

*Report of the Curator, Zoological Department.*

(Continued from Vol. XXXI. p. 345.)

III. W. T. Blanford, Esq., of the Indian Geological Survey. A collection of sundries from different parts of Burmá.

MAMMALIA.

*PRESBYTIS PHAYREI*, nobis; from Arakan; *NYCTICEJUS TEMMINCKII* and *SCOTOPHILUS COBOMANDELIANUS*, from Thayet Myo, on the Irawádi (being two of the commonest Bats throughout India, Burmá, and the Malayan peninsula). Also *RHIZOMYS BADIUS*, Hodgson, from Arakan.

*TUPAIA FERRUGINEA* (var. *peguana*, Lesson). Also a very common species in the Burmese countries, ascending northward to the Kháasya hills, and likewise inhabiting the vicinity of Dorjiling. Specimen from "Arakan mountains."

\**SCIURUS BLANFORDII*, nobis, *n. s.* (described Vol. XXXI, *J. A. S.* p. 333.) From the neighbourhood of Ava—"common on the Shán hills, less so in the neighbourhood of the river near Ava."

*MUS CONCOLOR*, nobis, young described, *J. A. S. XXVIII*, 295\* and adult (unnamed, noticed in preceding page). "House Rats, from Thayet Myo." This is rather a great Mouse than a Rat, if the distinction can be understood; very like *M. MUSCULUS*, except in being much larger, with a proportionally longer tail. Length of adult male, taken out of spirit and the fur dried—head and body 4½ in., and tail 5¼ in.; ear-conch (posteriorly) ⅞ in.; hind-foot 1 in. Its close similitude to *M. MUSCULUS* renders further description unnecessary; except that the paler colour of the lower-parts has a peculiar reddish-sandy or faint vinaceous tinge (a sort of *isabelline* hue), and the fur of the back is distinctly spinous to the sense of touch. In the thatched roofs of the Burmese up the Salwin river, I several times observed a small long-tailed Rat, which I very strongly suspect, indeed feel quite sure, was of the present kind, but I was unable to obtain a specimen.† An old stuffed example in the Society's collection, from Malacca, seems also, perhaps, to be

\* I find that I have referred to this in *J. A. S. XXVI*, 391.

† Since writing the above, I have been assured, positively, that *CORVUS SPLENDENS*, of either race, does not occur, either at Pinang, Malacca, or Singapore.

identical: though I have my doubts, and I have found several specimens, obtained by the late Major Berdmore at Schwe Gyen.

#### AVES.

**IERAX EUTOLMOS**, Hodgson. From Shán hills E. of Ava. "Said to live on beetles. In the Southern Tenasserim Provinces, the **I. FRINGILLARIUS**, (Drapiez), begins to appear, and is the only species which I have seen from the Malayan peninsula. In fine specimens of this, the whole abdominal region is deep ferruginous, contrasting with a white breast (in general tinged a little with ferruginous); but the flanks and *tibial plumes* are always deep black. **I. EUTOLMOS** is the species which approaches nearest to Edwards's figure and description of **I. BENGALENSIS**, (L.); but is conspicuously distinguished by its broad white band across the nape, continuous with the broad white supercilia, also by its deep ferruginous throat and *tibial plumes*; but what appear to be the young have rufous forehead and supercilia, and a white throat. **I. BENGALENSIS** is a race which still remains to be verified. **I. MELANOLEUCOS**, nobis, has no ferruginous colouring whatever, and pure white tibial plumes; being also rather larger than the others. The Society's only specimen was received alive from Asám; and another is noted in the Catalogue of the India-house Museum, the habitat of which is unknown.

**BUCEROS CAVATUS**, L. Head from Ava.

**B. ALBIROSTRIS**, Shaw. "From Shán hills. The same species is common along the base of the Arakan hills in Pegu. I have not met with it on the alluvium." It seems to be common throughout Burmá, and in the forests of Upper Martaban, together with the preceding. It is not generally known that the Hornbills are capital eating, as I can testify from experience.

**CERYLE BUDIS**, (L.) "More common above Ava than in Pegu."

**ALEEDO MENINGTING**, Horsf. (*A. asiatica*, Swainson) "Replaces on the sea-coast the **A. BENGALENSIS** of the interior."

**HALCYON LEUCOCEPHALUS**, (L.) The Burmese race seems always to have a somewhat albescent cap.

**MEROPS QUINTICOLOB**, Vieillot. (Obtained also by myself near Maulmein, and in Upper Martaban; likewise **M. PHILIPPINENSIS** at Rangoon; and **M. VIRIDIS** everywhere, mostly with a redder head than in India. I observed numbers of this last species bur-

rowing into the hill-side (soft laterite), along deep road-cuttings near Maulmein.)

*MEGALAIMA INDICA*, (Latham). Common here and there; but in general less so than *M. LINEATA*, (Vieillot), the voice of which is quite similar to that of *M. CANICEPS*, (Franklin).

*MULLERIPICUS PULVERULENTUS*, (Tem.). "Shán hills E. of Ava. Very noisy. Only met with once, in a small flock of five or six, at a height of about 2,000 ft., in the Shán hills, east of Ava."

*MULLERIPICUS FEDDENI*, Blanford. (*M. JAVENSIS* of Burmá, suctorum.) Differs from *M. JAVENSIS*, (Horsf. v. *leucogaster*, Tem.,) of the Malay countries, by its white rump; in which it resembles *M. HODGSONI*, Jerdon, of Malabar: while the extent of slightly buffy-white colouring on the inside of the wing is greatly increased occupying the basal half of the remiges. In *M. HODGSEI*, nobis, of the Andamán islands, the plumage is wholly black, with the exception of the usual crimson marks on the head. In other respects, these four races bear a near resemblance to each other.

*PICUS BLANFORDI*, nobis, *n. s.* Very like *P. MAHRATTENSIS* of India; but the white markings generally more developed, as especially shewn on the wings and tail. It is just barely separable as a race.

