

PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL.

EDITED BY

THE HONORARY SECRETARY.



JANUARY TO DECEMBER,  
1900.-01



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## CONTENTS.

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	<i>f</i> <i>Pages.</i>
Proceedings for January, 1900 ... ..	1-8
Ditto „ February „ (including Annual Report) ...	9-66
Ditto „ March „ ... ..	67-74
Ditto „ April „ ... ..	75-80
Ditto „ May & June, 1900 ... ..	81-86
Ditto „ July „ ... ..	87-98
Ditto „ August „ ... ..	99-102
Ditto „ October and November, 1900 ... ..	103-106
Ditto „ December, 1900 ... ..	107-111
<b>List of Members of the Asiatic Society on the 31st Decem- ber, 1899 (Appendix to the Proceedings for February, 1900) ... ..</b>	<b>i-xiv</b>
<b>Abstract Statement of Receipts and Disbursements of the Asiatic Society for the year 1899 (Appendix to the Pro- ceedings for February, 1900) ... ..</b>	<b>xv-xxiii</b>
<b>List of all Societies, Institutions, &amp;c., to which the publi- cations of the Asiatic Society have been sent during the year, or from which publications have been received</b>	<b>xxiv-xxx</b>

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PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR JANUARY, 1900.

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The Monthly General Meeting of the Society, was held on Wednesday, the 3rd January, 1900, at 9 P.M.

T. H. HOLLAND, Esq., F.G.S., A.R.C.S., in the chair.

The following members were present :—

Major A. Alcock, I.M.S., Mr. J. Bathgate, Mr. H. Beveridge, Dr. T. Bloch, Babu Nobinchand Bural, Mr. W. K. Dods, Mr. F. Finn, Mr. D. Hooper, Mr. G. W. Kuchler, Dr. S. C. Laharry, Mr. W. A. Lee, The Revd. H. O. Moore, Mr. R. N. Mookerjee, Mr. L. de Nicéville, Mr. F. E. Pargiter, Babu Yadunath Sen.

Visitor :—Mr. H. Ludlow.

The minutes of the last meeting were read and confirmed.

Twenty-one presentations were announced.

The proposed resumption by the Society of its original name of "The Asiatic Society" instead of "Asiatic Society of Bengal" of which intimation has already been given by circular to all members were brought up for final disposal.

The Council recommended the adoption of the proposal to revert to the original title, the proposal being fully justified by the fact that the Title-Deeds stood in the name of "The Asiatic Society."

The votes of the members were laid on the table and the Chairman requested any Resident Members who had not expressed their opinion to take the present opportunity of filling in voting papers. Seven such papers were filled in and with the 96 votes returned by members, were scrutinized, the Chairman appointing Messrs. D. Hooper and L. de Nicéville to be Scrutineers.

The Scrutineers reported as follows:—

69 For.

34 Against.

The Chairman read the following appeal from the Royal Asiatic Society regarding the establishment of a gold medal for the encouragement of Oriental learning.

In 1897 the Council of the Royal Asiatic Society established a Jubilee Gold Medal to be awarded every third year as an encouragement to Oriental learning amongst English-speaking people.

To meet the expenses incurred in preparing a design, engraving dies, and finding an amount to produce an income sufficient to defray the requisite charges a sum of about £ 400 will be necessary.

Subscriptions with interest of £ 300 have already been received and a balance of about £ 100 is therefore still needed.

Donations should be sent to the Chairman of the Medal Committee,  
Royal Asiatic Society,  
22, Albemarle Street, London, W.

The Chairman announced that in accordance with Rule 37 of the Society's Rules, the names of seventeen members were to be suspended in the Society's rooms as defaulters for non-payment of dues.

The Chairman also announced that he had received two essays in competition for the Elliott Prize for Scientific Research for the year 1899.

Mr. T. H. Holland exhibited and described a new Indian Meteoric Iron.

This meteorite was found by a villager near Kodaikanal in the Palni Hills, Madras, and through the help of Mr. C. Michie Smith, Director of the Madras Observatories, it was secured in 1898 for the Geological Museum, Calcutta. It weighed about 35 lbs. when found, and was covered with a coat of rust due to its having, in all probability, been exposed for some time to the weather. There is no record of its fall, but a large meteor was seen eight years before to burst over the Pillar Rocks near Kodaikanal, and it is not unlikely that this "iron" fell at that time.

It is found to be composed almost entirely of nickeliferous iron, with included irregular mineral masses, measuring sometimes 10 m.m. across. Crystal structures—imperfect Widmanstätten figures—are developed by etching the polished surface of the iron with dilute acid; but beyond these tests, which satisfactorily establish the meteoric origin

of this iron, the specimen has not yet been examined in detail. The surface shows the "thumb-marks" characteristic of the holosiderites.

A certain amount of interest is attached to this "find" on account of the rarity of Indian meteoric irons.

Although stony meteorites have been found in great numbers, only one other iron has been obtained in India, and that was seen to fall near Nidigullum (lat.  $18^{\circ} 41' 20''$ ; long  $83^{\circ} 28' 30''$ ) in the Vizagapatam district on January 23rd, 1870. The Nidigullum meteorite\* weighed 10lbs. only; its model and a piece of the iron are preserved in the collection of the Geological Survey of India, Calcutta.

Major A. Alcock, I.M.S., exhibited and made the following remarks on some insects that possess special means of scaring their enemies.

The instances of natural protection here exhibited are all well known, and I claim no originality in speaking of them.

They consist of larvæ of three species of *Lepidoptera* which possess special means—so far as one can judge—of scaring their enemies.

In two of these cases the protection afforded by the "scare" appears—at any rate in certain stages of existence—to be supplemented by at least one form of disguise, making security doubly sure.

The first exhibit includes enlarged drawings of the larvæ of the Lycaenid butterfly *Ouretis thetys*. Those larvæ were common enough in my garden, during last rainy season, on young trees of *Pongamia glabra*.

In its youngest stage the larva very much resembles—both in form and colour, and also in the position that it usually takes up in or near the axil of a young leaf—a leaf-bud or a fleshy stipule.

In a later stage it has a large indefinite patch of white on either side of its body which give it a certain amount of resemblance to a bird's-dropping with the usual smear of uric acid.

In its latest stage the patches of white are well defined, and except that its prevailing colour is bright green, like the leaves on which it feeds, the larva has no special disguise-markings.

There now however comes in the scaring apparatus, though it, indeed, has been in existence from the first. This consists of a pair of brushes—much like bottle-brushes, or, perhaps, more like a thistle-head in seed—which can be suddenly shot out from two tall chimney-like excrescences on the dorsal surface of the last segment of the body, and when so extruded can be rapidly whirled round and round.

Whenever the animal is touched—in any of its larval stages—these brushes are ejected and worked with the greatest vigour.

\* Proc., Asiatic Socy. Beng., 1870, p. 64.

Mr. de Nicéville, who has made some observations on this subject (*vide* Journ. Bomb. Nat. Hist. Soc. Vol. III, 1888, pp. 164–168), considers that the use of these brushes is to sweep away Ichneumon flies and parasitic *Diptera*. They are certainly capable of doing this very effectually, but I think they would also scare bigger enemies.

The second exhibit includes enlarged drawings of the well-known larvæ of the Papilionio butterfly *Papilio pammon*, which was common in my garden, at the close of last rainy-season, on shrubs of the Orange order.

In its early stages the larva of this butterfly is dull green smeared with white, and might easily be mistaken for a bird's-dropping.

As it grows older the markings become well defined, and the animal is an undoubted caterpillar, though two large eyelike markings on the second segment behind the head give it an ugly look.

But, like the caterpillar of *Curetis thelys*, it does not trust solely to its looks to deceive or frighten its enemies; but it has also the power, when it is irritated, of shooting out, from the crevice between the back of the head and the first thoracic segment, a pair of very alarming bright-red horns.

The effect is so startling, even to a man accustomed to handle animals of all sorts, that one can easily imagine that it would effectually scare a bird.

The third exhibit includes enlarged drawings of the well-known caterpillar of the Notodontid moth, *Stauropus alternus*. These caterpillars, which can be found in Calcutta and its vicinity in the rainy season, are as extraordinary in look as they are in behaviour. When touched, they turn the hinder end of the body over on to the back, in the manner of an enraged scorpion, and then begin to tremble as if agitated by the most uncontrollable emotion. There are certain particularly irascible ants that behave somewhat in the same way, and there can be little doubt that the suggestion, which has been made, that the attitude of the alarmed *Stauropus* caterpillar may be mistaken by its enemies for the offensive posture of an ant of enormous dimensions, is somewhere near the truth.

The insects that accompany these drawings are common enough, during the monsoon, in Calcutta, and I recommend them to your further notice. No observer can watch their behaviour without admiration. Of their power to terrify creatures like birds, whose high aesthetic and emotional development cannot but be accompanied by at least the germs of superstition, there can be no uncertainty.

Mr. de Nicéville, in criticizing these remarks, considered that although perhaps the "scares" might frighten birds, their most



important function was to terrify ichneumon-flies and parasitic *Diptera*, which were far the most active enemies that caterpillars had to contend against. For this reason he thought that the more commonly received idea that the *Stauropus* caterpillar, when irritated, resembled a spider, was nearer to the truth.

The following papers were read :—

1. *Notes on the Sāsi Dialect.*—By THE REV. T. GRAHAME BAILEY, B.D., M.A.

2. *Novelties in Muhammadan Coins in India.*—By DR. W. VOST, I.M.S.

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

3. *On the Anthropology of the Coorgs and Yeravas.*—By T. H. HOLLAND, F.G.S., A.R.C.S.

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

The Chairman announced that it is proposed by the President and Council of the Society that a *conversazione* should be held in the Society's Rooms on the occasion of the Annual Meeting on February 7th, 1900.

Members who desire to invite visitors are requested to send the names and addresses of such visitors, ladies as well as gentlemen, in order that tickets of admission may be sent to them.

Members who desire to exhibit objects of Literary, Scientific or Aesthetic interest are requested to communicate with the Honorary Secretary as early as possible, in order that accommodation may be arranged for.

#### REPORT ON THE PROPOSED RESUMPTION BY THE SOCIETY OF ITS ORIGINAL NAME.

The Committee carefully examined the records of the institution and found that the Society was established on the 15th January, 1784, under the title of "The Asiatick Society," for the purpose of "enquiring into the History, civil and natural, the Antiquities, Arts, Science and Literature of Asia." At this historical meeting held at the Court House, Fort William, there were present, Sir Robert Chalmers, Knight, Chief Justice, Supreme Court, Fort William; Mr. Justice Hyde, Puisne Judge, Supreme Court; Sir William Jones, Knight, Puisne Judge, Supreme Court; General John Carnac; Lt.-Colonel Henry Watson; David Anderson, Esq., Henry Vansittart, Esq., Charles Croftes, Esq., William Chambers, Esq., Richard Johnson, Esq., John Shore, Esq. (afterwards Lord Teignmouth), Francis Gladwin, Esq., Charles Chapman,

Esq., Nathaniel Middleton, Esq., Major William Davy, Charles Wilkins, Esq. (afterwards knighted), Jonathan Duncan, Esq., John Bristow, Esq., Thomas Graham, Esq., Francis Fowke, Esq., Thomas Law, Esq., Captain Jonathan Scott, Francis Balfour, Esq., J. D. Paterson, Esq., Ralph Broome, Esq., Burrish Crisp, Esq., Lt. James Anderson, Lt. Charles Hamilton, T. Reuben Burrow, Esq., and George Hillarow Barlow, Esq. (afterwards a Baronet). SIR WILLIAM JONES was elected the first President, and WARREN HASTINGS, the Governor-General, became the first Patron of the Society.

"The Asiatick Society" thus established, published its transactions under the designation of "*The Asiatick Researches*" and only modified its original title by dropping, in 1825, the antique *k* in 'Asiatick.'

In 1832 the Society accorded permission to its Secretary, Mr. James Prinsep, editor of *Gleanings in Science* "to continue that (last named) publication under the designation of '*The Journal of the Asiatic Society*.'" In availing himself of this permission, however, Mr. Prinsep, whilst printing the Society's resolution correctly in his Journal and inserting the proper title of the Society on the first page of the letter-press and everywhere throughout the records of the Society's Proceedings, incorporated in the volume, took the liberty of adding *on the title-page* the words 'of Bengal.' This he probably did with the view of distinguishing this Society from the 'Royal Asiatic Society' which had recently been started in London, with a branch in Bombay. That he did it without the authority of the Society seems clear, for the most diligent search of the records has failed to show any trace of the matter. And, on the other hand, the Society continues invariably in all its proceedings and correspondence to call itself, and to be addressed by others as, simply "The Asiatic Society."

When in 1843, the Society having discontinued the publication of its 'Researches' took over Mr. Prinsep's *Journal* on its own account, the existing style of the periodical was tacitly retained, without any alteration.

In February 1851, the provincial affix 'of Bengal' was printed in the Society's designation in a revised code of the Bye-Laws, but no authority for this addition can be found. It seems to have crept in by an oversight and it doubtless by this time had become familiar by having been printed on the title-page of the *Journal* for so many years.

This altered title, once printed in the Bye-Laws, soon came into general use, though the Society in its proceedings still occasionally continued to use its proper title, which was also continued on the first page of the *Journal* regularly up to the end of 1875, the *Journal* being entitled simply "*The Journal of the Asiatic Society*."

It is therefore clear that the title of this Society still remains 'The Asiatic Society' and that the provincial designation 'of Bengal' crept into use by inadvertence and without the express authority or sanction of the Society.

The Committee after carefully considering all the evidence beg to recommend to the Council :—

That our Society, as the parent of all the other Asiatic Societies, may resume in its correspondence and publications its still unrevoked designation of 'The Asiatic Society' in accordance with the terms of our foundation.

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Objections raised by Mr. F. E. Pargiter :—

I take objection to the proposal on two grounds,—first, that the remarks on the past history of the Society's name are derogatory to the distinguished men who have governed the Society during this century ; and secondly, that the proposal subserves no real good.

It is stated in those remarks that the addition of the words "of Bengal" in the name was brought about "without authority," "by an oversight," "by inadvertence," and "without sanction." It is however too much to assume that, because no express resolution or order on the point can be found now, the former rulers of the Society did not notice the change. It seems more in consonance with the facts as narrated by the Committee and more respectful to those distinguished men, to infer that they perceived that, when the Royal Asiatic Society was established with a Branch at Bombay (and another, I believe, at Colombo then or soon afterwards), and after other Oriental Societies were established on the Continent, the condition of our Society was not precisely the same as before, that other societies claimed a share in our (till then exclusive) province, and that our position would be more appropriately described by adding the words "of Bengal." Those developments were gradual ; hence there was no occasion for formally altering our title, but the modification introduced tentatively by Mr. James Prinsep was tacitly approved and gradually adopted by the Society. For these reasons I demur to the remarks in the Committee's paper.

In the second place it is not explained what good the proposal will subserve. We are asked to go back at one step on what has been the practice for more than half a century, yet no reason of essential importance is urged on behalf of the change. No principle is involved, nor is it a matter of any practical consequence. Neither the scope of our researches, nor our position among the learned societies, nor the

estimation in which we are held depend in any way on whether we leave out the words "of Bengal" or not; they depend solely on our maintaining the high reputation of the past. I may note here that the Royal Asiatic Society describes itself on its Journal as the "Royal Asiatic Society of Great Britain and Ireland;" if then that Society uses such qualifying words, there is no good reason why we should be reluctant to retain the words "of Bengal." There remains the question of sentiment, and in that important respect we shall best preserve the noble traditions of the past by holding to what was adopted by the good sense and modesty of the distinguished men who have adorned our society during the last fifty years.

Under Rule 78, which provides that "no change in the Rules shall be valid unless a majority of three-fourths of the Members who have voted shall be in favour of the proposed changes," the proposal to resume the original name of *Asiatic Society* is not carried.



**PROCEEDINGS**  
OF THE  
**ASIATIC SOCIETY OF BENGAL,**  
FOR FEBRUARY, 1900.

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The Annual Meeting of the Society was held on Wednesday, the 7th February, 1900, at 9 P.M.

HIS EXCELLENCY BARON CURZON OF KEDLESTON, G.M.S.I., G.M.I.E.,  
Patron, and HER EXCELLENCY LADY CURZON, were present.

H. H. RISLEY, Esq., B.A., C.I.E., I.C.S., President, in the Chair.

The following members were present :—

Maulavi Abdul Aziz Khan, Maulavi Abdul Karim, Manlayi Abdul Wali, Shams-ul-Ulama Maulavi Ahmud, Major A. Alcock, I.M.S., The Hon. Mr. Justice Ameer Ali, C.I.E., Babu Damodar Das Barman, Babu Nagendra Nath Basu, Mr. J. Bathgate, Mr. H. Beveridge, Dr. T. Bloch, The Hon. Mr. C. W. Bolton, C.S.I., Babu Annada Prasad Bose, Babu Nobin Chand Bural, Dr. A. Caddy, Mr. B. W. Carlyle, C.I.E., Mr. W. B. Colville, Dr. P. Cordier, Mr. J. N. Das-Gupta, Mr. W. K. Dods, Mr. J. F. Duthie, Mr. F. Finn, Babu Bhupendra Sri Ghosha, Babu Pratapa Chandra Ghosha, Babu Rajani Kanta Gupta, Mr. E. B. Hayell, Col. T. H. Hendley, C.I.E., Mr. S. C. Hill, Mr. T. H. Holland, Mr. D. Hooper, Mr. G. W. Kuchler, Dr. S. C. Laharry, Mr. W. A. Lee, Mr. C. Little, Mr. D. J. Macpherson, C.I.E., Mr. B. D. Mehta, C.I.E., Captain C. J. Milne, I.M.S., Mr. J. C. Mitra, Mr. B. N. Mookerjee, The Revd. H. O. Moore, The Hon. Dr. Asutosh Mukerjee, Babu Panchanan Mukerjee, Mr. L. de Nicéville, Mr. F. E. Pargiter, Mr. A. Pedler, F.R.S., Major D. Prain, I.M.S., Dr. P. K. Ray, Mr. H. M. Rustomjee, Babu Yadu Nath Sen, Mr. M. J. Seth, Mahamahopadhyaya Hara Prasad Shastri, Babu Lachmi Narayan Singh, Dr. Mahendra Lal Sircar, C.I.E., Dr. M. A. Stein,

Mr. A. Tocher, Babu Amrita Lal Vasu, Pandit Mahendra Nath Vidyanidhi, Dr. G. Watt, C.I.E., The Most Revd. J. E. C. Welldon, D.D.

*Visitors*:—Maulavi Abdus Sattar Khan, Mrs. A. Alcock, The Hon. Mr. A. Arthur, Mons. C. Aubert, Mr. J. E. Bagram, The Revd. W. H. Ball, Babu Upendra Nath Banerjee, Mr. A. Bartels, Miss Bashford, Captain A. H. Bingley, I.S.C., Mr. and Mrs. Binning, Mr. A. J. F. Blair, Babu Asutosh Bose, Babu Doyal Chandra Bose, Babu Jnanendra Nath Bose, Babu Sasi Sekhar Bose, Mr. G. W. L. Caine, Mr. D. Campbell, Mr. N. Chatterjee, Mrs. Coldstream, The Hon. Major-General Sir E. H. and Lady Collen, Dr. and Mrs. Coulter, Mr. A. F. Cox, The Revd. F. Crohan, S.J., Miss Cruickshank, The Hon'ble Mr. and Mrs. C. E. Dawkins, Mr. N. G. Dighe, Mr. and Mrs. F. W. Duke, Babu Hirendra Nath Datta, Babu Pramatha Nath Datta, Mrs. Elliot, Sir Griffith Evans, The Hon. Mr. H. F. Evans, C.S.I., Mr. A. U. Fanshawe, C.S.I., Dr. Forsyth, Mr. and Mrs. J. S. Fraser, Mr. A. K. Ghose, Mr. C. C. Ghose, Babu Debendra Prasad Ghose, Babu Hemendra Prasad Ghose, Mr. M. C. Gora, Mr. L. Hare, Surgeon-General R. Harvey, I.M.S., Mrs. Havell, The Revd. L. Hagenbeek, S.J., Mrs. Hendley, Mr. J. P. Hewett, C.S.I., Mr. W. E. Hill, Mr. T. W. Holderness, C.S.I., Mrs. T. H. Holland, Mons. C. Jambon, Mr. A. H. James, Mr. E. Kinnison, Babu Makhan Lal, Rai Sohan Lal, Mr. Lubbock, Mr. Macdonell, The Hon. Sir Francis Maclean, Kt., K.C.I.E., Mr. J. M. Macpherson, C.S.I., The Hon. Sir W. Macpherson, Mr. W. D. Maitland, Babu Amrita Krishna Mallick, Babu Biraj Mohan Mazumdar, Mr. B. R. Mehta, Lady Meliss, Mr. and Mrs. W. S. Meyer, Mr. W. H. Michael, Babu Bosanta Kumar Mitra, Babu Kiran Chandra Mitra, Babu Mohini Nath Mitra, Babu Narendra Nath Mitra, Babu Provas Chuuder Mitra, Babu Sarat Kumar Mitra, Babu Tej Chandra Mitra, Mr. P. Moutgomery, Rai Bahadur Dr. Lal Madhub Mookerjee, Mian Muhammad Hamid, Mr. J. W. Murray, Thakur Nand Kumar, Mr. J. Nicoll, Dr. F. Pearse, Mr. T. B. Peterkin, Mr. H. S. Pike, Major and Mrs. Pilgrim, Mous. Piliuski, Sir Patriak Playfair, Kt., C.I.E., Mrs. D. Prain, The Hon. Mr. T. Raleigh, Mr. G. Reading, The Hon. Mr. J. D. Rees, C.I.E., Mr. W. F. Reynolds, Captain Rogers, I.M.S., Mr. R. H. M. Rustomjee, Babu Syam Krishna Sahay, Babu Kumud Behari Samanta, Babu Atal Coomar Sen, Dr. S. N. Sen, Maulavi Shamsul Huda, Pandit Yogesha Chandra Shastree, Mr. and Mrs. A. F. Simson, The Hon. Kanwar Sir Harnam Singh, Asstt.-Surgeon Hira Lal Sinha, Mr. Valentia Steer, The Hon. Mr. Justice Stevens, Mr. W. S. Tissendie, The Hon. Sir Arthur Trevor, K.C.S.I., Mr. G. Turton, Mr. F. R. Upcott, Captain H. J. Walton, I.M.S., Major R. R. H. Whitwell, I.M.S., Major and Mrs. Williams, Mr. and Mrs. A. H. Wood, Shams-ul-Ulama Maulavi Zulfakar Ali, and others.

According to the Rules of the Society, the President ordered the voting papers and certificates to be distributed for the election of officers and members of Council for 1900, and appointed Dr. G. Watt, C.I.E., and Mr. S. C. Hill to be scrutineers.

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

## ANNUAL REPORT FOR 1899.

The Council of the Society have the honour to submit the following Report on the state of the Society's affairs during the past year.

### Member List,

Our number of *Ordinary Members* is 301, which is higher than any year since 1893.

30 Ordinary Members have been elected, and we have lost 15 by withdrawal, 3 by death, 10 by removal under Rule 40, and 1 by removal under Rule 9.

The following table gives the statistics for the last six years.

YEAR.	PAYING.				NON-PAYING.				GRAND TOTAL.
	Resident.	Non-Resident.	Foreign.	Total.	Life.	Absent.	Special Non-Subscribing.	Total.	
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
1898 ...	122	108	11	241	23	35	1	59	300
1899 ...	120	119	13	252	21	27	1	49	301

The names of the Ordinary Members whose death we lament are Babu Gaurdas Bysack, Mr. J. H. Gilliland, and Deputy Surgeon-General S. B. Partridge. Dr. Partridge and Babu Gaurdas Bysack were two of the oldest members of the Society, having been elected in 1862.

Our number of *Honorary Members* is complete. We have to lament the loss of Sir William Flower, Sir Edward Frankland and Sir Monier

Williams; and we have elected Dr. A. F. R. Hoernle, C.I.E., Sir George King, F.R.S., Professor E. Ray Lankester, F.R.S., Professor E. Saess, and Professor E. B. Tylor, F.R.S.

Three *Associate Members* have been elected during the year, namely, Pandit Visnu Prasad Raj Bhandari, Rai Bahadur R. B. Sanyal, C.M.Z.S., and the Revd. E. Francotte, S.J.

#### Indian Museum.

Dr. A. F. R. Hoernle resigned his seat on the Board of Trustees and was succeeded by Archbishop P. Goethals. The other Trustees who represent the Society are Mr. A. Pedler, F.R.S., Dr. Mahendra Lal Sircar, C.I.E., Mr. R. D. Oldham, F.G.S., and Mr. G. W. Kuchler, M.A.

#### Finance.

Our financial position has improved, and we close the year with a credit balance of Rs. 1,52,452-11-11, which is considerably over five thousand rupees better than last year, in spite of the fact that the usual sum of Rs. 1,000 has not this year been contributed by the Assam Government towards our anthropological publications.\* It must be mentioned, however, that all of our bills for books have not yet been received, and that there are some outstanding printing liabilities for publications in the press; but these do not vitiate our comparison with previous years, because we always close the year with such liabilities, and they are much less this year than usual.

Our expenses have been well within the sanctioned Budget Estimate, except in respect of *Journal Part I* which, as usual, has largely exceeded its grant, and this at the expense of the two other sections of the *Journal*. This is unsatisfactory: for members who contribute papers to the Philological and Literary Section of the *Journal* must bear in mind that we have Scientific traditions to uphold and Scientific interests to conciliate, and that with regard to Science in general and to that part of it in particular that relates to Ethnology (*Journal Part III*), we have undertaken definite responsibilities that we must fulfil.

As regards Receipts, our actuals have been well in excess of our Budget Estimate, by reason of an unexpected increase in subscriptions and admission fees; for these had been estimated on the statistics of the five rather lean years preceding 1898. The non-receipt of the contribution of Rs. 1,000 from the Assam Government was balanced by an unforeseen donation of a like amount from the Government of India for the purposes of the International Catalogue of Scientific Literature, to be presently referred to.

\* [This sum has since been received. *Hon. Genl. Secy., Feb. 10th, 1900.*]



A review of our financial position will not be complete without a reference to the present value of our land and buildings.

The value of our land has undoubtedly increased, and this, which in itself is satisfactory, has lately been rather unpleasantly impressed upon us by the Municipal authorities, who have evinced a desire to hugely increase our assessment. Fortunately we have, for the present, persuaded the Municipality to deal gently with us, on the ground that, although our land may have increased in value, our building—which ties us to the land—has very greatly deteriorated.

We have taken steps to have our building properly surveyed, and we shall soon be in a position to make a balanced statement on this conflicting subject. For the present we can only emphasize the fact that we possess an old and probably precarious building of yearly decreasing value standing on land of such increased and increasing value that it may lay us open—and this is the point that will eventually urge us into action—to insupportable Municipal contributions.

An obvious solution of the problem—that the land might be made to yield the means either of reconstructing our building or of establishing ourselves anew on a smaller and less expensive site—will one day have to be considered.

The onerous duties of Treasurer were discharged first by Mr. R. D. Oldham and afterwards by Mr. W. K. Dods.

The Council propose the following estimates for the coming year. These, it will be observed, do not include either income or expenditure on the Royal Society's Catalogue operations, which cannot at present be decided. Nor do they provide for any repairs that may be called for when the survey of the building has been made.

#### BUDGET ESTIMATE FOR 1900.

##### Receipts.

	1899. Estimate.	1899. Actuals.	1900. Estimate.
Subscriptions ... Rs.	6,600 0 0	7,744 1 0	7,000 0 0
Sale of Publications...	600 0 0	732 2 4	600 0 0
Interest of Investments	5,500 0 0	5,530 0 0	5,530 0 0
Rent of Rooms ...	1,200 0 0	1,200 0 0	1,200 0 0
Govt. Allowances ...	3,000 0 0	2,000 0 0	2,000 0 0
Miscellaneous ...	100 0 0	249 9 6	400 0 0
<b>Total Rs.</b>	<b>17,000 0 0</b>	<b>17,455 12 10</b>	<b>16,730 0 0</b>

**Expenditure.**

	1899. Estimate.	1899. Actuals.	1900. Estimate.
Salaries ... .. Rs.	3,600 0 0	3,410 11 10	3,600 0 0
Commission ... ..	400 0 0	426 0 3	425 0 0
Pension ... ..	52 0 0	52 0 0	52 0 0
Stationery ... ..	120 0 0	121 6 0	120 0 0
Lighting ... ..	60 0 0	23 0 0	60 0 0
Municipal Taxes ... ..	819 0 0	819 0 0	846 0 0
Postage ... ..	600 0 0	445 0 3	550 0 0
Freight ... ..	80 0 0	56 4 5	70 0 0
Meetings ... ..	80 0 0	22 4 0	50 0 0
Contingencies ... ..	200 0 0	323 8 8	300 0 0
Books ... ..	1,500 0 0	303 11 6	1,500 0 0
Binding... ..	750 0 0	467 12 0	750 0 0
<i>Journal</i> , Part I ... ..	2,100 0 0	3,750 15 9	2,100 0 0
"    "    II ... ..	2,100 0 0	1,167 7 1	2,100 0 0
"    "    III ... ..	3,000 0 0	502 3 0	2,000 0 0
<i>Proceedings</i> ... ..	1,000 0 0	700 11 9	1,000 0 0
Printing Circulars, &c. ... ..	200 0 0	244 10 0	200 0 0
Registration Fee ... ..	5 0 0	5 0 0	5 0 0
Auditor's Fee ... ..	100 0 0	100 0 0	100 0 0
Petty Repairs ... ..	.....	237 8 0	250 0 0
Local Periodicals ... ..	16 0 0	16 0 0	.....
Furniture ... ..	140 0 0	116 0 0	.....
Catalogue ... ..	.....	30 8 0	.....
<b>Total Rs.</b>	<b>16,922 0 0</b>	<b>13,341 10 6</b>	<b>16,078 0 0</b>

**Extraordinary Expenditure.**

Library Catalogue ... ..	.....	.....	1,000 0 0
<b>Total Rs.</b>	<b>.....</b>	<b>.....</b>	<b>17,078 0 0</b>

**Agencies.**

Our London Agency is still in the hands of Messrs. Luzac and Co., from whom we have not yet received a final account. The value of the publications sent to them during the year amounts to £ 71-6-0 representing 757 pieces of the *Journal* and *Proceedings* and Rs. 559-8-0 representing 811 components of the *Bibliotheca Indica*. From them we have received books and papers of the value of £ 37-10-0.

Our Continental Agent is Mr. Otto Harrassowitz, to whom we have sent publications valued at £ 40-12-6 and Rs. 435-14-0, of which £ 29-14-2 and Rs. 106-6-10 worth have been sold for us.

### Library.

The codified additions will be found as an appendix to the December issue of the *Proceedings*; they number 2545, of which 748 were purchases and 1797 donations or exchanges.

The extent and importance of our exchanges should appeal to those members who are inclined to advocate retrenchment in our publications.

A new edition of the Library Catalogue has been energetically taken in hand, and some provision has been made in the Budget Estimate of 1900 for proceeding to publication.

All the books, except those in the Oriental Library, have been thoroughly cleaned and poisoned against insects.

### Publications.

Of the *Proceedings* ten numbers were published, namely, No. 11, (Index and Title-page) of 1898, and Nos. 1-9 of 1899. Among other matters of interest they contain reports of the sub-committees appointed to reprint the Society's Rules and to consider the resumption by the Society of its original title, and the scheme proposed by Mr. R. D. Oldham for establishing a Standard Time for the whole of India.

Of the *Journal, Part I*, four numbers were published; namely, No. 4 of 1898, and No. 1, and Extra Numbers 1 and 2 of 1899. The first Extra Number consists of Dr. Hoernle's report on *A Collection of Antiquities from Central Asia*, and is illustrated by a Map and 19 photo-etched plates, all of which were paid for by the Government of India. The second Extra Number is Dr. M. A. Stein's *Memoir on Maps illustrating the Ancient Geography of Kashmir*. This, though it was delivered by the Press in July last, has not yet been distributed, owing to the fact that the Society seems to have been, in some irregular way, pledged several years ago not to issue the Maps to which the *Memoir* relates until the same author's edition of *Kalhana's Rajatarangini*, which it appears the Maps are also intended to illustrate, should be published by Messrs. Constable & Co. The new regulations for the control of papers by the Council as a whole will, if observed, prevent the reoccurrence of irregularities of this kind.

Three numbers of the *Journal Part II*, have been distributed, containing several important papers on Zoology, and illustrated by two lithographed plates.

Of the *Journal, Part III*, only one number has been issued.

The other publications of the year are a Catalogue of the Society's Sanskrit Books and Manuscripts, Part I, and Catalogue of the Society's Arabic Books and Manuscripts, Part I, and a new and revised edition of the Society's Rules.

The *Proceedings* were edited by the General Secretary, Major A. Alcock, I.M.S., who also, under the new rules, was empowered to give general advice to the other Secretaries.

*Part I* of the *Journal* was edited by Dr. T. Bloch, who also had charge of the Coin Cabinet and reported on all the Treasure Trove coins sent to the Society. Mahamahopadhyaya Hara Prasad Shastri was Joint Philological Secretary.

*Part II* of the *Journal* was edited by Mr. F. Finn, and *Part III* by Mr. L. de Nicéville until the end of March and thereafter by Major L. A. Waddell, I.M.S.

#### Proceedings of the Council.

One of the most important pieces of business accomplished by the Council has been the appointment, at the request of the Royal Society and of the Government of India, of a "Regional Bureau," or Committee, to assist in carrying out the magnificent scheme of an *International Catalogue of Scientific Literature* proposed by the Royal Society. The Committee, whose duties will be to select and classify, from the mass of material published in India and Ceylon, the *data* required for the *Catalogue*, will act independently of the Council in their dealings with the "Central Bureau" in London, and will prepare their own annual report. The Government of India have sanctioned an annual grant of Rs. 1,000 towards carrying on the work.

Another matter of public importance, in which the Council was engaged, was the advocacy of Mr. R. D. Oldham's scheme for establishing a Standard Time for all India, after the continental manner. The Society takes a special interest in this subject because it promises to ensure precision in our meteorological and seismological observations, and it was encouraged to take the initiative in recommending it to Government in consequence of the success that attended its efforts of the year 1876 to ensure some provision for zoological research in the Hydrographic Survey of India. This time, however, the Government did not see its way to approve the Society's proposal.

Several matters of domestic interest have occupied the attention of the Council. First among these is the Library Catalogue. For some years past this Catalogue has been talked about: we have now arranged with Mr. H. B. Perie, formerly Librarian of the Indian Museum, to prepare it, in the convenient style of the Indian Museum Catalogue.

Mr. Perie has agreed to compile the catalogue and to see it through the press for an honorarium of Rs. 1,000. A permanent sub-committee, consisting of Dr. Bloch, Mahamahopadhyaya Haraprasad Shastri and Major Alcock, has been appointed to superintend the progress of the work.

A new and revised edition of the Rules of the Society has been published, and for the first time the Library Rules and the Council's Regulations regarding the submission of Papers for publication have been added as appendices.

The question of the Society's proper designation, which was raised by Major L. A. Waddell, I.M.S., has given some occupation to a special sub-committee. It appears from our Title-deeds that our original designation was "The Asiatic Society" and that for a great deal more than half a century this was the name that we ourselves used and by which we were officially addressed. The specific qualification "of Bengal," which ignores our Title-deeds, appears to have gradually established itself, but without—so far as we can ascertain from our records—any overt official sanction. In 1876 the Society was registered under the Registration Act, as the "Asiatic Society of Bengal" but there is no evidence on record that this change of name was formally proposed to and sanctioned by the Members. The sub-committee therefore recommended that the original name of "The Asiatic Society" should be resumed, and the Council endorsed the recommendation, which was then submitted to the whole body of Ordinary Members under Rules 64c, 64A and 65. More than a hundred voting-papers were returned, and although a large majority were in favour of the recommendation of the sub-committee a sufficient minority (under Rule 78) voted against it.

