

Report of Curator, Zoological Department.

The following collections have been received :

1. R. Swinhoe, Esq., of H. M. Consulate, Amoy. Numerous specimens of mammalia and birds, and some in other classes, additional to the birds noticed in XXVIII, 280,—collected chiefly about Amoy, but some from Formosa ; and among the latter the skull and horns of an undescribed Stag, of the *Elaphine* type of Deer, which cannot but be regarded as an interesting discovery.

MAMMALIA.

MACACUS — ? Skull of a young animal, sent as that of “the small Formosa Monkey.” I am not aware that any species of Monkey has been described from that island ; and the present specimen exhibits no special characteristic at so early an age, when the second true molars had not been developed. A Monkey of this genus (*M. SPECIOSUS*, F. Cuv.) inhabits Japan. Mr. Swinhoe since writes—“The MACACUS from Formosa must have been at least two years old. I procured him in spring and kept him alive for several months. I have one still alive, with an unmutilated tail, which I will send you as it is, and you will be able to form your own views of the species from the living animal. It is very difficult to get an animal of the kind with a full tail, as the Chinese are in the habit of docking the tail before Europeans can get hold of them. This is the small species and inhabits the camphor forests of the Formosa mountains. Its colour is grey with pale under-parts, and it has yellowish-brown eyes. The large species which frequents the rocks on the coast of Formosa, especially in the neighbourhood of *Sakow* or ‘Ape’s hill,’ is about twice the size and rather darker in colour (both have rough coats), with redder face, and with two *bright* red callosities on the rump. This I take to be the Japanese animal, as also identical with the Monkeys found in the island of Lintin near Hong-kong, but this only on conjecture. The small species stands about 2 ft. high, the larger about 3 ft. A sporting friend has lately gone over to Formosa, and having sent a stuffer with him, I hope to procure some of these animals.”—*Qu.* Has the very short tail of *M. SPECIOSUS*, as figured by M. Fr. Cuvier, been docked of its natural proportions?—Again, Mr. Swinhoe subsequently writes—

"I have ascertained that the *large* Formosa Monkey is identical with the Japanese one, and it will therefore stand as *M. SPECIOSUS*. The small kind, which I am about to send you alive, is undoubtedly distinct and probably new. The large are found on the coast, the small in the forests of the interior of the island.*

NYCTICEJUS (?) *SWINHOEI*, nobis, *n. s.* I can find no description of a Bat at all applicable to this species; and can discover in the specimen no trace of upper incisors. It is rather a robustly formed Bat, with the alar membrane continued to the base of the toes; with unusually short linguiform tragus, and short anti-helix. Fur mostly straight and silky, even glossy above, but a little frizzled on the forehead and about the neck; its surface-colour on the upper-parts an umbre-brown with pale tips, below much paler and a little albescent; membranes dark, with numerous transverse stripes of minute hairs on the lower surface of the interfemoral; the extreme tip of the tail exerted. Head and body about $2\frac{1}{2}$ in. long, the tail $1\frac{1}{2}$ in.; expanse about 12 in.: length of fore-arm 2 in.; longest finger $3\frac{1}{2}$ in.; tarse $1\frac{1}{8}$ in.; hind-foot with claws $\frac{1}{2}$ in.; ears (posteriorly) about $\frac{5}{8}$ in. in the fresh specimen; tragus barely $\frac{3}{8}$ in. This with other species not expressly stated to be from Formosa, I conclude are from Amoy.

SCOTOPHILUS PUMILOIDES, R. F. Tomes, *Ann. Mag. N. H.*, XX. (1857), p. 228. After much consideration, I think this small species is correctly identified.

CANIS (FAMILIARIS). Skull of a short-faced Dog, from Formosa, *minus* the lower jaw and wanting several of the upper teeth.

C. (FAMILIARIS). Skull of another short-faced Dog, of smaller size, and similarly imperfect, from Amoy,—most remarkable for possessing no second true molar, nor space for its insertion.†

* The living monkey has arrived just as this sheet was going to press. It is a half-grown female, and differs in no respect (that I can perceive) from the common *M. RADIATUS* of the peninsula of India, except in being a shade or two darker in colouring, with a nigrescent wash on the face and ears.

† The Tiger is an occasional visitor in the island of Amoy. In a letter from Mr. Swinhoe, dated Nov. 21st, 1859, he writes—"I have, since my last, met with little of interest except a Royal Tiger of large size in a Chinese village. I attacked him at close quarters with a fowling-piece and made him bleed; but to avoid an awkward spring at me, I fell down a precipice and nearly killed myself. No assistance being at hand and the Chinese not daring to come near the beast, I need not tell you that I missed getting his skin. One was killed last year at Amoy, and I once bought a cub out of three that a Chinese had for sale, but I never met the brutes before in my rambles. I was out after specimens, and was not of course provided with ball; my stock being only shot and cartridges.

MUSTELA SIBIRICA, Pallas : *M. Hodgsoni*, Gray, *Ann. Mag. N. H.*, XI (1843), p. 118. A fine skin of a female, and an imperfect skull.

SOREX MURINUS (?), L. : *S. Swinhoei*, nobis, *J. A. S.* XXVIII, 285. The specimen formerly described was but half-grown, and has the surface-colour of the upper-parts much darker than in four adults now sent. In the young of *S. MURINUS*, Dr. Cantor states (*J. A. S.* XV, 191), that "the colour is more of a bluish grey, slightly mixed with brown on the back." In the young of our present animal, the

When I reflect on this adventure, it seems a wonder that I was not killed, but a sight of that *glossy striped skin* emboldened me to try the odds." I sincerely trust that my esteemed friend will admit "discretion" to be "the better part of valour" on any future similar occasion. He since writes (Jan. 5th)—"Tigers, I am told, are greatly increasing in the neighbouring high hills. The villagers report a number of lives lost ; and numerous small cattle carried away."

Tigers appear to be very troublesome in the new Russian territory of the Amûr. "In the same places where the Elk is found, the Tiger prowls ; and the latter animal may be called quite common, its constant abode being there. I was informed by some Zolons, that there are always a great number of Tigers in the mountains on the opposite or Chinese side. During winter they cross the river and seize the horses of the Zolons, who hunt them at that time." *Journ. Voy. Geogr. Soc.* XXVIII (1858), p. 420. Again, p. 424. "The enquiries I made of those few Tunguses confirmed the fact of the Tiger being found all over the Hing-gan, especially at its central and lower parts. The population are accordingly prevented from hunting there, as the Tiger destroys their Horses, particularly during winter.*** The Tiger always follows the fresh tracks of the wild Boar, which constitutes its principal food."...And p. 440, "The inhabitants of both banks of the Usuri are employed in agriculture, which the extent and fecundity of their lands render very successful. They have bred cattle for cultivating their fields, but being often attacked by Tigers, it is very difficult to keep cattle in any number." *Vide* also Atkinson's *Siberia*, and Humboldt's notice of Tigers in Northern Asia in *Asie Centrale*. However, they do not quite range to America, albeit the poet Campbell places them on the banks of Lake Erie! "On Erie's banks where Tigers steal along." Nor to Africa ; though Sir Walter Scott locates them in "Lybia!" (*Bridal of Triermain*.) The Russian Expedition employed on the Survey of Lake Aral, found them troublesome even there *in mid-winter!* (*Vide J. R. Geog. S.* Vol. XXIII, 95).

Here it may be remarked that Tigers appear to be fast multiplying in Pinang, where notices of the occurrence of this animal have several times appeared in the Journals from about the middle of 1859. In the Island of Singapore, where they are now so numerous and destructive, they made their first appearance five or six years after the establishment of the British settlement ; and but three or four years ago, Dr. Oxley wrote—"The channel between Pinang and the main is two miles broad ; and this has been sufficient to exclude the Tiger : for although there have been examples of individuals having crossed over, it has been in an exhausted state, and they have been immediately destroyed." Since this was written, the Tiger would appear to have fairly established itself on the island.

In another communication, dated Dec. 8th, Mr. Swinhoe notices two other species of FELIS. He remarks—"A wild FELIS is found in Hongkong marked like the domestic Cat, but much larger ; and an animal known to Anglo-Chinese as the 'Tiger cat.'" From the description sent, evidently *F. MACROCELIS*, or *F. MACROCELOIDES* if this be distinct, or an animal very closely akin : a specimen is promised shortly.

brown of the upper-parts all but totally conceals the dark grey: in the adults the brown tips are much less developed, and there is scarcely any difference in colour above and below. The largest specimen (a skin) has the tarse $\frac{3}{4}$ in. A female skin in spirit measures about 5 in., with the tail nearly 3 in.; tarse *plus* $\frac{3}{4}$ in. Amoy.*

S. — ? The young of a large species of Shrew, which at first sight might be deemed an *albino*, but on closer examination is seen to be of a very albescent grey colour, which is probably typical. Extremely doubtful as a *leucoid* variety of the preceding.

SCIURUS CASTANEOVENTRIS, Gray, *Br. Mus. Catal. : Sc. griseopectus*, nobis, *J. A. S.* XVI, 873.

MUS DECUMANUS, L.

M. FLAVESCENS, Gray. Not full-grown apparently.

M. — ? A diminutive species seemingly; rather than the young of a Mouse affined to M. MUSCULUS; approximating the description of M. VAGUS, Pallas, only the tail is of the same length as the head and body. Entire length about 4 inches only; the tarse with toes $\frac{5}{8}$ inch, or decidedly long in proportion. Ear-conch as in M. MUSCULUS; but more clad with small hairs within. It is not desirable to name it from a single skin.

