya, with his letters, dated 27th May, 1897, and 9th July, 1897.**

They were found some 10 feet below the surface of the earth, when a well was sunk in a village called Erki, about 29 miles north of Gaya, situated midway on the Patna and Gaya Road. They belong to the class called 'punch-marked Coins,' and are of silver, 7 being round pieces, and the rest, *viz.*, 13 approximately square or oblong pieces. The punch-marks on the *Obv.* of these coins are the usual ones; the *Rev.* of a few pieces shows traces of a wheel and some other marks of uncertain meaning. Nothing can be said as to the date of these coins. Speaking generally, this class must be considered the oldest among Indian coins, but we do not know how long the practice of issuing money of this kind continued in the different parts of India.

**IV. REPORT ON 163 old coins forwarded by the Deputy Commissioner of Nimar with his No. 2741, dated 6th July, 1897.**

Nothing is known as to locality and time of the find.

The coins are Rupees of the Sūri King Shēr Shāh, and the Mughal Emperors Akbar, Jahāngir, Shāhjahān and Aurangzēb, mostly in an indifferent condition.

**SHĒR SHĀH** (A.H. 946–952 = A.D. 1539–1545) :

|                                                                                 |     |     |     |   |
|---------------------------------------------------------------------------------|-----|-----|-----|---|
| Type similar to Brit. Mus. Cat., No. 537. Margins gone, Mint and Date illegible | ... | ... | ... | 1 |
|---------------------------------------------------------------------------------|-----|-----|-----|---|

**AKBAR** (A.H. 963–1014 = A.D. 1556–1605) :

- (1) Qandahār Ilāhi Rupees: of Aḥmadābād Mint<sup>2</sup>, Burhānpur<sup>1</sup>, Delhi<sup>1</sup>, Lāhōr (date: Ilāhi years 42 and 46)<sup>2</sup> ... .. 6

- (2) Type as in Brit. Mus. Cat., No. 96, date 985(P),  
Mint obliterated ... .. 1: 7

JAHĀNGĪR (A.H. 1014–1037 = A.D. 1605–1628):

- Ilāhī Rupees, of Aḥmadābād<sup>1</sup>, Patna (A.H. 1022)<sup>1</sup>,  
Qandahār (Ilāhī year 8)<sup>1</sup> ... .. 3

SHĀHJAHĀN (A.H. 1037–1068 = A.D. 1628–1658):

- (1) Square Areas;

- (a) usual type: 3 coins of Sūrat Mint, date H. y.  
1063 on *Obv.* of one; Regnal years 18 and 32  
in square area on *Rev.* of two coins; Mint  
and Date of others obliterated ... .. 31.  
(b) on two coins, the square areas are made by  
dotted lines, as in Brit. Mus. Cat., No. 549 ... 2

- (2) Type as in Brit. Mus. Cat., No. 587; Mint Akbar-  
nagar<sup>3</sup> (on one, Ilāhī year 12); Sūrat<sup>3</sup>; Tattah<sup>3</sup>;  
on others obliterated ... .. 11

- (3) *Kalimah* in Circle on *Obv.*, very much worn off ... 2: 46

AURANGZĒB (A.H. 1069–1118 = A.D. 1659–1707):

- (1) Usual type, with *badr-i-munir*. Mint: Aḥmadābād,  
regnal year 8 (Hijrah year 1075)<sup>1</sup>; Aurangābād  
30<sup>1</sup>; Barsīl<sup>1</sup> 36(1103); Bijāpur 2. (1091)<sup>1</sup>; Bur-  
hānpur 28<sup>1</sup>; 47 (1115)<sup>1</sup>; 48<sup>1</sup>; 49<sup>1</sup>; on one, date  
obliterated; *Dārū-l-Khilāfat* Shāhjahānābād 20  
(1088)<sup>1</sup>; 21 (1089)<sup>1</sup>; 32 (1100)<sup>1</sup>; on one, date  
obliterated; Elichpur 49 (1117)<sup>1</sup>; Etawah 31  
(1098)<sup>1</sup>; 49 (1116)<sup>1</sup>; Golkondah 5<sup>3</sup>; 12<sup>1</sup>; 19<sup>1</sup>;  
24<sup>1</sup>; 26<sup>1</sup>; Jahāngīrnagar 46 (1114)<sup>1</sup>; Maḥṣūgā-  
bād 48 (1115)<sup>1</sup>; Nārñol 34 (1102)<sup>1</sup>; Shāhja-  
hānābād 41 (1108)<sup>1</sup>; Sūrat 8<sup>1</sup>; 12 (1079 and  
80)<sup>3</sup>; 13 (1081)<sup>1</sup>; 22 (1090 and 91)<sup>3</sup>; 24 (1092)<sup>1</sup>;  
25 (1092 and 93)<sup>3</sup>; 26 (1093 and 94)<sup>3</sup>; 27 (1094  
and 95)<sup>3</sup>; 28 (1096)<sup>1</sup>; 29 (1097)<sup>3</sup>; 30 (1097 and  
98)<sup>3</sup>; 31 (1098)<sup>1</sup>; 37 (1105)<sup>3</sup>; 44 (1112)<sup>3</sup>; on  
9 coins of this Mint date obliterated; Tattah 8<sup>1</sup>;  
Mint obliterated, date in regnal and Hijrah years:  
3 (1071)<sup>1</sup>; 13<sup>3</sup>; 14<sup>1</sup>; 17<sup>1</sup>; 19<sup>3</sup>; 22<sup>3</sup>; 23 (1091)<sup>1</sup>;  
24 (191 *sic.*! and 1092)<sup>3</sup>; 25<sup>1</sup>; 26 (1093)<sup>3</sup>; 28  
(1096)<sup>1</sup>; 34 (1102)<sup>1</sup>; 44 (1111)<sup>1</sup>; 47 (1115)<sup>1</sup>;  
1083<sup>1</sup>; 1093<sup>1</sup>. On 9 coins, both Mint and Date  
are obliterated ... .. 97

- (2) Variety of same class, with *mīhr-i-munir*: date:



|     |                                                                                                                                 |     |         |
|-----|---------------------------------------------------------------------------------------------------------------------------------|-----|---------|
|     | 4 <sup>l</sup> , 10 <sup>l</sup> , 18 <sup>l</sup> , 31 <sup>l</sup> , 32 <sup>l</sup> , on one coin obliterated.               |     |         |
|     | Mint: Akbarnagar                                                                                                                | ... | 6       |
| (3) | With square areas, as in Brit. Mus. Cat., No. 734,<br>date: Regnal year 27 on <i>Rev.</i> ; Mint and Hijrah<br>year obliterated | ... | 1       |
| (4) | Do, as in Brit. Mus. Cat., No. 733, Mint: Akbarā-<br>bād, r. y. 15 (H. y. [10]83)                                               | ... | 1       |
| (5) | As in Brit. Mus. Cat., No. 728, but legend of <i>Rev.</i><br>differently arranged. Mint: Kābul, r. y. 4                         | ... | 1 : 106 |
|     | Total                                                                                                                           | ... | 163     |

V. REPORT ON 743 old coins forwarded by the Collector of Darbhanga with his No. 1201, dated Laheria Serai, 7th August, 1897.

The coins were discovered at the time of digging a tank at a village called Rauna Berai. On examining them, I found them to be 28 copper pieces and 715 silver coins, all of which belong to the class commonly known as "Indo-Sassanian coins" or "*Gadhiyā paisā.*" Unfortunately, most of them are very much worn off, and they do not therefore throw as much new light on this doubtful class of Hindu coins, as might be expected from such a large find.

They may be thus classified:—

1. *Varāha-coins* :

*Obv.* Varāha-avatāra of Viṣṇu ;

*Rev.* Legend : *Śrīmad-Ādi-Varāha*, and traces of fire-altar below.

See Cunningham, *Coins of Mediæval India*, p. 49 and Plate VI, figs. 20 and 21; Rapson, *Indian Coins*, § 110 and Plate V, fig. 5. They are attributed to King Bhōjadēva of Kanauj (c. 850–900 A.D.):

(a) Copper-coins ... .. 28

(b) Silver-coins ... .. 23 : 51

2. *Vigraha-coins* :

*Obv.* Head of King (very rude) to r.

Legend : *Śrī-Vigraha* ;

*Rev.* Fire-altar with letter *ma*.

See Cunningham, *Archæological Survey Reports* Vol. XI, p. 156 and Plate XLIII, fig. 1 ; also Cunningham, *Coins of Mediæval India*, p. 49 and Plate VI, fig. 16.

They are ascribed to King Vighrahapāla I, of Magadha (c. 910 A.D.).

Number of pieces (Silver) ... .. 9

3. *Similar type, very rude :**Obv.* Head of king to r.Legend : *Çri-vi-(ha ?)**Rev.* Fire-altar.

Identical with No. 8545-8550, p. 94, Part III, of Mr. Rodgers' Catalogue of Coins in Indian Museum. They look very much like a crude imitation of type 2, the only difference being the absence of the letter *ma* on *Rev.* and a different arrangement of the legend on *Obv.* Most of the specimens belonging to this type are very much worn, showing only slight traces of *Çri* on *Obv.* The letter *vi* is visible on about 100 specimens; after this on about 10 specimens, traces of a third letter, perhaps *ha*, can be seen. What the complete legend of *Obv.* really was, remains doubtful, but the coins may safely be described as a rude imitation of the Vighraha-Type (No. 2).

|                           |     |     |     |
|---------------------------|-----|-----|-----|
| Number of pieces (Silver) | ... | ... | 683 |
|---------------------------|-----|-----|-----|

|       |     |     |
|-------|-----|-----|
| Total | ... | 743 |
|-------|-----|-----|

**VI. REPORT ON 14 old Silver Coins, 30 broken pieces of such, and 2 melted pieces, forwarded by Covenanted Deputy Collector in charge of Deputy Commissioner's Office, Sonthal Parganas, with his No.**

<sup>R</sup>  
3837, dated 10th December, 1897.

The coins are reported to have been found by a boy in Chandsar, a village in the Rajmahal Subdivision, Sonthal Parganas, where they lay buried under-ground in a small earthen pot. Out of the 30 broken pieces, six complete coins could be put together, the total amount of coins thus being 20. All of them are Rupees of the Independent Kings of Bengal. They are, as a rule, in a fair condition, the legends being clearly legible, but, unfortunately, the margins, containing the date are gone in most of them. Coins of this class are rare, and possess a great numismatic value.

Their classification is thus:—

SIKANDAR SHĀH I. (A.H. 759-792 = A.D. 1358-1389):

|                                                                             |     |     |   |
|-----------------------------------------------------------------------------|-----|-----|---|
| as in Brit. Mus. Cat., No. 37. Mint Firōzābād on one coin, Date obliterated | ... | ... | 2 |
|-----------------------------------------------------------------------------|-----|-----|---|

GHIVĀṢU-D-DĪN A'ZAM SHĀH (A.H. 792-799 = A.D.

|                                                                                                                                                                                                                                             |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1389–1396): as in Brit. Mus. Cat., No. 60. Mint and Date obliterated ... ..                                                                                                                                                                 | 2  |
| Posthumous coin, struck in the name of A'zam Shāh : as in <i>Proceedings</i> , Asiatic Society of Bengal, 1874, p. 156 ff, and <i>Journal</i> , A. S. B., Vol. XLIII, Part 1, 1874, p. 294; date 813 <sup>l</sup> , 81. <sup>l</sup> ... .. | 2  |
| <u>SHIHĀBU-D-DĪN BĀYAZĪD (A.H. 812–817=A.D. 1409–1414):</u>                                                                                                                                                                                 |    |
| (1) as in Brit. Mus. Cat., No. 67; Mint and Date obliterated ... ..                                                                                                                                                                         | 2  |
| (2) as in Brit. Mus. Cat., No. 68; margin of <i>Obv.</i> reads :<br>\| ابوبکر \| ضرب \| عمر \| فیروز \| عثمان \| اباد \| علی \| ۸۱۶ \| |  |
| Mint: Firōzābād, date 816 ... ..                                                                                                                                                                                                            | 3  |
| (3) as in Brit. Mus. Cat., No. 71; margin of <i>Obv.</i> same as above; Mint: Firōzābād 817 <sup>l</sup> , on one coin obliterated ... ..                                                                                                   | 5  |
| <u>JALĀLU-D-DĪN MUḤAMMAD (A.H. 817–834=A.D. 1414–1430): as in Brit. Mus. Cat., No. 72. Mint: Firōzābād on one coin, date 819 on one coin, on others illegible ...</u>                                                                       |    |
| Total ...                                                                                                                                                                                                                                   | 20 |

**VII. REPORT ON 615 old Silver Coins, forwarded by the Offg. Deputy Commissioner of Bhandharia with his No. 616, dated 15th February, 1898.**

The coins are stated to have been found buried in the village of Jam in the District of Bhandharia. They were described as “Nagpuri Rupees,” but really they are Rupees of the Mughal Emperors Muḥammad Shāh and Aḥmad Shāh :

Of Muḥammad Shāh (A.H. 1131–1161=A.D. 1719–1748) there are 50 Rupees, all from the Sūrat Mint, 46 bearing the date: regnal year 28.

Of Aḥmad Shāh (A.H. 1161–1167=A.D. 1748–1754) there are 565 Rupees, all from the Katak (Cuttack) Mint; most of them have the regnal year 5, to which, however, on a good many specimens the figures 7 or 12 or some other units are added (see also coin No. 9123 in Catalogue of Indian Museum, Part II, p. 71). I am unable to account for this curious irregularity.

**VIII.** REPORT ON 110 old coins, and 6 broken pieces of such, forwarded by Deputy Commissioner of Rawalpindi, with his No. 936-G, dated 9th March, 1898.

The coins were found in a ravine within the limits of Nakka, a village in the Pindi Gheh Tahsil of the Rawalpindi District. They are all silver coins (*dirhams*) of the early Pathan Sulṭān of Delhi, Muḥammad ibn Sām, mostly in an indifferent condition.

The following varieties are found among them :—

MUḤAMMAD IBN SĀM (A.H. 589-602=A.D. 1193-1205) :—

|                                                                                                                                                                                                                        |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| (1) Type as in Brit. Mus. Cat., No. 2, Mint: Ghaznih on three coins; date: <i>fi-l-awwal zi-l-ḥijjah</i> "on the first day of Zu-l-ḥijjah" on two coins; <i>fi zi-l-ḥijjah</i> , year 596 on one; others illegible ... | 4   |
| (2) Type as in Brit. Mus. Cat., No. 3; only fragments of date legible ... ..                                                                                                                                           | 2   |
| (3) Type as in Thomas' <i>Chronicles</i> , p. 17, No. 4 ...                                                                                                                                                            | 1   |
| (4) Type as in <i>Journal</i> , As. Soc. Beng. Vol. LII, 1883, Part I, p. 57, No. 9=Plate IV, No. 9; Mint and Date obliterated ... ..                                                                                  | 2   |
| (5) Issue of Tāju-d-din Yildiz: as in Brit. Mus. Cat., No. 20. Date: 608 on 8 coins; on four coins perhaps 610, on others obliterated ... ..                                                                           | 101 |
| Total ... ..                                                                                                                                                                                                           | 110 |

Of the 6 broken pieces, 5 belong to coins of type No. 5, and one to a coin of type No. 1.

**IX.** REPORT ON 121 old Silver Coins, forwarded by Deputy Commissioner of Rawalpindi District, with his No. 937 G., dated 9th March, 1898.

The coins were found within the common lands of Dhak Halim, a hamlet in the Pindi Gheh Tahsil of the Rawalpindi District. They are all Rupees of the following Mughal Emperors:

SHĀHJAHĀN (A.H. 1037-1068=A.D. 1628-1658):

Type: Square Areas; Mint and Date illegible ... 2

AUBANGZĒB (A.H. 1069-1118=A.D. 1659-1707):

Usual type, with *badr-i-munir*; Mint: Etāwā 1099<sup>1</sup>, 1114<sup>8</sup>, 1117<sup>1</sup>; Nārñōl<sup>8</sup> (1117 on one coin); Sūrat<sup>8</sup> (1115 on one coin); Mint and Date illegible<sup>18</sup> ... 28

JAHĀNDĀR (A.H. 1124=A.D. 1712):

Usual type; Mint and Date illegible ... .. 2

FARRUKH-SIYAR (A.H. 1124–1124 = A.D. 1713–1719):

Usual type; Mint: Dāru-l-khilāfah Shāhjahānābād<sup>4</sup>  
(*sanah aḥad* on 3 coins); Dāru-s-saltānah (Lāhōr?)  
4<sup>2</sup>; Sūrat<sup>1</sup>; others illegible ... .. 14

MUḤAMMAD SHĀH (A.H. 1131–1161 = A.D. 1719–1748):

(1) Usual type (Brit. Mus. Cat., No. 978 ff.); Mint:  
Dāru-s-saltānah Lāhōr 14<sup>2</sup>, 20<sup>1</sup>, 21<sup>1</sup>, 25<sup>1</sup>, 28<sup>1</sup>, 30<sup>1</sup>,  
illegible<sup>1</sup>; Etāwā 4<sup>2</sup>; Multān 14<sup>1</sup>; Mustaqarru-l-  
khilāfah Akbarābād 12<sup>1</sup>, 17<sup>1</sup>, 18<sup>1</sup>, 20<sup>2</sup>, illegible<sup>2</sup>;  
Siwāi Jaipur 18<sup>1</sup>; 28<sup>1</sup>; Sūrat<sup>1</sup>; illegible<sup>17</sup> ... 37

(2) With *Shāhib-qirān-i-gāni*; Mint: Dāru-l-khilāfah  
Shāhjahānābād 9<sup>1</sup>, 11<sup>2</sup>, (1141)<sup>1</sup>, 12 (1142)<sup>1</sup>, 17<sup>1</sup>,  
18<sup>1</sup>; 20<sup>2</sup>, 23 (1154)<sup>2</sup>, 28<sup>1</sup>, 30<sup>1</sup>, illegible<sup>6</sup>; Mint  
and Date illegible<sup>4</sup> ... .. 24

AḤMAD SHĀH (A.H. 1161–1167 = A.D. 1748–1754):

Usual type; Mint: Dāru-l-khilāfah Shāhjahānābād  
(*sanah aḥad*)<sup>1</sup>; Mustaqarru-l-khilāfah Akbarābād 2<sup>1</sup>, 3<sup>1</sup> 3

‘ĀLAMGĪR II (A.H. 1167–1173 = A.D. 1754–1759):

Usual type; Mint: Dāru-l-khilāfah Akbarābād (*sanah  
aḥad*)<sup>1</sup>; Dāru-s-saltānah Lāhōr (*sanah aḥad*)<sup>2</sup>; Sūrat  
3 (P)<sup>1</sup>... .. 4

SHĀH ‘ĀLAM (A.H. 1173–1221 = A.D. 1759–1806):

Usual type; Mint: Mustaqarru-l-mulk<sup>2</sup> (with years  
2 and 4); others uncertain ... .. 7

Total ... 121

**X. REPORT ON 11 Gold Coins and 36 pieces of such coins, forwarded by Deputy Commissioner of Jubbulpore with his No. 1468, dated 16. 3. 98  
18. 3. 98**

Nothing is known as to time and locality of the find. It is merely stated that the pieces were broken by the finders. The coins belong to the following classes:—

*Sultāns of Delhi:*

MUḤAMMAD II. IBN TUḠHLAQ (A.H. 725–752 = A.D.  
1324–1351):

(1) same as in Brit. Mus. Cat., No. 260–262; Mint:  
Delhi, 726 ... .. 1

|                                                                                                                          |   |
|--------------------------------------------------------------------------------------------------------------------------|---|
| (2) dinār struck in the name of the Abbaside<br>Khalif Al-Ḥakim (A.H. 741-753); as in<br>Brit. Mus. Cat., No. 335 ... .. | 2 |
| FIRŌZ SHĀH III. TUḠHLAQ (A.H. 752-790=A.D. 1351-<br>1388): as in Brit. Mus. Cat., No. 343 ... ..                         | 1 |
| MUḤAMMAD SHĀH IV. IBN FARĪD (A.H. 837-847=A.D.<br>1433-1443): as in Thomas' <i>Chronicles</i> , p. 336, No. 291          | 1 |

*Bahmanī Sulṭāns of the Dēkhan :*

|                                                                                                                                      |   |
|--------------------------------------------------------------------------------------------------------------------------------------|---|
| 'ALĀ'U-D-DĪN AḤMAD SHĀH II. (A.H. 838-862=1435-<br>1457): as in Indian Museum Catalogue, Part I,<br>p. 113, No. 7212 ... ..          | 1 |
| MUḤAMMAD SHĀH II. (A.H. 867-887=A.D. 1463-1482):<br>as in Indian Mus. Cat., Part I, p. 114, No. 7210:<br>date 875 on one coin ... .. | 3 |
| MAḤMŪD SHĀH II. (A.H. 887-927=A.D. 1782-1518):<br>New coin:                                                                          |   |

*Obv.*

المتوكل على  
الله القوي الغني  
السلطان الاعظم

*Rev.*

Within Square Area :

ابوالمغازي  
محمود شاه بن محمد شاه  
الواليبهمني

In margin perhaps احسنا باد 1

*Kings of Jaunpur :*

|                                                                                               |    |
|-----------------------------------------------------------------------------------------------|----|
| ḤUSAIN SHĀH (A.H. 863-881=A.D. 1458-1476): as in<br>Thomas' <i>Chronicles</i> , p. 322 ... .. | 1  |
| Total ... ..                                                                                  | 11 |

**XI.** REPORT ON 12 old coins, forwarded by Deputy Commissioner of Rawalpindi District, with his 1236-G, dated 23rd March, 1898.

