

PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR MAY, 1858.

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The monthly General Meeting for May was held on the 5th Instant.

The Hon'ble Sir James Colville, Kt., President, in the Chair.

The proceedings of the March Meeting were read and confirmed, no meeting having been held in April, in consequence of there not being a sufficient number of members present to form a quorum.

Presentations were received—

1. From the Hon'ble the Court of Directors, through the Government of Bengal, two\* sets of Photographic drawings of the ancient buildings at Bejapore.

2. From the Maharajah of Burdwan, a collection of stuffed birds and animals, as described by Mr. Blyth in his list, and a block of fossil wood (the last has not yet arrived).

3. From the Government of Bengal through Mr. Under-Secretary Buckland, the 3rd volume of the Reg Veda Sanhita, edited by Dr. Max Müller, and recently published under the patronage of the East India Company.

4. From Roy Lokenauth Bose, Bahadur, Principal Sudder Ameen, 24-Pergunnahs, a copy of his Bengali treatise on the Hindu Religion.

5. From Colonel Abbott a small Indo-Greek sculpture with the following note:—

\* The Jummah Musjeed and Ibrahim Roza.



“I have the pleasure to present to the Society a piece of Indo-Greek sculpture, representing a man seated on the earth, the left hand supported on the left knee. The only garments are a pair of short drawers and a species of Hessian boot. The features are nobly developed. It has evidently formed part of the freize of a cornice which has rested upon the head.

“To denote the weight thus supported, the neck is far buried in the bust, and the muscles are swollen in volume. It must have been executed before the Greek taste carried by the Macedonians to Ariana had been greatly impaired by the barbarism around.

“I purchased it when in charge of the Hazara of a native, who had found it in an old Fort of the Yoosufzye at the foot of the Mountains.”

6. From the same gentleman a copy of *Pantographia*. The following note accompanied the Book :

“I have the pleasure to send for deposit in the Library of the Asiatic Society, if approved by the Committee, a volume\* which I purchased of a man sent by me into Bokhara and the neighbouring districts to collect coins previous to quitting the Punjaub.

“It is a valuable, I believe, rare, work. But my object in placing it with the Society is to enable any person properly authorized to claim it. It has evidently belonged to the enterprising and sagacious traveller, William Moorcroft.

“It was purchased, so far as I remember, at Cabul. But I could learn from the purchaser no particulars of interest connected with it.

“Should the Volume be not claimed by any authorised person, I make over my interest in it to the Asiatic Society.”

7. From R. Cust, Esq., C. S, copies of his *Lives of Rama*, and of *Alexander the Great*, *pamphlets*.

8. From Captain R. Maclagan, Principal Roorkee Thomason College, three copies of Dr. Jameison's Report on the Botanical Gardens of the N. W. P.

9. From a gentleman (name unknown) the first 15 volumes of the Irish Academy Transactions.

\* The *Pantographia*, By Fry.



10. From Dr. A. Weber, a copy of the White Yajur Veda, part III.

11. From the Imperial Academy of Sciences and Belles-Lettres at Dijon, through Mr. Oldham, the Memoirs of the Academy, Volumes 1 to 5, Second series, with an Atlas.

12. From Dr. Falconer through Mr. Oldham, a pamphlet on the description of two species of the fossil Mammalian Genus *Plagiaulax* from Purbeck.

13. From the Geological Society of Dublin through Mr. Oldham, a series of its publications.

A note from Mohamed Hossein Ally Khan, Ex-Ameer of Scinde, conveying his wish to withdraw from the Society, was recorded.

The election of Mr. B. H. Hodgson and Dr. Falconer, as Honorary members of the Society was postponed under rule 6 of the Society's code.

Mr. Sutherland was named for ballot at the next meeting, proposed by Rev. Dr. Kay, and seconded by G. H. Freeling, Esq., C. S.

Communications were received—

From Baboo Radanauth Sikdar, an Abstract of the Meteorological Observations taken at the Surveyor General's Office during the months of October to January last.

2. From Mr. Cope a paper on Inscriptions on the public buildings of Lahore.

The Librarian and Zoological Curator submitted their usual reports for the months of March and April last.

Colonel R. Strachey exhibited a model of the exceedingly ingenious apparatus, designed by Mr. Stokes, Locomotive Superintendent of the E. I. Railway Company, by which the motive power of Locomotive Engines is made applicable to drive paddle-wheels of steamers. Several river-steamers have been built under Mr. Stokes' superintendence, and fitted with locomotive engines on this system, and have been found to answer excellently in practice. Colonel Strachey entered into some explanations as to the mechanical principles involved in this apparatus, illustrating his remarks by a model and some diagrams.



## LIBRARY.

The Library received the following accessions during the months of March and April last.

*Presented.*

Rig-Veda-Sanhita together with the Commentary of Sayancharya, edited by Max Müller, Vol. III. 4to. London, 1856.—BY THE HON'BLE THE COURT OF DIRECTORS, THROUGH THE GOVERNMENT OF BENGAL.

Selections from the Public Correspondence of the Punjaub Administration, Lahore, Vol. III. No. 4, 4 copies.—BY THE PUNJAUB GOVERNMENT.

Ditto from the Records of the Bombay Government, No. XLVI. New Series.—Annual Progress Reports of the Executive Engineers in the southern, central and northern Provinces of the Bombay Presidency in 1856-57.—BY THE GOVERNMENT OF INDIA, PUBLIC WORKS DEPARTMENT.

Tables de la Lune, par P. A. Hensen, London, 1857, Royal 4to.—BY THE LORDS COMMISSIONERS OF THE ADMIRALTY.

The Jumma Musjeed at Beejapore, being a Photographic drawing of the Ibrahim Royal.—BY THE HON'BLE THE COURT OF DIRECTORS.

Report of the Results of the Administration of the Salt Department during 1856-57, folio.—BY THE GOVERNMENT OF BENGAL.

Die Germanen und die Romer in ihren Bechselverhur, *pamphlet*.—BY THE PRUSSIAN ACADEMY OF SCIENCES AT MUNICH.

The Almanac and Companion for the North Western Provinces and the Punjaub for 1858.—BY MR. W. H. CAREY.

Journal Asiatique, Nos. 39 and 40.—BY THE ROYAL ASIATIC SOCIETY OF PARIS.

A Catalogue of the Bibliotheca Orientalis Sprengeriana.—BY DR. SPRENGER.

The Oriental Christian Spectator for January and February, 1858.—BY THE EDITOR.

The Oriental Baptist for March and April, 1858.—BY THE EDITOR.

The Calcutta Christian Observer for March and April, 1858.—BY THE EDITORS.

Abhandlungen der Akademie Historischen Classe, Vol. VI.—BY THE ACADEMY.

————— der, Philosophie Classe, Vol. VI.—BY THE SAME.



Bouverd Tables Astronomiques.—BY THE VENERABLE ARCHDEACON PRATT.

Vividharta Sangraha, Nos. 48 and 46.—BY BABU RAJENDRALAL MITTRA.

Recueil des Actes de L'Académie Imperiale des Sciences, Belles-lettres et arts de Bourdeaux, 3 Trimestre, *Bourdeaux*.—BY THE ACADEMY.

Report of the Director of Public Instruction in the Lower Provinces for the half year ending October 1857, *Calcutta*.—BY THE DIRECTOR OF PUBLIC INSTRUCTION.

Life of Alexander the Great, known in the East as Sikundar, *Agra*, 1854, *pamphlet*.—BY R. CUST, ESQ.

Rama the son of Dásaratha, King of Ajodya, *Agra*, 1854.—BY THE SAME.

Transactions of the Linnean Society, Vol. 22, Part 2.—BY THE SOCIETY.

Journal of the Proceedings of the Linnean Society, Vol. I. No. 4, and Vol. II., Nos. 5 and 6.—BY THE SAME.

List of the Linnean Society.—BY THE SAME.

Address of the President T. Bell, Esq. to the Society.—BY THE SAME.

Mémoires de l'Académie des Sciences, Arts et Belles-lettres de Dijon. Tome I. to V. Second series, 8vo., with an Atlas of Plates, 4to.—BY THE ACADEMY.

Description of two species of the fossil Mammalian Genus *Plagialax* from Purbeck.—BY DR. H. FALCONER, *pamphlet*.—BY THE AUTHOR.

Journal of the Geological Society of Dublin, Vol. II. Parts 2 and 3, Vols. III. to VI. 8vo.—BY THE ACADEMY.

Address at the 3rd and 5th Anniversaries, *pamphlets*.—BY THE SAME.

Journal of the Statistical Society of London, Vol. XXI. Part I.

Selections from the Records of the Madras Government, No. XLVI. Report on Civil Dispensaries for 1856.—BY THE MADRAS GOVERNMENT.

Magnetical Observations made at the Hon'ble East India Company's Magnetical Observatory at Madras, 4to.—BY THE SAME.

Speech of Col. Sykes in the House of Commons on February 18, 1858, on the proposed India Bill, *pamphlet*.—BY THE AUTHOR.

Report on the Revenue Administration of the Lower Provinces for the year 1855-56, *pamphlet*.—BY THE GOVERNMENT OF BENGAL.

Report on the Botanical Gardens of the Government, N. W. Provinces, by Dr. W. Jameson, *Roorkie*, 3 copies, 1855, 4to.—BY THE GOVERNMENT OF THE N. W. PROVINCES.

Pantographia containing accurate copies of all the known alphabets in the world; together with an English explanation of the peculiar force or



power of each letter, to which are added specimens of well authenticated oral languages forming a comprehensive digest of Phonology. By E. Fry, 1799, 8vo.—BY COL. ABBOTT.

Report (35th) Annual of the Parental Academy or Doveton College, *pamphlet*, 1858.—BY THE SECRETARY TO THE DOVETON COLLEGE.

A Treatise on the Mysteries of Hindu Religion in Vernacular, by Babu Lokenauth Bose, *pamphlet*.—BY THE AUTHOR.

*Exchanged.*

Athenæum for December and January, 1858.

The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science, Nos. 97 and 98.

Annaler der Chemie und Pharmacie, November, 1858.

*Purchased.*

American Journal of Science and Arts, Vol. XXV. No. 73.

Literary Gazette, Nos. 2135 to 2139.

Annals and Magazine of Natural History, Vol. 1, Nos. 1 and 2, 3rd series, supplementary No. for December, 1857.

Annales des Sciences Naturelles, Tome VII. Nos. 3 and 4.

Description de L'Assique Septentrionale par Abon-obeid-eb-Rekri, 1857, 8vo.

Comptes Rendus, Nos. 23 to 26, December 1857, Nos. 1 to 5, January to 1st February.

Tables Ditto, Tome XLIV. 1857.

Edinburgh Review for January, 1858, No. 217.

Journal des Savants for November, December, 1857, and January, 1858.

Die Orientalischen Münzen des Akademie Münzenbenets in Kongsberg on E. H. F. Neplman, *Liepzig*, 1858.

Revue des Deux Mondes, January and February, 1st and 15th, and 1st March, 1858.

— et Magasin De Zoology, Nos. 11 and 12, March 1857.

The Natural History Review, Vol. V. No. I. January 1858.

The Quarterly Review, No. 205, January 1858.

Atharva Veda Sanhita von Roth und Whitning, Erste Abth.

GOURDASS BYSA'CK,

*Librarian and Asstt. Secy.*

*The Asiatic Society's Rooms,*

*1st April, 1858.*



*Report of Curator, Zoological Department, for May, 1858.*

1. Dr. G. von Liebeg, having kindly permitted a native collector in the pay of the Society to accompany him, in his recent visit to the new penal settlement at Port Blair, on the eastern coast of the southern island of Great Andaman, I have now much pleasure in reporting on the specimens that were obtained by him and by Dr. Liebeg himself, under circumstances of considerable difficulty.