CERVUS TAIUANUS, nobis, *n. s.*† The 'Spotted Deer' of China has been currently but vaguely identified with the Axis or 'Spotted Deer' of India; but I have long doubted the correctness of that identification. The question is completely decided, so far at least as the Deer of the island of Formosa is concerned—and I am tolerably sure that this is the (imported?) 'Spotted Deer' of China,—by a skull now sent by Mr. Swinhoe, which belongs strictly to the *Elaphine* and not to the *Axine* group of Deer: being the smallest and southernmost in its distribution of that group, the northern tropic crossing the middle of the island, and the southern cape of Formosa lying in about the same

* I have since obtained what seems to be the same species from the vicinity of Calcutta; and Major Tytler assures me that he has several specimens collected at Barrackpore: but it seems distinct from a still darker Shrew sent from S. Malabar, my dubious S. VIRIDESCENS, *J. A. S.* XXVIII, 285. More extensive comparison of the skulls, especially, is needed to determine the identity or non-identity of these Shrews from various localities satisfactorily. I had long been assured of the existence of a large black Shrew in Lower Bengal, which the natives imagine to be fearfully venomous!

† This name is suggested by Mr. Swinhoe, in reference to the island's name of Taiwan, *seu* Formosa.

parallel as our Bengal Sandheads. All that Mr. Swinhoe says of the animal is that "the Formosa Deer are of a reddish colour with white spots, and may probably be the Indian species." The spots, I suspect, indicate the summer coat of the animal, as in various other species more or less (*e. g.* our Indian *Bára-sing'ha* and Hog Deer, the European Fallow Deer, &c.), and are not permanent at all seasons as in the Axis.* Whether in the details of the skull, or in the ramification of the horns, there can be no hesitation about the affinities of the Formosan Deer. It has well developed upper canines, which are wanting in the Axis; and the same large round infra-orbital foramina as in *C. ELAPHUS* and its immediate congeners. The skull is indeed a diminutive of that of *C. ELAPHUS*: but while all the permanent teeth are complete and well worn down (far more so than in an Axis skull with fully developed horns), the horns might be supposed to indicate an immature animal, and their pedicles are elongated as in a two or three year old *C. ELAPHUS*! Either, therefore, the skull is that of an aged animal with declining horns, which is scarcely consistent with the condition of the frontal and other sutures (any more than with the length of the horn-pedicles, as compared with other species), or the horns may be supposed to represent the typical development, corresponding to that occasional in a young animal of the larger typical Stags! They are little longer than the skull, do not spread much, and incline inwards at the tips; are slender, and the branches or antlers are mere snags; there is no 'bez-antler,' as commonly in young *C. ELAPHUS* and constantly (?) in *C. BARBAEUS*;† but the

* In a letter received as this was going to press, Mr. Swinhoe describes the animal in its winter vesture. "The Stag from the north I only know from hearsay. A species from Japan a neighbour has in keeping, and this I take to be true *C. SIKA*. Both are evidently distinct from the Formosan species, of which a fine male and female are lodged in quarters close to my house. A young male has just been shipped for Leyden. I give a few remarks as to the peculiarities of the living pair. They were too wild to permit of my taking exact measurements of them. The buck stands about 4 ft. from the forehead to the ground; the doe 3 ft. The buck has horns of about a foot long, with three anterior snags and one posterior. General tint reddish mouse-colour, with a black dorsal line from the shoulders to the tail, where it expands into the latter T (as it were), the buttocks beneath it and each side of the short tail being pure white. Inside of ears, base of the back of ears, under muzzle, throat, belly and inner thighs, also white. The top of the head is redder. Some long whitish hair on the throat and between the legs: a roundish tuft of long white hair on the outer side of each tibia. These last characters are more prominent in the buck."

† In the series of horns of *C. ELAPHUS* figured in Prof. T. Bell's 'History of British Quadrupeds,' the 'bez-antler' is omitted throughout!

beam is trifid, the first or lowest snag being *external* and inclining forward (representing the 'royal-antler'), beyond which the final division is transverse to the axis of the body. Extreme length of horn (measured by callipers) 13 in.; greatest distance of pair apart (measured externally) 11 in.; tips apart $7\frac{1}{2}$ in.; girth of beam, above frontal snag, $2\frac{5}{8}$ in.; length of skull, inclusive of lower jaw *in situ*, $10\frac{3}{4}$ in.; extreme breadth of orbits (posteriorly) $4\frac{3}{4}$ in.: upper series of molars 3 in.

There is a C. SIKA, Schlegel (*Fauna Japonica*, t. 17), from Japan, cited by Dr. J. E. Gray (*P. Z. S.* 1850, p. 228), and thus briefly noticed by him. "Dark brown; cheeks and throat rather paler; rump brown, without any pale spot; tail pale, white beneath; hair harsh; horns rather slender, with a basal and a medial snag, and a subapical internal one." This description of the horn suits very well the Formosan animal; but the size is unnoticed, which could hardly be were C. SIKA to be *comparatively* so small an animal as C. TAOUANUS, and it may be, judging from Dr. Gray's mode of describing the horn, that the *Elaphine* type of ramification is a degree more developed in the Japanese species. He does not, however, mention the age of the animal he describes; and it is quite possible that it may temporarily represent, at a certain age, the particular development of horn which in C. TAOUANUS is characteristic of maturity. The colouring described may very well be that of the winter coat of the little Stag of Formosa.*

* Mr. Swinhoe since writes—"A Stag has just arrived here from the north, and is in the possession of a gentleman next door to me. It stands nearly 3 ft. at the shoulder, has a short head, and horns about 10 or 11 in. long, shaped thus *** Its face and over the eyes are black, neck and ears blackish-grey. Median line of back black, blending on the sides with blackish chesnut. Legs black, getting grey towards the hoof. Tail and buttocks white." Pretty clearly the Siberian Roe, CAPREOLUS PYGARGUS, (Pallas). But what is the so called 'Roe-buck' of the Amúr territory, noticed in the 'Journal of the Royal Geographical Society,' Vol. XXVIII, 397 (1858)?—CERVUS WALLICHI, or a kindred species? "The Roe-buck," we are told, "is an animal resembling the Elk, but has a smaller body, although the head is comparatively larger [!]. Its flesh is savoury and nutritious; but the principal value of this animal lies in its horns, which contain at a certain period of the year—I think in March—a marrow [!], of peculiar medicinal properties, which is highly prized by the Chinese, who at the best season of the year, pay as much as sixty roubles (9l. 10s.) for a pair of good horns," &c. &c. This animal is mentioned in addition to "the Elk," the common Roe, and others.

Further particulars of the Chinese Deer have again since been received from Mr. Swinhoe, dated Dec. 8th, 1859. "The skull I sent you," he remarks, "was that of an elderly buck, one of a pair in the possession of a gentleman here. It died

CERVULUS REEVESII, (Ogilby). The small Chinese Muntjac. A skull with horns.

MANIS PENTADACTYLA, L. Skull and flat skin. This particular species of Pangolin has long been identified as an inhabitant of China, and was obtained by Dr. Cantor in Chusan.*

while in his care, and its skin was so worthless that I did not keep it. The doe is still alive and in good health, and from her personal appearance I observe that your surmise as to the summer duration of the white spots is quite correct. She has already *nearly* lost all the white marks. I hear that there are several more of the same species, in the possession of a Mandarin here, and I intend shortly visiting him to inspect them. As far as I have yet ascertained, the species is purely Formosan. A larger Stag replacing it in Shantung and North China with large branching horns, and having a redder coat [*i. e.* summer vesture]. This other species I am assured is also found in Formosa, but this requires confirmation. The small Muntjac (CERVULUS REEVESII), 'kina' of this dialect, is abundant in Formosa, having myself met with it there and seen skins. The other Deer-skins shewn me on my tour *round* Formosa were all of the spotted species. You say that no *Elaphine* Deer are found [in India] south of the Himaláyas. Let me remark that this Deer is from Formosa, where I have seen mountains *covered with snow in summer*; and it is most probable that these animals are sold by the savages to the Chinese settlers, as in our inland tour over the hills for some 40 miles we met none, and the Chinese spoke of them as coming from the mountains, and of their skins as forming articles of barter.

"We have a Japanese Deer at Amoy with horns short and *somewhat* like those of the Formosan. It is not so elegant as mine, shorter in the legs, about the same height, and of a far more *Stag* aspect. This I doubt not is the C. SIKA of Schlegel, but what our large northern Stag can be I have not had the opportunity to ascertain. There are a few of the horns of the Formosan species to be got, which I will try to procure for you."