*GECINUS VIRIDANUS*, nobis. "From banks of Irawádi." I observed it numerously in Martaban, as also *G. OCCIPITALIS*, (Vigors).

*G. CHLOROPUS*, (Vieillot). "From the same place as the *PULVERULENTUS*."

*TIGA INTERMEDIA*, nobis. "From Thayet Myo, where not very rare." I obtained both this and the preceding species on the Salwin, and also in the forests of Upper Martaban. In the same habitat, the diminutive *PICUS MOLUCCENSIS* (var. *canicapillus*, nobis) abounded; and I obtained *HEMICIRCUS CANENTE*, (Lesson), at the base of limestone hills along the Salwin.

*CUCULUS TENUIROSTRIS*, Gray. "Near Ava." Likewise obtained by myself: as also *C. CANORUS* at Moulmein, in immature plumage; *C. HIMALAYANUS* in Upper Martaban; *C. STRIATUS*, Drapiez, plentifully in the rainy season, when very musical, on the hills near Maulmein; *C. VARIUS* at Maulmein; and *CRYSOCOCCYX* (*Trogon maculatus* of Brown's Illustrations) once at Maulmein.

*HARPACTES EBYTHROCEPHALUS*, Gould. A particularly fine pair.

**CORVUS SPLENDENS**, Vieillot. "The common Crows in Mandell have the grey mark on their necks as distinctly as the Crows of Calcutta." In Akyab the Crows are also of the common Indian race; which appeared for the first time in Khyouk Phao on the 7th December, 1856, on which day (as I am informed by Major Ripley) a party of seven individuals arrived there, which have since stocked the neighbourhood. South of Khyouk Phao, this Crow has still no representative in Arakan; but across the mountains which divide that province from Pegu, in the valley of the Irawádi, again at Maulmein, Tavoy, and as far south as Mergui, it is replaced by a wholly black race, quite similar both in form and habit, but having a much shriller voice (a sort of *shrieking* caw, if possible still more inharmonious than that of the other). There is just a very faint tinge of ashy on the neck and breast, where the common Indian Crow is pure cinereous; but this must be specially looked for to be remarked. In the Ceylon race, the grey of the neck and breast is much darker than in that common (I believe) to all India; but very far from black as in the Crows of Burmá. Whether this race extends to the Malayan peninsula, I am unaware; but we know little of the ornithology of that peninsula northward of the latitude of Pinang. The large black Crow of all India (*C. CULMINATUS*,) extends throughout Burmá and the Malayan peninsula, and is doubtless the Sumatran *C. corax* apud Raffles; but, in the southern portion of the Malayan peninsula, there is another large black Crow with remarkably long bill (*C. MACROBRYNCHOS*, Vieillot), which again is distinct from the *C. ENCA*, Horsf., of Java and other islands further east. In Burmá, as in India, the *C. CULMINATUS* is diffused in pairs over the country, and is found even in the depths of the forest, remote from human habitations; whereas the black race of *C. SPLENDENS*, like the grey-necked race, is only observed near towns or populous villages. The difference of these two races corresponding to that of the Carrion and Hooded Crows of Europe, which are currently regarded as different species.\*

\* The Jackal has only recently occurred about Akyab; though, for years past, it has frequented the country through which the Koladyne river flows into Akyab harbour. It also occurs, rarely, about Prome, and thence northward to Ava; but nowhere in the maritime provinces of British Burmá, south of Akyab, where (as before remarked) it has only lately made its first appearance.

The common House Maina (*ACRIDOTHERUS TRISTIS*), and the representative of the Pied Starling (*STURNOPASTOR SUPERCILLIARIS*), I observed abundantly so

*CRYSIRINA CUCULLATA*, Jerdon (*J. A. S.* XXXI, p. 341).  
"Thayet Myo."

*TEMENUCHUS BURMANENSIS*, Jerdon (p. 342.) "Common throughout Burmá." I did not meet with it.

*STERNOPASTOR SUPERCILIARIS*, nobis. Differs from the Indian race in having a distinct white supercilium, in addition to the white ear-coverts, with streaks of white also tipping the feathers of the forehead. One specimen has a white-necked collar; but this I take to be abnormal. Just a distinctly recognisable race; and as well distinguished as others which are accepted as such.

*EUSPIZA AUREOLA*, (Pallas). "Twenty miles above Ava."

*EUSPIZA RUTILA*; *Emberiza rutila*, Pallas. A very pretty Bunting; the male uniformly reddish-ferruginous or rufous-bay, with the lower parts, from the breast, bright (though not deep) yellow; the primaries and rectrices dusky; and the wings underneath white anteriorly. Closed wing 3 in. From S. Arakan. One specimen only. Akin to *EU. AUREOLA* and others.

*MIRAFRA AFFINIS*, Jerdon. Upper Pegu.

*GARRULAX MONILIGER*, (Hodgson.) "Puppa hill, near Pagan, where not very common. Since shot near Thayet Myo."

*CHATARRHÆA GULARIS*, nobis, *J. A. S.* XXIV, 478. "This bird is extremely abundant among the low thorn bushes which cover the dry country about Yenankhyoung and Pagan. It is just as common near Ava."

*MEGALURUS PALUSTRIS*, Horsfield. "Found in much the same places as the *CHATARRHÆA EARLEI*; viz. in long elephant-grass; but

far south as Mergui; but am unaware that either has been recorded from the Malayan peninsula. As in Ceylon, the House Maina of the Tenasserim Provinces is darker-coloured than in India.

