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MDCCCXXII.

XVII. *Descriptive Catalogue of a Zoological Collection, made on account of the Honourable East India Company, in the Island of Sumatra and its Vicinity, under the Direction of Sir Thomas Stamford Raffles, Lieutenant-Governor of Fort Marlborough; with additional Notices illustrative of the Natural History of those Countries. By Sir Thomas Stamford Raffles, Knt. F.R.S. Communicated by Sir Everard Home, Bart., F.R.S. and L.S.*

Read December 5, 1820.

THE interest excited by the researches carried on during my administration in Java, early induced me to extend similar inquiries to the more extensive island of Sumatra; and I esteemed myself fortunate in obtaining the assistance of Dr. Joseph Arnold, a gentleman already advantageously known to the scientific world. Unhappily he fell an early sacrifice to his zeal in the cause, and his loss cannot be more regretted in a public view, than it is lamented by those who were best able to appreciate his amiable disposition and private virtues. He lived, however, long enough to lay the foundation of an extensive plan of research. I was subsequently induced to engage the services of two French gentlemen, who appeared qualified to assist in the collection and preservation of the zoological specimens, and to furnish such anatomical details as might require observation in recent subjects, it being stipulated that on the payment of the monthly sum of 500 dollars, the whole of their collections and observations should be the exclusive property of the East India Company. On these terms I intrusted to them the charge of the collection,

collection, and used all my influence to bring into it whatever was interesting in zoology. A year had scarcely elapsed when circumstances rendered it necessary to discontinue this arrangement. They advanced pretensions diametrically opposed to the spirit and letter of their engagement, and altogether inconsistent with what I had a right to expect from them, or they from me. Thus situated, I had no alternative but to undertake an immediate description of the collection myself, or to allow the result of all my endeavours and exertions to be carried to a foreign country. I should observe, that the papers delivered to me as containing all their observations, were for the most part so speculative and deficient in the kind of information required, that I could make no use of them myself, nor give them to the world under the sanction of my authority. I have therefore returned them, and left these gentlemen at liberty to publish or amend them as they think proper. They are young men not deficient in zeal, and though misled for the moment by private and national views, will, I doubt not, profit by the means I have afforded them, and eventually contribute to our further knowledge of the zoology of these islands.

I have thought it necessary to say thus much respecting these gentlemen, in order to prevent the possibility of misrepresentation; and I need only add, that as my descriptions have been made without assistance from them, and may contain particulars not only unknown to them, but at variance with their ideas, they are of course not responsible for any part of them. The Catalogue now submitted has been drawn up by myself from actual examination of the subjects, combined with the result of extensive personal inquiries among the best informed natives of the country. It has no pretensions beyond accuracy and the simple statement of facts.

PART I. MAMMALIA.

SIMIA.

Of this genus nine or ten species are known to the natives of these islands, the greater part of which are in the collection. The first is the well known

SIMIA SATYRUS Linn.

ORANG UTAN of the Malays. اورڠ هوتن

Of this a living specimen from Borneo was sent to the Menagerie at Calcutta in 1819. Native information gives reason to believe that it also exists in Sumatra; it is there known by the name of Orang Pandak (Pygmy), and the accounts given of it agree exactly with the Orang Utan of Borneo. It is frequently confounded with the Orang Kubu and Orang Gugu described by Mr. Marsden, which, though often the subject of fable and exaggeration, appear to exist on the island as a distinct race of men, almost as hairy and wild as the real Orang Utan.

The observation of Linnæus, that the nail of the thumb is wanting on the hind-feet, is confirmed by the above specimen, and is probably correct in all the true Orang Utans.

SIMIA SYNDACTYLA.

SIAMANG of the Malays. سيامڠ

This new species of Gibbon is abundant in the forests near Bencoolen, where they are seen in large companies, making the woods echo with their loud and peculiar cry.

It is of a jet-black colour throughout; is upwards of three feet in height, and of a robust and muscular frame. It agrees with

the *Simia Lar* of Linnæus in being tailless, having naked callosities and arms reaching to the feet. It differs, however, essentially in having the index and middle toes, or rather fingers, of the hind feet united as far as the middle of the second phalanx; in having two loose and naked folds of skin on the throat, which I have observed to be occasionally inflated with air; and in being entirely black, with the exception of a few brown hairs on the chin, which appear to become grey with age. The hair is long and soft; the face is without hair and black, as are also the breasts of the female. The orbits of the eyes are circular and remarkably prominent. The canine teeth are long.

Besides the specimens in the collection, I have recently procured a living Siamang, which is very tame and tractable: in fact, he is never happy but when allowed to be in company with some one.

Samang or Siamang is the name given to certain tribes of aboriginal inhabitants of the Malay peninsula. See Preface to Marsden's *Grammar*, and *Asiatic Researches*, vol. xii.

There is said to be a white variety of the Siamang found at Tapus and Barus; and I have accounts of one of these having been lately seen at Palembang, but it is probably nothing more than an accidental variety.

SIMIA LAR Linn.

There is found on the Peninsula of Malacca a smaller Gibbon than the preceding, which is probably the true *Simia Lar*. It does not exceed two feet in height, and is black, with a white circle round the face. It is there called Ungka etam. ائك هيتم

I have now in my possession a living specimen of another Gibbon called here Ungka puti, ائك فوتي which appears nearly related to the Wouwou ر, of Java, or *Simia leucisca* Schr. In size it is considerably less than the Siamang, not exceeding two feet,

feet, and is altogether of a more delicate and slender frame. Its colour is a dirty-yellowish white, which becomes nearly brown on the under and inner parts, contrary to what takes place in most animals, which are lighter below. The face and hands are black ; the hair is softer and more woolly than that of the Siamang, and its cry is softer and less harsh.

Both these are of a more timid disposition, and have neither the strength nor boldness of the Siamang.

With regard to the Ungka puti, it is the general belief of the people of the country that it will die of vexation if it sees the preference given to another ; in corroboration of which I may add, that the one in my possession sickened in this situation, and did not recover until relieved from the cause of vexation by his rival the Siamang being removed to another apartment.

Another variety has been met with at Bencoolen, which only differs in being of a light-brown colour, with a still lighter circle round its black face.

In none of these are there any naked folds of skin on the throat, and all the toes are separate. These marks are fully sufficient to distinguish them from the Siamang, which I therefore propose to establish as a distinct species under that appellation, if the characteristic one of *S. syndactyla* be not thought preferable.

SIMIA CARPOLEGUS.

BRUH of the Malays. برق

This is a very common Baboon in the vicinity of Bencoolen, where the inhabitants frequently train it to ascend the trees for the purpose of gathering coco-nuts, a service in which it is very expert.