At the instance of Dr. G. A. Grierson the Council have arranged for the publication, in the *Bibliotheca Indica* series of a Kashmiri Dictionary. The work will be supervised by Dr. Grierson and will be printed, under his direction, in England.

On the recommendation of the Philological Committee, the completion of the late Professor Peterson's Edition of the *Upamiti-bhāna-prapancha-katha* for the *Bibliotheca Indica* series was entrusted to Professor Jacobi.

The request of Dr. Sten Konow to retain the two Nepalese MSS. *Gunakāraṇḍavyūha* and *Dvāvimśavadāna* for a further period of one year was agreed to by the Council; and the Buddhist MS. *Sugatāvadāna* was, on application, lent to the Librarian of the India Office for the use of Mrs. Mabel Bode.

## Coin Cabinet.

The Coins have been in charge of the Philological Secretary, Dr. Bloch, who reports as follows:—

The following coins have been added to the Society's collection during 1899:—

Description of coin.	Gold.	Silver.	Copper.
Ancient India : Punch-marked ...	...	1	
Kalacuri kings of Mahākoçala :—			
Jājalladeva ...	1		
Pṛthvideva ...	2		
Sultans of Delhi :—			
Nāṣiruddīn <u>K</u> husrau ...	1		
Moghul Emperors :—			
Akbar ...		5	
Jahāngīr ...		5	
<u>S</u> hāhjahān ...		1	
Aurangzeb ...		1	
Muḥammad <u>S</u> hāh ...		7	
‘Ālamgir II ...		1	
Undetermined ...			10
Tippu Sultān of Mysore ...		4	
‘Abbāsi <u>K</u> halifas :—			
Hārūn ar-Raṣhīd ...		2	
Total.	4	27	10

The gold coin of Nāṣiruddīn Khusrau and the two silver coins of Hārūn ar-Raṣhīd were given to us in exchange; the remainder are presentations by Government.

## Bibliotheca Indica.

The following report has been drawn up by the Joint Philological Secretary :—

Twenty-four fasciculi have been published in this series. This is the normal number which the O.P. Fund can publish every year. So the present year is a year neither of great activity nor of slow work. The only noteworthy feature of the year's publication is the higher proportion of English translations to editions of Oriental works as compared to other years. The following translations have been taken up :—

Prabandhacintāmaṇi or Wishing-stone of Narratives composed by Merutunga Ācāryya, at Vardhamānapura or Vadvana in Kattiyawād in Samvat 1362. It is one of the semi-historical works brought to light

by the exertions of the late lamented Hofrath Bühler. The writer is a Jaina, the disciple of Candraprabha. He throws much light on the history of Mālava and Gurjaradeça during the centuries just preceding the Muḥammadan Conquest. The translation has been entrusted to the distinguished scholar C. H. Tawney, Esq., M.A., C.I.E., and as a special privilege he has been allowed to have it printed in England. The first fasciculus has appeared during the year.

The other English translation undertaken this year is that of the third volume of the *Muntakhabu-t-Tawarikh* by Al-Badaoni, under the editorship of Captain T. Wolseley Haig, I.S.C., M.R.A.S. The translation of the second volume was completed some years ago by Professor Lowe of Cambridge, and that of the first volume has just been completed under the editorship of Lieutenant-Colonel G. S. A. Ranking.

The new Sanskrit works undertaken during the year are three, two of them are works of the highest importance, namely,—

*Upamitibhavaprapañcā Kathā* by Siddharṣi, one of the greatest Jaina writers. Siddharṣi was the cousin of the celebrated poet Māgha. He was a brāhman and a wealthy man too, being the grandson of Suprabhadava, the Prime Minister of the Rājā of Çrimāla in Kathiyawād. His date is variously estimated by Klatt in the tenth, by Jacobi in the seventh, by Merutunga in the eleventh, and by the editor the late lamented Professor P. Peterson in the fifth century A.D. Professor Peter Peterson met with an untimely death after publishing the first two fasciculi only of this work. It has now been entrusted to Professor Dr. Jacobi of Breslau.

The other new work undertaken is the *Mahābhāṣyapradipodyota*. It is a Commentary in the second remove on the "Great" Bhāṣya of Patañjali, Kaiyyāta wrote a Commentary on the Mahābhāṣya entitled *Mahābhāṣyapradipa*. On that Commentary Nāgeça Bhaṭṭa in the last century wrote a Commentary known as *Udyota*. The Society has now undertaken a critical edition of this work and has entrusted it to a young Paṇḍit Bahuvallabha Çāstri.

The third work is *Bhāṭṭa dipikā* by Khaṇḍadeva an elementary work on the *Mimāṃsā* School of Hindu Philosophy under the editorship of Candrakāṇṭa Tarkāṇkāra.

One of the works that has come to an end is the *Cāṅkhāyana Çrauta Sātra* with its Commentaries in four volumes under the editorship of Professor Dr. Hillebrandt of Breslau.

*Taittiriya Kṛṣṇa Yajur Saṃhitā* also has come to an end. The work was commenced by Professor E. B. Cowell in 1854. On his retirement Mahāmahopādhyāya Maheca Candra Nyāyaratna became the editor and continued the work for a long series of years. Pressure of

Bonn

other duties obliged him to resign the editorship which on his recommendation was entrusted to Paṇḍit Satyavrata Sāmaçrami and that distinguished Vedic Scholar has brought the work to a close with a complete scientific apparatus of references, indices, &c. The work has taken 46 years. Paṇḍit Sāmaçrami's preface though short is extremely valuable for a Vedic Scholar.

Parāçara Smṛti with the Commentary by the celebrated Mādhavā-cāryya also has come to an end under the distinguished editorship of Mahāmahopādhyāya Candrakānta Tarkālaṅkāra with indices and a preface. It is the Standard work of Hindu Law and Ritual in Southern India.

The translation of the first volume of the *Muntakhabu-t-Tawarikh* has been completed with an elaborate index by Dr. Ranking.

The President announced that the scrutineers reported the result of the election of Officers and members of Council as follows:—

*President.*

His Honor Sir John Woodburn, M.A., K.C.S.I.

*Vice-Presidents.*

H. H. Risley, Esq., B.A., C.I.E., I.C.S.

Col. T. H. Hendley, C.I.E., I.M.S.

Major A. Alcock, M.B., C.M.Z.S., F.G.S., I.M.S.

*Secretaries and Treasurer.*

T. Bloch, Esq., Ph.D.

F. Finn, Esq., B.A., F.Z.S.

Major L. A. Waddell, LL.D., I.M.S.

T. H. Holland, Esq., F.G.S., A.R.C.S.

Mahamahopadhyaya Hara Prasad Shastri, M.A.

W. K. Dods, Esq.

*Other Members of Council.*

J. D. Nimmo, Esq.

Dr. Mahendra Lal Sircar, M.D., C.I.E., D.L.

C. L. Griesbach, Esq., F.G.S., C.I.E.

M. H. Oung, Esq.

W. A. Lee, Esq., F.R.M.S.

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

G. W. Kuchler, Esq., M.A.

L. de Nicéville, Esq., F.E.S., C.M.Z.S.

F. E. Pargiter, Esq., B.A., I.C.S.



The President also announced that two Essays on the prescribed subject of Chemistry had been received in competition for the Elliott Prize for Scientific Research for 1899, but that neither of them were of sufficient merit to justify the award of the prize.

The outgoing PRESIDENT then delivered the Annual Address.

### ANNUAL ADDRESS, 1900.

During the past year we have elected 30 new paying members. Our numbers now stand higher than at any time since 1893, and they are continually on the increase. The proposals of five Foreign Scientific Societies of standing, to exchange publications with us, have been accepted.

The original papers presented for publication to the various Secretaries have been so numerous that we have been compelled to insist on compliance with the rule recently passed, forbidding the printing of any paper whatever without the previous formal and specific sanction of the Council.

Several matters of special importance, both domestic and public, have engaged the attention of the Council.

As regards matters of domestic interest: we have amended and reprinted our Rules, in consultation with the whole body of members; we have sanctioned arrangements, which are now in progress, for a much-needed Library Catalogue; we have successfully averted a proposal of the Municipality to greatly increase our assessment; and, finally, we have taken much pains to discover our own name. The evidence of our title deeds makes for the view that we have still the right to call ourselves "The Asiatic Society," but a sufficient minority of members have voted against the proposal to resume the original name and no change will be made.

With regard to matters of public interest, the Society has taken two important steps, both of them being towards the unification and consolidation of Indian contributions to science.

We have, at the request of a committee representing the Royal Society, and with the countenance of the Governments of India and Ceylon, undertaken to select and codify, from the mass of material published in these two countries, all the local data required for the International Catalogue of Scientific Literature. This undertaking, which involves the establishment, within the Society, of a distinct department with definite responsibilities of its own, has been

subsidized by the Government of India, and is now in working order.

On the other hand, our attempt to ensure precision in meteorological and seismological data, by advocating the establishment of a standard time for all India, somewhat after the Continental manner, was unsuccessful, the Government being of opinion that the time for action had not yet come.

Our financial position has decidedly improved, and we close the year with a balance of Rs. 1,52,452-11-11 to our credit, which is Rs. 5,247-10-10 more than our closing balance of the previous year, notwithstanding the fact that the Assam Administration has omitted to pay its usual contribution of Rs. 1,000 for anthropological research. The balance looks well, but we must not forget that our building is an extremely old one and that we may any day have to face the question of rebuilding.

Of the first part of the Society's Journal, dealing with History, Literature, etc., three numbers—two of which are "Extra Numbers"—have been published; but of the Extra Numbers, one, though it was delivered by the press in July, has not yet been issued, owing to a complication which is explained in the Report.

The first number of Journal Part I. is occupied by an essay by Dr. G. A. Grierson on the verb and indeclinable particles in the Kāçmīri language, which brings to an end this author's series of articles on Kāçmīri Grammar published in previous years. As to the importance of these essays, I may quote Dr. Grierson's own words, taken from the preface to a separate edition of them. "It is hoped," he says, "that, as now completed, they will be found to give a much fuller account of that interesting language than has hitherto been available. Besides those who wish to study Kāçmīri for its own sake, it is also of considerable interest to comparative philologists. I know of no Indo-Aryan language which in her grammatical construction is so naked and unashamed. With but the thinnest veil of mystery, she freely displays to the ardent eyes of the student, not only the general contour of her graceful form, but each joint, each articulation. Devoid of every feeling of false modesty, she discloses many a secret which is jealously hidden by her more prudish sisters of the south. It is sufficient to point out that a study of Kāçmīri is an essential preliminary to any enquiry which deals comparatively with the mutual relations of the modern Aryan vernaculars of India."

The source from which the information contained in these essays has been taken, is a grammar of the Kāçmīri language, written by a Kāçmīri Pandit, Içvarakaula by name, according to the style of native

Hindu Grammar. This work, called the "nectar of Kāçmīri words," has been edited by Dr. Grierson and published by the Society. Besides the grammar, there also exists a Kāçmīri dictionary, composed by the same Içvarakaula in the style of Sanskrit Koshas. An edition of this dictionary has now been undertaken by the Society. Its publication is intended for the Bibliotheca Indica Series, and the work was at first entrusted to Pandit Govind Kaul, the best modern Pandit in Kashmir. After his death, the Council engaged Pandit Mukund Ram of Srinagar, who will be supervised by Dr. Grierson, to carry on the work. The Society thus may claim the merit of having done a great deal towards elucidating the grammatical structure of an important but hitherto much neglected vernacular of India, and its thanks are more especially due to Dr. Grierson, whose work in this direction is highly appreciated by all students of modern Indo-Aryan vernaculars.

The ancient topography of Kashmir has been exhaustively discussed in the Memoir by Dr. Stein, published as Extra Number 2 of Journal Part I. This Memoir is accompanied by two excellent maps prepared for the Society by the Survey of India Office and primarily intended to be issued together with Dr. Stein's translation of the ancient chronicle of Kashmir, called the Rājatarāṅgiṇī, which was composed by Kalhaṇa in the years 1148-49 A.D.

Dr. Stein has devoted much time and energy to the study of the history and antiquities of the Kashmir Valley. He succeeded in discovering the *Codex Archetypus* of Kalhaṇa's chronicle, and has brought out a model edition of it far surpassing the earlier editions of the same work. During a series of visits to Kashmir, he has been very successful in identifying ancient places and following up, in the track of the ancient historians, the topography and antiquities of this interesting country. What he now has presented in his Memoir is a systematical exposition of the final results of his studies, as far as topography is concerned. We may be proud to count among our publications what is probably the best treatise published hitherto on any part of ancient Indian Geography.

The country further to the north of Kashmir, the great Central Asian desert, has of late become more and more important to the student of Indian Antiquities. It appears that the numerous Buddhist ruins there contain many buried treasures, of which as yet only a portion has come to light. The discovery of the Bower Manuscript, written on birch bark in the fifth century A.D., first drew attention to this fact. Contrary to Indian experience, the dry climate of the sandy desert of Central Asia is very favourable to the preservation of anti-

quities, especially Manuscripts, and we may look to this country for many new and important discoveries. Dr. Hoernle, the decipherer of the Bower Manuscript, was the first to recognise this fact, and it was at his suggestion and through the influence of Sir Charles Lyall, who was then the Home Secretary to the Government of India, that the Indian Government issued orders to their Political Agents in Central Asia to secure any specimens of manuscripts and antiquities that they might hear of. The result has been a very large collection of Central Asian antiquities, which from time to time have been sent to Dr. Hoernle to be deciphered and identified, and to be finally deposited in the British Museum.

The first report on some of these, by Dr. Hoernle, has been published as Extra Number 1 of Journal Part I. It is illustrated by 19 plates, beautifully executed in photo-etching by the Survey of India Office, at the expense of the Indian Government. The Government also very liberally contributed a sum towards meeting the additional expenses involved in printing the text of this Report, which is devoted to coins, seals, and intaglios, and block-prints. The coins are very numerous and of various designations—Graeco-Bactrian, Indian, Muhammadan, and Chinese including even a Russian five Kopeck piece of the year 1758. One class, however, is of particular interest. These are copper coins inscribed on one side in Chinese, and on the other in an Indian language, the latter being written in the so-called Kharoṣṭhi script which was in use in the north-western corner of India during the last centuries before and the first after Christ. The Chinese legend gives the value and weight of the money only, while the Indian legend contains the name of the king who issued the coin. Dr. Hoernle distinguishes three, or perhaps five, of those kings, who all had a name beginning with *Gugra*, a word of very uncertain meaning. He assigns them to the period of 73-200 A.D. They were Uighur or Turki kings of Khotan, who reigned after the northern part of this kingdom had severed itself from its former connection with India, and had submitted to the Chinese empire. It is, as Dr. Hoernle says, owing to this fact that the Uighur coinage of Khotan was assimilated to the Chinese standard, and that its obverse legend, which had previously been Greek, was replaced by a Chinese inscription, while the reverse legend still continued to be expressed in the official Indian language and Indian-Kharoṣṭhi characters.

The block-prints are in a variety of unknown characters, which still wait for their decipherer. So much, however, is certain, that, in Dr. Hoernle's own words, they contain "interminable repetitions of the same text, which seems clearly to indicate that in these books we are

dealing with set formulas—creeds, prayers, or incantations, or whatever one may call them,—possibly or probably Buddhistic,—the virtue of which was supposed to be in proportion to their repetitions.” As regards the genuineness of these books, which has been doubted, Dr. Hoernle, after careful consideration of the evidence, decides in favour of all or almost all of the books examined by him.

At the last annual meeting, we had the pleasure of listening to an account by Professor Bendall of the results of a tour made by him and Mahamahopadhyaya Hara Prasād Shastri in Nepal in search of Manuscripts and Inscriptions. One of the results of this journey was the discovery of an old Manuscript of the poems of Vidyāpati, which in many important points differs widely from the versions now current in India. An edition of this interesting Manuscript is now being prepared by Mahamahopadhyaya Hara Prasād Shastri for the Bibliotheca Indica Series. He also has published in the *Proceedings* of the Society a notice of another interesting Manuscript discovered by him in Nepal. It is a Buddhistic work, the *Aṣṭāsāhasrikā Prajñāpāramitā*, which was written in Nālandā, the famous seat of Buddhistic learning in Behar, during the time of Mahipāla, in the beginning of the eleventh century A.D.

In connection with Manuscripts, I may mention that a list of all the Sanskrit Manuscripts kept in the Society's Library has been prepared by one of the Society's Pandits. It has been compiled on the same lines as the Catalogues of our Persian and Arabic Manuscripts, and it is published under the supervision of the Philological Secretaries. During the last year the first fasciculus has been issued. As no catalogue of our Sanskrit Manuscripts existed, it is hoped that the present list will supply a decided want, and that it will be welcomed by all those who take an interest in Sanskrit studies.

In the Bibliotheca Indica Series, a number of new publications, besides those already referred to, have been taken up during the last year. Among them is an English translation of Merutuṅga's *Prabandhacintāmaṇi*, by Professor Tawney. This work, among many legendary tales, contains some valuable historical information about the kings of Malwa and Gujarat, and is often referred to in Forbes's *Ras Mala*. The *Upamiti-bhava-prapañca-kathā* is the oldest collection in India of allegorical stories. It was composed in Sanskrit by a Jaina author, Siddharṣi by name, in the 9th century A.D. An edition of the same was begun by Professor Peterson; but, unfortunately only two fasciculi and the greater part of the third fasciculus had been finished at the time of his death. The work is now in the hands of Professor Jacobi of Bonn, one of the greatest living authorities on Jaina Literature.

Of Badaoni's *Muntakhabu-t-tawārīkh*, two volumes, dealing with the history of Muhammadan rule in India before Akbar, and with the history of Akbar himself, have been translated previously. The third volume, which contains a detailed account of the saints and learned men of Akbar's time, is now being translated by Captain Haig, who has already issued the first fasciculus of his translation.

During the last year, 346 treasure trove coins have been examined and described by the Philological Secretary. The greater portion of them belonged to Moghul Emperors. It was the fashion with many of those Emperors to inscribe Persian couplets on their coins. This is, however, extremely rare in the case of Muhammad Shāh, and only one such coin, struck at Surat, has yet come to light. Mr. Rodgers, who edited it, accordingly doubted its genuineness, but Mr. Irvine, in a short note published in last year's *Proceedings*, shows that this coin is quite in keeping with a statement contained in the *Misāt-i-Aḥmadi*, a Muhammadan history of Gujrat, and that we have no reason to doubt its genuineness. Dr. Hoey has published a note on the oldest gold coinage of India, the *suvarṇa*, which he believes to have been perforated pieces of gold with raised rims, similar to some pieces found by him in Set Mahet. It may be observed, however, that nowhere in India in historical times do we find perforated coins, like those of China, though we might expect to do so if it had once been a widespread fashion to use such pieces of metal as money. Moreover, on ancient reliefs such as those representing Anāthapiṇḍa in the act of covering the ground of the Jetavana with gold coins, we find gold coins represented as square pieces with some marks on them, probably intended for something like the so-called "Punch-marked" coins, of which, however, only pieces in silver or mixed metal have yet been discovered.

Finally, I may mention a short paper by Dr. Waddell, published in the *Proceedings*. Its object is to prove the identity of Upagupta, the high-priest of Aṣoka according to northern Buddhistic tradition, with Mogalliputta Tisso of the Pali Literature.

The Rev. H. B. Hyde published a note on the first marriage of Warren Hastings with the widow of Captain Buchanan, one of the victims of the Black Hole, and gave a revised list of the victims of that disaster. We may hope that Mr. Hyde will extend to the antiquities of Madras the talent for research which he displayed so conspicuously in Calcutta.

Part II. of the Journal has this year risen to three numbers, and a portion of the grant is still unexpended; some important papers have been published.

Major Alcock, I.M.S., has continued his contributions to Indian

Carcinology, and has published three papers, two of which are finished monographs, according to modern standards, of the groups with which they deal, namely the *Brachyura Cyclometopa* and the *Brachyura Primi-genia* or *Dromiacea*. The third is of more general and bionomic interest, and refers to the subject of commensalism between Zoophytes and Hermit crabs.

Mr. de Nicéville has worthily continued his work on Oriental Lepidoptera by a List of the Butterflies of Ceylon, and a brief paper by Dr. Hooper on the ancient drug Akakia has revived a branch of our subject which has long been without contributions.

For the rest, Ornithology has been unusually to the fore this year. The birds of Manipur form the subject of a paper communicated by Lieut. H. H. Turner, and a short note by Captain H. S. Wood, I.M.S., gives a much-needed account of the rare Hume's Bush-quail (*Microperdia manipurensis*) of that State. Lastly, the Natural History Secretary, Mr. Finn, has been able to make several ornithological exhibits, often of living birds, including specimens of the rare Bronze-Cap (*Eunetta fulcata*) and Clucking (*Nettion formosum*) Teals; and has described a new species of Bhimraj or Racket-tailed Drongo (*Dissemurus alcocki*) and also what has turned out to be the long-unknown summer-plumage of Hume's large Weaver-bird (*Ploceus megarhynchus*).

The biological work of the Indian Marine Survey is so intimately connected with the history of the Society that its progress during the year may be appropriately referred to here.

The long series of deep-sea investigations, which the Survey has been patiently carrying on for nearly fifteen years, and the results of which have hitherto been known only through preliminary communications, are now beginning to culminate in important monographs, the interest of which is quite as much bionomic and zoogeographical as faunistic. During the year there have been published volumes on the Deep-sea Madreporaria, the Deep-sea Brachyura and the Deep-sea Fishes by Major Alcock, and on the Deep-sea Ophiuroidea, by Dr. R. Koehler of Lyons.

Besides this, Major Alcock has published in the "Scientific Memoirs by Medical Officers of the Army of India" a summary of the Deep-sea Zoological work of the Survey."

The circular issued by the Society has borne fruit in a number of papers on folk-lore, which will be welcome to the numerous students in Europe who are at work on this fascinating subject. I may mention here that Mr. A. M. Jackson of the Bombay Civil Service, a well-known scholar and ethnologist, has had the circular translated and sent round to a number of village school-masters in Gujerat, whose replies

he will collate and examine as soon as he can find time to do so. The example is one that might be followed with advantage. In India, as in Europe, the great object of enquiries such as the circular suggests is to preserve and record those unwritten legends, superstitions, and traditions, the memory of which fades as popular education spreads. There is a certain fitness in employing the *Guru Mahásaya* to preserve that which it is his official function to destroy, and he has unrivalled opportunities for procuring exactly the information which we want.

Mr. Friend-Pereira's translations of some Khond (Kandh) songs enshrine some curious fragments of history and superstition which in a generation or two will probably have been forgotten. Passing by the lover's entreaty that the girl he is courting will 'gladden his liver by moving her body in the dance,' which recalls Horace's moral counsel "*Non ancilla tuum jecur ulceret ulla, puerve,*" we find a reference to the Páns, the helots of the Kandhs, who worked for them as weavers, and furnished the Meriali who was sacrificed to ensure good crops and general prosperity. The hymn to the earth god, which follows, is a revised version of an earlier and more ghastly hymn in which the human victim was apostrophised by the worshippers. It refers, however, to the original practice and its abolition by the "*sahab* sons" and "*pathán* sons," the latter being probably Muhammadan sepoy's employed on the suppression of human sacrifice, and it seems probable enough that the verses describing the magical effect of the tears and blood of the victim may have been simply passed on from the earlier hymn.

"Thou hast come, thou hast come, O curved-horn buffalo ;  
To thy death thou hast come.

\* \* \* \* \*

At present through fear of the *sahab* sons  
From thy shoulder we take the flesh ;  
Through fear of the *pathán* sons  
From thy cheek we take the flesh.  
In the country of former times  
We used to bury a human being.  
Do not cry out to me, O beautiful buffalo ;  
Do not cry out to me, O curved-horn buffalo.  
As the tears streams from thine eyes,  
So may the rain pour down in *Asár* ;  
As the mucus trickles from thy nostrils,  
So may it drizzle at intervals ;  
As thy blood gushes forth,  
So may the vegetation sprout ;



As thy gore falls in drops,  
So may the grains of rice form.

\* \* \* \* \*

O demon of the refuse heap,  
O demon of the dung-hill,  
Go you to sleep, go you to sleep.  
For twenty years sleep thou,  
O demon of the refuse heap ;  
For twelve years sleep thou,  
O demon of the dung-hill.  
Keep illness away, keep fever away,  
To you will I sacrifice a beautiful buffalo.  
Do not touch the children  
Be as one dead, O earth-god ;  
Do not touch the little ones  
O earth-god, O deaf, unheeding earth-god.

It is an excellent illustration of that singular system of departmental bogeydom which people have now agreed to call by the not very suitable name of *animism*, that the demons of the refuse-heap and the dung-hill should be entreated by sacrifice to keep illness and fever away. On this Mr. Friend-Pereira observes in a note, "It is remarkable that the Kandhs know that filth and decaying refuse are the principal factors in causing epidemic diseases. And yet their villages are anything but clean." But surely the Kandhs do not know anything of the kind. If they did they might perhaps remove their dung-hills. As it is they doubtless regard them as the homes of the fever demon whom they would naturally be reluctant to disturb, and it is the demon and not the dirt that in their view causes the fever. Having offered a suitable sacrifice they have done their part and must leave the rest to the heads of the fever department. That is the theory of the thing, and the practice too among most wild people that I know of. But I hope Mr. Friend-Pereira will inquire further. It looks as if he were on the track of very interesting discoveries.

I must permit myself one more extract which describes the administration of the Kandh country by Captain Campbell (Kaibon Sahib) in 1836-42 and Captain Macpherson (Mokodella Sahib) who succeeded him in 1842 and was the first agent for the suppression of human sacrifice and female infanticide under Act XXI. of 1845.

At the time of the great Kaibon Saheb's coming the country was in darkness ; it was enveloped in mist.

And how was the country enveloped in mist ?—there was murder and bloodshed ; conflagration of villages ; destruction of rice and crops.

Brothers and uncles sat together and deliberated how they were to act.

While they were discussing whether they would live or die the great Kaibon Saheb came.

All the people fled in terror ; the Saheb said, " brothers, uncles, fear not ; Maliko Knaro come to me."

Having sent *paiks* to collect the people of the land (they), having surrounded them, caught the *meria* sacrificers.

Having caught the *meria* sacrificers, they brought (them) ; and again they went and seized the evil councillors.

Having seen the chains and shackles the people were afraid ; murder and bloodshed were quelled.

Then the land became beautiful ; and a certain Mokodella Saheb came.

He destroyed the lairs of the tigers and bears in the hills and rocks, and taught wisdom to the people.

After the lapse of a month he built bungalows and schools ; and he advised them to learn reading and law.

They learnt wisdom and reading ; they acquired silver and gold ; then all the people became wealthy.

We may I think point to that as a *monumentum ære perennius* not merely of the pacification of the Kandhmals by the men whose names are still had in remembrance in curiously travestied forms by a grateful people, but of the methods to which British officers owe their success in dealing with primitive folk all over the world. We are greatly indebted to Mr. Friend-Pereira for rescuing from oblivion this and other Kandh songs, and I am sure you will join me in the hope that he will pursue his researches in a region which promises so well.

I am indebted to Mr. Holland for the following abstract of his paper on the Coorgs and Yeruvás which promises to do much to clear up the Ethnology of Southern India.

" In the little province of Coorg, which embraces a semi-isolated portion of the Western Ghats of South India, we have an interesting instance of the way in which a mountainous and jungle-covered country has been turned to totally different purposes by two distinct races. Like many of the aboriginal tribes of South India who have been compelled to retire to the unhealthy hills before the southward spread of the Aryans, the Yeruvás found in Coorg an asylum of refuge from the aggressive invaders, whilst the Coorgs, besides finding in the thick jungles the means for satisfying their hunting propensities, regarded the small plateau, with its steep and narrow approaches, as a natural *point d'appui* for predatory excursions into the country of their wealthier,

but less warlike, neighbours living on the rich agricultural lowlands around.

“The sporting and fighting proclivities of the Coorgs reveal themselves even in their festive and religious ceremonies. From his very birth, when a bow-and-arrow made from the castor-oil plant is placed in the hands of the small baby-boy, the Coorg male is, or at least in the old days was, regarded as a huntsman and a warrior, whose first pride should be in his size and physical strength. The selective influences arising from this have combined with many healthy habits to make the Coorgs the finest race, without exception, in South India.

“The unique privileges they enjoy in the system of administration, and, amongst other things, their exception from the provisions of the Disarming Act which was enforced after the Mutiny, are merely present-day expressions of the peculiarities in history which have distinguished Coorg from the rest of South India; and, assuming that the history of a country is necessarily dependent on native character, it is interesting to find by actual measurement that the Coorg people occupy amongst the races of South India a completely isolated position in regard to their physical characters as they do in history, tradition, customs and dress.

“The extensive and excellent researches by Mr. E. Thurston in the Madras Presidency enable us to show that there is at any rate no consanguinity between the Coorgs and the Dravidian races of the South. The traditions concerning their origin bear the stamp of comparatively recent manufacture, and their language being now a dialect of the Canarese prevalent in that region, we have no clue to their origin. Until, therefore, further anthropometric researches have been made in Peninsular India, the social affinities of the Coorgs must remain undetermined.

“The average height of the Coorg man is 168·7 cm. (5 ft. 6½ in.), which is only equalled by the Todas (169·6 cm.) amongst the native races of South India, all other tribes being below 165 cm. Their nasal index (72·1) is of a higher type than any of the people of the South except the nomadic Lambadis (69·1), who have a fair skin and speak an Aryan language, and the Sheik Mahommedans (70) who claim to be descendants of recent immigrants from the North. Regarded as percentages of the stature, they have a distinctly shorter foot, shorter fore-arm, and narrower span than the other tribes, and these characters are approximately coincident with what we generally consider to be concomitants of racial superiority. In many of these points the Coorgs are closely approached by the Todas; but they are sharply distinguished from these peculiar people by showing the only approach to brachy-

cephalism so far discovered in South India. With an average cephalic index of 79·9, the Coorgs just escape inclusion in Broca's class of sub-brachycephali. Of the other races in South India measured by Thurston, none is even mesaticephalic, whilst the Todas are decidedly dolichocephalic. The small tribe of 32,000 Coorgs thus occupy a completely isolated position amongst the races of the South.

“For the purpose of detecting any traces of aboriginal blood in the Coorgs I have made a comparative examination of the next largest caste in the province—the Yeruvas, with whom the Coorg have been in close contact from time immemorial. The Yeruvas in physical measurements and ethnographical characters fall into a group with the Kurumbas, Irulas, Paniyans and Kadirs—people of a very dark colour, curly hair, thick, slightly everted lips, feeble prognathism, distinctly platyrrhine noses (index 89·6), low stature (158·7 cm.), and comparatively long feet, long fore-arms, wide span and dolichocephalic cranium (73·6). By selecting from amongst the Coorgs those whose nasal indices are higher, more platyrrhine, more aboriginal so to speak, than the average, and from these picking out the individuals more dolichocephalic, that is also more aboriginal, than the average, we find that in the comparative length of arm, span, foot, and size of chest these do not show the slightest average tendency towards the Yeruva type. Conversely, by selecting from amongst the measured Yeruvas, those which have a higher type of nose than the average and from these separating the specimens which show a tendency towards brachycephalism, we find that in the other characters which distinguish the two tribes these Yeruvas do not show the slightest Coorg affinity. The actual figures will appear in the paper; but meanwhile it should be stated that these statements refer to averages; for whilst I have not found a single Yeruva who uniformly shows a tendency towards Coorg characteristics, I have met with two individuals with Coorg names, who, besides having longer heads and broader noses than their fellow-tribesmen, show also in all other points a tendency to conform to aboriginal characteristics. Accidents will of course happen in all communities; but I look upon the results of these experiments as a confirmation of Mr. Risley's assumption that the marriage customs resulting from the rigid observance of caste regulations render the methods of anthropometry superior in accuracy to all other forms of anthropological research, and on this account India offers an unusually favourable field for physical measurements.

“Whilst the origin of the Yeruvas clearly becomes part of ‘the Dravidian problem,’ the unique position of the Coorgs remains unexplained. Assuming that the tall, fair, dolichocephalic people of the

Punjab are actual descendants of the original Aryan invaders, Mr. Risley has traced the so-called Aryan type fading out in the direction of Bengal, where it comes into contact with Dravidian and Mongolian elements. But the recent researches of European anthropologists do not leave undisputed the assumption that the people who spoke the undivided Aryan tongue were dolichocephalic. On the contrary, many authorities profess to trace the source of the Aryan languages to the tall brachycephali who built the pile-dwellings of the Swiss and Italian lake country, and who showed their intellectual superiority to dolichocephalic Teutons by the domestication successively of the ox, the goat, sheep, pig, and horse; by the use of superior implements; by the practice of agriculture; and by other signs of a progressive civilization. Is it possible, then, that the Coorgs are a last remnant—a small “outlier,” to use an equivalent geological term—of the original Aryan invasion, and that the tall, fair, dolichocephalic tribes of the Punjab are a subsequent intrusion of people who, like the Teutons of Europe, had meanwhile adopted an Aryan language? The chain of evidence to support this assumption must necessarily have many weak links; but the discovery of the Coorgs shows that, besides the comparatively recent, so-called Aryan, trespass on Dravidian territory, there is a chapter in the anthropological history of India which remains still to be deciphered.”

I desire to add my testimony to that of Mr. Holland as to the great value of Mr. Thurston's anthropological work in Madras. In his report on the administration of the Government Museum at Madras for the year 1898-99, Mr. Thurston gives only too brief an account of his recent operations. He made a tour last year among the Malaiális of the Shevaroy hills, who, though calling themselves hill-people and living on the summit and slopes of the hills, turn out to be merely Tamils who migrated from the plains—probably from Conjeveram—in comparatively recent times. Can it be that the affectation of coyness with which these people received Mr. Thurston was due merely to the apprehension that their pretensions to be genuine hill-men were about to be unmasked? On the Malabar coast Mr. Thurston examined Cherumans, Tiyans and Eurasians—the latter a type which anthropologists have as yet taken little notice of. He went on to deal with the Kádírs of the Anamalai hills, “the existing remnant of a once more numerous race.” These people alone in India resort to the practice common in Africa and the Malay Archipelago of chipping the incisor teeth of both sexes to a sharp point. They also climb trees by means of pegs in a fashion which corresponds in every detail to that followed by the Dyaks of Borneo.

It is a matter for congratulation that an area which promises to prove exceptionally rich in all kinds of survivals should have been taken in hand by such competent inquirers as Messrs. Holland and Thurston. To their names I may add that of Mr. Mullaly, now Assistant Inspector-General of Police in Madras, whose researches among the criminal tribes of the Presidency are well-known and have an interest far beyond the limits of his Department.

An equally interesting and even less-known area on the north-east frontier, the valley of the Brahmaputra and the adjacent ranges of hills, has been taken in hand by our Anthropological Secretary, Major Waddell, who is specially qualified for the task by his anthropometric researches among the Himalayan tribes of Sikkim, Eastern Nepal, and British Bhutan, the Kochh of Northern Bengal, Tibetans from all parts of Tibet, including the valley of the Tsangpo, the Upper Brahmaputra, and also most of the tribes of Burma as far up as the Kachins or Singphos above Bhamo on the confines of China and Assam. Major Waddell's observations, which will be published in an early number of the *Journal of the Society*, will furnish exact details of the physical type of the tribes of Assam and the Brahmaputra Valley and will include a record of the colour of the skin and eyes—the first attempt of the kind in India. The opening paragraphs of his paper, which he has kindly permitted me to quote, describe the almost untouched field which his researches will open up:—

“Few of the wilder parts of the world, still left, preserve such a vast variety of savage tribes of such great ethnological interest as the mountainous valley of the mighty Brahmaputra, in its course from Lower Tibet to the Bay of Bengal. And in few localities has the war of races raged more fiercely.