The coins were found in Rajar a village of the Rawalpindi District. They are Rupees of the Mughal Emperors Akbar and Shāhjahān.

AKBAR (A.H. 963-1014=A.D. 1556-1605) :

|                                                                                                                                                                                                                                                   |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| (1) Ilāhi Rupees: Mint Aḥmadābād, Ilāhi years 3 and<br>43 (as in Brit. Mus. Cat., No. 178)*; Mint Kābul,<br>Ilāhi year 47 (as in Brit. Mus. Cat., No. 221)*;<br>Mint Lāhōr, Ilāhi year 41 (as in Brit. Mus. Cat.,<br>No. 215) <sup>1</sup> ... .. | 5 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|

|                                                                                                                                                                                                                       |    |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------|
| (2) Late imitation of Guzarat Fabric, as in Brit. Mus. Cat., No. 254... ..                                                                                                                                            | 1: | 6         |
| <b>SHĀHJAHĀN (A.H. 1037-1068 = A.D. 1628-1658):</b>                                                                                                                                                                   |    |           |
| (1) With square areas, Mint: Sūrāt 1044 <sup>1</sup> ; Kābul, date obliterated <sup>1</sup> ; Mint obliterated, date 1046 at bottom of area on <i>Obv.</i> , regnal year 9 in area of <i>Rev.</i> <sup>1</sup> ... .. | 3  |           |
| (2) <i>Kalimah</i> within circle on <i>Obv.</i> , regnal year 19 on <i>Rev.</i> , Mint obliterated ... ..                                                                                                             | 1  |           |
| (3) With Ilāhī year 15 on <i>Obv.</i> , Mint Tattah, Hijrah year 1051 on <i>Rev.</i> (see Brit. Mus. Cat., No. 643) ...                                                                                               | 1  |           |
| (4) <i>Niḡār</i> : Mint: Dāru-l- <u>khilāfah</u> Akbarābād, 1054, regnal year 17 ... ..                                                                                                                               | 1: | 6         |
| Total ... ..                                                                                                                                                                                                          |    | <u>12</u> |

## XII. REPORT ON 317 old Silver Coins forwarded by Collector of Mymensingh with his No. 104, dated 15th April, 1898.

The coins were found on the 27th December, 1897, by one Girish Chandra Aich Roy of Jashodal, Station Kishoregunge, Post Office Jashodal, in District Mymensingh. They are Rupees of different Bengal Sultāns; a few coins belong to the Bahmani Sultān Tāju-d-din Firōz Shāh, to the Sūri Kings Islām Shāh and Muḥammad Shāh, and the Mughal Emperor Humāyūn. As is the case with nearly all the Bengal coins, they are generally much disfigured by shroffmarks, a few specimens being too badly damaged as to be identified at all. There are a few rare specimens among this find, which possess great numismatic value; the majority, however, belongs to more or less known and common types.

### *Coins of Bengal Sultāns:*

SIKANDAR SHĀH I (A.H. 759-792 = A.D. 1358-1389):

As in British Mus. Cat., No. 32-36; date with the exception of *sab'ina* (70) illegible ... .. 1

GHIYĀṢU-D-DĪN A'ZĀM SHĀH (A.H. 792-799 = A.D. 1389-1396):

New variety: *Obv.* uncertain, probably legend of Brit. Mus. Cat., No. 60;

|             |                         |     |       |
|-------------|-------------------------|-----|-------|
| <i>Rev.</i> | الموید بتائید الرحمن    |     |       |
|             | غیاث الدینا و الدین     |     |       |
|             | ابوالمظفر اعظم شاه      |     |       |
|             | ابن سکندر شاه ابن الیاس |     |       |
|             | (شاه السلطان)           | ... | ... 1 |

JALĀLU-D-DĪN FATḤ SHĀH (A.H. 886–892=A.D. 1481–1486):

As in Brit. Mus. Cat., No. 98 ... .. 2

SHĀMSU-D-DĪN MUẒAFFAR SHĀH (A.H. 896–899=A.D. 1490–1493):

As in Brit. Mus. Cat., Nos. 105–107; date 896 on one specimen; others, illegible ... .. 4

‘ALĀ’U-D-DĪN ḤUSAIN SHĀH (A.H. 899–925=A.D. 1493–1518):

(1) Type of Brit. Mus. Cat., Nos. 122–131, with *al-fātiḥ li-l-kāmrū*, etc.

Mint Dāru-ẓ-ẓarb 922<sup>4</sup>; Fathābād<sup>3</sup>; Ḥusainābād 919<sup>18</sup>, illegible<sup>4</sup>; Muḥammadābād 910<sup>1</sup>; illegible<sup>13</sup> 41

(2) With *Kalimah* on *Obv.*:

(a) Legend of *Rev.* as in Brit. Mus. Cat., No. 108; Mint: Ḥusainābād 899 (?)<sup>8</sup>; *Khizānah* 889 (?)<sup>1</sup>; illegible<sup>8</sup> ... .. 6

(b) Legend of *Rev.* as in Brit. Mus. Cat., No. 113; Mint, Fathābād 899<sup>11</sup>, illegible<sup>8</sup>; Mint illegible<sup>5</sup> ... .. 18

(c) New Variety: Mint illegible, date [9] 18;

*Rev.* علماء الدنيا

والدين ابو المظفر

حسين شاه سلطان

ابن سيد اشرف حسيني

خلد الله ملكه

(3) With *as-sultān al-‘ādil* on *Obv.*:

(a) As in Brit. Mus. Cat., Nos. 119–121; Mint Ḥusainābād 89 (*sic!*)<sup>8</sup>, 8 (*sic!*)<sup>3</sup>; illegible<sup>3</sup> ... .. 13

(b) Similar, but legend of *Obv.* differently arranged; *Rev.* begins with *sultān* and reads *khullida mulkuhu wa-sultānuhu*. Mint: Muḥammadābād [9]12 ... .. 1

(c) Similar, but *Ḥusain Shāh as-sultān* on *Rev.*, and *khullida mulkuhu*. Mint: Dāru-ẓ-ẓarb 904 (?)<sup>18</sup>; illegible<sup>4</sup> ... .. 17

Of doubtful type ... .. 9: 105



NĀSĪRU-D-DĪN NAŞRAT SHĀH (A.H. 925-939=A.D. 1518-1532):—

(1) With ornamented borders:

- (a) As in Brit. Mus. Cat., No. 134-136; Mint: Ḥusainābād 925<sup>13</sup>; Mint illegible, same date<sup>8</sup>; one very crude specimen bears neither Mint nor Date ... .. 16

[*Note*: Here and in other specimens the last line of *Rev.* reads *dāru-ḡ-ḡarb*, and not (*sic!*) *خزينة* or *dāru-n-naşr*, as has been read by the compilers of the British Museum Catalogue.]

- (b) Same legend, but different ornaments. Mint: Ḥusainābād (on *Obv.*); *dāru-ḡ-ḡarb* 925 (on *Rev.*)<sup>4</sup>; others illegible ... .. 12
- (c) Similar, but *Rev.* reads: *Naşrat Shāh bin Ḥusain Shāh Sayyid Ḥusaini*; *dāru-ḡ-ḡarb* is left out; Mint: Ḥusainābād 925<sup>7</sup>; one illegible ... 8
- (2) Double-lined border, in some specimens with dots between:—
- (a) legend as in Brit. Mus. Cat., No. 137; Mint: Naşratābād<sup>3</sup> (on one coin: 927 on *Obv.*); *Dāru-ḡ-ḡarb*<sup>6</sup> (on two coins date: 925); illegible<sup>16</sup> ... 23
- (b) a variety of same: *nāşir* in second (instead of third) line of *Obv.*; Mint: *Dāru-ḡ-ḡarb* (on *Rev.*, last line of *Obv.* uncertain)<sup>8</sup> (date: 925 on 6 coins); *Faḥābād* (in last line of *Obv.*), *dāru-ḡ-ḡarb* 925 (in last line of *Rev.*)<sup>20</sup>; Ḥusainābād 925<sup>6</sup> (on 4 coins: *dāru-ḡ-ḡarb* Ḥusainābād 925 in last line of *Rev.*; on 1 coin: Ḥusainābād in last line of *Obv.*, the remainder in last line of *Rev.*); *Khālifābād* 932<sup>3</sup> (this is extremely uncertain; the mint name reads *كخلفاء* on one specimen, others doubtful); *Muḥammadābād*<sup>6</sup>, dates: 926, 928, 932, 934, 935, 936 (the last 4 coins read *Naşrat Shāh sulṭān bin Ḥusain Shāh sulṭān* instead of *as-sulṭān*, on *Rev.*); Mint doubtful, date 932 and 939<sup>3</sup>; Mint and Date illegible<sup>3</sup> ... 53
- (c) another variety; *Naşrat Shāh* transposed from beginning of *Rev.* to end of *Obv.*; no Mint; date uncertain ... .. 1
- Of doubtful type... .. 10: 123
- ĀLĀ'U-D-DĪN FIRŌZ SHĀH (A.H. 939=A.D. 1532): ornamented border; legend as in Brit. Mus. Cat., No. 145;

Mint; Fathābād<sup>2</sup>; Ḥusainābād<sup>4</sup>; doubtful or illegible<sup>4</sup> 10  
 GHĪYĀṢU-D-DĪN MĀḤMŪD SHĀH III. (A.H. 933-947=A.D. 1526-1537):—

- (1) Usual type, with *badr-i-ghāzi* in small circle;  
 (a) as in Brit. Mus. Cat., Nos. 147-148; Mint Ḥusainābād<sup>2</sup>; Khalifābād (?) 933<sup>4</sup>; Naṣratābād 933<sup>2</sup>; Mint illegible, date 933<sup>4</sup>; Mint and Date illegible<sup>2</sup> 14  
 (b) similar, but date on *Obv.*; mint: Fathābād 933 ... 3  
 (c) as in Brit. Mus., 149-151 (with *Shāh* on *Obv.*); Mint: Ḥusainābād<sup>2</sup> (date 939 on two specimens); Muḥammadābād<sup>1</sup>; Naṣratābād<sup>1</sup>; on others doubtful 11  
 Of doubtful type ... .. 13  
 (2) Lettered surfaces, new type, different varieties:—

| <i>Obv.</i>       | <i>Rev.</i>          |
|-------------------|----------------------|
| السلطان           | السلطان              |
| بن السلطان فيات   | بن حسين شاه          |
| الدنيا والدين ابو | السلطان حسيني خلد    |
| المظفر محمود      | (sic!) الملكة وسلطان |
| شاه ٩٣٥           | حسيناباد             |

Mint Ḥusainābād 945 (?)<sup>2</sup>; on others illegible ... 13: 54

*Coins of Bahmanī Sulṭāns :*

TĀJU-D-DĪN FIRŪZ SHĀH (A.H. 800-825=1397-1721):  
 as in Brit. Mus. Cat., No. 449-452 ... .. 2

*Coins of Sūrī Dynasty :*

ISLĀM SHĀH (A.H. 952-960=A.D. 1545-1552):

- (1) as in Brit. Mus. Cat., No. 619 ... .. 1  
 (2) uncertain *Obv.* portion of *Kalimah* within square area, and *as-sulṭān* ..... beneath; *Rev.* in looped pentagon: *as-sulṭān khallad Allāhu mulkahu* 955 1: 2  
 MUḤAMMAD SHĀH (A.H. 960-964=A.D. 1552-1556):  
 a doubtful piece ... .. 1

*Coins of Mughal Emperors :*

HUMĀYŪN (A.H. 937-960=A.D. 1530-1554):

A new and probably unique type, of decidedly Bengal Mintage; apparently Rupees struck by Humāyūn while residing at Gaur (Jannatābād; see Riyāz, p. 144, and Stewart, p. 124):

*Obv.* in circle: *Muḥammad Humāyūn bādshāh-i-ghāzi* (or simply *ghāzi*). In margin of one coin 94, and traces of legend.

|                                                                                                                                |     |
|--------------------------------------------------------------------------------------------------------------------------------|-----|
| <i>Rev.</i> in larger circle with lettered margin or in double-lined border : <i>Kalimah</i> and <i>Qorān</i> , II, 208 ... .. | 3   |
| Unidentified coins :—                                                                                                          |     |
| (a) A piece, divided in 6 fields. Legend :                                                                                     |     |
| <i>Obv</i> : بارنا (? الدنيا والدين ابو المظفر ماربل (? شاه السلطان ابن                                                        |     |
| <i>Rev</i> : قومان خلد الله ملكه وسلطانه (? ٩٤                                                                                 |     |
| (b) Another piece, legend in curious characters ... ..                                                                         | 2   |
| Illegible coins ... ..                                                                                                         | 7   |
| Total ... ..                                                                                                                   | 317 |

**XIII.** REPORT ON 107 old copper coins, forwarded by Deputy Commissioner of Gujranwala District, with his No. 810, dated 14th April, 1898.

The coins are reported to have been found "in a village pond in an earthen vessel"; no further particulars stated. They are all copper coins (*dām*) of the Sultāns of the Sūri Dynasty, generally in a fair condition; *viz.* :—

**SHĒR SHĀH** (A.H. 946-952 = A.D. 1540-1545) :

- (1) Square areas, usual type, different varieties. Mint :  
Agrah 951<sup>2</sup>; Alwar 95<sup>1</sup>; Gwālyār 950<sup>8</sup>, 951<sup>1</sup>;  
Hīṣār<sup>2</sup> (dates illegible); Nārṇōl 951<sup>5</sup>, (dates  
illegible)<sup>2</sup>; Sambhal 950<sup>1</sup>; Shērgarh 950<sup>2</sup>, 951<sup>1</sup>,  
952<sup>1</sup>; on two coins, Mint and Date obliterated ... 23
- (2) Type as in *Journal*, As. Soc. of Bengal, Vol. LIX,  
1890, Part I, Plate III, 13, etc. Different varieties;  
dates 949<sup>1</sup>; 950<sup>3</sup>; 951<sup>1</sup>; on others illegible 18
- (3) As in Indian Museum Catalogue, Part 1, p. 96,  
No. 13038; date 95 ... .. 1
- (4) Legends uncertain, probably new varieties ... 2
- (5) Small size, legends uncertain ... .. 5 : 49

**ISLĀM SHĀH** (A.H. 952-960 = A.D. 1545-1552) :

- (1) Lettered surfaces, usual type, as in *Journal* As. Soc.  
of Bengal, Vol. LIX, 1890, Part I, p. 163, Type  
II. Different varieties; dates : 952<sup>2</sup>; 955<sup>3</sup>;  
956<sup>3</sup>; others illegible ... .. 39

[*Note* : In a few specimens of this class as well as of No. 2 of *Shēr Shāh*'s coins the legend of *Obv.* clearly runs thus :—

في عهد الامير الحامي لدين الديان  
*fī 'ahdi-l-amir al-hāmi li-dini-d-dayyān,*

"in the reign of the Amīr, the protector of the divine faith" (*dayyān*, lit. 'judge,' being one of the names of God). This is evidently the originally intended wording of this much disputed legend; and Dr. Hoernle's remarks (*l. c.* p. 115) should be corrected accordingly.]

|                                                                                                                                                                           |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| (2) New variety of same type; date 959, <i>al-ḥāmī</i> of<br><i>obv.</i> is divided so that <i>alḥā</i> stands on proper<br>right side, and <i>mī</i> on proper left side | ... 1: 40 |
| MUḤAMMAD SHĀH (A.H. 960-964 = A.D. 1552-1556):                                                                                                                            |           |
| (1) Usual type, as in <i>Journal As. Soc. of Bengal</i> , <i>l. c.</i><br>p. 167, Type I. Dates 961 <sup>5</sup> ; 962 <sup>8</sup> ; others illegible                    | 10        |
| (2) Small size, legends uncertain                                                                                                                                         | ... 6: 16 |
| Two coins among this lot were too much worn off to<br>be identified with certainty                                                                                        | ... 2     |
| Total                                                                                                                                                                     | 107       |

**XIV.** REPORT ON 39 old silver rupees, forwarded by Collector of Saran District, with his No. 311-G., dated 7th May, 1898.

The coins are reported to have been found in a village called Mithadur in the Chapra Thana of Saran District, while a well was being dug, in May, 1897. They are all rupees of the Mughal Emperor Shāh Ālam II. (A.H. 1173-1221 = A.D. 1759-1806) of the 'Azīmābād (Patna) Mint, struck in the regnal years 7, 8 and 9: *viz.*, 11 coins of year 7; 10 coins of year 8; and 18 coins of year 9; type as in *Brit. Mus. Cat.*, No. 1166.

The PHILOLOGICAL SECRETARY contributed the following obituary notice of the death of Dr. George Bühler, an Honorary Member of the Society.

Dr. George Bühler, an Honorary Member of the Society, whose death has been reported at the last meeting, was born on the 19th June, 1837 in Borstel, a small country-place in Hannover. He studied in Göttingen under Benfey Sanskrit and Comparative Philology, and took his degree of Ph. D. in 1858. He then went first to Paris and later on to England where he was employed for some time as an assistant in the Queen's private Library in Windsor. In 1863, he was appointed Professor of Oriental Languages in the Elphinstone College in Bombay, in 1866 Superintendent of Sanskrit Studies in the Deccan College in Poona, and later on Educational Inspector in Gujarat. In 1880, when he resigned his Indian Service, the University of Vienna selected him for the newly created professorship of Sanskrit; he was made an

Ordinary Member of the Imperial Academy of Science in Vienna, and given the title of Hofrath. He was elected an Honorary Member of our Society in 1895.

His death occurred on the 8th April by a very deplorable accident. He had started on a journey to Zürich to spend the Easter holidays with his wife and son who were then living at that place. On his journey he halted for a few days in Lindau, where he hired a small boat, a so-called "nutshell," in which he went out alone to enjoy a moon light night on the beautiful Lake of Constanze. But the waters of that dangerous sea that had craved so many a victim before, proved dangerous to him also. On the next day, the boat was seen driving on the sea without its inmate, whose body still lies buried under the depth of the water. It was not till much later that his family, who were looking out anxiously for his arrival, came to know of that sad occurrence, which had bereaved them of a beloved husband and father, and his friends of one who was dear to them not only as a scholar who stood foremost of all in Oriental learning, but also as a man of a truly noble mind and great character.