When first at Akyab, during the rainy season, I remarked the British Tree Sparrow (*PASSER MONTANUS*) to be the common species about the streets; considerably out-numbering the Indian House Sparrow (*P. DOMESTICUS*, *Ind. var.*): whereas, in the cold season, the latter is the prevalent species about Akyab. Southward, however, I only on two occasions saw the common Indian Sparrow; once at Maulmein, and once in a Burmese village higher up the Salwin; whereas the Tree Sparrow is everywhere in extreme abundance, extending southward to Singapore (*J. A. S.* 1859, p. 443), and likewise inhabiting Java; having precisely the same habits as the other. I observed it, numerously, as far south as Tavoy and Mergui. At Thayet Myo, on the Irawádi, Dr. Jerdon informs me that not only are *P. DOMESTICUS* and *P. MONTANUS* common, but also a third species my pretty little *P. FLAVEOLUS*. When at Palphoon, in Upper Martaban, in November last, three or four pairs of *P. MONTANUS* appeared for one day only, entering the few human abodes in the most familiar manner, and apparently seeking convenient nooks for nesting places; but I saw no others in that wild forest region.

its song is finer and its flight much stronger than that of the MALACOCERCUS group. It generally towers when it rises from the grass, and takes long flights. I have only met with this bird above Ava,—near Thayet Myo, where CH. EARLEI and CH. GULARIS are common. CH. EARLEI I shot thirty miles above Ava." M. PALUSTRIS I observed in considerable abundance in low brushwood about Akyab harbour. CH. EARLEI I have not yet seen from the Burmese region; but Col. Phayre obtained CH. CAUDATA in addition to CH. GULARIS.

LANIUS HYPOLEUCOS, nobis. "Ava." Extremely common during the cold season near Maulmein; where it takes the place of L. PHÆNICURUS, Pall., so abundant in lower Bengal and also about Akyab. L. HYPOLEUCOS has been received from Bankok.\*

PETROCINCLA CYANEA, (L.) "Common from Kenankhyoung as far as I went, viz. to Malé, nearly 100 miles above Ava." I found this species everywhere plentiful in Burmá, and very tame and familiar, *i. e.* during the cold season. Some individuals were undistinguishable from the S. Indian race (*A. pandoo*, Sykes), others from the E. Himalayan race (*A. affinis*, nobis), and the Chinese and Philippine race (*A. manillensis*) is again equivalent, and all (with the Kashmirian (*A. longirostris*) cannot be satisfactorily distinguished from P. CYANEA of S. Europe and N. Africa.

CYORNIS RUBECULOIDES, (Vigors). "Fifty miles above Ava. Occurs I think only in forest. I shot it also at 2000 ft. in height upon the Shan hills." Not uncommon in Burmá during the cold season.

GRAUCALUS MACEI, Cuv.

PYCNONOTUS NIGROPILEUS, Blyth. "Ava. Common throughout Burmá." In Arakan, replaced by P. HÆMORRHOUS, as in Bengal by P. CAFER. The habits and notes of all three are as similar as can well be.

PRATINCOLA LEUCURA, Blyth. A specimen of this bird was procured by Sir A. Burnes in Scindh; I have never seen it from the vicinity of Calcutta, but Dr. Jerdon lately observed it plentifully in the country about Colgong and Caragola, on the main stream of the Ganges, and also at Thayet Myo on the Irawádi. Mr. Blanford

\* There are four distinguishable races of Shrikes, which are very nearly akin.

1. L. SUPERCILIOSUS, L. From the Malayan peninsula.
2. L. PHÆNICURUS, Pallas. India generally; Arakan.
3. L. ARENARIUS, nobis. Desert region of N. W. India.
4. L. LUCIONENSIS, L. China; Philippines, Ceylon; Andamáns (!)

writes—"It abounds in long grass on the river-banks in Lower Pegu, and I found it equally common sixty miles above Ava." It has doubtless often been confounded with *PR. INDICA*; from which it is readily distinguished by the large quantity of white on the inner webs of the tail-feathers.

*RHODOPHILA MELANOLEUCA*, Jerdon, *n. g. et sp.* This curious little bird was discovered, not long ago, by Dr. Jerdon, in plenty about Caragola, on the main stream of the Ganges, where it haunted the *interior* of the wild rose-bushes (*Rosa involucrata*), there constituting much of the ordinary low jungle; and never perching on the topmost sprays, like the Stonechats and other *vaxicolinæ*. Mr. Blandford has since obtained in Arakan. The form appears to me to approximate *Curruca* most nearly; but the tarsi and toes are more slender, and the claws more gracile and elongated. The wings and tail are also more graduated; and the general plumage softer. Colours remarkable; plain glossy black above (inclusive of the ear-coverts), and plain white below. Bill and feet black. Length of closed wing  $2\frac{1}{4}$  inch; of tail  $2\frac{1}{4}$  inch. I shall leave Dr. Jerdon to describe it more in detail.

*PHYLLORNIS AURIFRONS*, (J. and S.) "Near Thingadau, seventy miles above Ava; also Thayet Myo." I obtained it at Maulmein; and *PH. COCHINCHINENSIS* in the forests of Upper Martaban.

*LEUCOCERCA ALBOFRONTATA*, (? Franklin.) Here, again, the race is a little different from the Indian one; being just distinguishable by having the white of the forehead and supercilia not so broad, nor meeting round behind at the occiput. There is also not so much white on the tail-feathers. Upper Pegu.

*IOEA TYPHIA*, (L.) "Common throughout Burmá."

*ORIOLOUS MELANOCEPHALUS*, Gm. "Seventy miles above Ava. I have shot this and three other species near Thayet Myo." *O. MELANOCEPHALUS* seems to be common throughout Burmá, and extends down the Malayan peninsula; being quite similar to the Bengal race, and constantly distinguishable from that of Malabar and Ceylon (*O. CEYLONENSIS*, Bonap.) *O. INDICUS* (*v. chinensis*) is also common in the Burmese region, and *O. TENUIROSTRIS*, nobis, is less so. I obtained a mature female of the latter at Maulmein, and doubt if the mature male is yet known. Specimens of *O. INDICUS* from China are undistinguishable from Indian examples, and appear to be the *O.*

*chinensis*, L., et *O. cochinchinensis*, Brisson,—but not *O. ACROCHYNCHOS*, Vigors, of the Philippines. *O. TRAILLII* inhabits the higher mountains of Burmá; but is not likely to have been obtained by Mr. Blanford at Thayet Myo.\*

*NECTARINIA ASIATICA*, (L.) “Yenankhyoung.” The most widely diffused of the Asiatic species. At Maulmein I obtained *N. FLAMMAXILLARIS*, nobis (there common), and *N. HASSELTII*, Tem. (apparently rare). The last ranges from Arakan to Singapore; but *N. FLAMMAXILLARIS* is replaced in the Malayan peninsula by *N. PECTORALIS*, Horsfield.