“This hilly region, standing up between China, India, Tibet, and Burma, has come to be the last refuge of scattered families of the more primitive hordes from each of those countries. Driven into these wild glens, by the advance of civilization up the plains and lower valleys, they have been hemmed in among the mountains, where, pressing on each other in their struggle for existence, they have developed into innumerable isolated tribes, differing widely in appearance, customs and language; but all alike engaged in blood-thirsty feuds, head-hunting, and murderous raids on their more defenceless neighbours. Many of them are of that extremely barbarous type which is popularly associated with South Africa. Almost equally painful, too, was the condition of the rich plain fringing the great river—the plain of Assam whose history

<sup>1</sup> *Journ., Anthropol. Inst.*, Vol. xx. (1891), p. 241.

up till the British occupation, was one long tale of inter-tribal conflict, invasion and cruel extermination.

“These wild hillmen, however, bordering the valley, were little affected by the British occupation for a long time. They proved to be so hostile, and their country so impenetrable, that, although a large section of their mountains had for many years lain nominally within the British territory of Assam and North-Eastern Bengal, our Government was content to leave them and their country alone, except for an occasional expedition and the establishment of a few military outposts, to punish a particular tribe for raiding or massacring British subjects.

“Since, however, the extension of the tea industry and other European interests in Assam, and still more so since the annexation of Upper Burma in 1886, the Indian Government has been actively opening up and settling that large section of these mountains on the southern side of the valley, between Assam and Upper Burma, in order to put a stop once for all to that murderous raiding by the tribes, which has been a perpetual terror and menace to all civilization in their neighbourhood.

“Following disarmament and the military occupation of several parts of the hills, roads and, latterly, that most powerful of all disintegrating social factors—the railway—are being rapidly pushed through amongst the dreaded hills. And this development is not likely to relax, for this tract is on the direct route from India to the heart of China. Already, it is said to be no uncommon sight to see a *Naga* who only two or three years ago was a naked head-hunting savage of the most pronounced type, now clad in a tweed coat and carrying a Manchester umbrella, taking his ticket at a railway station.

“Unfortunately for science, however, no steps are being taken to record the rare vestiges of prehistoric society which still survive here; but which are in danger of being swept away by our advancing civilization. Beyond a few fragmentary lists of words in several of the dialects and some grammars, which after all are of secondary importance, extremely little is known of the most interesting tribes in this part of Indo-China. The little that is known is just sufficient to show that some of them are in many respects in a much more primitive condition than the wildest tribes of India; and that here, almost at our very doors, is a unique mine of unexplored material to yield the very kind of unrecorded information which Professor Tylor and those others who have raised Anthropology to a science, have shown the urgent necessity for fixing without delay; and for which they have been ransacking the few remaining wilder parts of the world before the surviving traces of prehistoric usage are irretrievably lost.

“Thus, for example, in this part of Indo-China still persists, amongst the *Garos*, *Kasias* and the wilder *Koch* tribes, that once widespread stage of primitive society, about which so little is known—the ‘maternal’—in which descent is traced through the mother, and not through the father, as in civilized society, thus implying a somewhat promiscuous state of the family. Others again, such as the *Miris*, are in a transition-stage from the maternal to the paternal. They retain survivals of the maternal stage; but appear only recently to have adopted the paternal. For, as if to emphasise the change and to show that the father has a direct relation to his child, the father is represented as a second mother and goes through the fiction of a mock child-birth, the so-called *couvade*. He lies in bed for forty days, after the birth of his child; and during this period he is fed as an invalid. The *Kukis* and ‘*Kacha*’ *Nagas* seem also to be more or less in this transition-stage while the other *Naga* tribes appear to be in a more communal state, the exact nature of which, however, as well as its relation to the others, is not yet clear. And adjoining tribes practise polyandry, polygamy, and the Levirate.”

I should like to commend this sketch of the material awaiting the ethnologist in Assam to the notice of my friend Mr. Andrew Lang, who said to me in England the other day, “You have got nothing primitive in India.” One may fairly ask in reply what is it that entitles people to pose as primitive? If dispensing with clothes is the test we may point to the ‘naked’ tribe of *Nagas* described by Mr. Davis, who are nude and antique enough to satisfy anybody; to the *Juangs* of *Keanjhar*, whose women until quite recently wore nothing but a couple of bunches of leaves stuck under a girdle of beads; and to the curious survival mentioned by Mr. Clayton in Part III. of the *Journal* for last year, where he describes how at the temple of the goddess *Bavaniyam-mal*, in a village only sixteen miles from *Madras*, the worshippers, including *Brahmans* and the respectable agricultural caste of *Vellalās* strip themselves naked and circumambulate the shrine clad only in leaves of the sacred *neem* tree (*Azadirachta Indica*). If eccentric modes of marriage are the point to be looked to, we have in *India* a large and varied selection embracing both forms of polyandry, the fraternal and the promiscuous, the latter of which has given rise in *Malabar* and in the north of *Ceylon* to an elaborate law of property under which a man's *proximus haeres* is his sister's son. In *Bengal* an equally elaborate law has arisen from a system of ancestor worship, none the less primitive for the fact that its development, so far from being arrested, seems to have been stimulated by the fostering care of the *Privy Council*. *Exogamy* prevails everywhere in forms which are instructive for their variety and for the light which they throw upon



the probable origin of the practice. Totemism survives over large areas among strong and well organised tribes who show no signs of dying out and on occasion assert themselves with inconvenient vigour. As for taboo, which is usually considered to be one of the distinctive characters of primitive man, the whole country is alive with it; and the caste system itself may be plausibly described as nothing more than a highly specialised and complicated application of the same principle.

Before leaving this branch of the subject I should like to make mention of the very admirable ethnographic work that has been done in the series of Caste Hand-books for the Indian Army, by Major Vansittart, Captain Bingley and Captain Nicholls, and to express a hope not only that that work may be continued so as to give us a complete account of all the tribes and races represented in the Indian Army, but also that officers with a taste for such studies will pursue them on the lines laid down in 1885 at the Lahore Conference on Ethnography by Mr. Ibbetson, Mr. Nesfield and myself and will send us from time to time for publication in the *Journal* notes or monographs giving the results of their inquiries.

Having reviewed in a rather summary fashion the work done by our Society and by others during the year I shall now take a dip into the future and sketch what I think ought to be done and might be done, at no great cost and without putting any undue strain on existing machinery, to open up and render accessible to the world the great store of ethnographic facts which India still offers to those who are willing to seek for them. In doing this I shall take as my text the following letter (the substance of which was published in the *Times* some months ago) which my friend Sir George King informs me has been addressed by the Council of the British Association to the Secretary of State for India.

“At the meeting of the British Association for the Advancement of Science at Dover, attention was called to the special opportunity offered by the Census about to be taken in India for collecting valuable ethnographical data concerning the races of the country; and the Council of the Association having taken the matter into consideration, and being impressed by its scientific importance, have requested me, on their behalf, to bring to the notice of Her Majesty's Government the valuable scientific results which might be obtained by means of the Census.

“The results of the Census itself constitute, of course, by their very nature, an ethnographical document of great value; and my Council feel that, without overburdening the Officers of the Census or incurring any very large expense, that value might be increased to a

very remarkable degree if to the enumeration were added the collection of some easily ascertained ethnographical data. They are encouraged to make this suggestion by the reflection that the Census Commissioner is an accomplished ethnographer, well known by his publication on the Tribes and Castes of Bengal, the valuable results of which would be supplemented by the inquiries now proposed. They feel confident that with his aid, and under his direction, most important data may be obtained at a minimum of effort and cost. I may add that should the suggestion which my Council desire to make be carried out, a great step will have been taken towards establishing a uniform method of ethnographical observation in India—a matter of great scientific importance.

“ Stated briefly, what my Council desire to see carried out is as follows:—

“ 1. While collecting the ordinary information for the Census, to obtain such data of the physical and sociological characters of the jungle races—Bhils, Gonds, and other tribes of the central mountain districts—concerning which our information is at present very limited. These data would furnish the basis for a true estimation of the number and distribution of the tribes in question, and thus powerfully contribute to a sound classification of the races of India.

“ 2. In a similar manner to verify and add to the knowledge which we already possess of the Naga, Kuki, and other cognate races of the Assam and Burmese frontiers, and of the vagrant and criminal tribes—Haburas, Beriayas, Sansiyas, &c.—in North and Central India.

“ 3. To collect physical measurements, particularly of the Dravidian tribes, and of the Rajputs and Jats of Rajputana and the Eastern Panjab. Such data will be of the greatest service, in throwing light on the important and difficult problem of the origin of these tribes and their relation with the Yu-echi and other Scythian races.

“ 4. To obtain, so far as can be done without too great labour and expense, a series of photographs of typical individuals of the various races, and if it should be practicable, of views of archaic industries, &c. This, which might be accomplished by placing photographers at the service of the Census Officers, would be the commencement of an Ethnological Survey of India similar to and certainly no less important than the Archæological Survey of which the Government of India may so justly be proud.

“ My Council, in considering the above proposal, have been assisted by a Committee of gentlemen possessing special knowledge of the subject in question, and I am to add that this Committee will be pleased to place themselves at the disposal of Her Majesty's Government to

assist in the proposed investigation. If it should seem desirable to Her Majesty's Government, the Committee are prepared to put themselves into direct communication with the Officers of the Census, who, however, the Council have reason to believe, are fully capable of carrying out the details of the investigations proposed."

It will be seen that the proposals of the Association comprise

- (1) Ethnography, or the systematic description of the history, structure, traditions, and usages of tribes and castes.
- (2) Anthropometry, or physical measurements directed to the determination of types.
- (3) Photography of typical members of particular castes and tribes and if possible of archaic industries.

Now as regards the first of these it is clear that nothing of the nature of a comprehensive ethnographic survey can be undertaken as part of the Census procedure. At the same time we may be sure that on this, as on previous occasions, the Census will be the means of bringing to light and placing on record much valuable knowledge which would otherwise have been lost. An instance of what I mean is to be found in Mr. A. W. Davis's admirable monograph on the Nagas printed as part of the Assam Census Report of 1891. I saw Mr. Davis recently in Assam, and I am glad to be able to announce that he has consented to rewrite his monograph, embodying in it a quantity of fresh material which he has since collected, and to publish it as a paper in the *Journal* of this Society. To those who, like myself, have long been watching with regretful eyes the passing away of primitive usage with the spread of Hinduism and Islam it is pleasant to hear that this process of disintegration has not as yet gone very far in Assam. Mr. Davis assures me that the characteristic tribes of that Province, and particularly the Nagas, have parted with none of their distinctive customs, except that of cutting off their neighbour's heads, which the most enthusiastic ethnologist will hardly regret. In head-taking as practised by the Nagas there seems to have been no vestige of even savage chivalry. One head was as good as another, and a Naga who had surprised and mutilated a helpless child or woman considered that he had earned as good a title to manhood as if he had killed a full-grown warrior in fair fight. The existence of the practice has no doubt helped to keep meddlesome strangers out of the hilly tracts, while of the Province generally it may be said that the absence of railways, the prevalence of the deadly form of malaria known as *Kála Azár*, and the peculiar system of land tenures, under which there are no Rajas to create *brahmottar* and *pirottar* tenures for the benefit of their spiritual advisers, have combined to deter the Brahman and the Hadji

from exploiting what is, when once you have got there, a fertile and attractive country. An instance or two of the customs which have thus been kept alive may be of interest. We find in the *khels* or tribal septs of the Nagas a complete example of the exogamous group of blood relations, dwelling apart in its own territory and more or less at war with the rest of the world, which Mr. McLennan and others believed to be the earliest organised unit of human society. Hitherto the only surviving specimen of the exogamous sept as reconstructed in Mr. McLennan's famous essay has been the *gochi* of the Orissa Kandhs, which I came upon and described some years ago. But the Kandh *gochis* live at peace with one another, and to that extent have fallen away from their primitive condition; while the Naga *khel* fortifies its quarter of the villages with a stockade, a deep ditch full of bamboo calthrops, and a craftily devised ladder, and is for ever at war with its immediate neighbours. During the next few years I hope we may have more light thrown upon the internal structure of the Mongolian and semi-Mongolian tribes of our eastern borders, which has always been a bit of a puzzle. Meanwhile I venture the conjecture that further inquiry will show the *khel* or exogamous sept to be the original unit of their organisation, the tribal names by which we know them referring merely to locality or to some personal idiosyncrasy, such as an aversion to wearing clothes, which may have struck their neighbours as distinctive.

Another subject of which I hope we may hear more is that of the picturesque oaths and ordeals in vogue among some of these people for the purpose of settling disputes. The Nagas for example have the most intense belief in the binding virtue of an oath when properly taken. The litigant who appeals in this fashion to the judgment of the powers unseen, bares his right arm and shoulder, plants one foot firmly in a noose of rope laid on the ground, and swears aloud in an elaborate formula, settled by much preliminary haggling with the other side, in which he devotes not himself only, but all the members of his *khel* or blood-kin to an early death if his cause is not good. Even if he is prepared to take risks himself, the *khel* see to it that their lives are not rashly sworn away. Still there are loop holes of which an adroit person may avail himself. If the opponents have weakly agreed to a loosely worded oath, or if in the most formidable oath the swearer can manage to skip or slur over an important word, he may win his case triumphantly without provoking divine intervention. Mr. Davis, who is well known as a leading authority on the Naga languages, told me that he had himself on several occasions detected a man in the act of slipping or mispronouncing a word. When called upon to repeat it he at once withdrew his foot from the noose, declined the ordeal and threw up his

case. Classical parallels will occur to everyone, and I am also reminded of a dramatic form of oath which was used in my own court when I was Subdivisional Officer of Govindpur in Maunbhum. A piece of a tiger's skin was tied on to the railing of the witness box, and every Santal who gave evidence took the skin in his hand and swore in his own language a terrible oath which began by apostrophising the moon and ended with an invitation to the tiger to devour him if he swore falsely. I am not prepared to vouch for the efficacy of the sanction, but every now and then it was apparent that a witness was anxious to shirk holding the skin or tried to let go of it before the final adjuration *kul jamáin* "May the tiger eat me" had been reached.

The Kuki and Garo ordeals are of a different and more material type. Kuki disputants walk side by side into water holding their heads well back until the water reaches their mouths. The man who first chokes for breath loses his case. The Garos, so Captain Howell tells me, dive together into a deep pool, catch hold of a rock at the bottom and hold on as long as they can. Judgment is entered in favour of the man who comes up last; and cases are known of sturdy litigants getting themselves drowned in the process but winning the suit for their kith and kin beyond all possibility of appeal. The practice is a fairly ancient one, and is not confined to the Garos. Three hundred years ago, in 1586, Master Ralph Fitch, the first Englishman who visited Burma, found it prevailing among the people whom he calls Pegues:

"The Pegues if they have a sute in the law which is so doubtfull that they cannot well determine it, put two long canes into the water where it is very deepe: and both the parties go into the water by the poles, and there sit men to judge, and they both do dive under the water, and he which remaineth longest under the water doth winne the sute."

To return from this digression to the proposals of the British Association. The illustrations I have cited show that now and again an excellent monograph may be got from some one who has special knowledge of the usages of a particular tribe, while scraps of more or less interesting information may be picked up by anyone with a taste for such things. But we want more than this. Before all vestiges of primitive custom are swept away by the action of proselytism on the one side and education on the other aided, as I have elsewhere pointed out,<sup>1</sup> by the recent extension of railways, we ought to have a systematic ethnographic survey of those parts of India which have not already been dealt with. The cost of such a survey would not be great; the

<sup>1</sup> Tribes and Castes of Bengal, Vol. i., p. xxix.

lines on which it should proceed have already been laid down and have been tested by experience in two large Provinces; and in undertaking it the Government of India would merely be doing what the United States and the Government of Netherlands India have done long ago, and what I understand is now about to be done by our own Colonial Office for the large populations of savage races which the expansion of the Empire has recently brought under its control. Of the scientific arguments for undertaking such a survey it is needless to speak; but looking at the question from the point of view of practical administration I may be permitted to point out that the task of governing a great congeries of races, tribes and castes among whom diversity is the rule and uniformity the exception, and who at present show no sign of evolving a compact social type, demands above all things for its successful accomplishment some systematic acquaintance with the vast body of custom with which Government is brought into contact at an infinite number of points. Where knowledge means influence, knowledge is power. A learned Professor who came to India some fourteen years ago to study philosophy and published, besides an exhaustive treatise on his own subject, a delightful account of his personal experiences, tells in the latter volume a story which illustrates this principle. He says that just before the Census of 1881 there arose in certain Indian districts an extraordinary rumour that the people of certain tribes were to be branded and deported, the men to carry hospital litters in Afghanistan and the women to pluck tea in Assam. Not unnaturally the tribes in question, numbering several hundred thousand, stampeded *en masse* into the jungles and declined to be censused on any terms. It happened that two of the local officials, in places many hundred miles apart, were interested in tribal customs and had influence enough with the tribes to induce their headmen to come in and talk things over. In each case whisky loosened their tongues and in each case they were led to ask why they were being counted. To this question one official, who was of a prosaic turn of mind, replied by asking "If you hide away and won't let me count you how am I to know how many of you will want rice in the next famine"? The other, a Colonel in the Central Provinces, who added to a sense of humour some acquaintance with Indian folk-lore, gravely told them, as one would tell children a fairy-tale, how, so many months before, Her Majesty the Maharāni and the Kaiser-i-Rūs (the Emperor of Russia) had been dining together. "Now when they had finished their curry and rice and were smoking their hookahs, they got quarrelling as to who had the most ryots. And he said he had, and she said she had, and they could not agree. So at last they made a very big bet (*pan lagāyā*), and ordered all their subjects to be counted. That

is why I want to count you now, and if you don't come in and let me do it the Queen will lose her bet and your faces will be blackened for ever." In either case the manoeuvre was successful; the tribesmen returned to their villages and the Census went off without a hitch. But the discussion which ended in this happy result would have been altogether impossible but for the friendly relations which had been already established on the common ground of ethnography.

I have taken my illustration from Census but a dozen other branches of official business would have served my purpose equally well. Take famine for example. Different tribes and different castes feel the stress of scarcity in different ways; they require different treatment, and some of the most conspicuous failures of our famine administration in the past have been due to ignorance of the usages and traditions of the people with whom we had to deal.

Under the head of anthropometry the British Association wish that the opportunity of the Census may be taken "to collect physical measurements, particularly of the Dravidian tribes, and of the Rajputs and Jats of Rajputana and the Eastern Panjab. Such data will be of the greatest service, in throwing light on the important and difficult problem of the origin of these tribes and their relation with the Yuechi and other Scythian races."

As I am responsible for having introduced anthropometry into India under the guidance of the late Sir William Flower and Professor Paul Topinard of Paris, I should like to say a few words about the history of the method of observation now known by that uncomfortable name. The idea of applying instruments of precision to the measurement of the human body was familiar to the Egyptians and the Greeks, both of whom appear to have made extensive experiments with the object of arriving at a 'canon' or ideal type showing the proportions which various parts of the body should bear to the entire figure and to each other. Such canons were usually expressed either in terms of a particular member of which the rest were supposed to be multiples, or in fractional parts of the entire stature. Thus the Egyptian canon, according to Lepsius, is based on the length of the middle finger and this measure is supposed to be contained nineteen times in the full stature, three times in the head and neck, eight times in the arm, and so forth. The Greek canon on the other hand, as restored by Quételet, expresses the limbs and other dimensions in thousandth parts of the entire stature. Concerning this canon a curious story is told by Topinard, not without interest in its bearings upon the relations of Egyptian and Greek art. In 1866 the eminent French anthropologist, M. Paul Broca, was asked on behalf of M. Fock, who was engaged in

the attempt to reconstruct the Greek standard, to provide a skeleton corresponding in its proportions to certain measurements derived from an examination of the Belvedere Apollo. After some search Broca found in the Museum of the Anthropological Society at Paris a skeleton of the type required. It was that of a Soudanese negro named Abdullah, and from this Broca concluded that the famous statue of Apollo had been modelled on the Egyptian canou, which in his opinion had been derived by Egyptian sculptors from the study of the Nubian negroes whom they employed as models.

The Roman canon handed down in the treatise *De Architecturâ* of Vitruvius was taken up and developed in the early days of the Renaissance by Leo Battista Alberti, himself, like Vitruvius, an architect, and a curious enquirer into the secret ways of nature and the human frame. Forty years later Leonardo da Vinci, in his *Trattato della pittura*, expressed the general opinion that the proportions of the body should be studied in children and adults of both sexes, and refuted the opinion of Vitruvius that the navel should be deemed the centre of the body. Following Leonardo's suggestions, Albrecht Dürer addressed himself to the task of working out the proportions of the body for different ages and sexes, for persons of different heights, and different types of figure. In his 'Four books on the proportions of the human figure,' published at Nürnberg in 1528, the year of his death, Dürer also discussed the difficult question of the so-called 'orientation' or adjustment of the head in an upright position, and he is believed by the authors of the *Crania ethnica* to have also anticipated Camper's invention of the facial angle. Jean Cousin, a French contemporary of Dürer's, took the nose as his unit of length, and represented the ideal head as measuring four noses, and the ideal stature as equivalent to eight heads or thirty-two noses. Cousin's system, slightly modified by Charles Blanc, holds its own at the present day as the *canon des ateliers* of French artists, preference, however, being given in ordinary parlance to the head rather than the nose as the unit of length.

All these canons, it will be observed, approach the subject purely from the artistic point of view, and, so far from taking account of the distinctive characters of particular races, incline to sink these in the attempt to frame a general canon of the proportions of the body which should hold good for the whole of mankind. Such an endeavour would be foreign to the purpose of anthropology, which fixes its attention on points of difference rather than of resemblance, and seeks by examination and analysis of such differences to form hypotheses concerning the genesis of the distinct race stocks now in existence. It would perhaps be fauciful to trace the germs of anthropometric research in the state-



ment of Herodotus that the skulls of the Persian soldiers slain at the battle of Plataea were thin, and those of the Egyptians were thick, or, to cite his explanation, that the former lived an indoor life and always wore hats, while the latter shaved their heads from infancy and exposed them to the sun without covering, as the earliest instance of the modern scientific doctrine of the influence of external conditions. But when Ctesias speaks of the small stature, black complexion, and snub noses of the inhabitants of India, we feel that the description is precise enough to enable us to identify them with the *Dasyus* and *Nishādas* of early Sanskrit literature, and we are almost tempted to wonder whether the Greek physician, who was doubtless acquainted with the canon of Polykletus, may not have devised some accurate method of recording the racial characteristics of which he was so accurate an observer. Curiously enough the famous potter, Bernard de Palissy, was the first to throw out, in a humorous dialogue published in 1563, the idea of measuring the skull for purposes other than artistic. The passage quoted by Topinard is too quaint to be omitted here:—"Quoy voyant il me print envie de mesurer la teste d'un homme pour sçavoir directement ses mesures, et me semble que la sauterelle, la règle et le compas me seroient fort propres pour cest affaire, mais quoy qu'il en soit je n'y scu jamais trouver une mesure osseuse, parce que les folies qui estaient en ladite teste luy faisaient changer ses mesures."

Palissy however cannot be seriously put forward as the founder of scientific craniometry and that title perhaps most properly belongs to the Swedish naturalist Anders Retzius who in 1842, hit upon the device of expressing one of the chief characters of the skull by the relation of its maximum breadth to its maximum length, the latter being taken to be one thousand. In this way he distinguished two forms of skull—the *dolicho-cephalic*, in which the length exceeds the breadth by about one-fourth, and the *brachy-cephalic*, in which the length exceeds the breadth by a proportion varying from one-fifth to one-eighth. Thus according to Retzius the Swedes are *dolicho-cephalic* in the proportion 773 : 1000, and the Lapps *brachy-cephalic* in the proportion 865 : 1000. He also distinguished two types of face—the *orthognathic*, in which the jaws and teeth project not at all, or very little, beyond a line drawn from the forehead, and the *prognathic*, in which this projection is very marked. His classification of races was based upon these characteristics. In 1861 M. Paul Broca improved Retzius' system by expressing it in hundredths instead of thousandths, by introducing an intermediate group called *mesati-cephalic*, ranging from 77.7 to 80 per cent., and by giving the name of cephalic index to the relation between the two diameters. From time to time other characters have been added to the

scheme such as the proportions of the nose, the dimensions of the face and forehead, the protuberance of the cheek bones, the facial angle, the stature in relation to the weight, the colour of the eyes and hair, and the transverse section of the hair as observed with a microscope. These later developments have the authority of Broca and Topinard in France, of Virchow in Germany, and of Sir William Flower, Dr. Beddoe, Dr. Garson and Mr. Francis Galton in England.

This is the method which the British Association desire to see extended in India. Let us first take stock of what has already been done. For Bengal the North-West Provinces and the Panjab we have a fairly complete series of measurements taken under my supervision in 1885-88, while for the N.-W.P. alone a second large series was taken by Captain Drake-Brockman some years later. Certain measurements were also taken by Mr. E. J. Kitts on a slightly different system. For Southern India there are Mr. Thurston's and Mr. Holland's observations supplemented by a series of measurements taken for this Society under my directions by Babu Kumud Behari Samanta in 1892, and including the Cingalese, the so-called Moormen of Ceylon, and a number of Tamils from the East coast of Madras. Major Waddell's researches will I understand cover the whole of Assam, parts of Tibet and the region of the Eastern Himalaya and some of the Burmese races. For the extreme north-west of the Empire we have a small but very interesting set of measurements of Hunzas, Nagars and Kafirs which I had the good luck to get taken when Sir George Robertson brought these people to Calcutta some ten years ago. Savages as they were, their chiefs, who claimed to be descendants of Alexander, looked as if they had stepped down from a Greek vase of the best period and their measurements, especially that of the facial angle, seemed to confirm this impression.

In order to give full effect to the recommendations of the British Association we ought now to extend the measurements to the areas which have not yet been dealt with selecting in each case those castes and tribes typical of the area. We must at the same time endeavour to fill in any gaps that may be found in the existing series of measurements. There will, I believe, be no difficulty in settling for any given area what groups should be regarded as typical. For assistance in the work of measurement we may I trust look to the officers of the Indian Medical Service and the Royal Army Medical Corps who have always been ready to further the aims of scientific research in India.

The results of the large series of measurements taken in Northern India were set forth in a paper read at the meeting of the British Association at Newcastle in 1889 and published under the title 'The

**Study of Ethnology in India** in the *Journal of the Anthropological Institute*, vol. xx, p. 235, in the following year. The conclusions then stated were accepted by Sir William Flower in his address as President of the British Association at Oxford; and were confirmed by the elaborate analyses of the figures subsequently published by Professor Topinard and Dr. Beddoe. They were, however, of a very general character and no attempt was made to press them into detail or to make them the basis of a minute classification of the various castes according to their supposed racial affinities. For this there were two reasons. In the first place some of the measurements, though introduced with the approval of Professors Flower and Topinard were admittedly experimental and it seemed desirable to await the judgment of experts before proceeding to generalise from the results; and secondly, it was doubtful whether a large series extending over a wider area might not introduce data pointing to quite different conclusions. A Provincial boundary is after all merely an arbitrary limit and it may well happen that the real clue to the origin of a tribe is only to be found by following it beyond the border of another Province. The great Kochh tribe is a case in point. Looking at them from the Bengal side one is inclined to say that on the whole Dravidian characteristics predominate over Mongolian, but in Assam the converse seems to hold good and it becomes obvious that a larger series and a wider view is necessary to settle the point. In connexion with this tribe my friend Major Prain has given me some interesting information which brings his researches in economic botany into relation with ethnology and supports the view that the Kochh are of Indo-Chinese rather than Dravidian origin. It seems that the northern districts of Bengal, Rungpur, Bogra, Dinajpur, Purnea,—the country north of the great Ganges and east of the Kosi—are marked by the cultivation of a considerable number of crops, particularly cold weather ones, which are peculiar to themselves or at any rate which do not extend further south or further west into either the lower or the upper Gangetic plain.

The commonest field Sāg in the whole of this area is what the people term Lapha, which is a Mallow (*Malva verticillata*). This is hardly met with anywhere else in India. A very common garden Sāg is the Lahi Sag, a cabbage mustard (*Brassica amcifolia*) also grown largely in the Assam valley but not elsewhere grown in India.

A widely cultivated oil-seed is a *Chrysanthemum*, (*C. coronarium*) commonly cultivated in Assam and in Burma but hardly if at all cultivated elsewhere in India.

The plant which the people grow for its fibre and use almost exclusively for making fishing nets and ropes for dragging their boats

is what they term Kankhera which is the plant we know as Riha *Boehmeria nivea*—the China grass or Ramie). This is also grown in the whole of the Assam valley for the same purposes but is never grown by the native inhabitants, in any other part of India. The *Boehmeria* and the *Chrysanthemum* are certainly, the *Brassica* is almost certainly of Chinese origin, while the employment of this Mallow as a vegetable is a Chinese usage. This incursion of botany into the domain of ethnology is, so far as I know, an entirely new departure and we may hope that Major Prain will find leisure to develop it.

One curious misapprehension I may take this opportunity of clearing up. In a sketch of the caste system which appeared in the *Revue des Deux Mondes* in 1894, and has since been published as a separate volume, M. Senart did me the honour of noticing at length some speculations of mine as to the origin of caste. In discussing the nasal index, the percentage of the breadth of the nose on its length, which Professors Flower and Topinard agree in regarding as the best test of race distinctions, I had pointed out that in certain parts of India, if a series of castes were arranged according to their nasal index, that order would be found to correspond substantially with the accepted order of social precedence. I went on to say "it is scarcely a paradox to lay down as a law of the caste organisation in Eastern India that a man's social status varies in inverse ratio to the width of his nose." On this M. Senart remarks:—"M. Risley aboutit à cette affirmation singulière, au moins d' aspect: 'C'est à peine une exagération d' établir comme une loi de l'organisation des castes dans l'Inde Orientale, que le rang social d'un homme varie en raison inverse de la largeur de son nez.' Qui ne resterait un peu sceptique"? Who indeed, if I had really made the *affirmation singulière* which M. Senart imputes to me? What I did say was something quite different. M. Senart's criticism in fact rests on a mistranslation. *L' Inde Orientale* means the whole of India—the East Indies as one might say; "Eastern India" means the eastern part of India to which, as appears clearly enough from the context, my remarks were limited. The expression is used in much the same sense by Mr. Montgomery Martin as the title of the well-known work—a sort of county history of part of Bengal—which he compiled in 1838 from the manuscript records of Dr. Francis Buchanan's survey, and by Sir Joseph Hooker in his introduction to the *Flora Indica*.

The British Association suggest in particular that anthropometric observations will throw light on the important and difficult problem of the origin of the Rajputs and Jats of Rajputana the Eastern Panjab and their relation with the Yu echi and other Scythian races. Now

who were the Yu-echi and why should they be supposed to be connected with the Jats and Rajputs? To answer the question fully would require a volume but some brief answer is necessary to explain the proposals of the Association. According to Chinese authorities quoted by De Guignes,<sup>1</sup> shortly after the building of the Great Wall of China a people called Yue-chi were expelled about 200 B.C. by the Hiungnu or Huns from their original settlements on the East of Lake Lob and driven westward. On their march they separated into two bands, the smaller of which made its way into Tibet, while the larger body took possession of the country between the Jaxartes and Oxus, where they are shown by Klapproth as settled in 31 B.C. Klapproth<sup>2</sup> says they were of the same race as the Khiaug, whom he describes as the aborigines of China. From Transoxiana the Yu-echi are said to have spread to Khwarism and Bokhara, and thence to the country on the Indus, where Tamerlane on his arrival in 1398 "recognised his old antagonists in their distant colony."<sup>3</sup> Here they were in power for several centuries, and were known to the classical geographers as Getæ. Mr. Keane<sup>4</sup> supposes that the Yu-echi were a people of Turki stock who entered India as conquerors, bringing with them a number of Bactrian peasants from the Kabul Valley. The Yu-echi, he thinks, are now represented by the Rajputs, while their followers were the ancestors of the Jats. The historical evidence does not seem very tangible, but if it is true that the Yu-echi were identical with the Khiang, and that their features were distinctive enough for Tamerlane, himself a Tartar, to recognise them, they probably were of Mongolian stock, and might, even now, retain some trace of Mongolian characteristics. If so, the method of measurement first used by Mr. Oldfield Thomas on a collection of Torres Straits skulls and introduced into India by me, with Sir William Flower's approval, for the purpose of dealing with the Mongoloid tribes of the Eastern Himalayas, may be trusted to bring out any trace of Mongolian blood that survives among the Jats. If no such trace is found, we may perhaps conclude that the theory of their Scythian origin rests on one of those verbal mystifications which have played so large a part in ethnology.

Lastly the Association ask for a series of photographs of typical individuals of the various races, and, if it should be practicable, of views of archaic industries, etc. This sounds at first sight a very extensive project, and so it would be if carried out *de novo* in the manner

<sup>1</sup> Histoire des Huns. ii., 42.

<sup>2</sup> Klapproth, *Tableaux Historiques de l'Asie*, p. 13.

<sup>3</sup> De Guignes *Académie des Inscriptions*, vol. xxv., p. 32.

<sup>4</sup> *Man Past and Present*, p. 323.

suggested by the Association "by placing photographers at the service to the Census officers." But an enormous number of admirable photographs of the various races of India are already in existence, and if we did nothing more than select from among these typical pictures of the characteristic people of each Province, and reproduce them by one of the cheap modern processes we should preserve and place on record a mass of very valuable material. The end in view would be to produce a revised and expanded edition of a book famous in its day, Watson and Kaye's *People of India*, the pictures in which have now faded almost out of recognition. To supplement the report on the Census of each Province and State by a volume of permanent prints illustrating the people and their pursuits, would be a worthy memorial of the Census of 1901. And it is an object in which I believe we could count on the enthusiastic co-operation of both professional and amateur photographers throughout India. The ideal to be worked up to would be the splendid series of types of the Indian army taken at Captain Bingley's instance to illustrate the *Caste Handbooks* which I have already mentioned.

In conclusion I wish to say a few words about the striking explanation of the origin of Totemism which has been put forward by Mr. J. G. Frazer in some recent numbers of the *Fortnightly Review*. The subject is one of special interest to us in India because the Indian evidence on the subject seems not only to point to conclusions different from those arrived at by Mr. Frazer on the basis of the Australian data recently published by Messrs. Spencer and Gillen,<sup>1</sup> but to suggest a new canon for determining the historical value of ethnographic evidence in general.

"A totem" says Mr. Frazer "is a class of natural phenomena or material objects—most commonly a species of animals or plants—between which and himself the savage believes that a certain intimate relation exists. The exact nature of the relation is not easy to ascertain; various explanations of it have been suggested, but none has as yet won general acceptance. Whatever it may be, it generally leads the savage to abstain from killing or eating his totem, if his totem happens to be a species of animals or plants. Further, the group of persons who are knit to any particular totem by this mysterious tie commonly bear the name of the totem, believe themselves to be of one blood, and strictly refuse to sanction the marriage or cohabitation of members of

<sup>1</sup> *The Native Tribes of Central Australia*. By Baldwin Spencer, M.A., some time Fellow of Lincoln College, Oxford, Professor of Biology in the University of Melbourne; and J. F. Gillen, special Magistrate and Sub-Protector of the Aborigines, Alice Springs, South Australia.

the group with each other. This prohibition to marry within the group is now generally called by the name of Exogamy. Thus, Totemism has commonly been treated as a primitive system both of religion and of society. As a system of religion it embraces the mystic union of the savage with his totem; as a system of society it comprises the relations in which men and women of the same totem stand to each other and to the members of other totemic groups. And corresponding to these two sides of the system are two rough-and-ready tests or canons of Totemism: first, the rule that a man may not kill or eat his totem animal or plant; and second, the rule that he may not marry or cohabit with a woman of the same totem. Whether the two sides—the religious and the social—have always co-existed or are essentially independent, is a question which has been variously answered. Some writers—for example, Sir John Lubbock and Mr. Herbert Spencer—have held that Totemism began as a system of society only, and that the superstitious regard for the totem developed later, through a simple process of misunderstanding. Others, including J. F. M'Lennan and Robertson Smith, were of opinion that the religious reverence for the totem is original, and must, at least, have preceded the introduction of Exogamy."