In the class of mammalia, there are only a human bone and some skulls of the undescribed wild Hog of the Andamans.

The bone is the left femur of probably an adolescent female. Length  $14\frac{1}{4}$  in., by  $2\frac{5}{8}$  in. in circumference at middle of trunk; the epiphyses imperfectly anchylosed. It is charred throughout; having been found among the smouldering remains of a recently fired village.

On the same occasion were found the following bones of the wild Hog. 1. Skull of an adult boar, wanting the tusks and lower jaw. 2. Lower jaw of a rather larger boar, with the series of teeth complete. 3. Skull of an adult sow, with teeth in lower jaw complete, and the upper series wanting only some of the incisors. 4, 5. Skulls of adolescent sows. 6, 7. Heads wanting lower jaw, of adult sows. 8. Lower jaw of adolescent sow. 9. That of a younger individual. All of these skulls are daubed over with regular stripes of red ochre, and had been hung up as trophies in the huts of the natives.

*SUS ANDAMANENSIS*, nobis, *n. s.* Seemingly akin to the *S. PAPUENSIS* of New Guinea, and to Mr. Hodgson's Pigmy Hog of the Nepal sâl-forest, which he terms *PORCULA SALVANIA*. The entire length of the skull of an adult male, from occiput to tip of the upper jaw, is only  $10\frac{1}{4}$  in.: breadth at zygomata  $4\frac{1}{2}$  in.: palate to tip of intermaxillaries, 6 in.: series of molars six (properly seven, the first having been displaced by the growth of the tusks, which are shewn by the shape of their sockets to have been large and abruptly curved outward and upward); longitudinal diameter of the tusk-sockets  $\frac{3}{4}$  in.: series of six grinders  $3\frac{1}{4}$  in.: from tusk-socket to tip of intermaxillaries,  $1\frac{7}{8}$  in.: breadth of occiput above, where narrowest, 1 in.; and of bony palate, 1 in. The lower jaw of a rather larger male measures  $8\frac{3}{8}$  in. to tip of incisors; and height to summit of coronoid process,  $3\frac{5}{8}$  in.: the tusks project  $1\frac{3}{4}$  in., as in the Indian boar, and are proportionately robust and keen-edged: series of six grinders  $3\frac{3}{8}$  in., thence to the tusk 1 in., and midway, a little nearer the tusk, is situate a small præmolar: the hindmost grinder is longer, in its antero-posterior diameter, than the penultimate by only one-half; and in the upper series



the hindmost is scarcely larger than the penultimate. This lower jaw is that of a fully grown boar, whose hindmost molars had long been brought into wear: in the other the hindmost molars are fully developed, but are not abraded.

Of the sow, there are three skulls of fully adults, with the hindmost molars worn; but one only has the lower jaw: in this, the upper plane of the occiput, where narrowest, is only  $\frac{1}{2}$  in.; being in the two others  $1\frac{1}{8}$  in.: the series of grinders is seven above and below; the tusks small, as in *S. INDICUS*. In other respects they resemble the boar skull, except in being smaller: length, from occiput to tip of intermaxillaries,  $9\frac{1}{2}$  in.; and greatest width, at the zygomata, 4 in.

From the size of the skull of the adult boar, it may be estimated that this animal would not exceed 15 in. in height, if indeed it is even so high at the shoulder. The skull is much less elongated anterior to the orbit than in ordinary Swine, that portion occupying somewhat less than three-fifths of the entire length. Profile a little concave anterior to the eyes, the forehead bulging into a convexity.

It is probable that the same species inhabits the Cocos islets, lying north of the Great Andaman, and also the group of the Nicobars to the south; though on the Great Coco it would appear that Hogs have only been recently introduced by the Burmans, and may therefore be of a domestic race derived from the continent. I have long had reason to suspect that the Hogs of at least the Andaman islands would prove to be of a peculiar species, and therefore called Dr. Liebeg's attention particularly to the subject. The Rev. J. Barbe describes the Nicobar Pigs as being apparently derived from the Chinese, and says nothing of their being of a diminutive size:\* moreover they appear to be domesticated; but so, I believe, are a few of the *SUS PAPUENSIS* in N. Guinea. Proceeding to the south and east, according to Dr. S. Müller, the *SUS VITATUS* inhabits Sumátra, with Jáva and Banka; *S. VERRUCOSUS* also inhabits Jáva; *S. BARBATUS*, Borneo; *S. CELEBENSIS*, besides the Babarussa (which is also in Buru and Ternate), Celebes; *S. TIMORIENSIS*, Timor and Rotti; and *S. PAPUENSIS*, New Guinea: a goodly series of wild swine, to which we now add the *S. ANDAMANENSIS*, which needs comparison most with *S. PAPUENSIS*.

The wild Hogs of the mainland of Asia have not yet been properly determined. They are found at all habitable elevations, and in all climates.

\* *J. A. S.* XV, 352. In Mr. H. Busch's 'Journal of a Cruise amongst the Nicobar Islands,' it is remarked that, in Teressa, "the jungle abounds with wild Pigs, which afford the islanders both sport and provisions."



Those of Siberia and Tartary (in the most extended sense of the latter appellation) are probably identical with *S. SCROPHA* of Europe; perhaps also those of Persia and Afghanistan :\* but there would seem to be more than one race in India, to judge from the skulls; and while the ordinary Indian wild Hog is also that of Ceylon, our museum contains a skull from that island which considerably resembles the skull of *S. BARBATUS*, (as figured by Dr. S. Müller); this is the *S. ZEYLONENSIS*, nobis, *J. A. S.* XX, 173. The ordinary wild Hog of India is designated *S. INDICUS* by Gray (being also *S. CRISTATUS*, Wagler); but the distinctions from *S. SCROPHA* mentioned by Dr. Gray are not very satisfactory;† and he also indicates a *S. AFFINIS* from the Nilgiris.‡ The countries eastward are likely to yield some peculiar species, even to the south of China: but the only peculiar Hog as yet properly determined from the whole mainland of Asia is Mr. Hodgson's tiny *PORCULA SALVANIA*.

Of birds, twelve species were obtained, one of which is a beautiful new *Sháma*.

*KITTACINCLA ALBIVENTRIS*, nobis, *n. s.* Differs from *K. MACROURA*, (L.) in its colouring, and in form of tail, the four middle feathers of which extend little beyond the next pair, and the medial pair but  $\frac{3}{16}$  in. (instead of commonly 2 in., as in the other). Abdominal region, vent, tibial plumes, and inside of the wing anteriorly, pure white, like the upper tail-coverts in both species; the hindmost portion of the flanks, and the lower tail-coverts, only, being deep ferruginous: four pairs of outer tail-feathers more deeply tipped with white than in *K. MACROURA*: in other respects resembling that species; being a true *Sháma*, as distinguished from a *Dhyal* (*COPSYCHUS*). Length of wing  $3\frac{1}{2}$  in., and of tail  $4\frac{1}{4}$  in. A third species of this genus, as distinguished from the nearly affined African genus *CERCOTRICHAS*, exists in the *K. LUZONIENSIS* (*Copsychus luzoniensis*, Kittlitz), of the Philippines.

The other species of birds from the Andamans are—

*HALCYON COROMANDELIANUS*, (Scopoli).

*H. SMYRNENSIS*, (L.)

*CORVUS CULMINATUS*, Sykes.

*STURNIA ERYTHROPYGIA*, nobis. The only specimen has the upper and lower tail-coverts, with the rump and tips of the tail-feathers dull white, instead of deep ferruginous; but there is a faintly perceptible shade of

\* Since writing the above, I have been assured of the existence of three most distinct species of wild Hog on the plains of Mesopotamia.

† *Vide Proc. Zool. Soc.* 1852, p. 130.

‡ *List of the Osteological specimens in the Collection of the British Museum.*



the latter, which I doubt not is fully developed in other Andaman examples. Heretofore only known from the Nicobars.

*TEPHRODORNIS GRISOLA*, nobis. This species we have also from Calcutta, Arakan, Pinang, and Java; so that it has probably been named by the late Professor Temminck.

*GEOCICHLA INNOTATA*, nobis. Discovered in the Nicobars, and subsequently obtained in Province Wellesley.

*COPSYCHUS SAULARIS*, (L.) Undistinguishable from Bengal specimens.

*ARTAMUS LEUCORHYNCHOS*, (L.) Badly so named; for the bill is of a fine blue.\*

*EDOLIUS* —? The Malayan species of *Bhim-ráj*, with rudimentary frontal crest.

*PYCNONOTUS JOCOSUS*, (L.) The Burmese and Pinang variety, with shorter and deeper-coloured crimson ear-tufts than in the Indian race.

*CARPOPHAGA SYLVATICA*, Tickell (*C. aenea* of India, auctorum, and of Sumatra apud Raffles). Two fine specimens, quite similar to the continental race on either side,—*i. e.* differing from the marked peculiar race of the Nicobars,—*C. INSULARIS*, nobis.†

In the class of reptiles, a species of *VARANUS* was procured, but circumstances did not permit of its preservation.

In that of fishes, the most remarkable is a curious new genus of the Blenny group, with broad expanded pectorals, thrown out as in the Loches of the genus *HOMALOPTERA* (apud Bleeker, *Balitora*, Gray, *Platyacara*, McClelland):—

*ANDAMIA*, nobis, *n. g.* Form elongated, with large expanded pectorals and caudal, and a long serrated anal which is also permanently expanded; the ventrals short, even with the pectorals, and consisting each of an outer simple ray and an inner divided ray, which are separated nearly to the base. Head depressed, with rather small eyes, placed vertically, and distantly apart; the mouth opening downward, and furnished with a remarkable labial apparatus: in front it is covered by a thin overflapping upper lip, which is connected laterally by a plicature with a fold or flap of membrane underneath, at a short distance from the mouth behind it: minute marginal teeth in both jaws, which are perceptible to the touch as a slight asperity. Dorsal fin extending the whole length of the back,

\* The alleged new Indian species of *ARTAMUS*, described by Dr. Nicholson in the *Proc. Zool. Soc.* 1851, p. 195, by the name *A. cucullatus*, seems to be no other than *CAMPEPHAGA SYKESI*, Strickland!

† The *CHALCOPHAPS* of the Nicobars appears to be *CH. AUGUSTA* of the late Prince of Canino.



becoming higher on its posterior half; its spinous and soft rays not easily distinguishable, and the second and third rays are a little elongated in the males (at least of the species described, which also has a small pal-mated appendage over each eye).

A. EXPANSA, nobis, *n. s.*

D. 36.—V. 26.—P. 14.—C. 11.

Colour dark plumbeous above, with slight pale mottled transverse bands on the sides: the gill-covers studded with minute dusky specks: dorsal fin dusky; the ventral surface and anal fin whitish, with a dark spot on each ray of the latter: membrane of the tail colourless, with conspicuous black rays; the caudal rays extending beyond the membrane: the tail having a rounded form, and being almost continuous below with the anal fin. In a young individual, the dorsal fin is pale, with the exception of the first two rays, which are black. In adults the pectorals and posterior half of the dorsal are marked (more or less distinctly) like the caudal, black rays on colourless membrane: ventrals pale. Length  $3\frac{5}{8}$  in.

SALARIAS OLIVACEUS, nobis, *n. s.* One of the crested species of this genus, having also a small appendage over each eye.

D. 12-19.—V. 22.—P. 13.—C. 12.

General colour dark olive-green, paler below, and also on the hinder half of the body, where inclining to dull reddish: a few obscure dark spots along the back, at base of the dorsal fin, not visible in all specimens, and some minute black specks also towards the tail. Length  $3\frac{1}{4}$  in.