In an obituary note published in a German paper, the late Professor has been rightly called the centre of all those learned investigations that are at present directed towards elucidating the ancient history and literature of India. There is hardly any one among the living Sanskritists of Europe and America as well, as of India to whom the late Professor was not known either by literary correspondence, or personally, and scarcely any one has addressed him on any question connected with this wide field of learning, who did not receive from him an answer that not only improved upon his own knowledge of the subject, but very often helped him essentially in seeing his way through some difficult point in connection with his researches. In India itself, it is especially the Bombay Presidency where the fruits of his labours planted during the 18 years he served this country, are still ripening. Witness to this is not only that excellent series of Sanskrit Text publications, the Bombay Sanskrit Series, which was begun and carried on under his own superintendence, in connection with his colleague, Prof. Kielhorn, not only the work done in that Presidency as well as in adjacent parts of India in connection with the search for Sanskrit Manuscripts which was started by him also in connection with Prof. Kielhorn, nay it may be fairly said that a good deal of the increasing interest among Native scholars of that part of the country for their ancient Literature and History is due to his direct personal influence.

His literary work was connected firstly with the ancient Law-books

of India a subject on which he was one of the first authorities. For Sir R. West's Digest of Hindu Law he wrote the Introduction dealing with the history of Smṛti. Of the ancient Law-books written in prose, which preceded the later standard codifications of Manu and Yājñavalkya, the Dharma-çāstra of Āpastamba was first made known by him; this and the corresponding Law-books of Gautama, Baudhāyana and Vasiṣṭha were translated by him, and his translation of Manu, published in the same series, the Sacred Books of the East, is a work of far more than literary merits to Indian Lawyers.

Here as in all his other publications he showed that admirable combination of a thoroughly philological knowledge of the subject with a practical knowledge of modern India and its people, that gave him such a great advantage over many of his European colleagues who have only to resort to their books, and never come in connection with the country and its inhabitants.

The next subject taken up by him, was the history and literature of the Jainas. Dr. Hoernle in his Presidential Address has newly given us an admirable survey of the work done in this long neglected branch of Indian Antiquities, and he has already pointed to the large amount of advancement in knowledge in this field of research which we owe to the late Professor. His work here is partly connected with the decipherment of the ancient Jaina Inscriptions from Mathurā, and this brings me to that particular branch of investigation where, as has been observed, Prof. Bühler has done more than any other living Sāṅskṛitist of his time. I refer to Inscriptions and History. It will be known to most of us, that Prof. Bühler's readings of the Açōka Inscriptions are far superior to any previous endeavours to read and translate those curious ancient documents. He was the first to adhere strictly to the principle that the texts should be explained as they stand, without allowing any arbitrary alterations of modern critics, and scarcely any other scholar commanded over such a wide knowledge of the ancient literature of Hindus, Jainas or Bauddhas as he did, or knew to utilize even out of the way scraps of information so masterly as he. As a result of all his investigations in the wide field of Indian Inscriptions he published lately his Indian Palaeography, that admirable survey of the history of writing in India that makes it now so easy even to outsiders to gain an oversight over the result of various learned researches dispersed hitherto in different often hardly accessible Periodicals.

This work together with Prof. Jolly's book on Indian Law and Custom, were the first specimens to appear of the famous Encyclopædia of Indo-Aryan Research which Trübner started under the superintendence of the late Professor. He himself was going to publish in the

same series an Indian History, a treatise on the Géography of India (in connection with Dr. Stein), an introductory work on literary and epigraphical sources of Indian History, and in connection with Sir R. West, and Prof. Jolly a work on Political Antiquities of India. And if the sudden death of the late Professor seems so extremely sad and deplorable, it is partly because we now cannot expect to get these books from his pen, that touched nothing which it did not adorn. If any one, it was he who by his previous researches as well as by his high literary capacities was entitled to write the History of India. The work will probably have to be entrusted to some other scholar. There seems but little hope that his Manuscript might be so far advanced as to be ready for publication, but the Encyclopædia, it is hoped, will be continued.

But even now, though we are to deplore the loss of such a book which would do so much help to everyone who works on this subject, the work done by the late Professor has advanced our knowledge of Indian Literature and History to such a degree, that it is scarcely said too much, if I contend that in many respects Sanskrit in Europe and India, would not stand where it now stands, if it had not been for the labours of the late Professor Bühler.

The following paper was read :—

*The Personal History of Dr. William Hamilton.*—By C. R. WILSON, M.A.

The paper will be published in the *Journal*, Part I.

## LIBRARY.

The following additions have been made to the Library since the meeting held in May last.

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PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR JULY, 1898.

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The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 6th July, 1898, at 9-15 P.M.

R. D. OLDHAM, Esq., A.R.S.M., F.G.S., in the chair.

The following members were present:—

Dr. A. Alcock, J. Bathgate, Esq., Dr. T. Bloch, W. K. Dods, Esq., F. Finn, Esq., D. Hooper, Esq., W. A. Lee, Esq., L. de Nicéville, Esq., A. T. Pringle, Esq., M. J. Seth, Esq., Mahamahopadhyaya Haraprasad Shastri.

*Visitors*:—G. A. T. Bennett, Esq., Dr. C. R. M. Green, J. A. Kinnison, Esq., J. Wyness, Esq.

The minutes of the last meeting were read and confirmed.

Thirty presentations were announced.

Mr. James Wyness was balloted for and elected an Ordinary Member.

Surgeon-Major D. W. S. Bain, I.M.S., Civil Surgeon, Merkara, Coorg, proposed by T. H. Holland, Esq., seconded by Surgeon-Major A. Alcock; Babu Sitaram, M.A., Deputy Magistrate, Cawnpur, N.-W. P., proposed by Mahamahopadhyaya Haraprasad Shastri, seconded by Dr. P. K. Ray; and, Surgeon-Captain C. R. M. Green, F.R.C.S., I.M.S., proposed by Surgeon-Major A. Alcock, seconded by Surgeon-Captain A. R. S. Anderson, are candidates for election at the next meeting.

The Rt. Revd. The Lord Bishop of Calcutta has expressed a wish to withdraw from the Society.

The PHILOLOGICAL SECRETARY exhibited an Assamese drum or “*doba*” forwarded by F. J. Needham, Esq.

The drum has been presented to the Society by F. J. Needham, Esq., Sadiya, Assam, who states that it has been in the possession of a Khamti chief for the last 12 years or more. It is a big kettle-drum, made of brass, shaped like a boiler, and measuring 4’ in breadth and 3’ 6” in height. A Sanskrit inscription in modern Bengali characters, engraved on its surface, records that the drum was made in the Çaka year 1652 (expressed in words: *nayana* (2), *bhāṇa* (5), *rasa* (6), *indu* (1), and in figures) by the king, the illustrious *Çivasimha*, together with his wife, Queen *Pramathēçvarī*, and that it weighs 620½ seers.

The Inscription reads thus :—

|             |            |              |              |
|-------------|------------|--------------|--------------|
| নূপঃ ক্রীশি | বসিংহঃক্রী | বৃহদ্রাটপ্রম | বেশ্বরী ।    |
| দম্পতী তার  | নুরুতা     | মেতংপিভল     | ছন্দুভিং ॥ ¹ |
| নয়নবাণ     | রসেন্দু    | শাকে ॥       | ১৬৬২         |
| পিতল        | ভো         | শাত ৬২০॥     | সের          |

Translation: “The King *Çri-Çivasimha*, and the Queen *Pramathēçvarī*, these two, husband and wife, made this brass drum. The Çaka year 1652 (=1730 A.D.). Made of brass (weighing) 620½ Sērs.”

The following papers were read :—

1. *Buddha worshipped by Indra: a favorite subject of Ancient Indian Art (with exhibition of photographs).*—By DR. THEODOR BLOCH, PH.D.

The first photograph which I have the honour to show you, is taken from a fine piece of sculpture, measuring 3’ 10” × 2’ 8”, excavated from the ruins of a Buddhist Stūpa in the Swat Valley, and deposited now in the Indian Museum.<sup>2</sup> It shows a figure of Buddha, seated inside of a cave on what is intended for the *vajrāsana* or diamond throne, in the attitude of meditating. His head is surrounded by the usual nimbus, while flames burst out from the cave, indicative of the *bhāmaṇḍala* or halo which, according to the *Nidānakathā*, “resplendent with many colours, proceeded to a fathom’s length all round his person.”<sup>3</sup> The cave evidently lies in a mountain, covered with jungle. This is indicated by the trees on top of the sculpture, as well as by the animals inhabiting the scene. A host of *dēvas* or angels stand on both sides of

¹ These two lines form a *Çloka*.

² I regret that it is impossible at present to publish this photograph.

³ Rhys Davids, *Buddhist Birth Stories*, Vol. i, p. 125; *Jātaka*, ed. Fausbøll, Vol. i, p. 89: *nānāvīrāgasamujjalāya sarīrappabhāya ... vyāmappabhāparikkhēpasamupabūhāya*. The halo is frequently mentioned in the *Nidānakathā*.



the cave, along the slope of the mountain; some have their hands folded in the attitude of worshipping, others throw down flowers indicative of the *puṣpavṛṣṭi* or rain of flowers, which, according to Buddhist legend, used to fall down wherever the Blessed One sat or walked. The principal figure among them is the one standing at the bottom of the sculpture next to the cave. His high rank can be easily recognised by the fact that he enjoys the benefit of having an umbrella worn over him, which, in ancient Indian Art, is always the sign of a royal person. A second figure stands parallel to the king as we may call him at present on the other side of the cave; head and upper portion of body is gone, but from what remains, it is evident that he was represented as playing a musical instrument, apparently a harp.

Whom are the two figures, the king and the harp-player, intended for? There can be no doubt that the scene is identical with a relief of the Bharhut Stupa (figured in Plate XXVIII of Cunningham's *Stūpa of Bharhut*), which is labelled by an ancient inscription as *Idasālaguha*, or 'the Indrasāla Cave.' The story to which this refers, is told by the Chinese pilgrims Fa-Hian and Hiuen Tshang, and also by Spence Hardy according to some Ceylonese author.<sup>1</sup> The gist of the story is that Indra once showed an eager desire to pay his reverence to Buddha, and taking with himself his musician Pañcaçikha, went to the Indrasāla or Indraçaila mountain where Buddha was seated meditating in a lonely cave. Pañcaçikha sung a number of stanzas in praise of Buddha, which he accompanied on his harp, and hereafter Indra proposed forty-two questions to Buddha, writing each one of them singly with his finger upon a stone.<sup>2</sup>

In the Bharhut relievo, the harp-player stands outside the cave; Indra is seated inside, surrounded by his attendants, his face turned towards a throne which is surmounted by an umbrella, the usual sign in the Bharhut sculptures to indicate the presence of Buddha, he himself being never represented here. A few animals and a tree are seen above the cave.

The same scene is also found in Sanchi and Gaya. The latter (Plate VIII, fig. 7 in Cunningham's *Mahābōdhi*) is very poor, only one person, apparently the harp-player, standing outside the cave; no sign

<sup>1</sup> Travels of Fa-hian, translated by Beal, Chapter xxviii, p. 110; St. Julien's Hiuen Tshang, Vol. ii, p. 59; Hardy, Manual, p. 298; see also Cunningham, *Stupa of Bharhut*, p. 88.

<sup>2</sup> I need not mention here that Cunningham has tried to identify the *Indraçailaguhā* with a locality in the neighbourhood of Giryāk. It is near this place that a long inscription in "shell characters" is found. Now if Fa-Hian tells us, that "the traces of these questions yet exist," are we to assume that those so-called 'shell characters' already existed in his time?

of Buddha, as indeed might be expected, and not even of Indra, being found in the medallion. Sanchi has got a much better relievo of the same scene. It is shown in Fig. 1 on Plate XXIX of Fergusson's *Tree and Serpent worship*, and occupies one of the compartments in the left post of the northern gateway of the big Stūpa. Here the cave is evidently sculptured according to well-known models in the Barabar Hills or similar caves, some of which are still in existence. Indra with his attendants form a group of two rows of figures (five in each) in the lower half of the relievo. Indra I take to be the figure in the centre of the upper-most row, turning his head towards the cave; Pañcaçikha stands at the right end of the same row. Buddha's throne is shown as if standing outside the cave; this is merely due to want of skill on part of the sculptor.

The last three sculptures, *viz.*, Bharhut, Gaya, and Sanchi, are scarcely younger than 150 B.C. The date of the Swat sculpture is probably not before 150 A.D. To the same date also belongs a sculpture from Mathurā, now in the Indian Museum, which is figured on Plate 60, fig. 1 of Burgess. The ancient *Monuments, Temples and Sculptures of India* (London 1897, W. Griggs, Part I). It agrees with the Swat sculpture (1) in showing Buddha in person seated in the cave; (2) in placing Indra and Pañcaçikha each on one side of the cave; but it differs in representing a huge elephant, Indra's vehicle, standing behind Indra's attendant, and taking up with his trunk some flowers, apparently intended as *arghya* for Buddha. Among the Gandhara sculptures, finally, the same scene occurs very often; the Indian Museum has got no less than six duplicates; a further one is in Lahore, of which the Indian Museum has got a cast and a photograph.<sup>1</sup> In later Buddhist Art, I do not remember to have met with this scene; but perhaps it may be found among the wall paintings of Ajanta.

My object in putting together all these various sculptures is not merely to deduct from this comparative study the well-known and often repeated, but hitherto unexplained fact that figures of Buddha occur first after Indian Art in touch with Greek or Roman sculptures. It is also not my intention to dwell here at length on another not uninteresting conclusion which we might draw from a comparison of these various sculptures. I am alluding to the advanced skill of artistic composition which is evident, I believe, if we put together the Bharhut and the Swat sculpture, and which we may safely pronounce as due to Greek or Western influence. It is just the

<sup>1</sup> It forms the upper-most compartment of a slab greater in length than in breadth, and divided into five horizontal compartments. The technical name of such a slab was *śrđhvapatta* as we learn from the Amrāvati Inscriptions.

opposite lesson which this comparative study teaches us: the artists of Gandhara took over the Indrasālaghā scene from purely Indian Art, and though they apparently re-modelled it according to their own higher standard of artistic taste, yet they remained true to their Indian models even so far as to copy minor details from them, as for instance, the curious animals and rather conventional trees which we noticed in the Swat. sculpture. Hitherto, Archæologists, in dealing with Gandhara Art, have been in the habit of searching very eagerly for the Greek or Roman prototypes of the various sculptures that are found in the North-West of India. I am afraid they have often run the risk of overlooking the Indian character of this Art. So, to give one example out of many. In Gandhara we often meet with a scene where a serpent-king with some of his daughters is represented in the act of worshipping Buddha. Those Nāgas or Nāginis are always figured as human beings with a huge cobra coming out over their head. This is decidedly Indian, and I doubt if a Greek or Roman sculptor to whom a similar task is set, would have ever chosen this way. But there is another still more important point. Snakes, according to Indian superstition, inhabit tanks and ponds of water. Consequently in all those Nāga-sculptures they are represented with only the upper portion of their body coming out from the water. This latter point has always been declared a true mark of Greek influence. But it is not so. For in Bharhut already, we meet with the same artistic trick, if I may call it so, in the relievo, labelled as *Ērapatō Nāgarājā Bhagavatō vadatē*, i.e., the serpent-king *Ērapatō* worships the Blessed One (i.e., Buddha),<sup>1</sup> and here, of course, the idea of Greek influence is quite out of place.

This is only one instance of what might almost form a lengthy paper on the connection of Gandhara Art with ancient Indian Art. To discuss this point in full, is not my intention now; I merely want to say that if I be right, those sculptures from Gandhara which show a more Indian character, must be considered as more primitive and consequently older than the higher developed Grecian sculptures.

2. *Note on a specimen of the rare Scincoid Lizard Eumeces blythianus*, (Anderson) from the Afridi Country; with exhibition of the type specimen.—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

While with the British forces during the recent military operations against the Afridis, Dr. C. R. M. Green made a small collection of Reptiles in the Afridi country, which he has generously made over to the Museum.

<sup>1</sup> Plate XVI in Cunningham's Stūpa of Bharhut.

Among these is a specimen of the very rare Skink *Eumeces blythianus* described by Dr. J. Anderson in our *Proceedings* for 1871 (p. 186) as *Mabouia Blythiana*. The type is still in the Museum collection, and is in good condition, except that the colours are very much faded. It is still, however, possible to make out that the markings correspond to Dr. Anderson's description, with which description, as also with the type itself, Dr. Green's specimen closely agrees, though it is younger and smaller; the structural details of scaling, &c., corresponding. In the coloration it is noticeable that in Dr. Green's specimen some red spots are present, not mentioned in the description of Dr. Anderson's type.

The locality of this type was doubtful when the species was described, it having been purchased from a Bokhara merchant who stated that he obtained it at Amritsar. No fresh specimen had been obtained when Mr. Boulenger published his volume on *Reptilia* and *Batrachia* in the "Fauna of British India" series in 1890, and that gentleman there suggests that the species may not be Indian.

Dr. Green, therefore, has the credit of giving this rare species, if not a name, at least a "local habitation."

His specimen has been sent to the British Museum, and I herewith exhibit the type, which has been re-coloured according to the markings displayed by this fresher specimen.

I have to acknowledge my obligations to Dr. Alcock, who entrusted the specimen to me for identification, for the opportunity of re-introducing this obscure species to naturalists.

3. *The Lepcha or Rong Language as illustrated in its Songs.*—By L. A. WADDELL, LL.D.

The paper will be published in the *Journal*, Part III.

4. *Note on a Dialect of Gujarāṭī discovered in the District of Midnapur.*—By GEORGE A. GRIERSON, C.I.E., PH.D., I.C.S.

The paper will be published in the *Journal*, Part I.

5. *On Coincidences between some Bengali nursery stories and South Indian Folk-tales.*—By ṢARAT CANDRA MITRA, M.A., B.L., Corresponding Member of the Anthropological Society of Bombay. Communicated by the Anthropological Secretary.

The paper will be published in the *Journal*, Part III.

6. *India in Lakṣmaṇa Sena's time from a rare manuscript written at his Court.*—By MAHĀMAHOPĀDHYĀYA HARAPRASĀDA ṢĀSTRĪ, M.A.

The third verse in all published editions of Jayadeva's *Gitagovinda* mentions five great poets all of whom flourished during the continu-

ance in power of the Sena family of Bengal kings. The verse runs as follows :—

वाचः पञ्चवयस्युमापतिधरः सन्दर्भशुद्धिं गिराम्  
 जानीते जयदेव एव शरदाः स्नाद्यो दुर्लभद्रुते ।  
 शृङ्गारोत्तरसत्प्रमेयरचनेराचार्य्य गोवर्द्धन-  
 स्यद्धीं कोऽपि न विमुक्तः श्रुतिधरो धोयो कविश्यापतिः ॥

Of these Umāpatidhara is the writer of the Deopādā inscription; Jaya-deva is the well-known author of the exquisite lyric *Gitagovinda*; and Gobardhanācāryya is the author of the *Aryyā Saptāçati*. We know very little of शरदा and धोयो. We also know of no work by Gobardhana which comes to the description given above, i.e., on a love-subject.

Paṇḍit Raghurāma Tarkaratna of Viṣṇupura in Bākuḍā had a copy of a work by धोयो entitled *पवनद्रुत*. It has been noticed in the Second Series of the Notices of Sanskrit Manuscripts, Vol. I, Part II. On my application Paṇḍit Raghurāma sent the MS. to me and I copied it for my own use. It is written in imitation of Kalidāsa's inimitable work the *Meghadūta*. It begins with a description of an imaginary golden city at the top of the Sandalwood Mountain, Candanādri, in the extreme south of India. There in that city dwelt a damsel belonging to the race of the celestial musicians, the Gaṇḍharvas. Her name was Kuvalayavati. Lakṣmaṇa Sena, in his conquest of the world came to the South. She saw him, and, unknown to him, she fell in love.

तस्मिन्नेका कुवलयवती नाम गन्धर्वकन्या  
 मन्ये जैत्रं कुसुमशरतोऽप्यायुधं या सरस्य ।  
 वृद्धा देवं सुवनविजले लक्ष्मणं क्षीयिष्यात्  
 वाचा सद्यः कुसुमधनुषः संविधेयोवभूत् ॥

Maddened in the advent of the spring and finding the South wind blowing to the North, she resolved upon making the wind her messenger. As in the *Meghadūta*, the road is described. A few miles from the Candanādri is the Pāṇḍyadeça with its capital Uraga on the Tāmraparṇi abounding in betel-nut trees. Uraga is mentioned by Kalidāsa also, as the capital of the Pandya-deça in the sixth canto of his *Raghuvança*; though modern Archæologists think that Urai-yūra was the capital of the Chola; while Madura was the capital of the Pandya country. Mallināth thinks that Uragapura was Nāgapura or Nāga-pattana. In the MS. itself there is a note to the effect that Uraga is Nāgapura.