It is about two feet high when sitting : colour yellowish-brown mixed with black on the back, and pale or whitish in front.

The hair of the body is short and close. On the top of the head the hairs are black, and diverge horizontally; those of the eyebrows, which unite above the nose, are also black and are radiated upwards. There is scarcely any beard. The face is naked and flesh-coloured; the ears, hands and callosities are the same, and the extremity of the prepuce is vermilion. The muzzle is somewhat prominent, and the nostrils open anteriorly. The eyes are brown. Ears roundish, obtusely pointed behind. Cheeks pouched. Tail short and tapering, about six inches long, inserted very high, and curling downwards. The callosities on the nates are large. The thumb is a little longer in proportion to the fingers than in many other species. The last molar has five tubercles. In this species, as in many others of the genus, there is a sac under the os hyoides which communicates with the larynx.

The natives distinguish three varieties of Bruh: the Bruh setopong, Bruh selasi, and Bruh puti. The Bruh setopong is the largest, the colour on the back verging to olive, and light in front. It is the most docile and intelligent of the whole, and is much prized in consequence. When sent to gather coco-nuts, he selects the ripe ones with great judgment, and pulls no more than he is ordered. The other two are darker coloured, less intelligent, and more intractable.

SIMIA CRISTATA.

CHINGKAU of the Malays. جينكوت

Frequent in the forests near Bencoolen.

This species is about two feet long, with a tail nearly two and a half; when standing on all fours it is fourteen inches high. It is of a dark-grey colour, the hairs being in general black with white points. The face, fore-arms, hands, feet, back, and upper

Upper side of the tail are nearly black, the under part of the body paler. (The same colour would in a horse be called iron-grey, or grey with black points.) The disposition of the hairs on the head is peculiar; they are long, and diverge round the face, forming on the top a kind of crest. Beard scanty. Face and ears bare and nearly black. Orbits large. Nose rather elevated between them, but quite flat at the nostrils, which are situated at some distance above the upper lip, and open laterally. Head and face small. Ears large and rounded. Canines long. Neck short. Callosities large. Tail thin and tapering, without any tuft. Thumbs on the fore-hands remarkably short. It is altogether of a light and slender make. The young Chingkaus are of a reddish fawn-colour, forming a singular contrast with the dark-coloured adults.

A variety of this is described by the natives to be of a light-grey or whitish colour, and called Chingkau Puti.

SIMIA MELALOPHOS.

SIMPAI of the Malays. سيمشي

Frequent in the neighbourhood of Bencoolen.

In general form and appearance this species nearly resembles the preceding, but is a little larger, and of a very different colour, being of a bright fawn-colour, mixed with black on the head, back and shoulders. The whole of the under parts is nearly white. Head and face small, with hair diverging as in the preceding, but forming a longer and more distinct crest on the head composed of black hairs, and also forming a tuft on each cheek of a fawn-colour graduating into white. The forehead below the crest is of a bright fawn-colour. Beard scanty. The orbits, nose and ears scarcely differ in form from
the

the preceding. Face bare, of a blueish colour, and slightly wrinkled. The line of the face is singularly straight and perpendicular. The ears nearly of the same colour. The palms and soles of the hands and feet are black. The thumb of the hands very short. Callosities large. Tail long and tapering, exceeding thirty inches.

The hair of this and the preceding species is long, and in this soft and silky.

SIMIA FASCICULARIS.

KRA of the Malays. 15

Frequent in the forests of Sumatra and the Malay islands, where they are met with in large companies.

The body is about twenty inches long, and the tail a little more. The back and upper part of the head are of a reddish-brown colour; the tail and sides of the body grey, which becomes still lighter on the inside of the limbs and lower part of the body and face. The face is brown, and covered with short light grey hairs. The cheeks are furnished with tufts of the same colour, much longer than the beard. The eyelids, particularly the upper ones, are white. The eyes are brown, the eyebrows prominent, and the muzzle projecting. The nose is prominent between the eyes, and flat at its point, where the nostrils open obliquely some way above the lip. Cheeks pouched. Ears roundish, obtusely pointed behind. Canines short. Callosities strong. Thumb of the hands short.

The Malay name has frequently a close resemblance to the cry of the animal it designates; and this is remarkably the case in the present instance, as well as in the Simpai, Wouwou and others.

The

The Kra is not easily domesticated. The natives distinguish a whiter variety, with a reddish shade on the back.

Besides the Kra above described, there is a smaller species called the Kra Buku, which only differs in size, and in wanting the circle of hair round the face. This little animal, which is less than a foot in length, is equally common in the other Malay islands. The head is remarkable in having very little hair on the temples, in which it strikingly differs from the larger species.

SIMIA MAURA? Linn.

LOTONG of the Malays. لوتونغ

Found at Singapore and Penang.

This species is often eighteen or twenty inches long and twelve or thirteen in height when on all fours. The tail is some inches longer than the body. Its colour is chiefly black. The hair of the arms, legs, and top of the head is tipped with grey. The inside of the thighs and lower part of the abdomen are entirely white; a line of white also extends from thence to the throat; the breast and axillæ are light grey. The hands, feet, ears and face are black. The lips are furnished with short whitish hairs mixed with a few longer black ones. Beard scanty, and composed of a few black hairs. The cheeks have also some black hairs. The hair diverges from the crown of the head so as to project over the forehead in front, and to form a kind of crest behind. Head and face small. Nose flat at the point, where the nostrils open laterally. It is not easily tamed.

LEMUR TARDIGRADUS Linn.

KUKANG (Malay). كوكڠ

Of this the natives distinguish a large and a small variety: the former they call Bruh samundi; and describe it as a larger and more

more active animal, of a grey colour, with a black stripe along the back. The Malays have a superstitious aversion to these animals, and never keep them in their houses, from an idea that they bring misfortunes and ill luck.

GALEOPITHECUS RUFUS *Pallas.*

LEMUR VOLANS *Linn.*

KUBUNG of the Malays. كوبرغ

Frequent in the Malay peninsula and islands.

This animal is too well known to require description : it usually hangs from the branch of a tree suspended by its four hands. The wing-like membrane cannot serve the animal to fly, but when extended acts as a kind of parachute, by which it is enabled to make long leaps from tree to tree. There are six pectinate incisors in the lower jaw, and four in the upper, of which the middle ones are remote ; two canines in each jaw, and five molars on each side. The canines are peculiar in having two fangs, and the molars have the same number. The larynx is osseous. The animal produces two young at a time, and the number of mammæ correspond. The two pair are situated near to each other on the breast a little below the axillæ. The colours on the back of the young are more distinct and variegated than in the adult. Mr. Marsden's figure gives a very good idea of this animal.