PERIOPTHALMUS FUSCATUS, nobis, *n. s.* Pectorals rather large: ventrals deeply divided: anterior dorsal moderately high, with no elongated filaments: caudal pointed, and as if obliquely truncated below.

D. 12-13.—V. 11.—P. 11.—C. 17.

Colour dusky leaden-brown above, obscurely mottled; the lower-parts pale: the two dorsal and the caudal fins speckled with black; the pectorals less distinctly so; and the ventrals and anal spotless: on the gill-covers are a few white specks; and the sides of the body are obscurely marked with numerous small black spots. Length  $3\frac{1}{4}$  in.\*

GOBIUS BREVICEPS, nobis, *n. s.* A small nude-headed Goby, with the eyes placed remarkably forward, imparting somewhat of a *feline* aspect to the visage. Fins ordinary, or presenting no peculiar character.

D. 6.—1-9.—A. 1-8.

Colour a pale red-brown, with a row of large blackish spots along the

\* We have a small PERIOPTHALMUS from Mergui, which, in its colouring, approximates the P. ARGENTILINEATUS, C. and V., but has merely a slight infuscation of the first dorsal. D. 9-13.—V. 12. If distinct, P. SCINTILLANS, nobis.



side from pectoral to caudal, tending rarely to form a continuous band, above which the back is irregularly freckled with dusky specks of different sizes: the two dorsal and the caudal fins are also minutely speckled with dusky; the other fins and the lower-parts pale and spotless. The largest of several specimens measures  $1\frac{7}{8}$  in.

*G. CORYPHÆNULA*, Valenciennes. This curiously formed species appears to be very common both at the Andamans and Nicobars, frequenting the coral-reefs.

*APOGON QUINQUEVITTATUS*, nobis, *n. s.* About 1 in. in length, with four vertical black bands, a fifth at base of tail, and the occipital region also of this colour. Form compressed; the mouth small; scales also small, numbering about 24 to end of lateral line, which terminates at the posterior base of the second dorsal fin, and 3 rows above and 10 below the lateral line, downward from the first dorsal. Eye large, occupying two-fifths of the vertical height of the head.

D. 13—10.—A. 3-9.—P. 15 (?).—V. 5.

Pectorals reaching beyond the second lateral band; the posterior dorsal and the anal fins projecting similarly as far as the base of the tail-fin.

*MICROPHIS TENUIS*, nobis, *n. s.* A very slender *Syngnathous* fish, with 16 body and 36 caudal rings, and dorsal fin upon the first 7 caudal rings.

D. 24?—P. 16?—C. 9?

Snout half the length of the head, and scarcely more compressed than the neck; body slightly heptangular, the two dorsal angles alone strongly marked; tail quadrangular, and nearly twice as long as the head and body. Dorsal aspect unmottled brown; the other facets of the body (between the angles) marked, more or less distinctly, each with a white band, the continuity of which is broken at the rings: on the tail similar markings are but slightly indicated: no silvery appearance at the gill-covers. Described from two female specimens, the longer of which measures nearly 4 in.

Of *Mollusca*, 22 marine species were procured; but all of them are well known kinds, common in the Bay, and which need not therefore be enumerated.

Among the *Crustacea* are five specimens of a magnificent land-Crab, which sufficiently agrees with the description of *CARDISOMA CARNIFEX*, (Herbst.), by Milne Edwards; but which are nevertheless probably distinct and new, as no land-Crabs approaching them in size seem to be known on the peninsula of India. There are two marked varieties (one of them probably the result of former mutilation of a claw), each attaining to above 3 in. across the carapace. In one of these varieties the claws of the male are excessively unequal, and the huge nippers of the great



claw (which in three specimens sent is on the dexter side) are armed at the middle (typically) each with an enormous tooth. In the other variety the claws are unequal in the male (the left being rather the larger in the specimen sent), and quite equal in the female,—in both sexes much exceeding in size the small claw of the male of the other variety. There is also a marked difference in the colouring of the claws; those of the second variety being weaker in hue,—whence not improbably the whole difference may depend on the latter having cast and renewed the organ. In *GELASIMUS* and other Crabs with very unequal claws, the big one is as often on the right side as on the left. From the size and seeming abundance of this fine land-Crab, it is probably much eaten by the Andamaners.

A fresh-water species sent is the female of a new genus akin to *VARUNA*, remarkable for the small size and nearly round form of the last articulation to the tail, which is placed within a notch of the penultimate articulation, that accordingly half surrounds it, and is the largest of the series.

Other species of Crabs sent are a new *ZOZYMUS* (since received also from Ceylon), *ERIPHIA TUBERCULATA*, nobis, *n. s.* (common on the Burmese coasts), *TRAPEZA FERRUGINEA* (? Latr.), *PILUMNUS VESPERTILIO*, *GRAPSUS STRIGOSUS*, *GR. MESSOR*, *SESARMA TETRAGONA*, *CÆNOBITA RUGOSA*, *C. —*, a *PAGURUS*, and *GONODACTYLUS CHIRAGRA* of the *SQUILLA* group.

A species of Scorpion and *SCOLOPENDRA MORSITANS* are also sent; and of *Radiata* a species of *COMATULA*, two of *OPHIOCOMA*, one of *ECHINUS*, a *HOLOTHURIA*, and a *SIRINX* (?). Several interesting forms likewise of *Annelides*.

2. E. F. Kelaart, Esq., M. D., Trincomali. To this gentleman we are indebted for a very interesting series of marine Crabs, amounting to 15 species, with specimens of *OPHIOCOMA*, *OPHIURA*, *URASTER*, *ASTERINA*, &c. Also a *FILARIA* from the ovaries of the Pearl Oyster.

3. I have next to announce the presentation of a large collection of stuffed specimens, from his highness the Máharája of Burdwan. This collection contains numerous duplicates, and some very acceptable specimens—especially one or more undescribed species of mammalia, so far as I have been able to discover.

Of *Quadrumana*, adult male and female of the Mandrill (*PAPIO MAIMON*), and a young male of the Drill (*P. LEUCOPHÆUS*),—well set up: a Monkey, also, which I take to be the *INUUS ASSAMENSIS* (v. *pelops*); and other species with which we have long been well supplied. Two kinds of Lemur are sent; one the *L. ALBIFRONS*, Geoffroy; and the other is probably—



*L. FLAVIVENTER*, Lesson (*Rev. Zool. &c.*, 1851, p. 24). In this case, however, the remarkable colouring of the face is unnoticed by its describer. The face and between the eyes are black; but the broad bilobate band above the eyes of *L. NIGRIFRONS*, is in the present species grizzled with fulvous-white, vaguely divided by blackish along the middle, and the latter continued as a more distinct black line from the vertex to the occiput; the periphery also of the greyish frontal band is dusky-black. Fur more dense and frizzled than in *L. NIGRIFRONS*, especially upon the head: of a nearly uniform dull grizzled fulvous-brown on the upper-parts, limbs, and tail; palest on the limbs, but darker towards the anterior hands, and the digits light fulvescent: below dull fulvescent-white, purer white on the chin and throat, and passing to deeper fulvous towards the tail, and likewise on the fore-limbs towards the palms; some pale colour also on the cheeks, and the fur upon the ears; and the moustachial bristles black. Size rather exceeding that of *L. NIGRIFRONS* and *L. ALBIFRONS*.\*

A species of *PARADOXURUS* would seem to be *P. LANIGER*, Hodgson; but with the woolly fur much shorter (as produced in confinement), only  $\frac{1}{2}$  in. long upon the body, and *Lemurine* or Bat-like in character, close and frizzled: but the relative proportions of the tail and body do not agree, this having the tail about equalling in length the head and body; whereas in *P. LANIGER* it is described to be "barely more than a third of the entire dimensions." The prevailing colour of the fur is a maronne-brown, grizzled with hoary tips; darker on the head, occiput, cheeks, and ears; and a narrow median white line along the nose: paws also darker, especially those of the hind-feet, and the terminal third or more of the tail: lower-parts whitish, passing up the sides of the neck so as almost to form a collar: the whiskers long and black: ears naked within, and nearly so for the terminal half externally: no dark lines along the back; but a vague appearance of a broadish fulvous streak along the middle of the back. Length about 32 in., of which the tail is half (or very nearly so): head 4 in.; and hind-feet from heel,  $2\frac{3}{4}$  in.

Here may likewise be noticed—

*P. LEUCOTIS*, nobis (Horsfield's Catalogue). Length about 3 ft., of

\* We have now the following species of this genus:

1. *L. MACACO*, L.: the Ruffed Lemur.
2. *L. CATTAL*, L. The Ring-tailed Lemur.
3. *L. NIGER*, L. The Black Lemur.
4. *L. ALBIFRONS*, Geoffroy. The White-fronted Lemur.
5. *L. NIGRIFRONS*, Geoffroy. The Black-fronted Lemur, with skeleton.
6. *L. FLAVIVENTER* (?), Lesson. The Grey-fronted Lemur.



which the tail is half. Fur dense and woolly at base, but with long straight hairs intermixed: the prevailing colour pale dull yellowish or fulvous-brown, with three blackish dorsal streaks; below paler, more or less albescent: a white streak on the nose to between the eyes; and the ears black at base, with the terminal half flesh-coloured and scantily furnished with white hairs: crown more or less dusky, grizzled with whitish; and the paws and terminal half (or nearly so) of the tail blackish. Whiskers long and black. Inhabits the Burmese countries (Arakan, Tenasserim, &c.); and is said to be found likewise in Sylhet.

*P. RUBIDUS*, nobis, *n. s.* A large species, of a prevailing deep maronne colour, with black paws and terminal third of tail; the nape also blackish: no dorsal stripes or spots: a whitish band across forehead, extending broadly in front of the ears; and a duller white streak upon the nose, passing to pale ruddy on the forehead: ears black externally: whiskers conspicuously white: lower parts paler; but the fore-part and sides of the neck blackish, with a pale lateral streak continued downward from the white in front of the ears. Fur rather coarse, obscurely grizzled, with dusky-grey woolly pile at base. Entire length about 44 in., of which the tail is 18 in.: hind-foot from heel  $3\frac{1}{2}$  in. A broad pure white tail-tip in the specimen, which was purchased already stuffed; the individual having its nape much abraded from being tied up when alive. *Hab.* — ?\*

Among the mammalia sent by the Máharája of Burdwán, are a stuffed Tiger, 8 Leopards, and 9 Bears, an albino Jackal,† 2 Ratels, *ARCTONYX COLLARIS*, numerous *TRAGULI* (or ‘Mouse Deer’), with various others unnecessary to particularise, and 5 species of Kangaroo, three of which are new to our museum, *viz.* *HETEROPUS PENICILLATUS*, *BETTONGIA PENI-*

\* Of this genus we have now 8 species, counting *MUSANGA* and *typus* as one, and excluding the *DERBIANUS* as not properly appertaining to it.

1. *P. RUBIDUS*, nobis, *ut supra.* *Hab.* — ?

2. *P. GRAYII*, Bennett: *P. nipalensis*, Hodgson. *Hab.* Himaláya, and mountains of Arakan. One specimen from the latter locality has the entire tail fulvous-white.

3. *P. LANIGER* (?), Hodgson, *ut supra.* *Hab.* Himalaya?

4. *P. LEUCOMYSTAX*, Gray: *Amblyodon auratus*, Jourdain. *Hab.* Malayan peninsula, &c.

5. *P. ZEYLONICUS*, (Schreber). *Hab.* Ceylon.

6. *P. LEUCOTIS*, nobis, *ut supra.* *Hab.* Burmese countries.

7. *P. TRIVIRGATUS*, Reinwardt. *HAB.* Malayan peninsula, &c.