* The Chinese, like the natives of India, class the Pangolin as a fish, and it is curious that both people approximate it to certain Carps. Thus in India this animal is known as the *Jungli-mátch* (Jungle-fish), or *Bán Rohi* (Jungle Rohi), in reference to the ROHITA VULGARIS, or *Cyprinus rohita* of B. Hamilton. In some amusing notices of Chinese Natural History, published in the 'Chinese Repository' for 1838, we find the Pangolin thus described (p. 48). "The *ling-le*, or 'Hill Carp,' is so called, says the *Pun Tsaou*, because its shape and appearance resembles that of the *le* or Carp; and since it resides on land, in caves and hills, it is called *Ling*, a character compounded of *yu* fish, joined to the right half of *ling*, a high rocky place. It has by some been termed the *Lung-le*, or 'Dragon-carp,' because it has the scales of the Dragon; and by others *Chuen shan kéas*, or 'boring hill-scales,' because it is the scaly animal that burrows in the hills: the last name is the one by which the creature is best known among the people of Canton. An ancient name is *Shih ling yu* or 'stony hill-fish,' given to it because the scales on its tail have three corners like the *ling kéa*, or 'water calthrops,' and are very hard. This animal, for which the Chinese have as many synonyms as some anomalous Perch or *Hedysarum*, is the Manis, Pangolin, or Scaly Ant-eater, and is often seen in the hands of the people of Canton, by whom it is regarded as a very curious 'muster.' They consider it as 'a fish out of water,' an anomaly irreconcilable with any classification; and in the standard treatises on Natural History, it is placed among the Crocodiles and fishes." Further details are given; but I pass to an amusing description of this animal by the old Dutch traveller Linschoten, translated into quaint old English. He, too, describes it as "a strange Indian fish," caught in the river of Goa,—“the picture whereof, by commandment of the Archbishop of that city was painted, and for a wonder sent to the king of Spaine.” He says:—"It was in bignesse as great as a middle-

sized Dog, with a snout like a Hog, small eyes, no eares [the particular species has a small ear-conch], but two lobes where his eares should be; it had foure fete like an Elephant, the tayle beginning somewhat upon the backe, broad and then flat, and at the very end round and somewhat sharpe. It ranne along the hall upon the floore, and in every place in the house snorting like a Hog. The whole body, tayle, and legs being covered with scales of a thumbe breadth, harder than iron or steel [!]. We hewed and layed upon them with weapons, as if men should beate upon an anvill, and when we strooke upon him, he rouled himself in a heape, head and feet together, so that he lay like a round ball, we not being able to judge whether he closed himself together, neyther could we with any instrument or strength of hands open him againe, but letting him alone and not touching him, he opened himself and ranne away, as I said before."

So little is known of the mammalia of China that any contribution on the subject is of interest to zoologists. There is an animal known at Shanghai as the 'Musk Cat,' which I suspect is a species of Marten unknown to naturalists. It is thus described:—

"A beautiful animal, of about the size of the common Cat, but longer in form; in fact, somewhat resembling the Marten, with a long bushy tail, like the brush of a Fox. Emits an exceedingly powerful and by no means disagreeable musky odour. Lives in holes of the ground, and also climbs into trees and bushes in search of birds and their nests. Exceedingly destructive to the Pheasants (*PHASIANUS TORQUATUS*) when sitting; and is much hunted by the natives for its fur." *Bengal Sporting Magazine*, n. s. II, 642 (1845). Probably identical with the "large Marten" of the Amûr territory noticed in *Journ. Roy. Geogr. Soc.*, XXVIII (1858), p. 424.

Again, in the bird class, there is a Chinese Bustard well known to sportsmen from Amoy and also to the northward, but which has not yet been systematically described, so far as I can learn. The following is a notice of it from the same paper, p. 529.

"A species of Bustard, somewhat like the common mottled English Turkey, only smaller. These birds are generally found singly, at least during the time we were there (November and the winter months being the season in which we beat for them): they are exceedingly shy and difficult of approach, and are usually found in the long grass and fir-clumps: they seem to rise with difficulty, running a considerable distance preparatory to their taking wing, during which time they call and cackle, which seems extraordinary, as they are generally found as odd birds." Mr. Swinhoe is well aware of the existence of this Bustard, but hitherto has been unable to procure a specimen, on account of the estimation in which it is held for the table.

For the same reason, comparatively few skins of Bustards are preserved anywhere, especially of the larger species; and so it happened that the Great Bustard of Australia, though met with even by Cook and repeatedly mentioned by Flinders and other early navigators, remained unknown to European naturalists until Mr. Gould's visit to that country! Capt. Cook, it may not be remembered, on his first voyage, proceeding northward from Botany Bay, landed a second time on the continent of Australia, a little to the south of the Tropic of Capricorn, and there he shot "a kind of Bustard weighing 17 lbs.," and named the landing-place *Bustard Bay!*

From a notice published in the 'Journal of the Royal Geographical Society,' Vol. XXVIII, 148 (1858), it appears that—"Of birds, the black and the white Cockatoos, bronze-winged Pigeons of various kinds, and the Bustard (or 'wild Turkey' of the colonists), were all found in the valley of the Victoria, but they were all much smaller than their kindred of the south." Probably, therefore, distinct species, according to the common acceptation of the phrase, or such as would be figured as different species by Mr. Gould.

In a collection of Chinese paintings of birds, among numerous species at once recognisable, was one of a very fine *BONASA* or 'Ruffed Grouse,' as yet undescribed. The collection referred to was taken to England by the late Viscount Hardinge.

AVES.*

CIRCUS — ? Female. Affined in general appearance to *C. ÆRUGINOSUS*, but apparently distinct. Mr. Swinhoe writes—“ I have at last succeeded in procuring what I take to be the male of this species, bluish-grey on the wings and white on the under-parts with a few streaks. *C. CYANEUS* is also common with us.

BUTEO VULGARIS, Bechstein; *B. vulgaris*, var. *japonicus*, Temminck and Schlegel (apud Swinhoe), though why so distinguished I cannot perceive.

MILVUS MELANOTIS; *Haliaëtus melanotis*, Gray, Hardw. *Ill. Ind. Zool.* Like *M. GOVINDA*, Sykes, but having a stouter beak, and the plumage of the *mature* bird marked with pale streaks on the upper-parts.

CYPSELUS — ? Like *C. AFFINIS*, Gray, of India, but with the crown and tail conspicuously blacker, and the tail distinctly sub-furcate.

CORVUS SINENSIS, Gould; Horsfield, *Ind. Mus. Catal.*, II, 556. Exceedingly near to the common *C. CULMINATUS*, Sykes, of India, Burma, and the Malayan peninsula, but decidedly larger, and I now doubt if either can be correctly identified with *C. ORIENTALIS*, Eversmann, of Middle Asia.†

* For other Chinese birds sent, vide Vol. XXVIII, p. 280.

† *C. ORIENTALIS* is thus distinguished by Prof. Eversmann from the European *C. CORONE*, of which latter the late Dr. Horsfield notes in his Catalogue two specimens from Pushut, and also *C. CORNIX* from Mesopotamia and Afghánistán!

“*CORVUS CORONE. Cæruleo ater, rostro modice acuminato, lineâ elevatâ horizontali infra nares, tomium in rostro medio attingente.*”

“*CORVUS ORIENTALIS. Cæruleo-ater, rostro valido, crassiusculo, incurvo, tomis continue involutis, mandibulari apice recto, spatio inter nares et tomium maxillare rotundato, lævi.*”

“*Exemplaria mea circa fluvium Narym, ultra oppidam Buchtarma, occisa sunt.*” (*Addenda ad celeberrimi Pallasii Zoographiam Rosso-asiaticum. Fasciculus II, A. D. 1841.*)

Over India generally and Ceylon, we have only *C. CULMINATUS* and *C. SPLENDENS*; the latter found exclusively where there is a considerable human population. It is only of late years that *C. SPLENDENS* has found its way into Arakan; but in Pegu there is a black race of it, and a nearly black race of it in Ceylon. Mr. F. Moore, however, describes a *C. TENUIROSTRIS* from Bombay. “Plumage above glossy purple-black, palest on the head, neck, back, and body beneath, and these having an ashy cast; forehead jet-black, and contrasting with the ashy cast of plumage of the crown. Length 18 in.; of wing 12½ in.; tail 7 in.; bill to gape 2¾ in.; and tarse 2¼ in.”

C. CULMINATUS we have received from Malacca, where it co-exists with *C. MACRORHYNCHOS*, Vieillot, a species with remarkably long and slender bill, measuring 2¾ in. to gape; and this again appears to differ from *C. ENCA*, Horsfield,

C. TORQUATUS, Cuv.: *C. pectoralis*, Gould, *P. Z. S.* 1836, p. 18; *C. dominicanus*, Bonap.; *C. dauricus* apud G. R. Gray, *Gen. Birds*, II, 315.

PICA MEDIA, nobis: *P. sericea*, Gould.

PARUS MINOR, Temminck and Schlegel (figured in Gould's 'Birds of Asia'). Like *P. CINEREUS*, Vieillot, but with green on the fore-part of the back.

LEUCODIOPTRON CANORUM, Schiff.; *Turdus canorus*, *T. sinensis*, et *Lanius faustus*, L.; *Garrulax sinensis* apud Gray, nec *G. chinensis*, nobis, Catal. No. 483, which is a Tenasserim species, doubtful if likewise inhabiting China. Fowchow.

GARRULAX PERSPICILLATUS, (Gm.)

TEMENUCHUS CINERACEUS, (Tem.)

PASSER MONTANUS, (L.), var. Although alike in size and markings, specimens of this bird from different regions are readily distinguishable. The British are much darker ashy underneath, like *P. DOMESTICUS* as compared with its Indian representative; those from Arakan are considerably more rufous on the back; while the Chinese race is simply whiter underneath than the European. The Sikhim race, if I remember rightly, resembles the Chinese one; while specimens from Singapore and Java are probably like those from Arakan. I have never seen this bird from the N. W. Himaláya; and the Afghán *P. MONTANUS* of Capt. T. Hutton proved to be *P. SALICICOLUS* (v. *hispaniolensis*). Nevertheless, in Dr. Horsfield's Catalogue, examples of the present species are noted from Kandahar.