VESPERTILIO VAMPIRUS. VAR. β . RUBRICOLLIS *Geoff.*

VESPERTILIO FERRUM EQUINUM *Linn.*

KALUANG of the Malays. كلراغ

Of this there are two distinct varieties : one large, and having a complicated nasal membrane ; the other smaller, and having a simple semilunar membrane over the nose. In one of these, besides

besides the two pectoral mammae, there are two others situated a little above the pubes, as already observed by Mr. Montagu in the 9th volume of the *Transactions of the Linnean Society*. These are not found in the *V. Vampyrus*.

MANIS PENTADACTYLA Linn.

PANGOLING SISIK. مَنگُولِيْغْ سِيْسِيْغْ

Or, TANGILING. تَنگِيلِيْغْ

CANIS FAMILIARIS Linn. VAR. SUMATRENSIS.

WILD DOG OF SUMATRA*.

Of this I carried a living specimen to Bengal in 1818; it died soon after, and the preserved skin was sent to Mr. Henry Colebrooke, in England, by my friend Dr. Wallich. They are numerous in the forests of the interior, where they are said to hunt in packs.

It is of a small size, of a brownish-red colour, lighter beneath, with an elongated head, and a bush-like tail somewhat resembling that of a Fox. Body slender. Ears short and erect. It is wild and untameable, and seems to resemble most the Australasian Dog, or Dingo.

How far this differs from either of the wild Dogs of Java, Dr. Horsfield will be able to decide.

FELIS.

Of this genus two species only are in the collection, the Royal Tiger, and a species of Tiger-cat. The latter is precisely the same with the *Felis Bengalensis*, Bengal Tiger-cat described by Pennant, and is called by the Malays Rimau bulu, رِيْمُو بُولُو.

* For a description and figure of this Dog, see p. 235, tab. XXIII.

Tigers are very numerous in Sumatra, and are very destructive on the west coast. The natives distinguish several varieties, such as the Rimau Kumbang, or black Tiger; the Rimau samplat, and others.

It may be proper also to notice the variety of the domestic Cat peculiar to the Malayan Archipelago, and remarkable by having a twisted or knobbed tail, in which particular it agrees with that of Madagascar. Sometimes they have no tail at all. This coincidence with the Madagascar variety is the more remarkable, as the similarity between the language and customs of the inhabitants of Madagascar and the Malay islands has frequently been a subject of observation.

Besides these, native accounts have been obtained of two other species existing in Sumatra, the Chigau or Jigau, جیگو and the Rimau dahan.

The former, called the Rimau mang'in in the southern districts, is described as larger than the Tiger, more dangerous and destructive, and as making his attack in a different manner, not crouching and darting from a covert, but rushing furiously and steadily forward, and even forcing his way into villages and houses. It is stated to have a mane of long hair on its head and neck, to have a tuft at the extremity of its tail, to be of a more uniform and dark colour, and to have a larger and longer head than the Tiger. All these particulars of form and habits indicate its being a kind of Lion. It has been seen in various parts of the country, but is by no means common.

The Rimau Dahan, ریمو داهن is about the size of a Leopard, but is of a darker colour and less regularly spotted. It lives principally on trees, pursuing and feeding on birds, &c., and is said by the natives to be in the habit of sleeping stretched across the fork of a large bough.

MEPHITIS

MEPHITIS JAVANENSIS *Desm.*

TELAGU of the Malays. تلاغ

Found in Sumatra and Java. From the latter it has already been sent to Europe by Mr. Leschenault, and I believe by Dr. Horsfield.

It is nearly related to the *Viverra Mephitis* Linn. of America, the type of this genus, but differs in having a very short tail not exceeding an inch in length, and in having but one line of white along the back, which covers the whole crown of the head, and becomes narrower as it runs backward to the tail, which is also white. The rest of the body is of a dark-brown colour. The snout is long and pointed. The direction of the hair on the forepart of the body is peculiar, being directed forwards under the throat, and upwards and forwards on the back of the head and neck. The five toes of the fore-feet are furnished with long claws fitted for digging. It has six incisors, two canines, and five molars in each jaw, of which the first three are not tuberculated.

When irritated, or in danger, it emits from its rectum a fluid of most insupportable stench.

VIVERRA ZIBETHA *Linn.*

TANGALUNG of the Malays. تنگالونغ

This animal is kept by the natives for the purpose of obtaining the well known perfume, which they call *jibet* or *dedes*. It is contained in a double sac under the anus:

The animal is above two feet long; the tail shorter than the body, and annulated. A black stripe runs the whole length of the back; there are several longitudinal stripes on the back of the
2 K 2
neck,

neck, and a broad black band encircles the lower part of the throat. The sides of the body are spotted, and the spots become undulated in the limbs. The hair is rather short and close.

The natives distinguish a smaller variety by the name of Tangalung Padi.

VIVERRA GENETTA Linn.

MUSANG SAPULUT. مونغ سقولات

This appears to be the true Genet.

It is of a dark-grey colour, with stripes and spots of black. The tail is of the same colour mixed with black, but not white at the tip like the following.

VIVERRA MUSANGA.

MUSANG BULAN of the Malays. مونغ بولن

This animal, figured by Mr. Marsden in his *History of Sumatra*, is nearly related to *V. Genetta*, but must be considered a distinct species.

It is of a dusky fulvous colour mixed with black; the tail is of the same colour, except about two inches at the point, where it is white, and is about as long as the body. The space from the eyes to the ears is white; there are some long black bristles above the eyes, and some other white ones a little way behind them. The nose is prominent at the extremity, and deeply furrowed between the nostrils. The muzzle is long and pointed. The feet are five-toed. The animal is about the size of an ordinary Cat.

VIVERRA

VIVERRA? BINTURONG.

Intermediate between *Viverra* and *Ursus* is an animal called Binturong, بنتورنغ found at Malacca by Major Farquhar, who communicated an account of it, accompanied with a specimen and drawing, to the Asiatic Society. It has not been made public, and it may therefore be interesting to give the following particulars as furnished to me by that gentleman, in whose possession I saw a living specimen in 1819.