The system of totems prevailing in Central Australia is so far paral- led to that known in India that it includes not only animals and plants but also a number of objects animate and inanimate. Thus while the Australians have "totems of the wind, the sun, the evening star, fire, water, cloud and so on" we find among our Dravidians in India the month of June, Wednesday in every week, the moon, the rainbow, the constellation Pleiades figuring as totems among a number of names which include pretty well the entire flora and fauna of the country where the tribe is settled. But while among the Australians the religious aspect of the totem is relatively more prominent than the social, in India the position is reversed; the social side of the system is very much alive while the religious side has fallen into disuse. It is the religious side on which Mr. Frazer lays stress, and he explains totemism as "primarily an organised and cooperative system of magic designed to secure for the members of the community, on the one hand, a plentiful supply of all the commodities of which they stand in need, and, on the other hand, immunity from all the perils and dangers to which man is exposed in his struggle with nature." In other words totemism is a primitive Commissariat and General Providence Department which at a later stage took over the business of regulating marriage. The evidence for this proposition is derived from the magical ceremonies called *Intichiuma* in which the members

of each totem solemnly mimic the animals and plants after which they are called, and eat a small portion of them with the object of ensuring a plentiful supply of the animals and plants of that species. Thus the men of the totem called after the Witchetty grub, a succulent caterpillar of some kind which is esteemed a great luxury, paint their bodies in imitation of the grub, crawl through a structure of boughs supposed to represent its chrysalis, chant a song inviting the insect to go and lay eggs, and butt each other in the stomach with the remark "You have eaten much food." The Emu men dress themselves up to resemble Emus and imitate the movements and aimless gazing about of the birds; the Kangaroo men and the men of the Hakea Flower totem go through similar mummeries.

Now in the first place the doubt occurs to one whether small<sup>1</sup> and moribund tribes, such as the Australians, can fairly be taken to be typical of primitive man. If they could, then man would be primitive still, and we should none of us have got to the point of vexing our souls about the origin of anything. The one distinctive feature of the Australian natives is their incapacity for any sort of progressive evolution. Surely an atrophied or it may be degenerate man of that type is not the sort of ancestor we want to discover; for it is difficult to see what we can learn from him. In Europe on the other hand primitive man, so far as we can judge from the traces he has left behind seems to have been an animal of an entirely different type. He had indeed his weaknesses—does not his *vates sacer*, Mr. Andrew Lang, impute to him a diet of oysters and foes—but he fought a good fight with his environment and as events show he came out a winner. It seems then that the quest of primitive man ready made and only waiting to be observed and analysed may be nothing better than a tempting short cut, leading to delusion, and that what we must look to is not so much primitive man but primitive usage regarded in its bearing on evolution.

It is from this point of view that I wish to put in a plea for the consideration of the Indian data. Primitive usages may, I would suggest, be divided, as Mr. Bagehot divided political institutions, into the effective and the ineffective, in other words, into those which affect evolution and those which do not. In the case of totemism you can distinguish these two pretty clearly. The magical ritual of the Arunta tribe obviously belongs to the ineffective class. No one outside the Arunta—and even among them one would think there must be angurs—

<sup>1</sup> Spencer and Gillon, p. 9. See also p. 114, where it is stated that the word "corroboree" for a tribal dance or orgie is borrowed from the whites. Can any one imagine a compact tribe, like the Santals, borrowing a foreign term for a tribal custom?



supposes that by performing the most elaborate parody of the demeanour of certain animals a man can really cause them to increase and multiply. In India, on the other hand, our totemistic people have got rid of all such antics, if indeed they ever practised them, and retain only the unquestionably effective factor in the system, the rule that a man may not marry a woman of his own totem. They have, it is true, also the rule that people may not eat, injure or make use of their totems, but this prohibition is relatively weak, and in some cases the totems are articles such as rice and salt which the members of the totem-kin could hardly do without.

Given then a state of things such as this, that tribes which are in no way moribund or degenerate, but on the contrary extremely full of life, retain the effective part of an archaic usage along with traces of its ineffective parts, may we not reasonably conclude that this effective part, which has stood the wear and tear of ages and contributed to the evolution of the tribe, furnishes the clue to the real origin of the usage itself? Assume this to be so and totemism at once wheels into line and takes the place, which it appears clearly to occupy in India, of a form of exogamy. The particular form presents no great difficulty. Primitive men are like children: they are constantly saying to themselves "Let's pretend," and a favourite and wide spread form of the game is to pretend to be animals. Only they play it in earnest, and very grim earnest it sometimes is, as one discovers when one has to administer a district where people believe that men can transform themselves into animals at will, or can be so transformed by the agency of witchcraft.

It will be asked, what then is the origin of exogamy? Here again I think the Indian evidence suggests an answer. Just as the special phenomenon of totemism may be explained by reference to the general law of exogamy, so exogamy itself may be traced to the still more general law of natural selection. Nor need we strain the law. We know that there is a tendency in individuals or groups of individuals to vary their habits; and that useful variations tend to be preserved and ultimately transmitted. Now suppose that in a primitive community, such as the Naga Khel or the Kandh Gochi, the men happened to vary in the direction of taking their wives from some other community, and that this infusion of fresh blood proved advantageous to the group. The original instinct would then be stimulated by heredity, and the element of sexual selection would in course of time come into play. For an exogamous group would have a larger choice of women than an endogamous one, and would thus get finer women, who again, in the course of the primitive struggle for wives, would be appropriated by the

strongest and most warlike men. Exogamous groups thus strengthened would tend, as time went on, to 'eat up,' as the Zulus used to say, their endogamous neighbours or at any rate to deprive them of the pick of their marriageable girls; and the custom of exogamy would spread, partly by imitation, and partly by the extinction of the groups which did not practise it.

The fact that we cannot say how people came to vary in this particular fashion is not necessarily fatal to the hypothesis put forward. In the case of animals other than man, we do not call in question the doctrine of natural selection because we cannot divine the precise cause which gave rise to some beneficial variation. It is enough that variations do occur, and that the beneficial ones tend to be transmitted. If however an attempt must be made to pierce the veil which shuts off from our view the ages of pre-historic evolution, it does not seem unreasonable to suppose that here and there some half-accidental circumstance, such as the transmission of a physical defect or an hereditary disease, may have given primitive man a sort of warning and thus have induced the particular kind of variation which his circumstances required. Conquest again may have produced the same effect by bringing about a beneficial mixture of stocks, though it is a little difficult to see, as Mr. Lang pointed out long ago, why the possession of foreign women should have disinclined people to marry the women of their own group. At the same time it is conceivable that the impulse may have been set going by some tribe from which all its marriageable women had been raided, and which was thus driven by necessity to start raiding on its own account. I have elsewhere given instances, drawn from the Kandhs and Nagas, which lend themselves to this view; but I am not sure that we need travel beyond the tendency to accidental variation which appears in all living organisms and may be assumed to have shaped the evolution of primitive man.

I may now draw together the loose ends of thoughts which the proposal of the British Association have suggested. Speaking as President of this Society, and leaving out of consideration for the moment those questions of ways and means which have to be taken into account when one quits the domain of the ideal, I would formulate the requirements of ethnological research in India at the present time as follows:—

First, we want the ethnographic survey, which has been carried out in Bengal and the N.-W.P., to be extended on similar lines to the rest of India. This ought to be done within a reasonable time and cannot be postponed indefinitely.

Secondly, we want a record of the physical characters of typical

tribes and castes for those parts of India which are not covered by existing investigations.

Thirdly, we want a series of permanent photographs of the typical tribes and castes of each Province and Native State.

Fourthly, we want those who are engaged on similar inquiries in Europe to recognise that India is full of survivals, which are none the less instructive because the people among whom they occur are in no sense moribund and are ready enough to avail themselves of the material advantages which an alien civilization places within their reach. It was with this object that I referred just now to the bearing of Indian Ethnographic data on the question of the origin of totemism and exogamy, and that I drew attention in last year's address to some parallels between the domestic life of the Greeks and Romans and that of the people of India at the present day. It may be that I exaggerate the importance of things Indian—if so I am content to err in such good company as Sir Henry Maine, Herr Bachofen, and M. Fustel de Coulanges—but in any case the matter seems to deserve serious examination and cannot be brushed aside lightly with the remark that there is nothing primitive in India.

All members of the Society will hear with regret that his Grace Archbishop Goethals, who till lately was one of our Vice-Presidents, is about to leave India. The Archbishop's superb library, and his wide knowledge of all branches of literature bearing on India and the East, have always been at the disposal of students, and I am proud of being one of the many who have profited by his advice and guidance in matters of research.

There is no need for me to ask you to join with me in welcoming Sir John Woodburn as the next President. His sympathy with the ways of thought of the natives of this country, his knowledge of their traditions and usages and his familiarity with their village life—the real life of the people of India—furnish the best guarantee that under his auspices the lines of inquiry on which we are now proceeding will be developed and extended.

I will now ask His Excellency the Patron to address the Society on Ancient Buildings in India. Those of us who are acquainted with Lord Curzon's interesting study of the architecture of Kedleston House, the prototype of Government House, Calcutta, will know that His Excellency has made this fascinating subject peculiarly his own.

HIS EXCELLENCY BARON CURZON OF KEDLESTON, Patron of the Society, spoke on the subject of

### ANCIENT MONUMENTS IN INDIA.

I hope that there is nothing inappropriate in my addressing to this Society a few observations upon the duty of Government in respect of ancient buildings in India. The Asiatic Society of Bengal still, I trust, even in these days when men are said to find no time for scholarship, and when independent study or research seems to have faded out of Indian fashion, retains that interest in archæology which is so often testified to in its earlier publications, and was promoted by so many of its most illustrious names. Surely here, if anywhere, in this house which enshrines the memorials, and has frequently listened to the wisdom of great scholars and renowned students, it is permissible to recall the recollection of the present generation to a subject that so deeply engaged the attention of your early pioneers, and that must still, even in a breathless age, appeal to the interest of every thoughtful man.

In the course of my recent tour, during which I visited some of the most famous sites and beautiful or historic buildings in India, I more than once remarked, in reply to Municipal addresses, that I regarded the conservation of ancient monuments as one of the primary obligations of Government. We have a duty to our forerunners, as well as to our contemporaries and to our descendants,—nay our duty to the two latter classes in itself demands the recognition of an obligation to the former, since we are the custodians for our own age of that which has been bequeathed to us by an earlier, and since posterity will rightly blame us if, owing to our neglect, they fail to reap the same advantages that we have been privileged to enjoy. Moreover, how can we expect at the hands of futurity any consideration for the productions of our own time—if indeed any are worthy of such—unless we have ourselves shown a like respect to the handiwork of our predecessors? This obligation, which I assert and accept on behalf of Government, is one of an even more binding character in India than in many European countries. There abundant private wealth is available for the acquisition or the conservation of that which is frequently private property. Corporations, societies, endowments, trusts provide a vast machinery that relieves the Government of a large portion of its obligation. The historic buildings, the magnificent temples, the inestimable works of art, are invested with a publicity that to some extent saves them from the risk of desecration or the encroachments of decay. Here all is different. India is covered with the visible records of vanished dynasties, of forgotten monarchs, of persecuted and sometimes dishonoured creeds.

These monuments are, for the most part, though there are notable exceptions, in British territory, and on soil belonging to Government. Many of them are in out of the way places, and are liable to the combined ravages of a tropical climate, an exuberant flora, and very often a local and ignorant population, who see only in an ancient building the means of inexpensively raising a modern one for their own convenience. All these circumstances explain the peculiar responsibility that rests upon Government in India. If there be any one who says to me that there is no duty devolving upon a Christian Government to preserve the monuments of a pagan art, or the sanctuaries of an alien faith, I cannot pause to argue with such a man. Art, and beauty, and the reverence that is owing to all that has evoked human genius, or has inspired human faith, are independent of creeds, and, in so far as they touch the sphere of religion, are embraced by the common religion of all mankind. Viewed from this standpoint, the rock temple of the Brahmans stands on precisely the same footing as the Buddhist Vihara, and the Mahomedan Musjid as the Christian Cathedral. There is no principle of artistic discrimination between the mausoleum of the despot and the sepulchre of the saint. What is beautiful, what is historic, what tears the mask off the face of the past, and helps us to read its riddles, and to look it in the eyes—these, and not the dogmas of a combative theology, are the principal criteria to which we must look. Much of ancient history, even in an age of great discoveries, still remains mere guess work. It is only slowly being pieced together by the efforts of scholars and by the outcome of research. But the clues are lying everywhere at our hand, in buried cities, in undeciphered inscriptions, in casual coins, in crumbling pillars, and pencilled slabs of stone. They supply the data by which we may reconstruct the annals of the past, and recall to life the morality, the literature, the politics, the art of a perished age.

Compared with the antiquity of Assyrian or Egyptian, or even of early European monuments, the age of the majority of Indian monuments is not great. I speak subject to correction, but my impression is that the oldest sculptured monument in India is the Sanchi Tope, the great railing of which cannot possibly be placed before the middle of the 3rd century before Christ, although the tope itself may be earlier. At that time the palaces of Chaldœa and Nineveh, the Pyramids and the rock tombs of Egypt, were already thousands of years old. We have no building in India as old as the Parthenon at Athens; the large majority are young compared with the Coliseum at Rome. All the Norman and the majority of the Gothic Cathedrals of England and of Western Europe were already erected before the great era of Moslem architecture in India had begun. The Kutub Minar at Delhi, which is the finest

early Mahomedan structure in this country, was built within a century of Westminster Hall in London, which we are far from regarding as an ancient monument. As for the later glories of Arabian architecture at Delhi, at Agra, and at Lahore, the Colleges of Oxford and Cambridge, which we regard in England as the last product of a dying architectural epoch, were already grey when they sprang, white and spotless, from the hands of the masons of Akbar and Shah Jehan; while the Taj Mahal was only one generation older than Wren's Renaissance fabric of modern St. Paul's.

There is another remarkable feature of the majority of Indian antiquities—of those at any rate that belong to the Mussulman epoch—that they do not represent an indigenous genius or an Indian style. They are exotics, imported into this country in the train of conquerors, who had learnt their architectural lessons in Persia, in Central Asia, in Arabia, in Afghanistan. More than a thousand years earlier a foreign influence had exercised a scarcely less marked, though more transient, influence upon certain forms of Indian architecture. I allude to the Greek types which were derived from the Græco-Bactrian kingdoms, that were founded upon the remains of Alexander's conquests, and which in the centuries immediately preceding the Christian era profoundly affected the art and sculpture of North-West India, and the Punjab. Indian sculptures or Indian buildings, however, because they reflect a foreign influence, or betray a foreign origin, are not the less, but perhaps the more interesting to ourselves, who were borne to India upon the crest of a later but similar wave, and who may find in their non-Indian characteristics a reminiscence of forms which we already know in Europe, and of a process of assimilation with which our own archæological history has rendered us familiar. Indeed a race like our own, who are themselves foreigners, are in a sense better fitted to guard, with a dispassionate and impartial zeal, the relics of different ages, and of sometimes antagonistic beliefs, than might be the descendants of the warring races or the votaries of the rival creeds. To us the relics of Hindu, and Mahomedan, of Buddhist, Brahmin, and Jain are, from the antiquarian, the historical, and the artistic point of view, equally interesting and equally sacred. One does not excite a more vivid, and the other a weaker emotion. Each represents the glories or the faith of a branch of the human family. Each fills a chapter in Indian history. Each is a part of the heritage which Providence has committed to the custody of the ruling power.

If, however, the majority of the structural monuments of India, the topes, and temples, the palaces, and fortresses, and tombs be of no exceeding antiquity in the chronology of architecture, and even if the

greater number of those at any rate which are well known and visited, are not indigenous in origin, it remains true, on the other hand, that it is in the exploration and study of purely Indian remains, in the probing of archaic mounds, in the excavation of old Indian cities, and in the copying and reading of ancient inscriptions, that a good deal of the exploratory work of the archæologist in India will in future lie. The later pages of Indian history are known to us, and can be read by all. But a curtain of dark and romantic mystery hangs over the earlier chapters, of which we are only slowly beginning to lift the corners. This also is not less an obligation of Government. Epigraphy should not be set behind research any more than research should be set behind conservation. All are ordered parts of any scientific scheme of antiquarian work. I am not one of those who think that Government can afford to patronise the one and ignore the other. It is, in my judgment, equally our duty to dig and discover, to classify, reproduce, and describe, to copy and decipher, and to cherish and conserve. Of restoration I cannot, on the present occasion, undertake to speak, since the principles of legitimate and artistic restoration require a more detailed analysis than I have time to bestow upon them this evening. But it will be seen from what I have said that my view of the obligations of Government is not grudging, and that my estimate of the work to be done is ample.

If then the question be asked how has the British Government hitherto discharged, and how is it now discharging its task, what is the answer that must be returned? I may say in preface that were the answer unfavourable—and I will presently examine that point—we should merely be forging a fresh link in an unbroken historic chain. Every or nearly every successive religion that has permeated or overswept this country has vindicated its own fervour at the expense of the rival whom it had dethroned. When the Brahmans went to Ellora, they hacked away the features of all the seated Buddhas in the rock-chapels and halls. When Kutub-ud-din commenced, and Altamsh continued, the majestic mosque that flanks the Kutub Minar, it was with the spoil of Hindu temples that they reared the fabric, carefully defacing or besmearing the sculptured Jain images, as they consecrated them to their novel purpose. What part of India did not bear witness to the ruthless vandalism of the great iconoclast Aurungzeb? When we admire his great mosque with its tapering minarets, which are the chief feature of the river front at Benares, how many of us remember that he tore down the holy Hindu temple of Vishveshwar to furnish the material and to supply the site? Nadir Shah during his short Indian inroad effected a greater spoliation that has probably ever been

achieved in so brief a space of time. When the Maratha conquerors overran Northern India, they pitilessly mutilated and wantonly destroyed. When Ranjit Singh built the Golden Temple at Umritsar, he ostentatiously rifled Mahomedan buildings and mosques. Nay, dynasties did not spare their own members, nor religions their own shrines. If a capital or fort or sanctuary was not completed in the life-time of the builder, there was small chance of its being finished, there was a very fair chance of its being despoiled, by his successor and heir. The environs of Delhi are a wilderness of deserted cities and devastated tombs. Each fresh conqueror, Hindu or Moghul or Pathan, marched, so to speak, to his own immortality over his predecessor's grave. The great Akbar in a more peaceful age first removed the seat of Government from Delhi to Agra, and then built Fatehpur Sikri as a new capital, only to be abandoned by his successor. Jehangir alternated between Delhi and Agra, but preferred Lahore to either. Shah Jehan beautified Agra, and then contemplated a final return to Delhi. Aurengzeb marched away to the south, and founded still another capital, and was himself buried in territories that now belong to Hyderabad. These successive changes, while they may have reflected little more than a despot's caprice, were yet inimical both to the completion and to the continuous existence of architectural fabrics. The British Government are fortunately exempt from any such promptings, either of religious fanaticism, of restless vanity, or of dynastic and personal pride. But in proportion as they have been unassailed by such temptations, so is their responsibility the greater for inaugurating a new era and for displaying that tolerant and enlightened respect to the treasures of all, which is one of the main lessons that the returning West has been able to teach to the East.

In the domain of archæology as elsewhere, the original example of duty has been set to the Government of India by individual effort and by private enthusiasm; and only by slow degrees has Government, which is at all times and seasons a tardy learner, warmed to its task. The early archæological researches, conducted by the founders and pioneers of this Society, by Jones, Colebrooke, Wilson, and Prinsep, and by many another *clarum et venerabile nomen*, were in the main literary in character. They consisted in the reconstruction of alphabets, the translation of manuscripts, and the decipherment of inscriptions. Sanscrit scholarship was the academic cult of the hour. How these men laboured is illustrated by the fact that Prinsep and Kittoe both died of overwork at the age of 40. Then followed an era of research in buildings and monuments; the pen was supplemented by the spade; and, in succession, descriptions, drawings, paintings, engravings, and in later days



photographs and casts gradually revealed to European eyes the precious contents of the unrifed quarries of Hindustan. In this generation of explorers and writers, special honour must be paid to two names, to James Fergusson, whose earliest work was published in 1845, and who was the first to place the examination of Indian architecture upon a scholarly basis, and to General Sir A. Cunningham, who only a few years later was engaged in the first scientific excavation of the Bhilsa topes. These and other toilers in the same field laboured with a diligence beyond praise; but the work was too great for individual exertion, and much of it remained desultory, fragmentary, and incomplete.

Meanwhile the Government of India was concerned with laying the foundations and extending the borders of a new Empire, and thought little of the relics of old ones. From time to time a Governor-General, in an access of exceptional enlightenment or generosity, spared a little money for the fitful repair of ancient monuments. Lord Minto appointed a Committee to conduct repairs at the Taj. Lord Hastings ordered works at Fatehpur Sikri and Sikandra. Lord Amherst attempted some restoration of the Kutub Minar. Lord Hardinge persuaded the Court of Directors to sanction arrangements for the examination, delineation, and record of some of the chief Indian antiquities. But these spasmodic efforts resulted in little more than the collection of a few drawings, and the execution of a few local and perfunctory repairs. How little the leaven had permeated the lump, and how strongly the barbarian still dominated the æsthetic in the official mind, may be shown by incidents that from time to time occurred.

In the days of Lord William Bentinck the Taj was on the point of being destroyed for the value of its marbles. The same Governor-General sold by auction the marble bath in Shah Jehan's Palace at Agra, which had been torn up by Lord Hastings for a gift to George IV., but had somehow never been despatched. In the same régime a proposal was made to lease the gardeus at Sikandra to the Executive Engineer at Agra for the purposes of speculative cultivation. In 1857, after the Mutiny, it was solemnly proposed to raze to the ground the Jumma Musjid at Delhi, the noblest ceremonial mosque in the world, and it was only spared at the instance of Sir John Lawrence. As late as 1868 the destruction of the great gateways of the Sanchi Tope was successfully prevented by the same statesman. I have read of a great Mahomedan pillar, over 600 years old, which was demolished at Aligarh, to make room for certain municipal improvements and for the erection of some *bunias'* shops, which, when built, were never let. Some of the sculptured columns of the exquisite Hindu-Mussulman mosque at Ajmere were pulled down by a zealous officer to construct a triumphal

arch under which the Viceroy of the day was to pass. James Fergusson's books sound one unending note of passionate protest against the barrack-builder, and the military engineer. I must confess that I think these individuals have been, and within the more restricted scope now left to them, still are inveterate sinners. Climb the hill top at Gwalior and see the barracks of the British soldiers, and the relics, not yet entirely obliterated, of his occupation of the Palace in the Fort. Read in the Delhi guide-books of the horrors that have been perpetrated in the interests of regimental barracks and messes and canteens in the fairy-like pavilions and courts and gardens of Shah Jehan. It is not yet 30 years since the Government of India were invited by a number of army doctors to cut off the battlements of the Fort at Delhi, in order to improve the health of the troops, and only desisted from doing so when a rival band of medical doctrinaires appeared upon the scene to urge the retention of the very same battlements, in order to prevent malarial fever from creeping in. At an earlier date when picnic-parties were held in the garden of the Taj, it was not an uncommon thing for the revellers to arm themselves with hammer and chisel, with which they wiled away the afternoon by chipping out fragments of agate and carnelian from the cenotaphs of the Emperor and his lamented Queen. Indeed when I was at Agra the other day, I found that the marble tomb of Shah Jehan in the lower vault, beneath which his body actually lies, was still destitute of much of its original inlay, of which I ordered the restoration.

That the era of vandalism is not yet completely at an end is evident from recent experiences, among which I may include my own. When Fergusson wrote his book, the Diwan-i-Am, or Public Hall of Audience, in the Palace at Delhi was a military arsenal, the outer colonnades of which had been built up with brick arches lightened by English windows. All this was afterwards removed. But when the Prince of Wales came to India in 1876, and held a Durbar in this building, the opportunity was too good to be lost; and a fresh coat of whitewash was plentifully bespattered over the red sandstone pillars and plinths of the Durbar-hall of Aurungzeb. This too I hope to get removed. When His Royal Highness was at Agra, and the various pavilions of Shah Jehan's palace were connected together for the purposes of an evening party and ball, local talent was called in to reproduce the faded paintings on marble and plaster of the Moghul artists two and a half centuries before. The result of their labours is still an eyesore and a regret. When I was at Lahore in April last, I found the exquisite little Moti Musjid, or Pearl Mosque, in the Fort, which was erected by Jehangir exactly three hundred years ago, still used for the profane

purpose to which it had been converted by Rangit Singh, *viz.*, as a Government Treasury. The arches were built up with brick-work, and below the marble floor had been excavated as a cellar for the reception of iron-bound chests of rupees. I pleaded for the restoration to its original state of this beautiful little building, which I suppose not one visitor in a hundred to Lahore has ever seen. Rangit Singh cared nothing for the taste or the trophies of his Mahomedan predecessors, and half a century of British military occupation, with its universal paintpot, and the exigencies of the Public Works Engineer, has assisted the melancholy decline. Fortunately in recent years something has been done to rescue the main buildings of the Moghul Palace from these two insatiable enemies. At Ahmedabad I found the mosque of Sidi Sayid, the pierced stone lattice-work of whose demi-lune windows is one of the glories of India, used as a tehsildar's kutcherry, and disfigured with plaster partitions, and the omnivorous whitewash. I hope to effect the reconversion of this building. After the conquest of Upper Burma in 1885, the Palace of the Kings at Mandalay which, although built for the most part of wood, is yet a noble specimen of Burmese art, was converted by our conquering battalions into a Club House, a Government Office, and a Church. By degrees I am engaged in removing these superfluous denizens, with the idea of preserving the building as the monument, not of a dynasty that has vanished never to return, but of an art that, subject to the vicissitudes of fire, earthquake, and decay, is capable of being a joy for ever. There are other sites and fabrics in India upon which I also have my eye, which I shall visit, if possible, during my time, and which I shall hope to rescue from a kindred or a worse fate.

These are the gloomy or regrettable features of the picture. On the other hand, there has been, during the last 40 years, some sort of sustained effort on the part of Government to recognize its responsibilities and to purge itself of a well-merited reproach. This attempt has been accompanied, and sometimes delayed, by disputes as to the rival claims of research and of conservation, and by discussion over the legitimate spheres of action of the Central and the Local Governments. There have been periods of supineness as well as of activity. There have been moments when it has been argued that the State had exhausted its duty or that it possessed no duty at all. There have been persons who thought that when all the chief monuments were indexed and classified, we might sit down with folded hands and allow them slowly and gracefully to crumble into ruin. There have been others who argued that railways and irrigation did not leave even a modest half a lakh of rupees per annum for the requisite establishment to supervise

the most glorious galaxy of monuments in the world. Nevertheless, with these interruptions and exceptions, which I hope may never again recur, the progress has been positive, and on the whole, continuous. It was Lord Canning who first invested archæological work in this country with permanent Government patronage by constituting in 1860, the Archæological Survey of Northern India and by appointing General Cunningham in 1862 to be Archæological Surveyor to Government. From that period date the publications of the Archæological Survey of India, which have at times assumed different forms, and which represent varying degrees of scholarship and merit, but which constitute, on the whole, a noble mine of information, in which the student has but to delve in order to discover an abundant spoil. For over 20 years General Cunningham continued his labours, of which these publications are the memorial. Meanwhile orders were issued for the registration and preservation of historical monuments throughout India, local surveys were started in some of the subordinate Governments, the Bombay Survey being placed in the capable hands of Mr. Burgess, who was a worthy follower in the footsteps of Cunningham, and who ultimately succeeded him as Director-General of the Archæological Survey. Some of the Native States followed the example thus set to them, and either applied for the services of the Government archæologists, or established small departments of their own.

In the provinces much depended upon the individual tastes or proclivities of the Governor or Lieutenant-Governor, just as at headquarters the strength of the impetus varied with the attitude of successive Viceroys. Lord Northbrook, who was always a generous patron of the arts, issued orders in 1873 as to the duties of Local Governments; and in his Viceroyalty, Sir John Strachey was the first Lieutenant-Governor to undertake a really noble work of renovation and repair at Agra—a service which is fitly commemorated by a marble slab in the Palace of Shah Jehan. The poetic and imaginative temperament of Lord Lytton could not be deaf to a similar appeal. Holding that no claim upon the initiative and resources of the Supreme Government was more essentially Imperial than the preservation of national antiquities, he contributed in 1879 a sum of 3½ lakhs to the restoration of buildings in the North-Western Provinces; and proposed the appointment of a special officer, to be entitled the Curator of Ancient Monuments, which, while it did not receive sanction in his time, was left to be carried out by his successor, Lord Ripon. During the three years that Major Cole held this post, from 1880 to 1883, much excellent work in respect both of reports and classification was done; and large sums of money were given by the Government of India, *inter alia*, for repairs in the Gwalior Fort and at

Sanchi Tope. But at the end of this time succeeded a period of some reaction, in which it appeared to be thought that the task of the Central Government, in the preparation of surveys and lists, was drawing to a close, and that Local Governments might, in future, be safely entrusted with the more modest, but, I may add, not less critical, duty of conservation. More recently, under Lord Elgin's auspices, the archæological work of Government has been placed upon a more definite basis. The entire country has been divided into a number of circles, each with a surveyor of its own, and while the establishment is regarded as an Imperial charge, the work is placed under local control and receives such financial backing as the resources of the Local Governments or the sympathies of individual Governors may be able to give it. In the North-West Provinces, where I was recently touring, I found Sir A. MacDonnell worthily sustaining, in point of generous and discriminating sympathy, the traditions that were created by Sir John Strachey.

For my part I feel far from clear that Government might not do a good deal more than it is now doing, or than it has hitherto consented to do. I certainly cannot look forward to a time at which either the obligations of the State will have become exhausted, or at which archæological research and conservation in this country can dispense with Government direction and control. I see fruitful fields of labour still unexplored, bad blunders still to be corrected, gaping omissions to be supplied, plentiful opportunities for patient renovation and scholarly research. In my opinion, the tax-payers of this country are in the last degree unlikely to resent a somewhat higher expenditure—and, after all, a few thousand rupees go a long way in archæological work, and the total outlay is exceedingly small—upon objects in which I believe them to be as keenly interested as we are ourselves. I hope to assert more definitely during my time the Imperial responsibility of Government in respect of Indian antiquities, to inaugurate or to persuade a more liberal attitude on the part of those with whom it rests to provide the means, and to be a faithful guardian of the priceless treasure-house of art and learning that has, for a few years at any rate, been committed to my charge.



PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR MARCH, 1900.

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The Monthly General Meeting of the Society was held on Wednesday, the 7th March, 1900, at 9-15 P.M.

H.H. SIR JOHN WOODBURN, M.A., K.C.S.I., President, in the Chair.

The following members were present:—

Mr. J. Bathgate, Rai Bahadur Chuni Lal Bose, Dr. T. Bloch, Dr. A. Krafft von Delmensingen, Mr. W. Dods, Mr. W. K. Dods, Mr. T. H. Holland, Mr. Chas. Michie, Babu Panchanan Mukerji, Mr. L. de Nicéville, Mahamahapadhyaya Hara Prasad Shastri, Mr. E. Thornton.

*Visitors*:—Capt. Allanson, R.A., Rai Sohan Lal, Mr. A. Shrager, Mr. A. E. Westerhout.

The minutes of the last Monthly General Meeting and of the Annual Meeting held on the 3rd January and 7th February, 1900, at 9 P.M., respectively, were read and confirmed.

Ninety-one presentations were announced.

Rai Bahadur Chuni Lal Bose, M.B.; Mr. Chas. Michie; Mr. David Robb Wallace; and Dr. A. Krafft von Delmensingen, were elected Ordinary Members of the Society in accordance with Rule 7 at the Council Meeting held on 19th January, 1900.

Mr. A. U. Fanshawe, C.S.I., I.C.S.; Mr. W. S. Meyer, I.C.S., and Pandit Yogesha Chandra Shastree, were balloted for and elected Ordinary Members.

Mr J. Kennedy, Mr. F. H. Harding and Mr. B. De, have expressed a wish to withdraw from the Society.

The President announced that in accordance with Rule 38 of the Society's Rules, the names of the following gentlemen had been posted

up as defaulting members since the last Monthly General Meeting, and will be removed from the Member List and the fact published in the Proceedings.

Babu Krishna Gopal Bhakta.  
 Rai Khirod Chandra Chowdhuri.  
 Babu Gopal Ballabh Das.  
 „ Mahendra Nath Ray.  
 „ Suresh Chundra Samajpati.

The President also announced :—

(1) That the Council had offered their cordial thanks to Mr. E. Thornton for his report on the Survey of the Society's premises which was ordered to be communicated to the General Meeting.

(2) That the Council had elected Mr. L. de Nicéville as Natural History Secretary in the place of Mr. F. Finn, resigned.

*Report on the Society's Premises.—By E. THORNTON, A.R.I.B.A.*

The structure shows signs of having suffered during the earthquake of 1897, but certain repairs were then undertaken which have rendered the building generally secure for the present. The chief structural defects noticeable at present are the bad state of the pillars supporting the roof over the staircase, and the bad state of certain beams and burgahs. I have had the whole of the beams and burgahs examined by competent mistries and have ascertained the extent of the repairs necessary. There need be no fear of immediate danger from either of the above defects, except in the event of earthquake. The cost of putting the whole premises in reasonable structural and decorative repairs, would be according to my estimate about Rs. 9,000. This would include :—

1. Securing the staircase columns with iron bands and tie rods.
2. Replacing defective beams with rolled steel joists and renewing burgahs.
3. Repairing arches where defective.
4. Repairing roofs where necessary.
5. Renewing and repairing woodwork of doors and windows.
6. Recolour-washing inside and outside throughout both main buildings and offices and making good plaster.
7. Repainting and regilding.
8. Making good broken glass and other petty repairs.

In conclusion, I would advise the Committee to set aside something yearly towards a "Repair Fund" so that at the end of four or five



years a round sum would be in hand to meet the cost of repainting and colour-washing, and any structural repairs that might become necessary. Rs. 1,000 yearly would, in my opinion, fully cover any ordinary re-decoration and repairs, and would, I think, leave over a substantial balance at the end of every four or five years to meet any unforeseen expenditure.

Mahamahopadhyaya Hara Prasad Shastri exhibited and described a Turquoise Ganeça, and made the following remarks on it.

On the 6th February Mr. Hill, Librarian to the Imperial Library wrote to me a letter, enclosing a drawing from a carved piece of Turquoise belonging to the Under-Secretary, Revenue and Agricultural Department, and expressing a hope that I might furnish him with an explanation of the details.

On examination the drawing proved to be that of Ganeça with the following curious features: (1) he has four faces; he rides on a lion; he has a Çakti on his left in an amorous position; his legs are short and thick set.

The figure of Ganeça, as we ordinarily find it, has one face, the head of an elephant; with a proboscis, a pot-belly, with two, sometimes with four hands, painted bright red with one tusk, riding on a rat. In the grand image of Durgā and her family worshipped in October we find a plantain tree placed by the side of Ganeça covered over with a bright red-bordered cloth, ordinarily called **कलशौ** (the wife of Ganeça represented by a plantain tree); but really it is not intended as Ganeça's mate. It is in Sanskrit called **नवपत्रिका**, nine leaves, the real essence of Durgā.

The drawing differs so greatly from our ordinary idea of Ganeça that I began searching on all sides for an explanation of the distinguishing features, and this was furnished from the Commentary by Rāghava Bhatta on Çaradātīlaka, a well-known Tāntrika work, in which 50 names of Ganeça and 50 names of his Çaktis are given. Most of these names are names taken from his attributes, and two of these names are important for our purposes, namely, **सप्तशिरस** and **सप्तमुख**. The first epithet means that he rides sometimes on an infuriated animal and the second says he often has six heads. Now the word **सप्त** may mean any infuriated animal and in the drawing the lion with its mouth gaping wide open and with tail raised high up seems to be in fury. This furnished explanation on one of the points of detail. The other epithet "with six heads," explains the fact that in the drawing, Ganeça has only four; because six heads all round, will show

only four when drawn on a plain surface. In Benares, I am told, the great Ganeṣa Dhunḍhirāja has replaced a six-headed figure of the same deity.