8. *P. MUSANGA*, (Marsden): *P. typus*, F. Cuv. *Hab.* India, Burma, and Malay countries.

† We have specimens of the Jackal in the museum,—pure white, coal-black, and bright rufous.



CILLATA, and a large species of LAGORCHESTES, which cannot be identified with any one of the four described by Mr. Waterhouse.

L. GYMNOTIS, nobis, *n. s.* Most nearly akin to L. CONSPICILLATUS, Gould; but much larger, a stuffed female measuring about  $2\frac{1}{2}$  ft. from nose to base of tail, and the tail 16 in.: the skin may be distended; but the following admeasurements can be better depended on: ears externally  $1\frac{3}{4}$  in. (more when fresh); palm to tip of middle claw  $1\frac{7}{8}$  in., the claw  $\frac{1}{2}$  in.; tarse to tip of longest claw  $5\frac{3}{4}$  in., the claw 1 in.; from muzzle to base of ear  $4\frac{1}{2}$  in. Muzzle as in L. CONSPICILLATUS: ears naked within. Prevailing hue rufous-brown, grizzled with dull white; each hair white towards the end, with a black tip: limbs more rufescent: under-parts dull rufescent-white throughout: from the mouth proceeds a dark chocolate-brown line or ill-defined band, contrasting with the white of the throat; and a similar vague band passes from the nostril to the eye, which latter is surrounded with dark hairs: chin also dark: the hairs of the tail are excessively abraded in the specimen, save chiefly a median line underneath; and they seem naturally to be very short, and scanty above and laterally: there is an exceedingly slight indication upon the haunches of the pale band of L. CONSPICILLATUS. *Hab.* — ?\*

Of the specimens of TRAGULUS (or 'Mouse Deer') under examination, four (if not five) species are distinguishable,—in addition to the MEMINNA INDICA.

1. TRAGULUS KANCHIL, (Raffles); of which *Moschus fulviventer*, Gray, is a common variety. This is by far the most abundant species, and its range of distribution extends northward into the Tenasserim provinces. Fourteen specimens are before me, besides an albino. It is constantly dis-

\* The Society's museum now contains the following species of MACROPODIDÆ.

1. MACRUPUS GIGANTEUS, (Zimmerman). Young male, and skeleton of the same; with skull of an older individual.
2. LAGORCHESTES GYMNOTIS, nobis, *ut supra*.
3. HALMATURUS RUFICOLLIS, (Desmarest). Adult male and female, skeleton of latter, and skull of a younger specimen.
4. H. BENNETTII, Waterhouse. Adult male and female, with skeletons, and skull of a younger individual.
5. H. UALABATUS, (Lesson and Garnot). Stuffed male, and skull.
6. H. DERBIANUS, Gray. Stuffed male and female.
7. H. BILLARDIERI, (Desmarest). Skeleton, with skin of head and neck.
8. HETEROPUS PENICILLATUS, (Gray), *ut supra*. Stuffed female.
9. BETTONGIA PENICILLATA, Gray, *ut supra*. Male.
10. B. CUNICULUS, Ogilby. Skull only.



tinguished from all the rest by the median dark line between the fore-legs : neck rufous, with a median dark nape-band strongly defined. A rufous hue commonly pervades the entire lower-parts, with the exception of the white on either side of the pectoral line ; and this white with its medial dark streak extends more or less backward, in proportion as another white streak is continued forward on each side of the belly from behind.

2. TR. PELANDOC (?); *Moschus pelandoc* (?), Ham. Smith: *Tr. affinis* (?), Gray. This species accords better than any other with Buffon's figure of *le Chevrotain de Java*. It is smaller than the Kanchil, with a conspicuously shorter head and larger eye : also smaller accessory or succentorial hoofs. The head and neck are very differently coloured ; and the hue of the body is more uniformly rufous and much less nigrescent than in the Kanchil, each hair, however, being black-tipped. Head of adult male from base of ear to muzzle  $3\frac{1}{2}$  in.; from eye to muzzle  $1\frac{3}{4}$  in. : the corresponding dimensions in an adult male Kanchil being  $3\frac{7}{8}$  in. and  $2\frac{1}{8}$  in. : from hock to point of succentorial hoof  $3\frac{3}{8}$  in. in the present species,  $3\frac{5}{8}$  in. in the Kanchil. Head rufous, with a strongly marked dark patch on centre of forehead, contrasting much with the broad rufous superciliary mark ; but the black of the forehead faintly continued as a nape-streak, whereas in the Kanchil the contrast of the same colours is transferred to the nape. In our present species, the throat is white, continued into three stripes down the front of the neck, which alike terminate in a pale fulvescent cross-band : the rest of the under-parts white, with merely a fulvous tinge on centre of belly : back and sides of the neck, with the two dark bands in front which alternate with the three white ones, of a peculiar *and similar* grizzled colouring, contrasting much with the rufous of the body ; the former being constantly rufous, and the latter more or less nigrescent, in the Kanchil : tail bright rufous above, white below and at the tip : limbs also bright rufous. Tusk protruding about  $\frac{9}{16}$  in. in the specimen described.

3. TR. JAVANICUS, (Pallas). An adult male and female which I refer to this species, as described by Dr. J. E. Gray in the *Proc. Zool. Soc.* for 1836, p. 64, are remarkable (more especially the female) for the blackish hue of the whole neck, and of the two dark streaks alternating with the three white ones in front of it. General colour rufous, the black tips to the hairs shewing much ; the breast, and towards the hind-legs, white, separated by fulvous which occupies the medial region of the belly, extending quite across it. From hock to point of succentorial hoof 4 in.

4. TR. JAVANICUS, var. STANLEYANUS ; *Moschus Stanleyanus*, Gray, P. Z. S. 1836, p. 65. I take this to be merely a variety of the last, having



the neck, and the marks in front of it, bright chesnut-rufous. The general colouring also is less nigrescent; and one female has a strongly defined dark line from eye to nose, and another along middle of nose, separated by a contrasting pale space. A male and two females are before me.

5. *TR. FUSCATUS*, nobis, n. s.: *Meminna malaccensis* (?), Gray, *Brit. Mus. Catal.* Larger than *TR. JAVANICUS*; an adult female measuring, from hock to point of succentorial hoof,  $4\frac{1}{2}$  in. General hue whitish, with prevailing dusky tips to the fur: beneath wholly white: neck of the same hue as the body, but with a dark nape-streak commencing from the forehead, and the usual white markings in front, alternating with the two dark ones, which are broad and nigrescent. Perhaps a third variety of the *JAVANICUS*; but, if so, a very distinct one. *Hab.* — ?

The second species, however, which I have doubtfully assigned to *TR. PELANDOC*, is most assuredly no variety of the Kanchil; and I do not in the least hesitate to regard it as a well characterized species.

The birds comprise numerous Lories, Cockatoos, and other Parrots; of which the following are new to the Society's museum. *ELOPHUS PHILIPPINARAM*, (Gm.), *LORIUS CYANAUCHEN*, Muller,\* and *CHALCOP-SITTA NOVÆ GUINÆÆ*: also 2 Emeus, 3 Swans, 3 *Sárás* Cranes, a couple of white Crows, a white (or rather *lutino*) 'Hurrial' or fruit-Pigeon (*OSMOTRERON BICINCTA*), sundry *Gallinacæ*, and others which need not be particularized: the only novelty being two specimens (old and young, in very bad condition,) of the *PHAPS HISTRIONICA*, (Gould). The following Australian species are, however, worthy of notice, as having evi-

\* *SYN. L. superbus*, Fraser; but the *L. LORY*, (L., v. *tricolor*, Stephens,) is subject to so much variation, that I have great doubt if the present bird is more than an occasional variety of it. The principal difference is, that this is blue under the wing (brighter than in *L. DOMICELLUS*), whereas *L. LORY* is usually red under the wing: there is also an unusual amount of red up the back, and the blue of the hind-part of the neck is particularly brilliant; but the latter varies much in brightness in different specimens of *L. LORY*, as do also the relative proportions of the blue and red both above and below,—some having nearly the whole under-parts blackish-blue, passing to vivid prussian-blue posteriorly, and others being crimson as far back as the thighs, with various intermediate phases. This particular specimen of *CYANAUCHEN* has lost many of its upper nape-feathers, so that it cannot be ascertained whether the usual red occipital band had been present; but I observe that some of the black feathers of the hindmost part of the cap are partly red at base. I repeat my doubt that it is more than an occasional variety of *L. LORY*.



dently been set up from cage specimens brought alive to this country—*PTILINORHYNCHUS COOKII* and *ENTOMYZA CYANOTIS*.\*

The reptiles are *CROCODILUS PALUSTRIS* and *GAVIALIS GANGETICUS*.

While describing new or little known birds, I may here bring to notice a Pheasant, of remarkable beauty, four living specimens of which (all males) have recently been obtained by Babu Rajendra Mállicka for his

\* The following, if not the *EOS RICINIATA* or *E. SEMILARVATA*, Bonap., descriptions of which I have not seen, would appear to be a new species of Lory.

*EOS FUSCATA*, nobis, *n. s.* (?) Structure typical. Length of closed wing 6 in. Prevalent colour brown-black, the rump-feathers marginal with dull-white, those of the nape with ruddy-brown, and of the breast with bluish-grey: a dull orange band across the crown, from eye to eye, perhaps typically crimson, a crimson band crossing the upper and another crossing the lower part of the breast; the abdominal and tibial feathers also crimson, and the flanks and lower tail-coverts dull purple-black: tertiaries ruddy-brown, perhaps brighter in fine specimens: a large ruddy-yellow spot on the inner web of each primary, as seen from above in the spread wing; and the unspread tail dull ruddy-brown above, with a shade of blue at tip, all but its middle feathers having the inner web crimson to near the tip: under surface of the wings chiefly yellowish-red. HAB. — ?

*TRICHOGLOSSUS OCHREOCEPHALUS*, nobis, *n. s.* Size and structure of *TR. CHLOROLEPIDOTUS*, (Kuhl). Upper-parts uniformly vivid green; the lower yellowish, passing on the belly and flanks to pure yellow with green tips: crown, ear-coverts, and cheeks, ochreous-yellow, streaked: a broad pure yellow band on the under-surface of the wing, on the inner webs of the primaries and secondaries. Length of closed wing 5 in. HAB. — ?

The following is perhaps but a cage variety of *TR. HÆMATODUS*, (L.); unless that the tail is more developed, attaining to 5 in. and upwards. The red of the breast and beneath the wing in *HÆMATODUS* is replaced by glowing yellow, faintly tinged with red towards the centres of most of the feathers: a slight admixture of red also on the axillaries and on the under-surface of the wing: pectoral feathers without dark margins, or with obscure traces of green terminal edges, chiefly towards the flanks: abdominal patch green, with very slight admixture of blue: the blue of the forehead and cheeks dull and little extended; and the occiput green, above the greenish-yellow nape-band: no yellow at base of inter-scapularies, abruptly defined, as red in *HÆMATODUS*. Perhaps a distinct species,—the *TR. FORSTENI*, Bonap.? The next is certainly distinct.

*TR. IMMARGINATUS*, nobis, *n. s.* Smaller than *HÆMATODUS*, the feet conspicuously so. Length of wing 5 in., and of tail 4 in. Crimson of the breast and beneath the wing much brighter than in *TR. HÆMATODUS*, and little or no trace of dark terminal margins: nape-feathers with fuscous tips, below which a few feathers are red at base, but shewing less than in *HÆMATODUS*; great abdominal



aviaries. *Habitat* unknown.\* It appears to constitute a second species of the genus *DIARDIGALLUS* of the late Prince of Canino; but still is closely akin to *GALLOPHASIS*, Hodgson, and *NYCTHEMERUS*, Swainson.

