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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL.

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THE HONORARY SECRETARIES.

JANUARY TO DECEMBER,

1896.

CALCUTTA:

PRINTED AT THE BAPTIST MISSION PRESS,

AND PUBLISHED BY THE

ASIATIC SOCIETY OF BENGAL.

1897.

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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR JANUARY, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 8th January, 1896, at 9 P. M.

ALEXANDER PEDLER, F. R. S., President, in the chair.

The following members were present:—

Moulvie Abdus Salam, Dr. A. W. Alcock, Dr. A. R. Anderson, Dr. A. F. R. Hoernle, His Grace Archbishop Dr. Paul Goethals, Dr. G. A. Grierson, Bābu Pañcānana Mukherjee, Paṇḍit Harimohan Vidyabhushan, Babu Mahendranath Rāy, Paṇḍit Haraprasād Çāstrī, C. R. Wilson, Esq.

Visitor:—Monsieur A. Foucher.

The minutes of the last meeting were read and confirmed.

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

The following gentlemen duly proposed and seconded at the last meeting of the Society were ballotted for and elected ordinary members:—

R. Paget Dowhurt, Esq.
Richard Burn, Esq.
G. Place, Esq.
Dr. Arnold Caddy.

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

W. C. Macpherson, Esq., I. C. S., proposed by Dr. G. A. Grierson, seconded by Dr. A. F. R. Hoernle.

Surgeon-Lieutenant Charles E. Williams, I. M. S., 6th Punjab Infantry, Edwardesabad, proposed by Dr. G. A. Grierson, seconded by C. R. Wilson, Esq.

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

Major J. Hayes Sadler, B. S. C.
Dr. G. H. D. Gimlette, M.D.

The PHILOLOGICAL SECRETARY exhibited a personal relic of General Cunningham.

Paṇḍit Haraprasād Çāstrī exhibited a second set of Viṣṇupur Circular Cards and read the following note.

A single pack contains forty-eight cards, in twelve groups of four each. The first four have each a figure, which though apparently a female figure, on closer examination appears to be the figure of a Malla king dressed in female attire. This is the Ace. The second four have two wrestlers. These are valued at two. The third four have three leaves. The fourth four have four conch shells ; the fifth, five flowers ; the sixth, six carpet cushions ; the seventh, seven swords ; the eighth eight *Bakula fruits ;* the ninth, nine full blown flowers ; the tenth, ten plums. The eleventh four have each a horseman and the twelfth each an elephant rider. They are valued at 11 and 12 respectively.

The point of the game is this. He who gets the number seventeen first in a group of four players, wins the stakes. The cards are first shuffled then cut by the right-hand man, and one card is dealt to each player from right to left. Then the right-hand man is given another card. If he gets more than seventeen he loses the stakes and throws away his cards ; if he gets seventeen he wins ; if he gets less, he has the option of either demanding another card or allowing cards to be given to others. If nobody gets seventeen, nobody wins. If a man gets two horses, two elephants, two aces and two twos, he also wins.

Some of the designs in this pack are the same as in the Viṣṇupur Circular Cards already described in *Journal*, Part I, p. 284. But others are not. The elephant rider, the horseman, the wrestlers and the king in the Ace remind one of the Aśvapatis, Gajapatis and

Narapatis Rājyatrayādhipatis so often mentioned in the inscriptions of the twelfth and thirteenth centuries.

The following papers were read :—

1. *On the Radical and Participial Tenses of the Modern Indo-Aryan Languages.*—*By* G. A. Grierson, Esq., Ph. D., C. I. E.

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

2. *Chronology of the Sēna kings of Bengal.*—*By* Babu Nagēndranātha Vasu.

(Abstract).

Though considerable research has been made to construct a genuine history of the Sēna kings, yet much remains to be done. The following conclusions are the abstract of the results of my perusal of the manuscripts of the Dāna-sāgara, the Kārikās of Ēḍū-miçra and Hari-miçra, and other books, the genealogy of the Candra-dvīpa dynasty, and a newly discovered copper-plate.

1. After the reign of Ādi-çūra and his descendants, the Pāla kings ascended the throne of Bengal. The Sēna kings flourished after the Pāla kings.

2. Vijaya-sēna's son, Ballāla-sēna, wrote the Dāna-sāgara in 1169 A.D., and ruled Bengal for 50 years. After ascending the throne, Ballāla set out for the conquest of Mithilā, and while there, he heard the news of his son Lakṣmaṇa's birth. There he inaugurated the Lakṣmaṇa era in 1119, in commemoration of his son's birth.

3. Ballāla's son, Lakṣmaṇa-sēna, established, after his father, kulinism among the Brāhmaṇas. He reigned for 27 or 28 years from 1170 to 1198-99 A.D., when Bengal was conquered by Muḥammad-i-Bakhtiār.

4. According to the Āīn-i-Akbarī, Mādhava-sēna and Kēçava-sēna ruled Bengal in succession, after their father Lakṣmaṇa-sēna. But in my opinion they never ascended the throne. They were probably governors of provinces, or regents of their father, during his life-time. Following the advice of the Paṇḍits, Mādhava-sēna left his father's kingdom, and went on a pilgrimage to Kedāranātha, a fact corroborated by the existence of a copper-plate grant of Mādhava-sēna in the Yōgēçvara temple near the city of Almora in Kumāun.

5. Kēçava-sēna, likewise, went away for fear of the Muhamadans, and took refuge in the court of some king,—probably Viçvarūpa-sēna, another son of Lakṣmaṇa-sēna, and described as the terrible destroyer of the Yavana dynasty in the copper-plate grant of the 14th year, noticed by me in the last meeting, and who I suppose formally ascended the throne in 1200 or 1201 A.D.

6. According to the ancient Kārikās of Kulācāryas, Danaujā-mādhava, grandson of Lakṣmaṇa-sēna established kulinism among the Brahmaṇas and Vangaja kāyasthas. Ābū-l-faẓl mentions one Rājā Nōjāh as reigning after Sadā-sēna. This Nōjāh, is no doubt, Danaujā of the Kārikās and the Danauja Rāya of the Tārīkh-i Fīrōz-Shāhī. But none of them tells us his father's name. He is probably son and successor either of Viçvarūpa or of Sadā-sēna. According to the genealogy of the Candra-Dvīpa kings, Danaujā-mādhava is the founder of that family. His fifth descendant Jaya-dēva died without male issue, and so the kingdom passed to his daughter's son Paramānanda of the Vasu family. After 7 Rājās from Paramānanda had succeeded to the throne, the son of the last king's sister, namely Udayanarāyaṇa of the Mitra family inherited the kingdom. His descendants are now living at Mādhavapāçā.

7. There was another king named Ballāla, who was a Vaidya and reigned at Vikrama-pura, and is described by his teacher Gōpāla-bhaṭṭa in his 'Ballāla-carita' written in 1378 A.D. This often leads to the error that the Sēna kings of Bengal were Vaidyas. Ballāla-sēna son of Vijaya-sēna and father of Lakṣmaṇa-sēna lived about 250 years previous to this Vaidya Ballāla, who was probably a zamindār of note, and at the time of the dismemberment of the kingdom of Bengal rose to some eminence.

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

Library.

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

Transactions, Proceedings and Journals,

presented by the respective Societies and Editors.

Baltimore. Johns Hopkins University,—Circulars, Vol. XV, No. 121.

Bombay. Anthropological Society of Bombay,—Journal, Vol. III, No. 7.

———. Bombay Natural History Society,—Journal, Vols. IX, Nos. 5; X, 1.

Brussels. La Société Royale Malacologique de Belgique,—Annales, Tome XXVII.

———. ———. Procès-Verbal, 5 Novembre, 1892.

———. ———. Procès-Verbaux des Séances, Tome XXII-XXIV.

Calcutta. Indian Engineering,—Vols. XVIII, Nos. 23–26; XIX, 1.
———. Indian Lancet,—Vols. VI, Nos. 12; VII, 1.
———. Maha-bodhi Society,—Journal, Vol. IV, No. 9.
Chicago, Ill. The American Antiquarian and Oriental Journal—Vol. XVII, No. 5.
Frankfurt, a. O. Des Naturwissenschaftlichen Vereins des Reg.-Bez. Frankfurt,—Helios, Jahrg XIII, Nrn 1–6.
———. ———. Societatum Litteræ, Jahrg IX, Nrn 4-9.
Havre. Société de Geographie Commerciale du Havre,—Bulletin, Septembre-Octobre, 1895.
The Hague. De Nederlandsche Entomologische Vereeniging,—Tijdschrift voor Entomologie, Deel XXVIII.
Leipzig. Der Königl. Sächsischen Gesellschaft der Wissenschaften,—Abhandlungen, philologisch-historischen classe, Band XV, No. 4.
London. Anthropological Institute of Great Britain and Ireland,—Journal, Vol. XXV, No. 2.
———. The Academy,—Nos. 1229–33.
———. The Athenæum,—Nos. 3552–56.
———. Nature,—Vol. LIII, Nos. 1360–62.
———. Royal Astronomical Society,—Monthly Notices, Vol. LVI, No. 1.
———. Royal Geographical Society,—Geographical Journal, Vol. VI, No. 6.
Mussoorie. The Indian Forester,—Vol. XXI, No. 12.
Paris. La Société de Géographie,—Bulletin, Tome XVI, No. 3.
———. ———. Compte Rendu de Séance, No. 13, 1895.
———. La Société Philomathique de Paris,—Comptes-Rendus Sommaire des Séances, Nos. 2 et 3, 1895.
Philadelphia. American Academy of Political and Social Science,—Annals, Vol. VI, No. 3.
Rome La Società di Studi Geografici e Colonialé in Firenze,—Bollettino, Tome II, Nos. 8 et 9.
———. La Società Degli Spettroscopisti Italiani,—Memorie, Vol. XXIV, Nos. 8–10.
Santiago de Chile. Des Deutschen Wissenschaftlichen Vereins zu Santiago de Chile,—Verhandlungen, Band III, Heft 1 und 2.
St. Petersburg. L'Académie Impériale des Sciences de St. Pétersbourg,—Bulletin, Ve Série, Tome II, No. 5.
———. Der Kaiserlichen Mineralogischen Gesellschaft,—Materialien zur Geologie Russlands, Band XVII.
———. La Société Impériale Russe de Géographie,—Journal, Tome XXXI, No. 4.

Sydney. Linnean Society of New South Wales,—Proceedings, 2nd Series, Vol. X, Part 2.

Taiping. Perak Government,—Gazette. Vol. VIII, Nos. 29-31.

Tokio. Der Deutschen Gesellschaft für natur-und völkerkunde ostasiens in Tokio,—Mittheilungen, Vol. VI, Heft 56, und Supplement-Heft II zu Band VI.

Vienna. Der. K. K. geologischen Reichsanstalt,—Verhandlungen, Nrn 18–10, 1895.

———. Der K. K. zoologisch-botanischen Gesellschaft in Wien,—Verhandlungen, Band XLV, Heft 9.

Books and Pamphlets,

presented by the Authors, Translators, &c.

Godwin-Austen, H. H. Description of a supposed new species of Land-Mollusk of the Genes Parmarion from Pulo Lant, an Island off the South-east Coast of Borneo. 8vo. London, 1895.

———. List and distribution of the Land-Mollusca of the Andaman and Nicobar Islands, with descriptions of some supposed new species. 8vo. London, 1895.

Lanman, Charles Rockwell. William Dwight Whitney. 8vo. 1895.

Seth, Mesrovb, J. History of the Armenians in India from the earliest times to the present day. 8vo. Calcutta, 1895.

Wackernagel, Jacob. Altindische Grammatik. 8vo. Göttingen, 1896.

Miscellaneous Presentations.

Books on China in the Library of the Essex Institute, Salem, Mass 8vo. Salem, Mass. 1895.

Essex Institute, Salem, Mass.

The Budh-Gaya Temple Case. H. Dharmapala *versus* Jaipal Gir and others. Fcp. Calcutta, 1895.

Mohanth Krishna Doyal Giri.

Anderson, J. D. A short list of words of the Hill Tippera Language with their English equivalents. 8vo. Shillong, 1885.

Needham, J. F. Outline Grammar on the Singpho Language. 8vo. Shillong, 1889.

Ramkhe, M. Bengali-Garo Dictionary, 8vo. Tura, 1887.

Government of Assam.

General Report on Public Instruction in Bengal for 1894-95. Fcp. Calcutta, 1895.

Report on publications issued and registered in the several provinces of British India during the year 1894. Fcp. Calcutta. 1895.

Report on the Rail-borne Traffic of Bengal during the year, 1894-95. Fcp. Calcutta, 1895.

Resolution reviewing the reports on the working of Municipalities in Bengal during the year 1894-95. Fcp. Calcutta, 1895.

GOVERNMENT OF BENGAL.

The Agricultural Ledger, Agricultural Series, Nos. 10 and 15; Medical and Chemical Series, Nos. 1 and 2; Veterinary Series 11 and 14. 8vo. Calcutta, 1894-95.

Records of the Botanical Survey of India, Vol. I, Nos. 5 and 6. 8vo. Calcutta, 1895.

GOVERNMENT OF INDIA, REV. AND AGRI. DEPARTMENT.

MARTIN, L. Einige neue Tagschmetterlinge von Nordost-Sumatra. 8vo. Munich, 1895.

LIONEL DE NICE'VILLE, ESQ.

Return of Wrecks and Casualties in Indian Waters for the year 1894. Fcp. Calcutta, 1895.

PORT OFFICE, CALCUTTA.

Tide-Tables for the Indian Ports for the year 1896, also January 1897. 8vo. London, 1895.

SURVEY OF INDIA, TIDAL AND LEVELLING OPERATION, POONA.

BARROWS, WALTER B; AND SCHWARZ, E. A. The Common Crow of the United States. 8vo. Washington, 1895.

U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON.

PERIODICALS PURCHASED.

Allahabad. North Indian Notes and Queries,—Vol. V, No. 9.

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

Calcutta. The Calcutta Review,—Vol. CII, No. 203.

———. Indian Medical Gazette,—Vol. XXX, No. 12.

Geneva. Archives des Sciences Physiques et Naturelles,—Tome XXXIV, No. 11.

Leipzig. Annalen der Physik und Chemie,—Band LVI, Heft 11 und 12.

———. ———. Beiblätter, Band XIX, Stück 11.

London. Numismatic Circular,—Vol. IV, No. 37.

Vienna. Vienna Oriental Journal, Vol. IX, No. 3.

BOOKS PURCHASED.

Lockhart, J. H. Stewart. The Currency of the Farther East, from the earliest times up to the present day, Vol. I., and plates. 8vo. Hongkong, 1895.

The Mahabharata, translated into English prose, Part 97. 8vo. Calcutta, 1895.

Waddell, L. Austine. The Buddhism of Tibet or Lamaism. 8vo. London, 1895.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

For February, 1896.

The Annual Meeting of the Asiatic Society of Bengal was held on Wednesday, the 5th February, 1896, at 9 P.M.

Alexander Pedler, Esq., F. R. S., President, in the chair.

The following members were present:—

Maulvī Abdus Salam, Dr. A. W. Alcock, H. K. W. Arnold, Esq., J. C. Bose, Esq., F. Finn, Esq., Dr. G. A. Grierson, Dr. A. F. R. Hoernle, S. C. Laharry, Esq., C. Little, Esq., J. Maun, Esq., R. D. Mehta, Esq., W. H. Miles, Esq., Bābu Pañcānana Mukherjee, Dr. G. Ranking, Bābu Lakṣhmī Nārāyaṇa Siṁha, Major R. C. Temple, Dr. G. Watt, C. R. Wilson Esq.,

Visitors:—Dr. J. R. Adie, Bābu Jyoti Bhūṣaṇ Bhādurī.

According to the Bye-laws of the Society, the President ordered the voting papers to be distributed for the election of Officers and Members of Council for 1896 and appointed Major R. C. Temple and Mr. J. C. Bose to be Scrutineers.

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

Annual Report for 1895.

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

Member List.

During the year under review 29 Ordinary Members were elected, 7 withdrew, 4 died, 16 were removed from the list, *viz.*, 11 under Rule 38

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as defaulters, and 5 under Rule 40, being more than 3 years absent from India. The election of one Member was cancelled at his own request as he was contemplating an early return to Europe. Of the Members elected 2 were old Members who rejoined. The total number of Members at the close of 1895 was thus 297 against 295 at the end of the preceding year; of these 108 were Residents, 122 Non-Residents, 12 Foreign, 23 Life, 31 Absent from India and 1 Special Non-Subscribing Member, as will be seen from the following table which also shows the fluctuations in the numbers of Ordinary Members during the past six years :—

Year.	Paying.				Non-Paying.				Grand Total.
	Resident.	Non-Resident.	Foreign.	Total.	Life.	Absent.	Special Non-Subscribing.	Total.	
1890	105	140	10	255	21	25	2	48	303
1891	101	134	10	245	21	27	2	50	295
1892	115	127	11	253	22	33	2	57	310
1893	116	123	12	251	22	33	2	57	308
1894	98	125	12	235	22	36	2	60	295
1895	108	122	12	242	23	31	1	55	297

The four Ordinary Members, the loss of whom by death during the year we have to regret, were Mr. Valentine Ball (special non-subscribing member), H. H. the Maharājā of Johore, The Rev. D. G. Latham-Browne and Mr. A. M. Nash.

There were five deaths amongst the Honorary Members, *viz.*, those of Professor Hermann L. E. Helmholtz, Professor T. H. Huxley, Monsieur Louis Pasteur, Major-General Sir H. C. Rawlinson and Dr. Rudolph von Roth. To fill these vacancies and others previously existing, the Society, on the recommendation of the Council, elected as Honorary Members, Dr. George Bühler, The Right Honourable Lord Rayleigh, Lieutenant-General R. Strachey, and Mr. C. H. Tawney. Thus the number of Honorary Members stands at 21.

Intimation of two deaths amongst the Corresponding Members was received, *viz.*, Dr. R. Gösche of Berlin and Mr. A. von Krämer of Alexandria, the number now stands at 4.

The lists of Special Honorary Members and Associate Members continue unaltered from last year, there having been no casualties, their number standing at 5 and 10 respectively.

During the year, one member, Mr. N. D. Beatson-Bell, compounded for his future subscriptions.

Indian Museum.

The following presentation made to the Society was transferred to the Indian Museum under the provisions of Act XXII of 1876.

A Diorite plug found in the Banda District, presented by Mr. J. Cockburn and referred to in the Society's *Proceedings* for May and June 1894.

The Trustees on behalf of the Society were :—

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

Finance.

The Accounts of the Society are shown in Statement No. 1, in the Appendix, under the usual heads.

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

The Budget Estimate for 1895 was taken at the following figures :— Receipts Rs. 16,844; Expenditure Rs. 16,013.

The actual results were found to be :—Receipts Rs. 18,166-6-11. Expenditure Rs. 13,080-5-11.

The Receipts show an increase of Rs. 1,322-6-11, while the Expenditure shows a decrease of Rs. 2,927-10-1 on the Budget Estimate.

There is an increase in Receipts under the heads of "Subscriptions," "Sale of Publications," "Interest on Investments," "Rent of Rooms" and "Miscellaneous." "Subscriptions" and "Miscellaneous" show a very slight increase, but owing to the large sale of the Society's *Journals* and *Proceedings*, "Sale of Publications" shows an increase of Rs. 1,050-7-2. During the year, Temporary Investments were made and there is thus an increase of Rs. 183 under the head of "Interest on Investments." "Rent of Rooms" also shows an increase of Rs. 60. This is due to the payment in this year by the Photographic Society of India of one month's rent in advance.

On the Expenditure side, the items of "Stationery," "Freight," "Contingencies," "Binding," "*Journal* Part I," and "*Proceedings*" show an increase. Owing to new registers being required for the

library, there is an increase of Rs. 33-6-6 under the head of "Stationery." The amount budgetted for under the head of "Freight" has been exceeded by Rs. 10-14-0, an additional box containing the Society's publications having been despatched to the London Agents. There is an increase of Rs. 154-6-9 under the head of "Contingencies." This is due to the carting of good earth for the improvement of the Society's garden and to providing peons with new clothing for the cold weather. During the year, it was found necessary to bind many old works belonging to the Oriental Library, thus there is an increase of Rs. 81-12 under the head of "Binding." "*Journal* Part I" was estimated for at Rs. 2,100 whilst the actual expenditure was Rs. 3,036-5-0. In February 1894, the Council sanctioned a special grant of Rs. 1,265 for the printing of Major Raverty's article on the "Mihran of Sind and its Tributaries." As reported last year, Rs. 408-4-6 was spent for the printing of the maps only, leaving a balance of Rs. 756-11-6 unexpended. To meet the printing charges, the above balance has been freely drawn on for this purpose. "*Proceedings*" has exceeded its budget grant by Rs. 26-9-0. This is due to an extra plate.

There were two items of extraordinary expenditure during 1895 under the heads of "Furniture" and "Registration Fees" not provided for in the Budget. After the repairs to the Society's building, none of the book cases could be locked as the almirahs were not on a level and the necessary repairs cost Rs. 79-13-0. In accordance with section 4 of Act XXI of 1860, Rs. 95, was spent in Registration Fees for 19 years from 1877 to 1895.

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

Journal	Part I	...	Rs. 3,036	5	0
	Part II	...	... 1,537	9	6
Proceedings ...		...	... 1,026	9	0
		Total Rs.	5,600	7	6

This is less than the Budget Estimate by Rs. 2,599-8-6.

The Budget Estimate of probable ordinary Receipts and Expenditure for 1896 has been fixed as follows:—Receipts Rs. 16,420. Expenditure Rs. 16,042.

On the Receipts' side, the estimated income under the head of "Interest on Investments" has been increased by Rs. 76 on account of the interest on Temporary Investments. The two years for which the Government of Madras sanctioned an allotment having expired, "Government Allowance" has been reduced by Rs. 500.

On the Expenditure side, the amount budgetted for under "Freight" has been increased by Rs. 20 to provide for the despatch of a greater number of cases of books for sale to the Society's agents.

There is an additional item of Rs. 5 under the head of "Registration Fees" which amount has to be paid yearly.

Beyond the Auditor's fee, no other extraordinary expenditure is anticipated during 1896.

The details of Budget Estimate are as follows :—

Receipts.

Subscriptions	Rs.	7,000	0	0
Sale of Publications ...	...	400	0	0
Interest on Investments ...	...	5,200	0	0
Rent of Rooms ...	...	720	0	0
Government Allowances ...	...	3,000	0	0
Miscellaneous	...	100	0	0
Total	Rs.	16,420	0	0

Expenditure.

Salaries	Rs.	3,400	0	0
Commission	...	400	0	0
Pension	...	52	0	0
Stationery	...	100	0	0
Lighting	...	40	0	0
Municipal Taxes ...	...	819	0	0
Postage	...	600	0	0
Freight	...	30	0	0
Meetings	...	80	0	0
Contingencies	...	150	0	0
Books	...	1,500	0	0
Local Periodicals ...	...	16	0	0
Binding	...	500	0	0
Journal Part I	...	2,100	0	0
,, ,, II ...	...	2,100	0	0
,, ,, III ...	...	3,000	0	0
Proceedings	...	1,000	0	0
Printing circulars, &c. ...	...	150	0	0
Registration Fees ...	...	5	0	0
Total	Rs.	16,042	0	0

London Agency.

The number of copies of parts of the *Journals*, of the *Proceedings*, and of the *Bibliotheca Indica*, sent to Messrs. Luzac and Co., during the year 1895, for sale, were 723, 363 and 556, valued at £ 108-9-0, £ 12-9-9 and Rs. 306-2-0 respectively.

Three invoices of books purchased, and of publications of various Societies sent in exchange, were received during the year. The value of the books purchased amounted to £ 6-7-3.

Continental Agency.

The number of copies of parts of the *Journal* and of the *Bibliotheca Indica* sent to Mr. Otto Harrassowitz, the Society's Continental Agent, during 1895, for sale, were 40 and 225, valued at £ 6-0-0 and Rs. 133-2-0 respectively. Other books were sent for sale amounting to Rs. 3-8-0.

Library.

The total number of volumes or parts of volumes, added to the Library during the year was 2,080, of which 266 were purchased and 1,814 presented, or received in exchange for the Society's publications.

The compilations of a new edition of the Society's Library Catalogue is far advanced.

Publications.

There were published during the year nine numbers of the *Proceedings* (No. 10 of 1894, and Nos. 1 to 8 of 1895), containing 158 pages of letter-press and 4 plates; three numbers of the *Journal*, Part I (No. 4 of 1894 and Nos. 1 and 2 of 1895), containing 300 pages of letter-press and 23 plates; three numbers of the *Journal*, Part II (No. 4 of 1894, and Nos. 1 and 2 of 1895), containing 322 pages of letter-press and 8 plates. The index to the *Journal*, Part I for 1894 was also published.

Coin Cabinet.

During the year, 64 coins were added to the Society's Cabinet. Among these, 8 were gold, 15 silver, and 41 copper coins. They belong to the following classes:—Great Kushan 3, Little Kushan 5, Ancient Hindū 29, Punch-marked 5, Muḥammad Karluk 6, Mālwa 6, Moghul 3, Durrānī 1, Old British Mintage 6. All these were acquired under Treasure Trove Act. They belong to well-known types, and detailed notices of them are published in the Society's *Proceedings* for April 1895.

Office of Secretaries.

Dr. G. A. Grierson carried on the duties of Philological Secretary and Editor of the *Journal*, Part I, throughout the year:—

Dr. A. W. Alcock carried on the duties of Natural History Secretary and Editor of the *Journal*, Part II, till June when he was absent on deputation and Mr. Frank Finn took charge of the work in addition to his own duties as Anthropological Secretary.

Mr. Finn was appointed Anthropological Secretary in May.

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

Mr. C. R. Wilson carried on the duties of General Secretary and Editor of the *Proceedings* throughout the year except for two months from April to May when Dr. Alcock officiated for him. Dr. Alcock continued for one month when he was absent on deputation, and Dr. G. Ranking agreed to carry on the work till Mr. Wilson's return.

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

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

Paṇḍit Harimohan Vidyābhūṣhaṇa, the Paṇḍit of the Society was allowed leave, without pay, for 6 months from November and Paṇḍit Annadāprasād Sarasvatī was appointed to officiate in his place.

There were no other changes in the office establishment.

Bibliotheca Indica.

The editing charges of sixteen and the printing charges of twenty-one fasciculi were paid for; the total outlay being 7,000 rupees in round numbers. The average cost of each fasciculus, including both the charges, is 368 rupees.

A descriptive catalogue of works published is given below:—

A. Arabic-Persian Series.

I. The Council sanctioned in the year 1884, the publication of the English translation of the first volume of Muntak̲habu-t-Tāwārīk̲h by Abdul Qādir, the Badaoni. It was arranged that it should be prepared uniformly with Mr. Lowe's translation of the second volume then in the course of preparation. Maulvī Abul K̲hair of the Madrasah College was requested to take the work in hand. For various reasons the editor could not commence work, and the work was kept in abeyance. Last year Dr. George Ranking accepted the editorship, and he has published his first fasciculus with copious annotations, Fasc. I.

B. Sanskrit Series.

1. The Aitarēya Brāhmaṇa is, next to the Ṛg Vēda, the most ancient Sanskrit work known, consequently it attracted the attention of Oriental Scholars very early. Haug published an edition of the work about 40 years ago. But he could not procure a commentary. Paṇḍit Satyavrata Sāmaçramī was therefore requested to undertake an edition with Sāyana's commentary. He has published five fasciculi during the year, Vol. I, Fascs. IV and V; Vol. II, Fasc. I to III.

2. Paṇḍits Yōgēçvara Smṛtiratna and Kāmākhyānātha Tarkavāgīça completed the second part of the third volume of the Caturvarga-Cintāmaṇi. This brings the Pariçēṣa Khaṇḍa or Miscellaneous Volume to an end. Vol. III, Part III, Fasc. X.

3. The Nyāyakusumañjali-prakaraṇa has been completed by Mahāmahōpādhyāya Candrakānta Tarkālaṇkāra with a commentary and a commentary on the commentary. The Editor in his preface makes an attempt to fix the date of the great teachers of the Nyāya philosophy. Vol. II, Fasc. III.

4. Professor Dr. Alfred Hillebrand of Breslau has published only one fasciculus, namely, Vol. II, Fasc. III of the Çrauta Sūtra of Çāṁkhāyana. This volume gives the commentary of Ānarttiya, son of Varadatta.

5. Since the transfer of the editorship of the Taittirīya Saṁhitā by Mahāmahōpādhyāya Mahēça Candra Nyāyaratna to Paṇḍit Satyavrata Sāmaçramī the work is progressing at the rate of one Fasciculus a year. The Fasciculus published last year is No. XXXVIII.

7. The Tattva-cintāmaṇi also has advanced by one fasciculus only, namely, Vol. V, Fasc. I. This is the first fasciculus of the last Khaṇḍa or part dealing with the evidencial value of speech.

8. The Madhyakhaṇḍa of the Vṛhad-dharma-purāṇa has been completed. In two more fasciculi the work will be concluded. Fasc. V. was published during the year.

9. The Svayambhū-purāṇa has also advanced by one fasciculus only, namely the fourth.

C. Tibetan Series.

1. The Sanskrit and Tibetan edition of the Kalpalatā advanced by two fasciculi, namely Vol. I, Fasc. V, and Vol. II Fasc. IV, under the joint editorship of Rāy Çarat Candra Dās, C.I.E., Bahādur, and Paṇḍit Harimohan Vidyābhūṣaṇa.

2. Babu Pratāpa Candra Ghoṣa has published one part of the Sher Phyin, namely Vol. III, Fasc. I. As he omits all the passages which are often repeated, there is a prospect of the work coming

to a speedy close. The publication of the Çatasāhasrikā Prajñāpāramitā, of which this is a Tibetan translation, otherwise would have been as great an undertaking as the publication of the Mahābhārata.

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 nothing has been sent in return.

* Allahabad :—Editor, *Pioneer.*
† Amsterdam :—Royal Zoological Society.
† ———:—Koninklijke Akademie van Wetenschappen.
* Angers :—Société d' Etudes Scientifiques d' Angers.
* Baltimore :—Johns Hopkins University.
* Batavia :—Society of Arts and Sciences.
* ———:—Kon. Natuurkundige Vereeniging in Nederlandsch-Indië.
§ Bellary :—Editor, *Astrological Magazine.*
* Berlin :—Gesellschaft Naturforschender Freunde zu Berlin.
* ———:—Royal Academy of Sciences.
† Berne :—Société Suisse d' Entomologie.
§ Birmingham :—Birmingham Philosophical Society.
* Bombay :—Bombay Anthropological Society.
* ———:—Bombay Branch, Royal Asiatic Society.
* ———:—Editor, *Indian Antiquary.*
* ———:—Editor, *Times of India.*
* ———:—Natural History Society.
* Bordeaux :—L' Académie Nationale des Sciences, Belles-Lettres et Arts.
* ———:—Société Linnéenne.
* Boston :—Natural History Society.
* Brisbane :—Royal Society of Queensland.
† Brookville :—Society of Natural History.
† Brunswick :—Verein für Naturwissenschaft.
* Brussels :—L' Académie Royale des Sciences.
† ———:—Musée Royal d' Histoire Naturelle de Belgique.
† ———:—Société Entomologique de Belgique.
§ ———:—La Société Royale des Sciences de Liége.

† Budapest :—Hungarian Central Bureau for Ornithological Observations.
* ——— :—Royal Hungarian Academy of Sciences.
† Buenos Ayres :—National Museum.
* ——— :—Academia National de Ciencias de la Republica Argentina.
* Caen :—Société de Linnéenne de Normandie.
* Calcutta :—Geological Survey of India.
* ——— :—Editor, *Englishman.*
* ——— :—Editor, *Indian Daily News.*
§ ——— :—Editor, *Indian Engineering.*
* ——— :—Editor, *Indian Mirror.*
§ ——— :—Editor, *Medical Reporter.*
§ ——— :—Indian Meteorological Department.
* ——— :—Indian Museum.
§ ——— :—Mahabodhi Society.
† ——— :—Mahommedan Literary Society.
§ ——— :—Micróscopical Society of Calcutta.
§ ——— :—Photographic Society of India.
* ——— :—Survey of India.
* ——— :—Tuttobodhini Shova.
* ——— :—University Library.
† Cambridge :—University Library.
† Cassel :—Der Verein für Naturkunde.
† Cherbourg :—Société Nationale des Sciences Naturelles.
* Chicago, Ill. :—Editor, *American Antiquarian and Oriental Journal.*
§ ——— :—Editor, *Open Court.*
* 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 :—Die Naturforscher-Gesellschaft bei der Universität Dorpat.
* Dresden :—Entomologischer Verein "Iris."
* ——— :—Königlich Zoologisches und Anthropologisch-Ethnographisches Museum zu Dresden.
† Dublin :—Royal Dublin Society.
* ——— :—Royal Irish Academy.
† Edinburgh :—Royal Society.
† ——— :—Scottish Geographical Society.
† Florence :—Societá Italiana di Anthropologia, Etnologia e Piscologia Comparata.

* Florence :—Societá Africana d'Italia.
* Frankfurt :—Senckenbergische Naturforschende Gesellschaft.
* ——— :—Naturwissenschaftlicher Verein des Reg.-Bez. Frankfurt.
† Geneva :—Société de Physique et d' Histoire Naturelle.
† Genoa :—Museo Civico di Storia Naturale.
* Giessen :—Oberhessische Gesellschaft für Natur-und Heilkunde.
† Graz :—Naturwissenschaftlicher Verein für Styria.
* The Hague :—Koninklijk Instituut voor de Taal-Land- en Volkenkunde van Nederlandsch-Indië.
* ——— :—Netherlands Entomological Society.
§ Halifax :—Nova Scotian Institute of Sciences.
† Halle :—Deutsche Morgenländische Gesellschaft.
† ——— :—Kaiserliche Leopoldinisch-Carlinische Akademie.
* Hamburgh :—Naturhistoriches Museum zu Hamburg.
* ——— :—Naturwissenschaftlicher Verein.
* Hamilton (Canada) :—Hamilton Association.
* Havre :—Société de Géographie Commerciale du Havre.
* Helsingfors :—Societas pro Flora et Fauna Fennica.
† ——— :—Société Finno Ougreinne.
* ——— :—Société des Sciences de Finlande.
§ Kiel :—Naturwissenschaftlicher Verein für Schleswig-Holstein.
† Kiew :—Société des Naturalistes.
† Königsberg :—Die Physikalisch-Oekonomische Gesellschaft.
* Lahore :—Editor, *Civil and Military Gazette.*
† ——— :—Agricultural Society.
§ Leipzig :—Deutsche Morgenländische Gesellschaft.
§ ——— :—Die K. Sächsische Gesellschaft der Wissenschaften.
† Leyden :—Royal Herbarium.
* Liége :—Société Géologique de Belgique.
* ——— :—Société des Sciences.
† Liverpool :—Literary and Philosophical Society.
* 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.

* London :— Royal Astronomical Society.
* ——— :— Royal Geographical Society.
* ——— :— Royal Institution of Great Britain.
* ——— :— Royal Microscopical Society.
* ——— :— Royal Society.
* ——— :— Statistical Society.
* ——— :— Zoological Society.
* Lyons :— La Société d' Agriculture, d' Histoire Naturelle et des Arts Utiles.
§ ——— :— La Société d' Agriculture Sciences et Industrie de Lyon.
† ——— :— Muséum d' Histoire Naturelle.
† ——— :— La Société d' Anthropologie.
* Madison, Wiss :— Wisconsin Academy of Sciences, Arts and Letters.
† Madras :— Literary Society.
* ——— :— Government Central Museum.
§ ——— :— Editor, *Indian Journal of Education.*
§ Melbourne :— Royal Society of Victoria.
§ Meriden :— Meriden Scientific Association.
* Manchester :— Literary and Philosophical Society.
† Mexico :— Sociedad Cientifica "Antonio Alzate."
* Moscow :— Société Imperiale des Naturalistes.
* Munich :— K. Bayerische Akademie der Wissenschaften.
* Nantes :— Société des Sciences Naturelles de L' ouest de la France.
† Naples :— Società Africana d' Italia.
* New Haven :— Connecticut Academy of Arts and Sciences.
§ ——— :— Yale University.
† Newport (R. I.) :— Natural History Society.
* New York :— American Museum of Natural History.
§ ——— :— Editor, *Nation.*
* Ottawa :— Geological and Natural History Survey of the Dominion of Canada.
† Oxford :— Bodleian Library.
† ——— :— Indian Institute.
* Paris :— Société de Géographie.
* ——— :— Société d' Anthropologie.
* ——— :— Société Asiatique.
§ ——— :— Société Philomathique.
* ——— :— Musée Guimet.
† ——— :— National Library.
* ——— :— Société Zoologique.
† ——— :— Société Académique Indo-Chinoise.
* ——— :— Museum d' Histoire Naturelle.