*DICÆUM CHRYSOBREUM*, Tem. “River banks, seventy miles above Ava.” Arakan, Tenasserim Provinces, Malayan peninsula.

*D. CRUENTATUM*, (L.) “Thayet Myo.” The most widely distributed of Asiatic species of this genus. I observed it in particular abundance in the vicinity of Mergui; and it is not rare near Calcutta.

*D. MINIMUM* (Tickell): young, *Certhia erythrorhyncha*, Latham. “River banks seventy miles above Ava.” India generally; Ceylon; Burmá; particularly common in the jungle-clad hills about Maulmain.

*CROCOPUS VIRIDIFRONS*, nobis. “Ava.” I never obtained this green pigeon; but *OSMATRERON PHAYBII* (p. *antea*) abounded in the forests of upper Martaban, and *O. BICINCTA* is common near Maulmain, with probably *O. PHAYBII* also.

*TURNIX BLANFORDII*, nobis, *n. s.* Like *T. DUSSUMIERII* of India, but much larger; holding the same relationship to that species which the *T. SYKESI* of India does to the *T. ANDALUSICA* of S. Europe and N. Africa. Col. Phayre had long previously sent a specimen of this race from Arakan. Length of closed wing 4 inches.

*TURNIX OCELLATA* (Scopoli.) Bengal race. “Common in the grass on the top of Pappa hill.” The three Indian species of this genus were obtained in the vicinity of Thayet-myo by Dr. Jerdon.

#### REPTILIA.

Two “shells” of Tortoises. One from Ava is decidedly *EMYS TRIJUGA*, Schweigger, as described and figured in Gray’s *Catalogue of Shield Reptiles* (1855) p. 20 and pl. IV. This species is new to the Society’s museum, though stated to inhabit “ponds at Calcutta.” I

\* The Andamán Oriole agrees best with *O. HORSFIELDI*, Bonap., *Consp. Avinu.*



have hitherto vainly sought for it, however, among the many hundreds of *EMYDES* from this neighbourhood which I have seen in the course of more than twenty years of collecting.\* Length of the Ava specimen, which I consider to be full grown  $9\frac{1}{2}$  in. The young of this species is figured as *E. Belangeri*, Lesson, in the Atlas to Belanger's *Voyage aux Indes Orientales*; and in the Society's copy of that work, purchased at the sale of the late Dr. H. Walker's library, *E. Belangeri* is identified by that naturalist (in a pencil-note) with *Geomyda tricarinata*, nobis (*J. A. S.* XXIV, 714), from Chaibasa, central India; but this is a mistake. I doubt if *EMYD TRICARINATA*, nobis, attains to nearly so large a size as *E. TRIJUGA*, and it is readily distinguished by the uniform yellowish-white colour of the *plastron*, the second, third, fourth and fifth pairs of plates upon which are of about equal size, constituting a strongly marked distinction from *E. trijuga*. The carapace of our only specimen is  $5\frac{1}{2}$  in. long. Another (forwarded many years ago to the India-house museum) was quite similar. The palms and soles of this species are much dilated (or roundly *keeled*, it might be termed), indicating terrene habits (whence I formerly placed it in *GEOMYDA*). Another species which has been confounded with *E. TRIJUGA*, is the *GEOCLEMYS SIBA*, Gray, from Ceylon, of which we possess two specimens presented by Dr. Kelaart.

Mr. Blanford's other Tortoise from "Arakan hills," is the adult of *CYCLEMYS DENTATA*, Gray, *ibid*, p. 42 and pl. XIX.; but with age this species elongates and loses the dentate appearance of the posterior margin, so as to be hardly, if at all, recognisable from Gray's plate. Length of adult  $8\frac{1}{2}$  by  $5\frac{1}{2}$  in.; of another less elongated and retaining the posterior denticulation 8 by 6 in.

In the same collection is also a large skull of *BATAGUR BASKAR*, Gray (*v. Tetronyx Lessonii*, D. and B., &c. &c.).

A common *EMYD* of the southern Tenasserim provinces is the *E. CRASSICOLLIS*, Bell, as figured in Hardwicke's *Ill. Ind. Zool.* This species I designated *E. nigra* in *J. A. S.* XXIV, 713, having mis-

\* The commonest Calcutta species is *E. TECTUM*; next *E. HAMILTONII* and *E. THURJII*; *E. OCELLATA*, D. and B., is much more rare; *E. TENTORIA* (closely akin to *TECTUM*) belongs to the Indus river-shed, and is very doubtfully Gangesic; *BATAGUR BASKAR*, Gray (*TETRONYX LESSONII*, D. and B.,) is brought abundantly to Calcutta to be eaten by certain classes of natives; *EMYDA PUNO TATA* and *TETRONYX GANGETICUS* are common, and of *CHITRA INDICA* I have obtained one specimen only,

taken, at that time, another species for the true *CRASSICOLLIS*, received from the Batavian Society in 1844. This error is indicated by Dr. Gray in the *Ann. Mag. A. H.* XIX, (1857), p. 343; but he nevertheless enumerates *E. NIGRA* as a distinct race.\* The Javanese species does not appear to be described, and may be named

*E. NUCHALIS*, nobis, *n. s.* from the unusual size of its medial nuchal plate, which is of a triangular shape. The next four medial dorsal plates are elongate, quadrangular, sub-hexagonal, the sixth being triangular with apex to the front. Three dorsal ridges conspicuous in the young animal; the lateral placed very high upon the costal plates, almost submarginally. Posterior border very slightly dentate in the young animal; whereas, in the young of *CRASSICOLLIS*, it is strongly dentate. Plastron flat, and laterally angulate; the four principal pairs of sternal plates mostly about equal and nearly quadrate, though in some the second pair are much shorter than broad, and the third pair are correspondingly enlarged. Colour, olive brown, obscurely mottled with darker brown, the lateral angles of carapace and plastron yellowish; the latter is reddish-brown, more or less deeply clouded with black. Head blackish, with yellow line on the eye, meeting its opposite above the nostrils, another yellow line under the eye, a third behind the eye, a fourth bordering the upper jaw, and other yellow markings on the lower jaw: rest of naked parts yellowish infuscated above. Shell of largest specimen  $6\frac{1}{2}$  by  $4\frac{1}{2}$  in. Hab. Java?