From Nāgapura the messenger goes to Setuvandha which is close by and which is used by the citizens as a resort of pleasure. The Bridge is compared to an arm of the earth sent towards the island of Lankā. The poet advises the messenger to pay his homage to the phallic emblem of Çiva stationed there entitled Rāmeçvara.

Thence he should proceed to Kānci the Queen of Southern India. It is said to be on a small rivulet named Suvata. From Kānci the Messenger is advised to go to Kāveri where the Keralis play their pranks. The water rises up to the waist and no more. Blowing to the North the South wind comes to the Mountain Mālyavān, the scene of Rāma's lamentations. This is perhaps in the Nellur district. Thence to the sheet of water known as Pancāpsara mentioned in Raghuvançā and identified by Mr. Beglar in vol. XIII of Sir A. Cunningham's Report with a dried up lake near Biçrāmepura the residence of the Raja of Sirguja. Blowing northward the wind comes to the Andhra country with its noble river the Godāvāri; passing which is the Kalinga Nagara on the seashore. To the north of this is the Vindhya Range with its beautiful woodlands through the Bamboo groves of which flow the Revā. To the north of this is the Yayātinagara or Jājapura where the Kerala women enjoy the sports of love. Kerala is the name of the Mālābār coast and Western Maisur. One may be surprised to hear of the Kerala women in the capital of Orissa. But it was about the time of Lakṣmaṇa Sena that the Kongas from Kerala conquered Uḍiṣyā and founded what is known as the Gangavançā.

From the capital of Utkala the invisible Messenger blows to the country known as Suhma, or what is now known as the Western Bengal. There in that country was a temple of Raghukulagaru, apparently Çiva with half his person occupied by Parvatī, on the Ganges, that is, the Bhāgīrathī. Between the temple and the river is the embankment thrown by Bāllala Sena. To the north of this, is the holy country in which Yamunā separates herself from the Ganges. This is Trivenī about 30 miles north of Calcutta. To the north of this is the capital of Bengal on the Ganges. Its name is *Vijoyapura* and there is a victorious camp.

The females of Bengal at this time were fond of ornaments made of palm-leaves and they were also fond of swinging machines.

7. *Bengali and Behari-Folk-lore about Birds.*—By ÇARAT CANDRA MITRA, M.A., B.L., *Corresponding Member of the Anthropological Society of Bombay.* Communicated by the Anthropological Secretary.

The paper will be published in the *Journal*, Part III.

PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR AUGUST, 1898.

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The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 3rd August, 1898, at 9-15 P.M.

THE HON. MR. H. H. RISLEY, C.I.E., B.A., I.C.S.,  
President, in the chair.

Seventeen members and five visitors were present.

The minutes of the last meeting were read and confirmed.

Sixty-one presentations were announced.

Surgeon-Major D. W. S. Bain, I.M.S.; Babu Sitaram, M.A., and Surgeon-Captain C. R. M. Green, F.R.C.S., I.M.S., were balloted for and elected Ordinary Members.

The SECRETARY reported the death of Mr. U. C. Batabyal, I.C.S.

The PRESIDENT exhibited Photographs of Coorgs and Yeravas taken by Mr. T. H. Holland.

The PHILOLOGICAL SECRETARY read the following letters from Dr. A. F. R. Hoernle, C.I.E., Vice-President, A. S. B., and Babu M. M. Chakravarti, Deputy Magistrate, Gaya :

*Simla, 15th July, 1898.*

DEAR DR. BLOCH,

I send you a letter from Babu M. M. Chakravarti, which appears to me deserving of publication in the Proceedings of the Society. So very little is known regarding this particular class of coins that any suggestions coming from the Babu who has made Orissa his special duty, are valuable and will be welcome to Numismatists generally.

Being in Simla, away from all reference books, I cannot enter fully into the Babu's queries; but it appears to me very likely that both his suggestions may be correct, that some of the coins should rather be ascribed to Ananṅa Bhīma, and that the numeral figures should be read as he proposes to read them.

Gaya, 10th July, 1898.

MY DEAR SIR,

Your interesting notes on the Ganga coins received from Angul, I have only lately come across. May I suggest the following points for your consideration and remarks?

All the coins are ascribed to one king, Anantavarman *alias* Cōḍa-gaṅga. May I ask why they should be presumed to belong to only one king? Three coins bear letter-groups indicating a name. No. 29 has been correctly read as "Çrī-ga(m\*)-ga;" No. 22, seems to bear the letters "Çrī-ana...;" No. 18 has letters hardly legible, such as Çrī??, but possibly they are Çrī-ana... The letters "Çrī-ana," might be the initial letters of Anantavarman, Ananṅa Bhīma, or Aniyāṅka Bhīma. Of these, Anantavarman is not probable, because it is merely a title common to the early Ganga kings and on such small coins only the names of the kings would have been stamped. I find Dr. Hultzsch has taken Cōḍagaṅga to be a surname, but it is the real name, while Anantavarman is the surname. Then again Aniyāṅka Bhīma appears to be only a variant of the name Ananṅa Bhīma; and the only king named Aniyāṅka has also been called Ananṅa. Would it not be therefore better to infer that No. 22 (and possibly No. 18), are coins of Ananṅa Bhīma Dēva? Some of the other coins might also belong to any other early Ganga king, other than Cōḍagaṅga.

May I ask how the date has been arrived at? The earliest figures used in Orissa (and probably in Kalinga) will be found in the copper plates printed in J. A. S. B., 1896, Plates VIII to XVIII (left hand side near the holes). From the figures there given and from others which I recollect, the figures 3 and 9 of the coins as now read would seem to be 2 and 5. Hence the following would appear to be the correct reading:—

- in No. 17, 22 for 33.
- „ No. 18, 12 for 13.
- „ No. 19, 2 for 3.
- „ No. 21, 5 for 9.
- „ No. 22, 24 for 34.
- „ No. 23, 24 for 34.
- „ No. 27, 15 for 19.
- „ No. 28, 22 for 33.



Similarly I would correct Dr. Hultzsch's readings in Nos. 24, 25 and 30 to 24, 27, and 2 for 34, 37, and 3. His No. 33 is not legible in the autotype.

The coins have been named as "Hoonas." Hūṇa is a general word in Orissa and Ganjam for small old coins. Correctly they would be "fanams," 1/10th of "Māṛhas." The existence of these coins I deduced from the Mādālā Pañji and others, in my article on Troy Weights of Orissa (J. A. S. B., 1892, pp. 44-5). Since then the Māṛhas have been found mentioned in copper-plate inscriptions of the king Nṛsimha Dēva IV. (J. A. S. B., 1895, pp. 150 and 153), and in many inscriptions in the Āṛi Kūrman temple, Chicacole, transcripts of most of which I secured 5 or 6 years back. Nos. 24 and 25 of Dr. Hultzsch's list I would identify as Māṛhas.

The coins show that in the times of Rājarāja and Cōḍagaṅga many of the letters and figures had approached modern Oṛiyā types. Hence they appear to me very interesting.

The following papers were read :—

1. *The Oāṛṣvara Inscription of Anarṅga bhīma II. of Orissa.*—By NAGENDRA NATH VASU.

The paper will be published in the *Journal*, Part I.

2. *On a small collection of Butterflies from Buru in the Moluccas.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S.

The paper will be published in the *Journal*, Part II.

3. *Scraps of Hindu Folk-lore, No. II.*—By PANDIT RAMGHARIB CHOUBE. Communicated by the Anthropological Secretary.

The paper will be published in the *Journal*, Part III.

4. *Kāçmīri Suffixes.*—By GEORGE A. GRIERSON, C.I.E., PH.D., I.C.S.

5. *The date of the temple of Jagannāth in Puri.*—By M. M. CHAKRAVARTI.

The papers will be published in the *Journal*, Part I.



PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR NOVEMBER, 1898.

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The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 2nd November, 1898, at 9 P.M.

DAVID HOOPER, Esq., F.C.S., F.I.C., F.L.S., in the chair.

The following members were present :—

Mr. J. Bathgate, Dr. T. Bloch, Mr. W. K. Dods, Mr. F. Finn, Captain W. Haig, Mr. W. A. Lee, Mr. C. Little, Kumar Rameshwar Maliah, Mr. M. J. Seth, Mr. J. Wyness.

*Visitors* :—Mr. J. K. Coulthard, Mr. H. E. Kempthorne, Mr. C. B. Pigot, Mr. W. F. Reynolds.

The minutes of the last meeting were read and confirmed.

Eighty-nine presentations were announced.

Captain W. A. Cuppage, S.C. ; The Revd. Herbert Octavius Moore, M.A. ; The Revd. Walter K. Firminger, M.A., F.R.G.S. ; and Mr. Ernst Cable, were elected Ordinary Members of the Society during the recess in accordance with Rule 7.

Mr. Edward Thornton, A.R.I.B.A. ; The Revd. Thomas Bailey, B.D., M.A. ; Babu Akshayakumar Maitra, B.A., B.L. ; Mr. Kamini Mohan Chatterjee ; and Mr. Robert Greenhill Black, were balloted for and elected Ordinary Members.

The PHILOLOGICAL SECRETARY exhibited some stamped bricks from Assam, presented by Mr. Robert Greenhill Black, and read the following extract from Mr. Black's letter forwarding the donation :—

“ They were procured by me at Maibong, in the N. Cachar Hills.

Maibong, now an executive station of the Assam Bengal Railway, was formerly the site of an old Kachari settlement. The race halted there before descending to the plains now known as Cachar. Settled in the plains, one Tuleram Senaputti was sent by the Raja back to Maibong in the capacity of governor. Revolting he attempted to set up a kingdom for himself. The clearing of land for the railway has brought to light many evidences of a bygone civilisation far superior to that surrounding the present degenerate descendants of the race. It is safe to assume that on a further clearance of jungle more would be found. Stamped bricks and idols carved in stone lie scattered about but the most prominent record is a temple carved in rock lying in the river bed. Beyond this last I doubt if much will be allowed to remain. It was with difficulty I procured my bricks which are not nearly so good specimens as others I have seen, the property of earlier visitors to the place. As for the idols—they being of some weight—heads and other parts have been broken off and carried away. It would appear to have been no one's business to interfere with this vandalism.

I should be glad to learn more as to this settlement. Perhaps some of your members can throw light on it. Beyond the facts in the statistical account I have seen nothing relating to it."

The PHILOLOGICAL SECRETARY exhibited the ancient Buddhist Relics, excavated by Mr. Claxton Peppé from the Piprahwa Mound, District Basti, N.-W. Provinces.

The following papers were read :—

1. *The Memoirs of Bāyazīd Biyāt.*—By H. BEVERIDGE, I.C.S., (retired).

The paper will be published in the *Journal*, Part I.

2. *On the Kurmis of Bihār, Chutiā Nāgpur, and Orissa.*—By G. A. GRIERSON, C.I.E., I.C.S., PH.D.

3. *Note on Hāri-Āllāh sect.*—By MAULVIE ABDUL WALI.

The papers will be published in the *Journal*, Part III.

4. *Two further Copper-plate Inscriptions of Nṛsimha-dēva II. of Orissa.*—By NAGENDRANATH VASU.

The paper will be published in the *Journal*, Part I.

5. *Note on Chitliyā-Faqirs.*—By MAULVIE ABDUL WALI.

The paper will be published in the *Journal*, Part III.

The paper entitled :—*Note on some tribal and family names employed in speaking of the inhabitants of the Lushai Hills.*—By MAJOR JOHN SHAKESPEAR, C.I.E., D.S.O., I.S.C., *Superintendent of the Lushai Hills.* Communicated by DR. G. A. GRIERSON, C.I.E., I.C.S., was postponed.

Mr. C. Little gave notice that he wished to bring forward the following motion at the next meeting of the Society in accordance with Rule 55, Clause (d) of the Society's Rules :—

“That the reading and printing of communicated papers be discouraged as far as possible and that such papers be accepted only in case they are of exceptional interest.”





PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR DECEMBER, 1898.

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The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 7th December, 1898, at 9 P.M.

L. DE NICÉVILLE, Esq., F.E.S., C.M.Z.S., in the Chair.

The following members were present :—

Major A. Alcock, I.M.S., Mr. J. Bathgate, Dr. T. Bloch, Mr. W. K. Dods, Mr. J. N. Das-Gupta, Mr. F. Finn, Major C. R. M. Green, I.M.S., Captain W. Haig, Mr. H. H. Hayden, Col. T. H. Hendley, C.I.E., I.M.S., The Revd. H. B. Hyde, Mr. C. Little, Major D. Prain, I.M.S., Dr. P. C. Roy, Mr. M. J. Seth, Pandit Haraprasad Shastri, Mr. E. Thornton, Major L. A. Waddell, I.M.S., The Revd. J. Watt, Mr. C. B. Wilson.

*Visitors* :—Major S. Burrard, Dr. F. G. Clemow, Captain A. H. McMahon, C.S.I., C.I.E., Mr. C. B. Pigot.

The minutes of the last meeting were read and confirmed.

Forty presentations were announced.

Babu Nrisingha Chandra Mukerjee and Mr. T. M. Munro expressed a wish to withdraw from the Society.

The Secretary reported the death of Mr. C. J. Rodgers, an Associate Member of the Society.

Mr. C. Little brought forward the following motion of which he had given notice at the last General Meeting.

“That the reading and printing of communicated papers be dis-

couraged as far as possible and that such papers be accepted only in case they are of exceptional interest."

The motion was seconded by Captain W. Haig.

Major D. Prain, I.M.S., proposed as an amendment:—

"That the reading of communicated papers be encouraged as far as possible and that such papers be accepted, as heretofore, only in case they are of exceptional interest."

The amendment was seconded by Mr. J. Bathgate and carried by fourteen votes against five.

The following papers were read:—

1. *Note on some tribal and family names employed in speaking of the inhabitants of the Lushai Hills.*—By MAJOR JOHN SHAKESPEAR, C.I.E., D.S.O., I.S.C., Superintendent of the Lushai Hills. Communicated by DR. G. A. GRIERSON, C.I.E., I.C.S. (Postponed from the last meeting).

2. *Some Khond Songs.*—By J. E. FRIEND-PEREIRA. Communicated by the ANTHROPOLOGICAL SECRETARY.

3. *Bengali and Behari Folklore about Birds, Part II.* By ÇARAT CANDRA MITRA. Communicated by the ANTHROPOLOGICAL SECRETARY.

The papers will be published in the Journal, Part III.

Mr. C. B. Wilson proposed:—

"That the paper No. 3 on the list, 'Bengali and Behari Folklore about Birds, Part II, by Çarat Candra Mitra,' be not printed and published by the Society."

The proposal was seconded by Captain Haig.

Major Alcock, I.M.S., proposed as an amendment:—

"That the question be left to the discretion of the Anthropological Secretary in accordance with the rules and customs of the Society as they at present stand."

Major Prain seconded the amendment which was carried by eleven votes against five.

The paper entitled:—

*The story of Hazuri.* By Dayaram Gidumal, Judge, Shikarpur, Sindh. Communicated by the ANTHROPOLOGICAL SECRETARY, was postponed.



## LIBRARY.

The following additions have been made to the Library since the meeting held in June 1898:—

## TRANSACTIONS, PROCEEDINGS AND JOURNALS,

*presented by the respective Societies and Editors.*

- Adelaide.** Roy. Geogr. Soc., Proc., Vol. II; Presidential Address, 1898; Elder Scient. Explor. Exped., 1891-92., Journ. and Maps; and Hand-book; Horn Scient. Explor. Exped., 1894., Journ. and Maps; Roy. Soc., Trans., Vol. XVI, Parts 1-3.
- Angers.** Soc. d'Etudes Scient., Bull., T. XXV-XXVI; Soc. Geogr., Bull., T. III, Nos. 1-2.
- Baltimore.** Johns Hopkins Univ., Amer. Chem. Journ., Vol. XIX, Nos. 3-10., XX, 1; Amer. Journ. Math., Vol. XIX, Nos. 2-4., XX, 1; Amer. Journ. Phil., Vols. XVII, Nos. 4., XVIII, 1-3; Circulars, Vol. XVII, Nos. 135-136; Studies Hist. Pol. Sci., 15th Ser. Nos. 3-12.
- Barcelona.** R. Acad. de Cien. y Artes., Boll., T. I, No. 10.
- Batavia.** Genootsch. Kunst en Wetensch., Notulen, Deel XXXVI, Nos. 1-2; Tijdschr. Ind. T. L. en Vk., Deel XL, No. 4; Verh., Deel LI, No. 1.
- Bellary.** Astrol. Mag., Vol. III, Nos. 1-6.
- Berlin.** K. Preuss. Akad. Wissensch., Abhandl., 1897; Sitzungsber., Nos. 1-34, 1898; Entom. Zeitschr., Bd. XLII, Heft 3-4; Gesellsch. Naturf. Freunde, Sitzungsber., 1897.
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**LIST OF MEMBERS**  
**OF THE**  
**ASIATIC SOCIETY OF BENGAL.**  
**ON THE 31ST DECEMBER, 1897.**

LIST OF OFFICERS AND MEMBERS OF COUNCIL  
OF THE ASIATIC SOCIETY OF BENGAL  
FOR THE YEAR 1897.

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Dr. A. F. R. Hoernle.

*Vice-Presidents :*

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A. Pedler, Esq., F.R.S.

The Most Revd. Archb. P. Goethals, D.D., S.J.

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C. R. Wilson, Esq., M.A.

Pandit Haraprasād Shāstri, M.A.

C. Little, Esq., M.A.

*Other Members of Council :*

Bābu Pratāpachandra Ghosha, B.A.

Brigade-Surgeon-Lieut.-Col. D. D. Cunningham, C.I.E.,  
M.B., F.R.S.

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Dr. P. K. Ray.

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Surgeon-Captain A. R. S. Anderson, B.A., M.B.

A. T. Pringle, Esq.

G. W. Kūchler, Esq., M.A.

The Hon. Mr. H. H. Risley, C.I.E., B.A., I.C.S.

## LIST OF ORDINARY MEMBERS.

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R. = Resident. N. R. = Non-Resident. A. = Absent. N. S. = Non-Subscribing.
L. M. = Life Member. F. M. = Foreign Member.

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N. B.—Members who have changed their residence since the list was drawn up are requested to give intimation of such a change to the *Secretaries*, in order that the necessary alteration may be made in the subsequent edition. Errors or omissions in the following list should also be communicated to the *Secretaries*.