* Pennsylvania :—University of Pennsylvania.
* Philadelphia :—Academy of Natural Sciences.
§ ———:—American Philosophical Society.
† ———:—Editor, *Journal of Comparative Medicine and Surgery.*
* Pisa :—Società Toscana di Scienze Naturali.
§ Prague :— K. K. Sternwarte.
§ Rio de Janeiro :—Museu National do Rio de Janeiro.
§ Rome :—Editor, *Zoologicae Res.*
§ ———:—Société degli Spettroscopisti Italiani.
§ Roorkee :—Editor, *Indian Forester.*
§ St. Louis :—Academy of Sciences.
* St. Petersburgh :—Comité Géologique.
† ———:—Imperial Library.
* ———:—Russian Geographical Society.
* ———:—Académie Impériale des Sciences.
* ———:—Jardin Impériale de Botanique.
§ ———:—Société Impériale de Mineralogique.
§ Salem :—Essex Institute.
* San Francisco :—Californian Academy of Arts and Sciences.
§ Santiago :—Deutscher Wissenchaftlicher Verein.
§ Schaffhausen :—Swiss Entomological Society.
† Shanghai :—China Branch, Royal Asiatic Society.
† Simla :—United Service Institution of India.
† Stettin :—Entomological Society.
* Stockholm :—Entomologische Tidskrift.
* ———:—Royal Swedish Academy of Sciences.
* Stuttgart :—Der Verein für vaterländische Naturkunde in Württemberg.
† Sydney :—Royal Society of New South Wales.
† ———:—Linnean Society of New South Wales.
§ Taiping :—Government of Perak.
† Toronto :—Canadian Institute.
* Tokyo :—Imperial University of Japan.
† Trieste :—Società Adriatica di Scienze Naturale.
* ———:—Museo Civico di Storia Naturale.
* Tring :—Zoological Museum.
* Turin :—Reale Accademia delle Scienze.
† Ulwar :—Ulwar Library.
* Vienna :—Anthropologische Gesellschaft.
* ——— :—K. K. Akademie der Wissenschaften.
* ——— :—K. K. Geologische Reichsanstalt.
* ——— :—K. K. Naturhistorisches Hofmuseum.

* Vienna :—Zoologisch-botanische Gesellschaft.
† ——— :—Ornithologischer Verein.
§ Washington :—American Historical Association.
† ———:—Commissioners of the Department of Agriculture.
* ———:—Smithsonian Institution.
* ———:—United States Geological Survey.
§ ———:—United States National Museum.
* Wellington :—New Zealand Institute.
* ———:—Polynesian Society.
* Yokohama :—Asiatic Society.
* ———:—Deutsche Gesellschaft für Natur-und Völkerkunde Ostasiens.
† Zagreb :—Archæological Society.
* Zurich :—Naturforschende Gesellschaft.

Abstract of Proceedings of Council during 1895.

February 1st, Ordinary Meeting.

An order was made thanking Dr. G. A. Grierson for his report as the Delegate of the Asiatic Society of Bengal at the 10th International Congress of Orientalists held at Geneva in the year 1894.

On the recommendation of Bābū Gaurdās Baiçāk and Bābū Çarat Candra Dās, two Tibetan Manuscripts were returned to the donor, Mahanta Omrao Giri Gossein.

At the request of Monsieur de la Vallée Poussin, a copy of the 9th Chapter of the Commentary of the Sanskrit Manuscript "Bodhicaryāvatāra" was ordered to be sent from the Society's Library.

The General Secretary was authorized to vote on behalf of the Society for Ward No. 16.

On the recommendation of the Council, a new edition of Burton's Arabian Nights edited by Leonard C. Smithers was ordered to be purchased for the Society's Library.

The Budget of the expenses of the Bibliotheca Indica drawn up by the Philological Committee for the year 1895 was approved.

Messrs. Meugens, King and Simson were appointed to audit the Accounts for 1894.

Dr. Grierson having returned from leave and relieved Dr. A. F. R. Hoernle of the Philological Secretaryship of the Society, the change was recorded and ordered to be reported at the next General Meeting.

February 28th, Ordinary Meeting.

On the recommendation of the Natural History Secretary a copy of Geyer's Supplement to J. Hübner's Sammlung Exotischer Schmetterlinge was subscribed for.

At the request of the Manager, Moslem Chronicle and the Mahommedan Observer, it was decided that the Arabic and Persian series of the Bibliotheca Indica should be advertised in that paper once a month for 6 months at Rs. 6 per month.

Permission was given to Mr. E. A. Gait to reprint and sell his article on the "Koch Kings of Kāmrūp" from the Society's *Journal* for 1893.

On the recommendation of the Philological Secretary, several books were ordered to be purchased for the Society's Library.

On the recommendation of the Natural History Secretary, it was agreed to purchase a copy of Oliver's translation of Botany by Kerner for the Society's Library.

March 28th, Ordinary Meeting.

On the recommendation of the Natural History Secretary, it was agreed to purchase a copy of Vol. II. of Letheérry's and Severin's Catalogue Général des Hémiptéres for the Society's Library.

At the request of the Secretary of the Nāgarī Pracāriṇī Sabhā, Benares, *Journal*, Part I. and *Proceedings*, were offered to the Sabhā in exchange for its publications.

A copy of Lassen's Indische Altertumskunde, in four volumes and supplements, vols. I. and II, 2nd edition, was purchased for the Society's Library.

A letter was recorded from the Government of India sanctioning the continuation of the Annual Grant of Rs. 3,200 in aid of the operations in search of Sanskrit Manuscripts in Bengal up to the end of the financial year 1899–1900.

On an application from Bābū Manmatha Nātha Datta, a copy of his translation of the "Rāmāyaṇa" was purchased, and the publications of the "Wealth of India" series, were subscribed for.

Paṇḍit Madhu Sūdan Smṛtiratna was allowed to edit the "Kālavivēka" and the "Smṛti Candrikā" for the Bibliotheca Indica from the manuscripts in his possession.

On the recommendation of the General Secretary, several books were purchased for the Society's Library.

On the recommendation of the Council, it was ordered that General Strachey, Lord Rayleigh, Mr. C. H. Tawney and Professor Dr. G. Bühler, should be proposed at the next General Meeting for Honorary Membership.

April 25th, Ordinary Meeting.

On the recommendation of the Philological Secretary, a copy of Guidi's Tables Alphabétiques du Kitâb-al-agânî, 1st Fasc., was ordered to be purchased for the Society's Library.

At the suggestion of Dr. Grierson, Mr. Gait's notes on the subject of Historical Research in Assam were ordered to be published in the *Proceedings*.

Mr. Frank Finn was elected a member of the Council and Anthropological Secretary in the place of the Hon. Mr. H. H. Risley and Dr. A. W. Alcock to officiate as General Secretary in the place of Mr. C. R. Wilson.

May 30th, Ordinary Meeting.

The purchase of the 2nd part of the Persian manuscript of "Irshādu-z-zarā'at," price Rs. 15 was approved.

Mr. E. Teza was supplied with a copy of the Society's *Journal*, Part I, No. 2 of 1888, containing Bābū Çarat Candra Dās' article on Tibetan characters.

The purchase of a copy of the Persian manuscript of "Jāmiu-l-Qawāmī," was sanctioned.

The publication of the index to the Riyāzu-s-Salāṭīn was sanctioned.

Mr. Finn was ordered to officiate as Natural History Secretary and Dr. George Ranking, as General Secretary.

On the recommendation of the Philological Secretary, an additional grant of Rs. 300, making a total of Rs. 1,500, for the publication of the "Sher Phyin" was sanctioned.

A copy of the "Katalog der Armenischen Manuscripte der Klosterbibliothek der Mechitharisten-Congregation in Wien" was ordered to be purchased for the Society's Library.

June 27th, Ordinary Meeting.

Permission was granted to Professor F. Schwally of Strassburg to retain the manuscript of "Kitabu-l-Mahasui-wal-Masani Mahazirat" till the coming autumn.

On the recommendation of the Philological Secretary, the purchase of a copy of Mahēndranāth Chatterjee's English translation of the Çrīmad-bhāgavata, Book I, was sanctioned.

The offer of Mr. A. F. Goumêche to prepare the index to Major Raverty's translation of the Tabaqāt-i-Nāṣirī, at Re. 1 per printed page, was accepted.

The purchase of the manuscripts of "Tafsīr-i-Gharīb" "Sharḥu-s-Sirājiyyah" and "Zakhīra-i-Iskandarāni," price Rs. 40, was approved.

At the request of Mr. L. de Nicéville, a copy of Wallace's "Darwinism" was ordered to be purchased for the Society's Library.

The purchase of a copy of Elia's English translation of the "Tārīkh-i-Rashīdi," price 30 shillings was approved.

Mr. Wilson having returned and resumed charge of General Secretaryship from Dr. Ranking, the change was ordered to be reported at the next Monthly General Meeting.

On the recommendation of the Philological Secretary, the purchase of a copy of Waddell's "Tibetan Buddhism," was sanctioned.

August 1st, Ordinary Meeting.

Permission was granted to Mr. H. Beveridge to borrow the manuscript of "Jawāmi-i-Aḥkāmu-n-Nujūm" and a lithograph book entitled "Ḥadāiqu-n-Nujūm" from the Society's Oriental Library.

The Librarian was ordered to subscribe for two copies of the *Journal* and *Text* of the Buddhist Text Society of India.

An order was given to purchase two copies of a new edition of the Atharvavēda Saṁhitā with the commentary of Sāyanācārya edited by the late Rai Bāhādur Çaṇkar Pāṇḍurang Paṇḍit, vols. I–IV.

In reply to a letter from the Officiating Secretary to the Government of India in the Home Department covering a proposal by Dr. Grierson of a scheme for preliminary Language Survey of India and asking if the Asiatic Society would give Government their advice as to how the proposal could be carried into effect so far as Northern and Central India were concerned and also whether the Society would be willing to take charge of the necessary operations provided that it were assured of assistance from Government Officials and an annual grant, the Government of India was informed that in the opinion of the Society, the proposed Survey would be a work of the utmost utility, that it was essential that the work should be entrusted to experts and that one or more selected officers should be placed on special duty for that purpose by the Government of India, that in the opinion of the Society, Dr. Grierson was the fittest person to be placed in charge of the operations provided that all District and Political Officers were requested to give all necessary information and assistance, and that if the scheme was carried out on these lines, the Society would be very glad, in order to secure continuity in the event of change of officers, to undertake the general control and supervision of the work, and with this object, the Society would place their library at the disposal of the selected officer.

August 29th, Ordinary Meeting.

Mr. J. H. Elliott was confirmed in the appointment of Assistant Secretary to the Society from the first of January 1895.

Bābū Nani Lāl Mānna, the copyist, was allowed to draw the full pay of his post.

September 19th, Ordinary Meeting.

Permission was granted to Dr. L. A. Waddell to borrow Mdo, Vol. II, Fol. 426, a Tibetan manuscript from the Society's Library.

It was agreed that the Philological Secretary should ask Mahāmahōpadhyāya Mahēça Candra Nyāyaratna to get a copy made of the "Prāyascitta Khaṇḍa of Hemādri" from a good manuscript in Benares for Rs. 60, the copying being supervised by the Mahāmahōpādhyāya.

October 31st, Ordinary Meeting.

Paṇḍit Harimohan Vidyābhūṣhaṇa, the Paṇḍit of the Society, was granted leave for six months, without pay, from 1st November, 1895.

A letter having been received from the Under-Secretary to the Government of Bengal in the General Department covering copy of a communication addressed to the Government of India in the Revenue and Agricultural Department, with enclosures, reporting on the measures taken by the Lieutenant-Governor to procure for the Indian Museum, facsimili reproductions of the Açōka Inscriptions in India, it was ordered that the Government of Bengal should be thanked for its action and that selections from the report should be published in the *Proceedings*.

November 28th, Ordinary Meeting.

A copy of Clarke's translation of Sikandar-nāma-i Barā, price Rs. 19, was ordered to be purchased for the Society's Library.

Paṇḍit Annadāprasād Sarasvatī, the officiating Paṇḍit of the Society was allowed leave for one month, without pay, from 1st November 1895, and his services placed at the disposal of the Government of Bengal, P. W. D.

December 19th, Ordinary Meeting.

Messrs. Thacker, Spink and Co. were allowed to purchase certain numbers of the Society's *Journal* at a reduction of 25 %.

In reply to a letter from Dr. C. Bomford stating that the Surgeon General, I. M. S., has agreed to offer to the Society the Barclay

Memorial Medal, together with Rs. 500 odd, belonging to the fund and inquiring what were the Society's proposals and intentions in the matter, he was informed that the Society would be willing to accept the medal, that the conditions under which it was to be awarded would be referred to a Committee consisting of Col. Waterhouse, Dr. Cunningham and Dr. Alcock and the rules would be forwarded in due course for the information of the donors.

The Report having been read, the President invited the Meeting to put any questions or to offer any remarks which any member might think necessary in connection therewith.

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

The President proposed that the hearty thanks of the Society be given to the Honorary Secretaries and Treasurer for the able manner in which they have carried on the work of the Asiatic Society for 1895.

The President then read the report of the Trustees of the "Elliott Prize for Scientific Research."

Report of the Elliott Prize for Scientific Research for 1895.

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

1. On the transformation of hypochlorites into chlorates by Yati Bhūṣaṇa Bhādurī, M.A., Prēmcānd Rāicānd Scholar.

2. On the wastage of gold in the course of preparing jewelry in Bengal, especially in "colouring," with explanations of interesting indigenous chemical processes, and researches into the subject of recovering the gold that is lost, by Jñāna Çaraṇa Cakravarttī, B.A.

The Trustees, after consulting experts as provided in the scheme, adjudge the prize for the year 1895, to Bābū Yati Bhūṣaṇa Bhādurī, M.A.

They also consider the Essay by Bābū Jñāna Çaraṇa Cakravarttī, B.A. to be worthy of commendation.

A. Croft. } *Trustees.*
Alex. Pedler. }

Calcutta, 18*th January*, 1896.

The President then delivered an address, which has been printed separately from the *Proceedings*.

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

President.

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

Vice-Presidents.

Sir A. W. Croft, M.A., K.C.I.E.
Col. J. Waterhouse, B.S.C.
Dr. A. F. R. Hoernle.

Secretaries and Treasurer.

Dr. G. A. Grierson, C.S., C.I.E.
Dr. A. W. Alcock, C.M.Z.S.
F. Finn, Esq., B.A.
C. R. Wilson, Esq., M.A.
Paṇḍit Haraprasād Çāstrī, M.A.
C. Little, Esq., M.A.

Other Members of Council.

Bābu Pratāpa Candra Ghoṣa, B.A.
Dr. D. D. Cunningham, F.R.S., C.I.E.
C. L. Griesbach, Esq., C.I.E., F.G.S.
Dr. G. Ranking, M.D.
T. H. Holland, Esq., A.R.C.S., F.G.S.
Dr. G. Watt, C.I.E.
The Hon. Mr. Justice Amir Ali, C.I.E.
Dr. P. K. Rāy.

The Meeting was then resolved into the Ordinary General Meeting.

Alexander Pedler, F. R. S., President, in the chair.

The minutes of the last meeting were read and confirmed.

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

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

W. C. Macpherson, Esq., I. C. S.
Surgeon-Lieutenant Charles E. Williams, I. M. S.

The Council reported that in consequence of the deaths of:—Major-General Sir H. C. Rawlinson, Professor T. H. Huxly, Professor Hermann L. E. Helmholtz, Dr. Rudolph von Roth, and Monsieur Louis

Pasteur, there were now four vacancies in the list of the Honorary Members. The Council therefore recommended the four following gentlemen for election as Honorary Members at the next meeting :—

Sir Joseph Lister, Bart., P. R. S., Surgeon Extraordinary to the Queen, Professor of Clinical Surgery in King's College, London, is the author of numerous papers on Surgical Pathology and Histology, but is celebrated, before all, as the great originator and exponent of the Antiseptic System of Surgery, a system that has not only revolutionized surgery and reformed Hospital Hygiene, but also has had a beneficial influence on every other branch of Medicine.

In the history of the antiseptic reformation, Sir Joseph Lister was the foremost to recognize, first, that septic changes in wounds are of the nature of fermentations, and are due to the advent and multiplication within wounds of organic germs ; and secondly, that these germs find their surest and most favourable abode in places where the wounded are improperly crowded together.

The "antiseptic treatment" initiated by Sir Joseph Lister was aimed more at the destruction of the germs in the neighbourhood of any given wound ; but with the spread and acceptance of Listerian principles the treatment became more and more directed towards removing the conditions under which the germs were found to exist, until to-day the antiseptic treatment is not so much a matter of special surgical technique as a matter of scrupulous sanitary cleanliness. But the wide reforms in the care of the sick which this strict sanitary observance has brought about are the direct and obvious outcome of the original antiseptic teaching of Sir Joseph Lister.

Professor Michael Foster, Secretary of the Royal Society, Professor of Physiology in the University of Cambridge, is the author of numerous papers on pure physiology as well as on histology, but is specially known by his Text Book of Physiology, and for his influential labours in the cause of scientific education at Cambridge University.

The Text Book of Physiology is, practically, original work—original in its treatment of the subject, and above all original in its wealth of philosophical suggestion. It is not too much to say of the earlier editions of that work that they have had a deep influence far beyond the limits of their special field of education, and that their introductory and few closing chapters, without departing from strictly physiological ground, exhibit physiology at its highest level as a branch of learning.

Professor F. Kielhorn Ph.D., C.I.E., now Professor of Sanskrit in the University of Göttingen in Germany, formerly Professor of Oriental Languages in the Deccan College in British India. He is equally distinguished by his intimate knowledge of Sanskrit Grammar and of

Indian Epigraphy and Palaeography. In the former department he has published in English, an excellent Sanskrit Grammar for students which has been translated into German by Dr. Solf. His edition of the Vyākaraṇa Mahābhāshya of Patañjali is a standard work on Sanskrit Grammar. He has contributed numerous valuable papers on Indian Epigraphical subjects to our own *Journal*, as well as the *Indian Antiquary*, the *Epigraphia Indica* and other learned periodicals. The British Government has acknowledged his eminence as an Oriental scholar by the bestowal on him of the honour of a C.I.E.

Professor Charles Rockwell Lanman, Professor of Sanskrit in the Harvard College, Cambridge, in the United States of America. He is—since the death of Professor W. D. Whitney of the Yale University—the most distinguished Sanskrit scholar in America. He is the author of a very excellent Sanskrit Reader with Vocabulary and Notes, and has published numerous valuable papers on a variety of points touching the grammar and religion of the Vedas as well as Indian subjects generally, which were contributed to the Journals of the American Oriental Society and other learned Societies, our own included. He is also one of the Secretaries of the first-named Society.

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

F. MacBlaine, Esq., I. C. S., Nowgong, proposed by Dr. G. A. Grierson, seconded by C. R. Wilson, Esq.

Maulvī Abdul Karim, B.A., Assistant Inspector of Schools for Muhammedan Education, Presidency Circle and Orissa Division, proposed by Maulvi Abdul Wali, seconded by Dr. A. F. R. Hoernle.

T. N. Das, Esq., B.A., (Oxon.) Bar.-at-Law, Assistant Professor, Hooghly College, proposed by S. C. Laharry, Esq., seconded by Dr. G. A. Grierson.

Satiç Candra Banerjie, Esq., M.A., LL.B., proposed by S. C. Laharry, Esq., seconded by Dr. G. A. Grierson.

C. H. Bompas, Esq., proposed by Dr. G. A. Grierson, seconded by C. R. Wilson, Esq.

H. N. De, Esq., proposed by S. C. Laharry, Esq., seconded by Dr. Grierson.

The following gentleman has expressed a wish to withdraw from the Society:—

W. Crooke, Esq., C.S.

The President laid on the table the Budget of expenses on the *Bibliotheca Indica* for 1896 drawn up by the Philological Committee and approved by the Council.

PROCEEDINGS OF A MEETING OF THE PHILOLOGICAL COMMITTEE OF THE ASIATIC SOCIETY OF BENGAL.

Held on Friday, December 20th, 1895.

PRESENT:

Mahāmahōpādhyāya Mahēça Candra Nyāyaratna, C.I.E.
G. A. Grierson, Esq., PH.D., C.I.E., *Hon. Phil. Secy.*
Dr. A. Rudolf Hoernle.
Dr. George Ranking.
Dr. Āçutōṣa Mukherjee.
Paṇḍit Haraprasād Çāstrī, *Hon. Jt. Phil. Secy.*

1. We recommend that, for the present, no action be taken on the report of the Tenth International Congress of Orientalists on the subject of transliteration, until we see what action has been taken by the Royal Asiatic Society of Great Britain and Ireland. We further recommend that that Society be asked what it intends to do in the matter.

2. We recommend that the following Budget for the "*Bibliotheca Indica*" for the year 1896 be approved:—

BUDGET ESTIMATE FOR 1896.

RECEIPTS.	RS.	AS.	P.
Balance in hand	10,000	0	0
Government grant for 1896	9,000	0	0
Total	19,000	0	0

DISBURSEMENTS.	RS.	AS.	P.
Tattva-cintāmaṇi	900	0	0
Svayambhū-purāṇa	700	0	0
Tul'sī-sat'saī	300	0	0
Bṛhad-dharma-purāṇa ...	600	0	0
Pag-Sam-Thi-Sin	500	0	0
Markaṇḍēya-purāṇa	600	0	0
Nyāya-vārtika	900	0	0
Kalpalatā	1,050	0	0
Caturvarga-cintāmaṇi ...	300	0	0
Taittirīya-saṁhitā	600	0	0
Çrauta-sūtra of Çāṁkhāyana	350	0	0
Ma'āṣiru-l-umarā	400	0	0
Aitarēya-brāhmaṇa	1,800	0	0
Translation of Muntakhabu-t-tawārīkh	3,000	0	0
Sher Phyin	600	0	0
Translation of Akbarnāma ...	600	0	0
Kālavivēka	600	0	0
Ñātadhamma-kathā-snṭta ...	300	0	0
Āpastamba-çrauta-sūtra ...	700	0	0
Padumāvati	900	0	0
Anubhāṣya	300	0	0
Parāçara-smṛti ... ... (the last fasciculus was left incomplete).	300	0	0
	16,300	0	0

	Rs.	As.	P.
Brought forward ...	19,000	0	0

Note—
No account has been taken of the sale-proceeds of books, as they cover the establishment, postage and other charges.

	Rs.	As.	P.
Brought forward ...	16,300	0	0
NEW WORKS RECOMMENDED.			
Translation of Riyāzu-s-salātīn	1,000	0	0
Aparārka	300	0	0
Bālambhaṭṭa	300	0	0
	1,600	0	0
Dr. Hoernle having agreed to continue the translation of the Suçruta, kept in abeyance, we recommend that one fasciculus of it be budgetted for this year	600	0	0
	18,500	0	0
We recommend that certain fasciculi, portions of long works, now out of print, be reprinted	500	0	0
	19,000	0	0

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

4. We recommend that the Smṛti-candrikā be removed from the list, as a good edition has been published at Madras in the Thāmal character. The publication of the Ātharvaṇa-Upaniṣads has been announced in Bombay, so that work, too, should be removed from the list.

5. The following work has been stopped for various reasons:—

Lalita-vistara (English Translation).

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

1. Ḥiraṇya-kēçi-sūtra (Çrauta).
2. Baudhāyana-sūtra (Çrauta).
3. Vipāka-sūtra (Jaina).
4. Sad-dharma-puṇḍarīka (Bauddha).
5. Tāwārīkh-i-Yamīnī.
6. Tāwārīkh-i-Wassāf.
7. Tāju-l-Ma'āṣir.
8. Naqa'idu-l-farazdaq wa Jarīr.
9. Karaṇa-grantha.
10. Bhaṭṭōtpala's Commentary on the Bṛhat-saṁhitā.
11. Yājñavalkya-gītā (English Translation).
12. English Translation of Caraka.
13. Translation of Sāṁkhyāpravacana bhāṣya.

The following papers were read :—

1. *Notes on the ancient topography of the Pīr Pantsāl Route.*—*By* Dr. M. A. Stein.

2. *Two unrecorded sculptures in the Ānanta Cave, Khandagiri, Orissa.*—*By* Alexander E. Caddy. Communicated by Dr. A. F. R. Hoernle. (With four Plates).

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

Library.

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

Transactions, Proceedings and Journals,

presented by the respective Societies and Editors.

Amsterdam. De Koninklijke Akademie van Wetenschappen,—Jaarboek, 1894.

———. ———. Verslagen en Mededeelingen, Afd. Letterk,—3de Reeks, Deel XI.

Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—Tijdschrift voor Indische Taal,-Land- en Volkenkunde, Deel XXXIX, Aflevering 1.

Berlin. Deutsche Entomologische Zeitschrift,—Berliner Entomologische Zeitschrift, Band XL, Heft 3 und 4.

Bombay. The Indian Antiquary,—Vol. XXIV, Parts 305 and 306.

Brussels. L'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique,—Annuaire, 1894-95.

———. ———. Bulletins,—3me série, Tome XXVI–XXIX.

———. ———. Mémoires,—Tome LI, et LII.

———. ———. Mémoires Couronnés,—Tome XLVII, L–LII.

———. ———. Mémoires Couronnés et Mémoires des Savants Etrangers,—Tome LIII.

Budapest. La Société Hongroise de Géographie,—Bulletin, Tome XXIII, Nos. 1–5.

Calcutta. Indian Engineering,—Vol. XIX, Nos. 2–6.

———. The Indian Lancet,—Vols. VI, Nos. 11; VII, 2 and 3.

———. Indian Meteorological Memoirs,—Vol. VIII, Part 1.

———. Mahabodhi Society,—Journal, Vol. IV, No. 10.

———. Photographic Society of India,—Journal, Vol. IX, Nos. 1 and 2.

Chicago, Ill. The American Antiquarian and Oriental Journal,—Vol. XVII, No. 6.

Copenhagen. La Société Royale des Antiquaires du Nord,—Mémoires, Nouvelle Série, 1894,

Dorpat. Die Naturforscher-Gesellschaft bei der Universität Jurjew (Dorpat), – Sitzungsberichte, Band XI, Heft 3.

Dresden. Die Gesellschaft Iris zu Dresden,—Deutsche Entomologische Zeitschrift, Band VIII, Heft 1 und 2.

Florence. La Società Italiana di Antropologia, Etnologia e Psicologia Comparata,—Archivio per L' Antropologia e la Etnologia, Tome XXV, Nos. 1 et 2.

The Hague. Koninklijk Instituut voor de Taal,-Land- en Volkenkunde van Nederlandsch-Indië,—Bijdragen tot de Taal,-Land- en Volkenkunde van Nederlandsch-Indië, 6e Volgr, Deel II, Aflevering 1.

———. De Nederlandsche Entomologische Vereeniging,—Tijdschrift voor Entomologie, Band XXXVII, Nos. 1–4.

Iasi. Organul Societăţiĭ Ştiinţifice şi Literare din Iasĭ,—Arhiva, Anul VI, No. 11, şi 12.

Leipzig. Die Königl. Sächsische Gesellschaft der Wissenschaften,—Abhandlungen, Phil.-hist. Cl., Band XVII, Nrn. 1; XXII, 2–5.

London. The Academy,—Nos. 1234–38.

———. The Athenæum,—Nos. 3557–61.

———. Institution of Civil Engineers,—Charter, Supplemental Charter, By-Laws and List of Members, 6th September, 1895.

———. ———. Minutes of Proceedings, Vols. CXXI and CXXII; and Subject-Index, Vols. LIX–CXVIII.

———. Institution of Mechanical Engineers,—Proceedings, Nos. 1 and 2, 1895.

———. Linnean Society,—Journal, Botany, Vol. XXX, Nos. 209 and 210.

———. ———. ———. Zoology,—Vol. XXV, Nos. 158–60.

———. ———. List of Members, 1894-95.

———. ———. Proceedings,—Session, 1893-94.

———. ———. Transactions, Botany,—2nd series, Vol. V, Parts 1 and 2.

———. ———. ———. Zoology,—2nd series, Vol. VI, Part 3.

———. The Messenger of Mathematics,—New series, Vol. XXV, No. 1.

———. Nature,—Vol. LIII, Nos. 1365–69.

———. Royal Asiatic Society of Great Britain and Ireland,—Journal, January, 1896.

London. Royal Astronomical Society,—Monthly Notices, Vol. LVI, No. 2.

———. Royal Geographical Society,—Geographical Journal, Vol. VII, No. 1.

———. Royal Microscopical Society,—Journal, Part 4, 1895.

———. Royal Society,—Proceedings, Vol. LVIII, Nos. 347–51.

———. Zoological Society of London,—Proceedings, Part 3, 1895.

———. ———. Transactions,—Vol. XIII, Part 2.

Madras. Indian Journal of Education,—January, 1896.

Mexico. La Sociedad Cientifica "Antonio Alzate,"—Memorias y Revista, Tome VIII, Nos. 1 et 2.

Mussoorie. The Indian Forester,—Vol. XXII, No. 1.

New Haven. Yale University,—Catalogue, 1895-96.

Ottawa. Royal Society of Canada,—Proceedings and Transactions, Vol. XII.

Paris. Journal Asiatique,—Tome V. Nos. 3; VI, 1.

———. Muséum d'Histoire Naturelle,—Bulletin, No. 7, 1895.

———. La Société de Géographie,—Comptes Rendus des Séances, Nos. 14–16, 1895

———. La Société Nationale des Sciences Naturelles et Mathématiques de Cherbourg,—Mémoires, Tome XXIX.

———. La Société Philomathique de Paris,—Bulletin, Tome VII, No. 3.

———. ———. Comptes Rendus Sommaire des Séances, Nos. 4–6, 1895.

Pisa. La Società Toscana di Scienze Naturali,—Atti, Memorie, Tome XIV.

———. ———. Atti (Processi Verbali), 5 Maggio,—7 Luglio 1895.

Rome. La Società degli Spettroscopisti Italiani,—Memorie, Tome XXIV, Nos. 11 et 12.

———. La Società di Studi Geografici e Coloniali in Firenze,—Bollettino, Tome II No. 10.

St. Petersburg. L'Académie Impériale des Sciences de St. Pétersbourg,—Bulletin, V^e^ Série, Tome III, No. 1.

Stockholm. Kongl. Svenska Vetnskaps-Akademiens,—Accessions-Katalog, IX, 1894.

———. ———. Handlingar, Band XXVI.

———. ———. Öfversigt, Band LI.

———. Société Entomologique à Stockholm,—Journal Entomologique, Tome XVI, Nos. 1–4.

Taiping. Perak Government,—Gazette, Vol. IX, No. 1.

Tokio. Die Kaiserlich-Japanische Universität,—Mittheilungen aus der Medicinischen Facultät, Band III Nr. 11.

Tring. Novitates Zoologicae.—Vol. II, No. 4.

Vienna. Die Anthropologische Gesellschaft in Wien,—Mittheilungen, Band XXV, Heft 4 und 5.

———. Die K. K. Zoologisch-botanische Gesellschaft in Wien,—Verhandlungen, Band XLV, Heft 10.

Yokohama. Asiatic Society of Japan,—Transactions, Vol. XXIII, Supplement.

Zürich. Die Naturforschende Gesellschaft in Zürich,—Neujahrsblatt, Nr. XCVIII.

———. ———. Vierteljahrsschrift,—Tome XL, Heft 3 und 4.

Books and Pamphlets,

presented by the Authors, Translators, &c.

Haeckel, Ernst. Die cambrische Stammgruppe der Echinodermen. 8vo. Jena, 1895.

Lyman, Benjamin Smith. Metallurgical and other features of Japanese swords. 8vo. Philadelphia, 1896.

———. The Yardley Fault; and the Chalfont Fault Rock, so called. 8vo. Philadelphia, 1895.

Pringle, Arthur T. The Diary and Consultation Book of the President Governor and Council at Fort St. George, 1685, First Series, Vol. IV. 8vo. Madras, 1895.

Miscellaneous Presentations.

Chijs, J. A. van der. Dagh-Register gehouden int Easteel Batavia vant passerende daer ter plaetse als over geheel Nederlandts-India, Anno, 1665–1697.

Batavia, Society of Arts and Sciences.

Norges gamle Love indtil 1387. Band V, Heft 2. 4to. Christiania, 1895.

Bibliothéque de l'Université Royale de Norvége á Christiania.

Report of the sixty-fifth meeting of the British Association for the Advancement of Science, held at Ipswich in September, 1895. 8vo. London, 1895.

British Association for the Advancement of Science.

Catalogue of the Library of the Ceylon Branch of the Royal Asiatic Society. 8vo. Colombo, 1895.

Ceylon Branch of the Royal Asiatic Society.

Report on the Administration of the Central Provinces for the year 1894-95. Fcp. Nagpur, 1895.

Chief Commissioner, Central Provinces.

Annual Report of the Department of Agriculture, Brisbane, for the year 1894-95. 8vo. Brisbane, 1895.

Department of Agriculture, Brisbane.

Magnetical and Meteorological Observations made at the Government Observatory, Bombay, 1894. Fcp. Bombay, 1895.

GOVERNMENT OBSERVATORY, BOMBAY.

Report on the Administration of Bengal, 1894-95. Fcp. Calcutta, 1895.

Report on the River-borne Traffic of the Lower Provinces of Bengal, and on the Inland Trade of Calcutta, and on the Trade of Chittagong Port for the year 1894-95. Fcp. Calcutta, 1895.

Resolution reviewing the reports on the working of the District Boards in Bengal during the year 1894-95. Fcp. Calcutta, 1895.

GOVERNMENT OF BENGAL.

North Indian Notes and Queries for December, 1895. 4to. Allahabad, 1895.

GOVERNMENT OF INDIA, HOME DEPARTMENT.

Report on the Administration of the Madras Presidency during the year 1894-95. Fcp. Madras, 1895.

GOVERNMENT OF MADRAS.

Gazetteer of the Rawalpindi District, revised edition, 1893-94. 8vo. Lahore, 1895.

GOVERNMENT OF THE PUNJAB.

Report of the eighteenth Annual Meeting of the Indian Association for the Cultivation of Science held on the 30th July, 1895. 8vo. Calcutta, 1895.

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE.

Catalogue of the Library of the Institution of Civil Engineers, London, A-G, H-Pa, Pe-End. 8vo. London, 1895.

INSTITUTION OF CIVIL ENGINEERS, LONDON.

Die Handschriften-Verzeichnisse der Königlichen Bibliothek zu Berlin, Band XIX. 4to. Berlin, 1895.

KÖNIGLICHE BIBLIOTHEK ZU BERLIN.

BEMMELEN, J. M. VAN. Over de Samenstelling, het Voorkomen, en de Vorming van Sideroze (Witte Klien) en van Vivianiet in de onderste darglaag der hoogveenen van zuidoost drenthe. 8vo. Amsterdam, 1895.

CAPPELLE, DR. H. VAN. Diluvialstudien im Südwesten van Friesland. 8vo. Amsterdam, 1895.

DOJES, P. H. Over de theorie der straling in verband met de voorstelling van Fourier. 8vo. Amsterdam, 1895.

HAMBURGER, DR. H. J. Ueber die Reglung der osmotischen Spannkraft von Flüssigkeiten in Bauch-und Pericardialhöhle. 8vo. Amsterdam, 1895.