In the southern Tenasserim provinces is also found abundantly the *EMYS BERDMORII*, nobis, *J. A. S.* XXVII, 281 *v. E. ocellata* apud nos, *J. A. S.* XXII, 645, XXIV, 481, and *Batagur ocellata* apud Gray, *Ann. Mag. N. H.* XIX, (1857), p. 348; but not *B. ocellata*, apud Gray, *Catalogue of Shield Reptiles* (1855), p. 36, which refers to the true *E. OCELLATA*, Dumeril and Bibron, a species which I have only seen from the neighbourhood of Calcutta. The two are very conspicuously distinct, and are not even nearly akin, as members of the same genus. They will, therefore, henceforth stand as *BATAGUR BERDMORII*, nobis, from Martaban and southern Burmá; and *B. OCELLATA*, (D. and B.), from Lower Bengal.

\* Dr. Gray in his catalogue of *Shield Reptiles*, notices specimens of *E. CRASSICOLLIS* from "India" and "Ceylon." I doubt these *habitats* exceedingly. An American *C. NIGRA* is also given by Dr. Gray.

In *J. A. S.* XXII, 640, I described a land Tortoise, by the name *Testudo megalopus*, which I now consider to be merely an enormous specimen of *T. STELLATA*, Schweigger; the species inhabiting peninsular India and Ceylon.\* In XXIII, 301, it was recorded that the Rev. Dr. Mason recognised the supposed megalopus as the species with which he was most familiar in Burmá; but there is a nearly similar land Tortoise, which would appear to be very common in Lower Pegu, and which I cannot doubt is the species referred to by Dr. Mason. I name it—

*TESTUDO PLATYNOTUS*, nobis, *n. s.* Very similar to *T. STELLATA*; but averaging a larger size, and conspicuously distinguished by being quite flat upon the back; the plates not rising in the centre, and the bosses presenting the appearance of having been ground flat by attrition in all the specimens observed. The radiating marks are also broader and less numerous, in general numbering six only on each vertebral plate, three on each side of the centre, as compared with *T. STELLATA* and *T. GEOMETRICA* (from S. Africa), the carapace is conspicuously broader but not so high; and the species is much more obviously distinct from the two latter, than these are from each other.† Length of largest specimen 11 by  $7\frac{1}{2}$  in. and height of carapace  $4\frac{1}{2}$  in. I have not seen the plastron. The carapaces are used abundantly in the Rangoon bazar for baling out oil from earthen vessels. In each oil dealer's shop there are three or four of them in constant use; but the entire animal is difficult to be obtained, as the Burmáns are so fond of eating them. I was promised specimens of the animal, as a common inhabitant of the province; but did not succeed in procuring one. Three good illustrative carapaces were, however, obtained, showing about the extent of variation; and I had to pay a tolerable price for them.‡

\* *Homopus Burmesii*, nobis, *J. A. S.* XXII, 642,—*TESTUDO HORSFIELDI* Gray, *Catalogue of Shield Reptiles*, (1855) p. 7 and pl. I, *Hab.* Afghanistan (Nipal? P. Z. S. 1861, p. 219).

† In two or three S. African specimens of *T. GEOMETRICA* (*J. A. S.* XIX, 88) the usual small nuchal platelets wanting. This appears never to exist in *T. STELLATA* and *T. PLATYNOTUS*.

‡ It will be convenient here to enumerate the *Testudinata* of the Burmese provinces, so far as hitherto ascertained.

1. *TESTUDO PHAYZII*, nobis, *J. A. S.* XVII, 560, XXII, 639. *Hab.* Arakan; Tenasserim provinces.

2. *T. ELONGATA*, nobis, *J. A. S.* XXII, 639, XXIV, 712, XXV, 443; Gray, *Ann. Mag. N. H.* XIX, (1857) p. 242. From Arakan to Mergui. This species has bred in my garden, and the young do not possess the lengthened form of the

Five Snakes sent are CYLINDROPHIS RUFA, (Schn.), LYCODON AULICUS, DIPSAS CYNODON, TROPIDONOTUS UMBRATUS, and TR-

adult (as in CYCLEMYS DENTATA and sundry others). It would appear to exhibit a near resemblance, at first sight, to the American T. TABULATA. (Vide Gray, *loc. cit.*)

Of course this is the species referred to as T. ELONGATA, Gray (!) from Camboja, in P. Z. S. 1861, p. 139, (as well, however, may Dr. J. E. Gray refer to HOMO SAPIENS, Gray, or EQUUS CABALLUS, Gray! I claim the honour—such as it is of having named the three fine Indo-Chinese species of TESTUDO, as yet discovered. *Palmam qui meruit ferat*).

3. T. PLATYNOTUS, nobis, *ut supra*. Valley of the Irawadi.

4. E. MYSTICUS, Schweigger; young, E. BELANGERI, Lesson. Ava; Bengal (rare); Coromandel coast.

5. E. CRASSICOLLIS, Bell; E. nigra, nobis, J. A. S. XXIV, 713. Tenasserim provinces; Malayan peninsula; Sumatra; Java; Camboja, (P. Z. S. 1861, p. 140).