The body of this animal is about two feet and a half in length ; tail nearly the same, bushy and prehensile ; height from twelve to fifteen inches. It is entirely covered, with the exception of the legs and face, with a thick fur of strong black hair. Its general appearance and habit is slow and crouching, the body long and heavy, and low on the legs ; the tail is thick at the root, gradually diminishing in size to the extremity, where it curls inwards. The muzzle is short and pointed, somewhat turned up at the nose, and is covered with bristly hairs, brown at the points, which lengthen as they diverge, and form a peculiar radiated circle round the face, giving the countenance a striking and remarkable aspect. The eyes are large, black and prominent ; and the ears are short, rounded, edged with white, and terminated by tufts of black hair. There are six short rounded incisors in each jaw, two canines, which are long and sharp, and six molars on each side : of these, in the upper jaw, the three first are pointed ; in the lower jaw the two first are pointed, and the last is smaller and imperfect. The molars are remote from the canines in the lower jaw, and approximate in the upper. The feet are five-toed, with large strong claws ; the soles are bare, and applied to the ground throughout the whole of their length ; the hind ones longer than the fore. The hair on the legs is short and of a brownish tinge.

tinge. When at rest the animal coils himself, the tail encircling the body.

It climbs trees assisted by its prehensile tail, in which it has uncommon strength. Major Farquhar kept one alive many years; it lived both on animal and vegetable food; was particularly fond of plantains, but would also eat fowls' heads, eggs, &c. Its movements are slow, and it is rather of a timid disposition; it sleeps much during the day, but is more active at night.

This animal seems to have considerable affinity to the *Viverra caudivolvula* of America; but in general appearance and nocturnal habits it resembles the *Ursus Lotor* or Raccoon.

LUTRA.

Of this genus there are two species in Sumatra known by the common appellation of Anjing Ayer, or Dog of the Waters. The largest is properly distinguished by the name of Simung, سيمونغ and the smaller by that of Barang Barang, برانغ or Ambrang.

The latter appears to be nearly allied to the *Lutra Lutreola* (*Mustela Lutreola* Linn.), being about a foot and a half in length, of a beautiful glossy-brown colour, and white on the mouth and throat. The feet are covered with hair, but the toes are not of equal length. The tail is shorter than the body, covered with hair, thick at the base, and tapering to a point.

URSUS MALAYANUS. BRUANG. براغ

This deserves to be ranked as a distinct species from the common Bear, and from that of the continent of India. The most striking difference is in the comparative shortness of its hair, and the fineness and glossiness of its fur; in which particular

cular it appears to resemble the American Bear. It is further remarkable in having a large heart-shaped spot of white on the breast. The muzzle is of a ferruginous colour. It stands lower, but is a stouter and better proportioned animal than the common Bear.

When taken young they become very tame. One lived for two years in my possession. He was brought up in the nursery with the children; and, when admitted to my table, as was frequently the case, gave a proof of his taste by refusing to eat any fruit but mangosteens, or to drink any wine but Champaign. The only time I ever knew him to be out of humour was on an occasion when no Champaign was forthcoming. It was naturally of a playful and affectionate disposition, and it was never found necessary to chain or chastise him. It was usual for this Bear, the cat, the dog, and a small blue mountain bird or Lory of New Holland, to mess together and eat out of the same dish. His favourite play-fellow was the dog, whose teasing and worrying was always borne and returned with the utmost good humour and playfulness. As he grew up he became a very powerful animal, and in his rambles in the garden, he would lay hold of the largest plantains, the stems of which he could scarcely embrace, and tear them up by the roots.

A female of this species was sent to England last year by the William Pitt.

SOREX.

Of this genus the collection contains a small variety of the *S. carulescens*, or Musk Rat of Bengal. In it, as in the Bengal species, the musky fluid is emitted from a single gland on each side of the body.

TUPAIA.

TUPAIA.

GEN. CHAR. Snout elongated.

Teeth, Incisors above 4 remote.

below 6 (or 4?) leaning forwards,
the middle ones approximate.

Canines two on each side both above and
below, remote.

Molars, three on each side both above and
below.

Feet five-toed.

Habit and tail of a Squirrel.

TUPAIA FERRUGINEA.

TUPAI PRESS. Malay توفى فريس

This singular little animal was first observed tame in the house of a gentleman at Penang, and afterwards found wild at Singapore and in the woods near Bencoolen, where it lives on the fruit of the Kayo Gadis, &c. It has the tail and general appearance of a Squirrel, united to the elongated head and dentition of a *Sorex*. It further differs from the latter genus in being a lively playful animal, with large eyes suited to day-light, and in not being nocturnal or subterranean in its habits.

The head is prolonged into a conical snout; the upper jaw and lip not however projecting much beyond the lower. Incisors four above, rather remote and sharp, six below, the middle ones smaller, the lateral ones inclining forwards. Canines four in each jaw, remote from the incisors in the upper. Six conical molars in each jaw. Eyes large and bright. Ears roundish. Colour of a rusty brown on the back and sides, whitish on the belly; tail greyish-brown, the hairs being a mixture of black and white. Length of the body about six or eight

eight inches. Tail not quite so long, hairy like that of a Squirrel, but rounder. Five toes on all the feet; the middle three longest; all furnished with curved claws.

These animals are as tame and sprightly as Squirrels. The tame one above mentioned was suffered to go about at perfect liberty, ranged in freedom over the whole house, and never failed to present himself on the breakfast- and dinner-table, where he partook of fruit and milk.

TUPAIA TANA.

This species very nearly resembles the preceding one, but is larger, the length of the body being nine inches, and that of the tail about seven. Colour above nearly the same, but the lower parts of a ferruginous red. The tail in this species is flat like that of a Squirrel, and is of a reddish colour.

In the only specimen yet procured of this last, there are but four incisors in the lower jaw, yet in every other respect the teeth agree with the former species. As the specimen was prepared by a native before it came into my hands, further examination will be necessary to ascertain whether this difference may not have been the effect of accident in the preparation.

These animals are generally known by the country people under the name of Tupai tana; and it is said they are always found on or near the ground. It is not impossible we may succeed in finding further varieties; at all events, the two noticed are sufficiently distinct to form separate species, and, I should presume, to justify the adoption of a new genus: most certainly they will not come under any of the genera yet noticed.

HYSTRIX.

Of this there are two species, one long-tailed, the *H. fasciculata*, the other the Landak, لندك, figured by Mr. Marsden in

his *History of Sumatra*, under the name of *Hystrix longicauda*. That figure is a good and accurate representation of the animal, with the exception of the fore-feet being delineated as five-toed, while in reality they are only four-toed, the place of the thumb being supplied by a tubercle. The name *longicauda* is perhaps objectionable, as the tail of this species is much shorter than that of the *H. fasciculata*. It seems questionable whether the *H. macroura* of Seba is really different from the *H. fasciculata*, and whether two species are not confounded under it.