HUBRECHT, A. A. W. Die Phylogenese des Amnions und die Bedeutung des Trophoblastes. 8vo. Amsterdam, 1895.

Kapteyn, W. Over de merkwaardige punten van den driehoek. 8vo. Amsterdam, 1895.

Kolk, Dr. J. L. C. Schroeder van der. Bijdrage tot de Karteering Onzer Zandgronden, (I). 8vo. Amsterdam, 1895.

Muller, J. J. A. De verplaatsing van eenige Triangulatie-Pilaren in de residentie Tapanoeli (Sumatra) tengevolge Van de Aardbeving van 17 Mei, 1892. 8vo. Amsterdam, 1895.

Muller, S. De Germaansche Volken bij Julius Honorius en Anderen. 8vo. Amsterdam, 1895.

Schoute, P. H. Regelmassige Schnitte und Projectionen des hundertzwanzigzelles und sechshundertzelles im Vierdimensionalen Raume. 8vo. Amsterdam, 1894.

Went, Dr. F. A. F. C., und Geerligs, H. C. Prinsen. Beobachtungen über die Hefearten und Zuckerbildenden Pilze der Arackfabrikation. 8vo. Amsterdam, 1895.

Wisselingh, C. van. Over de Vittae der Umbelliferen. 8vo. Amsterdam, 1894.

Der Koninklijke Akademie van Wetenschappen te Amsterdam.

Scientific Memoirs by Medical Officers of the Army of India, Part IX. 4to. Calcutta, 1895.

Sanitary Commissioner with the Government of India.

Haffkine, W. M. Anti-cholera Inoculation. 4to. Calcutta, 1895.

Messrs. Thacker, Spink & Co.

North American Fauna, No. 10. 8vo. Washington, 1895.

U. S. Department of Agriculture, Washington.

Periodicals Purchased.

Allahabad. North Indian Notes and Queries,—Vol. V, No. 10.

Calcutta. Indian Medical Gazette,—Vol. XXXI, No. 1.

Geneva. Archives des Sciences Physiques et Naturelles,—Tome XXXIV, No. 12.

Leipzig. Annalen der Physik und Chemie,—Band LVII, Heft 1.

———. ———. Beiblätter, Band XX, Stück 1.

London. Numismatic Circular,—Vol. IV, No. 38.

Books Purchased.

Oliver, F. W. The Natural History of Plants, their forms, growth, reproduction, and distribution. From the German of Anton Kerner von Marilaun. Vol. II. 4to. London, 1895.

Wallace, Alfred Russel. Darwinism; an exposition of the Theory of Natural Selection with some of its applications. 8vo. London. 1890.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

For March, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 4th March, 1896, at 9-15 P.M.

Alexander Pedler, Esq., F. R. S., President, in the chair.

The following members were present:—

Dr. A. W. Alcock, F. Finn, Esq., Dr. G. A. Grierson, J. Mann, Esq., J. D. Nimmo, Esq., Dr. P. C. Roy, Paṇḍit Satyavrata Sāmaçramī, R. E. S. Thomas, Esq., C. R. Wilson, Esq.

Visitor:—Hugh Grants, Esq.

The minutes of the last meeting were read and confirmed.

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

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

F. MacBlaine, Esq.
Maulvī Abdul Karim.
T. N. Dās, Esq.
Bābu Satīç Candra Banerjee.
C. H. Bompas, Esq.
H. N. De, Esq.

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

The Hon. Guruprasād Sen, Calcutta, proposed by P. N. Bose, Esq., seconded by R. C. Dutt, Esq.

Bābu Çyām Lāl Mallik, proposed by Bābu Gaurdās Baṣāk, seconded by C. R. Wilson, Esq.

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

J. J. D. LaTouche, Esq.
M. Finucane, Esq.
P. Nolan, Esq.
Lt.-Col. E. H. Molesworth.

THE SECRETARY reported the death of the following gentlemen :—

W. Swinhoe, Esq.,
Bābu Balāi Cānd Siṁha.

THE SECRETARY read the names of the following gentlemen who had been appointed to serve in the various Committees for the present year.

Finance and Visiting Committee.

Sir A. W. Croft.
Bābu Pratāpa Candra Ghoṣa.
C. L. Griesbach, Esq.
Dr. A. F. R. Hoernle.
Col. J. Waterhouse.

Library Committee.

Bābu Gaurdās Baṣāk.
Dr. D. D. Cunningham.
Bābu Pratāpa Candra Ghoṣa.
His Grace Archbishop Dr. P. Goethals.
Dr. A. F. R. Hoernle.
T. H. Holland, Esq.
The Rev. H. B. Hyde.
Prince Sir Jahan Qudr Muḥammad Wahid Ali Khān Bāhādur.
J. Mann, Esq.
Dr. Āçutoṣa Mukherjee.
L. de Nicéville, Esq.
Paṇḍit Nīlmaṇi Mukherjee, Nyāyālaṅkāra.
Mahāmahapādhyāya Maheça Candra Nyāyaratna.
Dr. G. Ranking,
Dr. Mahendralāl Sarkār.
Major R. C. Temple.
Col. J. Waterhouse.
Dr. G. Watt.

Philological Committee.

Maulvī Abdus Salam.
Maulvī Ahmad.
Sir Sayid Ahmad.
Bābu Gaurdās Baṣāk.
Bābu Çarat Candra Dās.
Dr. A. Führer.
Bābu Pratāpa Candra Ghoṣa.
Dr. A. F. R. Hoernle.
J. Mann, Esq.
Dr. Āçutoṣa Mukherjee.

Paṇḍit Nīlmaṇi Mukherjee, Nyāyālaṅkāra.
Mahāmahapādhyāya Maheça Candra Nyāyaratna.
F. E. Pargiter, Esq.
Captain D. C. Phillott.
Dr. G. Ranking.
Paṇḍit Satyavrata Sāmaçramī.
Rāya Rājkumār Sarvādhikāri, Bāhādur.
Dr. Mahendralāl Sarkār.
Mahāmahapādhyāya Candra Kānta Tarkālaṅkāra.
Major R. C. Temple.
Dr. G. Thibaut.
A. Venis, Esq.

Coins Committee.

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

History and Archæological Committee.

The Hon. Mr. Justice Amir Ali.
Bābu Gaurdās Baṣāk.
Dr. A. Führer.
Bābu Pratāpa Candra Ghoṣa.
His Grace Archbishop Dr. P. Goethals.
The Rev. H. B. Hyde.
Paṇḍit Mohanlāl Viṣṇulāl Pāṇḍia.
Major R. C. Temple.

Natural History Committee.

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

Physical Science Committee.

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

Anthropological Committee.

M. L. Dames, Esq.
Bābu Çarat Candra Dās.
E. A. Gait, Esq.
R. Greeven, Esq.
J. Mann, Esq.
S. E. Peal, Esq.
The Hon. Mr. H. H. Risley.
Rāya Rājkumār Sarbādhikārī Bāhādur.
Major R. C. Temple,
E. Thurston, Esq.
Dr. G. Watt.

The President announced that the Council had resolved to form a Committee consisting of the President, Dr. D. D. Cunningham, Dr. A. W. Alcock, Mr. T. H. Holland and Dr. Mahendralāl Sarkār, with power to add to their number, to invite subscriptions and take such steps as they considered necessary to further the purpose of the Huxley Memorial.

The following papers were read :—

1. *On Irregular Causal Verbs in the Indo-Aryan Vernaculars.*—*By* G. A. Grierson, Esq., C.I.E., Ph.D.

(Abstract.)

In the formation of causal verbs, in the Vernaculars of Central and Western India, certain verbs insert *ḍ*, *r*, *l*, or *n* before or after the causal suffix. Examples are Gujarātī *bes-ā-ḍ*, 'cause to sit;' Sindhī, *sikhā-r* 'teach;' Hindī, *di-l-ā*, 'cause to give;' Kāçmīrī, *pak-an-āv*, 'cause to go.' The origin of these inserted letters has hitherto been considered obscure.

The author points out that recent comparative philology shows that in Sanskrit many verbal roots took nominal suffixes before adding the personal terminations. Examples are *krī-ṇā-ti*, 'he buys,' *su-nōti*,' 'he squeezes,' *mṛ-ṇa-ti*, 'he kills,' *kṛp-aṇya-ti*, 'he is a suppliant,' *lā-la-ya-ti* 'he causes to adhere.' Sometimes these suffixes give a causal force to the root, and sometimes, so far as meaning goes, they are merely pleonastic.

The author next shows that some modern Indo-Aryan roots have certainly taken similar pleonastic suffixes. As an example, he takes the Sanskrit *drava-ti* 'he runs,' and shows that in some languages, it takes *k*, in others *g*, in others *r*, in others *ḍ* or *ṛ*, and, in one, both *g* and *r*; so that we find the forms

(1) *druk*, *ḍōk*, *daug*,
(2) *dōr*, *ḍōṛ*, *daur*,
(3) *dugur*, all of which mean 'run.'

He finally explains the consonants inserted in modern causals, by stating that they have a similar origin.

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

2. *Contributions to the Theory of Warning Colours and Mimicry, No.* II. *Experiments with a Lizard* (calotes versicolor).—*By* Frank Finn, Esq., B.A., *Deputy Superintendent, Indian Museum.*

3. *A note on the nature of the substance formed during Indigo Fermentation from which Indigo-Blue is eventually formed and an Indigo-Brown.*—*By* Surgeon-Lieutenant-Colonel George Ranking, B.A., M.D.

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

4. *On the transformation of hypochlorites into chlorates.*—*By* Bābu Yati Bhūṣaṇ Bhāḍurī, M.A., Prēmcānd Rāycānd Scholar. *Communicated by the* President.

(Abstract.)

In the preliminary portion the various methods of estimating chlorates and hypochlorites have been carefully examined. Direct estimation of both in a mixture containing the same have been found possible by distillation in moderately dilute solution with pure phosphoric acid and then the residue with fuming hydrochloric acid. Hypochlorites can not be estimated in acid solutions (with KI and HCl) in presence of chlorates.

The action of chlorine on sodic hydrate is ascertained by passing the washed gas through a solution of the hydrate. Owing to considerable change of volume consequent on absorption, the amount of sodium is determined afterwards. The total chlorine is determined by reduction with zinc copper couple and the hypochlorite by Penot's, or distillation method. From numerous experiments it is found that the amount of chlorate which is formed in solution up to 7 per cent. of concentration and containing free alkali is insignificant. Above 10 per cent. solution, however, the secondary reaction—transformation—becomes more distinct and when the concentration exceeds 20 per cent., time becomes an important factor. Presence of free alkali retards the change.

To study the transformation, the solution of known strength is kept in stoppered bottles or sealed tubes and then exposed to rays of different degrees of refrangibility or kept in absolute darkness. After the required time the contents are analysed (the volume of oxygen also determined). The results of the analyses prove that a solution of sodium hypochlorite slowly decomposes even when kept in absolute darkness. The rate of decomposition increases as the refrangibility of the rays increases. Yellow rays are far more active than the red. The change is one into chlorate and free oxygen. If there be little or no free alkali, chlorine is simultaneously liberated.

When the change takes place at about 100° C. strong sealed glass

tubes are used. Comparing the percentage decomposition of a number of solutions in which the *relative quantities* of free alkali, chloride, chlorate and hypochlorite are the *same*, the following peculiarities are observed. The decomposition diminishes with dilution up to a certain point when it is minimum. Further diminution in concentration instead of diminishing increases decomposition. This peculiar deportment is observed not only with similar solutions heated to different periods of time, but in all solutions which are examined, the ratio of hypochlorite to free alkali being approximately as 2 : 5, 2 : 2 and 2 : 1. When the percentage decompositions are represented by curves whose ordinates express percentage decompositions and abscissa concentrations, greatest depressions (minimum decompositions) lie very nearly in the same vertical line. The exact strength of the solution which decomposes least is not yet known with great accuracy, but it appears to lie between 1·5 to 1·7 per cent. of concentration. The influence of other constituents may be neglected as all the solutions containing widely different quantities of chlorate, hypochlorite and free alkali lead to the same conclusion. In all cases oxygen and chlorate are simultaneously produced. At the end of the first hour the amount of oxygen that is liberated varies from $\frac{1}{4}$ to $\frac{1}{2}$ of the oxygen fixed in the chlorate. As the duration of heating is prolonged the quantity of free oxygen is increased, but in no case is this quantity greater than the oxygen of the chlorate although the strength of the solution is seen to vary from 3 to 8·9 per cent. and duration of heating from one to six hours and a half. As the strength of the solution diminishes the liberation of free oxygen increases. For the same weight of chlorate formed, the quantity of oxygen diminishes with the rapidity with which the solutions are heated.

Library.

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

Transactions, Proceedings and Journals,

presented by the respective Societies and Editors.

Calcutta. Buddhist Text Society of India,—Journal, Vol. III, Part 2.
———. Geological Survey of India,—Memoirs, Vol. XXVII, Part 1.
———. ———. Records, Vol. XXIX, Part 1.
———. Indian Engineering,—Vol. XIX, Nos. 7–9.
———. The Indian Lancet,—Vol. VII, Nos. 4. and 5.

Calcutta. Indian Meteorological Memoirs,—Vols. VI, Parts 2; VII, 5; IX, 1.

Ithaca. Cornell University,—Library Bulletin, Vol. III, No. 10.

———. ———. Register, 1895-96.

Leipzig. Die Deutschen Morgenländischen Gesellschaft,—Zeitschrift, Band XLIX, Heft 4.

Liège. La Société Géologique de Belgique,—Annales, Tome XX, No. 4.

London. The Academy,—Nos. 1239-41.

———. The Athenæum,—Nos. 3562-64.

———. Geological Society,—Geological Literature, 31st December, 1895.

———. ———. Quarterly Journal,—Vol. LII, Part 1.

———. Institution of Electrical Engineers,—Journal, Vol. XXIV, No. 119.

———. Nature,—Vol. LIII, Nos. 1370 and 1371.

———. Royal Astronomical Society,—Memoirs, Vol. LI.

———. ———. Monthly Notices,—Vol. LVI, No. 3.

———. Royal Geographical Society,—Geographical Journal, Vol. VII, No. 2.

———. Royal Microscopical Society,—Journal, Part 6, 1895.

———. Royal Society,—Proceedings, Vol. LVIII, No. 352.

Madras. The Indian Journal of Education,—February, 1896.

Mussoorie. The Indian Forester,—Vol. XXII, No. 2.

Paris. Journal Asiatique,—IV^{e} Série, Tome VI, No. 2.

———. La Société Philomathique de Paris,—Compte-Rendu Sommaire de Séance, No. 7, 1896.

Rome. La Societè Degli Spettroscopisti Italiani,—Memoire, Indice, Tome XXIV.

St. Petersburg. Comité Géologique,—Bulletins, Supplément au Tome XIV.

———. ———. Mémoires, Tome X, No. 4.

———. Russian Imperial Geographical Society,—Proceedings, Vol. XXXI, No. 5.

Sydney. Linnean Society of New South Wales,—Proceedings, Vol. X, Part 3; and Supplement to Vol. X.

Taiping. Perak Government,—Gazette, Vol. IX, Nos. 2-4.

Tōkyō. Imperial University of Japan,—Journal of the College of Science, Vols. VIII, Parts 3; IX, 1.

Vienna. Die K. Akademie der Wissenschaften,—Almanack, 1894.

———. ———. Archiv für Österreichische Geschichte,—Band LXXXI, Heft 2.

———. ———. Denkschriften—Band LXI.

Vienna. Die K. Akademie der Wissenschaften,—Sitzungsberichte, Math.-Naturw. Cl, Abth. I, Band CIII, Heft 4–10; II a, CIII, 6–10; II b, CIII, 4–10; III, CIII, 5–10.

———. ———. ———. Phil.-hist. CL., Band CXXXI, und Register Band CXXI–CXXX.

Yokohama. Asiatic Society of Japan,—Transactions, Vol. XXIII.

Miscellaneous Presentations.

Report on the Nagpur Experimental Farm in the Central Provinces for the year 1894-95. Fcp. Nagpur, 1896.

Returns of the Rail-borne Traffic of the Central Provinces during the quarter ending the 30th September, 1895. Fcp. Nagpur, 1895.

Chief Commissioner, Central Provinces.

Anderson, J. D. A short vocabulary of the Aka language. 8vo. Shillong, 1896.

Government of Assam.

Blanford, W. T. The Fauna of British India, including Ceylon and Burma, Birds, Vol. III. 8vo. London, 1895.

Notes on the Administration of the Registration Department in Bengal for the year 1894-95. Fcp. Calcutta, 1895.

Returns of the Rail and River-borne Trade of Bengal during the quarter ending the 30th September, 1895. Fcp. Calcutta, 1896.

Government of Bengal.

The Indian Antiquary for November and December, 1895. 4to. Bombay, 1895.

North Indian Notes and Queries for January, 1896. 4to. Allahabad, 1896.

Government of India, Home Department.

The Agricultural Ledger, Agricultural Series, No 14; Entomological Series, No. 4; Implements and Machinery Series, No. 3. 8vo. Calcutta, 1895.

Epigraphia Indica, Vol. IV, Part 2. 4to. Calcutta, 1895.

Government of India, Revenue and Agricultural Department.

Bulletin of the Department of Land Records and Agriculture, N.-W. P. and Oudh, Veterinary Series, Nos. 2 and 3. 8vo. Allahabad, 1895.

Government of N.-W. P. and Oudh.

Report on the Administration of the Punjab and its Dependencies for 1894-95. Fcp. Lahore, 1896.

Government of the Punjab.

Monumenta Concilorum Generalium, Tome III, Pars 3. 4to. Vindobonae, 1895.

Die Kaiserliche Akademie der Wissenschaften, Wien.

Monthly Weather Review for August and September, 1895. 4to. Calcutta, 1895-96.

METEOROLOGICAL REPORTER TO THE GOVERNMENT OF INDIA.

Eighth Report of the Microscopical Society of Calcutta for the year 1895. 8vo. Calcutta, 1896.

MICROSCOPICAL SOCIETY OF CALCUTTA.

SCHMIDT, DR. CARL. Synchronistische Tabellen über die Naturwissenschaftliche Journalliteratur von. 1650–1893. 8vo. Dorpat, 1895.

DIE NATURFORSCHER-GESELLSCHAFT, DORPAT.

Bulletin of Miscellaneous Information of the Royal Gardens, Kew, 1895. 8vo. London, 1895.

ROYAL GARDENS, KEW.

PERIODICALS PURCHASED.

Calcutta. Indian Medical Gazette,—Vol. XXXI, No. 2.

Geneva. Archives des Sciences Physiques et Naturelles,—Quatrième Pèriode, Tome I, No. 1.

Leipzig. Annalen der Physik und Chemie,—Band LVII, Heft 2.

———. ———. Beiblätter, Band XIX, Stück 12.

London. The Messenger of Mathematics,—Vol. XXV, Nos. 2–5.

———. Numismatic Circular,—Vol. IV, No. 39.

Vienna. Vienna Oriental Journal,—Vol. IX, No. 4.

BOOKS PURCHASED.

CLARKE, H. WILBERFORCE. The Sikandar Nāma, e Barā or Book of Alexander the Great. Translation. 8vo. London, 1881.

DUTT, MANMATHA NATH. The Wealth of India Series, Vol. III, Parts I–VI. 8vo. Calcutta, 1895.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR APRIL, 1896.

Plates I.—IV. will be issued with a subsequent Number.

Fourteen presentations were announced, details of which are given in the Library List appended.

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

The Hon'ble Mr. Gurupraṣād Sen.

Bābu Çyām Lāl Mallik.

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

Bābu Aghōr Candra Bhāḍuṛi, L. M. S., Medical Practitioner, Calcutta, proposed by S. C. Laharry, Esq., seconded by Dr. G. A. Grierson.

Paṇḍit Mahēndranāth Vidyānidhi, Calcutta, proposed by Dr. Açutōṣ Mukerji, seconded by Bābu Mahēndranāth Rāya.

17005

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR APRIL, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 1st April, 1896, at 9 P. M.

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

The following members were present :—

Dr. A. W. Alcock, F. Finn, Esq., His Grace Dr. Paul Goethals, T. H. Holland, Esq., Bābu Pañcānana Mukherjee, Dr. D. Prain, Dr. G. Ranking, Paṇḍit Haraprasād Çāstrī, Bābu Nagēndra Nāth Vasu, C. R. Wilson, Esq.

The minutes of the last meeting were read and confirmed.

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Paṇḍit Mahēndranāth Vidyānidhi, Calcutta, proposed by Dr. Açutōṣ Mukerji, seconded by Bābu Mahēndranāth Rāya.

17005

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

Kumār Dinēndranārāyaṇ Rāya.
Bābu Çarat Candra Caṭṭerji.

The Secretary reported the death of the following Member :—
Dr. R. Rost (Honorary Member).

The Philological Secretary read the following obituary notice of the death of Dr. R. Rost, an Honorary Member of the Society.

Our Society has to mourn his loss of one of its most distinguished Honorary members who has recently died very suddenly—Dr. Reinhold Rost, who was till within a short time of his death occupied actively in work connected with Oriental language and literature. On the 7th February last, Dr. Rost was at Canterbury in the performance of duties connected with St. Augustine's College, where he lectured weekly, when death put an end to his labours, and completed a life spent in the service of the languages and literature of the East. Reinhold Rost was born seventy-four years ago in a small manufacturing town in the duchy of Saxe-Altenberg. He was the son of a Lutheran minister holding the Office of Archdeacon. He was educated at the University of Jena where he graduated as Ph. D. in 1847, and almost immediately after taking his degree proceeded to England, where he had been offered a small teaching appointment, at the institution above referred to, as Oriental lecturer.

In 1864 he became Secretary to the Royal Asiatic Society, and in 1869 was appointed librarian to the India Office in succession to Dr. Fitz Edward Hall, which post he held till 1893, when he was succeeded by the present librarian Mr. Tawney whose name is so honourably known to us all in this Society. "Dr. Rost will long be remembered" says the *Academy* in its obituary notice, "as the ideal librarian to the India Office. Though primarily a Sanskritist, he had to consider the claims of Arabic and Persian, of Pali, Burmese, and Sinhalese, of Tibetan and Malay, and of countless vernaculars. Of all these languages he had a competent knowledge, and he had further to give his attention to questions relating to archæology, ethnology, and Indian history. In brief Dr. Rost elected to turn himself into an oriental encyclopœdia which no one ever consulted in vain."

He was subsequently elected an Honorary Member of the Royal Asiatic Society a distinction reserved by that Society for thirty only of the leading orientalists of the world, and still more recently became Member of the Council.

The India Office Library practically owes its existence in its present form to Reinhold Rost, and even after his somewhat enforced retirement in 1893, he continued to do much useful work in an unofficial capacity for the institution in which the real interest of his life was centred. "Above all things" says the *Athenæum* "the India Office Library became under him, as the Asiatic Society was before, the natural and regular resort of all students of the East, old and young who might be visiting London; and they could not come away without feeling that they had profited by his profound knowledge, ready counsel, and genial sympathy."

Dr. Rost wrote little under his own name. His first publication was an Essay on the Hindū Sources of Burmese law (1850), and he also compiled a catalogue of the palm-leaf MSS. in the Imperial Library at St. Petersburg, 1852). He however was the hidden source of much that has issued from other men inspired by his learning and encouragement, he was also the editor of H. H. Wilson's selected works, of Brian Hodgson's Collected Papers, and of four volumes of Miscellanies relating to Indo-China.

In conjunction with M. Nicholas Trübner, whose valued friend he was, a series of "Simplified Grammars" was planned and edited by Dr. Rost

Public recognition of his vast attainments came in the form of honorary degrees from various universities, Edinburgh conferring upon him the LL.D., while Oxford made him an M.A. *Honoris Causâ*, a distinction attainable by very few. Prussia, Russia and Sweden gave him decorations and in 1888 he was appointed a Companion of the Most Eminent Order of the Indian Empire. He married in 1863, and leaves a son who is a sculptor of eminence. The bust of Mr. Tawney now standing in the vestibule of the Senate House of the Calcutta University is ample testimony for all here to the skill of Reinhold Rost's son who executed it; none who have seen it, and knew the original, can fail to be struck with the fidelity of the portrait in marble. Dr. Rost was elected to the Honorary Membership of this our Society in March 1894, and by his death we feel that our Society has lost one of the most distinguished of those men whom it has been its pride to enrol among its Members in acknowledgment of their life-devotion to the sacred cause of scientific advancement, and in testimony of the value placed by this Society upon the results of their life's work.

The Philological Secretary also read the following report, dated 29th November, 1895, submitted by Dr. G. A. Grierson to the Government of Bengal, General Department, on his investigation at Bōdh-Gayā.

Dated Howrah, the 29th November, 1895.

From—G. A. Grierson, Esq., Ph. D., c. i. e., Magistrate of Howrah,
To—The Secretary to the Government of Bengal, General Department.

With reference to your No. 408 T.G., dated the 31st October, 1895, I have the honour to report, that I left this for Bodh-Gayā on the 9th instant, and examined the masons' marks referred to.

2. I now beg to forward herewith a report of what I saw there. I regret that it is not more satisfactory.

3. I may add that I have consulted Dr. Hœrnle, and he has authorised me to state that he agrees with the conclusions arrived at by me.

REPORT.

Dr. Bühler, in his study on the Indian Brāhma alphabet (page 30), refers to a discovery of Sir A. Cunningham at Bōdh-Gayā in the following terms:—

"In the cloistered walk, which Aśoka erected over the supposed *Caṅkama* of Buddha, there is a double row of pillars, eleven on each side, which bear the following letters*—

"On the south side—*a*, *ā*, *i*, *ī*, *u*, *ū*, *e*, *ai*, *o*, *au*, *aḥ*.

"On the north side—*ṭa*, *ña*, *jha*, *ja*, *cha*, *ca*, *ṅa*, *gha*, *ga*, *kha*, *ka*.

"The characters, of which some specimens are given, *op. cit.* Plate X, No. 1, are of the same type as those of Aśoka's Edicts.† They are, no doubt, masons' marks, and intended for numbering the pillars according to the simplest and most natural system of notation by means of the letters. As the Indian masons are neither great scholars nor quite illiterate,‡ it may be assumed that the alphabet, which they used, is the popular one of the elementary schools of the day. As far as it goes, it closely agrees in its character with that still taught in the modern indigenous schools, and omits, like it, and like the alphabet of the Lalita vistara, the vowels *ṛ*, *ṝ*, *ḷ*, *ḹ*. If it omits also the eleventh vowel *aṃ*, giving *aḥ* in its place, that is no doubt due to a mistake of

* Cunningham, Mahâbodhi Gayâ, page 8; Plates V, No. 3, and X, No. 1.

† It will be shown below that the *ga* with the round top and the peculiar *cha*, which they contain, occur also in the Edicts.

‡ The Indian masons, the Sutradhāras or Vardhakins of the older literature and the Sileṭâs of our days, occupy an intermediate position between the Aryan and the Śūdra classes. They wore, and still wear, the sacred thread, and they once possessed, and still possess a small amount of Sanskrit learning. The rules of their craft, which they commit to memory, are written in Sanskrit, and are at present largely mixed with Prakrit and barbarous bastard forms.

the engraver: for no alphabet could be without this *mātṛkā*, least of all that of Aśoka's times, when Anusvāras were used very extensively.

"Sir A. Cunningham's discovery possesses, as he himself has pointed out, considerable importance for the history of Indian writing. The masons' alphabet, with its diphthongs *ai* and *au*, the Visarga in the group *aḥ* and the guttural *ṅa*, deals a heavy blow to the theory, according to which the writing of the third century B.C. and earlier times served merely the purposes of the Prakrit dialects. It is as plain as possible that this alphabet has been framed for the requirements of Sanskrit, and it is at least highly probable that its formation is due to the Brahmans, whose influence and peculiar theories are also recognizable, as will appear further on, in the manner of the derivation of the secondary signs from the original ones. In the third century B.C., it appears the state of things in the elementary schools was the same as in our days. The children learnt an alphabet which was not intended for their vernacular dialects, and this was no doubt due to the circumstance that already then (as later, when the legend regarding Buddha's Brahminical writing-master, Viśvāmitra, arose, and also in modern times) the elementary instruction was chiefly in the hands of the Brahmans, who did not think it worthwhile to alter, for the sake of their Prakrit-speaking pupils, the alphabet invented and suited for the peculiar *bhāṣā* of their schools and class."

As I knew Bōdh-Gayā pretty well, and had no memory of this important series of masons' marks, I visited that place, under instructions of the Bengal Government, in the middle of November, and examined the pillar, or rather pillar bases, referred to by Dr. Bühler, with some minuteness. Sir A. Cunningham's description* is as follows:—

"This cloistered walk, which still exists close to the north side of the Temple, is a simple brick wall, 53 feet long, 3 feet 6 inches broad, and a little more than 3 feet in height. On each side there is a row of 11 Persepolitan pillar bases, of the well-known pattern of a vase placed above three or four steps and surmounted by a parabolic moulding with an octagonal top for the reception of an octagonal shaft. Each of these bases was marked with a separate letter of the Aśoka alphabet, the 11 bases on the south side bearing the 11 vowels *a, ā, i, ī, u, ū, e, ai, o, au, aṁ*, and the northern bases the first 11 consonants *k, kh, g, gh, ṅg, ch, chh, j, jh, ñj, ṭ*. In Plate V [of *Mahābodhi*], I have given one of the Bharhut bas-reliefs, which I feel certain must be a representation of one of these covered walks. In the same plate I have given a view of the remains of Buddha's walk at Mahābodhi. The whole length of the walk is given with the northern row of pillar bases still *in situ*,

* *Mahābodhi*, page 8.

and the broken shaft placed on the end base. The walk itself was still visible in Hwen Thsang's time (A.D. 640); but the pillar bases were then covered by a plastered terrace. This arrangement of letters has an important bearing on the antiquity of the Indian alphabet, as it shows that the several characters had already been arranged in their present groups as gutturals, palatals, cerebrals, dentals, labials, semi-vowels and sibilants. The southern row of these bases was partly hidden under the basement of the Great Temple which had been built over them on a slightly different alignment, part of the two most westerly bases alone appearing 7 inches outside the wall, while all the easterly bases were completely covered.

"As these pillar bases showed that the walk had once been roofed over, I made diligent search for some remains of the pillars, and I was fortunate enough to light upon an octagonal shaft with a female figure on it, which had been brought to light by Mr. Beglar's excavations. On measuring the bottom of the shaft, I was delighted to find that it was of the same dimensions as the recessed tops of the bases. The westerly base of the southern row, which bore the Aśoka letter A, was therefore extracted and when the octagonal shaft was set upon it, it was found to fit so exactly that there could be no doubt that the two pieces belonged to the same pillar. This proved to be the case when, turning the shaft round for a better view, it was found to be marked with the same letter A as the base on which it was then standing. No fragments of other shafts have yet been found."

Sir A. Cunningham gives photographic fac-similes of the letters on Plate X, fig. 1, of his work, and on page 16 annotates this illustration in the following terms :—

"At the top of the plate, fig. 1, I have given fac-similes of the Aśoka letters found on the Persepolitan pillar bases of Buddha's walk. The first two are the vowel *a* on the base and its shaft; the third letter, *k*, was found on the first base of the northern line, opposite *a*. The remaining letters, *g*, *chh*, *j* and *t*, were found on the 3rd, 7th, 8th and 11th bases of the same line. The other letters were lost owing to the breaking of the edges or lips of the upper parts of the bases."

I now proceed to describe what I myself saw. As my account will differ from that of Sir A. Cunningham's in important particulars, casts of the entire row of pillar bases will be deposited in their original order in the Indian Museum, so as to enable scholars to judge for themselves.

In his "Mahâbodhi" (Plate V), Sir A. Cunningham gives what purports to be an accurate plan to scale of Buddha's *Caṅkama* as he saw it. As this plan is not correct for the *Caṅkama* as it now stands, I give in figure 1 a new plan drawn to scale by the overseer in charge of the Temple.

The row of pillar bases on the south side, mentioned by Cunningham, is no longer visible. In the process of repairing the Great Temple most of them have been left buried within the walls of its foundation. This may be presumed from Cunningham's description, and is borne out by the statement of Jagannāth Singh, the custodian of the Temple on behalf of the Mahanth, who was there when the repairs were going on.* In my plan the supposed original sites of these southern bases are indicated by dotted squares, and the line of the Temple wall is shown. According to General Cunningham, this southern line of bases was lettered as follows in the Brāhma (or so called Pāli) alphabet :—

Number of base	...	... 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1.
Letter	...	... *aḥ*, *au*, *ō*, *ai*, *ē*, *ū*, *u*, *ī*, *i*, *ā*, *a*.

He states, however, that the only letter which survived was that on No. 1, *viz.*, *a* (𑀅). This pillar-base was sent by General Cunningham to the Indian Museum, where it deposited in the Aśoka gallery, and is numbered in the catalogue AR. It bears the letter *a* (𑀅) clearly cut upon it, but lying on its side, thus (𑁅). There are deposited alongside of this pillar-base two step-like plinths of what were apparently similar bases (catalogue mark, ST). These are very possibly all that remained of the bases which General Cunningham said bore the letters *ā* and *i*. Regarding the letters on the remaining pillar-bases he says that they have all chipped off. It is impossible to check his statement, for the bases are no longer visible. Is is not improbable that Nos. 2 to 7 bore the letters attributed to them, but I cannot understand on what authority he makes out that No. 8 bore *ai*, that No. 10 bore *au*, and that No. 11 bore *aḥ*, or on what authority he omits the vowels *ṛ*, *ṝ*, *ḷ*, or *ḹ*. The last four have just as much right to appear as *aḥ*. The diphthong *ai*† is a very rare letter, and no instance of the existence of *au* is known to occur elsewhere.

The letter *aḥ* does not occur in the Pāli language. It only occurs in Sanskrit, so that if it existed on any one of these pillar-bases, it would prove that Sanskrit was a written language at the time when the masons made the mark. In order to locate it on the eleventh base, besides omitting the letters *ṛ*, *ṝ*, *ḷ*, *ḹ*, which do not occur in Pāli, General Cunningham has had to omit the very common Pāli letter *aṁ* (*anusvāra*).

* It is, however, stated by him that only the first (*a*) base was unearthed from the foundations, and that the remaining bases on that side were never seen by General Cunningham. As a matter of fact, General Cunningham sent the *a* base, and, possibly, the plinths of the two next ones, to the Indian Museum.

† The only instances of the occurrence of *ai* which I know of are in the word *thaira* which appears three times in the Girnār rock inscription. It usually appears in Pāli under the form *ē*.

It is beyond the bounds of probability that, in writing the vowels in alphabetical order, the masons should have omitted so common a letter, and have substituted in its place a letter hitherto not met with in the alphabet. In my opinion, if there was originally any letter on the eleventh southern base, it must have been *aṁ*, not *aḥ*. At any rate, Sir A. Cunningham never *saw* any letter on the eleventh base at all, and, owing to the disappearance of the base inside the wall of the great Temple, it is impossible to find out the grounds of his statement.

Regarding the alleged existence of *ai* on No. 8, and of *au* on No. 10, though there is no proof of their ever having been there, their existence is not impossible. The testimony of the Girnār rock Edict show that *ai*, though rarely used, did exist in Açōka's Pāli, and if *ai* existed, there is no reason for *au* not also existing, though no instances of its existing are known to occur. At any rate, whether they were there or not, their presence there does not prove that, at the time of their inscription, Sanskrit was a written language.

The northern row of pillar-bases is still in existence and is accessible for examination. Sir A. Cunningham does not say that he or Mr. Beglar found them in the sites that they now occupy. They may have been found lying about amid the débris of the ruins, and put up where they are now by Mr. Beglar. I enquired from old servants of the Mahanth, and from Jagannāth Siŋgh, already referred to, who informed me that they *were* found *in situ*. At the same time, I must point out that base No. 2 is not of the same design as the rest. The vase itself and the top are octagonal and not round, and the moulding between the top and the vase is smaller and of a different pattern. Possibly it was substituted after the original pillars were erected, during one of the many repairs which the Temple and its precincts have undergone.