6. BATAGUR BERDMOREI, Emsy Berdmorei, nobis, J. A. S. XXVII, 281: *Syn. ut supra*. Sitang and Tenasserim rivers.

7. B. BASKA, Gray; Tetraonyx Lessonii, D. and B., Gray, *Ann. Mag. N. H.* XIX, (1857), p. 343, common in Lower Bengal; and a large skull now sent from the Irawadi by Mr. W. T. Blandford.

8. B. DHONGOKA; Emsy dhongoka, Gray, *Hardw. Ill. Ind. Zool.*; young, E. trionyx, D. and B. An estuary species chiefly, according to my experience; common along the eastern side of the Bay of Bengal and also in the Nerbudda. It is now unfrequently brought to the Maulmoim fish-bazar.

9. CUORA AMBOINENSIS, Gray; Testudo amboinensis, Dandin; Cistudo amboinensis, D. and B. Tenasserim provinces; Camboja; Malayan peninsula and Arohipelago; Philippine islands.

10. CYCLEMYS DENTATA; Cistudo dentata, Gray; Cycl. orbiculata, Bell; very young, Tetraonyx affinis, Cantor. Arakan; Pegu; Martaban; Tenasserim provinces; Malayan peninsula; Java; Borneo.

11. C. PLATYNOTA, Gray, (*Catal.* 1855); Emsy platynota, Gray, *Hardw. Ill. Ind. Zool.*; Cantor, J. A. S. XVI, 609; Blyth, J. A. S. XXIV, 714. Tenasserim provinces; Malayan peninsula; Sumatra.

12. PLATYSTERNON MEGACEPALUM, Gray, P. Z. S. 1831, p. 106; *Hardw. Ill. Ind. Zool.*; J. A. S. XXIV, 481. Sitang river; China. The adult of this animal is still a desideratum in our collection.

13. EMYDA PUNCTATA, Gray; Cryptopus granodus, D. and B. Very common throughout India; and received from the Sitang valley.

14. TRIONYX GANGETICUS, Cuv. India and Malay countries; also received from the Sitang river.

The marine species of the Bay, including CHITRA INDICA, Gray, (*Gymnopus lineatus*, D. and B.), are sufficiently well known, and are given in the late Dr. Cantor's Catalogue of Malayan reptiles, J. A. S. XVI, pp. 616 to 620. To the list of them, however, Major Tickell has just added SPHANJIS CORIACEA, (L.)

All of the fourteen species enumerated are illustrated by one or more specimens in the Society's museum; and most of them by a series of successive ages, from youth to maturity.

It is worthy of remark that of three species extremely common in Lower Bengal, viz. GEOCLEMYS HAMILTONII, Emsy THURJII, and BATAGUR TECTUM, and a fourth which has not hitherto been observed elsewhere, viz. B. OCELLATUS, (D. and B.), not one appears to inhabit the Burmese countries, so far as hitherto ascertained. They appear rather to be peculiar to the gangetic river-shed, with perhaps also the Brahmaputran; but even the latter is doubtful so far as I have been able to learn.

In the Proceedings of the Zoological Society for 1861, p. 139-40, Dr. Gray gives a list of some reptiles received from Camboja; in which the following

STOLATUS; all from Thayet Myo; and four species of BATRACHIA from near the mouth of the Irawádi are LYMNODYTES ERYTHREUS, RANA VITTIGERA, R. EUGULOSA (vide *J. A. S.* XXIV, 722), and BUFO MELANOSTICTUS.

A number of fishes and *Crustacea* are likewise forwarded from different localities; but these I have not the time to examine properly at present. The class of fishes is that to which I devoted especial attention during my late excursion; and I have more to place on record regarding the fishes of Burmá than can be conveniently compressed into an ordinary Report. I will only remark that Mr. Blanford's 'Bream-like fish' from Ava is the *Cyprinus cotis*, B. H., OSTEOBRAMA COTIS apud nos, *J. A. S.* Vol. XXIX. p. 158, which is more emphatically bream-shaped than the OST. MICROLEPIS, nobis, *ibid.* I obtained both species in abundance, and they acquire a considerable size, as I anticipated, the COTIS being the larger of the two, so far as I have seen.

IV. The Rev. C. S. P. Parish, Chaplain, Maulmein. A jar of sundries from Port Blair. When I was at Maulmein towards the close of September last, Mr. Parish was about to visit the Andamans; and I supplied him with a small jar of spirit, in which he obligingly promised to preserve any small animals that he might be able to procure. He has contributed a few additions to our scanty list of the Andamánese *fauna*, which I distinguish by prefixing an asterisk to their names.

Of mammalia, one ferruginous Bat\* CYNOPTERUS MARGINATUS; abundant in all the neighbouring countries.†

species are noted—*GEOLAMYS* \*MACROCEPHALA, Gray, *P. Z. S.* 1859, p. 478, *t.* XXI, and *GEOMYDA* SPINOSA, Gray; there is, also, a *TRIONYX* ORNATUS, Gray, from Camboja, described in *P. Z. S.* 1861, p. 40. *G. MACROCEPHALA* has likewise been received from Siam; also *EMYS* SIAMENSIS, Gray, Gunther, *P. Z. S.* 1861, p. 114.

I observe that my highly esteemed old friend, Prof. Thos. Bell, in his 'History of British Reptiles,' (Introduction, p. xviii, remarks that—"The eggs of the land Tortoises, as well as those of the marine Turtles, are generally round; but those of the fresh-water genera are usually more or less oval or elliptical." Those of *TESTUDO* STELLATA are exceedingly elongated. The eggs of the *TRIONYX* series are quite globular or spherical, as of the marine Turtles; but those of the *EMYS* group, as likewise of the land Tortoises (so far as I have seen), are very much elongated and elliptical.

† On the Barren Island volcano, Mr. Parish found the half-devoured remains of a Bat, probably *MUS* ANDAMENSIS, nobis: the head was wanting, and Mr. Parish did not think the fragment worth preserving; but the Andamánese species is easily recognised from its size, combined with the peculiar character of

Of birds, \*COLLOCALIA NIDIFIOA, (Latham), and HIRUNDO RUSTICA, L., juv. (*H. gutturalis*, Scopoli.)