Members who are about to leave India and do not intend to return are particularly requested to notify to the *Secretaries* whether it is their desire to continue Members of the Society; otherwise, in accordance with Rule 40 of the *Bye-Laws*, their names will be removed from the list at the expiration of three years from the time of their leaving India.

| Date of Election. |      |                                                                                                            |
|-------------------|------|------------------------------------------------------------------------------------------------------------|
| 1896 Mar. 4.      | R.   | Abdul Karim, Maulvie, B. A. <i>Calcutta</i> .                                                              |
| 1894 Sept. 27.    | N.R. | Abdul Wali, Maulvie. <i>Sailkapa, Jessore District</i> .                                                   |
| 1895 May 1.       | N.R. | Abdus Salam, Maulvie, M. A. <i>Brahmanbaria, Typ-perah</i> .                                               |
| 1888 Feb. 1.      | F.M. | Adamson, Major Charles Henry Ellison, M. S. C. <i>Europe</i> .                                             |
| 1895 Aug. 29.     | A.   | Agnew, Henry De Courcy. <i>Europe</i> .                                                                    |
| 1860 July 4.      | N.R. | Ahmad Khān, The Hon. Maulvie Sir Sayid, Bahādur, K. C. S. I. <i>Aligarh</i> .                              |
| 1888 April 4.     | R.   | Ahmud, Shams-ul-ulama Maulvie, Arabic Professor, Presidency College. <i>Calcutta</i> .                     |
| 1888 Feb. 1.      | R.   | Alcock, Surgeon-Major Alfred William, M. B., C. M. Z. S., Superintendent, Indian Museum, <i>Calcutta</i> . |
| 1884 Mar. 5.      | L.M. | Āli, Sir Āli Qadr Syud Hassan, Nawāb Bahadur, K. C. I. E. <i>Murshedabad</i> .                             |
| 1885 Mar. 4.      | N.R. | Āli Bilgrāmi, Sayid, B. A., A. R. S. M., F. G. S. <i>Hyderabad</i> .                                       |
| 1874 June 3.      | R.   | Amir Āli, The Hon., C. I. E., M. A. Barrister-at-Law, Judge, High Court. <i>Calcutta</i> .                 |
| 1865 Jan. 11.     | F.M. | Anderson, John, M. D., F. R. S., F. L. S. <i>Europe</i> .                                                  |
| 1884 Sept. 3.     | F.M. | Anderson, J. A. <i>Europe</i> .                                                                            |
| 1893 Aug. 31.     | N.R. | Anderson, Surgeon-Captain A. R. S., B. A., M. B. <i>Bombay</i> .                                           |
| 1892 Jan. 6.      | R.   | Arnold, Henry Kerchever Walter. <i>Calcutta</i> .                                                          |
| 1890 July 2.      | N.R. | Arnold, Thomas Walker, B. A., M. B. A. S. <i>Aligarh</i> .                                                 |
| 1872 April 3.     | N.R. | Ashān-ullah, Nawāb, Khan Bahadur. <i>Dacca</i> .                                                           |

| Date of Election. |      |                                                                                                  |
|-------------------|------|--------------------------------------------------------------------------------------------------|
| 1889 Aug. 29.     | N.R. | Aziz-ud-din Ahmad, Deputy Magistrate. <i>Jaunpur.</i>                                            |
| 1870 Feb. 2.      | L.M. | Baden-Powell, Baden Henry, C. I. E., M. A. <i>Europe.</i>                                        |
| 1891 Mar. 4.      | N.R. | Baillie, D. C., c. s. <i>Naini Tal.</i>                                                          |
| 1892 Aug. 3.      | A.   | Baker, Lieutenant Donald. <i>Europe.</i>                                                         |
| 1891 April 1.     | N.R. | Baker, E. C. S. <i>North Cachar.</i>                                                             |
| 1889 May 1.       | R.   | Banerji, The Hon. Gurudās, M. A., D. L., Judge, High Court. <i>Calcutta.</i>                     |
| 1896 Mar. 4.      | N.R. | Banerji, Satish Chandra, M. A. <i>Allahabad.</i>                                                 |
| 1869 Dec. 1.      | L.M. | Barker, R. A., M. D. <i>Europe.</i>                                                              |
| 1885 Nov. 4.      | R.   | Barman, Dāmudar Dās. <i>Calcutta.</i>                                                            |
| 1877 Jan. 17.     | N.R. | Barman, Kishor Kumār Rādhā Dev, Juvraj of Hill Tipperah. <i>Tipperah.</i>                        |
| 1894 Sept. 27.    | R.   | Basu, Nagendra Natha. <i>Calcutta.</i>                                                           |
| 1893 April 5.     | N.R. | Batabyal, Umes Chunder, c. s. <i>Bogra.</i>                                                      |
| 1864 Sept. 7.     | A.   | Beames, John. <i>Europe.</i>                                                                     |
| 1895 July 3.      | L.M. | Beatson-Bell, N. D., c. s. <i>Backergunge.</i>                                                   |
| 1878 Sept. 25.    | A.   | Beighton, T. D., c. s. <i>Europe.</i>                                                            |
| 1876 Nov. 15.     | F.M. | Beveridge, Henry. <i>Europe.</i>                                                                 |
| 1896 May 6.       | R.   | Bhaduri, Aghore Chandra. <i>Calcutta.</i>                                                        |
| 1878 Oct. 4.      | R.   | Bhakta, Krishna Gopāl. <i>Calcutta.</i>                                                          |
| 1879 Mar. 5.      | A.   | Biddulph, Col. J., B. S. C. <i>Europe.</i>                                                       |
| 1859 Aug. 3.      | L.M. | Blanford, W. T., D. C. L., F. R. S., A. R. S. M., F. G. S., F. R. G. S., F. Z. S. <i>Europe.</i> |
| 1897 Feb. 3.      | R.   | Bloch, T., PH. D. <i>Calcutta.</i>                                                               |
| 1893 Feb. 1.      | N.R. | Bodding, The Rev. P. O. <i>Rampore Haut.</i>                                                     |
| 1885 Mar. 4.      | R.   | Bolton, C. W., c. s. <i>Calcutta.</i>                                                            |
| 1895 July 3.      | N.R. | Bonham-Carter, N., c. s. <i>Dinagepur.</i>                                                       |
| 1890 July 2.      | R.   | Bonnerjee, Womes Chunder, Barrister-at-Law, Middle Temple. <i>Calcutta.</i>                      |
| 1897 June 2.      | R.   | Bose, Annadaprasad. <i>Calcutta.</i>                                                             |
| 1893 Mar. 1.      | R.   | Bose, Bhupendra Nath, Solicitor. <i>Calcutta.</i>                                                |
| 1895 Mar. 6.      | R.   | Bose, J. C., M. A., Bengal Education Service. <i>Calcutta.</i>                                   |
| 1880 Nov. 3.      | N.R. | Bose, Pramatha Nath, B. Sc., F. G. S., Geological Survey of India. <i>Camp Mandla, C. I.</i>     |
| 1890 Dec. 3.      | N.R. | Bose, Rai Nali Naksha, Bahadur, Chairman, Burdwan Municipality. <i>Burdwan.</i>                  |
| 1895 April 3.     | N.R. | Bourdillon, J. A., c. s. <i>Bankipur.</i>                                                        |
| 1876 May 4.       | A.   | Bradshaw, Surgeon-Major-General A. F., C. B., M. D. <i>Europe.</i>                               |
| 1860 Mar. 7.      | L.M. | Brandis, Sir Dietrich, K. C. I. E., PH. D., F. L. S. F. R. S. <i>Europe.</i>                     |
| 1887 May 4.       | R.   | Burāl, Nobinchānd, Solicitor. <i>Calcutta.</i>                                                   |
| 1896 Jan. 8.      | N.R. | Burn, Richard, c. s. <i>Kasia, Gorakhpur.</i>                                                    |
| 1862 Feb. 5.      | L.M. | Bysack, Gaurdās. <i>Calcutta.</i>                                                                |
| 1896 Jan. 8.      | R.   | Caddy, Dr. Arnold. <i>Calcutta.</i>                                                              |
| 1895 July 3.      | A.   | Carey, H. D., c. s. <i>Europe.</i>                                                               |



| Date of Election. |      |                                                                                                                                                                                                            |
|-------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1895 July 3.      | N.R. | Carlyle, R. W., c. s. <i>Comillah.</i>                                                                                                                                                                     |
| 1896 Nov. 4.      | A.   | Cave-Browne, J. A., I. C. S. <i>Europe.</i>                                                                                                                                                                |
| 1890 June 4.      | N.R. | Chakravarti, Man Mohan, M. A., B. L., Deputy Magistrate. <i>Jajpur, Cuttack.</i>                                                                                                                           |
| 1894 Aug. 1.      | N.R. | Chatterjee, M. N., Professor of Philosophy, Maharaja's College. <i>Patialia.</i>                                                                                                                           |
| 1893 July 5.      | N.R. | Chatterjee, Radhikaraman. <i>Rungpur.</i>                                                                                                                                                                  |
| 1892 Aug. 3.      | N.R. | Chaube, Behary Lall. <i>Bankipur.</i>                                                                                                                                                                      |
| 1893 Sept. 28.    | N.R. | Chaudhuri, Banawarilala, B. Sc. Edin. <i>Sherpur, Mymensingh.</i>                                                                                                                                          |
| 1861 Mar. 1.      | N.R. | Chaudhuri, Harachandra, Zemindar. <i>Sherpur, Mymensingh.</i>                                                                                                                                              |
| 1880 Nov. 3.      | R.   | Chaudhuri, Rai Khired Chandra. <i>Ohinsurah.</i>                                                                                                                                                           |
| 1890 Feb. 5.      | A.   | Chuckerbutty, A. Goodeve, c. s. <i>Europe.</i>                                                                                                                                                             |
| 1880 Aug. 26.     | F.M. | Clerk, Colonel Malcolm G. <i>Europe.</i>                                                                                                                                                                   |
| 1881 May 4.       | N.R. | Cockburn, John, Asst. Sub-Deputy Opium Agent. <i>Etawah.</i>                                                                                                                                               |
| 1889 Nov. 6.      | R.   | Colville, William Brown. <i>Calcutta.</i>                                                                                                                                                                  |
| 1890 Dec. 3.      | R.   | Connan, William, C. E. <i>Calcutta.</i>                                                                                                                                                                    |
| 1876 Mar. 1.      | F.M. | Crawford, James, B. A., C. S. <i>Europe.</i>                                                                                                                                                               |
| 1887 Aug. 25.     | R.   | Criper, William Risdon, F. C. S., F. I. C., A. R. S. M. <i>Calcutta.</i>                                                                                                                                   |
| 1877 June 6.      | A.   | Croft, Sir A. W., K. C. I. E., M. A. <i>Europe.</i>                                                                                                                                                        |
| 1874 Mar. 4.      | R.   | Crombie, Brigade-Surgeon-Lieutenant-Colonel Alexander, M. D. <i>Calcutta.</i>                                                                                                                              |
| 1895 July 3.      | N.R. | Cumming, J. G., c. s. <i>Comillah.</i>                                                                                                                                                                     |
| 1873 Dec. 3.      | N.R. | Dames, Mansel Longworth, c. s., Asst. Commissioner. <i>Dera Ghazi Khan.</i>                                                                                                                                |
| 1892 Mar. 2.      | N.R. | Das, Gopal Ballabh, M. A. <i>Cuttack.</i>                                                                                                                                                                  |
| 1896 Mar. 4.      | R.   | Das-Gupta, J. N., B. A., Barrister-at-Law. <i>Calcutta.</i>                                                                                                                                                |
| 1865 June 7.      | N.R. | Dās, Raja Jaykrishna, Bahadur, C. S. I. <i>Moradabad.</i>                                                                                                                                                  |
| 1879 April 7.     | N.R. | Dās, Rām Saran, M. A., Secy., Oudh Commercial Bank, Limited. <i>Fyzabad, Oudh.</i>                                                                                                                         |
| 1896 Dec. 2.      | N.R. | Davis, A. W., I. C. S. <i>Kohima.</i>                                                                                                                                                                      |
| 1893 Nov. 1.      | N.R. | Dē, B, c. s. <i>Balasure.</i>                                                                                                                                                                              |
| 1885 May 6.       | N.R. | Dē, Raja Baikuntanāth, Bahadur. <i>Balasure.</i>                                                                                                                                                           |
| 1895 Sept. 19.    | N.R. | De, Kiran Chandra, c. s. <i>Ranaghat.</i>                                                                                                                                                                  |
| 1895 Dec. 4.      | N.R. | Delmerick, Charles Swift. <i>Budaon.</i>                                                                                                                                                                   |
| 1893 Mar. 1.      | F.M. | Deussen, Dr. Paul. <i>Europe.</i>                                                                                                                                                                          |
| 1896 Jan. 8.      | N.R. | Dewhurst, R. Paget. <i>Benares.</i>                                                                                                                                                                        |
| 1886 June 2.      | R.   | Doyle, Patrick, C. E., M. R. I. A., M. I. C. E. I., F. R. A. S., F. E. S. E., F. G. S., F. R. Met. s., L. S. (Exam.), M. Lond. Math. Soc., F. S. S., Fel. San. Inst., M. Ans. Inst. M. E. <i>Calcutta.</i> |
| 1892 Sept. 22.    | A.   | Drury, Dr. F. J. <i>Europe.</i>                                                                                                                                                                            |
| 1889 Jan. 2.      | N.R. | Dudgeon, Gerald Cecil, <i>Nunkab, W. Doours.</i>                                                                                                                                                           |

| Date of Election. |       |                                                                                                                                                                                                                  |
|-------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1879 Feb. 5.      | A.    | Duthie, J. F. <i>Europe.</i>                                                                                                                                                                                     |
| 1892 Jan. 6.      | N.R.  | Dutt, Gerindranath. <i>Hatwa.</i>                                                                                                                                                                                |
| 1877 Aug. 30.     | R.    | Dutt, Kedārnāth. <i>Calcutta.</i>                                                                                                                                                                                |
| 1892 Aug. 25.     | R.    | Dutt, Narsingh. <i>Howrah.</i>                                                                                                                                                                                   |
| 1890 Sept. 25.    | A.    | Dutt, Romesh Chunder, c. s., Barrister-at-Law, Middle Temple. <i>Europe.</i>                                                                                                                                     |
| 1870 Mar. 9.      | L.M.  | Edinburgh, H. R. H. The Duke of. <i>Europe.</i>                                                                                                                                                                  |
| 1871 Dec. 2.      | N.R.  | Eliot, J., c. i. e., M. A. Meteorological Reporter to the Govt. of India. <i>Simla.</i>                                                                                                                          |
| 1894 Dec. 5.      | R.    | Finn, Frank, B. A., F. z. s. <i>Calcutta.</i>                                                                                                                                                                    |
| 1886 April 7.     | A.    | Fleet, John Faithfull, C. I. E., C. S. <i>Europe.</i>                                                                                                                                                            |
| 1892 May 4.       | A.    | Forrest, G. W., B. A., <i>Europe.</i>                                                                                                                                                                            |
| 1876 July 5.      | N.R.  | Foulkes, The Rev. Thos., F. L. S., M. R. A. S., F. R. G. S. <i>Salem, Madras Presidency.</i>                                                                                                                     |
| 1893 Jan. 11.     | N.R.  | Gait, E. A., c. s. <i>Krishnagar.</i>                                                                                                                                                                            |
| 1859 Aug. 3.      | L.M.  | Gastrell, General James Eardley. <i>Europe.</i>                                                                                                                                                                  |
| 1889 Jan. 2.      | R.    | Ghose, Jogendrachandra, M. A., B. L. <i>Calcutta.</i>                                                                                                                                                            |
| 1889 Mar. 6.      | R.    | Ghosha, Bhupendra Sri. <i>Calcutta.</i>                                                                                                                                                                          |
| 1869 Feb. 3.      | R.    | Ghosha, Pratāpachandra, B. A. <i>Calcutta.</i>                                                                                                                                                                   |
| 1895 April 3.     | R.    | Gilliland, J. H., Bengal Education Service. <i>Calcutta.</i>                                                                                                                                                     |
| 1897 Dec. 6.      | N.R.  | Godfrey, Captain Stuart. <i>Kashmir.</i>                                                                                                                                                                         |
| 1861 Feb. 5.      | N.S.  | Godwin-Austen, Lieut.-Colonel H. H., F. R. S. F. Z. S., F. R. G. S. <i>Europe.</i>                                                                                                                               |
| 1890 Aug. 6.      | R.    | Gothals, The Most Rev. Paul, D. D., S. J., Archbishop. <i>Calcutta.</i>                                                                                                                                          |
| 1896 Nov. 4.      | N. R. | Grant, A. J. <i>Wana, Waziristan.</i>                                                                                                                                                                            |
| 1897 July 7.      | N.R.  | Grant, Dr. J. W. <i>Bombay.</i>                                                                                                                                                                                  |
| 1892 Aug. 25.     | N.R.  | Greeven, R., c. s. <i>Naini Tal.</i>                                                                                                                                                                             |
| 1876 Nov. 15.     | N.R.  | Grierson, Dr. George Abraham, C. I. E., C. S. <i>Bankipur.</i>                                                                                                                                                   |
| 1885 Dec. 2.      | R.    | Griesbach, C. L., C. I. E., F. G. S. <i>Calcutta.</i>                                                                                                                                                            |
| 1897 July 7.      | R.    | Grimes, G. E. <i>Calcutta.</i>                                                                                                                                                                                   |
| 1888 July 4.      | R.    | Gupta, Rajanikānta. <i>Calcutta.</i>                                                                                                                                                                             |
| 1892 Jan. 6.      | A.    | Haig, Lieutenant Wolseley. <i>Europe.</i>                                                                                                                                                                        |
| 1883 Jan. 3.      | N.R.  | Harding, Francis Henry, B. A., C. S. <i>Shahabad.</i>                                                                                                                                                            |
| 1897 Feb. 3.      | R.    | Hayden, H. H. <i>Calcutta.</i>                                                                                                                                                                                   |
| 1890 June 4.      | A.    | Heilgers, Robert Philip, Consul for H. I. M. the Emperor of Austria and Hungary, Knight of the Imperial Order of the Iron Crown, Commandeur Ordre Impériale de Médjidié, F. R. G. S., F. B. S. S. <i>Europe.</i> |
| 1875 Mar. 3.      | A.    | Hendley, Brigade-Surgeon Lt.-Col. Thomas Holbein, C. I. E. <i>Europe.</i>                                                                                                                                        |

| Date of Election. |      |                                                                                                                                                                  |
|-------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1890 April 2.     | A.   | Hickson, F. G. <i>Europe.</i>                                                                                                                                    |
| 1892 Aug. 3.      | N.R. | Hill, Samuel Charles. <i>Parulia.</i>                                                                                                                            |
| 1872 Dec. 5.      | R.   | Hoernle, A. F. R., PH. D., C. I. E., Principal of the Calcutta Madrasa.                                                                                          |
| 1878 Mar. 6.      | N.R. | Hoey, Dr. W., c. s. <i>Gorakhpur.</i>                                                                                                                            |
| 1886 June 2.      | R.   | Hogg, Alexander. <i>Calcutta.</i>                                                                                                                                |
| 1891 July 1.      | N.R. | Holland, Thomas H., F. G. S. Geological Survey of India. <i>Madras.</i>                                                                                          |
| 1884 Mar. 5.      | N.R. | Hooper, John, c. s., Secretary, Board of Revenue. <i>Allahabad. N.-W. P.</i>                                                                                     |
| 1873 Jan. 2.      | L.M. | Houstoun, G. L., F. G. S. <i>Europe.</i>                                                                                                                         |
| 1863 Jan. 15.     | A.   | Howell, Mortimer Sloper, C. S., C. I. E. <i>Europe.</i>                                                                                                          |
| 1884 May 2.       | N.R. | Hussein, Sayid, B. A., Secy. to Nizam of Hyderabad's Council. <i>Hyderabad.</i>                                                                                  |
| 1890 Dec. 3.      | R.   | Hyde, The Rev. Henry Barry, M. A. <i>Calcutta.</i>                                                                                                               |
| 1866 Mar. 7.      | F.M. | Irvine, William, c. s. <i>Europe.</i>                                                                                                                            |
| 1879 April 2.     | R.   | Johnson, The Most Revd. Edward Ralph, D.D., LL. D., Lord Bishop of Calcutta.                                                                                     |
| 1895 Dec. 4.      | N.R. | Kennedy, J., c. s. <i>Commilla.</i>                                                                                                                              |
| 1882 Mar. 1.      | N.R. | Kennedy, Pringle, M. A. <i>Mozufferpur.</i>                                                                                                                      |
| 1874 Dec. 2.      | N.R. | Khudā Baksh, Maulvie, Khan Bahadur. <i>Bankipur.</i>                                                                                                             |
| 1867 Dec. 4.      | R.   | King, Brigade-Surgeon Sir George, C. I. E., K. C. S. I., M. B., F. L. S., Supdt., Royal Botanic Garden. <i>Sibpur.</i>                                           |
| 1881 Mar. 2.      | N.R. | King, Lucas White, B. A., LL. B., C. S. <i>Kohat.</i>                                                                                                            |
| 1896 Aug. 27.     | R.   | Konstam, E. M., I. C. S. <i>Calcutta.</i>                                                                                                                        |
| 1896 July 1.      | R.   | Küchler, G. W., M. A. <i>Calcutta.</i>                                                                                                                           |
| 1891 Feb. 4.      | N.R. | Kupper, The Hon. Lala Bunbehari. <i>Burdwan.</i>                                                                                                                 |
| 1893 July 1.      | R.   | Laharry, S. C. <i>Ohinsurah.</i>                                                                                                                                 |
| 1887 May 4.       | L.M. | Lanman, Charles R., Corresponding Secretary of the American Oriental Society, Professor of Sanskrit in Harvard College. <i>Cambridge, Mass., U. S., America.</i> |
| 1889 Mar. 6.      | A.   | LaTouche, Thomas Henry Digges, M. A. <i>Europe.</i>                                                                                                              |
| 1889 Nov. 6.      | A.   | Lee, W. A. <i>Europe.</i>                                                                                                                                        |
| 1889 Feb. 6.      | R.   | Little, C., M. A., Bengal Education Service. <i>Calcutta.</i>                                                                                                    |
| 1886 Sept. 30.    | R.   | Luson, Hewling, c. s. <i>Calcutta.</i>                                                                                                                           |
| 1869 July 7.      | N.R. | Lyall, Charles James, C. S. I., C. I. E., M. A., LL. D., Chief Commissioner, C. P. <i>Nagpur.</i>                                                                |
| 1892 Sept. 22.    | A.   | Lyell, George. <i>Europe.</i>                                                                                                                                    |
| 1870 April 7.     | L.M. | Lyman, B. Smith. <i>Philadelphia, Pa., U. S., America.</i>                                                                                                       |
| 1868 Dec. 2.      | A.   | Macauliffe, Michael, B. A., C. S. <i>Europe.</i>                                                                                                                 |
| 1896 Mar. 4.      | N.R. | MacBlaine, F., I. C. S. <i>Nowgong.</i>                                                                                                                          |