*D. FASCIOLATUS*, nobis, *n. s.* Size of a Jungle-fowl; and the tail well arched, as in typical *GALLUS*: papillose crimson skin of the cheeks greatly developed, as in the common Silver Pheasant (*GALLOPHASIS NYCTHEMERUS*), rising on either side into a distinct lappet over the forehead, but not uniting medially to form a comb; also continued downward into well marked incipient wattles, and backward into a peak above the ears. From the crown of the head a most elegant Peafowl-like crest, composed of feathers 3 in. long, the slender black stems of which are quite bare for 2 in., and then each divides and subdivides in a remarkable manner, together forming an acute triangular barbed tip, truncate at the extremity, and of a steel-blue colour. Crown black, passing downward into minutely vermiculated feathers on the neck, fore-part of the back, and breast; the vermiculation less distinct upon the last, which appears of a somewhat dark blended ash-colour: belly, flanks, and tibial plumes, black, the feathers of the flanks tipped with steel-blue: scapularies and wings like the back, but more coarsely vermiculated, each feather terminating in a transverse black band, with narrow whitish margin above, broadest on the scapularies: the great alars, tertiaries, and largest range of wing-coverts, are not thus tipped, but are vermiculated like the inter-scapularies: across the back, above the rump, a shining coppery-golden band; and the rump and upper tail-coverts black, tipped with shining steel-blue, and finally with very rich shining maronne-red: legs bright vermillion, the shank well spurred; and the bill dull waxy-greenish. Irides reddish-hazel. Length of tarse  $3\frac{1}{4}$  in.; of bill to gape  $1\frac{1}{4}$  in., and anterior to nostril  $\frac{3}{4}$  in.: closed wing 9 in., or somewhat less. Female unknown. The figure of the living bird is particularly gracile and *game*-looking; and the bright carmine legs are a conspicuous feature, also the handsome crest, and great development of the papillose naked skin of the cheeks, continued downward into wattles, which are more distinct than in the *NYCTHEMERUS*.

patch dusky-purple: blue of the forehead and cheeks less developed than in the other.

These various Lorikeets are not uncommonly brought alive to Calcutta; but much less numerously than *TR. ORNATUS*, the range of which extends eastward to Celebes,—certainly, however, not to Sumatra, as stated by Raffles.

\* Since writing the above, I have seen another in the possession of a gentleman, who has reason to believe that it is from Borneo.—All are now dead.



4. A small collection from Major Berdmore, sent by him from the Sitang valley, Pegu. It consists chiefly of species previously forwarded by that officer; though several of them are still highly acceptable. Of mammalia, RHINOLOPHUS AFFINIS, Horsfield,—SOREX FULIGINOSUS, nobis (*J. A. S.* XXIV, 362), and SCIUROPTERA SAGITTA *apud nos* (*J. A. S.* XXIII, 731). Of birds, a fine pair of BUCEROS CAVATUS. Of reptiles and fishes, a few known species, including a small MASTACEMBALUS 4 in. in length, which seems to be M. UNICOLOR, K. and V. H., but with 37 dorsal spines (instead of 34), and a row of black spots along the soft dorsal and more obscurely along the anal.\* Also a few crustacea and some good insects.†

We have another MASTACEMBALUS from Maulmein, which seems to be undescribed, and may therefore be designated—

M. ZEBRINUS, nobis. Tail detached from the dorsal and anal fins, as in the common M. PANCALUS of Bengal. Series of 28 or 29 dorsal spines. Colour pale brown, deeper along the back; and marked throughout (more distinctly in the young) with dusky transverse stripes, alternating with fainter stripes more or less regular, which latter are often double or more or less divided, and are set off by the narrow pale interspaces,—much as in the ‘Dauw’ or *original Zebra* (EQUUS BURCHELLII). In the larger specimens the stripes are more or less obsolete, except towards the tail. Dorsal and caudal fins minutely striated; the anal with broad stripes, as on the sides. Our largest specimen, apparently full grown from its bulk, is  $8\frac{1}{2}$  in. in length.

We have also a small *Siluroid* fish from the same locality, which appears to be new both as regards genus and species.

AMBLYCEPS, nobis, *n. g.* Affined to OLYRA,‡ McClelland, but the head much broader and flatter, with minute eyes, placed near the hind aperture of the nostrils: two pairs of cirri above and below, the inner above situate between the fore and hind apertures of the nostrils: pectoral and dorsal spines short and concealed, but comparatively robust: the second or adipose dorsal short and low; and the ventrals and anal also short: tail large and moderately furcate: a band of card-like teeth above and

\* The EMYS formerly sent by Major Berdmore, and referred to E. OCELLATA, Dumeril and Bibron (*J. A. S.* XXII, 645), proves to be totally distinct from the latter, of which I have lately obtained two living specimens in the Calcutta bazar. The Burmese Terrapin may therefore now bear the name E. BERDMOREI, nobis.

† Another,  $9\frac{1}{2}$  in. long, since received, has 36 dorsal spines, including the comparatively large one immediately anterior to the soft-rayed dorsal.

‡ This name is pre-occupied in Botany.



below, but no palatal band discernible in the specimen: body subcylindrical, compressed, becoming more so to the tail.

AMB. CÆCUTIENS, nobis, *n. s.* Head broader than the body, flat, obtuse at the muzzle; the mouth moderate, its cleft scarcely continued back laterally: cirri large; the upper labial cirrus reaching to tip of pectoral fin, and the exterior lower one nearly as long. Body long and COBITIS-like. The number of fin-rays is difficult to determine, but seems to be

D. 1-6.—P. 1-2 or 3.—V. 6.—A. 6.

Colour dark brown above, paler beneath. Length of specimen 3 in. To describe this little mud-fish properly, a series of specimens are required, or the sacrifice of our only individual. It will, however, be readily identifiable from the above notice. The individual described was procured by Mr. W. Theobald, Junr., at Maulmein; and others, but in much injured condition, have since been received from Pegu, from Major Berdmore.

Although I have attended pretty regularly the Calcutta fish-bazars during the last year, and have procured many good specimens, and added largely to our collection of fish-skeletons, the only species new to the museum which have been obtained are *SERRANUS LANCEOLATUS*, C. and V. (small), *GERRES POETÆ*, C. and V., and *OTOLITHUS MACULATUS*, C. and V. (four individuals).\* I have procured, however, a fine series of a somewhat rare fish which is perhaps the *CHRYSOPHRYS LONGISPINIS*, C. and V., apud Bleeker, from Calcutta; but the dentition of which differs altogether from that of *CHRYSOPHRYS*, there being no palatal teeth, but only a band of "card-like" teeth in each jaw, with reverted tips, especially those in the upper jaw in front, which are much curved backwards. Now the teeth of *CHR. LONGISPINIS* are described in the *Hist. des Poissons* to be "small, and disposed in three ranges." Our species otherwise approximates the *CHR. CALAMARA* (Russell, pl. 92), but is less deep in the body, the eye is larger and is situate higher in the head, which last is throughout covered with small indistinct scales. Pre-operculum minutely toothed; mouth slightly protrusile. The dorsal spines are alternately stouter and more slender, as in Rüppell's figure of *CHRYSOPHRYS SARBA*, and also in *DATNIA* and *DATNIOIDES*, Bleeker (founded on the *Coius polota* of Buchanan Hamilton).†

\* Add *MESOPRION RANGUS*, C. and V.; July 2nd: and since *GERRES FILAMENTOSUS*.

† Is not this, however, an *ANOPLUS* of Temminck and Schlegel? Vide *Fauna Japonica*, which I have not seen.



D. 12-14.—A. 3-8.—P. 18.—V. 1-5.—C. 1-16.

The first dorsal spine is short, about half the length of the second, which is two-fifths that of the third, which nearly equals the fourth and longest: thence the spinous portion of the fin slopes gradually backward; and the soft portion is as high as the seventh spine and nearly even. The first anal spine is short, the second long and robust and much flattened, and the third one-sixth shorter than the second and much less robust. Ventral spine longer and more slender than the third anal. Pectorals pointed, their tips reaching to the vent. Ventrals also pointed, terminating in a slight filament. Tail scarcely furcate. Scales of the body somewhat large, especially below the lateral line; numbering about 20 in oblique series descending from the first dorsal spine: those composing the lateral line are about 50 in number.

Colour bright silvery, with a pink iridescence along the back and above the eyes; the membrane of the dorsal fin spotted with dusky, becoming nearly or quite obsolete in large individuals. Rest of the fins white, the tail slightly suffused with dusky towards its tip. Irides white with brilliant nacreous lustre. Our largest specimen measures  $17\frac{1}{2}$  in. in length, with longest dorsal spine  $2\frac{3}{4}$  in. In small specimens (3 in. long), about 9 or 10 transverse bands are faintly discernible on the body, traces of which appear in larger individuals, broken up into spots more or less obscure. As seen on a fish-stall, the brilliancy of the silvery hue of this species attracts attention even from a distance, considerably surpassing that of the common DATNIA ARGENTEA, and equalling that of the rarer GERRES POETÆ. Should both genus and species prove new, as I suspect, this fish may be named POLOTUS NITIDUS, nobis.

The *Siluroid* fishes have engaged my particular attention; but the following species only have been procured in the bazar.

WALLAGO RUSSELLI, Bleeker: *Silurus boalis*, B. H.; *S. wallagoo*, Val., &c. Extremely common: attaining to an immense size.

W. PABDA; *Silurus pabda*, B. H.: *S. microcephalus*, Val. *Pabda* of Bengális, and certainly the true *pabda* of Buchanan Hamilton. Common: attaining to 9 or 10 in. long, at most.\*

SCHILBE GARUA; *Silurus garua*, B. H. Common: attaining to 14 in. in length.

AILIA COILA; *Malapterurus coila*, B. H.: *Malapterus (Ailia) bengalensis*, Gray; *Ailia bengalensis*, Val., &c. Common.

BAGRUS AOR; *Pimelodus aor*, B. H. Tolerably common.

B. AORELLUS, nobis, n. s. Hitherto confounded with the preceding, but a

\* W. ANASTOMUS, (Val.), is also enumerated from Calcutta by Dr. Bleeker.



much thicker fish in proportion to its length; the dorsal spine smaller, and uniformly granulose anteriorly,—instead of shewing a narrow white ridge, set off laterally with black, as in the AOR; the adipose dorsal fin less elongated, but higher, with the same black spot posteriorly; occipital bony process more developed, and posterior to this a small bony plate, not exceeding the occipital process in breadth (whereas the corresponding oval plate in B. AOR is fully twice as broad); at base of the first short dorsal spine, a bone formed of two lateral triangles well united in the middle,—whereas in B. AOR the union of the two lateral triangular bones is generally imperfect, and they are mostly quite distinct; occasionally, even in small specimens of B. AORELLUS, these bones are anchylosed to the oval bone in front of them,—but never in B. AOR. The palatal teeth in B. AOR are arranged in a subeven crescentic band; whereas in B. AORELLUS they are in two lateral sub-triangular masses united in the middle. Ten distinct soft rays to the pectorals and fourteen rays to the ventrals. Colouring much the same; but in B. AORELLUS there is a considerable admixture of black on the pectorals, ventrals, and membrane of the dorsal fin, which does not occur in the other. The two species are about equally common in the Calcutta bazar.\*

B. CAVASIUS; *P. cavasius*, B. H. Common: rarely exceeding 7 in. long.†

B. TENGARA; *P. tengara*, B. H. Common.

B. GULIO; *P. gulio*, B. H.: *B. albilabris*, Val.‡ The *Nuna Tenggara* of the Bengális, corrupted into *Nonatora* in the *Histoire des Poissons*. Extremely common: attaining to about 10 in. long.