According to Sir A. Cunningham, this row of bases was lettered as follows in the Brāhma alphabet:—

Number of base	...	11,	10,	9,	8,	7,	6,	5,	4,	3,	2, 1.
Letter ...	...	*ṭa*,	*ña*,	*jha*,	*ja*,	*cha*,	*ca*,	*ya*,	*gha*,	*ga*,	*kha*, *ka*.

Of these, according to Cunningham, only the letters on Nos. 1 (*ka*), 3 (*ga*), 7 (*cha*), 8 (*ja*) and 11 (*ṭa*) had, in his time, survived. The others had been chipped off. I find on inspection that there are now no letters on numbers 3 (*ga*), 8 (*ja*) and 11 (*ṭa*). If these existed in Cunningham's time on the bases mentioned by him, they have since been chipped off.

On the other hand, No. 5 distinctly bears a letter shaped thus , which does not belong to the Pāli alphabet, unless it is a

by-form of *ga*, which should have appeared on No. 3, and which Cunningham says he saw there under the form with rounded (not angular) corners at the top. According to Cunningham this base (No. 5) should have borne the Brāhma letter *ga*, which, though very rare, occurs under the form .

As this point is of some importance for the purposes of palæography, I give in figure 2 a reproduction of Cunningham's representation of the rubbings of the letters taken by him, and in figure 3 a photograph (actual sizes) of the rubbings taken by me.

The *ga* with the round top represented by General Cunningham, occurs, according to Dr. Bühler, once in the Delhi Siwālik column (Ed. VII), and in all inscriptions of the second century B.C. Its form (together with that of *cha*, to be noted later on) is of importance as proving the date of the masons' marks. But did it ever exist here? I cannot believe that so acute an observer as General Cunningham should not have noticed the perfectly plain mark on No. 5, and it appears to me to be most probable that the round topped *ga* which he gives is (whatever letter it represents) merely a faulty impression of the square topped letter on No. 5, and that, led by his reading it as *ga*, he has, by a slip of memory, located it on No. 3, where *ga* ought to have existed. I may add that No. 3 is now so badly damaged that I do not think it likely that any letter could have been visible on it so comparatively short a time ago as General Cunningham's last visit.

As to what this angular topped letter on No. 5 is, I do not like to give any decided opinion. It is certainly not *ya* ( ), as hitherto known, which should appear on that base (if it is arranged in alphabetical order). It might possibly represent *bha* ( ) with the right hand top appendage worn away, but this is the 23rd consonant of the Indian alphabet, and would be altogether out of place. It may also be a later development of a round topped *ga*, but I know no other similar case in the ancient Açōka alphabet, though it occurs in later alphabets, especially in the old Pāli alphabet of the Burmese. In this case the mark (if the bases are in alphabetical order) should be on the third, and not on the fifth base, and either the bases were not originally in alphabetical order, or their order was changed at some time subsequent to their erection. In the first alternative, the whole theory of the masons' marks representing an alphabetical order falls to the ground. In

the other case, if the position of this base has been altered, the position of other bases may have been altered too, and, as evidence of the order of the ancient Brāhma alphabet, the whole row of bases is valueless.

Unless, therefore, the letter on No. 5 can be shown to be some Brāhma form of *ya*, with which I am unacquainted, these masons' marks prove nothing. Dr. Bühler states that the letter *ya* occurred in Sanskrit and not in Pāli. If therefore, the mark does represent *ya*, it affords valuable evidence of the fact that the Sanskrit alphabet was written when the masons' marks were made.

The letter on No. 7, *cha*, has the form instead of the more usual . According to Dr. Bühler, it occurs once in the Kālsi Açōka inscription, and frequently in the inscriptions of Hāthigumphā, Nānāghāt, Mathurā, and the Western Caves.

To sum up this portion of the subject.

The following table shows (*a*) the marks on the pillars as Sir A. Cunningham saw them, (*b*) the marks which I have seen, and (*c*) the complete series of marks which should have been on them if Sir A. Cunningham's theory is correct:—

(*a*)	(*b*)	(*c*)
1	2	3
1 *ka* ...	*ka* ...	*ka*
2 — ...	— ...	*kha*
3 *ga* ...	— ...	*ga*
4 — ...	— ...	*gha*
5 — ...	?*ga* ?*ya* ...	*ya*
6 — ...	— ...	*ca*
7 *cha* ...	*cha* ...	*cha*
8 *ja* ...	— ...	*ja*
9 — ...	— ...	*jha*
10 — ...	— ...	*ña*
11 *ṭa* ...	— ...	*ṭa*

I have examined these pillar bases with the greatest care several times by both morning and evening light, and I cannot discover even the faintest trace of any of the letters seen by Sir A. Cunningham, and which I have marked in column (*b*) as not existing.

I now proceed to describe the condition of each pillar-base in the northern row. Each base, as mentioned by Sir A. Cunningham (Mahâ-

bodhi, page 8) represents a vase placed above a plinth composed of three steps, and surmounted by a parabolic moulding with an octagonal top for the reception of an octagonal column. It would be more correct to speak of the top as circular with an octagonal recess cut in the top surface to receive the column. The annexed figures show (figure 4) a plan of the circular top, drawn to a scale of one inch to a foot, and (figure 5) an elevation of the whole. The rim is marked with four radial lines on the top surface of the outer edge or lip. These are evidently marks for orienting the vase, as they point north, south, east and west respectively. They are shown on the plan (figure 4). The letter *ka* on No. 1 is cut on the outer edge of the rim, below, and about an inch and a half to the east of the northern line. In Nos. 5 and 7 the letters are also on the outer rim, but exactly under the northern line.

No. 1.—This is in good order, and the *ka* is cut clearly on the northern side of the rim Mr. Beglar has set up on it an octagonal pillar shaft, which evidently belonged to one of the series of vases. It is figured in Plate IV of Cunningham's Mahâbodhi, and described by the author in page 9 of that work. I give a sketch of it in figure 6.

Cunningham says that this pillar shaft was marked with the Pāli letter *a*, and that it was originally fixed in the base No. 1 of the south row (now in the Indian Museum). On examining the shaft, I do find a trace of that letter. At one place, just above a chipped place, there are two marks, thus . These are most probably the remains of the letter *a* (अ) lying on its side, as is the case in the letter on the corresponding pedestal (see page 2). Figure 7 is a photograph of the rubbing of this mark.

No. 2.—This is badly damaged. The west side is knocked off. Only portions of the eastern and of the southern rims remain. No masons' mark visible. As already pointed out, this pillar's base differs from the others in its general designs, being octagonal and not circular.

No. 3.—This is the one on which General Cunningham says he found the letter *ga*. The northern and the southern rims have been chipped off, and no masons' mark is now visible.

No. 4.—Badly damaged. Of the rim, only portions of east and west sides remain. No masons' mark.

No. 5.—Also badly damaged. The northern and eastern rims are, however, nearly complete. On the northern face of the rim, just under the northern orientation mark, is the lettter , which Cunningham perhaps read as *ga*, and said was on No. 3.

No. 6.—In fair condition, but the northern and eastern parts of the

rims are chipped off. As all masons' marks appear to have been on the northern rim, there is none visible.

No. 7.—The whole of the south side of this base knocked off. The north side is complete and the rim bears clearly the letter *cha*. The orientation of this base is not quite in line with that of the rest.

No. 8.—Badly damaged. The whole of the south side knocked off; also the northern and western rims. Cunningham says that this base bears the letter *ja*. There is no trace of this letter, nor, as the fractures are evidently very old, can I understand how it can have been on its usual place on the north side when he saw it.

Nos. 9 and 10 are mere fragments of the plinths on which the bases stood.

No. 11.—Cunningham says that this base bore the letter *ṭa*. There is now no trace of this letter. The base is badly damaged, the south-west side and nearly the entire rim having been knocked off. The top of the rim bearing the northern orientation mark still exists, and we should find the mason mark under this. Unfortunately the lower part of this rim, where the mark should occur, has been chipped away. The fracture looks comparatively recent.

To sum up. I think it may be assumed that all these pillar bases, both on the south and on the north side, had masons' marks. There were eleven bases on each side. Of those on the south side (of which eight are still buried in the Temple wall and one, or, perhaps, three in the Indian Museum) the first (western) base was marked with the letter *a* and is now exhibited in Calcutta. There is no evidence as to what letters the other bases bore, and Cunningham's statement that they bore the letters *ā*, *i*, *ī*, *u*, *ū*, *ē*, *ai*, *ō*, *au*, *aḥ*, cannot be supported.

On the north side the first (western) base has *ka*, and the seventh has *cha*; *cha* is the seventh consonant of the Sanskrit alphabet and the sixth of the Açōka alphabet. If, therefore, the pillars are in their original order, as Jagannāth Siṇgh states, this tends to prove that Sanskrit was a written language when the masons made the marks.

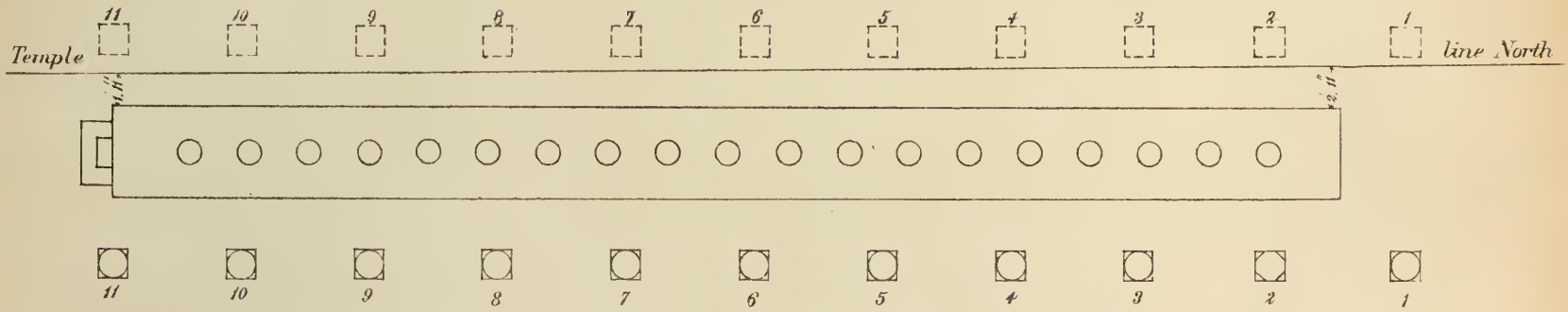
On the other hand, the letter which Cunningham appears to have read as *ga*, and which he says he saw in its right alphabetical place on the third base, is really on the fifth base, and, if it is *ga*, is not in correct alphabetical order. If therefore the reading is correct, the bases were either not originally set up in alphabetical order, or have since been interchanged. In either case their value as regards the history of the Indian alphabet is very small.

The letters *ja* and *ṭa* seen by Cunningham are no longer visible.

The importance of these bases rests on the correct reading of the

S

Fig. 1.



N

PLAN OF BUDDHA'S WALK

B B BANERJEE.
14-11-95. *Custodian.*

Scale 1 Inch = 8 Feet.

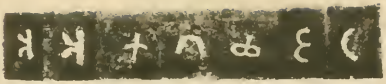
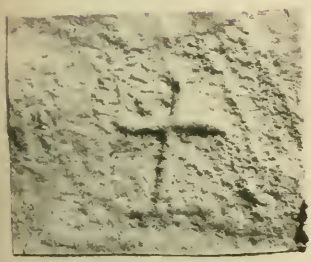
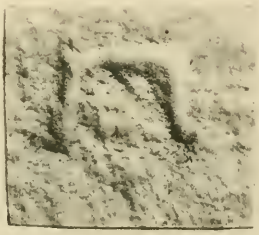


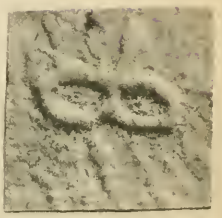
Fig. 2. GENERAL CUNNINGHAM'S RUBBINGS IN HIS MAHABODHI.



On № 1.



On № 5.



On № 7.

Fig. 3. RUBBINGS OF LETTERS NOW EXISTING ON THE PILLAR-BASES IN SITU.

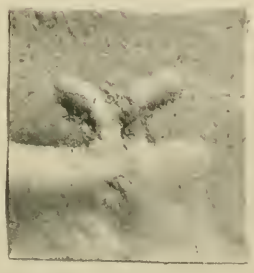


Fig. 7. RUBBING OF THE REMAINS OF THE LETTER A ON THE PILLAR-SHAFT.

Photo-etching.

Survey of India Offices, Calcutta, February 1896.

Fig. 4.

Plan.

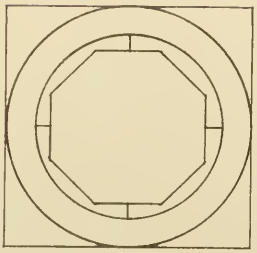
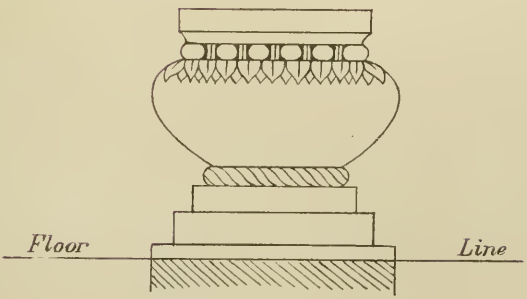


Fig. 5.

Elevation.



B. B. BANERJEE,
Custodian.

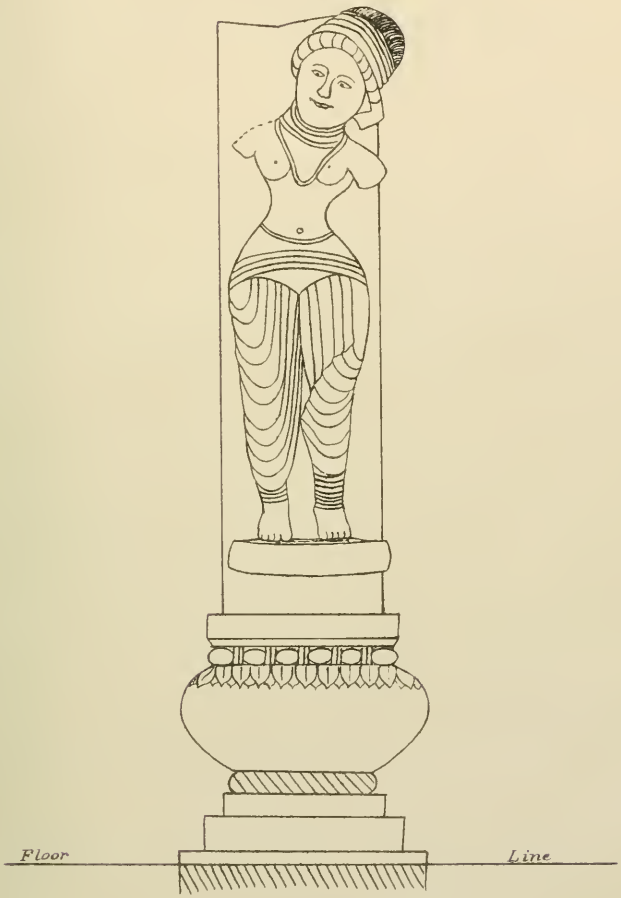
14-11-95.

N. W. PILLAR BASE OF BUDDHA'S WALK

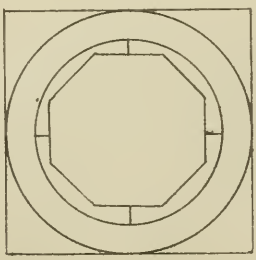
Scale 1 Inch=1 Foot.

Fig. 6.

Front Elevation.



Plan.



B. B. BANERJEE,
Custodian.

14-11-95

N. W. PILLAR OF BUDDHA'S WALK

mark on No. 5. If it is to be read as *ya*, they go to prove that Sanskrit was written in the second century B. C., when the masons' marks were made; or, at least, add a hitherto unknown letter to the Pāli alphabet.

For these reasons, casts of the complete set of the northern row of pillar bases are worth taking, and I am leaving instructions accordingly.

G. A. Grierson.

The 25th November, 1895.

P.S.—Since writing the above, the Mahanth and his people assure me that no one has ever seen the pillar bases on the south side, which are now built into the foundation wall of the Temple, except the first one, which Sir A. Cunningham says was marked *a*. They say, 'Cunningham Sāhib read his books and took measurements, and then dug into the wall of the Temple and found the *a* base. He never dug into the wall for the others, but as Cunningham Sāhib says they were there, they are there. Cunningham Sāhib could read books and knew everything, and when he said anything was in any place, he was always right.' This probably means that General Cunningham did not venture to dig into the walls for the last eight bases which his account shows were entirely within the foundations. He certainly removed No. 1, and probably the plinths of Nos. 2 and 3, which were partly visible and could be removed without injury to the main building (*see* quotation on page 54). These are the three exhibits now in the Açōka gallery of the Indian Museum.

G. A. G.

Since the above was printed, Dr. Bühler informs me that has no doubt that the sign on No. 5 is an old form of *ya*.

G. A. G.

Mr. Frank Finn, Deputy Superintendent of the Indian Museum, exhibited some rare Indian Ducks and read the following note:—

On the occurrence in India of two rare ducks, Fuligula baeri *and* Erismatura leucocephala.

By Frank Finn, B.A., F.Z.S., *Deputy Superintendent, Indian Museum.*

The ducks of which I have the honour to exhibit specimens to the Society to-night, belong to two species, one of which, as far as I can ascertain, has not hitherto been recorded as a visitor to our Empire.

I would first draw your attention to eight specimens of Baer's

Pochard,* *Fuligula baeri* Radde, which I obtained, with three others, in the Calcutta Provision Bazaar, on the 24th and three following days of last February. Three of these are males, and five females, and in addition there are two living males in the Zoological Gardens at Alipore, where the remaining female has apparently recently died.

This species is to be found in East Siberia (whence Radde described it) China, and Japan. The birds will be added to the Museum collection, where there is already a specimen apparently of this form, numbered 1789D. in Blyth's catalogue, but referred to the common and nearly allied species *F. nyroca*. This was procured in the Bazaar in 1842 or 3.

The single specimen of the second species exhibited belongs to that curious form the white-faced Stiff tail Duck (*Erismatura leucocephala* (Scop.) The present individual was sent to the Editor of the "*Asian*" newspaper by Captain H. R. Davies, who stated ("*Asian*," Feb. 14th, 1896) that it was shot by Captain E. D. White, 52nd Light Infantry, on the 22nd January last, at Bettia near Hardoi, between Lucknow and Bareilly. Captain White has kindly presented the specimen to the Indian Museum. It is in heavy moult, and quite incapable of flight, which considering the time of its occurrence is rather surprising, and almost looks as if the species might be somewhere resident within our limits. It is found usually in Southern and Eastern Europe, Northern Africa, and Western Asia, but is mentioned in the list of birds, in Mr. W. R. Lawrence's recently published work on the "Valley of Kashmir," p. 131, as having occurred in that country and once or twice in the Panjab.

The following papers were read :—

1. *On Jesuit Missions at the Court of the Emperor Akbar.—By* E. D. Maclagan, C.S.

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

2. *On the origin of the Nāgaras and the Nāgarī-Alphabet.—By* Nagēndranātha Vasu, *Editor, Viçvakōṣa.*

(Abstract.)

The Nāgarī specifies, a peculiar form of character. In printing Sanskrit works, this character has become the current one not only in

* Since this paper was read Count Salvadori's volume of the British Museum Catalogue (xxvii) containing the ducks, has come to hand, in which I see that *F. baeri* has been recorded from Bengal, though this author appears (p. 344) to doubt the fact; the occurrence of so many specimens quite disposes of this doubt. From the same work it appears (p. 445) that the other species is less rare in India than I had supposed, though its presence in moult is still noteworthy. F. F.

India, but all over the civilised world, wherever Sanskrit language has made its progress. Hence, considering its wide-spread circulation and use, it is worthwhile enquiring into the origin of the name, by which this form of character is recognised by the civilised world, besides the origin of the form itself. This I have tried to explain to some extent in my article entitled 'The origin of the Nāgaras and the Nāgarī-alphabet.'

The abstract of my article is as follows:—

As the Gaurjara language and the Gaurjara character originated from Gurjara, as Vaṇga-bhāṣā and Vaṇga-lipi derived their names from Vaṇga (Bengal), so the Nāgara language and the Nāgarī character derived their names from a particular place called Nagara. This Nagara was ancient Camat-kāra-pura (present Baḍa-nagar) mentioned in the Nāgara-khaṇḍa of the Skanda-purāṇa, and described as having become desolated by the havoc of the Nāgas (snakes). A Brāhmaṇa named Trijāta by propitiating Mahādēva, drove away, by his favour all the Nāgas from this place and rendered it Na-gara, (poisonless) after which it came to be known by the name of Nagara. There Trijāta established the Brāhmaṇas who came from distant countries; these Brāhmaṇas afterwards bore the common local title of Nāgara for their residing in the city called Nagara.

In the *Prākṛta-candrikā* by Çeṣa-kṛṣṇa, Nāgara is mentioned, with others, as a corrupt dialect then current.

During the prosperity of its Hindu kings, none of the other Brāhmaṇas of Gujarāt attained to such high reverence before kings, as these Nāgara-Brāhmaṇas. And the language they used was very probably Nāgara.

The most ancient inscription in the Nāgarī character has been discovered in Gujarāt. Though various sorts of different characters were then in vogue there, all the inscriptions, celebrating the greatness of these Nāgara-Brāhmaṇas, inscribed during the reigns of the Hindu kings, are written in the Nāgarī characters. Even now, some Nāgara-Paṇḍitas of Gujarāt boast of their ancestors as the devisers of the Nāgarī-alphabet. The Nāgara-Brāhmaṇas, who long ago left their mother-country (Baḍa-nagar) and travelling over several tracts, settled at Ānaguṇḍi, Vijaya-nagar and other places of the Deccan, though, during many centuries of their residence among the people, they have quite lost their mother-tongue, and adopted those of the natives, still adhere to their ancient tribal character in writing religious books, while all the surrounding people use a character of their own.

Under such circumstances, I think the Nāgarī character to have been the character devised or adopted by the Nāgara-Brāhmaṇas of Gujarāt and named after them.

From a thorough examination into the forms of the ancient Nāgarī, it is obvious that the form is only a modification of the ancient Gupta-character. This ancient form was introduced into Gujarāt from Northern India by the Nāgara-Brāhmaṇas, which is proved by the fact that most of the copper-plates in Nāgarī found in Gujarāt were granted to the Brāhmaṇas come from Kānya-kubja, Puṇḍra-vardhana, Pāṭali-putra, &c. No doubt Brāhmaṇas began to emigrate into Gujarāt and reside there long before that period.

I think the story of Trijāta and his driving away the Nāgas from Camat-kāra-pura is only an allegory. The Nāgas of the Nāgara-khaṇḍa were perhaps the snake-worshipper Shāh kings or the Nāga races of Gujarāt, who reigned there up to the 4th Century A.D. These Shāh kings, or the Nāgas, were afterwards defeated and driven away from Nagara-Ānandapura by the Çaivas (worshippers of Çiva), who erected there numerous temples which were visited by the Chinese pilgrim Hiouen Tsiang in 7th Century A.D.

In the lists of Indian alphabets given in works prior to this period, no mention whatever is made of Nāgarī.

The first mention of Nāgarī-lipi, is in the Jaina Scripture Nandi-sūtra. Most of the Jainapriests hold, that the Nandi-sūtra was compiled at the same time or a little before, as the first publication of Kalpa-sūtra. In 453 A.D. by order of Dhruva-sēna king of Valabhī, the Kalpa-sūtra was read before the public at Ānandapura (present Baḍa-nagar). It is probable that the Nandi-sūtra was compiled about this time at Ānanda-pura, then a Jaina city, and the compiler had in view the character used by the Nāgara-Brāhmaṇas, when he enumerated the others.

At a shortly later period, in the copper-plate grant of Dadda Praçānta-rāga king of Gurjara, dated Çaka 415, we see the first specimen of the Nāgarī character in the Royal sign-manual upon the plate It is very probable that this character came to be current somewhere about the latter part of the 4th and beginning of the 5th centuries.

During the reigns of the Rāṣṭra-kūṭa kings of Gujarāt, and their successors the Caulukyas, the Nāgara-Brāhmaṇas retained the Royal priesthood, the ministership and other higher offices of the state all to themselves. From the perusal of the copper-plates of these Rāṣṭra-kūṭa kings, we come to know, that some of them conquered Gauḍa, Vaṇga, Kaliṇga, Gāṇga, Magadha, Malava and several other countries in the 8th, 9th and 10th centuries A.D. It is possible during this period, the name Nāgara or Nāgarī became circulated in many parts of India.

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

3. *Notes on the Decomposition of Mercurous Chloride and Estimation of Free Chlorine.—By* Yati Bhūṣaṇa Bhāduṛī, M.A. *Communicated by the Natural History Secretary.*

4. *Novicæ Indicæ*, XI. *Two new species of* Lagotis.—*By* Dr. D. Prain.

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

5. *Note on Double Rice.—By* Dr. D. Prain. (With Plate V.)

Some years ago Mr. Blechynden, then Secretary to the Agri-Horticultural Society of India, sent to the Botanical Garden specimens of a "double" rice. Of these specimens I now offer an account.

The phenomenon was found to be due merely to "proliferation" in the gynaecium, without any accompanying abnormality in the other parts of the flower.

The glumes are precisely those of the race of *Oryza sativa* known in Bengal as 'Kamal bhog,' a small-grained rice of high quality, of which I take the double rice to be a sport. The andræcium also in this sport has always been found normal.

In the gynaecium of over 150 flowers examined, not one was found with fewer than 4 ovaries (all apparently perfect), the usual number being 5; a good few flowers were found to have 6, and one or two had 7 ovaries; no flower had more than seven. When 5, 6 or 7 ovaries were present, sometimes only 3, but usually 4 or 5, appeared to be perfect.

In some hundreds of flowers of 'Kamal bhog,' 'Kal magru,' 'Lal kalam,' 'Mota huru, and 'Kala nadi'—these are the races mostly cultivated in the neighbourhood of Calcutta—which were examined at the same time, no example of duplication of the ovary was met with.

In the gynaecium of the flowers in this sport, the individual ovaries are sometimes all quite similar; oftener, however, one or more may have 3 styles instead of 2 (*see* fig. 8 *b.*), and in some of the flowers with 4 or 5 ovaries this is all the abnormality that can be detected, except that at times the two styles may be conjoined at the base in one or more of the ovaries (*see* fig. 8 *c.*). But in flowers with more ovaries than 5, one or more of them may remain flaccid, their walls being without chlorophyll, and the embryo remaining undeveloped; this may happen even in cases where the style seems to be perfect. In other cases, only one style and stigma may be developed (*see* fig. 8 *d*); sometimes also the styles and stigmas may be imperfect (*see* fig. 8 *e*) and very abortive ovaries may even be organically united laterally to adjacent ones (*see also* fig. 8 *e*). In cases where the stigmas are imperfect, there is apparently never any formation of chlorophyll in the

ovarian walls. It happens that all the figures numbered 8 *a*—*e* are drawn from ovaries that were contained in the same flower.

After the stamens wither, it is most usual to find that only 2 ovaries continue to develop (*see* fig. 9), and then not infrequently one of these fails to grow as fast as the other (*see* fig. 10); but very often both grow equally (*see* fig. 11), and the result is the 'double rice.' In this case the inner faces of both the grains are flat with a whitish vertical central band (*see* fig. 12), and on section, the *embyro of each* is found at the outer, or *glumal*, aspect of the base of the grain.

In a few cases three grains are developed, and then instead of having flat faces (*see* fig. 14), they meet in the centre at the white line already mentioned (*see* fig. 15), this line being at the apex of an obtuse angle; the embryo is in each case at the outside, as before.

The accompanying Plate shows all the peculiarities noticeable in the flowers of this sport. The sport comes true to seed.

Explanation of the Plate.

Plate V. "Double" Rice.

1. Spicule of "Double Rice" (*Oryza sativa* L., race 'Kamal bhog'—sport.) nat. size.
2. Single flower, × 4.
3. Single flower, lower glumes removed, × 4.
4. Single flower, outer upper glume removed, × 4.
5. Floral whorls, × 8.
6. Lodicule, × 16.

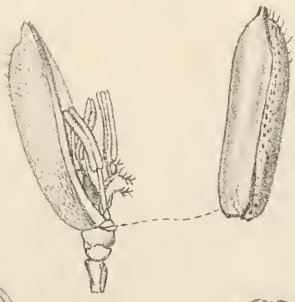
7*a*. Anther, × 16. 7*b*. Style and stigma, × 32.

8. Five ovaries from same individual flower, which had seven ovaries, × 16.
   - *a*. two-styled perfect ovary.
   - *b*. three-styled perfect ovary.
   - *c*. two-styled perfect ovary, styles cohering at base.
   - *d*. pale flaccid ovary with only one style and stigma.
   - *e*. flaccid imperfect ovary with cohering styles and imperfect stigmas, and with an abortive ovary adherent to it laterally.
9. Fertilized flower: two ovaries developing, growth of the others arrested, × 4.
10. Another flower: one ovary so developed as to fill the glumes; a second that has been fertilized arrested in its growth at stage reached in flower of fig. 9, × 4.
11. Another flower: two ovaries fully developed, × 4.
12. Inner face of one of the young grains shown in fig. 11, × 4.
13. Vertical section of flower in stage reached in fig. 11, showing embryos at outer aspect of base in both. × 4.—In a normal rice grain the embryo is at the base of the *lodicular* side, *i.e.*, on the side averse from the inner fertile and towards the outer empty upper glume.
14. Transverse section of flower in stage shown in fig. 11, indicating position of embryos, × 4.
15. Transverse section of flower in which three ovaries have developed, × 4.

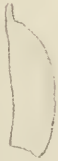
1. ad nat

2×4

3×4


4×4

5×8


6×16

7b×32

7a×16

8a×16

8b×16

8d×16

8e×16

8c×16

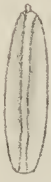
14×4

15×4

9×4

10×4

11×4


12×4

13×4

D. Prain delt.

A. C. Mukerjei lith.

"DOUBLE" RICE.

Library.

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

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———. ———. Miscellaneous Collections, Vol. XXXVIII, Nos. 971 and 972.

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Scudder, Samuel H. Canadian Fossil Insects. 8vo. Ottawa, 1895.
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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR MAY, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 6th May, 1896, at 9–15 P.M.

T. H. HOLLAND, ESQ., F. G. S., in the chair.

The following members were present:—

Dr. A. Alcock, F. Finn, Esq., W. A. Lee, Esq., R. D. Oldham, Esq., Dr. D. Prain, Dr. G. Ranking, Bābu Yadu Nāth Sēn, Bābu Nagēndra Nātha Vasu, Dr. G. Watt.

Visitor:—Dr. C. R. M. Green.

The minutes of the last meeting were read and confirmed.

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

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

Bābu Aghōr Candra Bhāduṛi.

Paṇḍit Mahēndranāth Vidyānidhi.

The SECRETARY reported the death of the following member:—

The Hon. Prince Sir Mahomed Jahan Qudr Wahid Ali Khān Bāhādur.

The following papers were read:—

1. *The Later Moghuls* (1707–1803).—*By* WILLIAM IRVINE, *Bengal Civil Service* (*Retired*).

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

17005

2. *The Mammalia of Tibet.*—*By* Graham Sandberg, B.A., *Chaplain of Subathu.*

(Abstract.)

The author first remarks upon, and endorses, the fact that the Mammalian Fauna of Tibet is singular.

He then notices its numerical profusion, especially in certain "herbivorous species, such as yak, antelope, wild ass, goat, and wild sheep," which occur in the elevated northern tracts of the country in immense herds.

In seeking for the causes of this numerical abundance he alludes to the fact—recorded by travellers—that the natural food-supply, in the form of coarse grasses, is surprisingly abundant at certain seasons of the year; and he also thinks that the fact that the Tibetans are Buddhist, and are therefore averse to the taking of life, is worthy of consideration. He does not, however, think it yet possible to explain how so many large herbivorous animals can subsist through the long and severe winter, and concludes that many must then perish of hunger.

The author next proceeds to enumerate the Mammalia found in Tibet, but he explains, first, that by Tibet he means not merely the elevated Tibetan plateau of Geologists, but also the lower outlying portions of the Indo-Chinese sub-region of the Oriental Region of Zoologists. He therefore includes in his enumeration "all forms occurring between the southern and northern barriers of the country, and between Ladak and the Szechuan-Yunnan frontier line." Within these limits he recognizes 146 species of Mammalia, not including Bats and domestic animals.

Incidentally the author gives the following interesting information with regard to the country commonly spoken of by Zoologists as Moupin:—

"It is a district or sub-prefecture lying between, lat. 31° 30′ and 32° N., and between long. 102° 30′ and 102° 50′ E., and is so small a tract that to write 'this species inhabits Moupin' would be parallelled by stating of the English weasel 'it is found in Gloucestershire.' The name Moupin occurs in no map: the fact being that the Abbé David has told us the French form of the Chinese name of a Tibetan District. *This* Moupin, which should be Muping-sze, is a Chinese designation for Nangchhen Sbring-wa, commonly known to Tibetans as Drumba or Jumba.

"This Drumba, otherwise 'Moupin,' is occupied by a Sifan tribe, and is shut off from China by a lofty snow-capped range styled by Tibetans Gyalmo Mordo. The average elevation may be set at *circa*

9000 feet, and the climate is exceedingly damp, rain or snow falling, it seems, nearly every day. Though the Chinese are fast immigrating and burning the timber up in wasteful fashion, the country is still well-wooded and encradled amid lofty heights covered with trees and thicket."

3. *The Copper-plate Inscription of Nṛsiṁha-dēva II. of Orissa, dated Çaka*, 1217—*By* Nagēndra Nātha Vasu.

(Abstract.)

When the Kēndrapāḍā canal was being excavated, there was found in the village of Kēndu-pāṭna, about 20 feet under ground, a stone chest containing three sets of copper-plate grants each consisting of 7 plates. The grant under review, one of Nṛsiṁha-dēva II. and dated Çaka 1217, is one of these three sets. It is important as it contributes largely to the history of the Gaṇga Kings of Orissa. Several of the statements of the Temple Records of Orissa—(Mādalā-pañji) and of the historians who follow them, about those Gaṇga-Kings vary greatly from the accounts given in this grant. According to the former the great temple of Jagannātha was erected by king Anaṇga-bhīma, but the grant clearly states that though Anaṇga-bhīma built several temples, it was long before him that Cōḍa-gaṇa-dēva had built this celebrated shrine. This and other notable facts which the inscription throws light upon, and which materially alter the History of Orissa, are dealt with at some length, in my article on the inscription to which I refer for details of great interest.

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

4. *Notes on the Indian species of* Vitis.—*By* G. King, M.B., LL.D., C.I.E., F.R.S.

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

5. *The Gauhaṭī Copper-plate Grant of Indrapāla of Prāgjyōtiṣa in Assam.—By* Dr. A. F. R. Hoernle.

(Abstract.)

Assamese copper-plate grants are rare. This is the third which has been made known. The first is the so-called Tējpur grant, which was published in 1840 in Volume IX of the Society's *Journal*. A third, the Nowgong grant, will shortly be published by Mr. E. A. Gait.

The Gauhaṭī grant belongs to the Pāla dynasty of Assam, the other two grants belong to the same dynasty, but a different one from the Pālas.

The members of the Assam Pālas mentioned in the grant are Brahma Pāla (*alias* Ratna Pāla), Purandara Pāla, and Indrapāla. The

grant was issued by the last mentioned. He immediately succeeded his grandfather Ratnā Pāla, his father Purandara apparently having died during Ratna's life-time. Ratna-pāla appears to have been the first of the Assamese Pālas. The names preceding his in the genealogical list are all mythical.

The grant is not dated, but its characters, which are old Bengali of the *kuṭila* type, refer it to the early part of the 10th century A.D.