After giving the fifty names of the Çaktis of Ganeṣa the commentary proceeds to say that all the Çaktis have some common attributes, two of which are to the point in this connection here, namely, that the Çaktis sit, on the lap of Ganeṣa and that they are furnished with wreathes of red flowers; now, here the Çakti is on the left lap of Ganeṣa the appropriate seat for a wife. One of Ganeṣa's thick set feet is outside her figure. The flower wreath is very prominent on her chest. She has a separate lotus seat. This furnishes a complete explanation of the details as given in the drawing.

But on an examination of the original Turquoise figure Ganeṣa seemed to possess eight hands four on each side. In Bengal Ganeṣa has four and sometimes even two hands. But in Nepal the number of hands depends on the imagination of the Carver who may attribute any number of attributes to his deity. I have seen Ganeṣa with 18 hands and other deities, too, with any even number of hands.

The short and thick set legs pointed out to me that the Turquoise figure was made in Nepal for in Northern India the limbs have a human proportion and in South India the most prominent feature of Ganeṣa is his belly. In fact, when I stood in front of a huge figure of Ganeṣa at the outer entrance of the great Temple of Viṣṇu Kañci my guide, naively, told me "what you do not seem to recognise this god, he is our great Belly God, Ganeṣa."

Mr. Maconochie, the Under-Secretary to the Revenue and Agricultural Department has subsequently assured me that his vendor got the figure from Nepal. He deserves the thanks of the Society for lending his valuable stone for exhibition to-night.

The following paper was read:—

*On the manuscript of a work on the biography of one of the Pāla Kings of Magādh, Rām Pāl.—By MAHAMAHOPADHYAYA HARA PRASAD SHASTRI, M.A.*

(Abstract.)

RAMACARITA BY SANDHYĀKARA NĀNDI, ELEVENTH CENTURY.

Rāmacarita may be said to be one of the most interesting finds. It is the first really historical manuscript found in Eastern India. It treats of the life and times of Rāmapāla Deva one of the Pāla Kings of Gauḍ. Rāmapāla is known from inscriptions to have been the son

of Vighraha Pāla III. He was the youngest and ablest of three brothers Mahipāla, Ārapāla and himself. The manuscript treats of Rāmapāla's wars with the rebellious Kaivartta King of Vārendra named Bhima Divoka. In one sense the manuscript is a very difficult work as it is written throughout in double-entendre. Explained one way every verse gives some portion of the Story of Rāma of the Rāmāyana. Explained another way the same verse gives the history of Rāmapāla Deva. Had it not been accompanied with a Commentary it would have been almost impossible to understand the work. Unfortunately, however, the Commentary breaks off almost at the beginning of the second Canto and I purpose in this abstract to give the history of Rāmapāla's reign as far as it can be gleaned from the portion of the work covered by the commentary. The manuscript has been obtained from Nepal. It now belongs to the Government collection.

The manuscript of the Text is written in old Newari but the Commentary is written in old Bengali,—much older than the character as revealed in the Bengali manuscripts written in 1198 and described in Professor Bendall's catalogue of manuscripts in Cambridge. The Author of the Text is Sandhyākara Nandi, the son of Prajāpati Nandi the Minister of Peace and War of Rāmapāla Deva. The Author lived at the capital of the Vārendra country, conquered by Rāmapāla, namely, in the city of Paṇḍravardhana, which Dr. Blochmann identified with Paṇḍua; but the identification has not yet been accepted as final. So the Author had very great opportunities of knowing what he writes about. The name of the Author of the Commentary is not given.

We come to know for the first time from this MS. that the Pāla Kings considered themselves as descendants of the Ocean God—a fact which shows that they came from the sea-shore. We have Bengali works which state that Dharmapāla and his descendants had relatives in the districts of Midnapore and Howrah.

Vighrapāla, the father of Rāmapāla, made a successful war against Kaṛṇa King of Dāhala who belonged to the Chedi race and had his Rāj in what is now known as the Rewa territories. Kaṛṇa was worsted in war and had to make peace by giving his daughter in marriage to his conqueror Vighraha who, thereupon, reinstated him. Now Kaṛṇa of Dāhal is known to us from inscriptions. He is said to have established a new capital for his Rāj in a more inaccessible part of the Vindhya Mountains, owing it appears to the constant trouble he had from his powerful neighbours, the Pālas.

Mahipāla, the elder brother of Rāmapāla, was a weak and impolitic Prince. His high-handed proceedings led the Kaivartta King of Vārendra to rebel. His successful rebellion led to much loss of territory

to the Pāla Empire. Mahipāla fought against the rebels, was taken prisoner and put to death. Çūrapāla's reign was weak and inglorious. Then came Rāmapāla who made extensive preparations to crush the audacious Bhīma. His maternal Uncle was Mathana or Mahana belonging to the Rāstrakūta race who held a high office under Rāmapāla's Government. His two sons were Mahamāṇḍaleçvaras and his nephew Çivarāja was the Mahāpratihāra the Commander of Household troops. He was Rāmapāla's right-hand man. He went into Vārendra to reconnoitre and then made great preparations. He summoned all the Pāla feudatories. Among these was the lord of the Daṇḍabhukti. The word bhukti means province. We have in Sena inscriptions Pauṇḍra vardhanabhukti and Vikramapurabhukti. We have Jejābhukti in the Mahoba territory and Tirabhukti the modern Tirhut. Now the question is what Province is known as Daṇḍabhukti? I believe the Province of which the capital was Daṇḍapura, modern Behāra, as identified by Sir A. Ounningham, was Daṇḍabhukti. The Rājā of Daṇḍabhukti had previously defeated Kaṇṇa Keçari the Rājā of Utkala. What strikes me as very curious is the fact that among the numerous feudatories there was a Rājā of Magadha, Bhīmajaças by name, who routed the cavalry of the King of Kanoj. The cradle of the Pāla Empire was Magadha. Why should there be a feudatory Rājā there is not clearly explained. The other feudatories were, Viraguṇa the Rājā of Piṭhi, described as the lord of the south. Vikrama, Rājā of Devagrāma. Lakshmiçura the Rājā of the Forest region and of the Mandāra Hills; Çikhara of the race of Tailākampa and an expert in war with elephants and Bhāskara Pratāpa Çila. Two great warriors are also mentioned, not as feudatories; one is Devarakṣita of Piṭhi and the other Sindhurāja. .

They crossed the Ganges and entered the Vārendra country. Bhīma fought as Rāvana fought against Rāina but was at last defeated and made a prisoner. The army of Kaiwarttas was dispersed and Bhīma was reduced to a very miserable condition. Here the Commentary breaks off. The Poem has four Cantos, namely—

1. Ārambharāma, the commencement of the career of Rāma.
2. Āsuricakra, the circle of Demons.
3. Rāmapratyāgamana, the return of Rāma.
4. Ramottaracarita, the last part of Rāma's career.

The information most interesting to students of Buddhism is that Rāmapāla checked the progress of a religious revolution and led his people into the path 'pointed out by the good' and this is the time, we know, when Mahāyāna doctrines received a fresh start and the Commentary on the Bodhicaryyāvātara and many other works were written.

I have seen manuscripts of the *Aṣṭasāhasrikā Prajñāpāramitā* copied during Rāmapāla's reign.

Much curious information is likely to be obtained from the rest of the poem if only the mystery in which it is enveloped could be solved without the aid of a Commentary.

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

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PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR APRIL, 1900.

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The Monthly General Meeting of the Society was held on Wednesday, the 4th April, 1900, at 9-15 P.M.

H.H. SIR JOHN WOODBURN, M.A., K.C.S.I., President, in the chair.

The following members were present :—

Mr. J. Bathgate, Babu Amrita Lal Bose, Mr. F. Finu, The Revd. Father E. Francotte, Col. T. H. Hendley, I.M.S., Mr. T. H. Holland, Mr. D. Hooper, Mr. T. H. D. La Touche, Mr. C. Little, Mr. R. D. Mehta, C.I.E., Mr. L. de Nicéville, Major D. Prain, I.M.S., Mahamahopadhyaya Hara Prasad Shastri, Mr. E. Thornton, Mr. A. Tocher.

*Visitors* :—Mrs. T. H. Holland, Mrs. T. H. La Touche, Mr. B. R. Mehta, Mr. M. R. Mehta, Mr. P. B. Mukerji, Mr. H. J. Weston.

The minutes of the last meeting were read and confirmed.

Twenty-three presentations were announced.

Major H. J. Dyson, I.M.S., F.R.C.S.; Mr. J. Lane Long, F.R.G.S. Surgeon-General R. Harvey, M.D., C.B., D.S.O., F.R.C.P.; The Hon. Sir Griffith Evans; The Hon. Mr. T. Raleigh; Lieut.-Col. R. H. Whitwell, I.M.S.; Captain A. H. Bingley, I.S.C.; Captain H. J. Walton, M.B., F.R.C.S., I.M.S.; and Captain Leonard Rogers; M.B., F.R.C.S., I.M.S.; were balloted for and elected Ordinary Members.

The President announced :—

(1) That Mr. R. C. Hamilton, I.C.S., who had been elected a Member of the Society on the 1st November, 1899, having not paid his Entrance fee, his name has been removed from the list according to Rule 9.

(2) That in accordance with Rule 38 of the Society's Rules, the names of the following gentlemen had been posted up as defaulting members since the Monthly General Meeting held in January last, and will be removed from the Member List and the fact published in the Proceedings.

Munshi Aziz-ud-din Ahmad,  
Raja Baikunta Nath De Bahadur,  
Maulvie Khuda Baksh Khan Bahadur,  
Rai Rajkumar Sarvadhikari Bahadur,  
Babu Narendra Nath Sen,  
Raja Bhupendra Singh Bahadur.

The President also announced that the Council had resolved that a Monthly General Meeting of the Society be held in Simla on the first Wednesday in September next (on which day no meeting is held in Calcutta) for the convenience of members in Northern India and that the meeting be devoted to the reading of papers, the general business of the Society being conducted as usual in Calcutta.

Mahāmahopādhyāya Hara Prasād Çāstri exhibited a manuscript of *Kulālikāmnāya*—a Tantric work in Gupta character of the seventh century and made the following remarks on it.

In exhibiting this manuscript he offered the following observations :—

(1) It has been obtained from Nepal.

(2) There are 77 leaves in the MS. in Gupta and one in Nevāri character. Seventy-two of the leaves are in tolerably good preservation, five being dilapidated. Leaves 34, 40 to 49, 69, 72 to 84, 86 to 89, 94, 96, 97, 100 to 104, 106 to 109, 111 to 165, 167 to 187, 189 to 259 are missing. The highest number marked 260. The leaves have holes for the string not in the middle but slightly to the right as in the Bower MSS.

(3) The character is Gupta. I have carefully compared the letters with charts of Gupta Alphabet and I believe that in pronouncing it to belong to the seventh century I have erred rather in making it more modern than it really is. The shape of letters agree more with those of Horiuzi Palm-leaves than with any other and the age of the Horiuzi Palm-leaves has been set down at 550 A.D. As they are said to be in Japan since the year 609 A.D. The most useful criterion in determining the age of an old manuscript, is to see how many letters have open tops. The proportion of open tops in the present MSS. appears to be much larger than in the ninth century Gupta Palm-leaves photographed in Professor Bendall's Cambridge Catalogue.



(4) In the Colophons the work *Kulālikāmnāya* is said to be a part of a larger work on Tantra entitled *Kubjikāmata*. The extent of *Kubjikāmata* is said to be 24,000 glokas and that of the *Kulālikāmnāya* 6,000 only. Fortunately I brought some portion of the *Kubjikāmata* from Nepal last year and on comparison I find that some verses of this work are identical with some verses of that. Both have the same interlocutors, namely, Bhairava and the Devi. The scene is laid in both on the Himalayas at a place named Santānapura a triangular city with three walls, three door-keepers, three gates. It is a rich city inhabited both by celestials and terrestrials.

(5) The Tantras are regarded as very recent works. Some distinguished orientalisists have pronounced them to belong to the fourteenth century. The appearance of this MSS. disproves that assertion. But I will not say anything on this topic to-day as I purpose to read a paper on the Tantrika MSS. in Gupta character at an early date.

(6) The pagination is curious. At the right hand side of each leaf there are four letters one below the other. The top letter is Çri. Below it is the figure. Below the figure is Ma and below it Ş. The whole seems to be an abbreviation of Çri mate Şaṭsahasre, page —, i.e., page so and so in the compilation running through 6000 verses of the School of the Goddess Çri.

The following papers were read:—

1. *Materials for a Flora of the Malayan Peninsula*, No. 11.—By SIR GEORGE KING, K.C.I.E., M.B., LL.D., F.B.S., &c., late Superintendent of the Royal Botanic Garden, Calcutta.

(Abstract.)

After nearly two years of unavoidable delay a new fasciculus—the eleventh—of those *Materials* has been prepared. The fasciculus gives an account of the natural order *Melastomaceæ*.

The genera described are, 1. OTANTHERA, Bl., two species; *O. celebica*, Bl., new to the Indian Flora, common in the Andamans, and *O. nicobarenis*, T. & B. 2. MELASTOMA, Linn., three species; *M. decemfidum*, Roxb., *M. imbricatum*, Wall., and *M. malabathricum*, Linn., with several varieties. 3. OXYSPORA DC., three species; *O. stellulata*, King, *O. acutangula*, King, and *O. Ourtisia*, King, all new to science. 4. ALLOMORPHIA, Bl., three species; *A. exigua*, Bl., *A. Wrayi*, King, and *A. alata*, Scort., the two latter new to science. 5. BLASTUS, Lour., one species, *B. Cogniauxii*, Stapf, new to the Indian Flora. 6. OCHTHOCHARIS, Bl., four species; *O. paniculata*, Korth., *O. borneensis*, Bl., new to the Indian Flora; *O. juvanica*, Bl., and *O. decumbens*, King, new to science. 7. ANERINCLEISTUS, Korth., five species; *A. macranthus*, King, *A. Scorte-*

*chini*, King, *A. Curtisii*, Stapf, *A. floribundus*, King, *A. sublepidotus*, King, all new to the Indian Flora and all except *A. Curtisii*, here published for the first time. The opportunity is taken of describing another new species, *A. glomeratus*, King, from Borneo. 8. SONERITA, Roxb., is described by Dr. Stapf, the well-known authority on the Asiatic species of this genus. Thirty-eight species are described; of these the following are new to science; *S. epilobioides*, Stapf and King, *S. hyssopifolia*, Stapf and King, *S. flaccida*, Stapf and King, *S. andamanensis*, Stapf and King, *S. populifolia*, Stapf and King, *S. pallida*, Stapf and King, *S. rudis*, Stapf and King, *S. mollis*, Stapf and King, *S. albiflora*, Stapf and King, *S. lusiantha*, Stapf and King, *S. suffruticosa*, Stapf and King, *S. elliptica*, Stapf and King, *S. succulenta*, Stapf and King, *S. repens*, Stapf and King, *S. muscicola*, Stapf and King, *S. sazosa*, Stapf and King, *S. congesta*, Stapf and King, *S. cyclaminella*, Stapf and King, *S. bracteata*, Stapf and King, *S. capitata*, Stapf and King, *S. caesia*, Stapf and King, *S. nidularia*, Stapf and King, *S. brachyantha*, Stapf and King, *S. microcarpa*, Stapf and King, *S. costulata*, Stapf and King, *S. macrophylla*, Stapf and King, *S. glabriflora*, Stapf and King, *S. elatostemoides*, Stapf and King, *S. bicolor*, Stapf and King, *S. calycula*, Stapf and King. 9. PHYLLOGATHIS, Bl., five species, *P. tuberculata*, King, *P. Griffithii*, King, *P. Scortechinii*, King, *P. hirsuta*, King, all new to science, and *P. rotundifolia*, Bl. 10. MARUMIA, Bl., three species; *M. nemorosa*, Bl., *M. rhodocarpa*, Cogn., *M. reticulata*, Bl. 11. DISSOCHAETA, Bl., ten species; *D. annulata*, Hook. f., *D. punctulata*, Hook. f., *D. hirsuta*, Hook. f., *D. bracteata*, Bl., *D. pallida*, Bl., *D. gracilis*, Bl., *D. celebica*, Bl., *D. intermedia*, Bl., *D. anomala*, King, and *D. Scortechinii*, King, the two last species new to science. 12. ANPLECTRUM, A. Gray, five species; *A. lepidoto-setosum*, King, new to science; *A. glaucum*, Triana, *A. palleus*, Bl., *A. divaricatum*, Triana, and *A. anomalum*, King, the last species also new to science. 13. MEDINILLA, Gaud., ten species; *M. scandens*, King n. sp.; *M. speciosa*, Bl., *M. heterantha*, King n. sp., *M. venusta*, King n. sp., *M. Hasseltii*, Bl., *M. Scortechinii*, King n. sp., *M. Maingyi*, Clarke, *M. Clarkei*, King n. sp., *M. crassinervia*, Bl., *M. perakensis*, King n. sp. 14. POGONATHERA, Bl., one species; *P. pulverulenta*, Bl. 15. PACHYCENTRIA, Bl., one species; *P. tuberculata*, Korth. 16. ASTRONIA, Bl., one species; *A. similicifolia*, Triana. 17. PTERANDRA, Jack, three species; *P. coerulescens*, Jack, *P. echinata*, Jack, and *P. Griffithii*, King, the last species new to science. 18. MEMECYLON, Linn., twenty-eight species, of which the following are new to science; *M. epiphyticum*, King, *M. fruticosum*, King, *M. pubescens*, King, *M. Kunstleri*, King, *M. Hullettii*, King, *M. Kurzii*, King, *M. cinereum*, King, *M. andamanicum*, King. Two doubtful species are also alluded to.

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

2. *On a new method of treating the properties of the circle and analogous matters.*—By PROMOTHO NATH DUTT, M.A., B.L. *Communicated by the Natural History Secretary.*

3. *Note on four Mammals from the neighbourhood of Darjeeling.*—By W. P. MASSON. *Communicated by the Natural History Secretary.*

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

4. *On a Supplement of the Celebrated Lexicon Amarakoṣa by a Buddhist author in very ancient Bengali character.*—By MAHĀMAHOĀDHYĀYA HARA PRASĀD ÇĀSTRĪ, M.A.

Of this supplement which seems to have run through about one hundred leaves we have got only the first, the eighty-fourth the eighty-fifth with distinct page numbers and another with the page number broken off. But all the leaves are precious the first leaf specially.

The Amarakoṣa is very well-known. It was composed by Amarasimha one of the nine gems of the Court of the legendary Vikramāditya who seems to have flourished by the middle of the Sixth Century A.D. The Author was a Brāhmaṇa and a worshipper of Çiva. But he subsequently became a Buddhist and is said to have built the great Temple at Bodh Gayā. His invocation at the beginning of his Kosa though thoroughly Buddhistic in tone does not name any deity and so it has been variously interpreted by commentators of different persuasions.

But the Author of the Supplement had no reason to keep the name of his deity in the back ground. He boldly makes his obeisance to the Muniudra and to such Hindu deities as have their place in the Buddhist Pantheon. In the second verse he says his attempt is confined to such names as were not used by people when Amara wrote but which have come into use since his time. He retains the arrangement and the technicalities of Amara and makes it in every sense a supplement.

The character (Bengali) is much more archaic than that of the palm-leaves photographed in Professor Bendal's Cambridge Catalogue. In fact it is intermediate between Gupta and old Bengali. If my memory serves me right I saw something like it in Dharmaditya's Copper-plate Grant obtained from Barisal. There is one feature in these leaves which is absolutely unique; I mean the use of something like commas and semi-colons. Each word is separated from its neighbour by a comma or rather a slanting stroke resembling the Bengali *hasanta* mark. Unlike the European comma it has not the point and the curve but it does all the work of a comma in separating various synonyms. Where one set of synonyms end within a verse there are two slanting strokes doing the duty of a semi-colon. The use of these signs makes the reading of the work comparatively easy.

Purusottama, the Author of the supplement, has not only retained the arrangement, the division of chapters, &c., of Amara but has also followed his order of words, adding new synonyms where necessary and putting in new words and sets of synonyms where, had these been in use, Amara would have put them. Amara makes a distinction between Buddha and Çākyaṃuni the former meaning a hypothetical being and the latter the great reformer of the sixth century B.C. Of the first Amara gives 18 synonyms and Purusottama adds 37 new names. Amara gives only four names of Buddha of the sixth century B.C. Purusottama adds four more, Savarthasiddha, Maḥaçramana, Kuliçasana, and Gopeça. He adds the names of the members of Gautama's family such as Yoçomati, Rāhula, Devadatta and so on. He also adds the name of Avalokiteçvara and gives many synonyms, one of which is Padmapāni. In the names of the Sungod Purusottama adds new words one of which is Padmapāni. This will explain the fact that the figures of Avalokiteçvara and of the Sungod are often confounded. Both have almost the same figure in Nepal. In Bengal too I have seen images of Avalokiteçvara worshipped as the Sun by Hindus in shrines which are undoubtedly Buddhistic. My only regret is that we have got only four-leaves. I propose to publish these leaves with notes in the *Journal*.

5. *Note on a method of detecting free Phosphorus*.—By P. B. MUKERJI, B.Sc., *Professor of Chemistry, Presidency College, Calcutta*. Communicated by MR. A. PEDLER, F.R.S.

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

PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR MAY, 1900.

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The Monthly General Meeting of the Society was held on Wednesday, the 2nd May, 1900, at 9-15 P.M.

F. E. PARGITER, Esq., B.A., I.C.S., in the chair.

Six members and one Visitor were present :—

The minutes of the last meeting were read and confirmed.

Twenty-one presentations were announced.

Miss. Butcher, M.D.; Professor Phani Bhushan Mukerji; Mr. George Charles Wolfe; Captain A. F. McArdle, I.M.S.; Mr. Adolphe Shrager; Kumar Satindra Deva Rai Mahasaya; and Mr. F. R. Leistikow, were balloted for and elected Ordinary Members.

Mr. R. Greeven, I.C.S., has expressed a wish to withdraw from the Society.

Mr. Pargiter exhibited the Timur Nāma and other rare Persian works of Shah Jahan forwarded by the Hon'ble Mr. J. A. Bourdillon, and belonging to the Library of Maulavie Khuda Baksh Khan Bahadur, of Patna.

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The Monthly General Meeting of the Society was held on Wednesday, the 6th June, 1900, at 9.15 P.M.

MAJOR A. ALCOCK, M.B., C.M.Z.S., F.G.S., I.M.S., Vice-President, in the chair.

The following members were present :—

Mr. J. Bathgate, Dr. T. Bloch, Rai Chuni Lal Bose Bahadur, Mr. F. Finn, Mr. T. H. Holland, Mr. D. Hooper, Mr. H. E. Kempthorne, Captain A. F. McArdle, I.M.S., Mr. C. Michie, Captain C. J. R. Milne, I.M.S., Mr. L. de Nicéville, Mr. F. E. Pargiter, Captain L. Rogers, I.M.S., Mr. E. S. Wood, Mr. E. Thornton, Captain H. J. Walton, I.M.S.

Visitors :—Captain T. B. Kelly, I.M.S., Mr. W. D. Maitland, Babu Hiralal Sinha, Mr. E. Vredenburg.

The minutes of the last meeting were read and confirmed.

Twenty-five presentations were announced.

The Chairman announced :—

(1) That Mr. W. A. Lee had resigned his seat on the Council of the Society.

(2) That the Council had elected Mr. F. E. Pargiter, I.C.S., as Anthropological Secretary in the place of Lt.-Col. L. A. Waddell, I.M.S., resigned.

Major Alcock exhibited a specimen of the giant Marine Isopod *Bathynomus giganteus* A. M.-Edw., recently dredged by the "Investigator" off Ceylon in 594-225 fathoms, and remarked upon its curious and suggestive geographical distribution, the only other locality in which it is known to exist being the Gulf of Mexico.

The specimen exhibited is an adult male and measures nearly a foot in length, along the dorsal curve.

Major Alcock also exhibited a coloured life-size model of a Colubrine snake (*Coluber oxycephalus*) made by native artists from a spirit specimen, and remarked upon this new application of native skill towards the illustration of the Zoology of the country.

The specimen is of life-like exactness, and is one of a large series now being prepared in the Indian Museum for exhibition in the Reptile Gallery.

The following papers were read :—

1. *Note on the Plague in India during the reign of the Emperor Aurangzeb.*—By MAULAVI ABDUL WALI.

In two notes on Tulsī-Dās and the Plague in Benares published respectively in the Proceedings of the Society for March and May, 1898, Dr. Grierson says that the Plague, which raged in India in the reign of Jahāngir, was probably the cause of the death of the poet Tulsī-Dās. Dr. Bloch, in a supplementary note to the first paper of Dr. Grierson, adds that the Plague broke out in March, 1616 A.D., and lasted eight years.

One of the symptoms of the disease, mentioned by the Emperor in his *Tuzuk-i-Jahāngiri*, and by the poet Tulsī-Dās in his *Rāmāyaṇa*, (according to the above notes) was the extremely painful boils and bubos which appeared in the groins or armpits. The Plague first appeared in the Panjāb, spread in all the towns and villages in the neighbourhood of Āgra, but there was no trace of it at Fathpur-Sikri. The disease again increased in the cold weather.

Another most terrible outbreak of the Plague or *Tā'ūn* occurred in the thirty-second year (1100 A.H. = 1688-89 A.D.) of the Emperor Aurangzeb's reign at Bijāpur, and is mentioned in the *Ma'āḡir-i-Ālamgiri*. The following are the particulars :—

In Muḡarram of the year 1100 A.H., (= October-November 1688 A.D.) the pestilence, Plague, broke out in a virulent type at Bijāpur, at a time when the Emperor and his army were encamped at that city. It burst forth suddenly, and spread rapidly. A terrible mortality ensued, and it struck terror into every heart. All ceremonies of pleasure were abandoned. The world sat bewailing. Verily it was the Day of Judgment (*qiyāmat*) that came upon the people, or an annihilating blast that was about to sweep away the human species.

Under the armpit or in the groin a boil appeared, fever and delirium (*madhūshi*) of such a peculiar type came upon the patient that no treatment gave him relief. The patient died of the pestilence generally in a day or two and sometimes in three days. Those who were so fortunate as to remain safe from its attack, were so much frightened that they considered themselves as dead. In fact, it came to such a pass, that none would care for the other. The cry of *nafsi, nafsi*, (myself, myself), was heard everywhere. *Nim-Jānān*, i.e., those who were half dead with fright and consternation, having forsaken their everyday business, were only waiting for the hour of death. The maid-of-honour of Her Majesty Aurangābādi Maḡal (the Empress), Muḡammadi Rāj, son of Mahārāja Jaswant Singh, Fāzil Khān, the Ṣadr, and a host of other nobilities succumbed to the

Plague. The middle class as well as the masses died in large numbers. Their number was estimated to be about 100,000 (one lak). The eyes, tongue and ears of those whose head or brain was affected, became useless. Ghāziu-d-Din Khān Bahādur Firūz Jang also had an attack of the Plague. Though he recovered, he lost his eyesight.\* It is useless to speak of the public. In fact no old men, nor any of the chroniclers can ever give an instance of such a terrible outbreak of the pestilence, or such a heavy mortality and the commotion caused thereby. The Plague lasted for two months. Its fury stopped after a week.

It is curious that the tārīkh (date) of this outbreak was—

قیامت بود یا شور و بنا بود

“Was it the Day of Judgment, or the commotion caused by the pestilence.”†

His Majesty relying on God and maintaining the presence of his mind and his indomitable will, was a looker-on of the doings of the *destiny*. He left Bijāpur in Rabi'u-l-awwal, and proceeded on to invade the territory of the Marhatta Sambhā, who was taken prisoner immediately.

From the above facts, we may conclude—

1. That the Plague now invading India for the *first time*, during the sovereignty of the British, is not a new visitor to India. It broke out in the reigns of the Mughal Emperors Jahāngir and Aurangzeb and probably in other periods especially during the rule of the later Mughals.‡

2. That the present epidemic of Plague is undoubtedly more severe and widespread in the *Bombay Presidency* than in other parts of

\* *Vide* Ma'āşiru-l-Umarā (Bib. Ind. Ed. Vol. II, p. 875).

† The *Miṣra* 'Qiyāmat būd yā ghūr-i-wabā būd' gives 1101 A.H. instead of 1100 A.H. The Ma'āşiru-l-Umarā (Vol. III, pp. 32-33), says that Fūzil Khān Shaikh Maḥdūm Ṣadr died of the pestilence that had broken out in the *Laghkar* (army) of 'Ālamgīr in the 32nd year of His Majesty's reign, corresponding with 1099 A.H. It appears that the author while correctly quoting the regnal year, was misled from the *heading* of the Chapter in the Ma'āşir-i-'Ālamgīri, which gives both the regnal and Hijri years. But the regnal year did not end till Ramaẓān, while the Hijri year ended in Zul-Hijja, hence the *discrepancy*. Again, 'Ālamgīr reached Bijāpur on the 22nd Jumādā I. 1099 A.H. He celebrated his next *Julūs* in *Shawwāl*, and did not leave the city till Rabi' I. A.H. 1100. The Plague broke out while the Emperor was in the city, in the middle of Muḥarram. So the year cannot but be 1100 A.H. or 1688 A.D.

‡ It is stated that Ahmad Shāh Durrānī had to leave Hindustān on account of the pestilence (*Wabā*) that broke out in his army (*laghkar*) in the neighbourhood of Akbarābād (Āgra) in or about 1173 A.H. Was this the *Plague*? I have no material at present to prosecute an enquiry on the subject (*vide* M. Umarā II, 720 and III, 892). But *Tā'ūn* and *Wabā* very often mean the same disease.



India, as the *Plague in the same tract* in the reign of the Emperor Aurangzeb was far more severe than the one that had broken out in Jahāngir's time.

3. That the symptoms of the disease stated are on fours with those of the pestilence now raging in India.

No record of an outbreak of the *Plague in Bengal* is to be found.\* The present outbreak has shown that Bengal is not the place where the disease can take a firm hold. Had there been no railways or steam-ships, or were not Calcutta the Capital of Hindustān, it is likely that Bengal would have escaped entirely this time also.

It is for the leisured antiquarians to find out, from the extant records and Chronicles, of the past, if there were other outbreaks of the disease in India in pre-British times.

2. *Note on the occurrence of Rhodospiza obsoleta, Licht., in the Tochi Valley.*—By CAPTAIN H. J. WALTON, I.M.S.

3. *On the Birds collected and observed in the Southern Shan States of Upper Burma.*—By COL. C. T. BINGHAM, F.Z.S., and H. N. THOMPSON, F.Z.S. Communicated by the Natural History Secretary.

4. *On the form of Cormorant inhabiting the Crozette Islands.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum (with exhibition of specimen).

5. *On two rare Indian Pheasants.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum, and LIEUTENANT H. H. TURNER (with exhibition of specimen).

6. *Notes on the structure and function of the tracheal bulb in male Anatidæ.*—By F. FINN, B.A., F.Z.S., Deputy Superintendent of the Indian Museum.

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

\* The unhealthiness, for which the old Capital of Bengal, Gaur, was deserted in the sixteenth century A.D., was not I suppose on account of the *Plague*.





PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR JULY, 1900.

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The Monthly General Meeting of the Society was held on Wednesday, the 4th July, 1900, at 9.15 P.M.

MAJOR A. ALCOCK, M.B., C.M.Z.S., F.G.S., I.M.S., Vice-President, in the chair.

The following members were present:—

Mr. J. Bathgate, Dr. T. Bloch, Rai Chuni Lal Bose Bahadur, Dr. A. Caddy, Mr. W. K. Dods, Mr. F. Finn, Mr. S. C. Hill, Mr. T. H. Holland, Mr. D. Hooper, Mr. H. E. Kempthorne, Mr. C. Little, Captain C. J. R. Milne, I.M.S., Mr. P. B. Mukerji, Mr. L. de Nicéville, Mr. F. E. Pargiter, Captain L. Rogers, I.M.S., Mr. E. Thornton.

*Visitors*:—Commander E. J. Beaumont, R.I.M., Captain R. Bird, I.M.S., Babu Jatendra Nath Bose, Major E. H. Brown, I.M.S., Mr. E. H. Elles, Major L. Jones, I.M.S., Captain T. B. Kelly, I.M.S., Babu Dwipendra Nath Maitra, Mr. T. McMorrان, Mr. A. E. Silk, Babu Hiralal Sinha, Mr. H. Sudlow, Mr. H. J. Weston.

The minutes of the last meeting were read and confirmed.

Twenty-three presentations were announced.

Babu Syam Sunder Das, B.A., and Mr. A. Earle, I.C.S., were balloted for and elected Ordinary Members.

Maulavi Abdul Karim has expressed a wish to withdraw from the Society.

The Secretary reported the death of Pandit Rajani Kanta Gupta.

The Chairman announced :—

(1) That Captain W. F. O'Connor, R.A., who had been elected a member of the Society on the 6th December, 1899, having not paid his entrance fee, his election has become null and void according to Rule 9.

(2) That Messrs. F. Finn, John Bathgate, and S. C. Hill, had been elected members of Council of the Society.

The Secretary read the names of the following gentlemen who had been appointed to serve on the various Committees for the present year.

#### Finance and Visiting Committee.

Major A. Alcock, I.M.S., Dr. T. Bloch, Mr. L. de Nicéville, Mr. J. D. Nimmo, Mr. F. E. Pargiter, Mr. A. Pedler, F.R.S., Mr. H. H. Risley, Mahamahopadhyaya Haraprasad Shastri, Dr. Mahendralal Sircar.

#### Library Committee.

Major A. Alcock, I.M.S., Dr. T. Bloch, Mr. L. de Nicéville, Mahamahopadhyaya Haraprasad Shastri, Mr. D. Hooper, Mr. E. Thurston, Mr. C. W. McMinna, Mr. S. C. Hill, The Hon. Dr. Asutosh Mukerjee, Mr. P. N. Bose.

#### Philological Committee.

Dr. T. Bloch, Mr. F. E. Pargiter, Mahamahopadhyaya Haraprasad Shastri, Dr. Mahendralal Sircar, The Hon. Dr. Asutosh Mukerjee, Maulavi Ahmad, Babu Pratapa Chandra Ghoshia, Mahamahopadhyaya Nilmani Mukerjee Nyayalankara, Shams-ul-Ulama Shaikh Mahomed Gilani, Mr. A. Venis, Lt.-Col. L. A. Waddell, I.M.S., Mr. J. G. Lorimer, Babu Nagendra Nath Vasu, Pandit Satyavrata Samasrami, Major D. C. Phillott, I.S.C., Mahamahopadhyaya Chandra Kanta Tarkalankara.

#### Coins Committee.

Dr. T. Bloch, Mr. F. E. Pargiter, Lt.-Col. D. S. E. Bain, I.M.S., Mr. L. W. King, Mr. E. Thurston, Babu Panchanan Mukerjee, The Hon. Mr. J. A. Bourdillon, Mr. V. A. Smith.

The proposal to withdraw Rs. 10,000 from the Permanent Reserve Fund for meeting the cost of repairing the Society's premises, and for instituting a "Repairs Fund" for future contingencies, of which

intimation had already been given by circular to all resident members in accordance with Rule 64 A, was brought up for discussion previous to further circulation under Rule 64 (c).

Major Alcock, I.M.S., exhibited specimens illustrating the sounding organs of Crustacea, and made a few remarks on the "musical powers" of the higher Crustacea.

The following papers were read:—

1. *Notes on the genus Calinaga, an aberrant genus of Asiatic Butterflies.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S.
2. *Notes on Birds collected in Kumaon.*—By CAPTAIN H. J. WALTON, I.M.S.
3. *Novicæ Indicæ, XVIII. Some new Plants from Eastern India.*—By D. PRAIN.

(Abstract.)