| Date of Election. |      |                                                                                                         |
|-------------------|------|---------------------------------------------------------------------------------------------------------|
| 1893 Jan. 11.     | L.M. | Maclagan, F. D., M. A., C. S. <i>Multan.</i>                                                            |
| 1891 Feb. 4.      | N.R. | Macpherson, Duncan J., C. S. <i>Motihari.</i>                                                           |
| 1896 Feb. 5.      | A.   | Macpherson, W. C. <i>Europe.</i>                                                                        |
| 1893 Aug. 31.     | N.R. | Mahatha, Purmeshwar Narain. <i>Mozufferpur.</i>                                                         |
| 1895 Sept. 19.    | R.   | Mahomed Abdul Kadar, Khan Bahadur. <i>Calcutta.</i>                                                     |
| 1895 Aug. 29.     | R.   | Mahomed Gilani, Shams-ul-ulama Shaikh. <i>Calcutta.</i>                                                 |
| 1886 Jan. 6.      | N.R. | Mahomed Latif Khān, Sayid, Khan Bahadur. <i>Jullunder.</i>                                              |
| 1882 Aug. 2.      | R.   | Mahomed Yusoof, The Hon. Maulvie, Khan Bahadur. <i>Calcutta.</i>                                        |
| 1889 Jan. 2.      | R.   | Maliāh, Kumār Rameswār. <i>Hourah.</i>                                                                  |
| 1893 July 5.      | R.   | Mangos, C. D. <i>Calcutta.</i>                                                                          |
| 1889 Mar. 6.      | R.   | Mann, John, M. A. <i>Calcutta.</i>                                                                      |
| 1893 Mar. 1.      | R.   | Marriott, C. R., C. S. <i>Calcutta.</i>                                                                 |
| 1892 April 6.     | N.R. | Maynard, Surgeon-Captain F. P. <i>Ranchi.</i>                                                           |
| 1886 Mar. 3.      | L.M. | Mehtā, Rustomjee Dhunjeebhoy, C. I. E. <i>Calcutta.</i>                                                 |
| 1895 July 3.      | N.R. | Melitus, P. G., C. S. <i>Shillong.</i>                                                                  |
| 1884 Nov. 5.      | N.R. | Middlemiss, C. S., B. A., Assistant Superintendent, Geological Survey of India. <i>Hasur, Salem Dt.</i> |
| 1884 Sept. 3.     | R.   | Miles, William Harry. <i>Calcutta.</i>                                                                  |
| 1870 July 6.      | R.   | Miller, A. B., B. A., Barrister-at-Law, Official Trustee. <i>Calcutta.</i>                              |
| 1874 May 6.       | N.R. | Minchin, F. J. V. <i>Aska, Ganjam.</i>                                                                  |
| 1896 July 1.      | N.R. | Misra, Rai Lakshmi Sanker, Bahadur. <i>Benares.</i>                                                     |
| 1897 Jan. 6.      | N.R. | Misra, Tulsi Ram. <i>Aligarh.</i>                                                                       |
| 1895 Mar. 6.      | N.R. | Mitra, Rajeswar. <i>Nagpur.</i>                                                                         |
| 1897 Nov. 3.      | R.   | Mitra, Saroda Churan, M. A., B. L. <i>Calcutta.</i>                                                     |
| 1890 Dec. 3.      | N.R. | Mitra, Varadā Charana. Joint-Magistrate. <i>Farridpur.</i>                                              |
| 1895 July 3.      | N.R. | Monahan, J. G., C. S. <i>Shillong.</i>                                                                  |
| 1879 May 7.       | N.R. | Muir, J. W., M. A., C. S. <i>Fatihgurrh.</i>                                                            |
| 1885 July 1.      | R.   | Mukerjea, Mahāmahopādhyāya Nilmani, Principal, Sanskrit College. <i>Calcutta.</i>                       |
| 1892 Mar. 2.      | R.   | Mukerjea, Nrisinha Chundra. <i>Calcutta.</i>                                                            |
| 1867 Mar. 6.      | R.   | Mukerjea, The Hon. Raja Pearimohan, M. A., C. S. I <i>Uttarpara.</i>                                    |
| 1894 Aug. 30.     | R.   | Mukerjee, Sibnarayan. <i>Uttarpara.</i>                                                                 |
| 1896 Aug. 27.     | R.   | Mukerjee, Syamdas. <i>Calcutta.</i>                                                                     |
| 1886 May 5.       | R.   | Mukhopādhyāya, Asutosh, M. A., D. L., F. R. A. S., F. R. S. E. <i>Calcutta.</i>                         |
| 1892 Dec. 7.      | R.   | Mukhopādhyāya, Panchanana. <i>Calcutta.</i>                                                             |
| 1896 April 1.     | R.   | Mullick, Sham Lall. <i>Calcutta.</i>                                                                    |
| 1896 Aug. 5.      | R.   | Munro, Thomas, M. <i>Calcutta.</i>                                                                      |
| 1887 May 4.       | A.   | Munro, Thomas R. <i>Europe.</i>                                                                         |
| 1885 June 3.      | N.R. | Naemwoollah, Maulvie, Deputy Magistrate. <i>Saharanpur.</i>                                             |
| 1887 June 1.      | N.R. | Narain, Rāo Govind Rāo. <i>Allahabad.</i>                                                               |

| Date of Election. |      |                                                                                                                  |
|-------------------|------|------------------------------------------------------------------------------------------------------------------|
| 1881 Nov. 2.      | R.   | Nicéville, L. de., F. E. S., C. M. Z. S. <i>Calcutta.</i>                                                        |
| 1889 Aug. 29.     | L.M. | Nimmo, John Duncan. <i>Calcutta.</i>                                                                             |
| 1887 April 6.     | R.   | Noetling, Fritz, PH. D. <i>Calcutta.</i>                                                                         |
| 1894 June 6.      | N.R. | Nomani, Shams-ul-ulama Maulvie Muhammad, Professor of Arabic in the Muhammadan Oriental College. <i>Aligarh.</i> |
| 1892 Oct. 27.     | N.R. | Norvill, Dr. Frederic H. <i>Dibrugarh.</i>                                                                       |
| 1885 Feb. 4.      | R.   | Nyāyaratna, Mahāmahopādhyāya Mahesachandra C. I. E. <i>Calcutta.</i>                                             |
| 1879 Aug. 28.     | A.   | Oldham, Brigade-Surgeon C. F., F. R. G. S. <i>Europe.</i>                                                        |
| 1883 Dec. 1.      | R.   | Oldham, R. D., A. R. S. M., F. G. S., Superintendent, Geological Survey of India. <i>Calcutta.</i>               |
| 1883 Aug. 30.     | N.R. | Oliver, Edw. Emmerson, M. I. C. E. <i>Nagpur.</i>                                                                |
| 1887 July 6.      | N.R. | Oung, Moungh Hla. <i>Rangoon.</i>                                                                                |
| 1880 Aug. 4.      | L.M. | Pandia, Pandit Mohanlāl Vishnulāl, F. T. S., Prime Minister, Partabgarh State. <i>Rajputana viā Mand-saur.</i>   |
| 1880 Jan. 7.      | A.   | Pargiter, Frederick E., B. A., C. S. <i>Europe.</i>                                                              |
| 1862 May 7.       | L.M. | Partridge, Surgeon-Major Samuel Bowen, M. D. <i>Europe.</i>                                                      |
| 1873 Aug. 6.      | R.   | Pedler, Alexander, F. B. S., Bengal Education Service. <i>Chinsurah.</i>                                         |
| 1888 June 6.      | L.M. | Pennell, Aubray Percival, B. A., C. S. <i>Rangoon.</i>                                                           |
| 1881 Aug. 25.     | R.   | Percival, Hugh Melville, M. A., Bengal Education Service. <i>Calcutta.</i>                                       |
| 1877 Aug. 1.      | N.R. | Peters, Brigade-Surgeon Lieut.-Colonel C. T., M. B. <i>Bombay.</i>                                               |
| 1889 Nov. 6.      | N.R. | Phillott, Capt. D. C. <i>Kohat.</i>                                                                              |
| 1896 Jan. 8.      | N.R. | Place, G., I. C. S. <i>Motihari.</i>                                                                             |
| 1889 Mar. 6.      | R.   | Prain, David, Royal Botanic Garden, <i>Sibpur.</i>                                                               |
| 1892 Aug. 3.      | R.   | Pramanick, Asutosh. <i>Calcutta.</i>                                                                             |
| 1889 Mar. 6.      | N.R. | Prasad, Hanuman, Raes and Zemindar. <i>Chunar.</i>                                                               |
| 1896 Sept. 25.    | R.   | Pringle, A. T. <i>Calcutta.</i>                                                                                  |
| 1880 April 7.     | R.   | Rai, Bipina Chandra, B. L. <i>Serampore.</i>                                                                     |
| 1895 Aug. 29.     | N.R. | Rai, Jatindranath Chaudhery, M. A., B. L. <i>Taki.</i>                                                           |
| 1894 Aug. 30.     | R.   | Ranking, Surgeon-Lieutenant-Colonel George, M. D. <i>Calcutta.</i>                                               |
| 1895 Aug. 7.      | R.   | Ray, Mahendranath, M. A., B. L. <i>Howrah.</i>                                                                   |
| 1887 May 4.       | R.   | Rāy, Prasannakumār, D. SC. (Lond. and Edin.) Professor, Presidency College. <i>Calcutta.</i>                     |
| 1895 Aug. 29.     | R.   | Richardson, T. W., C. S. <i>Calcutta.</i>                                                                        |
| 1884 Mar. 5.      | R.   | Risley, The Hon. H. H., C. I. E., B. A., C. S. <i>Calcutta.</i>                                                  |
| 1896 Dec. 2.      | N.R. | Row, Suryanaran, B. A. <i>Belary.</i>                                                                            |

| Date of Election. |      |                                                                                    |                                   |
|-------------------|------|------------------------------------------------------------------------------------|-----------------------------------|
| 1895 Mar. 6.      | R.   | Rowe, F. J., M. A.                                                                 | <i>Calcutta.</i>                  |
| 1889 June 5.      | N.R. | Roy, Maharaja Girjanath.                                                           | <i>Dinagepur.</i>                 |
| 1890 Mar. 5.      | R.   | Roy, P. C., Bengal Education Service.                                              | <i>Calcutta.</i>                  |
| 1885 Mar. 4.      | R.   | Rustomjee, H. M.                                                                   | <i>Calcutta.</i>                  |
| 1893 Aug. 2.      | R.   | Samajpati, Suresh Chundra.                                                         | <i>Calcutta.</i>                  |
| 1896 Aug. 27.     | R.   | Samman, H. F., I. C. S.                                                            | <i>Serampore.</i>                 |
| 1887 June 1.      | N.R. | Sandberg, The Rev. Graham, B. A., Barrister-at-Law, Inner Temple. Chaplain.        | <i>Nowgong.</i>                   |
| 1867 April 3.     | R.   | Sarkār, Dr. Mahendralāl, C. I. E.                                                  | <i>Calcutta.</i>                  |
| 1897 Jan. 6.      | R.   | Sarkār, Amritalal, F. C. S.                                                        | <i>Calcutta.</i>                  |
| 1885 Mar. 4.      | R.   | Sarvādhikāri, Rāj Kumār, Rai Bahadur.                                              | <i>Calcutta.</i>                  |
| 1897 Nov. 3.      | R.   | Saunders, C.                                                                       | <i>Calcutta.</i>                  |
| 1893 Jan. 11.     | L.M. | Scindia, His Highness the Maharaja.                                                |                                   |
| 1874 July 1.      | R.   | Scully, Dr. John, F. C. S.                                                         | <i>Calcutta.</i>                  |
| 1896 April 1.     | R.   | Sen, The Hon'ble Guruprasad.                                                       | <i>Calcutta.</i>                  |
| 1886 Mar. 3.      | R.   | Sen, Hirālal.                                                                      | <i>Calcutta.</i>                  |
| 1885 April 1.     | R.   | Sen, The Hon. Narendranāth.                                                        | <i>Calcutta.</i>                  |
| 1885 April 1.     | R.   | Sen, Yadunāth.                                                                     | <i>Calcutta.</i>                  |
| 1897 Dec. 1.      | R.   | Seth, M. J.                                                                        | <i>Calcutta.</i>                  |
| 1885 Feb. 4.      | R.   | Shāstri, Mahāmahapādhāya Haraprasād, M. A.                                         | <i>Calcutta.</i>                  |
| 1891 June 3.      | N.R. | Shillingford, Frederick Alexander.                                                 | <i>Purneah.</i>                   |
| 1889 Nov. 6.      | N.R. | Simpson, Edmund James, L. R. C. P. E., F. L. P. S. G., L. M. G. E., Civil Surgeon. | <i>Rai Bareilly.</i>              |
| 1887 April 6.     | A.   | Simpson, Dr. W. J.                                                                 | <i>Europe.</i>                    |
| 1893 Mar. 1.      | N.R. | Singh, Maharajah Kumara Sirdar Bharat, C. S.                                       | <i>Rai Bareilly.</i>              |
| 1880 June 2.      | N.R. | Singh, Thākur Garuradhawaya Prasād, Raja of Beswan.                                | <i>Beswan Fort, Aligarh.</i>      |
| 1895 Aug. 29      | R.   | Singh, Lachmi Nārāyan, M. A., B. L.                                                | <i>Calcutta.</i>                  |
| 1877 June 6.      | N.R. | Singh, H. H. the Hon. Maharaja Sir Luchmessur, Bahadur, K. C. I. E.                | <i>Darbhanga.</i>                 |
| 1892 Mar. 2.      | L.M. | Singh, The Hon. Raja Oodaypratab.                                                  | <i>Binga.</i>                     |
| 1889 Aug. 29.     | N.R. | Singh, H. H. Prabhunarain, Bahadur, Maharaja of Benares.                           |                                   |
| 1859 Aug. 3.      | N.R. | Singh, H. H. the Hon. Maharaja Pratap Narain.                                      | <i>Ajodhya, Oudh.</i>             |
| 1895 Aug. 29      | N.R. | Singh, Rām Din.                                                                    | <i>Bankipur.</i>                  |
| 1889 Nov. 6.      | N.R. | Singh, The Hon. Raja Rameshwara, Bahadur.                                          | <i>Darbhanga.</i>                 |
| 1894 Feb. 7.      | N.R. | Singh, H. H. Raja Vishwanath, Bahadur, Chief of Chhatarpur.                        |                                   |
| 1893 April 5.     | N.R. | Siñha, Raja Bhupendra, Bahadur, Raja of Bijoypur                                   | <i>Mirzapur.</i>                  |
| 1894 July 4.      | N.R. | Siñha, Kunwar Kushal Pal, M. A.                                                    | <i>Narki P. O. Agra District.</i> |
| 1872 Aug. 5.      | A.   | Skrefsrud, The Rev. L. O.                                                          | <i>Europe.</i>                    |

| Date of Election. |      |                                                                                                                                                |
|-------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1874 June 3.      | N.R. | Smith, Vincent Arthur, c. s. <i>Gorakhpur.</i>                                                                                                 |
| 1891 Aug. 27.     | N.R. | Stein, Dr. M. A. <i>Lahore.</i>                                                                                                                |
| 1895 July 5.      | A.   | Steinberg, A. F., c. s. <i>Europe.</i>                                                                                                         |
| 1868 June 3.      | R.   | Tagore, The Hon. Maharaja Sir Jotendra Mohun, Bahadur, K. C. S. I. <i>Calcutta.</i>                                                            |
| 1897 Dec. 1.      | N.R. | Talbot, W. A. <i>Dharmar</i>                                                                                                                   |
| 1893 Aug. 31.     | N.R. | Tate, G. P., Survey of India. <i>Karachi.</i>                                                                                                  |
| 1878 June 5.      | N.R. | Temple, Major R. C., s. c. <i>Port Blair.</i>                                                                                                  |
| 1875 June 2.      | N.R. | Thibaut, Dr. G., Professor, Muir Central College. <i>Allahabad.</i>                                                                            |
| 1886 Aug. 4.      | R.   | Thomas, Robert Edmond Skyring. <i>Calcutta.</i>                                                                                                |
| 1847 June 2.      | L.M. | Thuillier, Lieut.-Genl. Sir Henry Edward Landor, KNT., C. S. I., F. R. S. B. A. <i>Europe.</i>                                                 |
| 1889 Mar. 6.      | A.   | Thuillier, Colonel H. R., R. E. <i>Europe.</i>                                                                                                 |
| 1891 Aug. 27.     | N.R. | Thurston, Edgar. <i>Madras.</i>                                                                                                                |
| 1871 April 5.     | F.M. | Treffitz, Oscar. <i>Europe.</i>                                                                                                                |
| 1861 June 5.      | L.M. | Tremlett, James Dyer, M. A., C. S. <i>Europe.</i>                                                                                              |
| 1893 May 3.       | N.R. | Vandja, Raja Ram Chandra. <i>Mayurbhanga, District Balasore.</i>                                                                               |
| 1890 Feb. 5.      | N.R. | Venis, Arthur, M. A., Former Boden Sanskrit Scholar, Oxford, Principal, Sanskrit College, Benares, Professor, Queen's College. <i>Benares.</i> |
| 1895 Dec. 4.      | N.R. | Vidyabhushan, Harimohan. <i>Krishnagar.</i>                                                                                                    |
| 1896 May 6.       | R.   | Vidyaniidhi, Mahendranath. <i>Calcutta.</i>                                                                                                    |
| 1894 Sept. 27.    | L.M. | Vost, Surgeon-Captain William. <i>Gonda.</i>                                                                                                   |
| 1895 July 5.      | A.   | Waddell, Dr. L. A. <i>Europe.</i>                                                                                                              |
| 1889 Nov. 6.      | N.R. | Walsh, Surgeon-Major J. H. Tull. <i>Midnapur.</i>                                                                                              |
| 1865 May 3.       | A.   | Waterhouse, Col. James, B. S. C. <i>Europe.</i>                                                                                                |
| 1874 July 1.      | R.   | Watt, Dr. George, C. I. E. <i>Calcutta.</i>                                                                                                    |
| 1892 Aug. 3.      | R.   | Whitehead, The Rev. Henry, M. A. <i>Calcutta.</i>                                                                                              |
| 1896 Feb. 5.      | N.R. | Williams, Surgeon-Captain Charles E. <i>Nowshera.</i>                                                                                          |
| 1891 May 6.       | N.R. | Wilson, Charles Robert, M. A., Bengal Education Service. <i>Bankipore.</i>                                                                     |
| 1892 Jan. 6.      | R.   | Woodburn, The Hon. Sir, J., K. C. S. I., C. S. <i>Calcutta.</i>                                                                                |
| 1894 Sept. 27.    | R.   | Woodroffe, John George, Barrister-at-Law. <i>Calcutta.</i>                                                                                     |
| 1873 Aug. 6.      | A.   | Woodthorpe, Col. Robert Gossett, C. B., R. E. <i>Europe.</i>                                                                                   |
| 1894 Aug. 30.     | N.R. | Wright, Henry Nelson, C. S. <i>Allahabad.</i>                                                                                                  |
| 1897 Jan. 6.      | N.R. | Zaka-ullah, Shams-ul-ulama Muhammad. <i>Dehli.</i>                                                                                             |