There is nothing to connect the Assamese Pālas with the great Pāla dynasty of Bihār and Bengal. The probabilities are against any connection. The two dynasties use different seals, and claim a different ancestry. At the same time it may be remembered that Dēvapāla of Behār is said to have conquered Assam, in the latter part of the 9th century, and Dharmapāla of Bihār is said to have settled a colony of Brāhmans there about the middle of the 9th century. Ratnapāla of Assam would be a contemporary of Dēvapāla.

The grantee is a brāhman Dēçapāla, and the land granted to him is defined as situated near the hamlet of Kāsī, on the Digummā river. The locality can no more be identified.

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

6. *Description of some New Indian Trees.—By* G. KING, M.B., LL.D., C.I.E., F.R.S.

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

7. *Supplement to Thomas' Chronicle of the Pathan kings of Delhi. No. VI.—By* C. J. RODGERS, *Honorary Numismatist to the Government of India.*

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

8. *A second series of New Orchids from Sikkim.—By* G. KING, M.B., LL.D., C.I.E., F.R.S., *and* R. PANTLING.

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

9. *Coins of Nīmrōz.—By* C. J. RODGERS, *Honorary Numismatist to the Government of India.*

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

10. *Noviciæ Indicæ, XII. Description of a New Genus of Orchidaceæ.—By* DR. D. PRAIN.

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

11. *Rare Moghul coins.—By* C. J. RODGERS, *Honorary Numismatist to the Government of India.*

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

12. *An account of the Deep-Sea Crustacea dredged by the R. I. M. S.* 'Investigator' *during* 1894-95.—*By* Surgeon-Captain A. R. S. Anderson.
The paper will be published in the *Journal*, Part II.

13. *Rare Kāshmīr coins.*—*By* C. J. Rodgers, *Honorary Numismatist to the Government of India.*
The paper will be published in the *Journal*, Part I.

Library.

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

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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR JUNE, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 3rd June, 1896, at 9-15 P. M.

Frank Finn, Esq., B.A., in the chair.

The following members were present:—

Moulvi Abdul Kader, Moulvi Abdul Karim, Dr. A. W. Alcock, J. N. Dās-Gupta, Esq., Kumār Rāmēçvar Malliah, Bābu Pañcānana Mukèrji, C. A. Oldham, Esq., Dr. D. Prain, Paṇḍit Satyavrata Samaçramī, Paṇḍit Haraprasād Çāstrī.

Visitor:—Bābu Vahuvallabha Caṭṭopādhyāya.

The minutes of the last meeting were read and confirmed.

Nine presentations were announced, details of which are given in the Library List appended.

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

G. W. Kuchler, Esq., proposed by C. Little, Esq., seconded by Dr. A. W. Alcock.

Rai Lakṣmī Çankar Miçra, Bāhādur, proposed by S. C. Laharry, Esq., seconded by Dr. G. A. Grierson.

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

Rai Bāhādur Rādhāvallabha Caudhurī.

R. B. McCabe, Esq.

The SECRETARY reported the death of the following member:—

O. G. Arthur, Esq.

18573

The Chairman made the following announcement with regard to the Huxley memorial.

At an influential public meeting held in London on the 27th November last, His Grace the Duke of Devonshire in the Chair, it was proposed by Lord Kelvin, and seconded by Right Hon'ble A. J. Balfour:—

That it is desirable to establish a memorial to the late Right Hon'ble Thomas Henry Huxley.

It was then resolved, that the memorial do take the form of a statue, to be placed in the Museum of Natural History, and a medal in connection with the Royal College of Science, and that the surplus be devoted to the furtherance of biological science in some manner to be hereafter determined. And a Committee was then appointed to carry these resolutions into effect.

At a meeting of the Council of the Asiatic Society of Bengal, held in Calcutta on the 27th February last, it was decided to appoint a Local Committee, composed of the following members, to co-operate with the London Committee in promoting the objects of the above-quoted resolution:—

ALEXANDER PEDLER, 5, *Russell Street, Calcutta.*
G. KING, *Royal Botanic Garden, Calcutta.*
D. D. CUNNINGHAM, 9, *Loudon Street, Calcutta.*
MAHĒNDRALĀL SIRKĀR, 51, *Sakareetollah Lane, Calcutta.*
T. H. HOLLAND, *Geological Survey of India, Calcutta.*
A. ALCOCK, *Indian Museum, Calcutta.*

The Committee has to report that the following subscriptions have been received:—

H. E. The Viceroy	Rs.	100
Dr. J. R. Adie	„	20
Calcutta Microscopical Society	„	100
Dr. D. D. Cunningham	„	50
Sir A. W. Croft	„	20
F. Finn, Esq.	„	85
J. S. Gamble, Esq.	„	16
Bābu Pratāpa Candra Ghoṣa	„	10
Surg.-Maj.-Genl. R. Harvey	„	100
T. H. Holland, Esq.	„	100
Dr. G. King	„	16
C. S. Middlemiss, Esq.	„	30
W. Mackintosh, Esq.	„	25
Dr. James Murray	„	32
Alex. Pedler, Esq.	„	50
Pandit Haraprasād Çāstrī	„	10
W. J. Simmons, Esq.	„	20
Carried over ...	Rs.	784

			Brought forward ...	Rs.	784
Major R. C. Temple	...	...	... ...	„	50
R. E. S. Thomas, Esq.	...	...	... ...	„	50
			Total ...	Rs.	884

The equivalent in sterling, namely £ 51-14-3, has been remitted to the Honorary Secretary of the Home Committee.

Read a letter from the Secretary to the Government of the Punjab, dated 25th March, 1896, forwarding the following report by Mr. C. J. Rodgers, M.R.A.S., Honorary Numismatist to the Government of India, on the Sangla Tibba in the Gujranwala District, in connection with the question of quarrying that hill for the purpose of supplying ballast for the Wazirabad-Lyallpur Railway.

Report.

Sixty-eight and a half miles from Wazirabad, on the Wazirabad and Lyallpur Railway, the new railway station of Sangla is being made. It is about half a mile west from the Sangla Tibba, and between the station and the hill runs the Chenab Canal, having immediately on its west the new colony of Chahur or Jahur Fathpuri, known formerly also as Rakh Andheri, which is close by a small rock, known as Mundapatura. The Tibba or Rock of Sangla is one of a series of rocks which crop up in the neighbourhood. About a mile and a half to the south are three others known as *Arti or Arna*, and about a mile and half to the south-east of Arti is a solitary one known as the *Gupha* or Cave-rock, because in it is a cave said to have been, in olden times, the residence of a thief and *adam khor*, or man-eater. All these rocks seem to be composed of iron-stone. Those at Arti are being used as quarries for ballast for the Railway. Nothing has been done to the Sangla rock or to the *Gupha*.

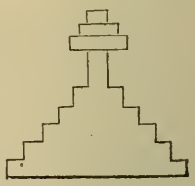
The Sangla rock is the highest and longest of all, rising, as it does, to the height of nearly 200 ft. above the plain. Of this plain, I ought to say, that it is to all appearance perfectly level, but with a uniform slope towards the south-west. To the east and north of the rock, there is a slight depression which, in one place, once had an embankment, probably artificial. The level plain comes nearly up to the rock. The rock rises abruptly on the north and west sides. Towards the east, there is a small tableland about 30 ft. high which lies between a spur of the northern part of the rock, and another from the centre of the main rock. Owing to the shaly nature of the rock the sides are covered all over with broken stones. These in three places are mixed with brick ends. At the top of the rock there is no area whatever on which buildings of any size could be erected, and in consequence,

there is not anywhere any sign of a building of any kind ever having been on the rock. There is not a chisel mark on any part. On the ridge stretching towards the east in the northern part of the rock, there are some modern foundations dug out, but they have never been built on. They are only for buildings about 8 ft. broad. There is a Trigonometrical Survey Station on the highest point. This is a circular erection, about 6 ft. in diameter and 3 ft. high. It is made of old bricks, and contains nearly all the old bricks to be found in the whole neighbourhood. One I measured was $15'' \times 11'' \times 2\frac{1}{2}''$. The next largest bricks I saw were only half this size. On the small plateau below there are some heaps of brick ballast and perhaps three gari loads of brick ends. Here and there are signs of rough foundations of small buildings, rows of stone with the straight surface turned outwards. *In no case did I see any superstructure on these rows. In no place are there two rows of stone or brick one on the top of the other. Were all the brick ends in the place to be collected, there would not be a truck load.*

After much persistent search I was rewarded by finding a broken stone image on the eastern lower plateau, and a corner-brick carved on the edge, amongst the debris to the north of the rock. The image is not made of Sangla stone, but of doab red sandstone. It is split in two pieces and has lost the left arm and the legs. The right hand holds a ball. The features are defaced but there is a tall crown on the head.

In several places on the plain at the foot of the rock broken pots are found *but they lie on the surface only. There is no depth of them anywhere.*

On the rock itself as there are no buildings nor traces of their having been any, so *there is no well or any source from which water could be obtained, and no tank in which it could be stored.*



To the north, however, about a quarter of a mile from the rock and close by the eastern bank of the canal is an old well made of large bricks. About 12 ft. down there is a curious ornamentation going round the well, made up of repetitions of the accompanying figure. *This well, the few big bricks, the carved brick, the broken image, and the broken pots scattered on the surface are the only signs of antiquity in the place.* General Cunningham says that 4,000 bricks were taken to mark, and that probably 4,000 more are in the Survey Station on the hill top. If I were inclined to be extravagant I might say let us suppose that the whole of the brick ends about the place represent 12,000 more, then we should have

20,000 bricks which are not sufficient for a structure of any size and could never have been sufficient to surround a town built round the rock. No place exists near Sangla or in the far off neighbourhood to which bricks could have been removed in any quantity. In the new colony of Jahur all the buildings are of mud.

There were no mud houses in Sangla or its vicinity. No mud walls surrounded the place, for, mud houses and mud walls when thrown down leave unsightly heaps which can never be removed, especially in a country with so small a rainfall as the Bar has. There are no signs of such mounds. Even the small mound at Mundapatura is not one of this kind. It is a small projecting rock, and a heap of rocky debris.

There is nothing now therefore of any antiquity in Sangla or its neighbourhood except the well. This has been beautifully restored by the Engineers of the Canal by having its broken masonry courses replaced and a small parapet erected at the top. Its water is 79 ft. from the wall top in spite of the well being actually in the bank of the canal. *One well could have supplied but a small population with water.* The swamp or seasonal lake must have dried up very soon after the rains. It had been long quite dry when I visited it on the last day of October.

From all this it will be seen (*1*) *that Sangla may have been a small village near the hill or rock.* (*2*) *It may have had a small temple or a few houses of brick*, but they were more probably of reeds. (*3*) The people used earthen vessels. (*4*) *There were no large buildings or bazaars.* (*5*) *There were no fortifications.* (*6*) *There were no buildings of stone.*

We know that everything strange in Nature in India has been worshipped, and has had, and has now in these days of modern enlightenment, its resident faqirs who have their followers and dependents, and hence small communities exist in these places. The rocks at Sangla are a strange phenomenon. They must have attracted faqirs in olden times. Before the canal was open, however, there was not a house near the rock and the only ones now are those connected with the brick kiln and the Canal Chowki nearly a mile to the north of the hill.

Therefore my decision is that *there is nothing now on the rock or in its neighbourhood of any Historical importance whatever.* There is nothing either in the rock, for, it is not a rock with fissures or caverns. The stone of which it is composed may be used for ballast or for any other purpose for which it may be required.

There is a place called Sangala mentioned as having been besieged

by Alexander the Great in his invasion of the Punjab. This is what is said of it in Arrian's Arrabasis, Book V, Chapters XXII to XXIV. Chapter XXI tells us: "He himself, *i. e.*, Alexander, crossed the river Hydraotes" and "he was advancing into the country beyond the Hydraotes." (N. B.—The *Hydraotes* was the RAVEE on crossing which Alexander would be in the Bari Doab.)

CHAPTER XXII.

"Alexander meanwhile had learned that the Kathaians and other tribes of independent Indians were preparing to meet him in battle if he invaded their country, and were inviting the neighbouring tribes, which were independent like themselves, to co-operate with them. He learned also that *the city near which they meant to engage him was* STRONGLY FORTIFIED, *and was called* SANGALA."....."Alexander, on receiving this intelligence, marched rapidly against the Kathaians, and, on *the second day after he had left the river Hydraotes*, arrived at a city named Piraprana....which surrendered on terms of capitulation. Alexander gave his troops rest the next day, and, ON THE THIRD DAY, *advanced to Sangala* where the Kathaians and the neighbouring tribes that had joined them were mustered BEFORE THE CITY and drawn up in battle order *on a low hill* which was not on all sides precipitous. They lay encamped behind their waggons, which, by encircling the hill in three rows, protected the camp with a triple barricade. Alexander, on perceiving the great number of the barbarians and the nature of the position they occupied, drew up his army in the order which seemed best suited to the circumstances, and at once despatched against them the horse archers just as they were, with orders to ride along and shoot at the Indians from a distance, so as not only to prevent them making a sortie before his own dispositions should be completed, but to wound them in their stronghold even before the battle began.

* * * * * * *

CHAPTER XXIII.

* * "Yes, even from these waggons they were forcibly driven by the phalanx of infantry and even at the third row they no longer held ground, but fled with all the haste they could into the city, and shut themselves within its gates. Alexander that same day encamped with his infantry around the city, as far at least as the phalanx enabled him to surround it, *for, the wall was of such great extent that his camp could not completely environ it.* Opposite the part where the gap was left, and where also was a lake not far from the walls, he posted the cavalry all round the lake, as he knew it not to be deep, and at the same time anticipated, that the Indians, terrified by their previous

defeat, would abandon the city during the night. The event showed he had conjectured aright, for, about the second watch, the most of them dropped down from the wall, and came upon the outposts of the cavalry. The foremost of them were cut to pieces by the sentinels, but those in the rear, perceiving that the lake was guarded all round, withdrew into the city. Alexander now encompassed the city with a double stockade, except where the lake shut it in, and around the lake he posted guards to keep still stricter watch. *He resolved also to bring up the military engines against the place for battering down the walls.* Some deserters, however, came to him from the city and informed him that the Indians intended that very night to escape from the city by way of the lake, where the gap occurred in the stockade. So at that point he stationed Ptolemy, the son of Lagoo, with three divisions of the hypaspists, each 1,000 strong, all the Agriarians and a single line of archers."

CHAPTER XXIV.

* * Such were the directions he gave, and Ptolemy in that place collected as many as he could of the waggons which the enemy had left behind them in their flight, and placed them athwart so that the fugitives might imagine there were many obstacles to their escaping by night. He ordered the stakes which had been cut, but not fixed in the ground, to be formed into stockades at different points between the lake and the wall. * * About the fourth watch, the barbarians, in accordance with the information Alexander had received, OPENED THE GATES which fronted the lake, and rushed towards it at full speed. * * * Ptolemy, with his men, fell upon them and killed them, one after another, as they struck out from the waggons. Upon this the Indians fled back once more to the city for refuge, and as many as 500 of them were slain in the retreat.

"Meanwhile Porus also arrived, bringing with him the remainder of his elephants, and a force of 5,000 Indians, and *the military engines which had been constructed by Alexander were now brought up to the wall.* But the Macedonians, before any part of it was battered down, took the city by storm, having *undermined the wall*, WHICH WAS OF BRICK *and planted ladders against it all round.* In the capture, 17,000 of the Indians were slaughtered, and more than 7,000 were captured together with 300 waggons and 500 horse men. The loss in Alexander's army was somewhat under 100 killed and 1,200 wounded." * * * "He drew back to Sangala and *razed the city to the ground.*" * * * "He himself advanced with his army to the river Hyphasis to conquer the Indians who dwelt beyond it." (N. B.—The Hyphasis was the Bias, so the Sangala of Alexander must have been in the Bari Doab.)

From the above, it is plain—

(1) That *Sangala was a strongly fortified city three days' march from the Ravi* in the Bari Doab.

(2) It was a *large city with gates*, so large that Alexander's army could not wholly encompass it.

(3) The walls were so high, they needed to be battered down. *They must have been therefore not only high but thick.* Eventually they were undermined.

(4) *The walls were of brick.* The city was razed to the ground.

(5) The gap in the stockade was so large, it had to be guarded by more than 3,000 men.

Nothing whatever is said about the rock at Sangla. A small rock or hill is mentioned outside the town.

At Sangla, to-day, there is no sign whatever of extensive ruins such as must be wherever Sangala was. The historian places it in the Bari Doab and *after its capture Alexander marched straight on the Bias.*

From all this, I infer that Sangla Tibba has nothing whatever to do with the strongly fortified city, surrounded by a high and thick brick wall, besieged by Alexander the Great, taken by him, and razed to the ground, AND WHICH WAS SITUATED IN THE BARI DOAB.

Again, in "Buddhist Records of the Western World" compiled before 713 A.D., we read that New Sakala was $3\frac{1}{2}$ miles to the north-east of the old town of Sakala. Both Sakalas were then about $3\frac{1}{3}$ miles in circuit. *The walls of old Sakala were thrown down*, but *the foundations were still firm and strong.* This old Sakala had, some centuries before the visit of the Chinese traveller, been the capital of Mahirakula who had "established his authority in this town and ruled over India."

(Here I venture to observe that this part of the country, Sangla and its vicinity, used to be known as the Sandal Bar and was an impenetrable jungle.)

"In the old town of Sakala is a *sangharama* with about 100 priests." * * * "By the side of the convent is a *stupa* (tope) *about 200 ft. high.*" * * * "To the north-east of the *sangharama*, about a mile, *is a stupa about 200 ft. high*, built by Asoka Raja." * * * "About $1\frac{2}{3}$ miles to the north-east of the new capital, we come to *a stupa* OF STONE, *about 200 ft. high*, built by Asoka."

(Beal's Buddhist Records of the Western World, Volume I, page 165–172.)

General Cunningham makes Sangla Tibba, the Sangala of the Alexandrian invasion and the Sakala of the Buddhist Records. On this I have to remark:—

(1) If Sangala and Sakala were the same, then the place had been in existence over 1,000 years when it was visited by the Chinaman. The foundations of its walls had stood thick and firm for 1,000 years. In that 1,000 years, there must have been a vast accumulation of sweepings and ashes and mud. The place was a large one, so that there must be even now where it stood, a very high mound. There is but the rock at Sangla.

(2) There were three stupas of stone more than 200 ft. high. After 1,200 years, there must be signs of those stupas. We know that such buildings were sculptured. There is not a sign of any such buildings either in, or on, or near, Sangla, neither is there a trace of the New Sakala mentioned by the traveller.

(3) Sakala was the capital of *Miharakula, a man whose coins are very plentiful in some parts of the Punjab.* But *not a coin is said to have been ever found in Sangla.* I hunted several hours in the bazaars of Hafizabad and could find no coins older than the reign of Sikandar Lodi.

(4) The travels of the Chinaman say nothing about the rocks, the peculiar physical feature of the neighbourhood.

From all this, I infer that the absence of all walls and foundations from Sangla; the absence of all traces of stupas either inside or outside the place and its neighbourhood; the absence of ruins of a neighbouring New Sakala; the absence of coins; the non-mention of chief physical features of the place, seem to point out plainly that Sangla is not the Sakala of the Chinese traveller.

I have before shown that it is not the Sangala of Alexander's expedition.

Sangla is therefore stripped of all historical associations.

(For the discussion identifying Sangla Hill, with Sangala of the Greeks and Sakala of the Chinese traveller, see Archæological Reports by General Cunningham, Vol. II, page 192–200.)

The quotations from Arrian are from McCrindle's "Ancient India, its invasion by Alexander the Great," page 114–120.

The image and brick found by me will be deposited in the Lahore Museum, together with a ball, which may be of cast or native iron. This last was found by Mr. Eldridge, Assistant Engineer, Chenab Canal, in the Arti quarries. I obtained it from Balik Ram, Contractor of Railway ballast.

In conclusion, I have to tender my thanks to Messrs. Preston and Benton, Superintending and Executive Engineers, for all their courtesy

and assistance; also to Mr. Bremner of the Wazirabad and Lyallpur Railway. These gentlemen all take an intelligent interest in the history of the district through which their Canal and Railway pass.

Lalla Ram Surup, Sub-Overseer, did the work I set him well. There was not much for him to do, as the absence of antiquities rendered the survey of the place almost unnecessary. He made the accompanying map (Plate VI) from his survey. On it are shown the different points to which I have drawn attention.

The Secretary read the following letter:—

SABATHU: PUNJAB.

May 25th, 1896.

The Editor: Journal, Asiatic Society of Bengal, Part I.

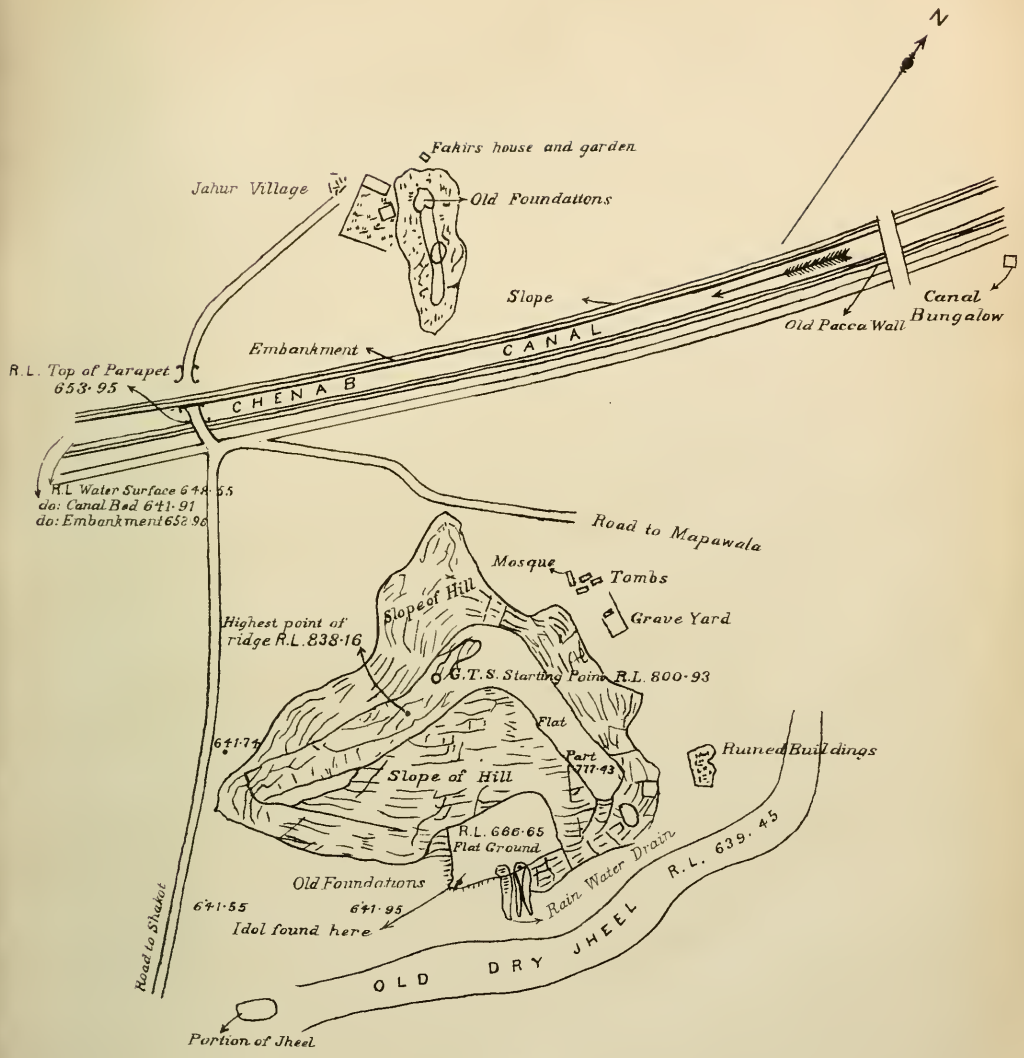
Sir,

With reference to your note to Mr. Gait's paper on Ahom coins, in which you set forth the series employed in Tibet and Mongolia for compiling the Kalendar, I hope you will forgive a few remarks in the interests of accuracy. I would point out that the names of the members of each series in the Mongol language are by no means correctly given in your revision of Huc's list. In fact Huc's version has the spelling much nearer to original Mongol than that which you substitute on the authority of Dr. Waddell.

DENARY SERIES.—The Mongol for "Wood" is *Modon*, usually pronounced *Modo;* Huc gives *Moto;* your list *Mod.* "Fire" is always *Gál;* Huc gives *Gal;* your list *Kal.* "Earth" is *Shirogé*, usually pronounced *Shiré;* Huc gives *Chéré* (*i.e.*, *Shéré*); your list *Shora.* "Iron" is *Te-mür;* Huc gives *Te-mur;* your list *T'u-led.* (N.B. There is no such letter as *t'* in Mongol). Finally, "Water" is *Usun*, sounded *Usu;* Huc gives *Ussu;* your list *Osu.*

DUODENARY SERIES.—The Mongol for "Mouse" is *Khulughána*, sounded in North Mongolia *Kulguna* and in the South *Hulghána;* Huc gives Khoulouk hana (*i.e.*, the literary form almost exactly); your list *Hul-kan.* "Tiger" is *Bars;* Huc gives *Bara;* your list *Par* (N. B. There is no letter "P" in Mongol). "Hare" is *Tolai:* Huc gives *Tolé;* your list *T'us-lus* which is an impossible orthography in Mongol. "Dragon" is *Lu;* Huc gives *Lou;* your list *Lwu!* "Fowl" is *Takiya*, sounded *Takya;* Huc gives *Takia;* your list *T'a-ka.* "Dog" is *Nokhai* and "Pig" is *Khákhai;* Huc giving *Nokhé* and *Khakhé;* your list *No-has* and *Ka-has.*

Confirmation of the above-stated readings may be found in the works of Bobrovnikov, Castren, and I, J. Schmidt.



SURVEY ROUND SANGLA HILL

Scale 600 Ft: = 1 Inch.

As Mr. Rockhill has observed, the much-maligned Huc, ever since he wrote his charming volumes on Tibet and Tartary, has been continually accused of errors, and then always found to have been correct after all. The more we learn of Tibet and Mongolia, the more is the marvellous accuracy of the geographical, philological, and general observations of that learned and adventurous Lazarist father made evident.

In the Tibetan list two mistakes occur. The words *lC'ag* "Ram," and *spRou* "Monkey," should be *Luk* and *Spreu*.

I remain, Sir,

Your obedient Servant,

Graham Sandberg.

Chaplain of Sabathu.

The Joint Philological Secretary Paṇḍita Haraprasād Çāstrī exhibited three Archæological photographs forwarded by Mr. W. Banks Gwyther, Esq., Under-Secretary to the Government of Bengal, Public Works Department with a note by Mr. Umeça Candra Vaṭavyāla, Officiating Magistrate, Baguḍā.

Photograph No. 1 belongs to an image found in a tank in the village of Durgāpur near Mahāsthāna in Baguḍā. It is a female figure probably of Tārā Deví one of the Bauddha Çaktis so much worshipped in Medæval India. It contains an inscription which is nothing else but the ordinary Confession of Buddhist faith. "*Ye dharmā hetuprabhavāḥ etc.*"

No. 2 belongs to an image discovered under a tree in the town of Baguḍa, of a Bodhisattva and a Çakti in an amatory condition sitting on a throne.

No. 3 belongs to an image which lay among a pretty large number of broken images in the village of *Tilak*. It is also that of a Bauddha Çakti sitting on a throne supported by a tiger. She has four arms carrying a *gadā* or mace a *cakra* or discus, a *kumbha* or waterpot in three of her arms. The object in her fourth arms is indistinct.

Mr. Umeça Candra Vaṭavyāla has caused all the three images to be brought over to Baguḍā. They might, now, with profit, be brought to the Indian Museum.

The following papers were read:—

1. *Materials for a Carcinological Fauna of India, No. II. The Brachyura Oxystoma.—By* A. Alcock, M. B., C.M.Z.S., *Superintendent of the Indian Museum.*

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

2. *Note on a curious tradition current in the Hutwa Raj.*—*By* ÇARAT CANDRA MITRA, M.A., B.L., *Communicated by the Joint Philological Secretary.*

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

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

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

4. *Contributions to Bengali Vernacular Lexicography.*—*By* PRATAPA CANDRA GHOSA, B.A.

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

5. *On Croftia a new Indo-Chinese genus of Scitamineae.*—*By* G. KING *and* D. PRAIN.

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

LIBRARY.

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

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

Baltimore. Johns Hopkins University,—Circulars, Vol. XV, No. 124.

Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—Notulen, Deel XXXIII, Afleveringen 3 en 4.

———. ———. Tijdschrift voor Indische Taal-, Land- en Volkenkunde, Deel XXXIX, Aflevering 2.

———. Koninklijke Natuurkundige Vereeniging in Nederl.- Indië,—Natuurkundig Tijdschrift voor Nederlandsch-Indië, Deel LV.

Berlin. Berliner Entomologische Zeitschrift,—Band XXXVII, Heft 4; XXXVIII, 1 und 2.

Birmingham. Birmingham Natural History and Philosophical Society,—Proceedings, Vol. IX, Part 2.

Bombay. The Indian Antiquary,—Vol. XXV, Part 309.
Brisbane. Royal Society of Queensland,—Proceedings, Vol. XI, Part 2.
Calcutta. Indian Engineering,—Vol. XIX, Nos. 19-22.
———. The Indian Lancet,—Vol. VII, Nos. 10 and 11.
———. Maha-bodhi Society,—Journal, Vol. IV, No. 12.
———. Microscopical Society of Calcutta,—Bulletin, Vol. V, Nos. 2 and 3.
———. Photographic Society of India,—Journal, Vol. IX, No. 5.
Copenhagen. Köngelige Nordiske Oldskrift-Selskab,—Aarboger, II. Rœkke, Bind X, Heft 4; XI, 1.
———. ———. Mémoires,—Nouvelle Série, 1895.
Leige. La Société Géologique de Belgique,—Annales, Tome XXIII, No. 1.
Leipzig. Die Königlich Sächsische Gesellschaft der Wissenschaften zu Leipzig,—Abhandlungen, Phil. hist. Classe, Band XVII, Nrn. 2 und 3.
———. ———. Berichte über die Verhandlungen, Math.- phys. Classe, Nr. 1, 1896.
London. The Academy,—Nos. 1251-54.
———. The Athenæum,—Nos. 3574-77.
———. Nature, -Vol. LIII, Nos. 1382-85.
———. Numismatic Circular,—Vol. IV, No. 42.
———. Royal Astronomical Society,—Monthly Notices, Vol. LVI, No. 7.
———. Royal Geographical Society,—Geographical Journal, Vol. VII, No. 5.
———. Zoological Society of London,—Proceedings, Part 4, 1895.
———. ———. Transactions, Vol. XIV, Part I.
Madras. Madras Journal of Literature and Science, 1889-94.
Manchester. Manchester Literary and Philosophical Society,—Memoirs and Proceedings, Fourth Series, Vol. X, No. 2.
Moscow. La Société Impériale des Naturalistes de Moscou,—Bulletin, No. 4, 1895.
Mussoorie. The Indian Forester,—Vol. XXII, No. 4.
Paris. La Société Philomathique de Paris,—Comptes Rendus Sommaire des Séances, Nos. 11—13, 1896.
Philadelphia. American Academy of Political and Social Science,—Annals, Vol. VII, Nos. 3; and Supplement.
Rome. Rivista Geografica Italiana,—Aprile, 1896.
———. La Società degli Spettroscopisti Italiani,—Memorie, Vol. XXV, Nos. 2-4.

Schaffhausen. La Société Entomologique Suisse,—Bulletin, Tome IX, No. 7.

St. Petersburg. Horti Petropolitani,—Acta, Tome XIV, No. 1.

———. Russian Imperial Geographical Society,—Journal, Vol. XXXI, No. 6.

Sydney. Linnean Society of New South Wales,—Proceedings, 2nd series, Vol. X, Part 4.

Taiping. Perak Government,—Gazette, Vol. IX, No. 10.

Vienna. Die Anthropologische Gesellschaft in Wien,—Mittheilungen, Band XXVI, Heft 1.

———. Die K. K. Zoologisch-botanische Gesellschaft in Wien,—Verhandlungen, Band XLVI, Heft 3.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

BASTIAN, A. Die Denkschöpfung umgebender Welt. 8vo. Berlin, 1896.

SENART, EMILE. Les Castes dans L'Inde. 8vo. Paris, 1896.

MISCELLANEOUS PRESENTATIONS.

Catalogus der Numismatische Verzameling van het Bataviaasch Genootschap van Kunsten en Wetenschappen. 8vo. Batavia, 1896.

BATAVIAASCH GENOOTSCHAP VAN KUNSTEN EN WETENSCHAPPEN.

GURDON, P. R. Some Assamese Proverbs. 8vo. Shillong, 1896.

CHIEF COMMISSIONER, ASSAM.

North Indian Notes and Queries for March 1896. 4to. Allahabad, 1896.

GOVERNMENT OF INDIA, HOME DEPARTMENT.

Final Report on the Revision of the Settlement of Gujranwala District, 1889–94. Fcp. Lahore, 1894.

GOVERNMENT OF THE PUNJAB.

Transactions of the Canadian Institute, Vol. IV, Part 2. 8vo. Toronto. 1895.

F. E. ROBERTSON, ESQ.

Reduction of Greenwich Meteorological Observations, Part III. 4to. London, 1895.

ROYAL OBSERVATORY, GREENWICH.

Annual Report of the Sanitary Commissioner with the Government of India, 1894. Fcp. Calcutta, 1896.

SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA.

Periodicals Purchased.

Allahabad. North Indian Notes and Queries,—Vol. V, No. 12.

Braunschweig. Jahresbericht über die Fortschritte der Chemie und verwandter Theile anderer Wissenschaften, Heft 6, 1890.

Calcutta. Indian Medical Gazette,—Vol. XXXI, No. 5.

Geneva. Archives des Sciences Physiques et Naturelles,—15 Avril, 1896.

Leipzig. Annalen der Physik und Chemie,—Beiblätter, Band XX, Stück 4.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR JULY, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 1st July, 1896, at 9-15 P. M.

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

The following members were present:—
Moulvi Abdul Kader, Dr. A. W. Alcock, F. Finn, Esq., T. H. Holland, Esq., C. Little, Esq., C. R. Wilson, Esq.

The minutes of the last meeting were read and confirmed.

Ten presentations were announced, details of which are given in the Library List appended.

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

G. W. Kuchler, Esq.
Rai Lakṣmī Çaṅkar Miçra, Bāhādur.

The following gentleman is a candidate for election at the next Meeting.
Thomas M. Munro, Esq., proposed by C. R. Wilson, Esq., seconded by Col. J. Waterhouse.

The SECRETARY reported the death of the following member:—
Sir Sardar Attar Singh, Bahadur.

The following is a rough draft of the programme of the proceedings of the Eleventh Meeting of the International Congress of Orientalists to be held at Paris from the 5th to the 12th September, 1897 :—

ELEVENTH MEETING

OF THE

INTERNATIONAL CONGRESS OF ORIENTALISTS.

PARIS, 5th–12th SEPTEMBER, 1897.

SIR,

The Oriental Scholars who assembled at Geneva in September, 1894, unanimously decided that the next Congress should be held at Paris, during the year 1897.

The French Orientalists have now completed the preliminary arrangements for carrying on the impetus originally received some twenty years ago by Oriental Philology, History and Archæology. The date of the ensuing Congress has been fixed, the various sections have been constituted, and the rough draft of the programme of the proceedings which they propose to adopt, after obtaining the consent of their Colleagues in Europe, America, and the East, has been prepared.

Our Colleagues have decided to arrange for the Congress to last from the 5th to the 12th September, 1897, and you will find in the appended prospectus, the list of the sections, in which it will give them great pleasure to see every scholar to whom this invitation may be addressed inscribe his name.

I have, &c.,

CHARLES SCHEFER,

PARIS, *May* , 1896. *President.*

A subsequent notice will issue showing the concessions which will be granted to Oriental Scholars by the various Railway Companies, and also the programme for each day of their stay in Paris.