EUSPIZA PERSONATA, (Tem.) Specimen of a female.

ALAUDE GULGULA (?), Franklin; *A. cælix*, Swinhoe, 'Zoologist,' p. 6723 (1859). I have only recently seen the true *A. MALABARICA*, Scopoli, from S. India, which differs from *A. GULGULA* of Bengal and

of Java, according to Mr. F. Moore's description and admeasurements of the latter.

In the N. W., the true British Raven (*C. CORAX*) is common in the Punjáb and Afghánistán; but is replaced by a still larger race in Tibet, the *C. TIBETANUS*, Hodgson. In Pesháwur, Kohát, Afghánistán, and Kashmir, the European Rook (*C. FRUGILEGUS*) occurs; and in Kashmir also the European Jackdaw (*C. MONEDULA*); but the Chinese and Japanese Rook (*C. PASTINATOR*, Gould,) is distinct, and also the Chinese Jackdaw (*C. DAURICUS*, Pallas). The Hooded Crow (*C. CORNIX*) extends eastward to Afghánistán, and the European Carrion Crow (*C. CORONE*) to Pushut, as noticed in the text.

Upper India, by having a well developed pointed crest, as in the GALERIDÆ. An Amoy specimen approximates the true GULGULA.

MOTACILLA LUGUBRIS, Pallas (apud Swinhoe): M. LUZONIENSIS in winter dress *apud nos*, J. A. S. XXVIII, 280: but very like M. ALBA (*vera*) in winter dress.

LANIUS SCHACH, Gmelin.

DRYMOICA EXTENSICAUDA, Swinhoe, *n. s.*

PRINIA SONITANS, Swinhoe, *n. s.*

ORTHOTOMUS PHYLLORAPHEUS, Swinhoe, *n. s.*

CISTICOLA TINNABULANS, *n. s.* (?)

} These have been
described by Mr.
Swinhoe in an
article on the

birds of Amoy forwarded to the Society for publication.

MERULA MANDARINA, Bonap.

TURDUS RUFULUS, Drapiez (*T. modestus*, Eyton). Var. ?

T. DAULIAS, Tem. et Schl., *Fauna Japonica* (apud Swinhoe). To me this appears to be a mere variety of the last.

PETROCOSSYPHUS MANILLENSIS, (Gm.)

PRATINCOLA INDICA, nobis.

ERYTHROSTERNA LEUCURA, (Gm.)

ZANTHOPYGIA NARCISSINA, (Tem.): *Z. chrysophrys*, nobis, J. A. S. XVI, 124. Male, differing from the female described (*loc. cit.*) by the much brighter and more flame-coloured tint of the yellow generally, which on the chin and throat is of a deep orange-colour; the difference, however, being far less than in the sexes of *Z. TRICOLOR*, (Hartlaub), v. *Z. leucophrys*, nobis, of the Malayan peninsula.

CURRUCA (?) CANTILLANS, Swinhoe.

ACROCEPHALUS MAGNIROSTRIS, Swinhoe, *n. s.*: *Salicaria turdina orientalis*, T. et Schl. (apud Swinhoe).

PHYLLOSCOPUS SYLVICULTRIX, Swinhoe, *n. s.*

PH. TENELLIPES, Swinhoe, *n. s.*

PERICROCOTUS CINEREUS, Strickland, *œm.* Amoy.

PYCNONOTUS ATRICAPILLUS, (Vieillot), apud Lord A. Hay, *Madr. Journ.* XIII, pt. II, 160; * nec *Ægithina atricapilla*, Vieillot, which is another PYCNONOTUS from Ceylon, the *Sylvia nigricapilla*, Drapiez, *Rubigula aberrans*, nobis, J. A. S. XV, 287, XVI, 272, and *G. me-ropinus*, Bonap.,—Levaillant, *Ois. d' Afr.* pl. 140, where much too dully coloured). The Chinese species being *le Gôbe-mouche à tête*

* If I mistake not, *Muscicapa atricapilla* of Vieillot (nec Lin.)

noire de la Chine of Sonnerat, described *J. A. S.* XIV, note to p. 569, also *Hæmatornis chrysoorrhoides*, Lafresnaye, *Rev. Zool. &c.* 1845, p. 367, and *P. hæmorrhous* apud Hartlaub, *Rev. Zool. &c.* 1846, p. 1. I have no means of determining upon which of the two species M. Vieillot first bestowed the name *ATRICAPILLUS*; but as both cannot bear it in the same genus, I propose to retain *ATRICAPILLUS*, (Vieillot), for the Chinese bird, and *NIGRICAPILLUS*, (Drapier,) for that of Ceylon.*

P. SINENSIS, (Gmelin): *Turdus occipitalis*, Tem.

ORIOLOUS CHINENSIS, Gmelin.

HIATICULA PHILIPPINA, (Scopoli).

TRINGA ALPINA, L.; *TR. SUBARQUATA*, (Gm.), *apud nos*, XVIII, (280.)

BUPHUS CABOGA, (Pennant).

ARDEOLA SPECIOSA, (Horsfield, *vera*), in summer and winter dress.

ARDETTA SINENSIS, (Gm.)

LARUS FUSCUS, L.

L. KITTLITZII (?), Bruch: *GAVIA KITTLITZII* (?), Bonap.

THALASSEUS PELICANOIDES, (King): *Sterna cristata*, Stephens (nec Swainson); *St. velox*, Rüppell. Specimens from the Bay of Bengal, the Maldives, and from China, appear to be perfectly identical; and correspond, so far as can be adjudged, with Rüppell's figure.

ANOUS STOLIDA, (Gm.)

PODICEPS CRISTATUS, L. Winter dress.

P. MINOR, Gm. (or *P. PHILIPPENSIS*, Gm., if this be considered separable). Winter dress.

REPTILIA.

PYTHON MOLURUS, (L.) A flat skin, more than 13 feet long without the head, from Formosa!

BUNGARUS MULTICINCTUS, nobis, *n. s.* Another flat skin, obviously of a *BUNGARUS*, nearly affined to *B. FASCIATUS*, (Schneider); but the golden bands only one-sixth as broad as the black bands, and numbering more than fifty in a specimen 4 ft. in length *minus* the head.†

* The late Prince of Canino proposed the generic name *MEROPIXUS* for the Ceylon species.

† Mr. Swinhoe writes, Dec. 8th—"In Davis's 'China,' II, 333, mention is made of a *very* poisonous striped *black and white* Snake having reached England

MOLLUSCA.

A few marine and fresh-water shells, already in the museum with the exception of a small *LYMNEA* and a minute *PLANORBIS*.

2. From E. L. Layard, Esq., on behalf of the Government Museum, Cape-town.

A fine collection of skins of mammalia and birds; those quite new to the museum being here distinguished by an asterisk prefixed.

MAMMALIA.

CYNOCEPHALUS PORCARIUS, (Bodd.) The Cape Baboon, or *Chacma*. Adult male.

**XANTHARPYIA HOTTENTOTA*, (Tem.)

**MEGALOTIS CAAMA*, (A. Smith).

**PROTELES CRISTATUS*, (Sparrman). Tail wanting.

**GENETTA TIGRINA*, (Schn.) 2.

**HERPESTES ICHNUEMON*, (L.): *Ichn. Pharaonis*, Geoff.

**H. CAFFER*, Wagner.

**H. PALUDOSUS*, Cuv.: *Mangusta urinatrix*, A. Smith.

**FELIS SERVAL*, Schreber.

**F. CAFRA*, Desmarest.

**ZORILLA STRIATA*, (Shaw).

**CHRYSOCHLORIS HOLOSERICEA*, Licht.: *Chr. hottentota*, A. Smith.*

XERUS SETOSUS, (Forster).

**GERBILLUS AFER*, Gray. 2.

**MUS PUMILUS*, Sparrman. 2.

BATHYERGUS MARITIMUS, (Gm.) 3.

from Canton. This must be our *BUNGARUS* which you propose to name *MULTICINCTUS*. Its venom is indeed poisonous, and a gentleman at Swatow was nearly dying from the effects of the bite of one that had concealed itself in his room. It haunts sewers and chinks in the jetties and such places, where it subsists on Rats. It is not by any means common, but in very high tides the overflowing water often drives these animals from their holes and lurking-places; but they are difficult to procure as the natives are paid to attack them. It is called here the *Pivà-ke-ka* and *How-swanchwa* ('umbrella snake'). I should say, both from the name 'Umbrella Snake' and from the habits indicated, that a *Cobra* (*NAIA*) was intended; and, so far as I am aware, the nearly affined *BUNGARUS FASCIATUS* subsists entirely on other Snakes, of which it is a great devourer; hence it is styled *Ráj-sámp* by the natives of Bengal, as realizing their idea of the attributes and prowess of a ruler!

* A species previously in the museum, presented by Major W. S. Sherwill and considered heretofore as *CHL. HOLOSERICEA*, proves to be *CHL. DAMARENSIS*, Ogilby, *P. Z. S.* 1838, p. 5.

*GEORHYCHUS CAPENSIS, (Pallas).

G. CÆCUTIENS, (Licht.)

*LEPUS SAXATILIS, F. Cuv.

*L. CAPENSIS, L.

HYRAX CAPENSIS, Pallas.

OREOTRAGUS SALTATRIX, (Bodd.). 'Klip-springer.'

*CALOTRAGUS MELANOTIS, (Thunb.) 'Grys-bok.'

*C. TRAGULUS, (Forst.) 'Stein-bok.'