Of reptiles, \*GECKO VERUS Merrem; TRIMESURUS VIRIDIS (var. Cantori), \*LEPTOPHIS ORNATA; \*DIPSAS—? (very young, but of a species unknown to me); LYCODON AULICUS (prettily mottled var., young); and \*BUFO MELANOSTICTUS. The last is the first instance of a batrachian having been received from the Andamans; but it is a very likely species to have been introduced from on board vessels. I have lately had occasion to remark from personal observation how much the small Geckos (HEMIDACTYLUS) are conveyed about in boats.

Of fishes, none worthy of remark.

Of crustaceans, GRAPSUS STRIGOSUS, (Herbst.); the fine land Crab noticed in *J. A. S.* XXVII, 272; and the common SQUILLA RAPHIDEA.

Of mollusks, CHITOA CUNNINGHAMII; PATELLA TESTUDINARIA; and a small LIMA.

(Here it will be convenient to interpolate a brief notice of some novelties from Port Blair, which have lately been received from Lieut.-Col. Tytler, the present Superintendent.)

Col. Tytler has *seen* a small wild FELIS on the main island, which, from his description, would seem to approximate the *F. CHAUS* of the neighbouring countries: Dr. Mouat also tells me that he picked up the skull of a small FELIS, on the occasion of his visit to the islands which led to the formation of the penal settlement of Port Blair; but that the specimen had been unaccountably lost. Col. Tytler writes—"On the 4th July at 'Aberdeen' I distinctly saw a FELINE animal, the size of the European wild cat. This creature walked across the road about 150 yards before me. Its colour was of an uniform light yellow-brown, not unlike the yellow of a Leopard, perhaps lighter, but I could see no marks or spots. On Ross Island

its fur. I may remark that on bare lava, upon Barren Island, Mr. Parish observed a beautiful plant in bloom, which proved to be the ordinarily epiphytic orchid, DENDROBIUM FORMOSUM, which is very common in the southern Tenasserim provinces. I observed it plentifully upon trees on the alluvial islands in the Tavoy river.

The naturalists attached to the Austrian 'Novara' expedition describe two species of MUS from the Nicobars, as *M. NICOBARICUS* and *M. PALMARUM*: the former of these may prove to be identical with *M. ANDAMENENSIS*. They also describe PTEROPUS NICOBARICUS (which is doubtless *Pr. melanotus* of my Mammal Catalogue).

there are several yellow-coloured domestic Cats belonging to the European Naval Brigade here, but these are small, besides which no Cat from Ross Island could swim over to 'Aberdeen;' and where I saw the animal none of the convicts' houses were within half a mile of the place. From the rapid casual view I had of it, I am persuaded that it was a wild animal, and not a stray domestic Cat." This would make a second species of *carnivora* on the Andamans, the other being the *PARADOXURUS* of which we possess the skull of an exceedingly aged individual. Col. Tytler further writes—"There is a great abundance of small Bats on the islands," which remain to be identified.

Of birds, Col. Tytler has sent a fine new Hawk—*HÆMATORNIS ELGINI*, Tytler, *n. s.* Like *H. CHEELA*, (Latham) *undulatus*, Vigors), but of smaller size and much darker colouring, with the occipital feathers less elongated; being further strongly distinguished by the markings of its great alar and caudal feathers. Instead of the broad pale band crossing the tail-feathers of *H. CHEELA*, the new species has a series of three narrow caudal bands, the last subterminal, only  $\frac{1}{2}$  in. broad, and followed by  $\frac{1}{4}$  in. of the black tip (perhaps in the newly moulted plumage there may be slight albescent extreme tips to the tail-feathers). In lieu of the broad whitish bands which predominate on the under surface of the wing in *H. CHEELA*, our present species has very slight and narrow pale cross-bands, the dark colour much predominating; and the white spots on the anterior portion of the inner surface of the wing are a good deal smaller. "Irides yellow. Bill slate-colour, tarsus yellow; claws black. Extreme length 21 in. by  $3\frac{1}{2}$  ft. in extent of wings." Closed wing 14 in.; tail 9 in.; tarse 3 in. "This species," remarks Col. Tytler, "is not uncommon on the main island, where it is seen sitting on the tops of trees. It is more abundant than the *H. CHEELA*."

*EURYZONA CANNINGI*, Tytler, *n. s.* Most like the Indian bird referred to *EU. CEYLONICA*, (Gme?) but very much larger and finer coloured, with tail proportionally more developed. Entire upper parts and breast, also the lower tail-coverts rich dark ferruginous, nearly approaching to marone; a slight olivaceous tinge about the rump: throat less deep-coloured: the abdominal region, flanks, and tibial plumes, black, with from two to four narrow white bands crossing each feather: under-surface of the wing much the same, but the

great alars are barred with rufous. "Bill yellow, with slight tinge of green: eyes reddish-orange: feet slate green. Length of adult female 13 in. by 21 in. in expanse of wings." Bill to gape  $1\frac{1}{2}$  in.: tarse  $2\frac{1}{2}$  in.: middle toe and claw  $1\frac{1}{2}$  in.: wing  $6\frac{1}{2}$  in.: tail  $3\frac{1}{2}$  in. The only specimen as yet obtained. The name *EURYZONA* does not so well apply to this species as to its congeners.

The Indian bird hitherto referred to *EU. CEYLONICA* is a recognisably distinct race from the true *CEYLONICA* of Ceylon. The ferruginous colour of the nape does not descend so low on the back, and there is no trace of ferruginous on the wing and tail-feathers. I distinguish it as *EU. AMAUROPTERA*, nobis.\* The distinction is about equivalent to that of *PALUMBUS ELPHINSTONII* of S. India and *P. TORBINGTONII* of Ceylon; or that of *SARCOGRAMMA GOENSIS* of all India and Ceylon, and *S. ATRONUCHALIS*, nobis, of Indo-China and Malasia. This last bird is common at Akyab.