Mr. ERNEST LEROUX, has been appointed Treasurer and Publisher of the Congress.

It has been decided that the subscription shall be twenty Francs (about sixteen shillings and eight pence, say Rupees fifteen.)

INTERNATIONAL CONGRESS OF ORIENTALISTS.

XITH SESSION,—PARIS, SEPTEMBRE, 1897.

Protector of the Congress.

M. LE PRÉSIDENT DE LA RÉPUBLIQUE.

STANDING COMMITTEE.

President: M. Charles Schefer, Membre de l'Institut, Administrateur de l'École des Langues Orientales vivantes, rue de Lille, 2.

Vice-President: M. Barbier de Meynard, Membre de l'Institut, Président de la Société Asiatique. Professeur au Collège de France, boulevard de Magenta, 18.

Secretaries: MM. Maspero, Membre de l'Institut, Professeur au Collège de France, avenue de l'Observatoire, 24.

Henri Cordier, Vice-Président de la Commission Centrale de la Société de Géographie, Professeur à l'Ecole des Langues Orientales vivantes, place Vintimille, 3.

Members: MM. E. Aymonier, Directeur de l'École Coloniale, rue du Général Foy, 46.

Em. Guimet, Directeur du Musée Guimet, place d'Iéna.

Jules Oppert, de l'Institut, Professeur au Collège de France, rue de Sfax, 2.

G. Schlumberger, de l'Institut, avenue d'Antin, 27.

Em. Senart, de l'Institut, rue François Ier, 18.

Marquis De Vogüé, de l'Institut, rue Fabert, 2.

Treasurer and Publisher of the Congress: M. Ernest Leroux, rue Bonaparte, 28.

GENERAL ORGANIZING COMMITTEE.

First Section.

Languages and Archæology of Aryan Countries.

(*a.*) Languages and Archæology of India.

MM. Barth, Bréal, Senart, Vinson.

Secretary: M. Sylvain Lévi.

(*b.*) Iran:

MM. Carriére, Dieulafoy, Drouin, Blochet.

Secretary: M. Meillet.

(*c*) Linguistics:

MM. Bréal, V. Henry, Ed. Specht.

Secretary: M. Louis Duvau.

SECOND SECTION.

Languages and Archæology of the Far East.

(*a.*) China and Japan.

MM. Cordier, Devéria, Guimet, De Rosny, Ed. Specht.

Secretary : M. Ed. Chavannes.

(*b.*) Indo-China, Malaya et Polynesia :

MM. Aymonier, Bonet, Cordier, Marre.

Secretary : M. P. Lefévre-Pontalis.

THIRD SECTION.

Musalman Languages and Archæology.

MM. Barbier De Meynard, Derenbourg, Houdas, Schefer.

Secretary : M. Casanova.

FOURTH SECTION.

Semitic Languages and Archæology.

(*a.*) Aramæan, Hebrew, Phœnician, Ethiopian :

MM. Ph. Berger, Rubens Duval, Marquis De Vogüé.

Secretary : M. L'Abbé Chabot.

(*b.*) Assyria :

MM. Heuzey, J. Oppert, L'Abbé Quentin, Thureau-Dangin.

Secretary : R. P. Scheil.

FIFTH SECTION.

Egypt and the Languages of Africa.

MM. Guieysse, Le Général Hanoteau, Lefébure, Maspero, Pierret.

Secretaries : MM. René Basset et Moret.

SIXTH SECTION.

The East, Greece.—Relations of Hellenism with the East,—Byzantium.

MM. D. Bikélas, E. Legrand, G. Schlumberger.

Secretaries : MM. Jean Psichari et Théodore Reinach.

SEVENTH SECTION.

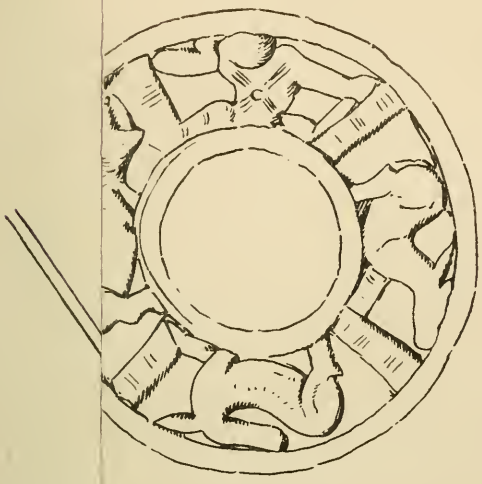
Ethnography, Folk-lore of the East.

MM. Le Prince Roland Bonaparte, Le Docteur E.-T. Hamy, Girard De Rialle.

Secretary : M. F. Grenard.

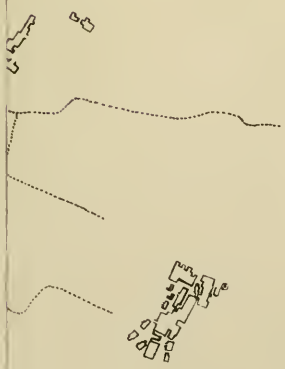
Plate VII.

erracotta Plaque.



$\frac{1}{2}$

Ghōralōtarī



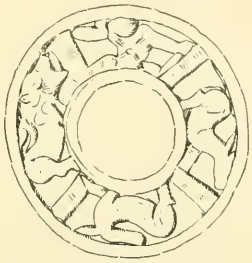
Rānīpur

ound.

MAP OF GŌPĀLPUR

Scale 48 inches to one Mile

Terracotta Plaque



$\frac{1}{2}$

A. Place where bricks were found.

D.D. Dharma Dehi.

The following papers were read:—

1. *Buddhist Sūtras Inscribed on Bricks found at Gōpālpur in the Gōrakhpur District.*—*By* VINCENT A. SMITH, *Indian Civil Service, and* WILLIAM HOEY, D. LITT., *Indian Civil Service.* (With Plate VII.)

The tract of country south of Gōrakhpur lying between the Amī, Kuāna, and Ghāgra rivers is singularly rich in ancient sites, which have as yet received very slight examination.

One of the most ancient of these sites is marked by the village Gōpālpur, which is situated about two miles west of the bazaar known as Gōla, a short distance from the northern bank of the Ghāgra, and about twenty-eight miles almost due south of Gōrakhpur. See the map, Plate VII.

The largest mound north-west of the village is known as Kōpgaṛh or Kōpwā Ḍīh. The horseshoe shaped sheet of water called Barkā, or Barjītā Tāl, encloses another mound, which has the curious name of Mañjhratiyā Ḍīh, or 'the midnight mound.'

Somewhere in these ruins a hoard of twenty gold Gupta coins was found in July 1854, which included seven specimens of the coinage of Chandra Gupta II. (*circa* A.D. 400).[1] At a later date an indigo planter is said to have obtained a pot of cowries in Kōpwā Ḍīh, and the curious little terracotta plaque herewith sent (see Plate VII) was obtained by Dr. Hoey from the same place. The ruins also yield great earthen vessels, pestles, and other utensils of terracotta, and numerous specimens of spindle whorls (*ṭikrī*). Small stone stools (*caukī*,) of which Dr. Hoey possesses a specimen, frequently turn up, and indicate that the buildings included a Buddhist monastery. These stools, which are commonly from twelve to fifteen inches long, and six inches high, with four small feet, are found at many Buddhist sites, and were probably used by the monks to stand on when bathing.[2]

A small temple east of the village and an adjoining tank preserve a reminiscence of Buddhism in the name Dharm Ḍēhī. Though the temple in its existing form is modern, it is built partly of ancient materials. Moulded terracotta or brick ornaments, belonging to an older building, are inserted in the walls.

Folklore of the usual kind has grown up around the ruins, which are supposed by the villagers to mark the site of the fort and city of a Bhar Rājā. They are haunted by two spirits, one male, and the other female. The male deity is Bhaīsāsur, the buffalo demon, and is appeased by offerings of oilcake and chopped straw. The female spirit is simply called Dēī, and is fed with sweetened rice cooked in milk.

[1] Mr. Thomas in *J. A. S. B.*, xxiv. (1855), p. 499, and V. A. Smith in *J. A. S. B.*, Vol. LIII, Pt. I. (1884), p. 152.

[2] Cunningham, *Reports*, iii, 52; xi, 162; xvii, 4.

She is believed to be the ghost of a Brāhman girl buried alive in the foundations to protect a golden treasure.

A well-known myth is attached to the Barkā Tāl. Once upon a time, whenever any man came to the city, and wanted food and utensils in which to cook it, the *dharm naukā*, or 'boat of merit,' rose to the surface of the water, and supplied his needs with provisions and golden vessels. So long as the golden vessels were duly returned, the boat sank, and disappeared until again called for. But one day a covetous man stole the golden vessels, and since that day the mystic boat has been no more seen.[1]

Some months ago the local zemindar, who was building indigo vats, employed men to collect all the loose bricks which they could find. When the surface supply failed, the workmen began to dig in the Mañjhratiyā mound, and coming to a masonry floor, they broke into a chamber below, and extracted a number of bricks. Paṇḍit Rāmgharīb Caubē, who is a resident of Gōpālpur, noticed that one of the bricks so extracted was inscribed, and, having obtained it from the workmen, sent it to Mr. V. A. Smith.

Shortly afterwards (in January 1896) Dr. Hoey visited the spot, and succeeded in recovering the other inscribed bricks now submitted.

Dr. Hoey is of opinion that the masonry floor broken through by the labourers belonged to some comparatively modern building erected on the mound. He caused the hole to be re-opened and found that the inscribed bricks had been taken out of a small chamber about eight feet square and about eight feet below the surface, which was built of huge bricks, about a foot and a half long, and some three inches thick. The inscribed bricks are said to have rested on a sort of pedestal, or *vēdi*, made of brick, which was destroyed for the sake of the material. On a ledge in the chamber Dr. Hoey himself found a small earthen-ware saucer containing eleven copper coins, which had evidently been undisturbed since they were deposited.

The coins belong to the reigns of the great Kuṣān kings, Hima Kadphises, Kaniṣka, and Huviṣka, and therefore range in date from about A.D. 40 to about A.D. 150, according to the chronology generally accepted. They are all of well-known types, and include examples of the three leading forms of obverse used by Huviṣka, namely the elephant-rider, the throned king, and the king squatted cross-legged. One coin belongs to the 'Cock and Bull' Mitra series associated with Ayōdhya. The obverse, with bull to left, and the legend *Ayu Mitrasa* is distinct. The reverse, which should show the cock and palm-tree, is defaced.[2]

We now proceed to describe the bricks.

1 A similar legend attaches to the Kawwal Ḍīh tank at Gōrakhpur.

2 These *Ayu Mitrasa* coins, which were described by Carlleyle for the first time in 1880 (*J. A. S. B.*, Pt. I, Vol. XLIX, p. 27), are ascribed by Cunningham (*Coins*

No. I, that sent in by Paṇḍit Rāmgharīb Caubē, is about $10\frac{1}{2}$ inches long, by $4\frac{1}{2}$ broad, and one inch thick. Unluckily it was broken in transit, but, notwithstanding the fracture, very few letters have been lost. The characters are about quarter of an inch in height, and are inscribed on both sides of the brick, nine lines on the front, and ten on the back. The writing was evidently incised before the brick was baked. The moulding was roughly done, and the surface is consequently uneven, and the letters are often irregularly formed.

We have obtained a fairly satisfactory facsimile of the text of this brick by pencilling over a paper *estampage*, which is submitted herewith. In its present state the brick would not yield a clear photograph, but if it were soaked for a long time, and the letters very carefully cleared of mud, a tolerably distinct photograph might be obtained. One side of one of Dr. Hoey's bricks has thus been cleaned.

The bricks Nos. II and III are perfect, except for some minute chippings.

No. II measures $11\frac{1}{2}$ by $4\frac{3}{4}$ inches, and has twelve lines of writing on one side, and ten on the other.

No. III measures $9\frac{1}{4}$ by $4\frac{1}{2}$ inches and has twelve lines of writing on each side.

No. IV (fragments A, B, C) is in bad condition. It measured originally about 9 inches by 5, and had twelve lines of writing on one side, and six on the other.

No. V is a small fragment of a brick, the rest of which has been lost.

The fragments of Nos. IV and V were recovered by Dr. Hoey near the indigo vats, into which several of the inscribed bricks have probably been built. Others are believed to be still in the villagers' hands.

The discovery of these brick records seems to us to be of much interest and importance. So far as we are aware, no similar discovery has ever before been made in India, and it is startling to find the Indian Buddhists using brick, as the Assyrians did, to preserve long documents.

The characters of the inscriptions, which use throughout the tridendate form of unattached *y*, belong to the Northern alphabet of the third or fourth century. The coins associated with the bricks indicate that the earliest possible date should be assigned to the inscriptions.[1]

Anc. I. p. 93, Pl. ix, 14, 15) to Sūrya Mitra. It seems to us impossible to read the characters as *Sūrya*, although *Ayu* gives no sense. The characters for *A* and *S* are quite distinct.

[1] The inscriptions on bricks found at Shōrkōṭ in the Jhaṇg district of the Pañjāb are merely masons' marks, notes to indicate the proper laying of the bricks. (Cunningham, *Reports*, v, 102.) Bricks inscribed with the name of *Śrī Kumāra Gupta* have been found at Bhitarī in the Ghāzīpur district (*ibid.* I, 97, Pl. xxx.)

The language is good grammatical Sanskrit prose. With the exception of the legends of the Gupta coins, inscriptions dating from the period between A.D. 250 and 400 are almost altogether lacking. The discovery now announced, therefore, helps to fill a considerable gap in Sanskrit palaeography and epigraphy.[1]

We are not prepared to offer complete transcripts and translations of these curious brick inscriptions, and must leave that task to professed scholars. But there is very little difficulty in deciphering most of the characters, and there is no doubt as to the general nature of the contents of the inscriptions. They all deal with Buddhist ontology, and specially with the doctrine of the twelve *nidānas*, or 'causes' which connect *Avidyā*, or Blind Ignorance, with *Jarā-maraṇa*, Decay and Death, and thus form the *Bhava-cakra*, or Cycle of Existence.

This ontological doctrine has recently been twice discussed and illustrated in the publications of this Society, and is, of course, familiar to all students of Buddhism.

Dr. Waddell, in a most valuable paper, has shown that the so-called Zodiac in the cave-paintings at Ajanṭā is really a pictorial represention of the Cycle of Existence, practically identical with the pictures now commonly used by the Lamas of Tibet.[2]

Paṇḍit Hari Mōhan Vidyābhūṣan has published a Sanskrit text and English translation of the *Bhava-cakra Sūtra* in eleven *çlōkas*, forming the 27th *Pallava* of the *Avadāna Kalpalatā*, entitled *Pratītya Samutpāda Avadāna*, the work of the poet Kṣēmēndra.[3] This metrical exposition of the doctrine by Kṣēmēndra is practically identical in substance with the prose version given on brick No. I. The inscription on that brick is a complete *Sūtra*, and begins with the well-known formula, *Evam mayā çrutam ēkasmin samayē Bhagavān Çrāvastyām*, etc :—"Thus have I heard—Once upon a time, Bhagavān was dwelling at Çrāvastī in the Jētavana, in the garden of Anāthapiṇḍada, etc."

The other bricks (Nos. II–V) do not seem to contain the opening *sūtra* formula, though all treat of the *nidānas*.

Bricks Nos. II–V are the property of Dr. Hoey, who proposes to present No. II, to the British Museum, and No. III, to the Lucknow Provincial Museum. No. I is the property of Mr. V. A. Smith, who gave a high price for it, and reserves the question of its disposal. Nos. IV and V, will be disposed of under Dr. Hoey's instructions.

1 E. Senart, *Indian Antiquary for July* 1892, Vol. XXI, p. 209: and V. A. Smith *Observations on the Gupta Coinage, J. R. A. S. for* 1893, p. 90.

2 *The Buddhist Pictorial Wheel of Life.* By L. A. Waddell, M. B. With three plates. (*J. A. S. B*, for 1892, Part I, p. 133)

3 *The Buddhist Bhavacakra* (Cycle of Existence). By Hari Mōhan Vidyābhūṣan. (*Proc. A. S B.* for 1892, p. 98.)

TRANSLITERATION OF INSCRIPTION ON BRICK NO. I.[1]

Front.

1 एवं मया श्रुतमेकस्मिन्समये भगवाञ्छ्रावस्त्यां विहरति जेतवने
2 नाथपिण्डदस्यारामे तत्र भगवान्भिक्षूनामन्त्रयति स्म धर्माणां वो भि
3 क्षव आचयं च देशयिष्याम्यपचयं च तच्छृणुत[साधचासुव्वच]
4 मनसिकुरुत भाषिष्ये धर्माणामाचयः कतमः यदुतास्मिन्सती
5 दं भवत्यस्योत्पादादिदमुत्पद्यते यदुता विद्याप्रत्ययाः संस्काराः संस्कार
6 प्रत्ययं विज्ञानं विज्ञानप्रत्ययं नामरूपं नामरूपप्रत्यय स्पर्शः
7 स्पर्शप्रत्यया वेद[ना] वेदनाप्रत्यया तृष्णा तृष्णाप्रत्ययमुपादानमु
8 पादानप्रत्ययो भवः भवप्रत्यया जातिर्जातिप्रत्यया जरामरण
9 शोकपरिदेवदुःखादैर्मनस्योपायासाः संभवत्येवमस्य महतो

BACK.

1 दुःखस्कन्धस्य समुदायो भवत्ययमुच्यते धर्माणामाचयः धर्माणा
2 मपचयः कतमः यदुता विद्यानिरोधात्संस्कारनिरोधः संस्कारनिरोधाद्वि
3 ज्ञाननिरोधः विज्ञाननिरोधान्नामरूपनिरोधः नामरूपनिरोधात्षडायतन
4 निरोधः षडायतननिरोधाद्वेदनानिरोधः वेदनानिरोधात्तृष्णानिरोधः
5 तृष्णानिरोधादुपादाननिरोधः उपादाननिरोधाद्भवनिरोधः भवनिरोधाज्जाति
6 निरोधः जातिनिरोधाज्जरामरणशोकपरिदेवदुःखादैर्मनस्योपायासा
7 निरुध्यन्त्येवमस्य [केवम]स्य महतो दुःखस्कन्दस्य निरोधो भवत्ययमुच्यते
8 धर्माणामपचयः धर्माणां वो भिक्षव आचयं च देशयिष्याम्यपचयं च
9 इति मे यदुक्तमिदमेतत्प्रत्युक्तमिदमवोचद्भगवानात्तम[नस . स्ते]
10 भिक्षवो भगवतो भाषितम[स्य] नन्द[ः] ॥

2. *Supplementary List of the Fishes of India with Descriptions of some new species.*—*By* A. ALCOCK, M.B., C.M.Z.S., *Superintendent of the Indian Museum.*

3. *Noviciæ Indicæ, XIII. Further notes on Indian* Convolvulaceæ. —*By* DR. D. PRAIN.

4. *Report on some* Paguridæ *Collected by the R. I. M. S.*, "*Investigator.*"—*By* J. R. HENDERSON, M.B., F.L.S., *Communicated by the Natural History Secretary.*

5. *Noviciæ Indicæ, XIV. Some additional* Solanaceæ.—*By* DR. D. PRAIN.

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

[1] [Compared with the original and revised by Dr. A. F. Rudolf Hoernle. The aksharas enclosed in brackets are damaged and not fully legible.]

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

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———. Photographic Society of India,—Journal, Vol. IX, No. 6.

The Hague. Koninklijk Instituut voor de Taal.,—Land-en Volkenkunde van Nederlandsch Indië,—Naamlijst der Leden op 1st April, 1896.

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Prague. K. K. Sternwarte zu Prag,—Magnetische und Meteorologische Beobachtungen,—Ja

Rome. La Societá degli Spettroscopisti Italiani,—Memorie, Vol. XXV, No. 5.

Taiping. Perak Government,—Gazette, Vol. IX, Nos. 11 and 13.

Turin. La R. Accademia della Scienze di Torino,—Atti, Tome XXXI, Nos. 6–11.

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Wellington. Polynesian Society,—Journal, Vol. V, No. 1.

Zagreb. Hrvatskoga Arheološkoga Druśtva,—Viestnik, Nove Serije, Godina I.

Miscellaneous Presentations.

Thirty-eighth Annual Report of the Trade and Commerce of Chicago for the year ending December, 31st 1895. 8vo. Chicago, 1896.

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Report on the Lunatic Asylums of the Central Provinces for the year 1895. Fcp. Nagpur, 1896.

Chief Commissioner, Central Provinces.

Bulletin of the Madras Government Museum, No. 4. 8vo. Madras, 1896.

Government Museum, Madras.

Administration Report on the Jails of Bengal for the year 1895. Fcp. Calcutta, 1896.

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The Indian Antiquary for March, 1896. Fcp Bombay, 1896.

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Annual Report of the Indian Museum, April 1894 to March 1895. 8vo. Calcutta, 1896.

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Das, Shyam Sunder. The Nagari Character. 8vo. Benares, 1896.

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Srimati Sundari Bālā Roy.

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Braunschweig. Jahresbericht über die Fortschritte der Chemie und verwandter Theile anderer Wissenschaften,—Heft I, 1891.

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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR AUGUST, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 5th August, 1896, at 9-15 P.M.

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

The following members were present:—

Maulvī Abdul Wali, T. H. Holland, Esq., M. A. Kader, Esq., W. A. Lee, Esq., Dr. F. P. Maynard, L. de Nicéville, Esq., Paṇḍit Haraprasād Çāstrī, Dr. G. Watt, C. R. Wilson, Esq.,

Visitor:—Maulvī Abdul Azeez Khan.

The minutes of the last meeting were read and confirmed.

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

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

Thomas M. Munro, Esq.

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

Dr. V. S. Balasundra Mudaliar, Medical Officer, Channagiri, Shimoga District, proposed by Surgeon-Lieut.-Col. G. Ranking, seconded by C. R. Wilson, Esq.

H. F. Samman, Esq., I.C.S., Nowgong, Assam, proposed by L. de Nicéville, Esq., seconded by A. Pedler, Esq.

E. M. Konstam, Esq., I.C.S., proposed by the Hon. Mr. Justice Amir Ali, seconded by C. R. Wilson, Esq.

1857

Babu Çyāmdās Mukherjee, proposed by Dr. Āçutoṣa Mukherjee, seconded by C. R. Wilson, Esq.

Nawab Ali Hosan Khan, proposed by the Hon. Mr. Justice Amir Ali, seconded by C. R. Wilson, Esq.

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

Col. E. Mockler.
Col. M. M. Bowie.

The Chairman announced that the Council had elected Mr. L. de Nicéville, Anthropological Secretary to the Society, in place of Mr. F. Finn, resigned.

The Chairman announced that a donation of Rs. 250 had been received from the Private Secretary to His Highness the Maharajah Scindia, Gwalior, on behalf of His Highness the Maharajah Scindia, for printing certain plates to illustrate the Rev. C. Maries' paper on coins of the native states.

It was resolved to thank His Highness the Maharajah Scindia, Gwalior.

The Chairman laid on the table the prospectus of the 7th International Geological Congress to be held in St. Petersburg, in August 1897.

The following papers were read:—

1. *On some traces of the Kal-Mon-Anam in the Eastern Naga Hills.—By* S. E. Peal, F.R.G.S.

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

2. *A Tibetan guide-book to the lost sites of Buddha's Birth and Death.—By* Dr. L. A. Waddell, M.B., LL.D.

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

3. *A rare gold coin of Jalálu-d-dín Muḥammad Sháh of Bengal.—By* Richard Burn, I.C.S.

817–35 H: 1414–31 A.D.

Wt. 160. Diam. ·95″ *N.*

Obverse in circle.

السلطان
(ال)عادل جلال الدنيا
(و) الدين ابو
(المج)اهد محمد شاه
السلطان

No margin.

Reverse in quatrefoil

ناصر
امير المومنين
غوث الاسلام
و المسلمين

Margins illegible.

This coin is not in Thomas or in the Panjab and Calcutta catalogues, or in the B.M. catalogue. The obverse corresponds with that of No. 9877, p. 146 of the Calcutta catalogue, a silver coin, and the epithet "Ghauṣ al islám wa al masalmin" is found on a coin of Sikandar Sháh bin Iliás Sháh, No. 9872, p. 143.

4. *A new Mint of Akbar.—By* Richard Burn, I.C.S.

The coin which I send for inspection bears a mint name which I read as Mánikpúr. If this reading is correct it adds a new mint city of Akbar to those already known. The coin is in good preservation, weighs 325 grains and its diameter is ·875″ and every letter except the "káf" is unmistakable. The unit figure, however, is not on the reverse, though there seems to be a trace of 9.

Mánikpúr has been a celebrated place since the conquest of Qanauj, and indeed its Shaikhs claim to have been settled there more than a century and a half before. Standing on the bank of the Ganges in the district of Partabgarh opposite to Karra, it has again and again been the scene of battles under both Patháns and Mughals. From Katlagh Khán under Náṣiru-d-dín Maḥmúd in A.H. 654 to the Maráthás in A.D. 1760–61, rebels to the central government have ravaged the neighbourhood. It was in the sands between Karra and Mánikpúr, according to Ziáu-d-dín Barní that Alau-d-dín Muḥammad treacherously seized his uncle Jalálu-d-dín Fíroz Sháh by the hand, at the same time giving the signal for his assassination. Under Akbar the sarkár of Mánikpúr was included in the Subáh of Allahábád, and even in his reign the same lawlessness prevailed. Perhaps the most important battle of that time was that in A.H. 974 when Akbar's rapid approach forced Khán Zamán Khán to raise the siege of Shergarh and withdraw to Karra where his brother Bahádur Khán was besieging Majnún Khán Kákshál, the Jágírdár. The Emperor followed and at Rai Bareli heard that the rebels intended joining the sons of Mirza Sulṭán. By a forced march he reached Mánikpúr, and as no boats could be secured he swam the river on an elephant followed by a hundred cavalry. It was the old story of the army spending its night feasting in imagined security. Before they had time to recover from their confussion Akbar was in their midst joined by Majnún Khán and Ásaf Khán Jágírdár of Karra. Khán Zamán Khán was trodden to death by an elephant, and Bahádur Khán was killed by some of the Amírs.

The vicissitudes of Mánikpúr came to an end in 1762 when it was incorporated in Oudh by Shujá-ud-daulat, in which province it still remains. Its population at present is under 2,000, but the gardens and groves in its neighbourhood still contain ruins that bear witness to its former importance.

Notwithstanding the many fights that took place in the neighbourhood, the supremacy of the central government was not shaken during the reign of Akbar. The coin has nothing to distinguish it from the ordinary dám, and I should therefore judge that more coins of this mint, and of different years will come to light. During the decade to which it must belong (980–989) there was no serious attempt on the place, and it appears to have been an ordinary mint. The coin was obtained in a bazar in the Farukhabad District.

Description of coin.

Wt. 325 D. ·875 Æ

Obverse.	Reverse.
مانکپور	?
فلوس	(هشتاد) دو
ضرب	۹۸
	(نهصد)و
	سنه

Library.

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

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presented by the respective Societies and Editors.

Angers. La Société d'Etudes Scientifiques d'Angers,—Bulletin, Tome XXIV, 1894.

Baltimore. Johns Hopkins University,—American Chemical Journal, Vols. XVI, Nos. 7 and 8 ; XVII, 1–7.

———. ———. Americau Journal of Mathematics,—Vol. XVII, Nos. 1–4.

———. ———. American Journal of Philology,—Vol. XVI, Nos. 1–4.

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———. ———. Studies in Historical and Political Science, 12th Series, Nos. VIII–XII; 13th Series, Nos. I—VIII.

Berlin. Berliner Entomologische Zeitschrift,—Band XLI, Heft 1.

Bordeaux La Société Linnéenne de Bordeaux,—Actes, Tome XLVII.

Boston. American Philological Association,—Transactions, Vol. XXVI.

Caen. La Société Linnéenne de Normandie,—Mémoires, Vol. XVIII, Nos. 1 et 2.

Calcutta. Geological Survey of India,—Memoirs, Palaeontologia Indica. Series XVI, Vol. I, Part 1.

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———. Field Columbian Museum,—Publications, Anthropological Series, Vol. I, No. 1; Botanical Series, Vol. I, No. 2; Report Series, Vol. I, No. 1; Zoological Series, Vol. I, Nos. 1 and 2.

Dublin. Royal Irish Academy,—List of Members, 1895.

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———. ———. Transactions,—Vol. XXX, Parts 15-17.

Florence. La Società Italiana di Antropologia, Etnologia e Psicologia Comparata,—Archivio per L'Antropologia e la Etnologia, Tome XXV, No. 3.

Halle. Die Kaiserliche Leopoldinsch-Carolinische Deutsche Akademie der Naturforscher,—Verhandlungen, Band LXI und LXII.

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

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Madison, Wisconsin. Wisconsin Academy of Sciences, Arts and Letters,—Transactions, Vol. X.
Melbourne. Royal Society of Victoria,—Transactions, Vol. IV.
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Munich. Die K. B. Akademie der Wissenschaften zu München,—Sitzungsberichte, Math-phys, Heft 1, 1896.
Mussoorie, The Indian Forester,—Vol. XXII, No. 7.
Nantes. La Société des Sciences Naturelles de l'ouest de la France,—Bulletin, Tome V, Nos, 2 et 3.
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———. Musée Guimet,—Annales, Tome V.
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———. Journal Asiatique,—IX^{e} Série, Tome VII, No. 1.
———. La Société de Géographie,—Bulletin, 7^{e} Série, Tome XVI, No. 4.
———. ———. Comptes Rendus des Séances,—Nos. 10–12, 1896.
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———. Die K. K. Zoologisch-botanische Gesellschaft in Wien,—Verhandlungen, Band XLVI, Heft 5 and 6.

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Castries, Henry de. L' Islam Impressions et Etudes. 8vo. Paris, 1896.

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Boas, F. Chinook Texts. 8vo. Washington, 1894.

Fowke, G. Archeologic Investigations in James and Potomac Valleys. 8vo. Washington, 1894.

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KARSLAKE, W. J. I. Orthocyanbenzenesulphonic Acid. II. The action of Alcohols upon the High-melting Chloride of Orthosulphobenzoic Acid. 8vo. Easton, 1895.

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LEASE, E. B. A Syntactic, Stylistic and Metrical Study of Prudentius. 8vo. Baltimore, 1895.

LEWIS, E. S. Guernsey: Its people and dialect. 8vo. Baltimore, 1895.

LEWIS, E. P. The Measurement of Some Standard Wave-Lengths in the Infra-Red Spectra of the Elements. 8vo. Baltimore, 1895.

MACKENZIE, A. S. On the attractions of Crystalline and Isotropic masses at small distances. 8vo. 1894.

MANNING, E. P. On the Representation of a Function by a Trignometric Series. 8vo. Baltimore, 1894.

MOALE, P. R. I. Para-methoxy-ortho-sulpho-benzoic Acid and its Sulphonfluoresceins. II. The Action of Absolute Methyl Alcohol on Para-diazo-ortho-toluene-sulphonic Acid in the Presence of Certain Substances. 8vo. Baltimore, 1894.

NEWELL, L. C. Parabenzoyldiphenylsulphone and related compounds. 8vo. Easton, 1895.

NORTHRUP, E. F. A Method for Comparing the Values of the Specific Inductive Capacity of a Substance under Slowly and Rapidly Changing Fields. Results for Paraffin and Glass. 8vo. Baltimore, 1895.

TOLMAN, W. H. The History of Higher Education in Rhode Island. 8vo. Washington, 1894.

TUPPER, F. Anglo-Saxon Daeg-Mael. 8vo. Baltimore, 1895.

WALKER, M. S. The Oxides of Manganese formed by the Spontaneous Decomposition of the Manganese Dioxide prepared by treating Manganous Sulphate with Potassium Permanganate and the Reduction of Potassium Permanaganate by Manganese Dioxide prepared in the wet way. 8vo. Baltimore, 1894.

WOLFF, F. A. On the Influence of Magnetism on Chemical Action. 8vo. Easton, 1895.

JOHNS HOPKINS UNIVERSITY, BALTIMORE.

Geschichte der Bibliothek und Naturaliensammlung der Kaiserlichen Leopoldinisch—Carolinischen Deutschen Akademie der Naturforscher von Dr. Oscar Grulich. 8vo. Halle, 1894.

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Die Kaiserliche Leopoldinisch—Carolinische Deutsche Akademie der Naturforscher, Halle.

Monthly Weather Review for December 1895 and January and February 1896. 4to. Calcutta, 1896.

Meteorological Reporter to the Government of India.

Annual Report of the United States Geological Survey, Washington, for the year 1892-93, Parts I-II. 4to. Washington, 1893-94.

Monographs of the United States Geological Survey, Washington, Vols. XXIII and XXIV. 4to. Washington, 1894.

United States Geological Survey, Washington.

Ehrenfeld, C. H. A Study of the Chemical Behavior of Tungsten and Molybdenum and their Trioxides. 8vo. York, 1894.

Hitchcock, F. R. M. Tungstates and Molybdates of the Rare Earths. 8vo. New York, 1894.

Memorial Volume of the Commencement Week of 1894 of the University of Pennsylvania. 8vo. Boston, 1894.

University of Pennsylvania.

Cutting, S. W. Der Conjunktiv bei Hartmann von Aue. 8vo. Chicago, 1894.

University of Chicago.

Periodicals Purchased.

Calcutta. Indian Medical Gazette,—Vol. XXXI, No. 7.

Geneva. Archives des Sciences Physiques et Naturelles,—4e Série, Tome I, No. 6.

Leipzig. Annalen der Physik und Chemie,—Band LVIII, Heft 2 und 3.

London. The Messenger of Mathematics,—Vol. XXV, Nos. 6-12.

———. Numismatic Circular,—Vol. IV, No. 44.

Book Purchased.

Orme, Robert. Historical Fragments of the Mogul Empire, of the Morattoes, and of the English Concerns in Indostan. From the year 1659. 4to. London, 1805.

PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR NOVEMBER, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 4th November, 1896, at 9 P.M.

THE MOST REV. ARCHBISHOP DR. P. GOETHALS, S.J., in the chair.

The following members were present:—

Dr. A. R. S. Anderson, H. K. W. Arnold, Esq., F. Finn, Esq., T. H. Holland, Esq., Bābu Pañcānana Mukerjee, L. de Nicéville, Esq., Dr. G. Ranking, Bābu Nagendranatha Vasu, Pandit Mahēndranatha Vidyānidhi, C. R. Wilson, Esq.

Visitors:—W. Mackenzie, Esq., A. G. Westerhout, Esq.

The minutes of the last meeting were read and confirmed.

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

The SECRETARY reported that the following gentlemen had been elected Ordinary Members of the Society during the recess in accordance with Rule 7:—

Dr. V. S. Balasundra Mudaliar.
H. F. Samman, Esq., I.C.S.
E. M. Konstam, Esq., I.C.S.
Babu Syāmdās Mukerjee, M.A.
Nawab Ali Hosan Khan.
A. T. Pringle, Esq.

1873

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

A. J. Grant, Esq., I.C.S.
J. A. Cave-Browne, Esq., I.C.S.
Babu Satiskisore Acharya Chaudhury.

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

B Suryanarain Row, Esq., B.A., Vakil, Bellary, Madras Presidency, proposed by Bābu Pañcānana Mukerjee, seconded by Pandit Haraprasād Çāstrī.

A. W. Davis, Esq., I.C.S., Deputy Commissioner, Naga Hills, proposed by E. A. Gait, Esq., seconded by Dr. G. A. Grierson.

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

Kumar Dinendranarain Roy.
Raja Ramranjan Chuckerbutty.
T. N. Mukerjee, Esq.

The Secretary reported the death of the following member :—

Manomohan Ghose, Esq.

The Chairman announced that the Council had elected Mr. Frank Finn, Natural History Secretary to the Society in the place of Dr. A. W. Alcock, resigned.

The Philological Secretary exhibited a photograph of a cup-marked stone found in Kashmir forwarded by Mrs. Harriet G. M. Murray-Aynsley and read a note on it.