This paper contains descriptions of twelve species from the North-Eastern Frontiers of India. They are as follows:—

1. *Grewia nagensium*, Prain; Nat. Ord. *Tiliacæ*, from Upper Assam and the Eastern Naga Hills.
2. *Gomphandra serrata*, King and Prain; Nat. Ord. *Olacinæ*, from the Kachin Hills.
3. *Combretum kachinense*, King and Prain; Nat. Ord. *Combretacæ*, from the Kachin Hills.
4. *Jasminum excellens*, King and Prain; Nat. Ord. *Oleacæ*, from the Kachin Hills.
5. *Marsdenia leiocarpa*, King and Prain; Nat. Ord. *Asclepiadacæ*, from the Kachin Hills.
6. *Ceropegia kachinensis*, Prain; Nat. Ord. *Asclepiadacæ*, from the Kachin Hills.
7. *Gymnostachyum Listeri*, Prain; Nat. Ord. *Acanthacæ*, from Chittagong.
8. *Peristrophe longifolia*, King and Prain; Nat. Ord. *Acanthacæ*, from the Kachin Hills.
9. *Gomphostemma inopinatum*, Prain; Nat. Ord. *Labiata*, from the Kachin Hills.
10. *Chloranthus kachiuensis*, King and Prain; Nat. Ord. *Cloranthacæ*, from the Kachin Hills.
11. *Smilax Pottingeri*, Prain; Nat. Ord. *Liliacæ*, from the Kachiu Hills.

12. *Cryptocoryne Cruddasiana*, Prain; Nat. Ord. *Aroidæ*, from the Kachin Hills.

4. *A list of the Asiatic species of Ormosia.*—By D. PRAIN.

(Abstract.)

This paper gives a list of the Asiatic species (20 in number) of the Leguminous genus *Ormosia* with complete bibliographical references to each of the previously known species. It provides a key to these species, proposes tentatively a system of classification for those that are known, and provides diagnoses and full descriptions of four forms, viz. :—*O. laxa*, Prain, a new species from the Kachin Hills; *O. inopinata*, Prain, and *O. inopinata* var. *dubia*, Prain, another new species which occurs in two very distinct forms, also from the Kachin Hills; and *O. Henryi*, Prain, an undescribed form from Central China.

5. *The food-plants of the Butterflies of Kanara District of the Bombay Presidency, with a revision of the species of Butterflies there occurring.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S.

6. *Materials for a Carcinological Fauna of India, No. 6.*—By MAJOR A. ALCOCK, I.M.S.

7. *The relationship of drinking water; water-logging and the distribution of Anopheles Mosquitos, respectively to the prevalence of Malaria North of Calcutta.*—By LEONARD ROGERS, M.D., M.R.C.P., I.M.S., Professor of Pathology, Medical College, Calcutta.

(Abstract.)

In February last (1900), I carried out an inquiry into the health of the tract of country just North of Calcutta and extending up along the east bank of the Hooghly as far as Naihati, some 25 miles, with special reference to the prevalence of malaria. The percentage of people with enlarged spleens was taken as the most reliable test, and over 5,000 persons were examined by myself, the degree of enlargement of the organ being noted. The ground water levels were taken in as many wells as possible, as the unhealthiness of this part has for years been considered to be due to water-logging. The drinking water supply was also noted, and the monthly number of admissions for fever in 10 of the principle dispensaries for the last six years was compared with the monthly rainfall the order to ascertain the seasonal influences. Lastly, some observations were made on the distribution of the anopheles mosquito larvæ.

The following table shows the percentage of persons found to suffer from enlargement of the spleen in each municipality. They are arranged in order from above downwards as they are situated on the map from north to south, while the westernly ones which lie on the east bank of the Hooghly are placed above, and the easternly ones, which lie at a little distance from the river are placed below in the following table:—

TABLE I.

MUNICIPALITY.	SPLEEN PERCENTAGE.
Naihati ... ..	19·9
Bhatpara ... ..	20·0
Garnlia ... ..	33·8
North Barrackpore ... ..	36·5
Titagarh ... ..	37·8
South Barrackpore, West ...	25·2
Kamarhati ... ..	18·8
Baranagar ... ..	17·8
Chitpore-Cossipore ... ..	11·2
Average ... ..	24·5
(Gobardanga) ... ..	(55·5)
(Basirhat) ... ..	(52·8)
Baraset ... ..	52·9
South Barrackpore, East ...	56·0
Kamarhati, East ... ..	34·8
North Dum Dum ... ..	68·1
South Dum Dum ... ..	32·3
Maniktolla ... ..	13·2
Average ... ..	41·0

A glance at the above table (which in the full paper is illustrated by a shaded map) shows that the places which are situated on the east bank of the Hooghly river have a much lower spleen rate than those further to the east, although the last five are but from one to two miles from the river. The question arises is to whether the riverine parts are exceptionally healthy or the inland portions especially unhealthy for this part of Bengal, and in order to settle this I examined several hundred people in Basirhat and Gobardanga, which are situated some 25 miles further to the east, and found their spleen rates to be over 50 per cent. It is evident, then, that the riverine portions are

exceptionally healthy for Lower Bengal, but the reason remains to be found.

One very marked exception will be found to the above rule, namely, that Maniktolla although at some distance from the river, yet has a very low spleen rate, the lowest of all the thirteen areas except Chitpore-Cossipore, facts which can only be explained as being due to these two municipalities being the only ones of the lot which have a full filtered water supply. Moreover, this low rate occurs in spite of these two places being the most water-logged in the whole area, their ground water levels being but from 4 to 5 feet below the surface in the dry season, and from 1 to 2 feet down only during the rains.

This result was somewhat surprising in view of recent work on malaria, so advantage was taken of the fact that certain wards of some of the municipalities were partially supplied with filtered water from standpipes provided by certain of the mills within them to examine more closely into the question. The result was ample confirmation of the relationship of the water supply to the spleen rate, illustrative examples of which are as follows. Naihati is divided up into five wards, beginning from the south. The first three are mainly inhabited near the river, and their spleen rates are 19·5, 10·8 and 19 respectively. The very low rate of Ward II coincides with a partial filtered water supply from a mill, which is the only difference between them that can account for the figures. The two most northerly wards are mainly inhabited at a distance of about two miles from the river, and their water supply is mainly from tanks, and although their ground water level is slightly lower than that of Ward III, yet their spleen rates are 22·7 and 27·9. The water supply of Wards I and III is mainly from the Hooghly. Still more striking are the figures for Garulia, in the northern portion of which is a mill which has been supplying filtered water for two years only, during which time the number of cases of fever treated at the local dispensary has fallen to about one-third of what it was before the filtered water came into use, and the greatest improvement took place in the very year that every other dispensary in this area show a great increase of fever. As, moreover, the native inhabitants were very positive that those who drunk the filtered water suffered much less from fever than those who did not, I decided to examine 100 people near the mill, about 80 per cent. of whom had drunk filtered water, and another series at a short distance away, but within one mile of the former, and living under identical conditions, but who differed from the former in not having been accustomed to drink filtered water. The spleen rate was found to be 21·1 per cent. in the former, and 55·5, or



more than two and a half times as great in the latter, which strikingly confirms the local opinion as to the relative immunity of filtered water drinkers from malaria.

Tittagarh, two out of the four wards of which have a partial filtered water supply from mills, afforded a good opportunity of putting the matter to a crucial test, so a note was made of the water drunk by nearly all the people examined. The results are shown in the following tables.

TABLE II.

## GROUND WATER LEVEL.

Area.	February.	Rains, 1899.
Ward IV. ... ..	10 ft. 1 in.	1 ft. 3 in.
Ward III. ... ..	10 ft. 6 in.	1 ft. 6 in.
Ward II. ... ..	.....	.....
Ward I. ... ..	18 ft. 4 in.	6 ft. 0 in.

## DRINKING WATER SUPPLY.

## SPLEEN PERCENTAGE.

River and tank water ... ..	48
One-third drank filtered water ... ..	30
82 per cent. drank filtered water ... ..	19
River and tank water ... ..	54·8

The much lower spleen rates in Wards II and III which had a partially filtered water supply, and that too in proportion to the number of persons examined who had drunk the filtered water is evident. But this is not all for it will be seen from Table III below that the spleen rate among 140 filtered-water drinkers is 26·4 per cent., that among 179 river-water drinkers was 41·8, while out of 55 tank-water drinkers (who it should be noted form a minority here), it was no less than 67·2 per cent. Further, only 38 per cent. of filtered water drinkers in which the spleen was enlarged, was it considerably (two finger-breadths below the ribs) or markedly so, while in 62 per cent. it was only just felt between below the ribs. In river-water drinkers it was much enlarged in 67 per cent. and slightly so in 43 per cent., while in tank-water drinkers it was much enlarged in 73 per cent., and slightly so in only 27 per cent. Not only, then, is the spleen much more frequently enlarged in river and tank water drinkers than in those who drink filtered water, but the degree of enlargement is also much greater in the former than in the latter.

TABLE III. ENLARGEMENT.

	SPLEEN PERCENTAGE AND WATER SUPPLY.			
	Filtered water.	River water.	Tank water.	TOTAL.
Spleen not enlarged ...	103	105	18	226
Spleen just felt ...	23 (62%)	32 (43%)	10 (27%)	65
Spleen considerably enlarged ...	9 (24%)	26 (36%)	15 (40%)	50
Spleen markedly enlarged ...	5 (13%)	16 (21%)	12 (33%)	33
Total examined ...	140	179	55	374
Percentage of enlarged spleens ...	26.4	41.8	67.2	39.5

If now the spleen rates for the different municipalities as shown in Table I (and in the Map), be now examined in the light of the figures just given it will be evident that the difference in the water supply will explain all the facts in a way that no other hypothesis will do. Thus, Chitpore-Cossipore has the lowest spleen rates, and it has the double advantage of both a full filtered water supply and close proximity to the river. The influence of the latter is well illustrated by the fact that the spleen rate of the two riverine wards is only 7 per cent., while that of the other two wards which are from one to two miles from the river, is 15 per cent., or just about the same as that of Maniktolla, which is similarly situated. The obvious explanation is that those who do not take the trouble to get the filtered water will drink river water in the wards on its bank, while in those at a distance they will drink tank water. The same point is illustrated by the differences between the spleen rates of the western portions of Kamarhati and South Barrackpore and the eastern portions of the same municipalities, the former with a water supply from the river having just about half the spleen rate as the latter with only tank water for drinking purposes. In short the much lower rate of the riverine parts is due to the difference in the water supply, for as will be shown presently, there is no essential difference in the ground water level which can explain this distribution. The good effect of even a partial water supply is once more shown by the ward variations of the spleen rate in Baranagar and South Dum Dum. In the former the lowest spleen rate, namely, 11.6, is met with in the most southerly of the riverine wards, which borders on Cossipore, and I found that many of the inhabitants of the small ward were getting their filtered water from Cossipore. Again the only ward which is at a little distance from the river in this municipality has the highest spleen rate, being dependant on tank water to a great extent.

South Dum Dum is divided into three wards, and one of these which borders on Cossipore, from which many of the people whom I examined were accustomed to get filtered water had only a spleen rate of 11·8, against one of 35·4 and 45·3 in the other two wards which had only tank water, although in all other respects I could find no difference between the wards. The very fact of the people taking the trouble to carry filtered water from a distance, and their robust belief that they to a large extent escape fever by so doing, must be allowed some weight in favour of the correctness of their belief. The whole of the evidence, then, points to the water supply as the determining factor in relationship to the relative amount of malaria in this tract of country, but other possible factors must be considered, the most important of which is water-logging.

#### WATER-LOGGING AND THE RAILWAY.

It has already been pointed out that Maniktolla and Chitpore-Cossipore are the most water-logged parts of the whole area, and yet they are the least malarious, owing to their filtered water supply. Further, an examination of the spleen rate and the ground water level ward by ward shows that there is no relationship between the height of the ground water level and the percentage of inhabitants with large spleens. At first sight the fact that the bank of the Hooghly river is very slightly higher than the surrounding country, so that the drainage flows away from the river and eventually finds its way back through khals, or runs into the Great Salt Lake to the East of Calcutta, might appear to indicate that the eastern portions of this area must have a higher ground water level than those near the river bank. Measurements in the wells, however, do not bear this out, for there is very little difference in this respect, while what little there is is rather more frequently in favour of the eastern portions than against them. Further if different wards of the same municipalities are compared no definite or constant relationship between the slight variations in the ground water level which are met with and the spleen rate is found, as a study of the tables in the full paper or the map will show.

The Eastern Bengal Railway, which runs from north to south through this area, and together with the grand trunk road roughly divides the western and eastern portions, has frequently been held to be responsible for the unhealthiness of the country, for it lies across the line of drainage. As, however, the drainage flows from west to east it is obvious that if it materially obstructs the drainage the part to the west of its course should be the more unhealthy, while precisely the opposite is the case. Moreover, in places in which wells were

found on either side of the railway, although not very near it, there was no marked or constant difference in the ground water levels on either side of the railway. The differences in the spleen rates in this tract of country cannot, then, be explained on any theory of water-logging, or interference with drainage by railways or roads, although the natural drainage of places is certainly bad, as in North Dum-Dum.

Again, it might be thought that the lower rate in the western parts might be due to greater density of population, and consequently less fever breeding grounds for the anopheles mosquitos. With regard to the former it may be pointed out that there was practically no difference in the spleen rate of the densely populated western portion of Manik-tolla and the very sparsely populated and somewhat more water-logged eastern part of the same place, both having a filtered water supply, and other similar instances could be given. Further the great differences in the spleen rates of the contiguous wards of the same municipalities in which every condition except the water supply are precisely similar, which have already been detailed, cannot be explained on any theory of varying density of population, or of mosquito breeding grounds.

#### DISTRIBUTION OF THE ANOPHELES MOSQUITOS.

The question of the relationship of the anopheles mosquitos to the prevalence of malaria remains to be considered. It must now be taken as proved that malaria may be communicated to man through the bites of mosquitos which have some days previously bitten another case of malaria, but it still remains to be proved whether this is the only or even the most common cause by which this protean disease is communicated. The point is one of the utmost importance to Bengal, one of the principal homes of malaria, for if the disease is only communicated by the bites of these tiny pests, and they only breed in certain small pools, namely, those which are too small to harbour fish, yet not so small as to dry up in a day or two, as Major Ross states is the case, then by searching out these breeding grounds and destroying the larvæ in the pools we may hope with Ross to at least rid towns or small areas of malaria. Unfortunately I have not been able to confirm these last statements of Ross, for both at Gobardanga and at Manik-tolla, which are at the extreme of the tract of country under observation, I easily found numerous anopheles larvæ both in tanks and in smaller pools all of which contained very numerous fish. As it was impossible to minutely examine 100 square miles or so of this area I determined to map out and closely search all the pools and tanks in

a small area of the Maniktolla Municipality. The results which were obtained are as interesting as they were unexpected. I much regret that I have not been able to confirm Major Ross' observations as to the very localised and small number of the breeding places of anopheles mosquitos. On the contrary I found them very commonly in large tanks, and that too in spite of most of them swarming with fish. In fact in the dry season when small pools are few in number the tanks are the common breeding place. Further, although I found them in two out of three very small pools (from two to five yards in diameter), and with but some two inches of water in them, these pools also contained small fish, which during some time that I watched them did not touch one of the anopheles larvæ which floated temptingly past their noses, although they eat several small beetles, which they appeared to prefer. If then, the larvæ can survive in spite of fish in such tiny pools is it any cause for wonder that they live in tanks.

The question then arises as to whether there is any relationship between the number of anopheles and the amount of fever, in order to test which I resolved to make a monthly examination of some thirty tanks, together with any pools near them in a small area of Maniktolla. These observations will have to be continued for a year, but it may be mentioned here that during the dry season, when malaria fevers were at a minimum, from one-third to two-thirds of the tanks have been found to harbour the anopheles larvæ, and that too at a time when three visits to the local dispensary, after having given notice that all fever cases were to be kept for me to see, I failed to obtain a single case. Yet some of the tanks were estimated to have contained over one million larvæ, so thickly were they lying near the leeward bank in particular. In short it would have taken a very large number of the small pools to harbour as many larvæ as one of these tanks, so that in this area the tanks form the principal breeding ground in the dry season at any rate. It will be very interesting to see what happens in the rainy season, but I may mention that after the recent heavy rain the larvæ nearly disappeared from the tanks, and were enormously reduced in numbers in spite of several new small infected pools having appeared, so that further observations promise to be of interest.

The importance of the above observations lies in the impossibility of destroying all the anopheles larvæ in even a very small area in Bengal, for the thirty tanks mentioned above all lay within an area of one-sixteenth of a square mile, and formed but a small fraction of those of the very small municipality of Maniktolla, so that unless some very much more potent method of destroying mosquitos is discovered I

fear that Bengal will not have its malaria much reduced by Ross' ingenious suggestions. If, too, all malaria is due to the bites of these mosquitos and they are present in such great numbers in the minimal fever season, how many will be found in the maximal fever period, and how great will be the difficulty of destroying them?

It may be objected that possibly many of the anopheles found by me in the tanks were varieties which do not carry malaria, but until we know which are harmless and can easily distinguish them at a glance, this will not lessen the difficulty of destroying the really dangerous ones, if indeed any of them are harmless.

The importance of the action of a filtered water supply in greatly reducing the amount of malaria, which has been demonstrated in this paper, is enhanced by the great difficulty of destroying the malaria-bearing mosquito, and also raises the question as to whether these insects may not carry the infection from cases of fever back to the water of tanks, etc., and the disease may not commonly be obtained by drinking such infected water, which has for centuries been considered to be a frequent medium through which the disease may be obtained. This important question can only be settled by experiment, which I hope shortly to be able to undertake.

Lastly, many charts have been made showing the monthly number of fever cases treated in the dispensaries of this area together with the monthly rainfall. It appears from these that the conditions which influence the amount of fever in different years is a general one, for all the dispensaries show very similar curves in the same year (except when the water supply has been materially altered as in the case of Garulia) so that some general cause must have been in operation. On the other hand, there is no definite relationship between low or heavy annual rainfall and the amount of fever, as I have shown elsewhere is the case on laterite soil with rapid ground water variations. There does, however, seem to be some relationship between the daily distribution of the rain and the amount of fever, but my observations on this point are not sufficiently advanced to allow of any definite statement on the subject at present.

The broad result of the present inquiry, then, is simply that there is a very definite relationship between the drinking water and the amount of malaria, as judged by the spleen rate in this alluvial area.



PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR AUGUST, 1900.

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The Monthly General Meeting of the Society was held on Wednesday, the 1st August, 1900, at 9.15 P.M.

MAJOR A. ALCOCK, M.B., C.M.Z.S., F.G.S., I.M.S., Vice-President, in the chair.

The following members were present:—

Mr. J. Bathgate, Babu Man Mohan Chakravarti, The Revd. E. Francotte, S.J., Mr. S. C. Hill, Mr. T. H. Holland, Mr. T. H. D. La Touche, Captain A. F. McArdle, I.M.S., Mr. L. de Nicéville, Dr. P. C. Ray, Mr. M. J. Seth, Mahamahapadhyaya Haraprasad Shastri, Pandit Jogesh Chandra Shastri, Mr. A. Shrager, Mr. E. Thornton.

*Visitors*:—Babu Bhuban Mohan Chatterjee, Mr. A. E. Duchesne, Pandit Navakanta Kavibhusan.

The minutes of the last meeting were read and confirmed.

Thirty-five presentations were announced.

Mr. C. G. H. Allen, I.C.S., and Major E. H. Brown, I.M.S., were balloted for and elected Ordinary Members.

The Secretary announced the death of H.R.H. the Duke of Saxe-Coburg, who has been an Ordinary Life Member of the Society since the 9th March, 1870.

The Secretary announced that Mr. F. E. Pargiter, Honorary Anthropological Secretary, had been appointed by the President according to Rule 47 to act as General Secretary during the absence of Mr. T. H. Holland between the 21st and 30th of July.

Major A. Alcock, I.M.S., exhibited some wood showing some of the supposed results of a storm in Assam.

The following papers were read:—

1. *Further researches on Mercurous Nitrite and its derivatives.*—  
By DR. P. C. RAY.

(Abstract.)

The first portion of this paper deals with the preparation of mercurous nitrite on a large scale, as also obtaining it in a chemically pure state.

The second portion takes up the preparation of ethyl nitrite and its isomer nitroethane by the interaction of mercurous nitrite and ethyl iodide. It is here shown that mercurous nitrite behaves just like silver nitrite.

The last portion describes certain interesting reactions between mercurous and mercuric nitrites on the one hand and silver and sodium nitrite respectively on the other.

2. *On Mercurous Iodide, and a new method of its preparation.*—By  
DR. P. C. RAY.

(Abstract.)

The Author shows that when the residue after the reaction between mercurous nitrite and ethyl iodide is heated in a tube, mercurous iodide, as might have been expected, sublimes off. Some new properties of this compound have also been added.

3. *Antiquities of the Tantras and the Introduction of Tantric rites in Buddhism.*—By MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

(1). I have examined one Tantrik work entitled *Laṅkavatara* in the Darbar Library, Nepal, written in later Gupta hand, bearing as the date of copying, the 28th year of the Newar era which corresponds to 908 of the Christian era. It is a work on the treatment of fever and other diseases by medicine, incantation and charms. It is addressed to Bibhisana the brother and successor of Ravana. Bibhisana is said to be immortal and the work is addressed to him. This work is to be differentiated from the celebrated work entitled *Laṅkavatara sūtra* of the





Buddhists. This is Hindu and tantra written in verse and that is Buddhistic sutra work written in verbose prose and verse.

I examined another work entitled *Niçvāsa-tattva-saṃhitā* at the same Library, written in a Gupta character older than the preceding. This is perhaps the first time that an important original tantrik work has been found complete. It bears no date but it must be more than a century older than the other. The scene is laid in the Naimisāranya the traditional home of the Puranas and the interlocutors are Rṣis or Ancient Indian Sages. The subject of their conversation is the *dikṣā* or initiation other than Vaidic. The Rṣis wonder how can there be such a thing as *dikṣā* without any reference to the Vedas. But the eldest among them explains to them that even the great Gods like Brahma, Visnu and others received non-Vedic *dikṣā* at the very spot they were sitting upon.

The third Tāntrik work in Gupta character has been very recently acquired for the Asiatic Society. It is a fragment written in character older than the preceding. It is a portion of the *Kulalikāmuāya* which again is a part of a much larger work entitled *Kubjikāmata*. I exhibited this work at the April meeting of the Asiatic Society which was presided over by His Honour the Lieutenant-Governor of Bengal.

The discovery of these three works pushes back the antiquity of the tantras to about the fifth or sixth century A. D., the time of Asanga, credited by the Buddhists with the introduction of Tantra into their religion (see page 208 Buddhism by Rhys Davis).

(2). The other discovery I have made is not so much from books and MSS. as from actual observation in Nepal. It was always a puzzle to me that the pure metaphysical religion of Buddha could be made the medium of practising immoral and obscene rites. The Buddhist Trinity Dharma (Religion) Buddha and Sangha (Buddhist monastic congregation) are merely abstract ideas personified. All the three words are in masculine gender. How can there be the introduction of female divinities and subsequent obscene rites? But on entering the Holiest of the Great places of Pilgrimage in Nepal, the Svambhu Ksetra, I was struck with a female figure labelled or inscribed as *Namo dharmaya*. I at once enquired from the Residency Pandit, a Buddhist high-priest himself and the descendant of the most learned of Buddhist Pandits ever met with by the English in Nepal. He coolly said *Dharma* is nothing else but *Prajñā*. I had often read in Buddhist works the phrase *Prajnopāyasvarūpinim* or *svarūpāya*. I know that Buddha is never an object of worship. His image is kept in monasteries simply for the purpose of keeping his noble example always present before the aspirers to *Nirvāna*, and so he is the *Upāya* or means to *Nirvāna*. I also knew that *Prajñā* or true knowledge is the great goal of those who aspired to *Nirvāna*. But none ever suspected that Dharma and *Prajñā* are

identical. This identification introduced a female deity into the Buddhist Trinity and she at once became the mother of all Bodhisattvas, beings representing the saṅgha or the Buddhist congregation. In a MS. in the Durbar library belonging to the Kālacakra School I subsequently saw illustrations of *Buddha* and *Prajñā* in the unspeakable situation begetting Bodhisattvas. This information led to the explanation of many facts and symbolisms unexplained before. Buddhism subsequently became closely allied to Çakti worship and its later development ran in parallel lines with that of Çakti cult.

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PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR OCTOBER AND NOVEMBER, 1900.

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A General Meeting of the Society for the reading of papers was held at Simla on the 5th October, 1900, at 5 P.M.

H. H. RISLEY, Esq., I.C.S., C.I.E., Vice-President, in the chair.

H.E. BARON CURZON OF KEDLESTON, Patron of the Society was present.

Mr. H. H. Risley exhibited and explained:—

(a) a fire-drill used by the Todas for kindling the fire in the sacred cow-house,

(b) a photograph of the wooden elephant used by the Kondhs of Ganjam and the Orissa hills for the purpose of human sacrifice,

(c) a *tāli*, or marriage symbol of the Chenchu tribe in Southern India, and

(d) a coin of the Nameless King, one of the Scythian rulers not yet identified.

The following papers were read:—

(1). *Description of a new Himalayan genus of Orobanchaceæ.*—By J. S. GAMBLE, M.A., F.R.S., and MAJOR D. PRAIN, I.M.S., LL.D.

( Abstract. )

This new genus *Gleadovia* Gamble and Prain, is dedicated to Mr. F. Gleadow who first actually found it. It has the facies of

a *Christisonia* but differs from that genus in having both anther-cells perfect; the corolla 2-labiate and the stigma equally 2-lobed.

It is nearest to *Conopholis* with which it agrees as to corolla and stamens but from which it differs as regards calyx and stigma. From *Boschniackia* it differs somewhat as regards corolla and greatly as regards stamens. From *Xylanche* (*Boschniackia himalaica*) it further differs in having 2 carpels not 3. From all three genera it differs as regards inflorescence which is spicate in those but paniculate in *Gleadovia*.

(2). *The Humours of Coin-collecting*.—By R. BURN, I.C.S.

(3). *How Rome would have ruled India*.—By W. S. MEYER, I.C.S.

In the discussion which followed the Chairman, The Hon. Mr. T. Raleigh and H.E. Lord Curzon took part.

The Monthly General Meeting of the Society was held on Wednesday, the 7th November, 1900, at 9 P.M.

LIONEL 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, Mr. W. B. Colville, Dr. A. Krafft von Delmensingen, Mr. W. K. Dods, Mr. F. Finn, Mr. S. C. Hill, Mr. T. H. Holland, Mr. H. E. Kempthorne, Mr. F. R. Leistikow, Mr. F. E. Pargiter, Mr. G. F. Reader, Captain L. Rogers, I.M.S., Pandit Jogesh Chandra Shastri, Mahamahopadhyaya Haraprasad Shastri, Mr. E. Thornton.

The minutes of the meetings held in August and October last were read and confirmed.

Seventy-five presentations were announced.

The Hon. Mr. E. N. Baker, C.S.I., I.C.S., Mr. F. O'Dwyer, I.C.S., Mr. H. A. Rose, I.C.S., Captain John Stephenson, I.M.S., Captain J. C. S. Vaughan, I.M.S., The Hon. Mr. H. C. Fanshawe, C.S.I., I.C.S., Mr. G. F. Reader, Mr. O. V. Bosanquet, I.C.S., The Hon. Sir Edward F. G. Law, K.C.M.G., and Maulavie Muhammad Abdullah, M.A., were elected Ordinary Members during the recess in accordance with Rule 7.

Mahamahopadhyaya Nilmani Mukerjee, and Lieut.-Col. R. H. Whitwell, I.M.S., expressed a wish to withdraw from the Society.

The Secretary reported the death of the following members:—

Babu Guruprasad Sen (Ordinary Member).

Dr. Aghore Chandra Bhaduri (Do.).

Dr. J. Anderson, F.R.S. (Life Member).

Prof. The Right Hon. F. Mäx Muller (Honorary Member).

The Chairman announced:—

1. That in accordance with Rule 38 of the Society's Rules, the name of the following gentleman had been posted up as a defaulting member since the last meeting, and will be removed from the Member List.

Rai Nali Naksha Bose Bahadur.

2. That Mr. J. Lane Long and Mr. George Charles Wolfe elected members of the Society on the 4th April and 2nd May, 1900, respectively, having not paid their entrance fees, their elections have become null and void under Rule 9.

The General Secretary reported that Dr. G. Thibaut had been appointed to serve on the Philological Committee of the Society during the present year.

The General Secretary also reported the presentation of the following coins:—

1. From Lieut.-Col. D. S. E. Bain, I.M.S., 6 gold coins found at Covercolly, North Coorg.
2. From the Deputy Commissioner, Wun District, 4 silver coins as described in the Society's *Proceedings* for March 1897.
3. From the Government of North-West Provinces and Oudh, 15 lead coins.
4. From the Bombay Branch, Royal Asiatic Society, 2 silver coins found in the Kaira District.

The proposal to withdraw Rs. 10,000 from the Permanent Reserve Fund for meeting the cost of repairing the Society's premises and for instituting a "Repairs Fund" for future contingencies of which intimation had already been given by circular to all members was brought up for final disposal. The votes of the members were laid on the table and the Chairman requested any Resident Members who had not expressed their opinion to take the present opportunity of filling in voting papers. Eight such papers were filled in and, with the 115 returned by members, were scrutinized, the Chairman appointing Mr. S. C. Hill and Captain L. Rogers, I.M.S., to be Scrutineers. The Scrutineers reported as follows:—

- 121 For the proposals.
- 1 Against.
- 1 Doubtful.

Mahamahopadhyaya Haraprasad Shastri exhibited a palm-leaf written under the order of Vidyapati for his Library.

The following papers were read:—

1. *Ancient stone implements in the Santal Parganas.*—By THE REV. P. O. BODDING..
2. *Notes on the Vēlāma Caste in Barar.*—By CAPTAIN WOLSELEY HAIG, I.S.C.

PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR DECEMBER, 1900.

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The Monthly General Meeting of the Society was held on Wednesday, the 5th December, 1900, at 9 P.M.

COLONEL T. H. HENDLEY, C.I.E., I.M.S., Vice-President, in the chair.

The following members were present:—

Mr. J. Bathgate, Dr. T. Bloch, The Hon. Mr. C. W. Bolton, C.S.I., Rai Chuni Lal Bose Bahadur, Major E. H. Brown, I.M.S., Dr. A. von Krafft Delmensingen, Mr. J. Eliot, F.R.S., Mr. E. B. Havell, Mr. S. C. Hill, Mr. T. H. Holland, Mr. D. Hooper, Mr. F. R. Leistikow, Mr. W. S. Meyer, Mr. W. H. Miles, Mr. L. de Nicéville, Mr. F. E. Pargiter, Mr. A. Pedler, F.R.S., Major D. Prain, I.M.S., Captain L. Rogers, I.M.S., Dr. P. C. Ray, Mr. M. J. Seth, Mahamahopadhyaya Haraprasad Shastri, Pandit Jogesh Chandra Shastri, Mr. A. Tocher, Mr. E. Thornton, Dr. G. Watt, C.I.E.

Visitor:—The Revd. J. H. N. McNeil.

The minutes of the last meeting were read and confirmed.

Twenty-seven presentations were announced.

Mr. Birendra Chandra Sen, I.C.S., Mr. E. V. Gabriel, I.C.S., Mr. Imre Geo. Schwaiger, Mr. J. W. A. Grieve, Captain W. F. O'Connor, R.A., Mr. H. C. Woodman, I.C.S., and Mr. John Nicoll, were balloted for and elected ordinary members.

The Chairman reported that the Council had appointed Babu Charu Chandra Bhattacharyya as the Pandit for the Oriental Library of the Society, in the place of Pandit Aunadaprasad Sarasvati, deceased.

The Chairman announced that in accordance with Rule 38 of the Society's Rules, the names of the following gentlemen had been posted up as defaulting members since the last meeting, and will be removed from the Member List.

Babu Radhika Raman Chatterjee,  
Varada Charan Mitra, Esq., I.C.S.

The General Secretary at the request of the Swedish Academy, Stockholm, called attention to the Nobel prizes for literature and science. The endowment for these prizes is based on the Will, dated 27th November 1895, of the late Dr. A. B. Nobel, engineer, who stipulated as follows :

“The remainder of the fortune which I shall leave shall be disposed of in the following manner: The capital, converted into safe investments by the executors of my Will, shall constitute a fund the interest of which shall be distributed annually as a reward to those who, in the course of the preceding year, shall have rendered the greatest services to humanity. The sum total shall be divided into five equal portions, assigned as follows :

“(1). To the person having made the most important discovery or invention in the department of physical science.

“(2). To the person having made the most important discovery or having produced the greatest improvement in chemistry.

“(3). To the author of the most important discovery in the department of physiology or of medicine.

“(4). To the author having produced the most notable literary work in the sense of idealism.

“(5). To the person having done the most, or the best, in the work of establishing the brotherhood of nations, for the suppression or the reduction of standing armies, as well as for the formation and the propagation of peace conferences.

“The prizes will be awarded as follows: For physical science and chemistry, by the Swedish Academy of Sciences; for works in physiology or medicine, by the Carolin Institute of Stockholm; for literature, by the Academy of Stockholm; finally, for the work of peace, by a committee of five members, elected by the Norwegian Storting. It is my expressed will that nationality shall not be considered, so that the prize may accrue to the most worthy, whether he be a Scandinavian or not.”



Each of the annual prizes established by the Will will be awarded at least once in the course of every period of five years, commencing with the year immediately following that in which the Nobel endowment enters on its functions, and the sum total of a prize thus awarded will in no case be less than 60 per cent. of the part of the yearly revenues disposable for the distribution of the prizes; neither can it be divided into more than three prizes at the most.

The first distribution of prizes for all sections will take place, if possible, in 1901. From the endowment resources will be deducted: First, a sum of 300,000 crowns (16,000*l.*) for each section—that is, 1,500,000 crowns (80,400*l.*) in all—which, with the interest commencing from January 1, 1900, will be used to cover, in proportion, the expenses of the organisation of the Nobel institutes in addition to the sum the board of administration shall judge necessary for the acquisition of a special site destined for the administration of the endowment and including a hall for its meetings.

The right of presenting proposals for prizes belongs to—

(1) Native and foreign members of the Royal Academy of Sciences. (2) Members of the Nobel committees for natural philosophy and chemistry. (3) Professors who have received the Nobel prize of the Academy of Science. (4) Ordinary and extraordinary professors of natural sciences and chemistry in the Universities of Upsala, Lund, Christiania, Copenhagen and Helsingfors, in the Carolin Institute of Medicine and Surgery, the Superior Technical Royal School, as well as to the professors of the same sciences in the Stockholm High School. (5) Incumbents of corresponding chairs of at least six universities or high schools, which the Academy of Science will select, taking care to divide them suitably between the different countries and their universities. (6) Learned men, to whom the Academy shall judge proper to send an invitation to this effect.

The invitations will be sent every year in the month of September. Proposals for the prize must be made before February 1 of the following year. They will be classified by the Nobel committee and submitted to the college of professors. The Nobel committee will decide which of the works presented shall be submitted to a special examination. The college of professors will pronounce definitely on the distribution of the prize in the course of the month of October. The vote will be taken in secret; if necessary, the question may be decided by drawing lots.

The right to present candidates for the Nobel prize belongs to the members of the Swedish Academy, the French Academy, and the Spanish Academy, which resemble the Swedish Academy in their

organisation and aim; to the members of the literary departments of other academies, as well as to the members of literary institutions and societies analogous to academies; to professors of æsthetics, of literature and of history in the universities. This order must be published at least every five years.

The proposal to alter the status of the Society of which intimation had already been given by circular to all resident members in accordance with Rule 64 A., was brought up for discussion previous to further circulation under Rule 64(c).

The following papers were read :—

1. *Note on 'Abdul Qādir Badayūni's place of burial.*—By H. BEVERIDGE, Esq.