*ELEOTRAGUS CAPREOLUS, (Thunb.) 'Rey-bok.'

*CEPHALOPHUS GRIMMIA, (L.) apud Gray (*mergens*, Blainville).

'Duiker-bok.'

*C. MONTICOLUS, (Thunb.) 'Blau-bok.'

ORYCTEROPUS CAPENSIS, Geoffroy. 'Aard-vark.'

AVES.

*SERPENTARIUS SECRETARIUS, (Scop.)

TINNUNCULUS RUPICOLUS, (Daud.) 2.

*BUTEO JACKAL, (Daud.) 2.

BUBO (?) MACULOSUS, (Viellot). Identical in species with the Somâli specimen correctly referred to *Bubo (?) africanus*, (Tem.), in *J. A. S.* XXIV, 298, though very differently coloured. Mr. G. R. Gray notes this species both from S. and W. Africa.

STRIX FLAMMEA, L.

LÆMODON NIGER, (Tem.)

TURACUS PERSA, (L.)

*CORVUS CAPENSIS, (Licht.)

PYROMELANA CAPENSIS, (L.) Male in winter dress.

HYPHANTORNIS AURIFRONS, (Tem.)

H. ——— ? With yellow crown and under-parts, black forehead, cheeks, chin and throat; upper-parts greenish-yellow, with dusky striæ; wing-edgings whitish, forming two cross-bands. Wing $3\frac{1}{4}$ in.*

*SERINUS CANICOLLIS, (Sw.), 2. 'Cape Canary.'

*ALAUDA MAGNIROSTRIS, (Stephens).

*AGRODROMA SORDIDA (? Rüppell). 2. Bill shorter and hind-

* Perhaps *H. MELANOTIS*, (Lafresnaye), *Mag. de Zool.* 1839, pl. 7 (which I have not for reference); but not *melanotis*, (Sw.), which = *PERSONATA*, (Viellot); nor *melanotis*, Guérin, *hodié* GUERINI, G. R. Gray.

claw longer than in Rüppell's figure of his *Anthus sordidus*, the latter also rather longer than in specimens from Abyssinia and from the Punjab Salt Range (*vide J. A. S. XXIV*, 258). The latter are also a shade more rufescent, have less distinct pale supercilia, and the penultimate tail-feather has a well defined pale mark at tip, which is not the case with the Cape specimens.

LANIUS COLLARIS, L. 2.

TELOPHONUS BACBAKIRI, (Shaw).

MERULA OLIVACEA, (L.)

COLUMBA ARQUATRIX, (L.) 2.

ÆNA CAPENSIS, (L.)

*PTEROCLES NAMAQUA, (Gm.) 2.

FRANCOLINUS (SCHLOPTERA) AFER, (Latham.)

STRUTHIO CAMELUS, L. Chick. Also imperfect skin of a superb wild-shot male, with head and neck, wings, and tail; the value of which at Cape-town is £5.

*CHORLOTIS CRISTATA, (Sc.): *Otis kori*, Burchell. Head of a specimen weighing 25 lbs. This is the largest of the Bustards, and is immediately congeneric with the great Bustards of India, Arabia, and Australia respectively. *Pauw* (or 'Peacock') of the Dutch colonists.

*CEDICNEMUS CAPENSIS, Licht.

STEPHANIBIS CORONATA, (L.).

*HOPLOPTERUS SPECIOSUS, (Wagler).

*CHARADRIUS MARGINATUS (?), Vieillot.

*RHYNCHEA CAPENSIS, (L.). By no means satisfactorily distinguishable from RH. BENGALENSIS.

FULICA CRISTATA, Gm.

*PORZANA NIGRA, (Gmelin).

*LARUS (GABIANUS, Bonap.) PACIFICUS, Lath. Adult. Rather smaller than the Australian species figured by Gould under this name, and without (?) the black bar on the tail. Tail mutilated. The late Prince of Canino referred Gould's species to J. GEORGI, King.

PHAËTON ÆTHEREUS, L.

*PHALACROCORAX CAPENSIS, (Sparman).

*HYPOLEUCUS MELANOGENIS, nobis, n. s. Very like H. VARIUS, (Gm., *Ph. hypoleucos*, Gould), of Australia, but distinguished by its

black cheeks and crest-feathers $1\frac{3}{4}$ in. long. Wing $10\frac{1}{2}$ in. Tail 5 in. Bill to forehead $2\frac{1}{8}$ in. Foot 4 in. From the 'Crozettes.'

CHENALLOPEX ÆGYPTIACA, (Gm.)

ANAS FLAVIROSTRIS, A. Smith (*A. Ruppelli*, nobis).

QUERQUERDULA ERYTHORHYNCHA, (Gm.)

PODICEPS CRISTATUS, L.

APTENODYTES PENNANTII, G. R. Gray.

*CHRYSOCOMA CATARRACTES, (Gm.) Feet wanting.

3. From Capt. Hodge, commanding the guard-ship 'Sesostris,' at Port Blair.

Two additional collections of sundries from that locality. The list of Andamánese mammalia is now extended to five species; *viz.*

PARADOXURUS MUSANGA (? Marsden), *v. typus* (?), F. Cuvier. Skull and other bones of a very aged individual, having naturally lost all of its true molars and most of its præ-molars, and the sockets of most of those of the lower jaw being completely closed up by deposition of bone; a single root only remains of three of the upper præ-molars respectively, and three præ-molars remaining in the lower jaw are worn away nearly to their bifurcation. The bones of the skull and face had long been completely united. The incisors, also, had been naturally dropped, save the outermost above, which is almost worn to the root; and the canines are excessively abraded, but what remains of them is remarkable for extraordinary size, considerably exceeding those of the common *P. MUSANGA* of Bengal, &c. This disposes me to hesitate in identifying the species positively, though in other respects the size and form of the skull accord satisfactorily with *P. MUSANGA*. Dr. Gray, in his British Museum catalogue, and the late Dr. Horsfield, in his catalogue of the specimens of mammalia in the India-house museum, regard the Malayan *P. MUSANGA* and the Indian *P. typus*, F. Cuv., as distinct species; but in Lower Bengal this animal varies much, some individuals being without markings and others being marked very strongly and undistinguishably from the Malayan specimens in our collection. It inhabits the whole eastern coast of the Bay of Bengal and Malacca Straits; and as it is quite impossible to distinguish many Bengal specimens from ordi-

nary Malacca specimens, I have no hesitation in following Dr. Cantor in regarding them as one and the same species.

The Andamán animal, with its extraordinarily large canines, may prove to be different; but it is likely that we shall soon receive a skin of it, that would help to decide the question. It is the species which has been lately noticed in various Indian Journals as "a sort of Mongoose" and "a kind of wild Cat;" and it is the only one as yet discovered in the Andamán islands appertaining to the Linnæan order *Feræ*.

MUS (LEGGADA ?) *ANDAMANENSIS*, nobis, *n. s.* The indigenous Rat of the Andamás,—a gigantic representative of the group *LEGGADA*, Gray, founded on the *MUS PLATYTHRIX*, Bennett, and *M. LEPIDUS*, Elliot, and to which my *M. SPINULOSUS* (*J. A. S. XXIII, 73±*), obtained both in the Pánjáb and in S. Malabar, is likewise referable. Size about half that of full-grown *MUS DECUMANUS*, with tail fully as long as in that species; the colour of the upper-parts a shade or two darker, and of the lower-parts pure white. Form more slender, and the limbs proportionally less robust, than in *M. DECUMANUS*. Fur much coarser and conspicuously spinous, with a few long black fine hairs intermixed; passing the hand along the fur in a backward direction, a very audible crackling sound is produced. The flat spines are similar in character to those of my Prickly Dormouse from Malabar (*PLATACANTHOMYS LASIURUS, J. A. S. XXVIII, 289*), but are very much weaker; and the fur of the under-parts is soft. In fact this species is a magnified representative of *M. SPINULOSUS*, but with the rodent tusks proportionally much more robust; the two holding the relationship of Rat and Mouse towards each other. Length 8 or 9 in., and tail equal to the head and body; hind-foot with claws $1\frac{1}{2}$ in.: ear-conch (posteriorly) $\frac{3}{4}$ in. Length of dorsal spinous fur $\frac{5}{8}$ in.; the spines being whitish on their basal half, and there is a soft dark ash felt below the surface.

MUS MANEI, Gray. Taken from the stomach of a venomous Snake, from Port Blair; but too far softened by digestion to permit of the species being determined with absolute accuracy. (A good specimen has since been received entire in spirit.)

SUS ANDAMANENSIS, nobis (*J. A. S. XXVII, 267, XXVIII, 271*).

A nearly perfect skeleton of an adult boar ; the tail being, however, unfortunately again deficient.*

HALICORE INDICUS, Owen, *vide* (J. A. S. XXVIII, 271.

* Since mounted ; and the height at the shoulder is 19 or 20 in.—Can this be the species noticed in Bingley's *History of Quadrupeds*, as an inhabitant of Sumátra, and which certainly cannot be the *SUS VITTATUS*, S. Müller, which is the only species of wild Swine at present recognised as inhabiting that island, being also found in Java and Banka? For an enumeration of the wild Swine of the archipelago, *vide* J. A. S. XXVII, 268.