MUS SUMATRENSIS.

A drawing and specimen of an animal, which appears related to the *Mus Pilorides*, was forwarded from Malacca by Major Farquhar to the Asiatic Society at the same time with the Binturong. I am informed by him, that it is not uncommon at Malacca, and is perhaps to be found in most parts of the Malay peninsula. It is called by the natives Dekan, دكنى, and by Europeans in India the Bamboo Rat, from its being found principally about Bamboo hedges, and being said to live on their roots.

The body is about seventeen inches in length, ten inches in circumference, and the height at the shoulder about five. The tail is six inches long, tapering, and blunt at the points, naked and scaly. The body is covered with rough greyish hair, brownish on the back. The head round and lighter coloured. Incisors large, two in each jaw. Eyes small. Ears naked. Fore-feet four-toed; hind-feet with a short fifth toe.

SCIURUS.

Besides the *Sciurus maximus*, the Tupai Jinjang or Tankrawa, توفى جنجج of the Malays, and the *S. bicolor* or Java Squirrel, which are frequent in the Malay islands, a third species, which may be named

SCIURUS

SCIURUS AFFINIS.

was found abundantly in the woods of Singapore (on the occupation of that station by the British in 1819), agreeing with the two former in having a flat nail on the very short thumb of the fore-feet, but differing in colour, being of a cinereous grey or brownish on the upper part of the head, body and tail, and on the outside of the limbs, and being nearly white on the under and inner parts. It is about the size of the *S. bicolor*. The separation of the colours on the body is not so abrupt as in that species, a stripe of reddish-brown marking the transition. Grey is the most usual colour of the upper parts; but it appears to vary considerably at different seasons (perhaps at rutting time), changing to a light brown, and even to a dusky yellow. The first specimens, that were procured in February, were of this latter colour; five months after they were found of a grey colour. One of them, which has been in my possession about ten months, and is now alive, has not changed colour perceptibly in that time. This animal is remarkably tame, and has become a regular and very amusing guest at the breakfast-table.

A sufficient number of specimens of the *S. maximus* and *bicolor* has not been examined, to decide whether they are subject to the same variations of colour. A young one of the latter, procured from the straits of Sunda, had the whole of the tail of the same fulvous colour as the belly, while in adult ones it is entirely black, like the upper part of the body. These facts indicate the necessity of caution in multiplying the number of species in this genus on mere diversities of colour, as intermediate varieties will often be found to connect species apparently sufficiently remote.

SCIURUS VITTATUS.

This species, which appears to be related to the *Sciurus gingianus*, is smaller than the preceding, and is frequent in the woods

of Bencoolen, living principally on palm-trees. It pierces a hole in the coco-nuts for the purpose of drinking the contained milk. It is called Tupai, تُوپاي which appears to be the generic name of the Squirrels.

It is about eight inches in length, and the tail is about the same.

The ears are round, resembling in form the human, and not bearded. The colour on the upper part of the body and on the tail is a mixed yellowish-grey, each hair being twice annulated with black and fawn-colour. The lower parts are brownish-red or fulvous. On the sides, from the shoulder to the hind-leg, is a stripe of white, separated from the fulvous part by one of black. The tail is round, and has the hair uniformly disposed, not spreading towards each side, in which particular it resembles the *S. Guerlingus* (*Myoxus Guerlingus* Pennant). It carries it erect like the other Squirrels, and it is of the same colour as the body, with the exception of the extremity, which is furnished with some fulvous hairs. The scrotum is very large and pendent. The eyes are surrounded by a fawn-coloured ring. The whiskers are black.

There is another species nearly related to the preceding, but much smaller, being only about five inches in length. It has the same distinguishing characteristics of rounded ears, round tail, and large scrotum, but differs in wanting the white stripe on the sides; in the under parts being of a greyish-white, not fulvous; in the tail wanting the fulvous hairs at its point, and in having the light and dark colours more distinct and somewhat annulated. In other respects, and in the colour of the back, it exactly resembles the former, and is perhaps no more than a variety.

Of Flying Squirrels there are two species. The *S. Petaurista* is, according to Major Farquhar, a native of Malacca, and there called Chin Krawa. The second species was lately sent to me from

from Singapore, and is without doubt the *Sciurus Sagitta* of Linnaeus, but quite a different animal from that figured by Shaw (*Gen. Zool.*) under this name. The flying membrane does not extend from the head to the hands, but only between the limbs, and is beautifully ciliated. The tail is flat and distichous, of an oblong lanceolate form. The scrotum is particularly large.

MOSCHUS.

The Malays distinguish three species or varieties of this genus; viz. the Napu, نافر the Kanchil كنجيل and the Pelandok.

MOSCHUS JAVANICUS *Pallas.*

NAPU. نافر

This is the largest of the three. It is about twenty inches long and thirteen in height. It stands considerably higher behind than at the shoulder. It is of a mottled ferruginous colour on the back, grey varied with white on the sides, and white below and on the inside of the thighs. The tail is from two to three inches long, tufted, white below and at the end. A white stripe runs along the base of the lower jaw on both sides to the posterior angle; the space between is also white, and gives origin to three diverging white stripes, which run to the shoulders and middle of the breast. The top of the head is very flat, and of the same ferruginous colour as the back, which, however, becomes darker on the back of the neck. A nearly black line runs from each of the eyes to the nose. A grey stripe runs for some way along the middle of the belly. It has short spurious hoofs.

This species frequents thickets near the sea-shore, and feeds principally on the berries of a species of *Ardisia*. It can be easily tamed if taken young, and will become quite familiar.

MOSCHUS

MOSCHUS KANCHIL. كنجيل

This species is smaller than the preceding, being about fifteen inches long by about nine or ten in height. In form it nearly resembles the Napu, but is lighter and more active. Its colour is very different, being of a deep-red brown, approaching to black on the back, and becoming of a bright bay on the sides. It is white on the belly and inside of the legs. It has three white stripes on the breast like the Napu, but differently disposed. The stripe on each side of the lower jaw is prolonged to the shoulder, becoming narrower as it goes backwards; the middle stripe is broadest below, and narrows to a point above, never uniting with the lateral stripes. In the Napu, on the contrary, the three white stripes originate from one point between the maxillary ones, which appear like the commencement of another pair; and all three become broader behind. The head of the Kanchil is not so flat, and the muzzle is more curved above. The black lines from the eyes to the nose are wanting, but a well defined black line runs down the back of the neck, which is not present in the Napu. A brown line runs from between the fore-legs to the middle of the belly. This species is further distinguished by having long upper canines curving backwards; while in the Napu they are short and straight. The tail is from one and a half to two inches long, tufted, white below and at the end. It has spurious hoofs like the former.