Mr. Blochmann in his valuable paper on Badāoni and his works (J.A.S.B., Vol. XXXVIII, Part I, p. 144) says “ Mr. Harrison (of the Barqilly College) informs me that a gentleman in Badāon has been at some pains to discover among the numerous and decaying tombs of ‘Aṭāpūr’ the grave which encloses the remains of ‘Abdul Qādir, but that his efforts have not been successful. It would be anything but antiquarian sentimentality to renew the search for the resting place of a man who has left us not exactly the fullest, yet the most original and independent history of the great Emperor.”

This was published in 1869, and I am happy to be able to inform the Society that Badayūni's grave is still extant, and that it was pointed out to me on the 12th December, 1899, by Qāzī ‘Alī Aḥmad Maḥmūd Ullāh Shāh, a resident of Badaun and a gentleman who is interested in historical studies.<sup>1</sup>

The grave lies in a field about two miles east of the town of Badaun and on the left hand side of the road leading to Shāhjahānpūr. There are at least six tombs there, and none has any name or date, but tradition identifies one of them as Badayūni's. The others are those of members of his family. They are in a small patch of waste land, raised above the level of the rest of the field, and covered with clumps of the long grass (elephant-grass?) from which *Mūnj*-Matting is made. The village of ‘Aṭāpūr,’ where Badayūni is said to have been buried, has ceased to be inhabited or to be remembered, and the field is reckoned

<sup>1</sup> It is Ṭufail Ahmed a brother of this gentleman and a pleader of the Badaun Court, who has repaired the Chief Mosque of Badaun.

as included in the village of Mūjhia. It seems desirable that steps should be taken to preserve the graves and also to mark the one which is Badayūni's.<sup>1</sup>

At p. 134 Mr. Blochmann says that it was the transfer of Badayūni's grant of land from Bisāwar to Badaun which has procured for him the name of Badayūni. But the local account is that Badaun was the home of his ancestors, though he himself was born at Tūnda near Bisawar on the road from Agra to Ajmir. The quarter of the town of Badaun where his ancestors lived is still pointed out.

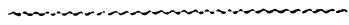
There is an excellent account of Badayūni in Maulvi Muḥammad Ḥusain Shams-al-Ulamā's *Darbār-i-Akbarī* (Lahore 1898), and at p. 461 of it there is a reference to the grave. The author there quoted under the *takhalluṣ* of Khūshgō is, I presume, the Rai Bakhtāwar Singh whose *Chronicles of Badaun* were published at Bareilly in 1868. Muḥammad Ḥusain adds that Badayūni is said to have left a daughter whose descendants still live in Khasiabad in Oude.

It will be observed that I have written the name, Badayūni. This is in accordance with the *Gazetteer of the N. W. Provinces*, and the *Darbār-i-Akbarī*, and also with the pronunciation of some native gentlemen. Others seem to pronounce it Badaūni, i.e., with the *u* short. But the town is always spelt Badaun, and the *o* of Badaoni seems wrong, unless merely intended to prevent the *a* ~~oo~~ being pronounced as a diphthong. See however Mr. Blochmann's Note on the point.

from/

2. *Abul Fazl's account of the Sarkar Multan in the third book of the Ain-i-Akbari.*—By E. D. MACLAGAN, ESQ., I.C.S.

<sup>1</sup> The field seems to be known to the villagers as the "Field of the Vizier" but is called by Qāzi Ahmed the *Milkiyat* and the *Nirkhiyān kā Khet*.





# INDEX

TO

PROCEEDINGS, ASIATIC SOCIETY OF BENGAL,

FOR 1900.

	<i>Page</i>		<i>Page</i>
Abdul Karim (Maulvie) ...	87	Bhakta (Krishna Gopal) ...	68
'Abdul Qādir Badayuni's place of burial ...	110	Bhattacharyya (Charu Chan- dra) ...	108
Abdul Wali (Maulvie) ...	83	Bibliotheca Indica ...	18
Abstract of Proceedings of Council during 1899 ...	16	Bingham (Col. C. T.) ...	75, 85
Address, Annual ...	21	Bloch (Dr. T.) ...	20, 88
Agencies ...	14	Bodding (Rev. P. O.) ...	106
Ahmad (Maulvie) ...	88	Bombay Branch of the Royal Asiatic Society, coins pre- sented by the ...	106
Alcock (Major A.) 3, 20, 82, 88, 89, 90, 100	100	Bosanquet (O. V.) ...	105
Allen (C. G. H.) ...	99	Bose (Rai Bahadur Chuni Lal) ...	67
Amarakoṣa, a supplement to the Ancient Monuments in India ...	79	Bose (Rai Nali Naksha) ...	105
Anderson (Dr. J.) ...	105	Bose (P. N.) ...	88
Annual Address, 1900 ...	21	Bourdillon (Hon. J. A.) ...	81, 88
„ Meeting ...	9	Brown (Major E. H.) ...	99
„ Report ...	11	Burn (R.) ...	104
Anthropological Secretary, elec- tion of ...	20	Butcher (Miss J.) ...	81
Antiquities of the Tantras ...	100	Chatterjee (Radhika Raman) ...	108
Asiatic species of <i>Ormosia</i> ...	90	Chowdhuri (Khirode Chandra) ...	68
Aziz-ud-din Ahmad (Munshi) ...	76	Coin Cabinet ...	18
Bain (Lieut.-Col. D. S. E.) ...	88, 106	Coins Committee, election of ...	88
Bailey (Revd. T. G.) ...	5	„ presentation of ...	106
Baker (Hon. E. N.) ...	105	<i>Coluber oxycephalus</i> ...	82
Bathgate (J.) ...	88	Calubrine snake ...	82
<i>Bathynomus giganteus</i> A. M.- Edw. ...	82	Continental Agency ...	15
Beveridge (H.) ...	110	Conversazione, proposed ...	5
Bhaduri (Dr. Aghore Chandra) ...	105	Council Members, election of ...	20
		„ Proceedings during 1899, abstract of ...	16
		Covercolly, coins found at ...	106

	<i>Page</i>		<i>Page</i>
Curzon (Lord) ...	56	India, Ancient Monuments in	56
Das (Gopal Ballabh) ...	68	„ note on the Plague in ...	83
Das (Syam Sunder) ...	87	Indian Meteoric Iron ...	2
De (B.) ...	67	Indian Museum ...	12
De (Raja Baikunta Nath) ...	76	Insects that possess special	
Death of Members... 88, 99, 105		means of scaring their ene-	
Defaulters, names of members		mies ...	3
as	2, 68, 76, 105, 108	Joint Philological Secretary,	
Deva (Kumar Satindra) ...	81	election of ...	20
Dods (W. K.) ...	20	Kaira District, coins found in	
Dutt (Promotho Nath) ...	79	the ...	106
Dyson (Major H. J.) ...	75	Kennedy (J.) ...	67
Earle (A.) ...	87	Khuda Baksh Khan Bahadur,	
Eastern India, plants from ...	89	(Maulvie) 76, 81	
Election of Members 67, 75, 81,		King (Sir George) ...	77
87, 99, 105, 107		King (L. W.) ...	88
Elliott Prize for Scientific		Krafft (Dr. A. von) ...	67
Research ...	2	Küchler (G. W.) ...	20
Evans (Hon. Sir Griffith) ...	75	Kulālikāmnāya, MS. of ...	76
Fanshawe (A. U.) ...	67	Law (Hon. Sir E. F. G.) ...	105
Fanshawe (Hon. H. C.) ...	105	Lee (W. A.) ...	20, 82
Finance ...	12	Leistikow (F. R.) ...	81
„ and Visiting Com-		Library Committee, election of	88
mittee, election of ...	88	„ report on ...	15
Finn (F.) ...	20, 68, 85, 88	Life Members, death of	99, 105
Flora of the Malayan Peninsula		London Agency ...	14
No. 11 ...	77	Long (J. Lane) ...	75, 106
Gabriel (E. V.) ...	107	Lorimer (J. G.) ...	88
Gamble (J. S.) ...	103	Maclagan (E. D.) ...	111
Ganeça, Turquois ...	69	Mahomed Gilani (Shaikh) ...	88
General Secretary, election of	20	Malaria North of Calcutta ...	90
Ghosha (Pratapa Chandra) ...	88	Malayan Peninsula, Flora of the	77
Greeven (R.) ...	81	Marine Isopod ...	82
Griesbach (C. L.) ...	20	Masson (W. P.) ...	79
Grieve (J. W. A.) ...	107	McArdle (Capt. A. F.) ...	81
Gupta (Rajani Kanta) ...	88	McMinn (C. W.) ...	88
Haig (Capt. W.) ...	106	Member-List ...	11
Hamilton (R. C.) ...	75	Members, death of	88, 99, 105
Harding (F. H.) ...	67	„ election of 67, 75, 81,	
Harvey (Surgeon Major R.) ...	75	87, 99, 105, 107	
Hendley (Col. T. H.) ...	20	„ of Council, election	
Hill (S. C.) ...	88	of	20
Holland (T. H.)	2, 5, 20, 100	withdrawal of 67, 81,	
Honorary Members, death of ...	105	87, 105	
Hooper (D.) ...	88	Mercurous Iodide and Nitrite ...	100

	<i>Page</i>		<i>Page</i>
Meteorite Iron, Indian	... 2	Plants from Eastern India	... 89
Meyer (W. S.)	... 67, 104	Prain (D.)	... 89, 90, 103
Monthly General Meetings 1,		Presentations 1,	67, 75, 81, 82,
67, 75, 76, 81, 82, 87, 99, 103,			87, 99, 105, 107
	105, 107	President, election of	... 20
Michie (Chas.)	... 67	Publications	... 15
Mitra (Varada Charan)	... 108	Raleigh (Hon. T.)	... 75
Muhammad Abdullah (Maulvie)	105	Ramacarita, On the MS. of	... 70
Mukerjee (Hon. Dr. Asutosh)	... 88	Ray (Mahendra Nath)	... 68
Mukerjee (Pandit Nilmani)	88, 105	Ray (Dr. P. C.)	... 100
Mukerjee (Panchanan)	... 88	Reader (G. F.)	... 105
Mukerji (P. B.)	... 80, 81	Risley (H. H.)	... 20, 88, 103
Müller (Prof the Right Hon.		Rogers (Capt. L.)	... 75, 90
F. Max)	105	Rose (H. A.)	... 105
Natural History Secretary, elec-		Royal Asiatic Society	... 2
tion of	20	Samajpatri (Suresh Chandra)	... 68
Nicéville (L. de)	20, 68, 88, 89, 90	Samasrami (Pandit Satyavrata)	88
Nicoll (J.)	... 107	Sarvadhikari (Rai Rajkumar)	76
Nimmo (J. D.)	... 20, 88	Saxe-Coburg, H. R. H. the	
Nobel prizes for literature and		Duke of	... 99
science	... 108	Schwaiger (I. G.)	... 107
North-West Provinces and		Sen (Birendra Chandra)	... 107
Oudh, coins from the	... 106	Sen (Guruprasad)	... 105
O'Connor (Capt. W. F.)	88, 107	Sen (Narendra Nath)	... 76
O'Dwyer (F.)	... 105	Shah Jahan, rare Persian works	
Ordinary Members, election of		of	... 81
67, 75, 81, 87, 99, 105, 107		Shastri (Pandit Haraprasad)	
Oriental learning, gold medal		20, 69, 70, 76, 79, 88, 100, 106	
for the encouragement of	... 2	Shastree (Pandit Yogesha	
<i>Ormosia</i> , asiatic species of	... 90	Chandra)	... 67
<i>Orobanchaceæ</i> , Himalayan genus		Shrager (A.)	... 81
of	... 103	Simla, Monthly General Meet-	
Oung (M. H.)	... 20	ing in	... 76, 103
Papers read:—5, 79, 80, 85, 89,		Singh (Raja Bhupendra)	... 76
90, 104, 106, 111		Sircar (Dr. Mahendra Lal)	20, 88
Pargiter (F. E.)	20, 81, 82, 88, 100	Smith (V. A.)	... 88
Pedler (A.)	... 20, 88	Society's Original Name, pro-	
Permanent Reserve Fund, pro-		posed resumption of	... 1, 5
posal to withdraw from the	88, 106	„ premises, repair of	
Phillott (Major D. C.)	... 88	the	... 68, 88, 106
Philological Committee, elec-		Stephenson (Capt. J.)	... 105
tion of	... 88	Swedish Academy, Stockholm	108
„ Secretary, election		Tantras, antiquities of the	... 100
of	... 20	Tarkalankara (Pandit Chandra	
Plague in India, note on the	... 83	Kanta)	... 88

	<i>Page</i>		<i>Page</i>
Thibaut (Dr. G.) ...	106	Vost (Major W.) ...	5
Thompson (H. N.) ...	85	Waddell (Major L. A.)	20, 82, 88
Thornton (E.) ...	68	Wallace (D. R.) ...	67
Thurston (E.) ...	88	Walton (Capt. H. J.)	75, 85, 89
Timur Nāma, MS. of	81	Withdrawal of Members	67, 81, 87, 105
Treasurer, election of	20	Whitwell (Lieut.-Col. R. H.)	75, 105
Turner (Lieut. H. H.)	85	Wolfe (G. C.) ...	81, 106
Turquoise Ganeça, exhibition of a	69	Woodburn (H.H. Sir John)	... 20
Vasu (Nagendra Nath)	88	Woodman (H. C.) ...	... 107
Vaughan (Capt. J. C. S.)	105	Wun District, coins from the	... 106
Venis (A.) ...	88		
Vice-Presidents, election of	20		





LIST OF MEMBERS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
ON THE 31ST DECEMBER, 1899.

LIST OF OFFICERS AND MEMBERS OF COUNCIL  
OF THE ASIATIC SOCIETY OF BENGAL  
FOR THE YEAR 1899.

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*President :*

H. H. Risley, Esq., B.A., C.I.E., I.C.S.

*Vice-Presidents :*

A. Pedler, Esq., F.R.S.  
The Most Revd. Archb. P. Goethals, D.D., S.J.  
Colonel T. H. Hendley, C.I.E., I.M.S.

*Secretaries and Treasurer :*

Dr. T. Bloch.  
F. Finn, Esq., B.A., F.Z.S.  
Major L. A. Waddell, LL.D., I.M.S.  
Major A. Alcock, M.B., C.M.Z.S., F.G.S., I.M.S.  
Mahamahopadhyaya Hara Prasad Shastri, M.A.  
W. K. Dods, Esq.

*Other Members of Council :*

Dr. G. Watt, C.I.E.  
J. D. Nimmo, Esq.  
Dr. Mahendra Lal Sircar, M.D., C.I.E., D.L.  
Shams-ul-Ulama Shaikh Mahomed Gilani.  
C. L. Griesbach, Esq., F.G.S., C.I.E.  
T. H. Holland, Esq., F.G.S., A.R.C.S.  
M. H. Oung, Esq.  
W. A. Lee, Esq.

## 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 Honorary General Secretary, 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 Honorary General Secretary.

Members who are about to leave India and do not intend to return are particularly requested to notify to the Honorary General Secretary 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.		
1899 Feb. 1.	R.	Abdul Aziz Khan, Maulvie, B.A. <i>Calcutta.</i>
1896 Mar. 4.	R.	Abdul Karim, Maulvie, B.A. <i>Calcutta.</i>
1894 Sept. 27.	N.R.	Abdul Wali, Maulvie. <i>Sailkopa, Jessore District.</i>
1895 May 1.	N.R.	Abdus Salam, Maulvie, M.A. <i>Monghyr.</i>
1888 Feb. 1.	F.M.	Adamson, Lieut.-Col. Charles Henry Ellison, M.S.O. <i>Europe.</i>
1895 Aug. 29.	A.	Agnew, Henry De Courcy. <i>Europe.</i>
1888 April 4.	R.	Ahmud, Shams-ul-ulama Maulvie, Arabic Professor, Presidency College. <i>Calcutta.</i>
1888 Feb. 1.	R.	Alcock, Major Alfred William, M.B., C.M.Z.S., F.G.S. I.M.S., Superintendent, Indian Museum. <i>Calcutta.</i>
1885 Mar. 4.	N.R.	Ali Bilgrami, Sayid, B.A., A.R.S.M., F.G.S. <i>Hyderabad.</i>
1899 Jan. 4.	N.R.	Ali Hussain Khan, Nawab. <i>Bopal.</i>
1874 June 3.	R.	Amir Ali, The Hon. Mr. Justice, M.A., C.I.E., Barrister-at-Law, Judge, High Court. <i>Calcutta.</i>
1893 Aug. 31.	N.R.	Anderson, Captain A. R. S., B.A., M.B., I.M.S., <i>Chittagong.</i>
1865 Jan. 11.	F.M.	Anderson, John, M.D., F.R.S., F.L.S. <i>Europe.</i>
1884 Sept. 3.	A.	Anderson, J. A. <i>Europe.</i>
1892 Jan. 6.	A.	Arnold, Henry Kerchever Walter. <i>Europe.</i>
1890 July 2.	N.R.	Arnold, Thomas Walker, B.A., M.R.A.S. <i>Lahore.</i>
1872 April 3.	N.R.	Ashan-ullah, Nawab, Khan Bahadur. <i>Dacca.</i>
1889 Aug. 29.	N.R.	Aziz-ud-din Ahmad, Deputy Magistrate. <i>Aligarh.</i>
1870 Feb. 2.	L.M.	Baden-Powell, Baden Henry, M.A., C.I.E. <i>Europe.</i>
1898 Nov. 2.	N.R.	Bailey, The Revd. Thomas Grahame, M.A., B.D. <i>Wuzirabad.</i>

Date of Election.		
1891 Mar. 4.	N.R.	Baillie, D. C., I.C.S. <i>Allahabad.</i>
1898 Aug. 3.	N.R.	Bain, Major D. W. S., I.M.S. <i>Mercara.</i>
1891 April 1.	N.R.	Baker, Edward Charles Stuart. <i>North Cachar.</i>
1889 May 1.	R.	Banerji, The Hon. Mr. Justice Guru Das, 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, Damudar Das. <i>Calcutta.</i>
1877 Jan. 17.	N.R.	Barman, H. H. The Maharaja Radha Kishor Dev. <i>Tipperah.</i>
1898 Mar. 2.	N.R.	Barnes, Herbert Charles, I.C.S. <i>Shillong.</i>
1894 Sept. 27.	R.	Basu, Nagendra Natha. <i>Calcutta.</i>
1898 May 4.	R.	Bathgate, J. <i>Calcutta.</i>
1895 July 3.	L.M.	Beatson-Bell, Nicholas Dodd, B.A., I.C.S. <i>Backergunge.</i>
1876 Nov. 15.	N.R.	Beveridge, Henry., I.C.S., (retired). <i>Allahabad.</i>
1896 May 6.	R.	Bhaduri, Aghore Chandra. <i>Calcutta.</i>
1878 Oct. 4.	R.	Bhakta, Krishna Gopal. <i>Calcutta.</i>
1898 Nov. 2.	N.R.	Black, Robert Greenhill. <i>Cachar.</i>
1859 Aug. 3.	L.M.	Blanford, William Thomas, LL.D., A.R.S.M., F.G.S., F.R.G.S., F.Z.S., F.R.S. <i>Europe.</i>
1897 Feb. 3.	R.	Bloch, Theodor, PH.D. <i>Calcutta.</i>
1893 Feb. 1.	N.R.	Bodding, The Revd. P. O. <i>Rampore Haut.</i>
1885 Mar. 4.	R.	Bolton, The Hon. Mr. Charles Walter, C.S.I., I.C.S. <i>Calcutta.</i>
1895 July 3.	R.	Bonham-Carter, Norman, I.C.S. <i>Calcutta.</i>
1890 July 2.	R.	Bonnerjee, Womes Chunder, Barrister-at-Law, Middle Temple. <i>Calcutta.</i>
1897 June 2.	R.	Bose, Annada Prasad, M.A. <i>Calcutta.</i>
1895 Mar. 6.	R.	Bose, Jagadis Chandra, M.A., D.S.C., 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 Raipur, O.I.</i>
1890 Dec. 3.	N.R.	Bose, Rai Nali Naksha, Bahadur, Chairman, Burdwan Municipality. <i>Burdwan.</i>
1895 April 3.	N.R.	Bourdillon, James Austin, C.S.I., I.C.S. <i>Bankipur.</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.	Bural, Nobin Chand, Solicitor. <i>Calcutta.</i>
1896 Jan. 8.	N.R.	Burn, Richard, I.C.S. <i>Allahabad.</i>
1898 Sept. 30.	R.	Cable, Ernest. <i>Calcutta.</i>
1896 Jan. 8.	R.	Caddy, Dr. Arnold. <i>Calcutta.</i>
1895 July 3.	N.R.	Carey, Hirzel Denis de Mussenden, I.C.S. <i>Cuttack.</i>
1895 July 3.	R.	Carlyle, Robert Warrand, C.I.E., I.C.S. <i>Calcutta.</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>Gya.</i>
1898 Nov. 2.	R.	Chatterjea, Kishori Mohan, Judge, Court of Small Causes. <i>Calcutta.</i>

Date of Election		
1894 Aug. 1.	N.R.	Chatterjee, M. N. <i>Patalia.</i>
1893 July 5.	N.R.	Chatterjee, Radhika Raman. <i>Rungpur.</i>
1892 Aug. 3.	N.R.	Chaube, Behary Lall. <i>Bankipur.</i>
1893 Sept. 28.	N.R.	Chaudhuri, Banawari Lala, B.Sc. Edin. <i>Sherpur, Mymensingh.</i>
1880 Nov. 3.	R.	Chaudhuri, Rai Khirod Chandra. <i>Chinsurah.</i>
1899 Jan. 4.	A.	Clemow, Dr. Frank Gerard, M.D., Edin, D P.H., Camb. <i>Europe.</i>
1880 Aug. 26.	F.M.	Clerk, Colonel Malcolm G. <i>Europe.</i>
1881 May 4.	N.R.	Cockburn, John, Opium Department. <i>Etawah.</i>
1889 Nov. 6.	R.	Colville, William Brown. <i>Calcutta.</i>
1890 Dec. 3.	A.	Connau, William, C.E. <i>Europe.</i>
1898 June 1.	R.	Cordier, Dr. Palmyr. <i>Chundernagore.</i>
1899 Feb. 1.	N.R.	Cotton, Julian James, B.A., I.C.S. <i>Madras.</i>
1876 Mar. 1.	F.M.	Crawford, James, B.A., I.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 Alfred W., M.A., K.C.I.E. <i>Europe.</i>
1895 July 3.	N.R.	Cumming, John Ghest, I.C.S. <i>Bhagalpur.</i>
1898 Aug. 26.	N.R.	Cuppige, Captain W. A., I.S.C. <i>Bombay.</i>
1873 Dec. 3.	F.M.	Dames, Mansel Longworth, I.C.S. <i>Europe.</i>
1892 Mar. 2.	N.R.	Das, Gopal Ballabh, M.A. <i>Cuttack.</i>
1896 Mar. 4.	R.	Das-Gupta, Jogendra Nath, B.A., Barrister-at-Law. <i>Calcutta.</i>
1865 June 7.	N.R.	Das, Raja Jay Krishna, Bahadur, C.S.I. <i>Moradabad.</i>
1879 April 7.	N.R.	Das, Ram Saran, M.A., Secy., Oudh Commercial Bank, Limited. <i>Fyzabad, Oudh.</i>
1896 Dec. 2.	A.	Davis, Arthur William, I.C.S. <i>Europe.</i>
1893 Nov. 1.	N.R.	De, Brajendra Nath, M.A., I.C.S. <i>Bankura.</i>
1885 May 6.	N.R.	De, Raja Baikunta Nath, Bahadur. <i>Balasore.</i>
1895 Sept. 19.	N.R.	De, Kiran Chandra, B.A., I.C.S. <i>Dinagepur.</i>
1895 Dec. 4.	N.R.	Delmerick, Charles Swift. <i>Budaon.</i>
1893 Mar. 1.	F.M.	Deussen, Dr. Paul. <i>Europe.</i>
1899 Aug. 30.	N.R.	Dev, Raj Kumar Satchidanand, Bahadur. <i>Deogarh, Sambalpur.</i>
1896 Jan. 8.	N.R.	Dewhurst, R. Paget., I.C.S. <i>Fatehgarh.</i>
1899 Aug. 30.	R.	Dods, W. <i>Calcutta.</i>
1898 Jan. 5.	R.	Dods, W. K. <i>Calcutta.</i>
1886 June 2.	R.	Doyle, Patrick, C.E., F.R.A.S., F.R.S.E., F.G.S. <i>Calcutta.</i>
1892 Sept. 22.	R.	Drury, Major Francis James, M.B., I.M.S. <i>Calcutta.</i>
1889 Jan. 2.	N.R.	Dudgeon, Gerald Cecil, Holta Tea Co., Ltd., <i>Palam-pur.</i>
1879 Feb. 5.	N.R.	Duthie, J. F., B.A., F.L.S. <i>Saharanpur.</i>
1892 Jan. 6.	N.R.	Dutt, Gerindra Nath. <i>Hatwa.</i>
1877 Aug. 30.	R.	Dutt, Kedar Nath. <i>Calcutta.</i>
1892 Aug. 25.	R.	Dutt, Rai Narsingh Chunder, Bahadur. <i>Howrah.</i>

Date of Election.		
1890 Sept. 25.	A.	Dutt, Romesh Chunder, C.I.E., I.C.S. (retired), 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, John, M.A., C.I.E., F.R.S. Meteorological Reporter to the Government of India. <i>Simla.</i>
1899 Jan. 4.	A.	Ferrar, Lieutenant, M. LL., I.S.C. <i>Europe.</i>
1894 Dec. 5.	R.	Finn, Frank, B.A., F.Z.S., Deputy Superintendent, Indian Museum. <i>Calcutta.</i>
1898 Sept. 30.	R.	Firminger, The Revd. Walter K., M.A. <i>Calcutta.</i>
1892 May 4.	A.	Forrest, G. W., B.A. <i>Europe.</i>
1876 July 5.	N.R.	Foulkes, The Revd. Thomas, F.L.S., M.R.A.S., F.R.G.S. <i>Salem, Madras Presidency.</i>
1893 Jan. 11.	A.	Gait, Edward Albert, I.C.S. <i>Europe.</i>
1899 Aug. 30.	R.	Garth, Dr. H. C. <i>Calcutta.</i>
1859 Aug. 3.	L.M.	Gastrell, General James Eardley. <i>Europe.</i>
1889 Jan. 2.	R.	Ghose, Jogendra Chandra, M.A., B.L. <i>Calcutta.</i>
1889 Mar. 6.	R.	Ghosha, Bhupendra Sri, B.A., B.L. <i>Calcutta.</i>
1869 Feb. 3.	R.	Ghosha, Pratapa Chandra, B.A. <i>Calcutta.</i>
1897 Dec. 6.	N.R.	Godfrey, Captain Stuart, I.S.C. <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>
1899 Aug. 2.	R.	Goenka, Roomall. <i>Calcutta.</i>
1890 Aug. 6.	R.	Goethals, The Most Revd. Paul, D.D., S.J., Archbishop. <i>Calcutta.</i>
1896 Nov. 4.	F.M.	Grant, A. J., I.C.S. <i>Europe.</i>
1897 July 7.	N.R.	Grant, Lieut. J. W., I.M.S. <i>Sirohes.</i>
1898 Aug. 3.	N.R.	Green, Major Charles Robert Mortimer, F.R.C.S. I.M.S. <i>Muzaffarpur.</i>
1892 Aug. 25.	N.R.	Greeven, R., I.C.S. <i>Benares.</i>
1876 Nov. 15.	F.M.	Grierson, George Abraham, Ph.D., C.I.E., I.C.S. <i>Europe.</i>
1885 Dec. 2.	R.	Griesbach, C. L., C.I.E., F.G.S., Director, Geological Survey of India. <i>Calcutta.</i>
1898 June 1.	R.	Gupta, Bepin Behari. <i>Calcutta.</i>
1898 April 6.	R.	Gupta, Krishna Govinda, I.C.S., Barrister-at-Law. <i>Calcutta.</i>
1888 July 4.	R.	Gupta, Rajani Kanta. <i>Calcutta.</i>
1898 Jan. 5.	N.R.	Gurdon, Captain P. R. T., I.S.C. <i>Gauhati.</i>
1892 Jan. 6.	N.R.	Haig, Captain Wolseley., I.S.C. <i>Berar.</i>
1899 Nov. 1.	N.R.	Hamilton, R. C., I.C.S. <i>Darbhanga.</i>
1883 Jan. 3.	N.R.	Harding, Francis Henry, B.A., I.C.S. <i>Shahabad.</i>
1899 April 5.	N.R.	Hare, Major E.C., I.M.S. <i>Yokohama, Japan.</i>
1884 Mar. 5.	L.M.	Hassan Ali Qadr, Sir Syud, Nawab Bahadur, K.C.I.E. <i>Murshedabad.</i>
1898 Feb. 2.	R.	Havell, Ernest Binfield. <i>Calcutta.</i>
1897 Feb. 3.	R.	Hayden, H. H., Geological Survey of India. <i>Calcutta.</i>

Date of Election.		
1875 Mar. 3.	R.	Hendley, Col. Thomas Holbein, C.I.E., I.M.S., Inspector General of Civil Hospitals, Bengal. <i>Calcutta.</i>
1892 Aug. 3.	R.	Hill, Samuel Charles, B.A., B.Sc. <i>Calcutta.</i>
1872 Dec. 5.	A.	Hoernle, Augustus Frederick Rudolf, PH.D., C.I.E. <i>Europe.</i>
1878 Mar. 6.	N.R.	Hoey, W., PH.D., I.C.S. <i>Gorakhpur.</i>
1891 July 1.	R.	Holland, Thomas H., F.G.S., A.R.C.S., Geological Survey of India. <i>Calcutta.</i>
1898 Feb. 2.	R.	Hooper, David, F.C.S. <i>Calcutta.</i>
1884 Mar. 5.	N.R.	Hooper, John, B.A., I.C.S. <i>Allahabad. N.-W.P.</i>
1873 Jan. 2.	L.M.	Houstoun, G. L., F.G.S. <i>Europe.</i>
1890 Dec. 3.	N.R.	Hyde, The Revd. Henry-Barry, M.A. <i>Madras.</i>
1866 Mar. 7.	F.M.	Irvine, William, I.C.S., (retired). <i>Europe.</i>
1899 April 5.	R.	Kemphorne, H. E. <i>Calcutta.</i>
1895 Dec. 4.	R.	Kennedy, Joseph, I.C.S. <i>Hughli.</i>
1882 Mar. 1.	N.R.	Kennedy, Pringle, M.A. <i>Mozufferpur.</i>
1874 Dec. 2.	N.R.	Khuda Baksh, Maulvie, Khan Bahadur. <i>Bankipur.</i>
1867 Dec. 4.	A.	King, Sir George, M.B., C.I.E., K.C.S.I., F.L.S., I.M.S., (retired). <i>Europe.</i>
1881 Mar. 2.	N.R.	King, Lucas White, B.A., LL.B., C.S.I., I.C.S. <i>Kohat.</i>
1896 Aug. 27.	A.	Konstam, Edwin Max, I.C.S. <i>Europe.</i>
1896 July 1.	R.	Küchler, George William, M.A. <i>Calcutta.</i>
1891 Feb. 4.	N.R.	Kupper, Raja Lala Bunbehari. <i>Burdwan.</i>
1893 July 1.	R.	Laharry, Sarat Chandra, PH.D. <i>Calcutta.</i>
1899 Aug. 30.	N.R.	Lal, Dr. Mannu. <i>Lucknow.</i>
1887 May 4.	L.M.	Lanman, Charles R. <i>Europe.</i>
1889 Mar. 6.	R.	LaTouche, Thomas Henry Digges, M.A., Geological Survey of India. <i>Calcutta.</i>
1889 Nov. 6.	R.	Lee, W. A., F.R.M.S. <i>Calcutta.</i>
1889 Feb. 6.	R.	Little, Charles, M.A., Bengal Education Service. <i>Calcutta.</i>
1899 Dec. 6.	R.	Lorimer, J. G., I.C.S. <i>Calcutta.</i>
1869 July 7.	F.M.	Lyall, Sir Charles James, M.A., K.C.S.I., C.I.E., LL.D., I.C.S., (retired). <i>Europe.</i>
1870 April 7.	L.M.	Lyman, B. Smith. <i>Europe.</i>
1896 Mar. 4.	N.R.	MacBlaine, Frederick, I.C.S. <i>Purneah.</i>
1893 Jan. 11.	L.M.	Maclagan, E. D., M.A., I.C.S. <i>Multan.</i>
1891 Feb. 4.	R.	Macpherson, Duncan James, M.A., C.I.E., I.C.S. <i>Calcutta.</i>
1896 Feb. 5.	N.R.	Macpherson, William Charles, I.C.S. <i>Chupra.</i>
1893 Aug. 31.	N.R.	Mahatha, Purnmeshwar Narain. <i>Mozufferpur.</i>
1895 Aug. 29.	R.	Mahomed Gilani, Shams-ul-Ulama Shaikh. <i>Calcutta.</i>
1886 Jan. 6.	N.R.	Mahomed Latif Khan, Sayid, Khan Bahadur. <i>Jullunder.</i>

Date of Election.		
1898 Nov. 2.	N.R.	Maitra, Akshaya Kumar, B.A., B.L. <i>Rajshahi.</i>
1889 Jan. 2.	R.	Maliah, Kumar Rameswar. <i>Howrah.</i>
1893 July 5.	R.	Mangos, C. D. <i>Calcutta.</i>
1889 Mar. 6.	A.	Mann, John, M.A. <i>Europe.</i>
1893 Mar. 1.	N.R.	Marriott, Charles Richardson, I.C.S. <i>Bankipur.</i>
1892 April 6.	N.R.	Maynard, Major F. P., I.M.S. <i>Ranchi.</i>
1899 Feb. 1.	N.R.	McMahon, Captain A. H., C.S.I., C.I.E., I.S.C. <i>Malakhand.</i>
1899 Mar. 1.	N.R.	McMinn, C W., B.A., I.C.S., (retired). <i>Comilla.</i>
1886 Mar. 3.	L.M.	Mehta, Rustomjee Dhunjeebhoj, C.I.E. <i>Calcutta.</i>
1895 July 3.	N.R.	Melitus, Paul Gregory, C.I.E., I.C.S. <i>Shillong.</i>
1884 Nov. 5.	R.	Middlemiss, C. S., B.A., Geological Survey of India. <i>Calcutta.</i>
1884 Sept. 3.	R.	Miles, William Harry. <i>Calcutta.</i>
1870 July 6.	R.	Miller, Albert Bermingham., B.A., Barrister-at-Law, Official Trustee. <i>Calcutta.</i>
1898 April 6.	R.	Milne, Captain C. J., I.M.S. <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>
1899 Mar. 1.	R.	Mitra, J. C., M.A., B.L. <i>Calcutta.</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, Varada Charana, I.C.S., Joint-Magistrate. <i>Furridpur.</i>
1895 July 3.	N.R.	Monahan, Francis John, I.C.S. <i>Shillong.</i>
1898 May 4.	R.	Mookerjee, R. N. <i>Calcutta.</i>
1898 Sept. 30.	R.	Moore, The Revd. Herbert Octavius, M.A. <i>Calcutta.</i>
1879 May 7.	A.	Muir, J. W., M. A., I. C. S., (retired). <i>Europe.</i>
1885 July 1.	R.	Mukerjee, Mahamahopadhyaya Nilmani, Principal, Sanskrit College. <i>Calcutta.</i>
1867 Mar. 6.	R.	Mukerjee, Raja Peari Mohan, M.A., C.S.I. <i>Uttarpara.</i>
1894 Aug. 30.	R.	Mukerjee, Sib Narayan. <i>Uttarpara.</i>
1899 Sept. 29.	R.	Mukharji, Jotindra Nath, B.A. <i>Calcutta.</i>
1886 May 5.	R.	Mukhopadhyaya, The Hon. Dr. Asutosh, M.A., D.L., F.R.A.S., F.R.S.E. <i>Calcutta.</i>
1892 Dec. 7.	R.	Mukhopadhyaya, Panchanana. <i>Calcutta.</i>
1896 April 1.	R.	Mullick, Sham Lal. <i>Calcutta.</i>
1885 June 3.	N.R.	Naemwoollah, Maulvie, Deputy Magistrate. <i>Cawnpur.</i>
1881 Nov. 2.	R.	Nicéville, Lionel de, F.E.S., C.M.Z.S. <i>Calcutta.</i>
1889 Aug. 29.	L.M.	Nimmo, John Duncan. <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.	Nyayaratna, Mahamahopadhyaya Mahesa Chandra, C.I.E. <i>Calcutta.</i>