"A species of wild Hog in Sumátra, of a grey colour, and smaller than the English Swine, frequents the impenetrable bushes and marshes of the sea-coast ; they associate in herds, and live on crabs and roots. At certain periods of the year they swim in herds, consisting of sometimes 1000, from one side of the river Siak to the other at its mouth, which is three or four miles broad, and again return at stated times. This kind of passage also takes place in the small islands, by their swimming from one to the other. On these occasions they are hunted by the Salettians, a Malay tribe, residing on the coasts of the kingdom of Siak.

"These men are said to smell the Swine long before they see them, and when they do this they immediately prepare their boats. They then send out their Dogs, which are trained for this kind of hunting, along the strand, where, by their barking, they prevent the Swine from coming ashore and concealing themselves among the bushes. During the passage the boars precede, and are followed by the females and young, all in regular rows, each resting its snout on the rump of the preceding one. Swimming thus in close rows, they present a singular appearance.

"The Salettians, men and women, meet them in their small flat boats. The former row and throw large mats, made of the long leaves of the *Pandanus odoratissima*, interwoven through each other, before the leader of each row of Swine, which still continue to swim with great strength, but soon pushing their feet into the mats, they get so entangled as to be either disabled altogether from moving, or only to move very slowly. The rest are, however, neither alarmed nor disconcerted, but keep close to each other, none of them leaving the position in which they were placed. The men then row towards them in a lateral direction ; and the women, armed with long javelins, stab as many of the Swine as they can reach. For those beyond their reach they are furnished with smaller spears, about six feet in length, which they dart to the distance of thirty or forty feet with a sure aim. As it is impossible for them to throw mats before all the rows, the rest of these animals swim off in regular order, to the places for which they had set out, and for this time escape the danger ; and the dead Swine, floating around in great numbers, are then pulled up and put into larger boats, which follow for the purpose.

"Some of these Swine the Salettians sell to the Chinese traders who visit the island ; and of the rest they preserve in general only the skins and fat. The latter, after being melted, they sell to the Maki Chinese ; and it is used by the common people instead of butter, as long as it is not rancid, and also used for burning in lamps, instead of cocoa-nut oil."

I have somewhere read a similar account of the habits of *S. PAPUENSIS*.

Of the large Indian Hogs, I am now satisfied of the existence of three well marked races, or species, which are quite as distinct from each other as are the various species of the archipelago, figured and described by Dr. S. Müller and others.

One is the proper Bengal boar, found also in Kuták, which is by far the most powerful, as shewn by the entire skeleton, and which has the longest and most formidable tusks of any, the lower commonly protruding from the socket from 3 to 3½ in. over the curve. It is specially distinguished by the breadth of its

Of birds, fifteen additional species have been added to the sixteen mentioned in p. 272 *et seq.* and p. 412; but as yet we have hardly made a beginning with the ornithology of the Andamáns.

Of new species, the most notable is a superb large black Woodpecker of the division *MULLERIPICUS* of the late Prince of Canino (*Hemilophus*, Swainson).

M. HODGEEI, nobis, *n. s.* Wholly black in both sexes, except the crown, occiput, and moustaches of the male, which are vivid crimson as usual, and the occiput only of the female. It is smaller than *M. HODGSONII*, (Jerdon), of Malabar, or *M. JAVENSIS*, (Horsfield), of the Malayan peninsula and more western islands; the closed wing measuring but $7\frac{1}{4}$ in., the middle tail-feathers 6 in., and the beak to forehead $1\frac{3}{4}$ in.

ANTHUS RUFOSUPERCILIARIS, nobis, *n. s.*; *A. pratensis* apud nos, *J. A. S. XXIV*, 473, from Pegu. Like *A. PRATENSIS*, but with the

occipital plane, which is 2 to $2\frac{1}{4}$ in. where narrowest, and by the shortness of the tail, which numbers only 13 or 14 vertebræ. This may be distinguished as *S. BENGALENSIS*, nobis.

Another is the ordinary *S. INDICUS*, Gray (*S. cristatus*, Wagler), as noticed by Dr. Gray from the Madras Presidency; it being found over the whole of India, the highlands of Ceylon, and also in Arakan, but I cannot pronounce on its diffusion further. It is likewise an inhabitant of Lower Bengal, as we have a stuffed specimen of a particularly fine boar of this race that was speared near Calcutta. The domestic Pigs of India appear to be mainly (if not wholly) derived from it. The entire skeleton is conspicuously less robust than in the preceding, the tusks less developed, the lower rarely projecting $2\frac{3}{4}$ in. from the socket; the occipital plane where narrowest rarely exceeds $1\frac{1}{2}$ in., and the tail is conspicuously much longer, consisting of about 20 vertebræ. We have the skull of a sow of this race, which has the fully developed tusks of the boar,—of course a rare anomaly.

The third is the species with very elongated skull and narrow occipital plane, where narrowest 1 in. only, inhabiting the lowlands of Ceylon, which I denominated *S. ZEYLANENSIS* in *J. A. S. XX*, 173, and which may also be *S. AFFINIS*, Gray, from the Nilgiris, mentioned in the *List of the Osteological Specimens in the Collection of the British Museum*, where *S. INDICUS* is cited from the Nepal hills and *tarai*, and also Malabar.

I have no skull of an European wild Boar for comparison, but judging from Blainville's figures, our *S. INDICUS* approximates it more nearly than *S. BENGALENSIS* or *S. ZEYLANENSIS*.

In the new Russian territory of the Amûr, it appears,—“Of Cattle or Horses few were seen, but many *Swine of a peculiar kind*, and Fowls.” *Journ. Roy. Geogr. Soc. XXVIII* (1858), p. 381. Wild Hogs are found at all elevations in the Himalaya, and generally over Asia. Those of Indo-China, China, and the Malayan peninsula require to be carefully examined. As many as three species are reported to inhabit the plain of Mesopotamia. Wood, in his *Journey to the Source of the Oxus*, remarks that—“Descending the eastern side of Junas Darah, our march was rendered less fatiguing by following Hog-tracks in the snow. So numerous are these animals, that they had trodden down the snow as if a large flock of Sheep had been driven over it.”

supercilium and moustachial streak of a ruddy rust-colour. Closed wing $3\frac{1}{4}$ in., tail $2\frac{1}{4}$ in., and bill and hind-claw as in *A. PRATENSIS*, of which it may be regarded as a local variety or sub-species.

OREOCINCLA INFRAMARGINATA, nobis, *n. s.* Uniform dark olive above, with conspicuous pale rufescent-whitish supercilia, and light rufescent spots tipping the wing-coverts; beneath pale, inclining to rufo-fulvous on the breast and front of the neck, pure white at centre of belly; the lower tail-coverts dark olive largely tipped with white; each feather of the lower-parts, except on middle of throat and of belly, somewhat narrowly tipped with the colour of the back; outer caudal feathers successively more largely tipped with dull white, though even on the outermost these white tips are but slight. The usual *OREOCINCLA* markings on the inner surface of the wing. Bill dusky, and legs pale corneous. Closed wing $4\frac{5}{8}$ in.; tail $3\frac{1}{2}$ in., its outermost feathers $\frac{3}{8}$ in. shorter than the middle pair; bill to gape $1\frac{3}{16}$ in.; tarse $1\frac{1}{16}$ in. Short first primary $\frac{3}{4}$ in. long, the second equalling the fourth and a little shorter than the third. This bird approximates the female of *MERULA WARDII*, Jerdon.

Three other species of true Thrushes inhabiting the Andamans are—*TURDUS RUFULUS*, Drapiez (*modestus*, Eyton), *GEOCICHLA INNOTATA*, nobis, and *PETROCOSYPHUS PANDOO*. The following have likewise to be added,—*MEROPS PHILIPPINUS*, L., *LANIUS PLENICURUS*, L., *ARUNDINAX OLIVACEUS*, nobis, *PERICROCOTUS SPECIOSUS*, (Lath.), *HIRUNDO RUSTICA*, L. (juv.), *OSMOTRERON CHLOROPTERA*, nobis (heretofore only known from the Nicobars), *CHALCOPHAPS INDICUS* (identical with the Indian race, but different from a pair received from the Nicobars, which seem to be *CH. MARLE*, C. L. Bonap.); *THALASSEUS AFFINIS* (*Sturna affinis*, Raffles, *St. bengalensis*, Lesson, &c.), and *ONYNOCHOPRION ANASTHÆTUS*, (Scopoli).

The *EDOLIUS* of the Andamans appears to be constantly a little larger than Malayan peninsula specimens, with more tendency to shew a rudimental frontal crest; this, however, is less developed than in Burmese and Tenasserim specimens.

Of *TEMENUCHUS ERYTHROPYGIUS*, nobis, I have seen no Andaman example yet with distinctly rufescent upper tail-coverts.

The black-naped Oriole I think will prove to be *ORIOULUS CORONATUS*, Sw. (*hippocrepis*, Wagler), being quite distinct from that of the neighbouring Nicobar islands, *O. MACROURUS*, nobis.