A *DENDROCITTA*, of small size, Col. Tytler describes (but has not yet sent† as—

"*D. BAYLEYI*, Tytler, *n. s.* A new species, not uncommon on the main island. I name it after Mr. Bayley, the Home Secretary to Government. This beautiful little Pie measures  $13\frac{1}{2}$  in. in extreme length with closed wing  $4\frac{1}{2}$  in.; bill to gape 1 in.; and tarsus 1 in. Wings and tail nearly black, with broad white patch on wing; head, neck, and throat, dark brown; back more rufous; belly and vent very rufous or chesnut. Tail with 12 feathers (therefore not a *Crypsirina*). Bill and feet dark slate-coloured."

A new Snake forwarded by Col. Tytler I designate as—

*TRIPIDONOTUS, TYTLERI*, nobis, *n. s.* Species typical; the head sub-conical, flattened above, with the inter-orbital plate twice as long as broad at middle, and projecting backward so as to form an equilateral triangle between the fronts of the parietals and beyond the orbitals. Colour a bistre-brown above, yellowish-white below, with three to five more or less conspicuous whitish lines on the fore-part of the body, becoming obsolete at about the middle of the length; a transverse dark streak below the eye, and another and broader dark streak

\* The late Prince of Canino referred the *Gallinula rubiginosa*, Tem. (*Rallus fuscus*, L. ?) to this division; but it does not belong to it, having much longer toes, and exhibiting other distinctions.

† Since received.—*T. C. J.*



passing obliquely backward so as to cross the angle of the gape. *Scutæ* 138; *scutellæ* 86 pairs; row of scales 19. (Length of adult 2 ft. 10½ in., of which tail 10½ in.)

V. W. Theobald, Esq., Jun., of the Indian Geological Survey. A small tin of specimens, containing—

Of mammalia, a skin of *LAGOMYS ROYLI*, Ogilby, from the Bala Pass, “inhabiting also other passes in Tibet,”—and a small *Arvicoline* quadruped, for which I find it necessary to establish a new genus.

*PHAIOMYS*, nobis, *n. g.* Similar to *Arvicola*, but more robust, with a well developed thumb and nail to the fore-foot; tail shortish, and densely clad with short adpressed hairs. Upper rodent tusks inconspicuously grooved.

*PH. LEUCURUS*, nobis, *n. s.* Length of a female containing six *fœtus*, 6½ in. of which tail ½ in. of a smaller specimen sent, 4½ in., of which tail 1½ in., of hind-foot claws ¾ in. Fur dense, very soft and fine, the surface hue greyish-brown on the upper parts; on the lower parts, feet and tail, white, a little sullied: basal two-thirds or more of the upper fur dark slaty. “Ears rounded, of medium size, rather adpressed.”

“These Rats,” remarks Mr. Theobald, “are very numerous near Lake Chomoriri; but can only be shot, as it is next to impossible to dig them out, their holes ramifying over acres of ground. They must migrate, as the whole ground is sheeted in snow for five months. The pregnant female was obtained on the 4th August.

(In Afghanistan, there is an animal of nearly similar habits which was known to our people as the ‘Quetta Mole,’ *MYOSPALAX FUSCOCAPILLUS*, nobis, *J. A.* . XV, 141; but that is more nearly akin to the true Lemmings.)

From the same locality, Mr. Theobald has sent two males and a female of “a *Viviparous* Lizard,” with also an example of the young. It is a *PHRYNOCEPHALUS* with non-prehensile tail, and would seem to be nearly affined to *PHB. OCELLATUS* (Licht), and *PHB. MELANURUS*, Eichwild, briefly noticed by M. M. Dumeril and Bibron (*Hist. Rept.* IV, 516. It is perhaps *PH. TICKELLII*, Gunther (?) noticed in *P. Z. S.* 1860, pp. 167, 173, as inhabiting from 15,200 to 15,300 ft. elevation on the Himalaya. The sexes differ so much that they might well be mistaken for separate species; the female being smaller, and coloured very much like *UROMASTYX HARDWICKII*, but the tail

is variegated with numerous irregular slaty bands, passing to blackish towards and at the tip; lower-parts uniform yellowish-white, except the dusky tail-tip: length  $3\frac{1}{2}$  in., of which tail 2 in. Male  $4\frac{1}{2}$  in. long, of which tail  $2\frac{1}{2}$  in.; extended fore-limb 1 in., and hind-limb  $1\frac{1}{2}$  in.: in both sexes a transverse double fold of skin at the throat. Colour of the male dark olive above, with an obscure dark band along the spine, broken into a series of spots, and a nearly similar row of largish dark spots on either side; these spots are set off each with a cirlet of pale specks: limbs and tail banded above, the latter with imperfectly alternating lateral half bands, of a dusky grey colour, passing to blackish on the terminal fourth of the tail underneath; there is a great black abdominal patch, and another on the throat. The lower jaw protrudes distinctly beyond the upper one. Longest toe of the hind-foot conspicuously serrated along its inner edge. These Lizards associate in pairs, and form shallow burrows along lake Chomoriri. As the species is probably undescribed, I shall designate it *PHE. THEOBALDI*, nobis, *n. s.*

From Tibet is also sent *MOCOA SIKIMENSIS*, nobis, *J. A. S. XXII*, 652 (previously received from Sikkim and Kashmir); and a small specimen of *LAUDAKIA* (?) *MELANURA*, nobis, (*J. A. S. XXIII*, 788);\* also from Simla a Snake there common, *TROPIDONOTUS PLATYCEPS*, nobis, *J. A. S. XXIII*, 297, which species we have only previously received from Darjiling.

VI. Messrs. Edwards and Water, of Penang. A fine pair of *DRACO FIMBRIATUS*, Kuhl; from the west coast of Sumatra. Also a small *CROCODILUS POROSUS* in spirit; an imperfect example of *SQUILLA MACULATA*; and a fine sea mouse, akin to *APHEODITA*, which we have also received from Port Blair and from the Tenasserim coast.

\* This Lizard, as I am assured by Mr. Theobald, grows to 18 in. long. It is common.