The Anthropological Secretary exhibited fragments of pottery forwarded by Surgeon-Captain F. P. Maynard, I.M.S.

The following papers were read :—

1. *The Bakhtiari Hills, an itinerary of the road from Isfahān to Shushtor.*—*By* Richard Burn, I.C.S., *and* Charles Norman Seddon, I.C.S.

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

2. *Notes on new salts of Cobalt and Nickel.*—*By* Nagendra Chandra Nag, M.A., *Communicated by* Alex. Pedler, F.R.S.

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

3. *Scraps of Kulu folk-lore:—No.* 1, *Marriage Customs; No.* 2, *Superstitions; No.* 3, *Gods and Language.—By* A. Grahame Young, *Communicated by the Anthropological Secretary.*

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

4. *Note on the Prolegomena to the Ẓafarnāma.—By* H. Beveridge.

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

5. *Notes on the action of Nitric Oxide on Alkalies.—By* Alex. Pedler, F.R.S., *and* Jyotibhushan Bhaduri, M.A.

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

6. *On Bībrbian, a goddess universally worshipped in the Punjab by native women with child.—By* Manmatha Nath Chatterjee, *Professor of the Patiala College.*

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

7. *On the Kāçmīrī Vowel System.—By* Dr. G. A. Grierson, C.I.E.

(Abstract.)

The vowel system of Kāçmīrī is extremely intricate, and resembles English in this, that the spelling of a word gives an insufficient clue to its pronunciation. This is due to the important part which epenthesis plays in the pronunciation of the language. That is to say, the frequency with which a final short vowel is not itself pronounced, but affects the pronunciation of the vowel of the preceding syllable, thus giving rise to a number of diphthongal and broken sounds, which are not represented by the letters composing the word. A similar peculiarity exists in English. For instance, take the word *mar*. Here the *a*, has the sound of *ah*. But if we add a final *e* to this word, we get the word *mare*, in which *e* is not pronounced, but epenthetically affects the preceding *a*, so that it is pronounced like a Sanskrit ए *ē* and no longer like *ah*.

In Kāçmīrī, no less than three different vowels are used in this way. Placed at the end of a word, they are hardly audible, or are not pronounced at all, but they altogether change the sound of the preceding vowel. These three vowels are *i*, *u*, and *ū*, and when so used, the author represents them by small letters above the line, thus ^{i}, ^{u}, ^{ū}. By native grammarians they are called *mātrā*-vowels. As an example of their use, the words *kaṛ^{i}*, *kaṛ^{u}*, and *kaṛ^{ū}*, may be taken. Roughly speaking, the first is pronounced something like *kyrie*, the second like *core*, and the third like the German *kür*. So also, the base *bōl-*, speech, when the feminine termination *-i* is added to it is pronounced *bū^{i}l^{i}*

the base *nīl-*, dark green, when the masculine termination *u* is added, becomes *nyūl*^{u}; and the root *bōz-*, hear, when the feminine termination *ū* is added, becomes *būz*^{ū}.

The author's object has been to discuss this question of epenthesis in Kāçmīrī as thoroughly as possible, and for this purpose, he has prepared lists of words, showing the result of every possible occurrence of these *mātrā*-vowels.

The results are interesting and explain many peculiarities in Kāçmīrī declension and conjugation.

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

8. *On the Harparowri, or the Behari women's ceremony for producing Rain.—By* Çarat Candra Mitra, M.A., B.L. *Corresponding Member of the Anthropological Society of Bombay. Communicated by the Anthropological Secretary.*

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

9. *Separation of Banswara from Dungarpur State in Rajputana.—By* Mohanlal Vishnulal Pandia, M.R.A.S.

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

10. *Cagayan Sulu, its Customs, Legends and Superstitions.—By* Ethelbert Forbes Skertchly. *Communicated by the Anthropological Secretary.*

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

Library.

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

Transactions, Proceedings, and Journals,

presented by the respective Societies and Editors.

Baltimore. Johns Hopkins University,—Circular, Vol. XV, No. 125.

Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—Notulen, Deel XXXIV, Aflevering 1.

———. ———. Tijdschrift voor Indische Taal,-Land-en Volkenkunde, Deel XXXIX, Aflevering 3.

Berlin. Die K. Akademie der Wissenschaften zu Berlin,—Abhandlungen, 1895.

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Bombay. Bombay Natural History Society,—Journal, Vol. X, No. 3.

Bombay. Indian Antiquary,—December, Part II, 1895; April and May, 1896.

———. Royal Asiatic Society,—Bombay Branch, Journal, Vol. XIX, No. 52.

Buenos Aires. Academia Nacional de Ciencias en Córdoba,—Boletin, Tome XIV, Nos. 3-4.

Budapest. La Société Hongroise de Géographie,—Bulletin, Tome XXIV, Nos. 1–5

Calcutta. Geological Survey of India,—Records, Vol. XXIX. Parts 2 and 3.

———. Indian Engineering,—Vol. XX, Nos. 6–18; and Index to Vol. XIX.

———. Indian Lancet,—Vol. VIII, Nos. 3, 5, 6, 8, 9.

———. Indian Meteorological Memoirs,—Vols, VI, Parts 3; IX, 6 and 7.

———. Maha-bodhi Society,—Journal, Vol. V, Nos. 5 and 6.

———. Microscopical Society of Calcutta,—Bulletin, Vol. V, Nos. 4 and 5.

———. National Magazine,—Vol X, No. 1.

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Copenhagen. K. Nordiske Oldskrift-Selskab,—Aarboger, II Rœkke, IX. Bind, 2 Hefte.

Chicago, Ill. American Antiquarian and Oriental Journal,—Vol. XVIII No. 4.

Dorpat. Die Naturforscher Gesellschaft bei der Universität Jurjew (Dorpat),—Archiv fur die Naturkunde Liv,—Ehst-und Kurlands, Band XI, Lieferung 1.

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Dresden. Die Gesellschaft Iris zu Dresden,—Deutsche Entomologische Zeitschrift, Band IX, Heft 1.

Dublin. Royal Dublin Society,—Scientific Proceedings, Vol. VIII (N. S.), Parts 3 and 4.

———. ———. Scientific Transactions, Vols. V (2nd series), Nos. 5–12; VI, 1.

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Edinburgh. Royal Society of Edinburgh,—Proceedings, Vol. XX.

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Frankfurt, a. M. Naturforschende Gesellschaft in Frankfurt am Main,—Senckenbergische, 1896.

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The Hague. Koninklijk Instituut voor de Taal,-Land-en Volkenkunde van Nederlandsch-Indië,—Bijdragen tot de Taal,-Land-en Volkenkunde van Nederlandsch-Indië, 6e Volgr, Deel II, Heft 3 und 4.

———. Nederlandsche Entomologische Vereeniging,—Tijdschrift voor Entomologie, Deel XXXVIII, Aflevering 2 und 3; XXXIX, 1.

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Helsingfors. La Société des Sciences de Finlande, — Observations publiées par L'Instituut Météorologique Central, 1895; et Tome Supplimentaire, 1881–90.

Ithaca. Cornell University, — Library Bulletin, Vol. III, No. 11.

Leige. Société Géologique de Belgique, — Annales, Tome XXIII, No. 2.

Leipzig. Die Deutsche Morgenländische Gesellschaft, — Zeitschrift, Band L, Heft 2.

———. Die. K. Sächsische Gesellschaft der Wissenschaften,— Abhandlungen, Band XXIII, Heft 2 und 3.

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———. Geological Society, — Quarterly Journal, Vol. LII, Part 3.

———. Institution of Civil Engineers, — Minutes of Proceedings, Vol. CXXIV, and List of Members corrected to June 1896.

———. Institution of Electrical Engineers — Journal, Vol. XXV, No. 124; and List of Members corrected to June 30th, 1896.

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London. Linnean Society,—Journal, Zoology, General Index to the first twenty Volumes.

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———. Nature,—Vol. LIV, Nos. 1395–1407.

———. Royal Asiatic Society,—Journal, October 1896.

———. Royal Astronomical Society,—Monthly Notices, Vol. LVI, No. 9.

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Mexico. Sociedad Cientifica "Antonio Alzate,"—Memorias y Revista, Tome IX, Nos. 7 et 8.

Montevideo. Museo Nacional de Montevideo,—Anales, No. 5.

Moscow. Société Impériale des Naturalistes de Moscou,—Bulletin, No. 1, 1896.

Munich. Die K. B. Akademie der Wissenschaften zu München,—Sitzungsberichte, Math-plys cl, Heft II, 1896.

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Mussoorie. The Indian Forester,—August and September 1896.

Paris. Journal Asiatique,—IX^{e} Série, Tome VII, No. 2.

———. Société de Géographie,—Bulletin, Nos. 1 et 2, 1896.

———. ———. Comptes Rendus des Séances, Nos. 13 et 14, 1896.

———. Société, Philomathique de Paris,—Bulletin, Tome VIII.

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Philadelphia. American Academy of Political and Social Science,—Annals, Vol. VIII, No. 2.

Rome. Revista Geografica Italiana,—Tome III, Nos. 7 et 8.

———. Società degli Spettroscopisti Italiani,—Memorie, Tome XXV, Nos. 7–9.

Schaffhausen. Die Schweiz. Entomologische Gesellschaft,—Mittheilungen, Band IX, Heft 8.

St. Petersburgh. L'Académie Imperiale des Sciences de St. Petersbourg,—Annuaire du Musée Zoologique, Nos. 1–3, 1896.

———. La Société Impériale Russe de Géographie,—Proceedings, Vol. XXXII, No. 2.

Stockholm. Kongl. Svenska Vetenskaps-Akademiens,—Bihang, Afd. I, Band XXI; II, XXI; III, XXI; IV, XXI.

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Sydney. Linnean Society of New South Wales,—Proceedings, Vol. XXI, Parts 1 and 2; and Supplement to Vol. XXI, Part I.

Taiping. Perak Government,—Gazette, Vol. IX, Nos. 16–24.

Tring. Novitates Zoologicæ,—Vol. III, No. 3.

Turin. R. Accademia della Scienze di Torino,—Atti, Tome XXXI, Nos. 12–15.

Vienna. Die Anthropologische Gesellschaft in Wien,—Mittheilungen, Band XXVI, Heft 3.

———. Die K. K. Geologische Reichsanstalt,—Verhandlungen, Nrn. 6–9, 1896.

———. Die K. K. Naturhistorische Hofmuseums,—Annalen, Band X, Nrn. 1 und 2.

———. Die K. K. Zoologisch-botanische Gesellschaft in Wien,—Verhandlungen, Band XLVI, Heft 7.

Washington. Biological Society of Washington,—Proceedings, Vol. X, pp. 1–43, 45–83, 85–101, 113–114.

Wellington. New Zealand Institute,—Transaction and Proceedings, Vol. XXVIII.

———. Polynesian Society,—Journal, Vol. V, No. 2.

Zurich. Die Naturforschende Gesellschaft in Zürich,—Festschrift, I–II.

Books and Pamphlets,

presented by the Authors, Translators, &c.

Burgess, Jas. Geographical Place-Names in Europe and the East. 8vo. London, 1895.

Grierson, G. A. On the Phonology of the Modern Indo-Aryan Vernaculars. 8vo. Leipzig, 1895-96.

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Haeckel, Ernst. Systematische Phylogenie der Wirbellosen Thiere (Invertebrata) Zweiter Thirl. 4to. Berlin, 1896.

Mitra, Sarat Chandra. Original Scientific Research in Bengal. 8vo. Calcutta, 1896.

Sanjana, Darab Dastur Peshotan. The Kârnâmê î Artakhshêr î Pâpakân; being the oldest surviving records of the Zoroastrian Emperor, Ardashîr Bâbakân. 8vo. Bombay, 1896.

Stein, M. A. Notes on Ou-K'ong's Account of Kaçmîr. 8vo. Vienna 1896.

Tate, G. P. A Memoir on the Country and Family of the Ahmadzai Khans of Kalat (Baluchistan). Fcp. Calcutta, 1896.

Miscellaneous Presentations.

An Introduction to the Study of Rocks in the British Museum (Natural History). 8vo. London, 1896.

Catalogue of the Birds in the British Museum, Vol. XXIV, XXV, XXVII. 8vo. London, 1895-96.

Catalogue of the Fossil Fishes in the British Museum (Natural History). Part 3. 8vo. London, 1895.

Catalogue of the Jurassic Bryozoa in the British Museum (Natural History). 8vo. London, 1896.

Catalogue of the Madreporarian Corals in the British Museum (Natural History), Vol. II. 4to. London, 1896.

Catalogue of the Mesozoic Plants in the British Museum (Natural History), Part 2. 8vo. London, 1896.

Catalogue of the Snakes in the British Museum (Natural History), Vol. III. 8vo. London, 1896.

British Museum, London.

Report of the Department of Land Records and Agriculture, Central Provinces for the year 1894-95. Fcp. Nagpur, 1896.

Report on the Jails of the Central Provinces for the year 1895. Fcp. Nagpur, 1896.

Report on the Judicial Administration (Civil and Criminal) of the Central Provinces for the year 1895. Fcp. Nagpur, 1896.

Report of the Police Administration of the Central Provinces for the year 1895. Fcp. Nagpur, 1896.

Report of the Sanitary Commissioner of the Central Provinces for the year 1895. Fcp. Nagpur, 1896.

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

Report on the workings of the Government Charitable Dispensaries in the Central Provinces for the year 1895. Fcp. Nagpur, 1896.

Report on the workings of the Registration Department in the Central Provinces for the year 1895-96. Fcp. Nagpur, 1896.

Resolution on the Revenue Administration of the Central Provinces for the year 1894-95. Fcp. Nagpur, 1896.

Returns of the Rail-borne Traffic of the Central Provinces during the quarter ending 31st March, 1896. Fcp. Nagpur, 1896.

Chief Commissioner, Central Provinces.

Solomon, Job. The Reader's Companion, being an easy guide how to speak and write Khasi. 8vo. Shillong, 1895.

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Report on the Administration of the Customs Department in the Bengal Presidency for the official year 1895-96. Fcp. Calcutta, 1896.

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Report on the Administration of the Registration Department in Bengal for the official years 1893-94, 1894-95 and 1895-96. Fcp. Calcutta, 1896.

Report on the Administration of the Salt Department during the year 1895-96. Fcp. Calcutta, 1896.

Reports of the Alipore and Hazaribagh Reformatory Schools for the year 1895. Fcp. Calcutta, 1896.

Report on the Calcutta Medical Institution for the year 1895. Fcp. Calcutta, 1896.

Report on Emigration from the Port of Calcutta to British and Foreign Colonies, 1895. Fcp. Calcutta, 1896.

Report on the External Trade of Bengal with Nepal, Tibet, Sikkim and Bhutan for the year 1895-96. Fcp. Calcutta, 1896.

Report on Inland Emigration for the year 1895. Fcp. Calcutta, 1896.

Report on the Legal Affairs of the Bengal Government for the year 1895-96. Fcp. Calcutta, 1896.

Report on the Lunatic Asylum of Bengal for the year 1895. Fcp. Calcutta, 1896.

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Report of the Sanitary Commissioner for Bengal for the year 1895. Fcp. Calcutta, 1896.

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Returns of the Rail and River-borne Trade of Bengal during the quarter ending the 31st March, 1896. Fcp. Calcutta, 1896.

GOVERNMENT OF BENGAL.

Selections from the Records of the Government of India, Foreign Department, No. CCCXXXIV. Fcp. Calcutta, 1896.

GOVERNMENT OF INDIA, FOREIGN DEPARTMENT.

Selections from the Records of the Government of India, Home Department, No. CCCXXX. Fcp. Calcutta, 1896.

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The Agricultural Ledger, Agricultural Series No. 17; Crop Disease and Pest Series, No. 1; Entomological Series, No. 5 (Sericulture); Medical and Chemical Series, Nos. 3–5; Mineral and Metallic Series, No. 5; Vegetable Product Series, Nos. 15, 18–26. Veterinary Series, Nos. 13, 18–24. 8vo. Calcutta, 1896.

Epigraphia Indica, Vol. IV, Pt. IV, June, 1896. 4to. Calcutta, 1896.

Watt, Geo. Index to the Dictionary of the Economic Products of India. 8vo. Calcutta, 1896.

Government of India, Rev. and Agri. Department.

Administration Report of the Madras Government Museum for the year 1895-96. Fcp. Madras, 1896.

Rea, Alexr. Châlukyan Architecture, including examples from the Ballâri District, Madras Presidency. 4to. Madras, 1896.

Government of Madras.

Report on the Horticultural Gardens, Lucknow for the year ending 31st March, 1896. Fcp. Lucknow, 1896.

Report on the progress and condition of the Government Botanical Gardens, Saharanpur and Mussoorie for the year ending 31st March, 1896. Fcp. Allahabad, 1896.

Smith, Edmund W. The Moghul Architecture of Fathpur-Sikri, Part II. 4to. Allahabad, 1896.

Government of N.-W. P. and Oudh.

Diack, A. H. The Kuln Dialect of Hindi. 8vo. Lahore, 1896.

Final Report of the Revision of the settlement of the Sialkot District in the Punjab. Fcp. Lahore, 1895.

Report on the Sanitary Administration of the Punjab for the year 1895. Fcp. Lahore, 1896.

Report on Vaccination in the Punjab for the year 1895-96. Fcp. Lahore, 1896.

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Harvard Oriental Series, Vols. II–III. 8vo. Cambridge, Mass, 1895-96.

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Monthly Weather Review from March, to May, 1896. 4to. Calcutta, 1896.

Report on the Administration of the Meteorological Department of the Government of India in 1895-96. 4to. Calcutta, 1896.

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Annals of the Royal Botanic Garden, Calcutta, Vol. V, Parts II; VI, I; VII. Fcp. Calcutta, 1895-96.

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Report of the United States National Museum, Washington for the year ending June 30th, 1893. 8vo. Washington, 1895.

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Calcutta. Calcutta Review,—October, 1896.

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Geneva. Archives des Sciences Physiques et Naturelles,—Tome II Nos. 7–9.

Leipzig. Annalen der Physik und Chemie,—Band LVIII, Heft 4; LIX, 1.

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London. Messenger of Mathematics,—Vol. XXVI, No. 1.

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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL,

FOR DECEMBER, 1896.

The Monthly General Meeting of the Asiatic Society of Bengal, was held on Wednesday, the 2nd December, 1896, at 9 P.M.

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

The following members were present:—

F. Finn, Esq., The Most Rev. Archbishop P. Goethals, A Hogg, Esq., T. H. Holland, Esq., W. H. Miles, Esq., Dr. D. M. Moir, L. de Nicéville, Esq., The Hon. Mr. H. H. Risley, C. R. Wilson, Esq.

Visitors: Dr. Th. Bloch, Denzil Ibbetson, Esq., Dr. F. O'Kinealy, B. C. Oldham, Esq., C. Saunders, Esq.

The minutes of the last meeting were read and confirmed.

Thirteen presentations were announced, details of which are given in the Library List appended.

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

B. Suryanarain Row, Esq., B.A.,
A. W. Davis, Esq., I.C.S.

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

Dr. Amritalal Sircar, L.M.S., 51, Sakaritola Lane, proposed by Pandit Mahēndranath Vidyānidhi, seconded by Bābu Nagendranātha Vasu.

1895-73

Pandit Tulsi Ram Misra, M.A., Tutor to H. H. The Raja Mursan, District Aligarh, proposed by Pandit Mahanlal Vishnulal Pandia, seconded by Pandit Haraprasād Çastrī.

"Shams-ul-ulama," "Khan Bahadur" M. Zakaullah, Delhi, proposed by A. F. M. Abdur Rahman, Esq., seconded by Dr. A. F. R. Hoernle.

The following gentleman has expressed a wish to withdraw from the Society :—

Sir C. A. Elliott, K.C.I.E.

The Chairman announced that the Council had agreed to Dr. Hoernle, editing the Society's Journal, Part I, as a temporary measure till other arrangements were made, in the place of Dr. G. A. Grierson, resigned.

Mr. T. H. Holland exhibited specimens showing flow-structure in dyke-rocks.

The Natural History Secretary exhibited specimens of new and rare reptiles.

The following papers were read :—

1. *A list of Kāçmīrī Verbs.—By* George A. Grierson, C.I.E.

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

2. *An account of the Reptilia collected by the Afghan-Baluch Boundary Commission of* 1896.—*By* A. Alcock, M.B., C.M.Z.S., and F. Finn, B.A., F.Z.S.

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

3. *The Pre-Aryan races of India, Asam and Burma.—By* S. E. Peal, F.R.G.S.

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

4. *The Discovery of Vidhivivēka, an unique MS. at Pūrī.—By* Pandit Haraprasāda Çāstrī.

It is a well-known fact that Vācaspati Miçra commented upon some of the best known works on the six schools of Hindū philosophy. His Bhāmati is a commentary on Çaṇkarācārya's Çārīraka-bhāṣya; Nyāyavārtika-tātparya-ṭīkā on Nyāyavārtika by Udyōtakara; Sāṃkhya-tattva-kaumudī on Īçvarakṛiṣṇa's Kārikās; Yōgasūtra-bhāṣya-vyākhya on Yōga-bhāṣya by Vyāsa.

But on Mīmāṁsā he wrote a commentary, entitled Nyāyakaṇikā, on a certain work named Vidhi-vivēka. His commentary is known to Hall (see his catalogue p. 87). A MS. of this commentary is to be found in the Sanskrit College Library at Benares. Two pages of this commentary are missing, and so I was requested to get a copy of these two pages from the only other MS. known to belong to the Mahant of Çaṇkara-maṭha at Pūri. The Çaṇkara-maṭha MS. is noticed by the late Rāja R. Mitter in p. 291 of the eighth volume of his Notices of MSS. My travelling Pandit, Binōdvihārī Kāvyatīrtha was asked to copy out the pages at Pūri, and in attempting to do so, he has made an important discovery. He was successful in laying his hand on the identical MSS. mentioned by Dr. Mitra. This was very fortunate, because since the publication of Vol. VIII, many of the Çaṇkara-maṭha MSS. are reported to have been lost or destroyed.

The beginning and end of the MS. is the same as given in Vol. VIII; but on careful examination, the first forty-six leaves of the MS. proved to be the text of the Vidhi-vivēka. The MS. of Nyāyakaṇikā was defective. It commences at leaf 87 and ends at leaf 268. The whole MS. was mistaken by Dr. Mitra's Pandit to be that of Nyāyakaṇikā. The text of Vidhi-vivēka is by Maṇḍana Miçra—the great Mīmāṁsaka teacher who was converted to be a Vēdāntist by Çaṇkarācārya and who wrote a large number of works on Vēdānta His name as a Sannyāsī was changed into Surēçvarācārya. He wrote the Vidhi-vivēka while he was a householder and fully believed in the efficacy of Vedic rituals. The so-called biographers of Çaṇkara have dwelt largely on the powers and learning of Maṇḍana, who was regarded as an incarnation of Brahmā himself.

The MS. of the Vidhi-vivēka is written in an excellent Dēvanāgārī hand and appears to have been written at least two hundred years ago. I have caused a transcript of the MS. to be made in Bangālī character, and it is now laid before you.

5. *List of Birds collected by the Afghan-Baluch Boundary Commission of* 1896.—*By* F. Finn, B.A., F.Z.S.

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

Library.

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

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presented by the respective Societies and Editors.

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Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—Notulen, Deel XXXIV, Aflevering 2.

Berlin. Die Königlich Preussische Akademie der Wissenschaften zu Berlin,—Sitzungsberichte, Nrn. XXXIX–LIII, 1893.

Bombay. The Indian Antiquary for June, 1896.

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Calcutta. Indian Engineering,—Vol. XX, Nos. 19–22.

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———. Geological Society,—Quarterly Journal, Vol. LII, Part 4.

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Mexico. La Sociedad Cientifica "Antonio Alzate,"—Memorias y Revista, Tome IX, Nos. 9 et 10.

Moscow. La Société Imperiale des Naturalistes de Moscou,—Bulletin, No. 2, 1896.

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Mussoorie. The Indian Forester,—Vol. XXIII, No. 10.

Paris. La Société Philomathique de Paris,—Compte-Rendu Sommaire de la Séance, No. 1, 1896.

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Stockholm. L'Académie Royale des Sciences de Suéde,—Observations, Tome XXXIII.

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Administration Report of the Meteorological Reporter to the Government of Bengal for the years 1893–1896.

Returns of the Rail and River-borne Trade of Bengal during the quarter ending the 30th June, 1896. Fcp. Calcutta, 1896.

Government of Bengal.

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———. Revue Linguistique et de Philologie Comparée,—1896, Nos. 1–3.

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LIST OF MEMBERS

OF THE

ASIATIC SOCIETY OF BENGAL.

ON THE 31ST DECEMBER, 1895.

LIST OF OFFICERS AND MEMBERS OF COUNCIL OF THE ASIATIC SOCIETY OF BENGAL FOR THE YEAR 1895.

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L. M. = Life Member. F. M. = Foreign Member.

N. B.—Members who have changed their residence since the list was drawn up are requested to give intimation of such a change to the *Secretaries*, in order that the necessary alteration may be made in the subsequent edition. Errors or omissions in the following list should also be communicated to the Secretaries.

Members who are about to leave India and do not intend to return are particularly requested to notify to the *Secretaries* whether it is their desire to continue Members of the Society; otherwise, in accordance with Rule 40 of the Bye-Laws, their names will be removed from the list at the expiration of three years from the time of their leaving India.

Date of Election.		
1894 Sept. 27.	N.R.	Abdul Wali, Maulvie. *Sailkapa, Jessore District.*
1895 Mar. 6.	R.	Abdur Rahman, A. F. M., Judge, Court of Small Causes. *Calcutta.*
1895 May 1.	R.	Abdus Salam, Maulvie, M. A. *Calcutta.*
1888 Feb. 1.	N.R.	Adamson, Major Charles Henry Ellison, M. S. C. *Minbu.*
1895 Aug. 29.	R.	Agnew, Henry De Courcy. *Calcutta.*
1860 July 4.	N.R.	Ahmad Khán, The Hon. Maulvie Sir Sayid, Bahádur, K. C. S. I. *Aligarh.*
1888 April 4.	R.	Ahmud, Shams-ul-ulama Maulvie, Arabic Professor, Presidency College. *Calcutta.*
1888 Feb. 1.	R.	Alcock, Surgeon-Captain Alfred William, M. B., Superintendent, Indian Museum. *Calcutta.*
1884 Mar. 5.	L.M.	Ali, Sir Ali Qadr Syud Hassan, Nawáb Bahádur, K. C. I. E. *Murshedabad.*
1885 Mar. 4.	N.R.	Ali Bilgrámi, Sayid, B. A., A. R. S. M., F. G. S. *Hyderabad.*
1874 June 3.	R.	Amír Ali, The Hon., C. I. E., M. A. Barrister-at-Law, Judge, High Court. *Calcutta.*
1865 Jan. 11.	F.M.	Anderson, John, M. D., F. R. S., F. L. S. *Europe.*
1884 Sept. 3.	R.	Anderson, J. A. *Calcutta.*
1893 Aug. 31.	R.	Anderson, Dr. A. R. S. *Calcutta.*
1892 Jan. 6.	R.	Arnold, Henry Kerchever Walter. *Calcutta.*
1890 July 2.	N.R.	Arnold, Thomas Walker, B. A., M. R. A. S., Professor, Muhammadan Anglo-Oriental College. *Aligarh.*

Date of Election.		
1892 Feb. 3.	N.R.	Arthur, O. G., C. S. *Muttra.*
1872 April 3.	N.R.	Ashán-ullah, Nawáb, Khán Bahádur. *Dacca.*
1877 July 4.	R.	Ashgar Ali Diler Jang, Nawáb Sayid, Khán Bahádur, C. S. I. *Calcutta.*
1889 Aug. 29.	N.R.	Aziz-ud-din Ahmad, Deputy Magistrate. *Jaunpur.*
1870 Feb. 2.	L.M.	Baden-Powell, Baden Henry, C. S., C. I. E. *Europe.*
1891 Mar. 4.	N.R.	Baillie, D. C., C. S. *Naini Tal.*
1892 Aug. 3.	N.R.	Baker, Lieutenant Donald. *Meerut.*
1891 April 1.	N.R.	Baker, E. C. S. *Cachar.*
1889 May 1.	R.	Banerji, The Hon. Gurudás, M. A., D. L., Judge, High Court. *Calcutta.*
1869 Dec. 1.	L.M.	Barker, R. A., M. D. *Europe.*
1885 Nov. 4.	R.	Barman, Dámudar Dás. *Calcutta.*
1877 Jan. 17.	N.R.	Barman, Kishor Kumár Rádhá Dev, Juvráj of Hill Tipperah. *Tipperah.*
1894 Sept. 27.	R.	Basu, Nagendra Natha. *Calcutta.*
1893 April 5.	N.R.	Batabyal, Umes Chunder, C. S. *Bogra.*
1864 Sept. 7.	A.	Beames, John, C. S. *Europe.*
1895 July 3.	L.M.	Beatson-Bell, N.D., C. S. *Dacca.*
1878 Sept. 25.	A.	Beighton, T. D., C. S. *Europe.*
1876 Nov. 15.	F.M.	Beveridge, Henry, C. S. *Europe.*
1878 Oct. 4.	R.	Bhakta, Krishna Gopál. *Calcutta.*
1892 April 6.	R.	Bhattacharjee, Janaki Nath. *Calcutta.*
1879 Mar. 5.	A.	Biddulph, Col. J., B. S. C. *Europe.*
1884 Feb. 6.	A.	Bigg-Wither, Major A. C., B. A., A. I. C. E. *Europe.*
1859 Aug. 3.	L.M.	Blanford, W. T., A. R. S. M., F. R. S., F. G. S., F. R. G. S., F. Z. S. *Europe.*
1893 Feb. 1.	N.R.	Bodding, The Rev. P. O. *Rampore Haut.*
1885 Mar. 4.	A.	Bolton, C. W., C. S. *Bankipur.*
1895 July 3.	R.	Bonham-Carter, N., C. S. *Calcutta.*
1890 July 2.	R.	Bonnerjee, Womes Chunder, Barrister-at-Law, Middle Temple. *Calcutta.*
1893 Mar. 1.	R.	Bose, Bhupendra Nath, Solicitor. *Calcutta.*
1895 Mar. 6.	R.	Bose, J.C., M.A., Bengal Education Service. *Calcutta.*
1880 Nov. 3.	R.	Bose, Pramatha Nath, B. SC., F. G. S., Geological Survey of India. *Calcutta.*
1890 Dec. 3.	N.R.	Bose, Rai Nali Naksha, Bahádur, Chairman, Burdwan Municipality. *Burdwan.*
1895 April 3.	N.R.	Bourdillon, J. A., C. S. *Burdwan.*
1876 Nov. 15.	N.R.	Bowie, Colonel M. M., Commissioner, C. P. *Nagpur.*
1876 May 4.	A.	Bradshaw, Surgeon-Major-General A. F., M. D., C. B. *Europe.*
1860 Mar. 7.	L.M.	Brandis, Sir Dietrich, K. C. I. E., PH. D., F. L. S., F. R. S. *Europe.*
1891 Aug. 27.	A.	Brown, Dr. E. H. *Europe.*
1887 May 4.	R.	Burál, Nobinchánd, Solicitor. *Calcutta.*
1862 Feb. 5.	L.M.	Bysack, Gaurdás. *Calcutta.*

Date of Election.		
1879 April 2.	R.	Calcutta, The Rt. Rev. the Lord Bishop of. *Calcutta.*
1895 July 3.	N.R.	Carey, H. D., C. S. *Serajgunge.*
1895 July 3.	N.R.	Carlyle, R. W., C. S. *Comillah.*
1893 Feb. 1.	R.	Caspersz, A. A., Barrister-at-Law. *Calcutta.*
1890 June 4.	N.R.	Chakravartí, Man Mohan, M. A., B. L., Deputy Magistrate. *Jajpur, Cuttack.*
1894 Aug. 1.	N.R.	Chatterjee, M. N., Professor of Philosophy, Maharaja's College. *Patialia.*
1893 July 5.	N.R.	Chatterjee, Radhikáraman. *Rungpore.*
1892 Dec. 7.	N.R.	Chatterjee, Sarat Chandra, B. A. *Madhupur.*
1892 Aug. 3.	N.R.	Chaube, Behary Lall. *Bankipur.*
1893 Sept. 28.	N.R.	Chaudhuri, Banawarilala, B. SC. Edin. *Sherpur, Mymensingh.*
1861 Mar. 1.	N.R.	Chaudhuri, Harachandra, Zemindar. *Sherpur, Mymensingh.*
1880 Nov. 3.	N.R.	Chaudhuri, Rái Khirod Chandra. *Chupra.*
1885 Feb. 4.	N.R.	Chaudhuri, Rájá Suryakánta, Bahádur. *Mymensingh.*
1890 Feb. 5.	N.R.	Chuckerbutty, A. Goodeve, C. S. *Lahore.*
1889 Sept. 26.	N.R.	Chuckerbutty, Rájá Rámranjan, Bahádur. *Hitampur, Beerbhoom.*
1885 April 1.	A.	Clark, H. Martyn, M. B. *Europe.*
1880 Aug. 26.	F.M.	Clerk, Colonel Malcolm G. *Europe.*
1881 May 4.	N.R.	Cockburn, John, Asst. Sub-Deputy Opium Agent. *Allahabad.*
1889 Nov. 6.	A.	Colville, William Brown. *Europe.*
1890 Dec. 3.	A.	Connan, William, C. E. *Europe.*
1876 Mar. 1.	F.M.	Crawfurd, James, B. A., C. S. *Europe.*
1887 Aug. 25.	R.	Criper, William Risdon, F. C. S., F. I. C., A. R. S. M. *Cossipore.*
1877 June 6.	R.	Croft, Sir A. W., M. A., K. C. I. E. Director of Public Instruction, Bengal. *Calcutta.*
1874 Mar. 4.	R.	Crombie, Surgeon-Major Alexander, M. D., Presidency General Hospital. *Calcutta.*
1888 Dec. 5.	A.	Crooke, William, B. A., C. S. *Europe.*
1895 July 3.	N.R.	Cumming, J. G., C. S. *Comillah.*
1873 Aug. 6.	R.	Cunningham, Surgeon-Major David Douglas, F. R. S., Honorary Surgeon to the Viceroy. *Calcutta.*
1873 Dec. 3.	N.R.	Dames, Mansel Longworth, C. S., Asst. Commissioner. *Dera Ghazi Khan.*
1892 Mar. 2.	N.R.	Das, Gopal Ballabh, M. A. *Cuttack.*
1865 June 7.	N.R.	Dás, Rájá Jaykrishna, Bahádur, C. S. I. *Moradabad.*
1879 April 7.	N.R.	Dás, Rám Saran, M. A., Secy., Oudh Commercial Bank, Limited. *Fyzabad, Oudh.*
1893 Nov. 1.	R.	Dé, B, C. S. *Hooghly.*