\* Another, closely akin, exists in the B. SINGHALA (*Platystoma singhala*, Sykes); and a fourth in the B. AORINUS of Jacquemont. The latter is not represented to have the conspicuous black spot on the adipose dorsal seen in the others; but neither is it represented in Jacquemont's figure of B. AOR! Buchanan Hamilton's figure of B. AOR represents a young specimen, but still the dorsal spine is not represented of sufficient magnitude. There is also a *B. aorides*, Jerdon, *Madr. Journ.* XV, 336, with maxillary cirri reaching to the tail. In B. AORELLUS they reach to the middle of second dorsal. B. AOR, B. AORELLUS, and OSTEOGENIOSUS CANTORI, are frequently attacked by an ÆGA, which buries its head in the adipose flesh anterior to the second dorsal and the caudal fins.

† The nearly affined *B. keletius*, Val., is enumerated from Calcutta by Dr. Bleeker.

‡ Dr. Bleeker adds, as synonymes, *B. abbreviatus* and *P. fuscus* of the *Histoire*



B. MENODA; *P. menoda*, B. H.: *B. carsio*, Cuv. *R. A.* (nec *P. carcio*, B. H.); *B. corsula*, Val.; by mistake marked *Mugil corsula* in pl. 1 of Buchanan Hamilton's 'Fishes of the Ganges'; but the original drawing (or a copy of it) marked *P. menoda* in B. Hamilton's hand-writing. Tolerably common: attaining to 14 in. long. A very mucous fish; and those brought to the bazar are commonly much clotted over with an adhesive clayey mud, as if they had burrowed into it; and they are mostly brought many together, appearing as if dug out from the mud of ponds or *jhils* more or less dried up.

B. URUA; *P. urua*, B. H.: *B. exodon*, Val. Identified from a drawing by Buchanan Hamilton. Common; but not often brought to the bazar.

ARIUS GAGORA apud Bleeker; *P. gagora*, B. H. (in part). Excessively common; but I have not been able to obtain it over 17 in. long, whereas B. Hamilton's *gagora* is described to attain to about 3 ft.: he having evidently confounded this and the next species. The present is indeed the commonest of the whole tribe in the Calcutta fish-bazars, and *Bagrus gudio* is the next in abundance: both of these may daily be obtained of all sizes; but I have rarely met with any but adults of A. GAGORIDES and A. ARIOIDES, and only adults of BAGRUS MENODA, which when brought are generally in quantity. The spines of A. GAGORA are less strongly pectinated in front than in B. Hamilton's figure of the species; and there is the usual prolongation of the dorsal beyond its spine. Dorsal and pectoral spines moderate, comparatively slender, and granulated in front only, the sides being striated. The upper labial cirri reach back to base of pectoral spines. Mouth comparatively small, its cleft scarcely reaching back one-third to below the eye. *Palatal teeth mammilliform, and totally unlike the maxillary teeth*; whereas in the next two species, the palatal and maxillary teeth are similar. No blackish tinge on the ventral and anal fins; nor trace of aureous wash on the upper-parts. A specimen 10 in. long has the dorsal spine  $1\frac{1}{2}$  in.; and one of 15 in. has the dorsal spine 2 in.

A. GAGORIDES; *Bagrus gagorides* and *B. trachypomus*, Val.: *P. gagora*, B. H. (in part). Nearly affined to A. ARIOIDES; but the interparietal plate differs in shape, and the upper cirri reach only to base of pectorals, as in A. GAGORA. Upper lip, as seen from beneath, protruding in the middle, so as to be there twice as broad as at the sides. Dorsal and pectoral spines much stouter than in A. GAGORA, and granulated half-way on the sides towards the front. General hue dull lurid purple with a

*des Poissons*,—and *B. gulioides*, *B. melas*, *B. Schlegelii*, and *B. rhodopterygius*, Bleeker.



golden shine; the head browner: fins purple; no dark spot on the adipose dorsal; and the lower-parts subdued white, studded over with minute dusky specks (which also occur in *A. ARIOIDES*, but to a less extent). This species is rarely procurable of small size, and it commonly occurs  $2\frac{1}{2}$  ft. or more. In a specimen  $5\frac{1}{4}$  in. long, the dorsal spine measures  $1\frac{1}{8}$  in.; in one of 10 in.,  $1\frac{7}{8}$  in.; of 15 in.,  $2\frac{1}{2}$  in.; of 2 ft., 4 in.; of  $2\frac{1}{2}$  ft.,  $4\frac{3}{4}$  in.; and of  $2\frac{3}{4}$  ft., 5 in.: the membrane of the dorsal is scarcely prolonged beyond its spine, to a much less extent than in the two other species. Occasionally, though rarely, one or more of the cirri are divided in this fish, as usual in several of the Nilotic SILURIDÆ. It is not uncommon.

*A. ARIOIDES*; *Bagrus arioides*, Val.; *Pimelodus auratus*, B. H. (MS. on coloured drawing, nec *B. AURATUS*, Val.). Tolerably common, or rather now and then brought in quantity: attaining to about 12 or 13 in. long. Upper cirri reaching back to base of dorsal spine. The dorsal and pectoral spines proportionally larger than in *A. GAGORIDES*, also more strongly pectinated behind, and more extensively granulated on the sides; the membrane of first dorsal prolonged beyond the spine, as usual as in the present group. All the fins are suffused with black, more or less. A distinct aureous wash on the upper parts, which begins to make its appearance when the fish is about 6 in. long; prior to which the general hue is plain plumbeous or livid, with the fins conspicuously almost wholly purple-black. Eyes proportionally large. Mouth (as in *A. GAGORIDES*) broader than in *A. GAGORA*; its cleft reaching half-way to below the eye, as seen in profile. A specimen 12 in. long has the dorsal spine  $2\frac{3}{8}$  in., and one exceeding 13 in. has it  $2\frac{3}{4}$  in.

*RITA BUCHANANI*, Bleeker: *Pimelodus rita*, B. H.; *Arius rita* et *A. ritoides*, Val. Common, chiefly in the hot season.

*OSTEOGENEOSUS CANTORI*, Bleeker: *Arius militaris* of Gangetic rivers, *auctorum*. Somewhat rarely brought.

*PANGASIUS BUCHANANI*, Val.: *Pimelodus pangasius*, B. H. Very common.

*SILUNDIA GANGETICA*, Val.: *Pimelodus silundia*, B. H. Very common.

*BAGARIUS BUCHANANI*, Bleeker: *Pimelodus bagarius*, B. H. Not rare. Attains an enormous size, but large specimens are seldom brought to the bazar.

*PIMELODUS GAGATA*, B. H. Not rare during the rains.

*CLARIAS MAGAR*; *Macropteronotus magur*, B. H. Very common.

*SACCOBRANCHUS FOSSILIS*; *Silurus fossilis*, Bloch: *S. singio*, B. H. Extremely common.

*PLOTOSIUS CANIUS*, B. H. Very common.



Of ESOCIDÆ, Buchanan Hamilton notices only three species, all of which are assigned by him to the old genus *ESOX*. These are—*BELONE CANCEL*A, (B. H.), *HEMIRHAMPHUS ECTUNTIO*, (B. H.—*ANGULATUS*, *ibid.*, on unpublished drawing), and *PANCHAX BUCHANANI*, Val. Two species of *BELONE* and three of *HEMIRHAMPHUS*, however, are about equally common in the Calcutta provision-bazars; and another species of each genus occurs at the Sandheads, at the mouth of the Hughli. A second *PANCHAX* also is sometimes brought in great numbers to the fish-bazars.

*BELONE TENUIROSTRIS*, nobis, *n. s.* As compared with *B. CAUDIMACULA*, Cuv., the general form is more slender, elongated, and compressed; with jaws of equal length (minus the cartilaginous tip of the lower), narrow and considerably more tapering in width to the extremity. Head a third of the entire length. Eyes moderately large, occupying about three-fifths of the vertical diameter of the head. Series of longer teeth slender and uniform in both jaws, becoming gradually smaller towards their tips; the minute intermediate teeth being so small as to be barely perceptible. Cheeks distinctly scaled. Low hind portion of the dorsal and anal fins much developed: the other fins of the usual proportions.

D. 19.—A. 24.—P. 11.—V. 6.—C. 15 (exclusive of the short exterior rays).

Colour greenish above, silvery below, with a very brilliant silvery stripe along each side, broadening posteriorly; the lower portion of the operculum also brilliant silvery, and likewise the sides of the lower jaw. Fins yellow more or less, with some black at the tips of the pectorals, and middle of the fork of the caudal—no spot at base of caudal, as in *B. CAUDIMACULA*.—From the Sandheads.

Our other species are—

*B. CAUDIMACULA*, Cuv.; Russell, pl. 176. Found also in the China seas.

*B. CANCEL*A; *Esox cancela*, B. Hamilton.

The *B. ANNULATA*, C. V., keeps further out to sea, but is common on the coast of Orissa.

Of *HEMIRHAMPHUS*, the next three species are brought commonly to the Calcutta bazars.

*H. ECTUNTIO*; *Esox ectuntio*, B. H. With upper jaw about a third as long as the lower, flat, and tapering from about the middle to an obtuse point. Eyes but half the vertical diameter of the head. Tail rounded, Ventral fins small, placed near the anal, and reaching close to the anus. In a specimen  $6\frac{3}{4}$  in. long, the lower jaw exceeds the upper by 1 in., and the upper from cleft of mouth measures  $\frac{1}{2}$  in. According to Buchanan Hamilton, this fish “does not exceed a foot in length.” I have not obtained it so large as 7 in. He states, also, that “each side has a broad



longitudinal stripe, shining like silver." The sides are indeed silvery, but ill-defined, except where forming a narrow streak towards the tail.

D. 13.—A. 11.—P. 7.—V. 5.—C. 14.

This species seems to be affined to *H. REYNALDI* of Valenciennes.

*H. BRACHYNOTOPTERUS*, Bleeker: *Esox angulatus*, B. H. (*MS.* on drawing). Upper jaw very short, triangular, broader than long, almost flat but with distinct angulate ridge. Eyes three-fifths of the vertical diameter of the head. Tail furcate. Ventrals placed midway on the body, far anterior to the anus. In a specimen 7 in. long, the lower jaw exceeds the upper by  $1\frac{1}{8}$  in., and the upper jaw from cleft of mouth measures  $\frac{3}{16}$  in. I have not seen it larger. A narrowish well defined silvery stripe extends from the base of the pectorals to the middle of the caudal. The dorsal fin contains 11 to 13 rays in perfect specimens.

D. 11 to 13.—A. 15.—P. 7.—V. 6.—C. 14.

*H. STRIGA*, nobis, *n. s.* With upper jaw subtriangular, rounded in front, a little longer than broad, flat, with very indistinct trace of angulate ridge; the lower jaw much longer than in the two preceding species. Eyes three-fifths of the vertical diameter of the head. Tail rounded. Ventrals small, placed near but not reaching to the anus. In a specimen  $8\frac{1}{2}$  in. long, the lower jaw exceeds the upper by  $2\frac{1}{8}$  in., and the upper jaw from cleft of mouth measures  $\frac{1}{4}$  in. Lateral silvery stripe narrow and little perceptible, excepting towards the tail, where broader and distinct. A medial dusky line along both mandibles and middle of the fore-part of the back. Operculum brilliant silvery.