The *Dháyal* (*COPSYCHUS SAULARIS*) is common, and differs in no respect from that of Bengal and of India generally, as distinguished from the larger race of W. Malasia; but the *Sháma* (*KITTACINCLA ALBIVENTRIS*, nobis,) has much the appearance of being a fertile hybrid between *K. MACROURUS* and *COPSYCHUS SAULARIS*! In several specimens of it, however, I can detect no variation whatever, nor transitional examples variously intermediate; and the female more nearly resembles the male than in *K. MACROURUS*. I have a fine healthy pair of the Andamán *Sháma* alive, and the male is a fair songster, with some very deep notes alternating with some shrill and very *Dháyal*-like notes; and, so far as I have heard as yet, the song is more broken or delivered in snatches, like that of the *Dháyal*, or less continuous than in the common *Sháma*. The bird is also rather larger, with the bill somewhat larger in proportion; but I doubt if any practised ornithologist would hesitate about classing it in *KITTACINCLA* rather than in *COPSYCHUS*. There is a third *Sháma*, with a white head (as I am informed), in Borneo (*K. STRICKLANDI*, Mottley and Dillwyn); and a fourth species exists in *K. LUZONIENSIS*, (*Kit-tlitz*), of the Philippines. The female of the Andamán *Sháma* is of a duller colour than the male, especially on the wings and breast, which latter is glossless black; tail also shorter; and the legs in both sexes are caraneous.

Of reptiles, the marine *Testudinata* of the Bay occur of course; but we have only received a very large skull of the common 'Loggerhead' Turtle (*CAOUANA OLIVACEA*), a species which is common towards the mouths of the Gangetic streams, and is often eaten here for the true edible Turtle (restricted *CHELONIA*); and here I may remark that I once received a young living 'Hawk's bill' or tortoise-shell producing Turtle (*CARETTA IMBRICATA*) from the interior of the Sundarbáns, which I kept alive for many months in fresh water. The 'Loggerhead' skull from the Andamáns measures $8\frac{1}{2}$ in. long, inclusive of occipital projection, and $4\frac{3}{4}$ in. in extreme breadth.

Of the *Loricata* or Crocodiles, it does not appear that any have yet been observed about the islands.

Of *Varanidae*, a *HYDROSAURUS* quite similar to one before received from the Nicobar group. I can perceive no difference from the common *H. SALVATOR*, (*Laurenti*) *v. Varanus bivittatus*, (*Kuhl*), in

structure; but it wants the pale neck-streaks and body and caudal rings of ordinary *H. SALVATOR* of Bengal, Ceylon, &c., while the upper-parts are freckled throughout (save on the head) with white scales and tips of scales interspersed among the black scales, more copiously on the tail, and tending to form close and narrow transverse lines on the sides. I have never seen this marking in specimens of true *H. SALVATOR* obtained elsewhere; and it may be remarked that this species commonly attains the dimensions assigned by Dr. Gray to his Australian *H. GIGANTEUS*, viz. 78 in. We have examples of that length both from Lower Bengal and from Ceylon; and the occurrence of this reptile in Ceylon is the more remarkable, as it does not appear to have been hitherto observed in the peninsula of India.

No *Scincidæ* have yet been received.

Of *Geckotidæ*, two species, both of which appear to be undescribed.

PHELSUMA ANDAMANENSE, nobis, *n. s.* Differs from *PH. CEPEDIANUM*, (Peron), of the Mauritius, by having a rather (yet distinctly) less obtuse muzzle, which is conspicuously longer from the eye to the nostril; the auditory orifice is also much smaller, and round instead of oval; and the pattern of the markings of the dorsal surface is different. In *PH. CEPEDIANUM*, there are two sub-lateral pale lines, with intermediate pale spots more or less irregularly disposed: in *PH. ANDAMANENSE*, there are no sub-lateral lines, but a mesial one commencing on the nape and continued half-way along the back, the rest of the upper-parts being sprinkled with numerous spots which appear to have been bright red or orange: the *palettes* at the tips of the toes are pale in the Mauritius species, dark in the other; and I can distinguish no femoral or præ-anal pores in *PH. ANDAMANENSE*, but a fold of skin in place of them along the thighs: in *PH. CEPEDIANUM* the femoral pores are continued to meet the opposite series, at an angle which completes a triangle with the transverse vent. On the chin of our present species, there is a series of five plates of equal size and larger than the rest, anteriorly adjoining the labial plates. Length of head and body 2 in.; the tail, which had been renewed, $1\frac{5}{8}$ in.

There can be no hesitation in referring this Gecko to *PHELSUMA*, Gray, though the former has hitherto been known to exist only in Madagascar and the Mascarine islands. The other appears to be a new form altogether:—

PUELLULA, nobis, *n. s.* Aspect of a HEMIDACTYLUS, but with no dilated palette on the toes, which are distinctly ribbed excepting on the unguinal phalanges. No femoral or præ-anal pores, but a large raised glandular space at the base of the thighs underneath, divided by a slight median groove on the anterior half, which deepens to form a large glandulous cavity on the posterior half, the labia of which are covered with scales larger than the rest; this structure being much less developed in the female sex. A very remarkable feature, for a Gecko, consists in a distinct rudimentary dorsal crest; and there is also a lateral fold of skin from the fore to the hind limbs, dividing the scales of the back from those of the belly, and another such fold margining the thighs anteriorly. The pupils of the eyes close vertically.

P. RUBIDA, nobis, *n. s.* Back and limbs above covered with minute tubercles, and also thickly studded with tubercles of a larger and uniform size, the former requiring a lens for their easy detection; on the tail are few only of the larger kind, and those disposed in transverse series on its basal half: scales of the head minute and uniform, those of the throat very minute, and those of the lower-parts small and uniform, save on the borders of the glandulous fissure, where they are a little larger; on the lower surface of the tail the scales are also larger. Bordering the lower labial shields in front are four large plates, the medial of which exceed the outer in size. Colour of the fresh animal very ruddy, a hue which soon disappears by exposure to the light in spirit. In the stronger-marked specimens a dark line passes backward from the eye, and meets its opposite upon the occiput; this V-like marking being succeeded by one or two others like it, and there are irregular narrow transverse bands throughout, composed of black tubercles interspersed among the rest, and a series of broad dark annuli on the tail. Length about 5 in., of which the tail is half. A common species at Port Blair. The young, 2 in. long, show some white specks on the neck, and the labial plates are alternately dark brown and white. This is also seen in the adults, but less conspicuously.

Of *Agamidæ*, a species of TIARA, D. and B.

TIARA SUBCRISTATA, nobis, *n. s.* : DILOPHYRUS apud nos, *J. A. S.* XXVIII, 275. Occiput and nape with a low crest, and merely a slight

serrated ridge along the back : gular pouch in the males only, covered with small keel-less scales of equal size ; the other scales of the lower-parts conspicuously carinated ; those of the upper-parts minute, arranged in irregular transverse series (as best seen by aid of a lens), their keels presenting a tuberculated appearance except towards the ridge of the back : a row of about ten large tubercles on each side commencing from the occiput. Colours various, but fugitive in spirit ; the young being much speckled and reticulated with greyish-black, and the full-grown mostly plain, with dark bands on the tail more or less distinct. Length 12 in., of which tail $8\frac{1}{2}$ in. Common at Port Blair.

Of Snakes, we have received five harmless and two venomous species. The former are—

LYCODON AULICUS, (L.). Uniformly coloured variety.

DENDROPHIS PICTUS, (Gm.). Some beautiful varieties.

DIPSAS HEXAGONOTUS, nobis, *J. A. S.* XXIV, 360. Several young specimens. The adult remains to be described.

HERPETODRYAS PRASINUS ; *Coluber prasinus*, nobis, *J. A. S.* XXIII, 291. Large. Also inhabits the base of the Himaláya, Asám, Tenasserim, &c.

CERBERUS BÖEFORMIS, (Schneider).

The latter—

HAMADRYAS VITTATUS, (Elliot).

TRIMESURUS VIRIDIS, (Lacepède), var. *Cantori*, nobis, *J. A. S.* XV, 377. A TRIMESURUS which appears to be exceedingly common both in the Andamán and Nicobar islands is altogether similar in structure to the common TR. VIRIDIS, but varies much in colouring, being grass-green, brown, or blackish, either uniformly coloured or variously mottled ; but only in one mottled specimen from the Nicobars do I perceive the lateral line on the scales bordering the abdominal plates, which is commonly seen in continental examples of TR. VIRIDIS. In a green example from Port Blair, 4 ft. in length (!), there is no trace of this ; but I may here call attention to the fact that there are certainly two nearly affined species confounded under TR. VIRIDIS. One common in Lower Bengal has the scales more strongly carinated, very conspicuously so on the sides of the head, while those of the crown are roughly granular (a modification of the more developed keels), instead of being flat or almost flat as in the

other. In this race there is usually no lateral streak, and at most I have only seen it obscurely indicated; but there is a fine porphyraceous lustre on the grass-green scales of the head and body, which does not occur in the true VIRIDIS. If considered worthy of a name, it may therefore bear the appellation PORPHYRACEUS.

Of *Batrachia*, I cannot learn that any species has yet been observed at Port Blair.

The collection of fishes is so large and important that I have made it the subject of a special report. As many as 106 osseous species have already been received from Port Blair;* the genera SALARIAS, GLYPHISODON, and MURÆNA, being extraordinarily developed. Of MURÆNA alone, I make out sixteen species already received! A considerable proportion of the species appear to be quite new, being described neither in the *Histoire des Poissons*, in the more recent elaborate essays by Dr. Bleeker, nor by Sir J. Richardson and other authorities. No fresh-water species has been received; but a few mud-skippers, as the PERIOPHTHALMUS PAPILIO, (Bloch),—a fine series, and the young of which species is *P. fuscatus*, nobis, *J. A. S.* XXVII, 271.†

A considerable number of *Crustacea*, *Mollusca*, and *Radiata* have likewise been received from Port Blair; but though I have mostly determined the genera and species, I have not at present the leisure to draw up a report on them.