These differences are constant at every age, and they differ not less in their habits and manners. This species is found in the depth of the forests, and feeds chiefly on the fruit of the Kayo briang (*Gmelina villosa* Roxb.). It will live in confinement, but never becomes tame like the preceding. If ever it succeeds in breaking its confinement, it endeavours to make its escape

escape to the woods. It is a much swifter and lighter animal, and is said to be so alert and cunning, that it is a common Malay proverb to designate a great rogue, to be as cunning as a Kanchil. Of this cunning many instances are related by the natives. If taken in the nooses laid for them, they will, when the hunter arrives, stretch themselves out motionless and feign to be dead; and if he is deceived by this manœuvre and unties them, they seize the moment to start on their legs and disappear in an instant. A still more singular expedient however is mentioned: that when closely pursued by dogs, the Kanchil will sometimes make a bound upwards, hook itself on the branch of a tree by means of its crooked tusks, and there remain suspended till the dogs have passed beneath. No portion of this activity and quickness is ascribed to the Napu or Pelandok; and to this difference of disposition is attributed the Kanchil frequenting the forests without fear of the Tigers and beasts of prey; while the latter two, more timid, seek safety in the thickets nearer to human habitations, where they are less exposed to such enemies.

The Pelandok is the least of the three in point of height, but has proportionably a larger and heavier body: it has also a larger eye.

CERVUS.

Of this genus there are three kinds frequent in Sumatra and the adjacent islands, viz. the Rusa, the Rusa ubi, and the Kijang.

CERVUS Axis.

RUSA. رُسا

This is, no doubt, the greater *Axis* of Pennant, and is abundantly distinct from the common or spotted *Axis*.

It is of a large size, often standing as high as an ordinary sized pony of the country, which is about four feet or twelve hands.

Its

Its horns are large, furrowed and rugged, and, like the other kinds of *Axis*, three-branched. Its colour is pretty uniformly of a greyish-brown, darker on the belly; the hinder parts and tail have somewhat of a ferruginous shade, and the inside of the limbs is whitish. The head is handsome; the muzzle black, and soft at its extremity. The chin is whitish. The eyes have the usual lacrymal furrow. The female has no horns; in the male they are large, frequently more than two feet in length, varying somewhat in the degree of divergence, and in relative thickness and proportions; their colour is more or less dusky or brown. The burr at the base is tuberculated; the lowest branch is directed forward, and the upper, which is shorter, looks backwards. The canines of the upper jaw are rather long in old individuals. The ears are large, rather naked, soft and whitish at the edges, and have some pencils of long hair at the lower and inner margin.

This species is elegantly formed, and in its habits is peculiarly gentle and tractable. It is frequently kept tame, and has been commonly known among Europeans in these islands by the erroneous name of Elk. The pair now in my possession were presented to me by the King of Acheen.

A variety of this is described by the natives as of a darker colour, being of a deep brown or nearly black, and called *Rusa etam* or *Rusa Kumbang*. It is rather smaller than the common kind, but has exactly the same horns, and in fact seems to differ in nothing but colour.

The spotted *Axis* met with in these islands appears to be the same as that of Bengal, and has probably been introduced from thence.

The middle *Axis* of Pennant is probably the small species most frequent in Java, and generally dried as an article of food, called *Dinding* throughout the eastern islands. A white individual of
this

this species was sent to me from Macassar in the island of Celebes, and lived some years in my park at Buitenzorg.

CERVUS MUNTJAK? Schreb.

KIJANG. كيجنج

The Kijang is smaller than the other species of deer, being less than four feet in length, and not exceeding two feet in height. The horns are seated on an elevated cylindric base or pedicel covered with skin and hair. The pedicel is about three inches long; the horn about four, deeply furrowed, with a prominent burr at the base, immediately above which it divides into two branches, one short and pointing inwards; the other erect, and curved inwards and backwards at the point. The pedicels are an elongation of the *os frontis*, and their roots are continued forwards above the eyes to the nose, forming two strong prominent ribs on the face. On the forehead between these is a double longitudinal fold of the skin, forming in some sort a middle rib, much less conspicuous than the lateral ones. The female has no horns, and the ribs of the face are obscure. The male has long canines in the upper jaw resembling tusks, sharp, and curved backwards. In form this deer is remarkably elegant; the legs are slender and graceful; the body is round, compact, and rather large in proportion to the legs. The fur is very fine, close and glossy. The colour is a bright bay or reddish brown, lighter below, and mixed with brown on the neck. The inside of the thighs, the region of the pubes, and the under-side of the tail, are of a pure white. The chin and lower jaw is whitish. The muzzle is nearly black, which colour extends along the middle rib, and from thence in a stripe running upwards to the extremity of each pedicel. In the female the place of the horns is marked

by a tuft of black hairs. The ears are rather small, and thinly covered with hair. Lachrymal furrows as usual. Spurious hoofs small and blunt.

This species is found in the neighbourhood of Bencoolen, and is figured by Mr. Marsden in his *History of Sumatra*. That drawing, however, must have been taken from a young individual before the horns had fully formed or begun to branch. Even the burr, which afterwards becomes so conspicuous, appears to have been wanting.

Of the *Rusa ubi*, روتا اوبي, called also *Rusa saput*, روتا سافوت, and *Rusa tunjuk*, a specimen has not been procured; but it is described by the natives to be inferior in size to the *Rusa*, of a reddish colour, and to have unbranched horns covered with hair to within a short distance of the point.

None of these species of deer appear to shed their horns yearly like the European ones. The first horn is commonly a small and imperfect one, and falls early. It is replaced by the perfect one, which is permanent, and is never lost unless by accident, when it is not replaced. This is probably the case with all the deer of tropical climates.

ANTILOPE SUMATRENSIS Penn.

KAMRING UTAN. كامريغ هوتن

WILD GOAT OF SUMATRA.

The figure of this animal, given in the last edition of Mr. Marsden's *History of Sumatra* is very accurate, but does not fully express the character of spirit and vivacity which marks the living subject. I kept one for some months, but found it impossible to tame him; and he finally died from impatience of confinement. It is a powerful muscular animal. The detailed description in Shaw's *Gen. Zool.* is generally correct.

BOS.

BOS.