D. 12 or 13.—A. 8 or 9.—P. 9 or 10.—V. 6.—C. 14.

*H. PLUMATUS*, nobis, *n. s.* General aspect of preceding species, but the eye less than half of the diameter of the head: the lateral scales of the body also much larger; and the upper jaw tapering to an obtuse point, and distinctly angulated. Each nostril covered by a remarkable plume of filaments. Tail furcate. Ventrals placed near the anus, but not reaching to it. In a specimen 11 in. long, the lower jaw exceeds the upper by  $2\frac{1}{2}$  in., and the upper from cleft of mouth measures  $\frac{1}{2}$  in. A well defined silvery stripe from base of pectorals, becoming rather broad towards the tail.

D. 15.—A. 13.—P. 9.—V. 6.—C. 15.

From the Sandheads, and also the coast of Ceylon.

Our species of *PANCHAX* are—

*P. BUCHANANI*, Valenciennes; *Esox panchax*, B. H. To the numerous synonymes of this species collated by Dr. Bleeker, add *Aplocheilus rubrostigma*, Jerdon, *Madr. Journ.* XV., 331.

*P. CYANOPHTHALMA*, nobis, *n. s.* Smaller than *P. BUCHANANI*, not



exceeding  $1\frac{1}{4}$  in. long, with fins less elevated and tail much less pointed; the eyes also less distantly apart, and of a brilliant pale nacreous azure (those of the other being yellow). Colour whitish, diaphanous, studded with dark specks which are less numerous below the lateral line: scales large, barely discernible.

D. 7.—A. 22 or 23.—V. 3.—P. 5?—C. 14.

This minute fish is sometimes brought to the bazar in considerable quantities, many pounds' weight of them together. Occasionally, a few of the *P. BUCHANANI* may be picked out of the mass, and some fry of other fishes, especially *MUGIL CORSULA*; but the present species, remarkable for its conspicuous light blue irides, predominates in the rate of 50 or more to 1 of any other. Wherever it occurs, therefore, it would seem to abound excessively.

The following CYPRINIDÆ may likewise be here described.

*SYSTOMUS MICROLEPIS*, nobis, *n. s.* Much resembling *S. OGILBII* (*Roktee Ogilbii*, Sykes);\* but with still smaller scales, and the dorsal spine is more finely pectinated behind. Scales larger on the anterior two-fifths of the body; and a series of 44 of them, counting obliquely downward, and of 73 along the lateral line.

D. 3-7.—A. 1-18.—P. 13.—V. 7.—C. 19.

Spinous ray of anal fin minute: the pectorals not reaching to base of ventrals: tail furcate. Colour (*blanched* in spirit) silvery throughout. Length of specimen, to end of tail-lobes,  $6\frac{1}{2}$  in.; and depth at base of dorsal fin.  $2\frac{3}{8}$  in. Form very Bream-like.

*Hab.* ————?

*LEUCISCUS SALMOIDES*, nobis, *n. s.* Affined to *L. goha* (*Cyprinus—Barilius goha*, B. H., v. *Opsarius gracilis*, McClelland); but larger and deeper in the body, with the spots smaller, much more numerous, and more regularly disposed, many of them occurring below the lateral line, and others on the opercula and præ-opercula: upper lip studded with pores.

D. 10.—A. 13.—P. 14.—V. 9.—C. 18.

Lateral line composed of 88 to 90 scales; and oblique series of 26 scales descending from anterior base of dorsal. Length of specimen 11 in. Colour blanched in spirit. Procured at Alláhábád by the late Major Wroughton.

*L. LINEOLATUS*, nobis, *n. s.* A *PERILAMPUS* of McClelland, affined in

\* Dr. Jerdon refers the species of *Roktee*, Sykes, to *ABRAMIS*; but they clearly appertain to *SYSTOMUS*, as assigned by Dr. Bleeker: *vide* dorsal spines, &c.



form to *L. DANICONIUS* (*Cyprinus daniconius*, B. H.), but the lateral line placed very low, as in *DANGILA*; and readily distinguished by its peculiar markings. A dusky spot behind the gill-covers, placed in a whitish space; beyond which a broad darkish band extends to the middle of the tail, bordered by a narrow pale line above and below, the lower not reaching so far forward as the upper: below this again another dark band, and then white; and above a second and trace of a third pale line.

D. 12.—A. 14.—P. 11.—V. 8.—C. 18?

Series of 10 oblique scales, the lateral line on the 9th of them, and numbering about 32 scales. Length of specimen  $3\frac{1}{4}$  in. Procured at Darjiling by Major Sherwill.

*L. BINOTATUS*, nobis, *n. s.* Affined to *L. CASUATIS*, (B. H., v. *Systomus malacopterus*, McCl.), but less deep in the body, and the dorsal fin much smaller; with a conspicuous black spot on the middle of base of tail, and another at hind base of dorsal: the rest green, with silvery lateral streak and below, and traces of a dark band along the lateral line; which last is medial and is composed of about 25 scales: oblique series of scales 7; the line passing along the fourth of them from above. Eyes rather large, and silvery.

D. 9.—A. 6.—

Length of specimen  $1\frac{1}{2}$  in. From Ceylon. Dr. E. F. Kelaart.\*

\* The *SYSTOMUS TRIPUNCTATUS*, Jerdon, is perhaps a *LEUCISCUS* akin to the above.

From Messrs. T. H. Hamilton & Co. The nest of a common Crow (*CORVUS SPLENDENS*), constructed in great part of the wires used in fastening down the corks of soda-water bottles. Two Crows' nests thus composed are noticed in the 'Calcutta Review,' Vol. XXVIII. p. 137; where it is observed that—"As it may well be wondered where such an accumulation of these could be procured, we may remark that Bengali servants are in the habit of treasuring them up till they amount to a saleable quantity; and that enormous heaps of them may accordingly be seen in the shops of those not very respectable small dealers, whose proper avocation is, with similar shops in England, indirectly purported by the announcement.—'Dealer in Marine Stores.' The supply of materials, therefore is comprehensible, however curious its application.—E. B.

#### NOTE ON THE HOGS OF THE NICOBAR ISLANDS (*vide* p. 268.)

In some "Sketches at the Nicobars," published in the *Journal of the Indian Archipelago*, Vol. III, we read (p. 265) of preparations made for a feast. "Enormous Pigs strung by their legs to long poles, were carried, some by four others by six athletic men. These Pigs were truly most gigantic animals." This was in the island of Car Nicobar; and the Pigs in question were doubtless originally derived from the shipping. We have met with another notice referring to the large size of the Pigs in the Nicobar Islands.—E. B.



## FOR JULY, 1858.

The Monthly General Meeting for July was held on the 6th instant.

Sir James Colville, Knt., President, in the Chair.

The proceedings of the May meeting were read and confirmed. No meeting was held in June on account of the repairs.

Presentations were received—

1. From the Royal Prussian Academy of Sciences at Berlin, the latest publications of the Academy.

2. From the Ceylon Branch of the Royal Asiatic Society, the latest journals of the Society.

Mr. B. H. Hodgson and Dr. Falconer, duly proposed in March last were balloted for and elected Honorary Members of the Society.

Mr. Sutherland duly proposed and seconded in May last, was balloted for and declared elected.

Communications were received—

1. From Baboo Radanauth Sikdar, an abstract of the Meteorological Observations taken at the Surveyor General's Office during the month of February last.

2. From the Venerable Archdeacon Pratt, M. A., a paper on the great Indian Arc of Meridian and the Figure of the Earth.

Mr. W. T. Blanford gave an account of the observations which had been made in Orissa by a party of the Geological Survey during the past season's field work, and exhibited to the Society the map of that province coloured geologically. The results of the examination were, that Orissa is mainly formed by the combined Delta of the rivers Mahanuddee and Brahmini, the deposits formed by which at their mouth have caused the land to gain upon the sea, and thus produced a considerable projection from the general run of the coast. A similar effect is seen at the mouth of the Godavery. While the Eastern portion of the province is formed of an extensive level plain, the western part is dotted over with detached hills, and near Bala-sore bounded by the fine range known as the Nilgiri hills. All of these peaks and ranges are composed of gneiss, except in the case of



a cluster of low ranges South and West of the town of Cuttack. These are composed of sandstone which has been referred to the same age as the rocks of the Mahadewa hills in Central India, but the connexion is not clearly established.

Laterite occurs largely in Orissa forming terraces like plains around all the hills up to a certain level, which level diminishes in height towards the East until at length the laterite is covered up by the alluvium of the low country. From various considerations it appears probable that there are, in Orissa, two kinds of laterite, one formed by detrital action and containing sand, rounded pebbles and boulders, the other resulting from the alteration in situ of gneiss or sandstone. The former appears to be invariably present where any laterite occurs. The quantity of iron contained appears difficult to account for.

Besides the flat Delta alluvium of Southern and Central Orissa, a considerable area in Northern Orissa is covered by an alluvium of older date which generally contains a gravelly form of laterite. Wherever the coast faces to the South-East sand hills occur, generally in several successive ranges one behind the other, each marking an old coast line.

In conclusion the uses to which many of the rocks of Orissa are put for building and other purposes were pointed out and the availability of some of them remarked on.

In a discussion which ensued Captain Sherwill explained the mode of occurrence of laterite in the Rajmahal Hills.

Captain Young gave some details relating to the same rock near Rangoon.

Professor Oldham described some curious phenomena connected with the occurrence of laterite in Ceylon and elsewhere, at the same time shewing that the name laterite had been applied without good reason to a number of different rocks distinct from that for which it was originally proposed.

Professor Oldham also mentioned that he had just been informed by a member, that a belief existed to the effect that formerly the bay between the mouths of the Brahmini and Soobunreeka was cultivated land, the sea being kept out by a bund which has since been destroyed. This rumour seems opposed by the present Geological



configuration of the coast, but it would be interesting to ascertain what foundation it has.

The Librarian submitted his usual monthly reports for May and June, 1858.

#### LIBRARY.

The following additions were made to the library during May and June, 1858.

#### *Presented.*

Abhandlungen der kon. Akademie der Wissenschaften, zu Berlin, for 1856, Royal 4to.—BY THE PRUSSIAN ROYAL ACADEMY OF SCIENCES.

Archæologia: or, Miscellaneous Tracts relating to Antiquity, *London*, Vols. 36 and 37, 4to.—BY THE SOCIETY OF ANTIQUARIES: LONDON.

Biblioteca Arabo-Sicula ossia Raccolta di Testi Arabici che Toccano La Geografia, la Storia, le Biografie, e la Bibliografia della Sicilia, Fasc. I. to III. *Lipsia*, 1855 and 1856.—BY THE GERMAN ORIENTAL SOCIETY OF LIEPZIG.

Calcutta Christian Observer for May and June, 1858.—BY THE EDITOR.

Correspondence relating to the establishment of an Oriental College in London, *pamphlet*, 1858.—BY THE WRITER.

Half yearly Paper of the Chamber of Commerce.—BY THE CHAMBER.

Journal Asiatique, Nos. 41 and 42.—BY THE ASIATIC SOCIETY OF PARIS.

—— of the Agricultural and Horticultural Society of India, Vol. X. Part. I., *Calcutta*, 1858, 8vo.—BY THE SOCIETY.

—— of the Ceylon Branch of the Royal Asiatic Society, Vol. II. Nos. 1 to 3, and Part I. of 1856-58.—BY THE SOCIETY.

—— (Madras) of Literature and Science, Vol. III. No. 5, for October and December, 1857.—BY THE MADRAS ASIATIC SOCIETY.

Memoire della Reale Accademia della Scienze di Torino, Serie seconde, Tome XVI. *Torino*, 1857, 4to.—BY THE ACADEMY.

Monatsbericht der kon. Preuss. Akademie der Wissenschaften zu Berlin, from January to December, 1857.—BY THE ACADEMY.

Macgowan's (Dr.) Remarks on Chinese Foreign Relations, *pamphlet*, 1857.—BY THE AUTHOR.

Meteorological Observations made at Dodabetta, 1851-55, 4to. Madras.—THROUGH THE GOVT. OF INDIA (HOME DEPT.)