Date of Election.		
1885 May 6.	N.R.	Dé, Rájá Baikuntanáth, Bahádur. *Balasore.*
1895 Sept. 19.	N.R.	De, Kiran Chandra, C. S. *Ranaghat.*
1895 Dec. 4.	N.R.	Delmerick, Charles Swift. *Budaon.*
1893 Mar. 1.	F.M.	Deussen, Dr. Paul. *Europe.*
1886 June 2.	R.	Doyle, Patrick, C. E., M. R. I. A., M. I. C. E. I., F. R. A. S., F. R. S. E., F. G. S., F. R. Met. S., L. S. (Exam.)., M. Lond. Math. Soc., F. S. S., Fel. San. Inst., M, Aus. Inst. M. E. *Calcutta.*
1892 Sept. 22.	R.	Drury, Dr. F. J. *Calcutta.*
1889 Jan. 2.	N.R.	Dudgeon, Gerald Cecil. *Sailihat, W. Dooars.*
1879 Feb. 5.	R.	Duthie, J. F., Director, Government Botanical Survey, Northern India. *Saharanpur.*
1892 Jan. 6.	N.R.	Dutt, Gerindranath. *Hatwa.*
1877 Aug. 30.	R.	Dutt, Kedárnáth, Depy. Magistrate. *Calcutta.*
1892 Aug. 25.	R.	Dutt, Narsingh. *Howrah.*
1890 Sept. 25.	N.R.	Dutt, Romesh Chunder, C. S., Barrister-at-Law, Middle Temple. *Cuttack.*
1870 Mar. 9.	L.M.	Edinburgh, H. R. H. The Duke of. *Europe.*
1871 Dec. 2.	N.R.	Eliot, J., M. A., Meteorological Reporter to the Govt. of India. *Simla.*
1892 May 4.	F.M.	Elliott, Sir C. A., K. C. S. I., C. I. E. *Europe.*
1891 Aug. 27.	N.R.	Ernest, Diego, Merchant. *Bombay.*
1894 Dec. 5.	R.	Finn, Frank, B. A. *Calcutta.*
1879 July 2.	R.	Finucane, M., C. S. *Calcutta.*
1886 April 7.	A.	Fleet, John Faithfull, C. S., C. I. E. *Europe.*
1893 May 3.	A.	Forbes, Major H. F. Gordon. *Europe.*
1892 May 4.	A.	Forrest, G. W., B. A., *Europe.*
1876 July 5.	N.R.	Foulkes, The Rev. Thos., F. L. S., M. R. A. S., F. R. G. S. *Salem, Madras Presidency.*
1893 Jan. 11.	N.R.	Gait, E. A., C. S. *Shillong.*
1880 April 7.	N.R.	Gajapati, Sir Ánanda Rám, K. C. I. E., Rája of Vizianagram. *Vizianagram.*
1859 Aug. 3.	L.M.	Gastrell, General James Eardley. *Europe.*
1889 Jan. 2.	R.	Ghose, Jogendrachandra, M. A., B. L. *Calcutta.*
1883 Aug. 30.	R.	Ghose, Manmohan. *Calcutta.*
1889 Mar. 6.	R.	Ghosha, Bhupendra Sri. *Calcutta.*
1869 Feb. 3.	R.	Ghosha, Pratápachandra, B. A. *Calcutta.*
1895 April 3.	R.	Gilliland, J. H., Bengal Education Service. *Calcutta.*
1886 Sept. 30.	N.R.	Gimlette, Surgeon George Hart Desmond, Bengal Medical Service, M. D., M. CH., M. R. C. S., L. S. A., *Sutna, E. I. R.*
1890 Aug. 6.	R.	Goethals, His Grace Dr. Paul, S. J., Archbishop. *Calcutta.*
1861 Feb. 5.	N.S.	Godwin-Austen, Lieut.-Colonel H. H., F. R. S., F. Z. S., F. R. G. S. *Europe.*

Date of Election.		
1892 Aug. 25.	N.R.	Greeven, R., C. S. *Naini Tal.*
1876 Nov. 15.	R.	Grierson, Dr. George Abraham, C. S., C. I. E. *Howrah.*
1885 Dec. 2.	R.	Griesbach, C. L., C. I. E., F. G. S., Director, Geological Survey of India. *Calcutta.*
1888 July 4.	R.	Gupta, Rajanikánta. *Calcutta.*
1892 Jan. 6.	N.R.	Haig, Lieutenant Wolseley. *Yeotmal, Berar.*
1883 Jan. 3.	N.R.	Harding, Francis Henry, B. A., C. S. *Shahabad.*
1890 June 4.	A.	Heilgers, Robert Philip, Consul for H. I. M. the Emperor of Austria and Hungary, Knight of the Imperial Order of the Iron Crown, Commandeur Ordre Impériale de Medjidié, F. R. G. S., F. R. S. S. *Europe.*
1875 Mar. 3.	N.R.	Hendley, Brigade-Surgeon Lt.-Col. Thomas Holbein, C. I. E. *Jeypur.*
1890 April 2.	A.	Hickson, F. G. *Europe.*
1892 Aug. 3.	F.M.	Hill, Samuel Charles. *Europe.*
1872 Dec. 5.	R.	Hoernle, A. F. R., PH. D., Principal of the Calcutta Madrasa.
1878 Mar. 6.	N.R.	Hoey, Dr. W., C. S. *Gorakhpur.*
1886 June 2.	R.	Hogg, Alexander. *Calcutta.*
1891 July 1.	R.	Holland, Thomas H., F. G. S. Geological Survey of India. *Calcutta.*
1884 Mar. 5.	N.R.	Hooper, John, C. S., Secretary, Board of Revenue. *Allahabad. N.-W. P.*
1873 Jan. 2.	L.M.	Houstoun, G. L., F. G. S. *Europe.*
1863 Jan. 15.	A.	Howell, Mortimer Sloper, C. S., C. I. E. *Europe.*
1884 May 2.	N.R.	Hussein, Sayid, B. A., Secy. to Nizam of Hyderabad's Council. *Hyderabad.*
1890 Dec. 3.	A.	Hyde, The Rev. Henry Barry, M. A., Bengal Ecclesiastical Establishment. *Europe.*
1866 Mar. 7.	F.M.	Irvine, William, C. S. *Europe.*
1869 Aug. 4.	R.	Jahán Qadr Muhammad Wáhid Alí, The Hon. Prince Sir, Bahadur, K.C.I.E. *Garden Reach. Calcutta.*
1895 Dec. 4.	N.R.	Kennedy, J., C. S. *Murshidabad.*
1882 Mar. 1.	N.R.	Kennedy, Pringle, M. A. *Muzufferpur.*
1874 Dec. 2.	N.R.	Khudá Baksh, Maulvie, Khán Bahádur. *Bankipur.*
1867 Dec. 4.	R.	King, Brigade-Surgeon George, C. I. E., M. B., F. L. S., Supdt., Royal Botanic Garden. *Sibpur.*
1881 Mar. 2.	F.M.	King, Lucas White, B. A., LL. B., C. S. *Europe.*
1884 Nov. 5.	A.	Kitts, Eustace John, C. S. *Europe.*
1891 Feb. 4.	N.R.	Kupper, The Hon. Lala Bunbehari. *Burdwan.*
1893 July 1.	R.	Laharry, S. C. *Chinsurah.*

Date of Election.		
1887 May 4.	L.M.	Lanman, Charles R., Corresponding Secretary of the American Oriental Society, Professor of Sanskrit in Harvard College. *Cambridge, Mass. U. S. America.*
1877 Sept. 27.	N.R.	LaTouche, James John Digges, B. A., C. S. *Allahabad.*
1889 Mar. 6.	A.	LaTouche, Thomas Henry Digges, M. A. Deputy Superintendent, Geological Survey of India. *Europe.*
1889 Nov. 6.	R.	Lee, W. A. *Calcutta.*
1889 Feb. 6.	R.	Little, C., M. A., Bengal Education Service. *Calcutta.*
1886 Sept. 30.	A.	Luson, Hewling, C. S. *Europe.*
1869 July 7.	N.R.	Lyall, Charles James, M. A., LL. D., C. S. I., C. I. E. Chief Commissioner, C. P. *Nagpur.*
1892 Sept. 22.	A.	Lyell, George. *Europe.*
1870 April 7.	L.M.	Lyman, B. Smith. *Philadelphia, Pa., U. S. America.*
1868 Dec. 2.	A.	Macauliffe, Michael, B. A., C. S. *Europe.*
1893 Jan. 11.	L.M.	Maclagan, E. D., M. A., C. S. *Europe.*
1891 Feb. 4.	N.R.	Macpherson, Duncan J., C. S. *Gya.*
1893 Aug. 31.	N.R.	Mahatha, Purmeshwar Narain. *Mozufferpore.*
1895 Sept. 19.	R.	Mahomed Abdul Kadar, Khan Bahadur. *Calcutta.*
1881 July 6.	R.	Mahomed Firukh Sháh, Prince. *Calcutta.*
1895 Aug. 29.	R.	Mahomed Gilani, Shams-ul-ulama Shaikh. *Calcutta.*
1886 Jan. 6.	N.R.	Mahomed Latif Khán, Sayid, Khán Bahádur. *Jullunder.*
1882 Aug. 2.	R.	Mahomed Yusoof, The Hon. Maulvie, Khan Bahadur. *Calcutta.*
1889 Jan. 2.	R.	Maliáh, Kumár Rameswár. *Howrah.*
1891 Aug. 27.	R.	Mallik, H. C. *Calcutta.*
1893 July 5.	R.	Mangós, C. D. *Calcutta.*
1889 Mar. 6.	R.	Mann, John, M. A. *Calcutta.*
1893 Mar. 1.	N.R.	Marriott, C. R., C. S. *Monghyr.*
1892 April 6.	R.	Maynard, Surgeon-Captain F. P. *Calcutta.*
1884 Dec. 3.	N.R.	McCabe, R. B., C. S., Deputy Commissioner. *Tezpur, Assam.*
1886 Mar. 3.	L.M.	Mehtá, Rustomjee Dhunjeebhoy. *Calcutta.*
1895 July 3.	N.R.	Melitus, P. J., C. S. *Shillong.*
1884 Nov. 5.	N.R.	Middlemiss, C. S., B. A., Assistant Superintendent, Geological Survey of India. *Hasur, Salem Dt.*
1884 Sept. 3.	R.	Miles, William Harry. *Calcutta.*
1870 July 6.	R.	Miller, A. B., B.A., Barrister-at-Law, Official Trustee. *Calcutta.*
1874 May 6.	N.R.	Minchin, F. J. V. *Aska, Ganjam.*
1895 Mar. 6.	N.R.	Mitra, Rajeswar. *Hoshangabad.*
1890 Dec. 3.	N.R.	Mitra, Varadá Charana. Joint-Magistrate. *Farridpur.*
1876 Dec. 6.	N.R.	Mockler, Col. E., Political Agent. *Turkish Arabia.*

Date of Election.		
1894 July 4.	R.	Moir, Surgeon-Captain D. M., I. M. S. *Calcutta.*
1886 May 5.	N.R.	Molesworth, Capt. E. H. *Shillong.*
1895 July 3.	N.R.	Monohan, J. G., C. S. *Sibsagar.*
1864 Nov. 2.	N.R.	Muir, J. W., M. A., C. S. *Jaunpur.*
1885 July 1.	R.	Mukerjea, Nilmani, Principal, Sanskrit College. *Calcutta.*
1892 Mar. 2.	R.	Mukerjea, Nrisinha Chundra. *Calcutta.*
1892 Dec. 7.	R.	Mukerjea, Panchanan. *Calcutta.*
1867 Mar. 6.	R.	Mukerjea, The Hon. Rájá Pearimohan, M. A., C. S. I. *Uttarpara.*
1894 Aug. 30.	R.	Mukerjee, Sibnarayan. *Uttarpara.*
1890 July 2.	R.	Mukharji, T. N. *Calcutta.*
1886 May 5.	R.	Mukhopádhyáya, Asutosh, M.A., D.L. F.R.A.S., F.R.S.E. *Calcutta.*
1887 May 4.	A.	Munro, Thomas R. *Europe.*
1885 June 3.	N.R.	Naemwoollah, Maulvie, Deputy Magistrate. *Moradabad.*
1887 June 1.	N.R.	Narain, Ráo Govind Ráo. *Allahabad.*
1881 Nov. 2.	R.	Nicéville, L. de., F.E.S. *Calcutta.*
1889 Aug. 29.	L.M.	Nimmo, John Duncan. *Calcutta.*
1887 April 6.	F.M.	Noetling, Fritz, PH. D. *Europe.*
1893 Feb. 1.	R.	Nolan, P., C. S. *Calcutta.*
1894 June 6.	N.R.	Nomani, Shams-ul-ulama Maulvie Muhammad, Professor of Arabic in the Muhammadan Oriental College. *Aligarh.*
1892 Oct. 27.	N.R.	Norvill, Dr. Frederic H. *Dibrugarh.*
1885 Feb. 4.	R.	Nyáyaratna, Mahámahopádhyáya Mahesachandra, C. I. E. *Calcutta.*
1895 July 3.	R.	Oldham, C. E. A. W., C. S. *Calcutta.*
1879 Aug. 28.	N.R.	Oldham, Brigade-Surgeon C. F., F. R. G. S. *Almora.*
1883 Dec. 1.	N.R.	Oldham, R. D., A. R. S. M., F. G. S., Deputy Superintendent, Geological Survey of India. *Darjeeling.*
1883 Aug. 30.	N.R.	Oliver, Edw. Emmerson, M. I. C. E. *Amballa.*
1887 July 6.	N.R.	Oung, Moung Hla. *Rangoon.*
1880 Aug. 4.	L.M.	Pandia, Pandit Mohanláll Vishnuláll, F. T. S., Prime Minister, Partabgarh State. *Rajputna viâ Mandsaur.*
1880 Jan. 7.	N.R.	Pargiter, Frederick E., B. A., C. S. *Cuttack.*
1862 May 7.	L.M.	Partridge, Surgeon-Major Samuel Bowen, M. D. *Europe.*
1871 Dec. 6.	N.R.	Peal, S. E. *Sibsagar, Assam.*

Date of Election.		
1873 Aug. 6.	R.	Pedler, Alexander, F. R. S., Bengal Education Service. *Calcutta.*
1888 June 6.	L.M.	Pennell, Aubray Percival, B. A., C. S. *Rangoon.*
1881 Aug. 25.	R.	Percival, Hugh Melvile, M. A., Bengal Education Service. *Calcutta.*
1877 Aug. 1.	N.R.	Peters, Surgeon-Major C. T., M. B. *Bijapúr, Bombay.*
1889 Nov. 6.	N.R.	Phillott, Capt. D. C. *Edwardesabad.*
1889 Mar. 6.	R.	Prain, David, M. A., M. B., L. R. C. S., I. R. S. E., I. L. S. *Seebpur.*
1892 Aug. 3.	R.	Pramanick, Asutosh. *Calcutta.*
1889 Mar. 6.	N.R.	Prasad, Hanuman, Raes and Zemindar. *Chunar.*
1881 Feb. 2.	A.	Prideaux, Colonel Sir William Francis, K.C.S.C., K.C.I.E. *Europe.*
1880 April 7.	N.R.	Rai, Bipina Chandra, B. L. *Noakhali.*
1895 Aug. 29.	N.R.	Rai, Jatindranath, M. A., B. L. *Baranagar.*
1894 Aug. 30.	R.	Ranking, Surgeon-Lieutenant-Colonel George, M.D. *Calcutta.*
1895 Aug. 7.	R.	Ray, Mahendranath, M. A., B. L. *Howrah.*
1887 May 4.	R.	Ráy, Prasannakumár, D. SC., (Lond. and Edin.) Professor, Presidency College. *Calcutta.*
1895 Aug. 29.	R.	Richardson, T. W., C. S. *Calcutta.*
1884 Mar. 5.	R.	Risley, H. H., B. A., C. S., C. I. E. *Calcutta.*
1889 June 5.	R.	Rowe, F. J., M. A., Bengal Education Service. *Calcutta.*
1888 June 6.	R.	Roy, Kumár Devendro Nárayán. *Calcutta.*
1890 Mar. 5.	N.R.	Roy, Mahárájá Girjanath. *Dinagepore.*
1895 Mar. 6.	R.	Roy, P. C., Bengal Education Service. *Calcutta.*
1888 June 6.	R.	Roy, Peary Mohun. *Calcutta.*
1885 Mar. 4.	R.	Rustomjee, H. M. *Calcutta.*
1889 June 5.	N.R.	Sadler, Major J. Hayes, B. S. C. *Muscat.*
1893 Aug. 2.	R.	Samajpati, Suresh Chundra. *Calcutta.*
1887 June 1.	N.R.	Sandberg, The Rev. Graham, B. A., Barrister-at-Law, Inner Temple. Chaplain. *Subathu.*
1867 April 3.	R.	Sarkár, Dr. Mahendralál, C. I. E. *Calcutta.*
1885 Mar. 4.	R.	Sarvádhikári, Rájkumár, Rai Bahádûr. *Calcutta.*
1893 Jan. 11.	L.M.	Scindia, His Highness the Maharajah.
1874 July 1.	R.	Scully, Dr. John, F. C. S. *Calcutta.*
1886 Mar. 3.	N.R	Sen, Hirálal, Excise Department. *Durbhanga.*
1885 April 1.	R.	Sen, Narendranáth. *Calcutta.*
1885 April 1.	R.	Sen, Yadunáth. *Calcutta.*
1885 Feb. 4.	R.	Shástri, Pandit Haraprasád, M. A. *Calcutta.*
1891 June 3.	N.R.	Shillingford, Frederick Alexander. *Purneah.*
1889 Nov. 6.	N.R.	Simpson, Edmund James, L. R. C. P. E., F. L. P. S. G., L. M. G. E., Civil Surgeon. *Rai Bareili.*
1887 April 6.	R.	Simpson, Dr. W. J., Health Officer. *Calcutta.*

Date of Election.		
1869 Feb. 3.	N.R.	Singh, Mahámahopádhyáya Sirdár Sir Attar, Bahádur, K. C. I. E., M. U. F., Chief of Bhadour. *Ludiana.*
1893 Mar. 1.	N.R.	Singh, Maharajah Kumara Sirdar Bharat, C. S. *Rai Bareili.*
1880 June 2.	N.R.	Singh, Thákur Garuradhawaya Prasád, Rájá of Beswan. *Beswan Fort, Aligarh.*
1878 Oct. 4.	N.R.	Singh, Rájá Lachman. *Agra.*
1895 Aug. 29	R.	Singh, Lachmí Náráyan, M. A., B. L. *Calcutta.*
1877 June 6.	N.R.	Singh, H. H. the Hon. Maharaja Sir Luchmessur, Bahádur, K. C. I. E. *Darbhanga.*
1892 Mar. 2.	L.M	Singh, The Hon. Raja Oodaypratab. *Binga.*
1889 Aug. 29.	N.R.	Singh, H. H. Prabhunarain, Bahádur, Mahárájá of Benares.
1859 Aug. 3.	N.R.	Singh, H. H. the Hon. Maharaja Pratap Narain. *Ajodhya, Oudh.*
1895 Aug. 29	N.R.	Singh, Rám Dín. *Bankipore.*
1889 Nov. 6.	N.R.	Singh, The Hon. Rájá Rameshwara, Bahádur. *Darbhanga.*
1894 Feb. 7.	N.R.	Singh, H. H. Raja Vishwanath, Bahadur, Chief of Chhatarpur.
1859 Aug. 3.	R.	Siñha, Baláichánd. *Calcutta.*
1893 April 5.	N.R.	Siñha, Raja Bhupendra, Bahadur, Raja of Bijoypur. *Mirzapore.*
1894 July 4.	N.R.	Siñha, Kunwar Kushal Pal, M. A. *Narki P. O. Agra District.*
1872 Aug. 5.	A.	Skrefsrud, The Rev. L. O. *Europe.*
1891 Dec. 2.	A.	Smith, A. Mervyn, C. E., F. S. A. *Europe.*
1874 June 3.	N.R.	Smith, Vincent Arthur, C. S. *Gorakhpur.*
1891 Aug. 27.	N.R.	Stein, Dr. M. A. *Lahore.*
1895 July 5	N.R.	Steinberg, A. F., C. S. *Rungpore.*
1864 Aug. 11.	R.	Swinhoe, W., Attorney-at-Law. *Calcutta.*
1868 June 3.	R.	Tagore, The Hon. Mahárájá Sir Jotendra Mohun, Bahádur, K. C. S. I. *Calcutta.*
1893 Aug. 31.	N.R.	Tate, G. P., Survey of India. *Karachi.*
1865 Sept. 6.	A.	Tawney, C. H., M. A., C. I. E. *Europe.*
1884 May 5.	N.R.	Taylor, W. C., Settlement Officer. *Khurda.*
1878 June 5.	N.R.	Temple, Major. R. C., S. C. *Rangoon.*
1875 June 2.	N.R.	Thibaut, Dr. G., Professor, Muir Central College. *Allahabad.*
1886 Aug. 4.	R.	Thomas, Robert Edmond Skyring. *Calcutta.*
1847 June 2.	L.M.	Thuillier, Major-Genl. Sir Henry Edward Landor R. A., C. S. I., F. R. S. *Europe.*
1889 Mar. 6.	A.	Thuillier, Colonel. H. R., R. E., Surveyor-General of India. *Europe.*
1891 Aug. 27.	N.R.	Thurston, Edgar. *Madras.*

Date of Election.		
1871 April 5.	F.M.	Trefftz, Oscar. *Europe.*
1861 June 5.	L.M.	Tremlett, James Dyer, M. A., C. S. *Europe.*
1893 May 3.	N.R.	Vandja, Raja Ram Chandra. *Mayurbhanga, District Balasore.*
1890 Feb. 5.	N.R.	Venis, Arthur, M. A., Former Boden Sanskrit Scholar, Oxford., Principal, Sanskrit College, Benares., Professor, Queen's College. *Benares.*
1885 May 6.	R.	Verdeau, Ivan. *Calcutta.*
1895 Dec. 4.	R.	Vidyabhushan, Harimohan. *Calcutta.*
1894 Sept. 27.	L.M.	Vost, Surgeon-Captain William. *Peshawar.*
1895 July 5.	N.R.	Waddell, Dr. L A. *Darjeeling*
1889 Nov. 6.	A.	Walsh, Surgeon-Captain J. H. Tull. *Europe.*
1865 May 3.	R.	Waterhouse, Col. James, B. S. C., Assistant Surveyor-General, Survey of India. *Calcutta.*
1887 Oct. 6.	N.R.	Watson, Lieut. Edward Yerbury. *Belgaum.*
1874 July 1.	R.	Watt, Dr. George, C. I. E. *Calcutta.*
1892 Aug. 3.	R.	Whitehead, The Rev. Henry. *Calcutta.*
1891 May 6.	R.	Wilson, Charles Robert, M. A., Bengal Education Service. *Calcutta.*
1892 Jan. 6.	R.	Woodburn, The Hon. J., C. S. *Calcutta.*
1894 Sept. 27.	R.	Woodroffe, John George, Barrister-at-Law. *Calcutta.*
1873 Aug. 6.	A.	Woodthorpe, Col. Robert Gossett, C. B., R. E. *Europe.*
1894 Aug. 30.	N.R.	Wright, Henry Nelson, C. S. *Allahabad.*

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., M. A., F. R. S. *Mauritius.*
1884 Jan. 15.	A. H. Sayce, Esq., Professor of Comp. Philology. *Oxford.*
1884 Jan. 15.	Monsieur Emile Senart, Member of the Institute of France. *Paris.*
1884 Jan. 15.	Sir Monier Monier-Williams, *Knt.*, K. C. I. E., M. A., D. C. E., LL. D., Boden Prof. of Sanskrit. *Oxford.*

HONORARY MEMBERS.

1848 Feb. 2.	Sir J. D. Hooker, K. C. S. I., C. B., M. D., D. C. L., F. R. S., F. G. S. *Kew.*
1860 Mar. 7.	Professor Max Müller. *Oxford.*
1860 Nov. 7.	Dr. Albrecht Weber. *Berlin.*
1875 Nov. 3.	Dr. O. Böhtlingk. *Leipzig.*
1879 June 4.	Prof. E. B. Cowell, D. C L. *Cambridge.*
1879 June 4.	Dr. A. Günther, V. P. R. S. *London.*
1879 June 4.	Dr. J. Janssen. *Paris.*
1879 June 4.	Prof. P. Regnaud. *Lyons.*
1881 Dec. 7.	Lord Kelvin, D. C. L. *Glasgow.*
1883 Feb. 7.	W. T. Blanford, Esq., A. R. S. M., F. R. S., F. G. S., F. R. G. S., F. Z. S. *London.*
1883 Feb. 7.	Alfred Russell Wallace, Esq., F. L. S., F. R. G. S. *Parkstone, Dorsetshire.*
1894 Mar. 7.	Sir William Henry Flower, K. C. B., D. C. L. *London.*
1894 Mar. 7.	Dr. Edward Frankland, D. C. L., F. R. S. *Reigate.*
1894 Mar. 7.	Sir George Gabriel Stokes, Bart, F. R. S. *Cambridge.*
1894 Mar. 7.	Mahámahopádhyaya Chandra Kanta Tarkalankara. *Calcutta.*
1894 Mar. 7.	Professor Theodor Noeldeke. *Strassburg.*
1894 Mar. 7.	Dr. Reinhold Rost, C. I. E., LL. D. *London.*
1895 June 5.	Dr. G. Bühler. *Vienna.*
1895 June 5.	Lord Rayleigh. *London.*
1895 June 5.	Lt.-Genl., R. Strachey. *London.*
1895 June 5.	C. H. Tawney, M. A., C. I. E. *London.*

CORRESPONDING MEMBERS.

Date of Election.	
1844 Oct. 2.	Macgowan, Dr. J. *Europe.*
1856 July 2.	Porter, The Rev. J. *Belfast.*
1862 Mar. 3.	Murray, A. *London.*
1866 May 7.	Schlagintweit, Prof. E. von. *Berlin.*

ASSOCIATE MEMBERS.

1874 April 1.	Lafont, Fr. E., S. J., C. I. E. *Calcutta.*
1875 Dec. 1.	Bate, The Rev. J. D. *Allahabad.*
1875 Dec. 1.	Abdul Hai, Maulvie. *Calcutta.*
1882 June 7.	Giles, Herbert. *Europe.*
1883 Feb. 7.	Rodgers, C. J. *Amritsar.*
1884 Aug. 6.	Moore, F., F. R. S., F. L. S. *London.*
1885 Dec. 2.	Führer, Dr. A. *Lucknow.*
1886 Dec. 1.	Dás, Saratchandra., C. I. E. *Calcutta.*
1892 April 6.	Samasrami, Satyavrata. *Calcutta.*
1892 Dec. 7.	Brühl, P. J. *Seebpúr.*

LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM INDIA THREE YEARS AND UPWARDS.*

* *Rule* 40.—After the lapse of 3 years from the date of a member leaving India, if no intimation of his wishes shall in the interval have been received by the Society, his name shall be removed from the List of Members.

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

Dr. E. H. Brown.
Dr. H. Martyn Clark.
Eustace John Kitts, Esq., C. S.
Colonel Sir William Francis Prideaux, K. C. I. E.
A. Mervyn Smith, Esq., C. E.

LOSS OF MEMBERS DURING 1895.

By Retirement.

Babu Gonesh Chunder Chunder.
E. C. Cotes, Esq.
Babu Hem Chandra Gosvámí.
A. S. Lovelock, Esq.
P. Sundaram Pillay, Esq.
Dr. O. C. Raye.
F. B. Shawe, Esq.

By Death.

Ordinary Members.

V. Ball, Esq. (Non-Subscribing Member)
H. H. the Maharaja, of Johore.
The Rev. D. G. Latham-Browne.
A. M. Nash, Esq.

Corresponding Members.

Dr. R. Gösche.
A. Von Krämer, Esq.

Honorary Members.

Professor Hermann, L. E. Helmholtz.
Prof. T. H. Huxley.
M. Louis Pasteur.
Major-Genl. Sir H. C. Rawlinson.
Prof. Rudolf von Roth.

By Removal.

Under Rule 38.

Dr. J. R. Adie.
A. Constable, Esq.
Dr. G. M. Giles.
G. Hughes, Esq.
Babu Brij Bhukan Lal.
J. Bridges Lee, Esq.
Pandit Jwala Prasad.
Babu Kally Prosonno Sen-Gupta.
N. F. F. Smith Esq.
Carr Stephen, Esq.
H. N. Thompson, Esq.

Under Rule 40.

Lieutenant-Colonel Henry Wilberforce Clarke.
Walter Henry Parker Driver, Esq.
Philip Lake, Esq.
William Lutley Sclater, Esq.
Dr. W. H. Solf.

ABSTRACT STATEMENTS

OF

RECEIPTS AND DISBURSEMENTS

OF THE

ASIATIC SOCIETY OF BENGAL

FOR

THE YEAR 1895.

STATEMENT

Asiatic Society

Dr.

	Rs.	As.	P.	Rs.	As.	P.
To Establishment.						
Salaries	3,118	13	0			
Commission	385	8	6			
Pension	48	0	0			
				3,552	5	6
To Contingencies.						
Stationery	133	6	6			
Lighting	33	0	0			
Taxes	819	0	0			
Postage	502	4	9			
Freight	20	14	0			
Meeting	78	0	0			
Miscellaneous	306	6	9			
				1,893	0	0
To Library and Collections.						
Books	1,027	11	11			
Local Periodicals	16	0	0			
Binding	581	12	0			
Furniture	79	13	0			
				1,705	4	11
To Publications.						
Journal, Part I	3,036	5	0			
Journal, Part II	1,537	9	6			
Proceedings	1,026	9	0			
				5,600	7	6
To Printing charges of Circulars, Receipt-forms, &c.				139	4	0
„ Personal Account (Writes off and Miscellaneous)				1,015	2	6
To Extraordinary Expenditure.						
Auditor's fee				100	0	0
Registration fees of the Society from 1877 to 1895 being 19 years @ 5/ each				95	0	0
To Balance				1,49,785	11	9
Total Rs.				1,63,886	4	2

No. 1.

of Bengal.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last report	.....			1,43,585	1	1
By Cash Receipts.						
Publications sold for cash	546	14	2			
Interest on Investments	5,307	0	0			
Rent of two rooms on the ground floor of the Society's Buildings	780	0	0			
Allowance from Government of Bengal for the publication of Anthropological and Cognate Subjects	2,000	0	0			
Ditto ditto Chief Commissioner of Assam ...	1,000	0	0			
Ditto ditto Government of Madras	500	0	0			
Miscellaneous	115	3	9			
				10,249	1	11
By Personal Account.						
Compounding fees	300	0	0			
Admission fees	816	0	0			
Subscriptions	7,470	0	0			
Sales on credit	1,446	2	0			
Miscellaneous	19	15	2			
				10,052	1	2
Total Rs.				1,63,886	4	2

C. Little,

Honorary Secretary and Treasurer,

Asiatic Society of Bengal,

Examined and found correct.

Meugens, King & Simson,

Auditors.

STATEMENT

Oriental Publication Fund in Account

Dr.

	Rs.	As.	P.	Rs.	As.	P.
To Cash Expenditure.						
Printing charges	4,877	11	0			
Editing charges	2,272	8	0			
Salaries	1,224	0	0			
Freight	20	14	0			
Stationery	15	7	0			
Postage	262	14	6			
Commission on collecting bills	38	1	6			
Contingencies	20	3	6			
Advertisement	24	0	0			
				8,755	11	6
To Personal Account (Writes off and Miscellaneous)	.....			1	2	0
Balance ...	.....			10,988	13	0
Total Rs. ...	.....			19,745	10	6

No. 2.

with the Asiatic Society of Bengal.

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last report	.....	8,368 9 9
By Cash Receipts.		
Government allowance	9,000 0 0	
Publications sold for cash	663 13 3	
Advances recovered	64 5 0	
		9,728 2 3
By Personal Account.		
Sales on credit	.....	1,648 14 6
Total Rs. ...	.....	19,745 10 6

C. Little,

Honorary Secretary and Treasurer,

Asiatic Society of Bengal.

Examined and found correct.

Meugens, King & Simson,

Auditors.

STATEMENT

Sanskrit Manuscript Fund in Account

Dr.

		Rs.	As.	P.	Rs.	As.	P.
	To Cash Expenditure.						
Salaries		1,236	0	0			
Travelling charges		484	2	0			
Purchase of manuscripts		767	9	0			
Postage		52	5	6			
Contingencies		225	15	0			
					2,765	15	6
	Balance ...	.. ...			6,279	15	4
	Total Rs. ...	.....			9,045	14	10

No. 3.

with the Asiatic Society of Bengal.

Cr.

	Rs.	As.	P.
By Balance from last report	5,844	14	10
By Cash Receipts.			
Government allowance	3,200	0	0
By Personal Account.			
Sales on credit	1	0	0
Total Rs.	9,045	14	10

C. Little,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

Examined and found correct.
Meugens, King & Simson,
Auditors.

STATEMENT

Personal

Dr.

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last report	.....			4,909	15	5
To Cash Expenditure.						
Advances for purchase of Sanskrit MSS., &c. ...	.....			627	3	6
To Asiatic Society	10,052	1	2			
„ Oriental Publication Fund	1,648	14	6			
„ Sanskrit MSS. Fund	1	0	0			
				11,701	15	8
Total Rs.				17,239	2	7

No. 4.

Account.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts	11,418	15	7			
,, Asiatic Society	1,015	2	6			
,, Oriental Publication Fund	1	2	0			
				12,435	4	1

By Balance.	Due to the Society.			Due by the Society.					
	Rs.	As.	P.	Rs.	As.	P.			
Members	4,475	15	7	206	9	2			
Subscribers	...	...	...	88	10	6			
Employés	30	...	...	250	...	...			
Agents	169	2	6	...	...	...			
Miscellaneous ...	838	8	6	164	8	5			
	5,513	10	7	709	12	1	4,803	14	6
Total Rs.							17,239	2	7

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

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

STATEMENT

Invest

Dr.

	Nominal.			Actual.		
	Rs.	As.	P.	Rs.	As.	P.
To Balance from last report	1,47,700	0	0	1,47,651	8	6
,, Cash	11,600	0	0	12,372	2	9
Total Rs. ...	1,59,300	0	0	1,60,023	11	3

Funds.	Permanent.						Temporary.						Total of Actuals.		
	Nominal.			Actual.			Nominal.			Actual.					
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A	P.	Rs.	A.	P.
Asiatic Society ...	1,39,500	0	0	1,39,224	0	0	18,500	0	0	19,503	14	6	1,58,727	14	6
Trust Fund ...	1,300	0	0	1,295	12	9	.....	0	0	.....	0	0	1,295	12	9
	1,40,800	0	0	1,40,519	12	9	18,500	0	0	19,503	14	6	1,60,023	11	3

STATEMENT

Trust

Dr.

	Rs.	As.	P.
To Pension	48	0	0
,, Balance	1,343	3	10
Total Rs. ...	1,391	3	10

No. 5.

ments.

Cr.

	Nominal.	Actual.
	Rs. As. P.	Rs. As. P.
By Balance*	1,59,300 0 0	1,60,023 11 3
Total Rs. ...	1,59,300 0 0	1,60,023 11 3

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

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

No. 6.

Fund.

Cr.

	Rs. As. P.
By Balance from last report	1,343 3 10
,, Interest on Investments	48 0 0
Total Rs. ...	1,391 3 10

C. LITTLE,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

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

STATEMENT

Cash

Dr.

	Rs.	As.	P.
To Balance from last report	6,580	5	7
RECEIPTS.			
To Asiatic Society	10,249	1	11
„ Oriental Publication Fund	9,728	2	3
„ Sanskrit MSS. Fund	3,200	0	0
„ Personal Account	11,418	15	7
„ Trust Fund	48	0	0
Total Rs. ...	41,224	9	4

STATEMENT

Balance

Dr.

	Rs.	As.	P.
To Cash	3,570	2	2
„ Investments	1,60,023	11	3
„ Personal Account	4,803	14	6
Total Rs. ...	1,68,397	11	11

No. 7.

Account.

Cr.

		Rs.	As.	P.
	EXPENDITURE.			
By Asiatic Society		13,085	5	11
„ Oriental Publication Fund		8,755	11	6
„ Sanskrit MSS. Fund		2,765	15	6
„ Personal Account		627	3	6
„ Trust Fund		48	0	0
„ Investments		12,372	2	9
By Balance		3,570	2	2
Total Rs. ...		41,224	9	4

C. LITTLE,

Honorary Secretary and Treasurer,

Asiatic Society of Bengal.

Examined and found correct.

MEUGENS, KING & SIMSON,

Auditors.

No. 8.

sheet.

Cr.

	Rs.	As.	P.
By Asiatic Society	1,49,785	11	9
„ Oriental Publication Fund	10,988	13	0
„ Sanskrit MSS. Fund	6,279	15	4
„ Trust Fund	1,343	3	10
Total Rs. ...	1,68,397	11	11

C. LITTLE,

Honorary Secretary and Treasurer,

Asiatic Society of Bengal.

Examined and found correct.

MEUGENS, KING & SIMSON,

Auditors.

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