There is a very fine breed of cattle peculiar to Sumatra, of which I saw abundance in Menangkabu when I visited the capital of that country in 1818. They are short, compact, well made animals, without a hump, and almost without exception of a light fawn-colour relieved with white. The eyes are large and fringed with long black eye-lashes. The legs are delicate and well shaped. Among all that I saw I did not observe any that were not in excellent condition; in which respect they formed a striking contrast to the cattle generally met with in India. They are universally used in agriculture, and are perfectly domesticated. This breed appears to be quite distinct from the Banting of Java and the more eastern islands.

Of the Buffalo, the white variety is the most frequent at Bencoolen. It does not appear to differ from the black in any thing but the colour, which is a reddish white.

EQUUS.

The Sumatran horses are small, strong and hardy. Those of the northern parts of the island, particularly Acheen, are the most prized. The Batta horses are rather larger, very strong, but not handsome. They are distinct breeds from the horses of Java and Bima, which are nearly of the same size, about twelve hands.

ELEPHAS.

Wild Elephants are extremely numerous in the forests of Sumatra; but few attempts have been made to catch and domesticate them. At Acheen alone have they been trained to the service of man; and I have now in my possession a young one presented to me by the King of that country.

RHINOCEROS SUMATRANUS.

BADAK. بادق

TWO-HORNED RHINOCEROS OF SUMATRA.

Dr. Bell's description and representation of this animal in the *Philosophical Transactions* are extremely correct. The drawing of the skull is however erroneous in one particular; the incisor bone of the upper jaw is straight and horizontal, and not curved as there represented. It must also be remarked, that the original number of incisor-teeth is four in each jaw, the same as in the one-horned Rhinoceros of India. Of these incisors, two in each jaw are very small, and soon fall out, and were therefore probably wanting in the adult head figured by Dr. Bell. The small incisors of the upper jaw are situated behind the large and persistent ones; those of the lower jaw between them. The number of persistent molars in each jaw is six on each side, as represented by Dr. Bell; but it appears that there is a seventh, which soon falls out. The number in the young subject is six, with the rudiment of a seventh behind. As this seventh advances, the first molar begins to be obliterated, and falls out before the last arrives at its full size; so that at no period are there seven completely formed teeth existing in the jaw. The skin of the Sumatran Rhinoceros is much softer and more flexible than that of the Indian one, and is not, like it, corrugated into plates of mail. It has however some doublings or folds, particularly round the neck, shoulders and haunches, rather more distinct and defined than in Dr. Bell's drawing. The natives assert that a third horn is sometimes met with; and in one of the young specimens procured, an indication of the kind was observed. The female has a larger and heavier head than the male, but is similar in other respects.

They

They are not bold, and one of the largest size has been seen to run away from a single wild Dog.

The one-horned Rhinoceros of India is not known to the natives of this part of Sumatra ; and the single horns which are occasionally procured, appear to be merely the larger horns of the two-horned species separated from the small one. There is, however, another animal in the forests of Sumatra never yet noticed, which in size and character nearly resembles the Rhinoceros, and which is said to have a single horn. This animal is distinguished by having a narrow whitish belt encircling the body, and is known to the natives of the interior by the name of 'Tennu. تنوق It has been seen at several places ; and the descriptions given of it by people quite unconnected with each other, coincide so nearly, that no doubt can be entertained of the existence of such an animal. It is said to resemble in some particulars the Buffalo, and in others the Badak or Rhinoceros. A specimen has not yet been procured ; but I have several parties on the look-out, and have little doubt of soon being able to forward a more accurate description from actual examination.

It should be remarked, that the native name, Tennu, has, until lately, been understood to belong to the Tapir. It is so applied at Malacca, and by some of the people at Bencoolen. In the interior however, where the animals are best known, the white-banded Rhinoceros is called Tennu, and the Tapir Gindol, and by some Babi Alu. It is not impossible, that, as both animals have white bands, the names may have been confounded by people little in the habit of seeing either, and deriving their information solely from report. In a country like Sumatra, where the inhabitants, in a great measure shut out from general communication, are divided into an infinity of tribes, speaking different dialects, a perfect consistency or uniformity of nomenclature

ture cannot be expected, and it is not always easy to reconcile the synonymy.

TAPIRUS MALAYANUS.

The first notice that I received of the existence of this animal was in the year 1805; a living specimen having been sent to Sir George Leith, when Lieutenant-Governor of Penang: it was afterwards observed by Major Farquhar in the vicinity of Malacca. A drawing and description of it was communicated by him to the Asiatic Society in 1816, and a living subject was afterwards sent to the Menagerie at Barrackpore from Bencoolen. At this latter place the specimens contained in the present collection have been procured.

It is known by different names in different parts of the country. By the people of Limun it is called Saladang, سلاڠ by those of the interior of Manna, Gindol, گندول in the interior of Bencoolen, Babi Alu; and at Malacca, Tenu.

Little can be added to the original description of Major Farquhar, the substance of which is as follows:

The Malay Tapir resembles in form the American, and has a similar flexible proboscis. Its general appearance is heavy and massive, somewhat resembling the hog. It is particularly distinguished by its colour, the body having a broad defined belt or band of white, while the fore and hind parts are black. This band extends circularly round the body from behind the shoulders to the root of the tail, and contrasts strongly with the glossy black of the rest of the animal. The skin is thick and firm, thinly covered with short hair. There is no mane on the neck as in the American species. The head is black, and furnished with a proboscis of six or eight inches in length. The eyes are small. Ears roundish and bordered with white. The teeth are forty-two in number. In the upper jaw there are

are seven molars on each side, one small canine inserted exactly on the suture of the incisor-bone, and in front six incisors, the two outer of which are elongated into tusks. In the under jaw there are but six molars, the canines are large, and the number of incisors, the two outer of which are the smallest, is the same as in the upper jaw. There is a vacant space of about two inches between the molars and canines in each jaw. The tail is very short, and almost destitute of hair. The legs are short and stout; the fore-feet furnished with four toes; the hind-feet with three.

These animals are large, particularly in the body, which is equal to that of the Buffalo. It may be interesting to give the exact dimensions of two, one a male, described by Major Farquhar; the other a female, killed at Bencoolen. It is remarkable that all the females that have been procured have been considerably larger than the males.

	MALE.		FEMALE.	
Extreme length from the nose to the tail,	Ft.	Ins.	Ft.	Ins.
measured along the back	6	10½	8	1
Circumference of the body	6	0	6	3
Height of the shoulder	3	2	3	5
Ditto at the haunch	3	4	3	9

In a subsequent communication to the Asiatic Society, Major Farquhar gave an account of a very young Tapir which he had alive in his house. It appears that until the age of four months it is black, and beautifully marked with spots and stripes of a fawn colour above, and white below. After that period it began to change colour, the spots disappeared, and at the age of six months it had become of the usual colour of the adult. Major Farquhar says that he found this animal of a very mild and gentle disposition, that it became as tame and familiar as a dog, fed

fed indiscriminately on all kinds of vegetables, and was very fond of attending at table to receive bread, cakes, or the like. The living specimen sent from Bencoolen to Bengal was young, and became very tractable. It was allowed to roam occasionally in the park at Barrackpore, and the man who had the charge of it informed me that it frequently entered the ponds, and appeared to walk along the bottom under the water, and not to make any attempt to swim.