Oriental Baptist for May and June, 1858.—BY THE EDITOR.

—— Christian Spectator from March to May, 1858.—BY THE EDITORS.



Proceedings of the Royal Society, Vol. VIII. No. 27 and Vol. IX. Nos. 28, 29 and 30.—BY THE SOCIETY.

———— of the Royal Society of Edinburgh, Vol. III. No. 47.—BY THE SOCIETY.

———— of the Society of Antiquaries of London, Vols. III. and IV. Nos. 43 to 46.—BY THE SOCIETY.

Title-page of Vol. III. and List of Members of the Society.—BY THE SAME.

Quarterly Journal of the Geological Society of London, Nos. 53 and 54.—BY THE SOCIETY.

Recueil des Actes De l'Académie Imperiale des Sciences, Belles lettres, et Arts de Bourdeaux, 1 et 2 Trimestres, 19th Année, 1857.—BY THE ACADEMY.

Report of the Calcutta Mechanics' Institution and a few other pamphlets.—BY BABU RAJENDRALAL MITTRA.

Transactions of the Philological Society, London, for 1854, 1855 and 1856, 8vo.—BY THE SOCIETY.

———— of the Royal Society of Edinburgh, Vol. XXI. Part IV. 4to.—BY THE SOCIETY.

Tattwabodhini Patrica, Nos. 177 and 178.—BY THE EDITOR.

Weber's (Dr. A.) Indische Studien, Band IV. Heft. I. and II.—BY THE AUTHOR.

Weber's White Yajurveda, Part III. No. 12.—BY THE AUTHOR.

Werken van het Koninklijk Instituut voor Taal,—Land—en Volkenkunde van Nederlandsch,—Indie, Riezen en onderzoekingen in den Indischen Archipel door, D. S. Müller, Deel I. and II. 8vo.—BY THE ROYAL INSTITUTION OF NETHERLANDS.

Ditto, ditto Het Boek Adji-Sáká, *Amsterdam*.—BY THE SAME.

Vividhartha Sangraha, Nos. 47 and 48.—BY BABU RAJENDRALAL MITTRA.

Zietschrift der deutschen morgenlandischen Gesellschaft, Band XII. Heft 1, *Liepzig*.—BY THE GERMAN ORIENTAL SOCIETY.

### *Exchanged.*

Athenæum for February, March and April, 1858.

Annalen der Chemie und Pharmacia from December to March, 1858.

Calcutta Review (The) No. 59, March, 1858.

The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science, Nos. 99 to 101, March to May, 1858.



*Purchased.*

Annals and Magazine of Natural History, Nos. 3 to 5, 1858.

American Journal of Science and Arts, No. 74.

Annales des Sciences Naturelles, Nos. 5 and 6, Tome VII.

Comptes Rendus, Nos. 6 to 18, February 8th to 3rd May, 1858.

Edinburgh Review, No. 218 for April, 1858.

Journal des Savants for February and March, 1858.

Literary Gazette, Nos. 2140 to 2156, and extra Nos. 17 to 19 of 1856.

Natural History Review, No. 2. Vol. V. April, 1858.

Quarterly Review, No. 206, April, 1858, Vols. 92, 93, 94, 95 and 96.

Revue des Deux Mondes, 15th March to 1st May, 1858.

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## BOOKS.

Andersson's (C. John Mr.) Lake Ngami; or Explorations and Discoveries during four years' Wanderings in the Wilds in South Western Africa. *London*, 1856, 8vo.

Atkinson, T. Witlam, Oriental and Western Siberia, and Chinese Tartary.

Buffon's Histoire des Insects Lépidoptères, Tome X. 8vo.

Barth's (Henry) Travels and Discoveries in North and Central Africa: being a Journal of an Expedition undertaken under the auspices of H. B. S. Government in the years 1849 and 1855 in 5 Vols. Recd. Vols. 3, 8vo. *London*.

Barges' Epistola.

Benfey's Indica.

Bopp's (Franz) Über den Einfluss der Pronomina auf die Wortbildung im Sanscrit und den mit ihm, verwandten Sprachen, *Berlin*, 1832, pamphlet.

Burnouf et Lassen's Observations Grammaticales sur quelques Passages de L'Essai sur le Pali, *Paris*, 1827, pamphlet.

Bellot's Sanscrit Derivations.

Boehtlingk's (Otto) Die Unâdi Affixe, pamphlet, 4to.

Bochinger's (J. J.) La Vie Contemplative, Ascétique et Monastique chez les Indous et chez les Peuples Bouddhistes. *Strasbourg*, 1831, 8vo.

Brougham's (Lord Henry) Political Philosophy, Vol. I. 8vo.

Crawfurd's (John) Dictionary of the Indian Islands and adjacent countries, *London*, 1856, 8vo.

Candolle's (M. Alph. de) Géographie Botanique Raisonnée, Tomes I. and II. *Paris*, 8vo. 1855.

Deslongchamps' (A. L.) Amarkocha ou vocabulaire D'Amarasinha publié en Sanskrit avec une Traduction Française, Parts I. and II. *Paris*, 8vo. 1845.



Fournel's (Henri). Etude sur La Conquête de l'Afrique par les Arabes Part I. *Paris*, 1857, 4to.

Hardwicke's (C.) Christ and other Masters : an Historical enquiry into some of the chief parallelisms and contrasts between Christianity and the religious systems of the Ancient World. Part II. Religions of India, *Cambridge*, 1857, 8vo.

Julien's (St.) Histoire de La vie de Hiouen-thsang et de ses voyages dans L'Inde, *Paris*, 1853, 8vo.

Koeppen (C. F.) Die Religion des Buddha und ihre Entstehung, *Berlin*, 1857, 8vo.

Leguest's (M. L'Abbe) Etudes sur la formation des Races Sémitiques suivies de considerations générales sur l'origine et la developpement du Language, *pamphlet*, *Paris*, 1858.

Malkuma's Poems.

Néne (F.) Essai sur le Mythe des Ribhavas premier vestige de L'Apotheose dans le Véda. *Paris*, 8vo. 1857.

Notices et Extracts des Manuscrits de la Bibliothèque du Roi et autres Bibliothèques, Tome X. to XIV. (Vol. 14 has 2 parts) and Tome XVII. Parte 2nd, 4to.

Pavie (Théodore) Tarikh i Asham Récit de l'expédition de Mir Djumlah au pays D'Assam, *Paris*, 8vo. 1845.

Rubner II Die Riese Seiner Koniglichen Hoheit des Prinzen Waldemar von Preussen noch Indien in den Dohren, 1844 bis 1846, *Berlin*, 1857.

Spier's (Mrs.) Life in Ancient India, *London*, 8vo.

Spiegel's (Dr. F.) Anecdota Pâlica, *pamphlet*, *Liepzig*, 1845.

Thuillier's (H. L.) and Capt. R. Smyth's Manual of Surveying for India, 8vo. 1855.

Vuller's (Joannis Augusti) Lexicon Persico-Latinum, Fas. V. Parts I. and II. 4to. *Bonera*, 1856-57.

Weber's Indische Studien, Band IV. P. 2.

Westminster Review, No. 26, April, 1858.

Wilson's Leighton (Rev. J.) Western Africa; its History, Condition and Prospects, *London*, 8vo. 1856.

Woodward (S. P.) A Treatise of Recent and Fossil Shells, 3 Nos.

———— Ditto (new copy) 12mo.

GOURDASS BYSA'CK,  
Librarian and Asstt. Secy.

The Asiatic Society's Rooms,  
8th July, 1858.



FOR AUGUST, 1858.

The Monthly General Meeting for August was held on the 4th instant.

HON'BLE SIR JAMES COLVILLE, KT., *President*, in the chair.

The proceedings of the July Meeting were read and confirmed.

Presentations were received—

1. From Capt. Bivar at Debrooghur through Dr. Mouat, some fragments of Hindu sculpture consisting of an image of the Hindu Deity Durga or Dossovooja and a portion of a cornice frieze. Capt. Bivar has promised a communication on the subject, but it has not yet been received.

2. From the Acting Principal of the Government Grant Medical College Bombay, a copy of the Report for the session 1857-58.

3. From the Raja Pertap Chundra Singh Bahadur, a copy of the Ratnavali Natika in Bengali, with an English translation by M. M. S. Dutt, Esq.

A note from Lieut.-Col. Jenkins expressing his wish to withdraw from the Society was recorded.

The Council submitted a report announcing that they had appointed Dr. Crozier, a member of their body, in place of Dr. Boycott, who had left India; and also that they had added Babu Ramgopaul Ghose, to the Finance Committee, and Dr. Crozier to the Committee of Natural History.

Communications received—

1. The following note, accompanied by a copper plate, from Mr. Biss, Assistant, Revenue Accountant's Office :—

DEAR SIR,—The accompanying copper plate was unearthed some 20 years ago in Lot No. 55 of the Soonderbunds in digging a tank. In the vicinity of the spot where it was found there are ruins of the abode apparently of some wealthy person.

Whether or not the inscription on the plate is of any interest I cannot say, but as I have reason to suppose it to be of ancient date, I would leave it with you to submit it for the inspection of the Society, or not, as you may deem fit. I can at present only offer it for inspection it being the property of another.

Yours faithfully,

(Sd.) T. W. BISS.



Babu Rajendralal Mittra supplied the following information regarding the plate:—

The plate is an oblong of  $11\frac{1}{2}$  inches by 6 inches with an arched projection at one end with two perforations. It has a Sanskrit inscription of 15 lines on one side and 14 on the other; the characters being the Gour of the same date as the Backergunge plate noticed in the 8th volume of the Asiatic Society's Journal. The plate has been very much injured by exposure to the atmosphere and the inscription is almost illegible. From a few lines in the centre of the obverse it appears that the plate was inscribed (as generally such plates are) to record the grant of a piece of land in the Soonderbuns, bounded on the east by the bank of the Matanga River, on the south by the sea and on the west by *Kukuta pattana*. The date is illegible, but from the occurrence of the name Vaidyaka Sena, and the style of the writing, the gift is supposed to be of the period of the Sena Rajas of Bengal.

2. From Babu Radhanauth Sickdar, being an Abstract of the Meteorological Register kept at the office of the Surveyor General, Calcutta, for March and September last.

Lieut.-Col. Strachey explained to the meeting the application of certain sliding scales to arithmetical computation.

The Librarian submitted his usual monthly report for July last.

#### LIBRARY.

The following additions were made to the Library during July 1858.

#### *Presentations.*

Annals of Indian Administration. The Indian Official Thesaurus, being Introduction. Compiled by M. Townsend.—BY THE HOME GOVERNMENT.

Ditto, Parts III. to VI.—BY THE SAME.

Calcutta Christian Observer for July, 1858.—BY THE EDITORS.

Oriental Baptist, No. 140, for July, 1858.—BY THE EDITOR.

Oriental Christian Spectator for June, 1858.—BY THE SAME.

Report on the Revenue Administration of the Lower Provinces for 1856-57.—BY THE BENGAL GOVERNMENT.

Ditto on Public Instruction in the Madras Presidency for 1856-57.—BY THE HOME GOVERNMENT.



Selections from the Records of the Bombay Government with four Maps, No. XLV. Report on the upper portion of the Eastern Naraca, and the feasibility of restoring it as a permanent stream, accompanied by Maps and Plans.—BY THE BOMBAY GOVERNMENT.

Report of the Konnugor Seminary, Sessions 1857-58.—BY BABU SEEBCHUNDER DEB.

Calcutta Review, No. 60, for June, 1858.—BY THE EDITOR.

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*Erratum*, p. 17, first line, For “C. 1—16,” read C. 16.