4. The Rev. H. Baker, Junr., of Mundakym, Alipi, S. Malabar.

A dozen skins of the Spiny Dormouse (PLATACANTHOMYS LASIURUS, nobis, *J. A. S.* XXVIII, 289), five skins of MUS (LEGGADA) SPINULOSUS, nobis (*J. A. S.* XXIII, 734), identical with Punjáb specimens,—one of a small Mouse affined to, if not identical with, M. ALBIDIVENTRIS, nobis, of L. Bengal, but of which it is desirable to

* Several more have since come to hand.

† *Salarias olivaceus*, XXVII, p. 271, is identical with *S. LINEATUS*, C. V.; *Gobius breviceps* is the young of *G. ALBOPUNCTATUS*, C. V.; *Apogon 5-vittatus*, p. 272, is the young of GLYPHISODON RAHTI, C. V.; *Serranus lanceolatus*, C. V., is the young of *S. COIODES*, (B. H.), v. *S. suillus*, C. V.; *Gerres poeteæ*, C. V. = *Chanda setifer*, (B. H.), ergo *G. SETIFER*, though the name better applies to *G. FILAMENTOSA*, C. V., which I have also obtained; *Polotus nitidus* = MESOPRION GUTGUTEA, (B. H.) C. V., though the generic name POLOTUS may stand; and PANCHAX CYANOPTHALMA, p. 288, is the unnamed species figured in *As. Res.* XIX, pl. , f. , but in the living fish the azure eye is much less noticeable. I have since long kept this species in an *aquarium*, and it is less of a surface fish in its habits than the *P. BUCHANANI*, C. V.

have more examples for comparison,—and a young *Gho-sámp* (MONITOR DRACÆNA).

5. Capt. W. H. Lowther, in command of the 1st Asám Local Battalion. Skin of a Binturong (ARCTICTIS BINTURONG), killed on the Singpho frontier of Upper Asám, where termed by the natives *Young*. Important with reference to the geographical distribution of this remarkable animal.

6. H. M. the ex-King of Oudh. A Snake (DENDROPHIS ORNATA); and since a dead Monkey (PRESBYTIS CEPHALOPTERUS).

7. Prince Mahomed Julaludin, of Baligunge. A Snake, the *Ráj-sámp* of the Bengalis (BUNGARUS FASCIATUS).

8. Babu Rajendra Mallika. Various dead animals, including a superb male Golden Pheasant in perfect plumage, which has been set up in a manner worthy of its beauty. I take this opportunity to remark, that among the objects of particular interest now living in the aviaries of our contributor, are two very distinct species of Cassowary. The Bábu has also magnificent adult hybrids, of both sexes, raised from the male PAVO MUTICUS and female P. CRISTATUS, the two species being beautifully blended in colouring, form of crest, &c.; and, still more remarkable, he has a hybrid now nearly full-grown, bred between a Curassow and Guan! Numerous other living specimens of great interest adorn his collections.

One of the Cassowaries being clearly of a new and fourth species of its genus, of which quite recently only one species was known, I shall here indicate it as

CASUARIUS UNAPPENDICULATUS, nobis, *n. s.*, from its peculiarity of having but a single pendulous caruncle in front of the neck. Specimen apparently more than half grown, and much paler in the colouring of its plumage than specimens of the same age of the common C. GALEATUS, two fine examples of which are associated with it in the same paddock. In lieu of the two bright red caruncles of the latter, the new species has but a single small oblong or elongate oval *yellow* caruncle, and the bright colours of the naked portion of the neck are differently disposed. The cheeks and throat are smalt-blue, below which is a large wrinkled yellow space in front of the neck, terminating in front in the oval button-like caruncle, and its lower portion being continued round behind, while on the sides of the

neck, the yellow naked portion is continued down to its base, the bordering feathers more or less covering and concealing this lateral stripe of unfeathered skin: on the hind-part of the neck the bare yellow skin is not tumous and corrugated as in the common Cassowary, where also this part is bright red. The casque is about equally developed at this age in the two species. The legs of the new species are smaller, from which I doubt if it attains to quite so large a size as the other.

The known species of *CASUARIUS* now range as follow:

1. *C. GALEATUS*, Vieillot: *C. emeu*, Latham; *Struthio casuarinus*, L. Hab. N. Guinea. Eastern Moluccas.
2. *C. BENNETTII*, Gould (figured in *P. Z. S.* 1851, pl. 7). The *Mooruk*. Hab. N. Ireland.
3. *C. AUSTRALIS*, Gould. Hab. York peninsula, N. E. Australia.
4. *C. UNAPPENDICULATUS*, nobis. Hab. ———?*
9. Alex. Thomas, Esq., in medical charge of Khyook Phoo, Ram-ri, Arakan. A fine specimen in spirit of *PLATYDACTYLUS GECKO*, (L.)
10. Mrs. Turnbull. A fine stuffed specimen of *PETAURUS SCIURIUS*, (Shaw).
11. H. H. Atkinson, Esq. A few bird-skins procured at Singapore.
12. The Rev. J. Cave Browne, late of Subathoo. A small collection chiefly reptiles in spirit, with a few insects, procured in that neighbourhood.

* In the *Conspectus Ineptorum et Struthionum* of the late Prince of Canino, published in the *Comptes Rendus*, tom. XLIII (1856), 840-1, only one species of *CASUARIUS* is recognised (!); but a second *DROMAIUS* or *EMEU*, as DR. ATEB, Vieillot, from "l'isle Decrès," which would appear to be already extinct; while a third species, from the interior of Australia, with transversely barred plumage, has recently been brought to the notice of the Zoological Society. H. H. also indicated a second Ostrich doubtfully, as *STRUTHIO EPOASTICUS*, C. L. Bonap., which is doubtless the northern race with smooth and poreless egg-shell noticed in *J. A. S.* XXVIII, 282. The two living species of Nandou, or *RHEA*,—the three-toed American Ostrich,—are of course recognised; and at least three, if not four (!), living species of *APTERYX*; with no fewer than 38 species, more or less satisfactorily made out, of *Inepti* and *Struthiones* of various zoological epochs; but the knowledge of the greater portion of these is vague in the extreme; and the Prince's bold attempt at classification of them will simply, as such, meet with approval. At the head of the *Inepti* he places the huge *EPIORNIS* of Madagascar, a fragment of the egg-shell of which I have recently procured for the Society's museum, presented to by M. Zill. This giant bird appears to have been first indicated (to Europeans) by the missionary Ellis, though not scientifically brought to notice. The natives of Madagascar imagine that the eggs of the *EPIORNIS* are those of some huge saurian.

Of Lizards, the common *CALOTES VERSICOLOR*, a small and young *RIOPA*, and a beautiful new Gecko congeneric, with that described from the mountainous interior of the Tenasserim provinces, in *J. A. S.* XXVIII, 279.

NAULTINUS (?) *FASCIOLATUS*, nobis, *n. s.* Tail proportionally longer and more slender than in *N.* (?) *VARIEGATUS*, nobis, *l. c.*; but the larger of two specimens evidently not full-grown. Head very similar to that of the other; but the dark band behind the eye bending abruptly to meet its opposite on the occiput; this is followed by 23 other blackish cross-bands, continued to the end of the tail, those of the body being edged and set off posteriorly with whitish; a series of broad sub-haxagonal plates in both species beginning near the vent, and continued to the end of the tail underneath. Abdominal scales proportionally smaller than in the other, and no group of conspicuously larger scales anterior to the vent. The sub-caudal scales are also much smaller than in the other. Larger specimen $4\frac{7}{8}$ in., of which tail $2\frac{3}{4}$ in. Both species are remarkable for the beauty of their markings.

Of Snakes, *CORONELLA RUSSELLII*, (Daud.), *COLUBER MUCOSUS*, (L.), *DIPSAS TRIGONATA*, Schlegel, *VIPERA RUSSELLII*, (Shaw), and two species which appear to be new:—

DIPSAS MULTIFASCIATA, nobis, *n. s.* Form typical; the muzzle shorter and rounder than in *D. TRIGONATA*: the same whitish spots along the ridge of the back as in that species, but somewhat indistinctly defined; and narrow black transverse bands on the sides, numbering as many as 72 from neck to vent, beyond which they are broken into spots: throat dull white; the abdominal surface densely speckled throughout with triangular black spots, which are more or less continued into lines. Length of specimen (evidently young) $14\frac{1}{2}$ in., of which tail 3 in.

For the other I must constitute a genus:—

PLATYCEPS, *n. g.* Like *COLUBER* (*CORYTHODON*, D. B.), but with exceedingly flat head, and tail only about a sixth of the total length.

PL. SEMIFASCIATUS, nobis, *n. s.* Colour olive-grey above, white below; the posterior two-fifths without markings, and the nuchal region marked with broad transverse black bands, having lateral black spots alternating on either side. These gradually become

narrower and are broken into alternate bands on the second fifth of the body, being still more broken into small spots on the third fifth, beyond which they gradually disappear anterior to the vent. Eyes of moderate size. Specimen evidently young. Length about $10\frac{1}{2}$ in., of which tail about 2 in., its extreme tip being lost in the specimen. *Scutæ* 187; *Scutellæ* — ?

P. S.—It appears that a species of Deer, which has been named *CERVUS PSEUDAXIS*, has recently been received in France from the mountainous regions of the north of China and Mantcheeria. From the geographical region it cannot be a true *Axine*, and the name would imply its being an *Axis*-like (or *spotted*) species,—just possibly identical with the Formosan Deer.

E. BLYTH.