## SPECIAL HONORARY CENTENARY MEMBERS.

| Date of Election. |                                                                                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1884 Jan. 15.     | Dr. Ernst Haeckel, Professor in the University of <i>Jena</i> .                                                          |
| 1884 Jan. 15.     | Charles Meldrum, Esq., M. A., F. R. S. <i>Mauritius</i> .                                                                |
| 1884 Jan. 15.     | A. H. Sayce, Esq., Professor of Comp. Philology. <i>Oxford</i> .                                                         |
| 1884 Jan. 15.     | Monsieur Emile Senart, Member of the Institute of France. <i>Paris</i> .                                                 |
| 1884 Jan. 15.     | Sir Monier Monier-Williams, <i>Knt.</i> , K. C. I. E., M. A., D. C. L., LL. D., Boden Prof. of Sanskrit. <i>Oxford</i> . |

## HONORARY MEMBERS.

|              |                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------|
| 1848 Feb. 2. | Sir J. D. Hooker, K. C. S. I., C. B., M. L., D. C. D., F. R. S., F. G. S. <i>Kew</i> .                 |
| 1860 Mar. 7. | Professor Max Müller. <i>Oxford</i> .                                                                  |
| 1860 Nov. 7. | Dr. Albrecht Weber. <i>Berlin</i> .                                                                    |
| 1875 Nov. 3. | Dr. O. Böhtlingk. <i>Leipzig</i> .                                                                     |
| 1879 June 4. | Prof. E. B. Cowell, D. C. L. <i>Cambridge</i> .                                                        |
| 1879 June 4. | Dr. A. Günther, V. P. R. S. <i>London</i> .                                                            |
| 1879 June 4. | Dr. J. Janssen. <i>Paris</i> .                                                                         |
| 1879 June 4. | Prof. P. Regnaud. <i>Lyons</i> .                                                                       |
| 1881 Dec. 7. | Lord Kelvin, D. C. L. <i>Glasgow</i> .                                                                 |
| 1888 Feb. 7. | W. T. Blanford, Esq., D. C. L., F. R. S., A. R. S. M., F. G. S., F. R. G. S., F. Z. S. <i>London</i> . |
| 1888 Feb. 7. | Alfred Russell Wallace, Esq., F. L. S., F. R. G. S. <i>Parkstone, Dorsetshire</i> .                    |
| 1894 Mar. 7. | Sir William Henry Flower, K. C. B., D. C. L. <i>London</i> .                                           |
| 1894 Mar. 7. | Dr. Edward Frankland, D. C. L., F. R. S. <i>Reigate</i> .                                              |
| 1894 Mar. 7. | Sir George Gabriel Stokes, Bart, F. R. S. <i>Cambridge</i> .                                           |
| 1894 Mar. 7. | Mahāmahopādhyaya Chandra Kanta Tarkalankara. <i>Calcutta</i> .                                         |
| 1894 Mar. 7. | Professor Theodor Noeldeke. <i>Strassburg</i> .                                                        |
| 1895 June 5. | Dr. G. Bühler, L. L. D., C. I. E. <i>Vienna</i> .                                                      |
| 1895 June 5. | Lord Rayleigh. <i>London</i> .                                                                         |
| 1895 June 5. | Lt.-Genl. Sir R. Strachey, G. C. S. I., D. C. L., L. L. D., F. R. S., R. E. <i>London</i> .            |
| 1895 June 5. | C. H. Tawney, C. I. E., M. A. <i>London</i> .                                                          |
| 1896 Feb. 5. | Sir Joseph Lister, P. R. S.                                                                            |
| 1896 Feb. 5. | Professor Michael Foster, F. R. S.                                                                     |
| 1896 Feb. 5. | Professor F. Kielhorn, C. I. E.                                                                        |
| 1896 Feb. 5. | Professor C. R. Lanman.                                                                                |



## CORRESPONDING MEMBERS.

Date of Election.

1866 May 7. Schlagintweit, Prof. E. von. *Berlin.*

## ASSOCIATE MEMBERS.

1874 April 1. Lafont, The Revd. E., C. I. E., S. J. *Calcutta.*  
 1875 Dec. 1. Bate, The Rev. J. D. *Europe.*  
 1875 Dec. 1. Abdul Hai, Maulvie. *Calcutta.*  
 1882 June 7. Giles, Herbert. *Europe.*  
 1883 Feb. 7. Rodgers, C. J. *Europe.*  
 1884 Aug. 6. Moore, F., F. R. S., F. L. S. *London.*  
 1885 Dec. 2. Führer, Dr. A. *Lucknow.*  
 1886 Dec. 1. Dās, Saratchandra, C. I. E. *Darjeeling.*  
 1892 April 6. Samasrami, Satyavrata. *Calcutta.*  
 1892 Dec. 7. Brühl, P. J. *Sibpur.*

LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM  
INDIA THREE YEARS AND UPWARDS.\*

\* *Rule 40.*—After the lapse of 3 years from the date of a member leaving India, if no intimation of his wishes shall in the interval have been received by the Society, his name shall be removed from the List of Members.

The following members will be removed from the next Member List of the Society, under the operation of the above Rule:—

John Beames, Esq.  
 Thomas R. Munro, Esq.  
 Colonel H. R. Thuillier, R.E.

## LOSS OF MEMBERS DURING 1897.

## BY RETIREMENT.

A. F. M. Abdur Rahman, Esq.  
 Babu Janaki Nath Bhattacharjee.  
 C. H. Bompas, Esq.  
 A. A. Caspersz, Esq.  
 Raja Suryakānta Chauduri Bahadur.  
 Dr. D. D. Cunningham,  
 Babu H. C. Mallik.  
 Dr. D. M. Moir.  
 Dr. V. S. Mudaliar.  
 C. E. A. W. Oldham, Esq., I. C. S.  
 Babu Peary Mohon Roy,  
 I. van Verdean, Esq.

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## BY DEATH.

*Ordinary Members.*

Nawab Sayid Ashgar Ali Diler Jang Khan Bahadur.  
 Sir Ananda Rām Gujapati, K. C. I. E.  
 Prince Mahomed Firukh Shah.  
 S. E. Peal, Esq.  
 Raja Lachman Singh.  
 W. C. Taylor, Esq.  
 Captain E. Y. Watson.

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## STRUCK OFF UNDER COUNCIL ORDERS.

## CORRESPONDING MEMBERS.

Dr. J. Macgowan.  
 A. Murray, Esq.  
 The Rev. J. Porter.

BY REMOVAL.

*Under Rule 40.*

Major A. C. Bigg-Wither.  
Major H. F. Gordon Forbes.  
C. H. Tawney, Esq., C. I. E.



[APPENDIX.]

ABSTRACT STATEMENTS  
OF  
RECEIPTS AND DISBURSEMENTS  
OF THE  
ASIATIC SOCIETY OF BENGAL  
FOR  
THE YEAR 1897.

# STATEMENT

## *Asiatic Society*

Dr.

|                                                      |     |     |         | To ESTABLISHMENT.             |     |     |          |     |    |
|------------------------------------------------------|-----|-----|---------|-------------------------------|-----|-----|----------|-----|----|
|                                                      |     |     |         | Rs.                           | As. | P.  | Rs.      | As. | P. |
| Salaries                                             | ... | ... | ...     | 3,384                         | 5   | 4   |          |     |    |
| Commission                                           | ... | ... | ...     | 351                           | 15  | 10  |          |     |    |
| Pension                                              | ... | ... | ...     | 48                            | 0   | 0   |          |     |    |
|                                                      |     |     |         |                               |     |     | 3,784    | 5   | 2  |
|                                                      |     |     |         | To CONTINGENCIES.             |     |     |          |     |    |
| Stationery                                           | ... | ... | ...     | 110                           | 15  | 6   |          |     |    |
| Lighting                                             | ... | ... | ...     | 25                            | 8   | 0   |          |     |    |
| Taxes                                                | ... | ... | ...     | 819                           | 0   | 0   |          |     |    |
| Postage                                              | ... | ... | ...     | 627                           | 10  | 0   |          |     |    |
| Freight                                              | ... | ... | ...     | 43                            | 2   | 0   |          |     |    |
| Meeting                                              | ... | ... | ...     | 72                            | 8   | 0   |          |     |    |
| Miscellaneous                                        | ... | ... | ...     | 352                           | 3   | 4   |          |     |    |
|                                                      |     |     |         |                               |     |     | 2,050    | 14  | 10 |
|                                                      |     |     |         | To LIBRARY AND COLLECTIONS.   |     |     |          |     |    |
| Books                                                | ... | ... | ...     | 3,284                         | 3   | 11  |          |     |    |
| Local Periodicals                                    | ... | ... | ...     | 16                            | 0   | 0   |          |     |    |
| Coins                                                | ... | ... | ...     | 50                            | 8   | 0   |          |     |    |
| Binding                                              | ... | ... | ...     | 792                           | 6   | 0   |          |     |    |
| Furniture                                            | ... | ... | ...     | 15                            | 12  | 0   |          |     |    |
|                                                      |     |     |         |                               |     |     | 4,158    | 13  | 11 |
|                                                      |     |     |         | To PUBLICATIONS.              |     |     |          |     |    |
| Journal, Part I ...                                  | ... | ... | ...     | 3,679                         | 4   | 6   |          |     |    |
| Journal, Part II                                     | ... | ... | ...     | 3,508                         | 2   | 6   |          |     |    |
| Journal, Part III                                    | ... | ... | ...     | 699                           | 2   | 6   |          |     |    |
| Proceedings                                          | ... | ... | ...     | 1,186                         | 14  | 0   |          |     |    |
|                                                      |     |     |         |                               |     |     | 9,073    | 7   | 6  |
| To Printing charges of Circulars, Receipt-forms, &c. | ... | ... | ...     |                               |     |     | 250      | 8   | 0  |
| „ Personal Account (Writes off and Miscellaneous)    | ... | ... | ...     |                               |     |     | 168      | 5   | 0  |
|                                                      |     |     |         | To EXTRAORDINARY EXPENDITURE. |     |     |          |     |    |
| Auditor's fee                                        | ... | ... | ...     | 100                           | 0   | 0   |          |     |    |
| Registration fee of the Society for 1897             | ... | ... | ...     | 5                             | 0   | 0   |          |     |    |
| Catalogue of coins                                   | ... | ... | ...     | 707                           | 10  | 3   |          |     |    |
|                                                      |     |     |         |                               |     |     | 812      | 10  | 3  |
|                                                      |     |     | Balance | ...                           | ... | ... | 1,53,455 | 3   | 7  |
|                                                      |     |     |         | Total Rs.                     | ... | ... | 1,73,754 | 4   | 3  |

No 1.  
of Bengal.

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Cr.

|                                                                                                 | Rs. | As. | P.  | Rs.      | As. | P. |
|-------------------------------------------------------------------------------------------------|-----|-----|-----|----------|-----|----|
| By Balance from last report                                                                     | ... | ... | ... | 1,55,923 | 2   | 9  |
| <b>BY CASH RECEIPTS.</b>                                                                        |     |     |     |          |     |    |
| Publications sold for cash                                                                      | ... | ... | ... | 65       | 4   | 9  |
| Interest on Investments                                                                         | ... | ... | ... | 5,702    | 8   | 0  |
| Rent of rooms on the Society's ground floor                                                     | ... | ... | ... | 800      | 0   | 0  |
| Allowance from Government of Bengal for the publication of Anthropological and Cognate Subjects | ... | ... | ... | 2,000    | 0   | 0  |
| Ditto Ditto Chief Commissioner of Assam                                                         | ... | ... | ... | 1,000    | 0   | 0  |
| Miscellaneous                                                                                   | ... | ... | ... | 178      | 1   | 0  |
|                                                                                                 |     |     |     | <hr/>    |     |    |
|                                                                                                 |     |     |     | 9,745    | 13  | 9  |
| <b>BY PERSONAL ACCOUNT.</b>                                                                     |     |     |     |          |     |    |
| Admission fees                                                                                  | ... | ... | ... | 368      | 0   | 0  |
| Subscriptions                                                                                   | ... | ... | ... | 7,047    | 0   | 0  |
| Sales on credit                                                                                 | ... | ... | ... | 606      | 5   |    |
| Miscellaneous                                                                                   | ... | ... | ... | 63       | 14  | 0  |
|                                                                                                 |     |     |     | <hr/>    |     |    |
|                                                                                                 |     |     |     | 8,085    | 3   | 9  |

Total Rs. ... 

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1,78,754 4 3

C. LITTLE,  
Honorary Secretary and Treasurer,  
Asiatic Society of Bengal.

Examined and found correct.  
MEUGENS, KING & SIMSON,  
Auditors.

**STATEMENT**  
*Oriental Publication Fund in Account*

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Dr.

To CASH EXPENDITURE.

|                                                    | Rs. | As. | P.  |       | Rs. | As.    | P.     |      |
|----------------------------------------------------|-----|-----|-----|-------|-----|--------|--------|------|
| Printing charges                                   | ... | ... | ... | 6,029 | 13  | 6      |        |      |
| Editing charges                                    | ... | ... | ... | 4,365 | 12  | 0      |        |      |
| Salaries                                           | ... | ... | ... | 1,236 | 10  | 8      |        |      |
| Freight                                            | ... | ... | ... | 76    | 13  | 0      |        |      |
| Stationery                                         | ... | ... | ... | 55    | 13  | 6      |        |      |
| Postage                                            | ... | ... | ... | 318   | 15  | 0      |        |      |
| Commission on collecting bills                     | ... | ... | ... | 26    | 15  | 8      |        |      |
| Contingencies                                      | ... | ... | ... | 14    | 7   | 6      |        |      |
|                                                    |     |     |     |       |     |        | 12,125 | 4 10 |
| To Personal Account (Writes off and Miscellaneous) | ... |     |     |       |     | 5      | 4 0    |      |
| Balance                                            | ... |     |     |       |     | 11,164 | 12 0   |      |
|                                                    |     |     |     |       |     |        | 23,295 | 4 10 |
| Total Rs.                                          | ... |     |     |       |     |        |        |      |



No. 2.

*with the Asiatic Society of Bengal.***Cr.**

|                             |     | Rs. | As.   | P.  | Rs.    | As.    | P. |    |
|-----------------------------|-----|-----|-------|-----|--------|--------|----|----|
| By Balance from last Report | ... | ... | ...   | ... | 12,542 | 13     | 1  |    |
| <b>BY CASH RECEIPTS.</b>    |     |     |       |     |        |        |    |    |
| Government allowance        | ... | ... | 9,000 | 0   | 0      |        |    |    |
| Publications sold for cash  | ... | ... | 367   | 15  | 6      |        |    |    |
| Advances recovered          | ... | ... | 71    | 15  | 6      |        |    |    |
|                             |     |     | <hr/> |     |        | 9,439  | 15 | 0  |
| <b>BY PERSONAL ACCOUNT.</b> |     |     |       |     |        |        |    |    |
| Sales on credit             | ... | ... | 1,310 | 2   | 9      |        |    |    |
| Miscellaneous               | ... | ... | 2     | 6   | 0      |        |    |    |
|                             |     |     | <hr/> |     |        | 1,312  | 8  | 9  |
| <b>Total Rs.</b>            |     |     |       |     | ...    | 23,295 | 4  | 10 |
|                             |     |     | <hr/> |     |        |        |    |    |

**C. LITTLE,**  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

**Examined and found correct.**  
**MEUGENS, KING & SIMSON,**  
*Auditors.*

**STATEMENT**  
*Sanskrit Manuscript Fund in Account*

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**Dr.**

**To CASH EXPENDITURE.**

|                         |     | Rs. | As.   | P. |   | Rs.   | As. | P. |
|-------------------------|-----|-----|-------|----|---|-------|-----|----|
| Salaries                | ... | ... | 1,058 | 0  | 0 |       |     |    |
| Travelling charges      | ... | ... | 474   | 8  | 0 |       |     |    |
| Purchase of manuscripts | ... | ... | 458   | 0  | 0 |       |     |    |
| Postage                 | ... | ... | 1     | 10 | 0 |       |     |    |
| Contingencies           | ... | ... | 0     | 4  | 0 |       |     |    |
|                         |     |     |       |    |   |       |     |    |
| Balance                 | ... | ... |       |    |   | 1,992 | 6   | 0  |
|                         |     |     |       |    |   | 5,755 | 8   | 1  |
| Total Rs.               | ... | ... |       |    |   | 7,747 | 9   | 1  |

No. 3.

*with the Asiatic Society of Bengal.*

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Cr.

|                             |     |                  | Rs.   | As. | P. | Rs.   | As. | P. |
|-----------------------------|-----|------------------|-------|-----|----|-------|-----|----|
| By Balance from last report | ... | ...              | ..... |     |    | 4,542 | 9   | 1  |
| <b>BY CASH RECEIPTS.</b>    |     |                  |       |     |    |       |     |    |
| Government Allowance        | ... | ...              | 3,200 | 0   | 0  |       |     |    |
| Publications sold for cash  | ... | ...              | 5     | 0   | 0  |       |     |    |
|                             |     |                  |       |     |    | 3,205 | 0   | 0  |
|                             |     |                  |       |     |    |       |     |    |
|                             |     | <b>Total Rs.</b> | ...   |     |    | 7,747 | 9   | 1  |

**C. LITTLE,**  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

**Examined and found correct.**  
**MEUGENS, KING & SIMSON,**  
*Auditors.*

# STATEMENT

## *Personal*

| Dr.                                                |        | Rs. As. P. | Rs. As. P.  |
|----------------------------------------------------|--------|------------|-------------|
| To Balance from last report                        | ... .. | .....      | 3,270 8 11  |
| <b>To CASH EXPENDITURE.</b>                        |        |            |             |
| Advances for purchase of Sanskrit Manuscripts, &c. |        | .....      | 662 0 6     |
| To Asiatic Society                                 | ... .. | 8,085 3 9  |             |
| „ Oriental Publication Fund                        | ... .. | 1,312 8 9  |             |
|                                                    |        | .....      | 9,897 12 6  |
| Total Rs.                                          |        | ...        | 13,330 5 11 |

No. 4.  
*Account.*

Cr.

|                             |     |     |     | Rs.   | As. | P.    | Rs.   | As. | P. |
|-----------------------------|-----|-----|-----|-------|-----|-------|-------|-----|----|
| By Cash Receipts            | ... | ... | ... |       |     | ..... | 9,236 | 0   | 0  |
| „ Asiatic Society           | ... | ... | ... | 168   | 5   | 0     |       |     |    |
| „ Oriental Publication Fund | ... | ... | ... | 5     | 4   | 0     |       |     |    |
|                             |     |     |     | <hr/> |     |       | 173   | 9   | 0  |

| By Balance.   | Due to the Society. |         |          | Due by the Society. |          |          | Rs.    | As. | P. |
|---------------|---------------------|---------|----------|---------------------|----------|----------|--------|-----|----|
|               | Rs.                 | As.     | P.       | Rs.                 | As.      | P.       |        |     |    |
| Members       | 3,791               | 2       | 4        | 188                 | 8        | 0        |        |     |    |
| Subscribers   | ...                 | ...     | ...      | 98                  | 12       | 0        |        |     |    |
| Employes      | 30                  | 0       | 0        | 350                 | 0        | 0        |        |     |    |
| Agents        | 169                 | 2       | 6        | ...                 | ...      | ...      |        |     |    |
| Miscellaneous | 710                 | 5       | 0        | 147                 | 8        | 11       |        |     |    |
|               | <hr/> 4,700         | <hr/> 9 | <hr/> 10 | <hr/> 779           | <hr/> 12 | <hr/> 11 |        |     |    |
|               |                     |         |          |                     |          |          | 3,920  | 12  | 11 |
|               |                     |         |          |                     |          |          | <hr/>  |     |    |
|               |                     |         |          | Total Rs.           | ...      |          | 13,330 | 5   | 11 |
|               |                     |         |          |                     |          |          | <hr/>  |     |    |