Date of Election		
1899 Jan. 7.	N.R.	O'Brien, P. H., I.C.S. <i>Purneah.</i>
1899 Dec. 6.	N.R.	O'Connor, Captain W. F., R.A. <i>Astor, Kashmir.</i>
1879 Aug. 28.	A.	Oldham, Dr. C. F., F.R.G.S. <i>Europe.</i>
1880 Dec. 1.	A.	Oldham, R. D., A.R.S.M., F.G.S., Geological Survey of India. <i>Europe.</i>
1883 Aug. 30.	F.M.	Oliver, Edw. Emmerson, M.I.C.E. <i>Europe.</i>
1887 July 6.	R.	Oung, Moug Hla. <i>Calcutta.</i>
1880 Aug. 4.	L.M.	Pandia, Pandit Mohanlall Vishnulall, F.T.S., <i>Muttra.</i>
1880 Jan. 7.	R.	Pargiter, Frederick Eden, B.A., I.C.S. <i>Calcutta.</i>
1899 Aug. 2.	R.	Peake, C. W., M.A., Bengal Education Service. <i>Calcutta.</i>
1873 Aug. 6.	R.	Pedler, Alexander, F.R.S., Director of Public Instruction, Bengal. <i>Calcutta.</i>
1888 June 6.	L.M.	Pennell, Aubray Percival, B.A., I.C.S. <i>Europe.</i>
1881 Aug. 25.	R.	Percival, Hugh Melville, M.A., Bengal Education Service. <i>Calcutta.</i>
1877 Aug. 1.	N.R.	Peters, Lieut.-Colonel C. T., M.B., I.M.S. <i>Bombay.</i>
1889 Nov. 6.	N.R.	Phillott, Capt. D. C., I.S.C. <i>Dera Ghazi Khan.</i>
1896 Jan. 8.	N.R.	Place, George William, B.A., LL.B., I.C.S. <i>Bankipur.</i>
1889 Mar. 6.	R.	Prain, Major David, M.A., M.B., I.M.S., Royal Botanic Garden. <i>Sibpur.</i>
1889 Mar. 6.	N.R.	Prasad, Hanuman, Raes and Zemindar. <i>Chunar.</i>
1896 Sept. 25.	F.M.	Pringle, A. T. <i>Europe.</i>
1880 April 7.	R.	Rai, Bipina Chandra, B.L. <i>Serampore.</i>
1895 Aug. 29.	R.	Rai, Jatindra Nath Chaudhery, M.A., B.L. <i>Barnagor.</i>
1898 Aug. 3.	N.R.	Ram, Sita, M.A. <i>Cawnpore.</i>
1895 Aug. 7.	R.	Ray, Mahendra Nath, M.A., B.L. <i>Howrah.</i>
1890 Mar. 5.	R.	Ray, Prafulla Chandra, D.Sc., Bengal Education Service. <i>Calcutta.</i>
1887 May 4.	R.	Ray, Prasanna Kumar, D.Sc. (Lond. and Edin.), Bengal Education Service. <i>Calcutta.</i>
1884 Mar. 5.	R.	Risley, Herbert Hope, B.A., C.I.E., I.C.S. <i>Calcutta.</i>
1896 Dec. 2.	N.R.	Row, B. Suryanaran, B.A. <i>Bellary.</i>
1895 Mar. 6.	A.	Rowe, Frederick James, M.A. <i>Europe.</i>
1889 June 5.	N.R.	Roy, Maharaja Girjanath. <i>Dinagepur.</i>
1885 Mar. 4.	R.	Rustomjee, Harjeebhoy Manickjee. <i>Calcutta.</i>
1893 Aug. 2.	R.	Samajpati, Suresh Chundra. <i>Calcutta.</i>
1896 Aug. 27.	R.	Samman, Herbert Frederick, I.C.S. <i>Howrah.</i>
1899 June 7.	N.R.	Sarkar, Chandra Kumar. <i>Benares.</i>
1898 Mar. 2.	N.R.	Sarkar, Jadu Nath. <i>Bankipur.</i>
1885 Mar. 4.	R.	Sarvadhikari, Rajkumar, Rai Bahadur. <i>Calcutta.</i>
1897 Nov. 3.	R.	Saunders, C. <i>Calcutta.</i>
1893 Jan. 11.	L.M.	Scindia, His Highness the Maharaja. <i>Gwalior.</i>
1899 Mar. 1.	R.	Scott, Lieutenant Bernard, I.S.C. <i>Barrackpore.</i>
1896 April 1.	A.	Sen, Guru Prasad. <i>Europe.</i>
1885 April 1.	R.	Sen, Narendra Nath. <i>Calcutta.</i>

Date of Election.		
1885 April 1.	R.	Sen, Yadu Nath. <i>Calcutta.</i>
1897 Dec. 1.	R.	Seth, M. J. <i>Calcutta.</i>
1885 Feb. 4.	R.	Shastri, Mahamahopadhaya Hara Prasad, M.A. <i>Calcutta.</i>
1891 June 3.	A.	Shillingford, Frederick Alexander. <i>Europe.</i>
1899 May 3.	N.R.	Silberrad, Chas. A., I.C.S. <i>Lalitpur, Bundelkhand.</i>
1887 April 6.	A.	Simpson, Dr. W. J. <i>Europe.</i>
1893 Mar. 1.	N.R.	Singh, Maharaja Kumara Sirdar Bharat, I.C.S. <i>Rai Bareili.</i>
1880 June 2.	N.R.	Singh, Thakur Garuradhawaya Prasad, Raja of Beswan. <i>Beswan Fort, Aligarh.</i>
1895 Aug. 29	R.	Singh, Lachmi Narayan, M.A., B.L. <i>Calcutta.</i>
1892 Mar. 2.	L M	Singh, The Hon. Raja Ooday Pratab. <i>Binga.</i>
1889 Aug. 29.	N.R.	Singh, H. H. The Maharaja Prabhu Narain, Bahadur. <i>Benares.</i>
1892 Aug. 3.	N.R.	Singh, H. H. The Hon. Maharaja Pratap Narain. <i>Ajodhya, Oudh.</i>
1895 Aug. 29	N R.	Singh, Ram Din. <i>Bankipur.</i>
1889 Nov. 6.	N.R.	Singh, H. H. The Hon. Maharaja Rameshwara, Bahadur. <i>Darbhanga.</i>
1894 Feb. 7.	N.R.	Singh, H. H. Raja Vishwa Nath, Bahadur, Chief of Chhatarpur.
1893 April 5.	N.R.	Sinha, Raja Bhupendra, Bahadur, Raja of Bijoypur. <i>Mirzapur.</i>
1894 July 4.	N.R.	Sinha, Kunwar Kushal Pal, M.A. <i>Narki P.O. Agra District.</i>
1899 June 7.	N.R.	Sinha, Purnenda Narayan. <i>Bankipur.</i>
1867 April 3.	R.	Sircar, Dr. Mahendra Lal, M.D., C.I.E., D.L. <i>Calcutta.</i>
1897 Jan. 6.	R.	Sircar, Amrita Lal, F.C.S. <i>Calcutta.</i>
1872 Aug. 5.	N.R.	Skrefsrud, The Revd. Laurentius Olavi. <i>Rampur Hat.</i>
1874 June 3.	N.R.	Smith, Vincent Arthur, I.C.S. <i>Gorakhpur.</i>
1899 Nov. 1.	N.R.	Srivastavya, Lala Shyam Sunder Lal. <i>Pertabgarh.</i>
1898 April 6.	R.	Stark, Herbert, B.A. <i>Calcutta.</i>
1891 Aug. 27.	R.	Stein, M. A., Ph.D. <i>Calcutta.</i>
1895 July 5.	A.	Steinberg, Alfred Frederick, I.C.S. <i>Europe.</i>
1899 Aug. 30.	R.	Stephen, St. John, B.A., LL.B. <i>Calcutta.</i>
1898 June 1.	N.R.	Sunder, Donald. <i>Patna.</i>
1899 Mar. 1.	R.	Tocher, A. <i>Calcutta.</i>
1868 June 3.	R.	Tagore, The Hon. Maharaja Sir Jotendra Mohun, Bahadur, K.C.S.I. <i>Calcutta.</i>
1898 April 6.	R.	Tagore, Maharaja Prodyat Coomar. <i>Calcutta.</i>
1897 Dec. 1.	A.	Talbot, W. A. <i>Europe.</i>
1893 Aug. 31.	N.R.	Tate, G. P., Survey of India. <i>Karachi.</i>
1878 June 5.	N.R.	Temple, Lieut.-Col. Richard Carnac, C.I.E., I.S.O. <i>Port Blair.</i>

Date of Election.		
1875 June 2.	N.R.	Thibant, Dr. G., Professor, Muir Central College. <i>Allahabad.</i>
1898 Nov. 2.	R.	Thornton, Edward, A.R.I.B.A. <i>Calcutta.</i>
1847 June 2.	L.M.	Thuillier, Lieut-Genl. Sir Henry Edward Landor, KNT., C.S.I., F.R.S., R.A. <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., I.C.S., (retired), <i>Europe.</i>
1893 May 3.	N.R.	Vandja, Raja Ram Chandra. <i>Mayurbhanga District Balasore.</i>
1898 Feb. 2.	R.	Vasu, Amrita Lal. <i>Calcutta.</i>
1890 Feb. 5.	N.R.	Venis, Arthur, M.A., Principal, Sanskrit College. <i>Benares.</i>
1896 May 6.	R.	Vidyanidhi, Mahendra Nath. <i>Calcutta.</i>
1894 Sept. 27.	L.M.	Vost, Major William, I.M.S. <i>Gonda.</i>
1895 July 5.	R.	Waddell, Major Lawrence Austine, M.B., LL.D., I.M.S. <i>Calcutta.</i>
1889 Nov. 6.	N.R.	Walsh, Major John Henry Tull, I.M.S. <i>Murshidabad.</i>
1865 May 3.	A.	Waterhouse, Col. James, I.S.C., (retired). <i>Europe.</i>
1874 July 1.	R.	Watt, Dr. George, C.I.E. <i>Calcutta.</i>
1899 Sept. 29.	R.	Welldon, The Most Revd. James Edward Cowell, D.D., Lord Bishop of Calcutta; Metropolitan of India and Ceylon. <i>Calcutta.</i>
1896 Feb. 5.	N.R.	Williams, Captain Charles E., I.M.S. <i>Tounggyi, Shan States, Burma.</i>
1891 May 6.	R.	Wilson, Charles Robert, M.A., Bengal Education Service. <i>Bankipur.</i>
1899 Aug. 30.	R.	Wood, E. Seymour, F.G.S. <i>Calcutta.</i>
1892 Jan. 6.	R.	Woodburn, The Hon. Sir John, M.A., K.C.S.I., I.C.S. <i>Calcutta.</i>
1894 Sept. 27.	R.	Woodroffe, John George, Barrister-at-Law. <i>Calcutta.</i>
1894 Aug. 30.	N.R.	Wright, Henry Nelson, B.A., I.C.S. <i>Allahabad.</i>
1898 July 6.	R.	Wyness, James, C.E. <i>Calcutta.</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 Jena.
1884 Jan. 15.	Charles Meldrum, Esq., C.M.G., M.A., LL.D., F.R.A.S., F.R.S. <i>Mauritius.</i>
1884 Jan. 15.	Professor A. H. Sayce, Professor of Comp. Philology. <i>Oxford.</i>
1884 Jan. 15.	Professor Emile Senart, Member of the Institute of France. <i>Paris.</i>

## HONORARY MEMBERS.

1848 Feb. 2.	Sir Joseph Dalton Hooker, G.C.S.I., C.B., M.D., D.C.L., LL.D., F.L.S., F.G.S., F.R.G.S., F.R.S. <i>Berkshire.</i>
1860 Mar. 7.	Professor The Right Hon. F. Max Müller. <i>Oxford.</i>
1860 Nov. 7.	Dr. Albrecht Weber. <i>Berlin.</i>
1875 Nov. 3.	Dr. Otto von Böhtlingk. <i>Leipzig.</i>
1879 June 4.	Professor Edward Bayles Cowell, D.C.L. <i>Cambridge.</i>
1879 June 4.	Dr. Albert Günther, M.A., M.D., PH.D., P.L.S., V.P.Z.S., F.R.S. <i>Surrey.</i>
1879 June 4.	Dr. Jules Janssen. <i>Paris.</i>
1879 June 4.	Professor P. Regnaud. <i>Lyons.</i>
1881 Dec. 7.	Lord Kelvin, G.C.V.O., D.C.I., LL.D., F.R.S.E., F.R.S. <i>Glasgow.</i>
1888 Feb. 7.	William Thomas Blanford, Esq., LL.D., A.R.S.M., F.G.S., F.R.G.S., F.Z.S., F.R.S. <i>London.</i>
1888 Feb. 7.	Alfred Russell Wallace, Esq., LL.D., D.C.L., F.L.S., F.Z.S. F.R.S. <i>Dorset.</i>
1894 Mar. 7.	Sir George Gabriel Stokes, Bart, M.A., D.C.L., LL.D., D.S.C., F.C.P.S., F.R.S.E., F.R.S. <i>Cambridge.</i>
1894 Mar. 7.	Mahamahapodhyaya Chandra Kanta Tarkalankara. <i>Calcutta.</i>
1894 Mar. 7.	Professor Theodor Noeldeke. <i>Strassburg.</i>
1895 June 5.	Lord Rayleigh, M.A., D.C.L., D.S.C., LL.D., PH.D., F.R.A.S., F.R.S. <i>Witham, Essex.</i>
1895 June 5.	Lt.-Genl. Sir Richard Strachey, R.E., G.C.S.I., LL.D., F.R.G.S., F.G.S., F.L.S., F.R.S. <i>London.</i>
1895 June 5.	Charles H. Tawney, Esq., M.A., C.I.E. <i>London.</i>
1896 Feb. 5.	Lord Lister, F.R.C.S., D.C.L., M.D., LL.D., D.S.C., F.R.S. <i>London.</i>
1896 Feb. 5.	Sir Michael Foster, K.C.B., M.A., M.D., D.C.L., LL.D., D.S.C., F.L.S., F.C.S., F.R.S. <i>Cambridge.</i>
1896 Feb. 5.	Professor F. Kielhorn, PH.D., C.I.E. <i>Göttingen.</i>
1896 Feb. 5.	Professor Charles Rockwell Lanmann. <i>Massachusetts,</i> <i>U.S.A.</i>
1899 Feb. 1.	Dr. Augustus Frederick Rudolf Hørnle, PH.D., C.I.E. <i>Oxford.</i>
1899 Dec. 6.	Professor Edwin Ray Lankester, M.A., LL.D., F.R.S. <i>London.</i>
1899 Dec. 6.	Sir George King, K.C.I.E., M.B., LL.D., F.L.S., F.R.S. <i>London.</i>
1899 Dec. 6.	Professor Edward Burnett Tylor, D.C.L., LL.D., F.R.S. <i>Oxford.</i>
1899 Dec. 6.	Professor Edward Suess, PH.D., For. Mem. R.S. <i>Vienna.</i>

## CORRESPONDING MEMBER.

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Date of Election.

1866 May 7. Schlagintweit, Dr. Emil. *Zweibrücken.*

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## ASSOCIATE MEMBERS.

1874 April 1.	Lafont, The Revd. Father, E., C.I.E., S.J.	<i>Calcutta.</i>
1875 Dec. 1.	Bate, The Revd. J. D., M.R.A.S.	<i>Kent.</i>
1875 Dec. 1.	Abdul Hai, Maulvi.	<i>Calcutta.</i>
1882 June 7.	Giles, Herbert.	<i>Europe.</i>
1884 Aug. 6.	Moore, F., F.L.S.	<i>Surrey.</i>
1895 Dec. 2.	Führer, Dr. A.	<i>Europe.</i>
1886 Dec. 1.	Das, Rai Bahadur Sarat Chandra, C.I.E.	<i>Calcutta.</i>
1892 April 6.	Samasrami, Satya Vrata.	<i>Calcutta.</i>
1892 Dec. 7.	Brühl, P. J.	<i>Sibpur.</i>
1899 April 5.	Sanyal, Rai Bahadur Ram Brahma.	<i>Calcutta.</i>
1899 April 5.	Bhandari, Visnu Prasad Raj.	<i>Nepal.</i>
1899 Nov. 1.	Francotte, The Revd. Father E., S.J.	<i>Calcutta.</i>

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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.

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The following members will be removed from the next Member List of the Society, under the operation of the above Rule:—

Henry DeCourcy Agnew, Esq.  
Dr. C. F. Oldham, F.R.G.S.

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## LOSS OF MEMBERS DURING 1899.

## BY RETIREMENT.

Babu Bhupendra Nath Bose.  
 Arthur Goodeve Chuckerbutty, Esq., I.C.S.  
 Alexander Hogg, Esq.  
 Hewling Lusson, Esq., B.A., I.C.S.  
 George Lyell, Esq.  
 Maulvie Mahomed Yusoof, Khan Bahadur.  
 Babu Syamdas Mukerjee.  
 Dr. Fritz Noetling.  
 Babu Asutosh Pramanick.  
 The Revd. Graham Sandberg, B.A.  
 Dr. John Scully, F.C.S.  
 Babu Hiralal Sen.  
 Robert Edmond Skyring Thomas, Esq.  
 The Revd. J. Watt.  
 The Revd. Henry Whitehead, M.A.

## BY DEATH.

*Ordinary Members.*

Babu Gaurdas Bysack. (Life Member).  
 John Howard Gilliland, Esq., M.A.  
 Deputy-Surgeon-General Samuel Bowen Partridge, M.D. (Life Member).  
 Colonel Robert Gossett Woodthorpe, C.B., R.E.

*Honorary Members.*

Sir William Henry Flower, K.C.B.  
 Sir Edward Frankland, K.C.B.  
 Sir Monier Monier-Williams, K.T., K.C.I.E. (Centenary Member).

## BY REMOVAL.

*Under Rule 9.*

Major Herbert Jekyl Dyson, F.R.C.S., I.M.S.

*Under Rule 40.*

Lieutenant Donald Baker.  
 T. D. Beighton, Esq., I.C.S.  
 Colonel J. Biddulph, I.S.C.  
 Major-General A. F. Bradshaw, C.B., M.D.  
 John Faithful Fleet, Esq., C.I.E., I.C.S.  
 Robert Philip Heilgers, Esq., F.R.G.S.  
 F. G. Hickson, Esq.  
 Mortimer Sloper Howell, Esq., C.I.E., I.C.S.  
 Michael Macauliffe, Esq., B.A., I.C.S., (retired).

[APPENDIX.]

ABSTRACT STATEMENTS  
OF  
RECEIPTS AND DISBURSEMENTS  
OF THE  
ASIATIC SOCIETY OF BENGAL  
FOR  
THE YEAR 1899

1899.

# STATEMENT

## *Asiatic Society*

### Dr.

				TO ESTABLISHMENT.					
				Rs.	As.	P.	Rs.	As.	P.
Salaries	...	...	...	3,410	11	10			
Commission	...	...	...	426	0	3			
Pension	...	...	...	52	0	0			
							3,888	12	1
				TO CONTINGENCIES.					
Stationery	..	...	...	121	6	0			
Lighting	...	...	...	23	0	0			
Taxes	...	...	...	819	0	0			
Postage	...	...	...	445	0	3			
Freight	...	...	...	56	4	5			
Meeting	...	...	...	22	4	0			
Registration fee of the Society for 1899	...	...	...	5	0	0			
Auditor's fee	...	...	...	100	0	0			
Miscellaneous	...	...	...	323	8	8			
							1,915	7	4
				TO LIBRARY AND COLLECTIONS.					
Books	..	...	...	303	11	6			
Local Periodicals	...	...	...	18	0	0			
Binding	...	...	...	467	12	0			
Furniture	...	...	...	116	0	0			
Catalogue	...	...	...	30	8	0			
							933	15	6
				TO PUBLICATIONS.					
Journal, Part I	..	...	...	8,750	15	9			
Journal, Part II	...	...	...	1,167	7	1			
Journal, Part III	...	...	...	502	3	0			
Proceedings	...	...	...	700	11	9			
							6,121	5	7
To Printing charges of Circulars, Receipt-forms, &c.	...	...	...	244	10	0			
„ Personal Account (Writes-off and Miscellaneous)	...	...	...	211	11	0			
				TO EXTRAORDINARY EXPENDITURE.					
Repairs	...	...	...	237	8	0			
Royal Society's Scientific Catalogue	...	...	...	245	5	9			
							482	13	9
Balance				...	...	...	1,52,452	11	11
Total Rs.				...	...	...	1,66,251	7	2



No. 1.  
of Bengal.

1899.

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Cr.

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	...	...	...			1,47,205	1	1
<b>BY CASH RECEIPTS.</b>								
Publications sold for cash	...	...	478	7	4			
Interest on Investments	...	...	5,530	0	0			
Rent of Rooms on the Society's ground floor	...	...	1,200	0	0			
Allowance from Government of Bengal for the Publication of Anthropological and Cognate Sub- jects	...	...	2,000	0	0			
Ditto from Government of India for Royal Society's Scientific Catalogue	...	...	1,000	0	0			
Miscellaneous	...	...	249	9	6			
						10,458	0	10
<b>BY PERSONAL ACCOUNT.</b>								
Admission fees	...	...	864	0	0			
Subscriptions	...	...	7,215	0	0			
Sales on credit	...	...	408	0	0			
Miscellaneous	...	...	101	5	3			
						8,588	5	3

Total Rs. ... 1,66,251 7 2

W. K. DODS,  
Honorary Secretary and Treasurer,  
Asiatic Society of Bengal.

Examined and found correct  
MUGGENS, KING & SIMSON,  
Auditors.

**STATEMENT**  
*1899. Oriental Publication Fund in Account*

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**Dr.**

TO CASH EXPENDITURE.				Rs.	As.	P.	Rs.	As.	P.
Printing charges	...	...	...	7,213	7	6			
Editing charges	...	...	...	4,384	10	0			
Salaries	...	...	...	1,280	10	8			
Freight	...	...	...	41	4	0			
Stationery	...	...	...	65	12	0			
Postage	...	...	...	317	8	6			
Commission on collection	...	...	...	28	14	7			
Contingencies	...	...	...	27	1	6			
							13,358	15	9
To Personal Account (Writes-off and Miscellaneous)			...				4	14	0
			Balance				10,564	13	1
							23,923	10	10
Total Rs.									

**STATEMENT**

*Sanskrit Manuscript Fund in Account*

---

**Dr.**

TO CASH EXPENDITURE.				Rs.	As.	P.	Rs.	As.	P.
Salaries	...	...	...	1,056	0	0			
Travelling charges	...	...	...	866	13	2			
Purchase of manuscripts	...	...	...	541	8	6			
Printing	...	...	...	516	14	0			
Postage	...	...	...	34	2	0			
Binding	...	...	...	2	8	0			
Contingencies	...	...	...	5	9	0			
							3,023	6	8
To Personal Account (Writes-off and Miscellaneous)			...				4	0	0
			Balance				5,872	7	11
							8,899	14	7
Total Rs.									

No. 2.

*with the Asiatic Society of Bengal. 1899.*

Cr.

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	...	...	...			12,789	13	9
BY CASH RECEIPTS.								
Government allowance	...	...	9,000	0	0			
Publications sold for cash	...	...	501	6	10			
Advances recovered	...	...	61	13	6			
						9,568	4	4
BY PERSONAL ACCOUNT.								
Sales on credit	...	...				1,625	8	9
						23,928	10	10
			Total Rs.					

W. K. Dods,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
**MEUGENS, KING & SIMSON,**  
*Auditors.*

No. 3.

*with the Asiatic Society of Bengal.*

Cr.

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	...	...	...			5,651	14	7
BY CASH RECEIPTS.								
Government allowance	...	...	3,200	0	0			
Publications sold for cash	...	...	8	0	0			
						3,208	0	0
BY PERSONAL ACCOUNT.								
Sales on credit	...	...				40	0	0
						8,899	14	7
			Total Rs.					

W. K. Dods,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
**MEUGENS, KING & SIMSON,**  
*Auditors.*

STATEMENT  
*Personal*

1899.

Dr.

				Rs.	As.	P.	Rs.	As.	P.
To Balance from last Report	...	...	...				4,715	7	7
To CASH EXPENDITURE.									
Advances for purchase of Sanskrit Manuscripts, &c.	...	...	...				222	5	3
To Asiatic Society	...	...	...	8,588	5	3			
„ Oriental Publication Fund	...	...	...	1,625	8	9			
„ Sanskrit Manuscript Fund	...	...	...	40	0	0			
							10,263	14	0
Total Rs.							15,191 10 10		

STATEMENT  
*Invest*

Dr.

				Nominal.			Actual.		
				Rs.	As.	P.	Rs.	As.	P.
To Balance from last Report	...	...	...	1,59,300	0	0	1,60,143	0	10
Total Rs.				1,59,300 0 0			1,60,143 0 10		

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 ...	1,42,800	0	0	1,42,540	0	0	15,200	0	0	16,307	4	1	1,58,847	4	1
Trust Fund ...	1,800	0	0	1,293	12	9	...	...	...	...	...	...	1,295	12	9
	1,44,100	0	0	1,43,833	12	9	15,200	0	0	16,307	4	1	1,60,143	0	10

No. 4.  
*Account.*

1899.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts ...	...	...	...	...	...	...
" Asiatic Society ..	211	11	0			
" Oriental Publication Fund ..	4	14	0			
" Sanskrit Manuscript Fund ...	4	0	0			
					220	9 0

By Balance.	Due to the Society.			Due by the Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members ...	4,381	14	9	177	0	0
Subscribers ...	5	0	0	91	12	0
Employés ...	30	0	0	350	0	0
Agents ...	169	2	6	...	...	...
Miscellaneous	290	8	0	133	5	11
	4,876	9	3	752	1	11

... 4,124 7 4

Total Rs. ...

15,191 10 10

W. K. DODS,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*

No. 5.  
*ment.*

Cr.

	Nominal.			Actual.		
	Rs.	As.	P.	Rs.	As.	P.
By Balance * ...	...	...	...	...	...	...
	1,59,300	0	0	1,80,143	0	10
Total Rs.	1,59,300	0	0	1,60,143	0	10

W. K. DODS,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
MEUGENS, KING & SIMSON,  
*Auditors.*

## STATEMENT

1899.

*Trust*

						Dr.	
						Rs.	As. P.
To Pension ...	...	...	...	...	...	44	0 0
„ Balance ...	...	...	...	...	...	1,846	3 10
Total Rs.						...	1,890 3 10

## STATEMENT

*Cash*

						Dr.	
						Rs.	As. P.
To Balance from last Report ...	...	...	...	...	...	2,083	0 10
					RECEIPTS.		
To Asiatic Society ...	...	...	...	...	...	10,458	0 10
„ Oriental Publication Fund ...	...	...	...	...	...	9,563	4 4
„ Sanskrit Manuscript Fund ...	...	...	...	...	...	3,208	0 0
„ Personal Account ...	...	...	...	...	...	10,846	10 6
„ Trust Fund ...	...	...	...	...	...	45	8 0
Total Rs.						...	36,204 8 6

## STATEMENT

*Balance*

						Dr.	
						Rs.	As. P.
To Cash ...	...	...	...	...	...	5,968	12 7
„ Investments ...	...	...	...	...	...	1,60,143	0 10
„ Personal Account...	...	...	...	...	...	4,124	7 4
Total Rs.						...	1,70,236 4 9

No. 6.

*Fund.*

1899.

Cr.

				Rs. As. P.
By Balance from last Report	...	...	...	1,344 11 10
„ Interest on Investments	...	...	...	45 8 0
Total Rs.				1,390 8 10

W. K. DODS,  
*Honorary Secretary and Treasurer,*  
*Asiatic Society of Bengal.*

Examined and found correct.  
 MEUGENS, KING & SIMSON,  
*Auditors.*

No. 7.

*Account.*

Cr.

				Rs. As. P.
EXPENDITURE.				
By Asiatic Society	...	...	...	13,587 0 3
„ Oriental Publication Fund	...	...	...	13,858 15 9
„ Sanskrit Manuscript Fund	...	...	...	3,023 6 8
„ Personal Account	...	...	...	222 5 8
„ Trust Fund	...	...	...	44 0 0
		Balance	...	5,968 12 7
Total Rs.				36,204 8 6

W. K. DODS,  
*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	...	...	...	1,52,452 11 11
„ Oriental Publication Fund	...	...	...	10,564 13 1
„ Sanskrit Manuscript Fund	...	...	...	5,872 7 11
„ Trust Fund	...	...	...	1,346 3 10
Total Rs.				1,70,236 4 9

W. K. DODS,  
*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.*

\* 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.

- \* Adelaide:—Royal Geographical Society of Australasia.
- § ———:—Central Australian Exploring Expedition.
- § Algiers:—Société de Géographie d' Alger.
- \* Allahabad:—Editor, *Pioneer*.
- § ———:—Bharati Bhavan Library.
- \* 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.
- § Bellary:—Editor, *Astrological Magazine*.
- § 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*.
- \* ———:—Natural History Society.
- § ———:—Government Observatory.
- § ———:—Marine Survey of India.
- † 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.
- § ———:—Queensland Museum.



- † 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 Royale Malacologique de Belgique.
- \* ——— :—Société Royale des Sciences de Liège.
- § ——— :—Musée du Congo.
- † Budapest :—Hungarian Central Bureau for Ornithological Observations.
- \* ——— :—Royal Hungarian Academy of Sciences.
- § ——— :—Editor, *Aquila*.
- \* Buenos Ayres :—National Museum.
- \* ——— :—Academia Nacional de Ciencias de la Republica Argentina.
- \* Caen :—Société Linnéenne de Normandie.
- \* Calcutta :—Agri-Horticultural Society of India.
- \* ——— :—Geological Survey of India.
- \* ——— :—Editor, *Englishman*.
- § ——— :—Editor, *Indian and Eastern Engineer*.
- \* ——— :—Editor, *Indian Daily News*.
- § ——— :—Editor, *Indian Engineering*.
- \* ——— :—Editor, *Indian Mirror*.
- § ——— :—Editor, *Indian Lancet*.
- \* ——— :—Indian Meteorological Department.
- \* ——— :—Indian Museum.
- § ——— :—Maha-bodhi Society.
- § ——— :—Photographic Society of India.
- \* ——— :—Royal Botanic Gardens.
- \* ——— :—Survey of India.
- \* ——— :—Tuttobodhini Shova.
- § ——— :—Sanskrit College.
- § ——— :—Imperial Library.
- § ——— :—Botanical Survey of India.
- § ——— :—St. Xavier's College Observatory.
- § ——— :—Linguistic Survey of India.
- \* ——— :—University Library.
- \* Cambridge :—University Library.
- \* Cape Town :—South African Museum.
- \* ——— :—South African Philosophical Society.
- \* Cassel :—Die Verein für Naturkunde.
- † Cherbourg :—Société Nationale des Sciences Naturelles.
- \* Chicago, Ill. :—Editor, *American Antiquarian and Oriental Journal*.

- \* Chicago, Ill. :—Field Columbian Museum.
- § ——— :—Board of Trade.
- § ——— :—Academy of Sciences.
- \* 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 Antropologia.
- † ——— :—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.
- § Glasgow :—University Library.
- \* Graz :—Naturwissenschaftlicher Verein für Styria.
- § Greenwich :—Royal Observatory.
- \* Hague :—Köninklijk Instituut voor de Taal- Land-en Volkenkunde van Nederlansch-Indië.
- \* ——— :—Netherlands Entomological Society.
- \* ——— :—The State Archives.
- \* 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.

- \* Honolulu :—Bernice Pauahi Bishop Museum.
- § Indianapolis, Ind. :—Indiana Academy of Science.
- § ——— :—Geological Survey.
- § Ithaca :—Cornell University.
- † Kiew :—Société des Naturalistes.
- § Kew :—Royal Gardens.
- \* 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.
- § ——— :—University Library.
- \* Liège :—Société Géologique de Belgique.
- † Liverpool :—Literary and Philosophical Society.
- § ——— :—University College.
- \* London :—Anthropological Institute.
- \* ——— :—Editor, *Academy*.
- \* ——— :—Editor, *Athenæum*.
- \* ——— :—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.
- \* ——— :—Royal Statistical Society.
- \* ——— :—Zoological Society.
- § ——— :—Wyclif Society.
- § ——— :—British Association for the Advancement of Science.
- § Lucknow :—Government Horticultural Gardens.
- § ——— :—Provincial Museum.
- † Lyons :—La Société d' Agriculture, d' Histoire Naturelle et des Arts  
Utiles.

- † Lyons :—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*.
- § ——— :—Government Observatory.
- \* Melbourne :—Royal Society of Victoria.
- \* Manchester :—Literary and Philosophical Society.
- † Massachusetts :—Tufts College.
- § Mauritius :—Royal Alfred Observatory.
- \* Mexico :—Sociedad Científica " Antonio Alzate."
- § Missouri :—Botanical Garden.
- § Montevideo :—Museo Nacional de Montevideo.
- \* Moscow :—Société Impériale des Naturalistes.
- \* Munich :—K. Bayerische Akademie der Wissenschaften.
- § Nagpur :—Experimental Farm.
- \* 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.
- § Para, Brazil :—Museu Paraense.
- \* Paris :—Société de Géographie.
- \* ——— :—Société d' Anthropologie.
- \* ——— :—Asiatic Society.
- § ——— :—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.

- § Philadelphia :—Franklin Institute.  
† ——— :—Editor, *Journal of Comparative Medicine and Surgery*.  
\* Pisa :—Società Toscana di Scienze Naturali.  
§ Prague :—K. K. Sternwarte.  
§ Rome :—Revista Geografica Italiani.  
\* ——— :—Società degli Spettroscopisti Italiani.  
§ ——— :—R. Accademia dei Lincei.  
§ 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.  
§ St. Petersburg :—Die Russisch-Kaiserliche Mineralogische Gesellschaft zu St. Petersburg.  
§ Saharanpur :—Government Botanical Gardens.  
\* San Francisco :—Californian Academy of Arts and Sciences.  
§ 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.  
† ——— :—Royal Academy of belles letters, history and Antiquities.  
\* 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.  
§ ——— :—Editor, *Science of Man*.  
§ ——— :—Australian Association for the Advancement of Science.  
§ ——— :—Australian Museum.  
§ Taiping :—Government of Perak.  
§ Tiflis :—Botanical Garden.  
\* Toronto :—Canadian Institute.  
\* Tokyo :—Imperial University of Japan.  
† Trieste :—Società Adriatica de Scienze Naturale.  
† ——— :—Museo Civico di Storia Naturale.  
\* Tring :—Zoological Museum.  
\* Turin :—Reale Accademia delle Scienze.  
† Ulwar :—Ulwar Library.

- \* Upsala :—University of Upsala.
- \* Valparaiso :—Deutscher Wissenschaftlicher Verein.
- \* 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.
- § Vizagapatam :—Juggarow Observatory.
- § Washington :—Biological Society of Washington.
- \* ——— :—Commissioners of the Department of Agriculture.
- \* ——— :—Smithsonian Institution.
- \* ——— :—United States Geological Survey.
- § ——— :—United States National Museum.
- § ——— :—Academy of Sciences.
- § ——— :—Volta Bureau.
- § ——— :—American Historical Association.
- § ——— :—American Museum of Natural History.
- † Wellington :—New Zealand Institute.
- \* ——— :—Polynesian Society.
- \* Yokohama :—Asiatic Society.
- \* ——— :—Deutsche Gesellschaft für Natur und Völkerkunde Ostasiens.
- \* Zagreb :—Archæological Society.
- \* Zurich :—Naturforschende Gesellschaft.