C. LITTLE,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*

## STATEMENT

### *Invest*

Dr.

|                             |        | Nominal. |                 |            | Actual.         |             |    |
|-----------------------------|--------|----------|-----------------|------------|-----------------|-------------|----|
|                             |        | Rs.      | As.             | P.         | Rs.             | As.         | P. |
| To Balance from last report | ...    | ...      | 1,64,300        | 0 0        | 1,65,083        | 4 9         |    |
| „ Cash                      | ... .. | ...      | 5,000           | 0 0        | 5,053           | 11 0        |    |
| <b>Total Rs.</b>            | ...    | ...      | <u>1,69,300</u> | <u>0 0</u> | <u>1,70,136</u> | <u>15 9</u> |    |

| FUNDS.*            | PERMANENT.      |            |    |                 |             |    | TEMPORARY.    |            |     |               |            |     | TOTAL OF ACTUALS. |             |    |
|--------------------|-----------------|------------|----|-----------------|-------------|----|---------------|------------|-----|---------------|------------|-----|-------------------|-------------|----|
|                    | Nominal.        |            |    | Actual.         |             |    | Nominal.      |            |     | Actual.       |            |     | Rs.               | As.         | P. |
|                    | Rs.             | As.        | P. | Rs.             | As.         | P. | Rs.           | As.        | P.  | Rs.           | As.        | P.  |                   |             |    |
| Asiatic Society... | 1,40,900        | 0 0        |    | 1,40,640        | 0 0         |    | 22,100        | 0 0        |     | 23,075        | 3 5        |     | 1,63,715          | 2 5         |    |
| Trust Fund ...     | 1,300           | 0 0        |    | 1,295           | 12 9        |    | ...           | ...        | ... | ...           | ...        | ... | 1,295             | 12 9        |    |
|                    | <u>1,42,200</u> | <u>0 0</u> |    | <u>1,41,935</u> | <u>12 9</u> |    | <u>22,100</u> | <u>0 0</u> |     | <u>23,075</u> | <u>2 5</u> |     | <u>1,65,010</u>   | <u>15 2</u> |    |

## STATEMENT

### *Trust*

Dr.

|                  |        | Rs. | As.          | P.          |
|------------------|--------|-----|--------------|-------------|
| To Pension       | ... .. | ... | 48           | 0 0         |
| „ Balance        | ... .. | ... | 1,343        | 3 10        |
| <b>Total Rs.</b> | ...    | ... | <u>1,391</u> | <u>3 10</u> |

No. 5.  
*ment.*

---

Cr.

|                   | Nominal. |     |     | Actual.         |           |          |
|-------------------|----------|-----|-----|-----------------|-----------|----------|
|                   | Rs.      | As. | P.  | Rs.             | As.       | P.       |
| By Cash ... ..    | ...      | ... | ... | 5,000           | 0         | 0        |
| „ Balance* ... .. | ...      | ... | ... | 1,64,800        | 0         | 0        |
| <b>Total Rs.</b>  | ...      | ... | ... | <u>1,69,800</u> | <u>0</u>  | <u>0</u> |
|                   |          |     |     |                 |           |          |
|                   |          |     |     | <u>1,70,136</u> | <u>15</u> | <u>9</u> |

C. LITTLE,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*

No. 6.  
*Fund.*

---

Cr.

|                                    | Rs. |     |     | As. P.       |          |           |
|------------------------------------|-----|-----|-----|--------------|----------|-----------|
| By Balance from last report ... .. | ... | ... | ... | 1,343        | 3        | 10        |
| „ Interest on Investments ... ..   | ... | ... | ... | 48           | 0        | 0         |
| <b>Total Rs.</b>                   | ... | ... | ... | <u>1,391</u> | <u>3</u> | <u>10</u> |

C. LITTLE,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*

## STATEMENT

### *Cash*

| Dr.                         |     |     |     | Rs. As. P. |      |
|-----------------------------|-----|-----|-----|------------|------|
| To Balance from last report | ... | ... | ... | 5,997      | 15 1 |
| <b>RECEIPTS.</b>            |     |     |     |            |      |
| To Asiatic Society          | ... | ... | ... | 9,745      | 13 9 |
| „ Oriental Publication Fund | ... | ... | ... | 9,489      | 15 0 |
| „ Sanskrit MSS. Fund        | ... | ... | ... | 3,205      | 0 0  |
| „ Personal Account          | ... | ... | ... | 9,236      | 0 0  |
| „ Trust Fund                | ... | ... | ... | 48         | 0 0  |
| „ Investments               | ... | ... | ... | 5,126      | 0 7  |
| <b>Total Rs.</b>            |     |     |     | 42,798     | 12 5 |

## STATEMENT

### *Balance*

| Dr.                |     |     |     | Rs. As. P. |       |
|--------------------|-----|-----|-----|------------|-------|
| To Cash            | ... | ... | ... | 2,786      | 10 5  |
| „ Investments      | ... | ... | ... | 1,65,010   | 15 2  |
| „ Personal Account | ... | ... | ... | 3,920      | 12 11 |
| <b>Total Rs.</b>   |     |     |     | 1,71,718   | 6 6   |



No. 7.  
*Account.*

|                             |     |     |         | Cr.       |        |     |    |
|-----------------------------|-----|-----|---------|-----------|--------|-----|----|
|                             |     |     |         |           | Rs.    | As. | P. |
| <b>EXPENDITURE.</b>         |     |     |         |           |        |     |    |
| By Asiatic Society          | ... | ... | ...     | ...       | 20,130 | 11  | 8  |
| „ Oriental Publication Fund | ... | ... | ...     | ...       | 12,125 | 4   | 10 |
| „ Sanskrit MSS. Fund        | ... | ... | ...     | ...       | 1,992  | 6   | 0  |
| „ Personal Account          | ... | ... | ...     | ...       | 662    | 0   | 6  |
| „ Trust Fund                | ... | ... | ...     | ...       | 48     | 0   | 0  |
| „ Investments               | ... | ... | ...     | ...       | 5,053  | 11  | 0  |
|                             |     |     | Balance | ...       | 2,786  | 10  | 5  |
|                             |     |     |         | Total Rs. | 42,798 | 12  | 5  |

C. LITTLE,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*

No. 8.  
*Sheet.*

|                             |     |     |     | Cr.       |          |     |    |
|-----------------------------|-----|-----|-----|-----------|----------|-----|----|
|                             |     |     |     |           | Rs.      | As. | P. |
| By Asiatic Society          | ... | ... | ... | ...       | 1,58,455 | 3   | 7  |
| „ Oriental Publication Fund | ... | ... | ... | ...       | 11,164   | 12  | 0  |
| „ Sanskrit MSS. Fund        | ... | ... | ... | ...       | 5,755    | 3   | 1  |
| „ Trust Fund                | ... | ... | ... | ...       | 1,343    | 3   | 10 |
|                             |     |     |     | Total Rs. | 1,71,718 | 6   | 6  |

C. LITTLE,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*



**LIST OF ALL SOCIETIES, INSTITUTIONS, &c.,**  
**TO WHICH**  
**THE PUBLICATIONS OF THE ASIATIC SOCIETY**  
**HAVE BEEN SENT DURING THE YEAR, OR FROM WHICH**  
**PUBLICATIONS HAVE BEEN RECEIVED.**

*List of all Societies, Institutions, &c., to which the Publications of the Asiatic Society have been sent during the year, or from which publications have been received.*

\* Societies, &c., which have received the Asiatic Society's publications, and have sent their publications in return.

† Societies, &c., which have received the Asiatic Society's publications, but have sent none in return.

§ Societies, &c., whose publications have been received, but to which none have been sent in return.

- \* Allahabad :—Editor, *Pioneer*.
- † Amsterdam :—Royal Zoological Society.
- \* ——— :—Koninklijke Akademie van Wetenschappen.
- \* Angers :—Société d' Etudes Scientifiques d' Angers.
- § Austin :—Texas Academy of Sciences.
- \* Baltimore :—Johns Hopkins University.
- \* Batavia :—Society of Arts and Sciences.
- \* ——— :—Kon. Naturkundige Vereeniging in Nederlandsch-Indië.
- § Berlin :—Entomologische Verein.
- \* ——— :—Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte.
- \* ——— :—Gesellschaft Naturforschende Freunde zu Berlin.
- \* ——— :—Royal Academy of Sciences.
- † Berne :—Société Suisse d' Entomologie.
- \* Bombay :—Bombay Anthropological Society.
- \* ——— :—Bombay Branch, Royal Asiatic Society.
- \* ——— :—Editor, *Indian Antiquary*.
- \* ——— :—Editor, *Times of India*.
- \* ——— :—Natural History Society.
- † Bonn :—University of Bonn.
- \* Bordeaux :—L' Académie Nationale des Sciences, Belles-Lettres et Arts.
- \* ——— : Société Linnéenne.
- § Boston :—American Philological Association.
- \* ——— :—Natural History Society.
- § ——— :—American Oriental Society.
- \* Brisbane :—Royal Society of Queensland.
- § ——— :—Editor, *Queensland Agricultural Journal*.
- † Brookville :—Society of Natural History.
- † Brunswick :—Verein für Naturwissenschaft.

- † Brussels :—L' Académie Royale des Sciences.
- † ——— :—Musée Royal d' Histoire Naturelle de Belgique.
- \* ——— :—Société Entomologique de Belgique.
- † ——— :—La Société Royal Malacologique de Belgique.
- \* ——— :—Société Royale des Sciences de Liége.
- † Budapest :—Hungarian Central Bureau for Ornithological Observations.
- \* ——— :—Royal Hungarian Academy of Sciences.
- \* Buenos Ayres :—National Museum.
- \* ——— :—Academia Nacional de Ciencias de la Republica Argentina.
- \* Caen :—Société de Linnéenne de Normandie.
- † Calcutta :—Agri-Horticultural Society of India.
- \* ——— :—Geological Survey of India.
- \* ——— :—Editor, *Englishman*.
- \* ——— :—Editor, *Indian Daily News*.
- § ——— :—Editor, *Indian Engineering*.
- \* ——— :—Editor, *Indian Mirror*.
- § ——— :—Editor, *Indian Lancet*.
- \* ——— :—Indian Meteorological Department.
- \* ——— :—Indian Museum.
- § ——— :—Mahabodhi Society.
- § ——— :—Microscopical Society.
- § ——— :—Photographic Society of India.
- \* ——— :—Survey of India.
- \* ——— :—Tuttobodhini Shova.
- § ——— :—Editor, *Wealth of India*.
- \* ——— :—University Library.
- \* Cambridge :—University Library.
- \* Cassel :—Die Verein für Naturkunde.
- † Cherbourg :—Société Nationale des Sciences Naturelles.
- \* Chicago, Ill. :—Editor, *American Antiquarian and Oriental Journal*.
- § ——— :—Chicago Academy of Sciences.
- \* ——— :—Field Columbian Museum.
- \* Christiana :—University Library.
- \* Colombo :—Ceylon Branch, Royal Asiatic Society.
- \* Copenhagen :—La Société Royale des Antiquaires du Nord.
- † Cuttack :—Cuttack Library.
- \* Danzig :—Naturforschende Gesellschaft.
- \* Dehra Dun :—Great Trigonometrical Survey.
- § Dorpat :—Naturforscher-Gesellschaft.
- \* Dresden :—Entomologischer Verein "Iris."
- † ——— :—Königlich Zoologisches und Anthropologisch-Ethnographisches Museum zu Dresden.

- † Dublin :—Royal Dublin Society.  
 \* ——— :—Royal Irish Academy.  
 † Edinburgh :—Royal Society.  
 § ——— :—Royal Physical Society.  
 † ——— :—Scottish Geographical Society.  
 \* Florence :—Società Italiana di Anthropologia, Etnologia e Piscologia Comparata.  
 \* ——— :—Società Africana d'Italia.  
 \* Frankfurt :—Senckenbergische Naturforschende Gesellschaft.  
 \* ——— :—Naturwissenschaftlicher Verein des Reg.-Bez Frankfurt.  
 † Geneva :—Société de Physique et d' Histoire Naturelle.  
 \* Genoa :—Museo Civico di Storia Naturale.  
 \* Giessen :—Oberhessische Gesellschaft für Natur und Heilkunde.  
 \* Graz :—Naturwissenschaftlicher Verein für Styria.  
 \* Hague :—Köninklijk Instituut voor de Taal-Land-en Volkenkunde van Nederlansch-Indië.  
 \* ——— :—Netherlands Entomological Society. .  
 \* Hamburg :—Naturhistorisches Museum zu Hamburg.  
 \* ——— :—Naturwissenschaftlicher Verein.  
 § Halifax :—Nova Scotian Institute of Science.  
 † Halle :—Deutsche Morgenländische Gesellschaft.  
 \* ——— :—Kaiserliche Leopoldinisch-Carlinische Akademie.  
 \* Hamilton (Canada) :—Hamilton Association.  
 \* Havre :—Société de Géographie Commerciale du Havre.  
 † Helsingfors :—Societas pro Flora et Fauna Fennica.  
 \* ——— :—Société Finno Ougrienne.  
 \* ——— :—Société des Sciences de Finlande.  
 § Kiel :—Naturwissenschaftliche Vereins für Schleswig-Holstein.  
 † Kiev :—Société des Naturalistes.  
 \* Königsberg :—Die Physikalische-Oekonomische Gesellschaft.  
 † La Plata :—Museo de La Plata Republica Argentina.  
 \* Lahore :—Editor, *Civil and Military Gazette*.  
 † ——— :—Agricultural Society.  
 § Lawrence, Kansas :—Kansas University.  
 § Leipzig :—Deutsche Morgenländische Gesellschaft.  
 § ——— :—Die K. Sächsische Gesellschaft der Wissenschaften.  
 † Leyden :—Royal Herbarium.  
 \* Liège :—Société Géologique de Belgique.  
 \* Liverpool :—Literary and Philosophical Society.  
 \* London :—Anthropological Institute.  
 \* ——— :—Editor, *Academy*.  
 \* ——— :—Editor, *Athenæum*.

- \* London :—British Museum.
- \* ——— :—Geological Society.
- \* ——— :—Institution of Civil Engineers.
- \* ——— :—Institution of Electrical Engineers.
- \* ——— :—Institution of Mechanical Engineers.
- \* ——— :—Editor, *Nature*.
- \* ——— :—Linnean Society.
- \* ——— :—Royal Asiatic Society of Great Britain and Ireland.
- \* ——— :—Royal Astronomical Society.
- \* ——— :—Royal Geographical Society.
- \* ——— :—Royal Institution of Great Britain.
- \* ——— :—Royal Microscopical Society.
- \* ——— :—Royal Society.
- \* ——— :—Statistical Society.
- \* ——— :—Zoological Society.
- \* Lyons :—La Société d' Agriculture, d' Histoire Naturelle et des Arts  
Utiles.
- † ——— :—Muséum d' Histoire Naturelle,
- \* ——— :—La Société d' Anthropologie.
- † Madison, Wiss. :—Wisconsin Academy of Sciences, Arts and Letters.
- † Madras :—Literary Society.
- \* ——— :—Government Central Museum.
- § ——— :—Editor, *Indian Journal of Education*.
- \* Melbourne :—Royal Society of Victoria.
- \* Manchester :—Literary and Philosophical Society.
- \* Mexico :—Sociedad Científica " Antonio Alzate."
- § ——— :—Instituto Geológico de México.
- § Montevideo :—Museo Nacional de Montevideo.
- \* Moscow :—Société Imperiale des Naturalistes.
- \* Munich :—K. Bayerische Akademie der Wissenschaften.
- \* Nantes :—Société des Sciences Naturelles de l' ouest de la France.
- † Naples :—Società Africana d' Italia.
- § Neuchatel :—La Société Neuchateloise de Géographie.
- † New Haven :—Connecticut Academy of Arts and Sciences.
- § ——— :—Yale University.
- † Newport (R. I.) :—Natural History Society.
- \* New York :—American Museum of Natural History.
- † Ottawa :—Geological and Natural History Survey of the Dominion of  
Canada.
- § ——— :—Royal Society of Canada.
- † Oxford :—Bodleian Library.
- † ——— :—Indian Institute.

- \* Paris :—Société de Géographie.
- \* ——— :—Société d' Anthropologie.
- \* ——— :—Société Asiatique.
- § ——— :—Société Philomathique de Paris.
- \* ——— :—Musée Guimet.
- † ——— :—National Library.
- § ——— :—Observatoire d'Astronomie Physique de Paris.
- \* ——— :—Société Zoologique.
- † ——— :—Société Académique Indo-Chinoise.
- \* ——— :—Muséum d' Histoire Naturelle.
- \* Pennsylvania :—University of Pennsylvania.
- \* Philadelphia :—Academy of Natural Sciences.
- § ——— :—American Academy of Political and Social Science.
- § ——— :—American Philosophical Society.
- § ——— :—Franklin Institute.
- † ——— :—Editor, *Journal of Comparative Medicine and Surgery*.
- \* Pisa :—Société Toscana di Scienze Naturali.
- § Prague :—K. K. Sternwarte.
- § Rome :—Editor, *L'Oriente*.
- § ——— : *Revista Geografica Italiana*.
- \* ——— :—Società degli Spettroscopisti Italiani.
- § Roorkee —Editor, *Indian Forester*.
- § St. Louis :—Academy of Science of St. Louis.
- \* St. Petersburg :—Comité Géologique.
- † ——— :—Imperial Library.
- \* ——— :—Russian Geographical Society.
- \* ——— :—Académie Impériale des Sciences.
- † ——— :—Horti Petropolitani.
- § ——— :—Die Russisch-Kaiserliche Mineralogische Gesellschaft zu  
St. Petersburg.
- † San Francisco :—Californian Academy of Arts and Sciences.
- § Santiago :—Deutscher Wissenschaftlicher Verein.
- § Schaffhausen :—Swiss Entomological Society.
- † Shanghai :—China Branch, Royal Asiatic Society.
- § ——— :—Editor, *Chinese Recorder*.
- \* Simla :—United Service Institution of India.
- \* Stettin :—Entomological Society.
- \* Stockholm :—Entomologische Tidskrift.
- \* ——— :—Royal Swedish Academy of Sciences.
- \* Stuttgart :—Der Verein für vaterländische Naturkunde in Württemberg.
- \* Sydney :—Royal Society of New South Wales.



- \* Sydney:—Anthropological Society of Australia.
  - \* ———:—Linnean Society of New South Wales.
  - § Taiping:—Government of Perak.
  - \* Toronto:—Canadian Institute.
  - \* Tokyo:—Imperial University of Japan.
  - † Trieste:—Société Adriatica de Scienze Naturale.
  - † ———:—Museo Civico di Storia Naturale.
  - \* Tring:—Zoological Museum.
  - \* Turin:—Reale Accademia delle Scienze.
  - † Ulwar:—Ulwar Library.
  - \* Upsala:—University of Upsala.
  - \* Vienna:—Anthropologische Gesellschaft.
  - \* ———:—K. K. Akademie der Wissenschaften.
  - \* ———:—K. K. Geologische Reichsanstalt.
  - \* ———:—K. K. Naturhistorische Hofmuseum.
  - \* ———:—Ornithologische Verein in Wien.
  - \* ———:—K. K. Zoologisch-Botanische Gesellschaft.
  - § Washington:—Biological Society of Washington.
  - \* ———:—Commissioners of the Department of Agriculture.
  - § ———:—Philosophical Society.
  - \* ———:—Smithsonian Institution.
  - \* ———:—United States Geological Survey.
  - § ———:—United States National Museum.
  - \* Wellington:—New Zealand Institute.
  - \* ———:—Polynesian Society.
  - \* Yokohama:—Asiatic Society.
  - \* ———:—Deutsche Gesellschaft für Natur und Völkerkunde  
Ostasiens.
  - † Zagreb:—Archæological Society.
  - \* Zurich:—Naturforschende Gesellschaft.
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