The flesh is eaten by the natives of Sumatra.

SUS SCROFA.

BABI. بابي

The Wild Hog of Sumatra offers nothing peculiar.

HALICORA DUGONG.

DUYONG of the Malays. دويونغ

Of this singular and interesting animal I have already sent an account to England. The specimen which accompanied it was procured at Singapore, and presented to me by the Sultan. They are occasionally met with in the bay of Tappanuli on the west coast of Sumatra.

Since writing the above a new and very singular animal has been brought to me, which agrees with *Viverra* in the number of incisors, but differs in their proportions and disposition. The naked rat-like tail is also peculiar. If it be considered as a *Viverra*, the specific name of *gymnura* would be appropriate.

It is above a foot in length from the nose to the root of the tail, which

which is ten inches more. The body, legs, and first half of the tail are black. The head and neck to the shoulders are white. There is a black stripe above the eyes, and there are black hairs intermixed with the white on the top of the head between the ears. The tail is nearly naked, somewhat scaly, black to the middle, and white from thence to the tip. The body is covered with two sorts of hair, one short, silky and dense, forming a fine coat of fur; the other longer and coarser. The muzzle is elongated, and the snout projects nearly an inch beyond the lower jaw. The nostrils are prominent, and have their margins convoluted. There are in the upper jaw six incisors, the first two largest and remote from each other, the last pair very small; two canines about the same length as the first incisors, and six molars on each side, the first of which is small and has two points, the second is larger and has one point. The fourth and fifth molars are the largest, and are marked with four tubercles; while the last is imperfect, and has only three. In the lower jaw there are six incisors, of which the last pair is the smallest; the others nearly equal, and with a space between the first two as in the upper jaw. There are two long canines, and six molars, similar to those above. Tongue large and soft. Eyes small. Ears rounded, erect and bare. Whiskers long, some of the hairs white, some black. Legs and feet scantily covered with short hair, the fore-ones thick and muscular. Feet five-toed, with compressed, curved, sharp claws. The animal emits a strong musky smell.

An animal was brought to Major Farquhar some years ago from the woods in the interior of Malacca, under the name of *Tikus Ambang bulan*, which appears to be the same as the above.

In concluding this part of the catalogue, it may be proper to observe that I have information from the natives, of several additional Mammalia existing in Sumatra, but which I have not felt myself justified in noticing until that information is more full and complete. The King of Acheen assures me that there is an animal called Jumbing nearly the size and make of a horse, with two unequal horns, to be found in the eastern part of his dominions; and several smaller animals, which appear to be yet undescribed, are mentioned by the natives as existing in the forests of the interior of Bencoolen, which I hope in time to procure.

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XVIII. *Second Part of the Descriptive Catalogue of a Zoological Collection made in the Island of Sumatra and its vicinity.* By Sir Thomas Stamford Raffles, Knt., F.R.S.

Read March 20, 1821.

A V E S.

VULTUR.

VULTURES are rare on the west coast of Sumatra, but are occasionally seen on the Malay peninsula and at Penang.

FALCO.

HALANG or LANG of the Malays. هالغ

In this genus the species are so numerous and so liable to variation, that it is not easy to determine them with certainty without ampler means of reference than are obtainable in India. Those contained in this collection appear reducible under the following species.

/ 1. FALCO OSSIFRAGUS, Linn. VAR.

LANG BOOMBOON. هالغ بمبون

2. FALCO DIMIDIATUS.

2 LANG LAUT, or SEA EAGLE. هالغ لوت

Resembles the preceding in size and general appearance, but has the head, under part of the body, and end of the tail white, with bill and cere blue. Both species live chiefly on fish.

3. FALCO BACHA.

This species, described by Le Vaillant, has been found in Sumatra both at Bencoolen and at Acheen.

4. FALCO PONDICERIANUS, *Gmel.*

LANG BONDOL. هلع بندوق

This species of Kite is frequent throughout India and the eastern islands, and is very useful in devouring carrion. It is commonly called in India the Bramini Kite.

5. FALCO COMMUNIS, *Gmel.* VAR.

RAJAWALI of the Malays. رجولي

SIKAP LANG of the Sumatrans. سيكف هلع

LAKI ANGIN of the Passummahs. لاکي اشن

This Falcon is in high estimation among the Malays, who consider it as the prince of birds, and have frequent allusions to it in their poetry.

6. FALCO NISUS, *Linn.*

SIKAP BALAM. سيكف بالم

Of this there are several varieties. The smallest kinds are called Sikap belalang, or Mangkas.

7. FALCO CALIGATUS.

LANG TAMBIKAR. هلع تمبيکر

Is a large, and perhaps a new species.

It is above two feet in length, and more than three feet across the wings. Bill and claws blueish-black; cere blueish. Legs covered with short feathers down to the toes, which are pale yellow.

yellow. The colour on the back and wings is fulvous brown, the edges of the feathers being lighter coloured, and the wing-feathers having darker transverse bands. The lower parts are white, with a lanceolate brown spot in the middle of each feather; on the abdomen and thighs these become transverse stripes. The bill is straight at the base, curved at the point, and the upper mandible has an obtuse dent in the middle. The feathers on the head rise into a kind of crest behind, and are lighter coloured than those of the body. The cheeks are whitish, with brown spots. The rectrices are brown, with several dark transverse bands. The wings are shorter than the tail, and their fourth feather is the longest.

STRIX.

BURONG HANTOO, or PONGO. بورغ هنتو ثقور

Also called TOOHOO توهوق by the Sumatrans.

Hantoo and Pongo are both names given by the Malays to certain imaginary beings of evil omen, or in one word, hobgoblins. Owls are also called birds of the moon; and are fabled to be in love with that planet, because they are said to be particularly vociferous just before she appears, and to become silent the moment she rises above the horizon, as if they had then attained the object of their wishes. There are three species in the collection.

1. STRIX SUMATRANA.

The first and largest resembles in colour the *S. nyctea*, or Snowy Owl, but is a horned species.

It is about fourteen inches in length; its plumage white, and each feather marked with transverse stripes of brown, which are fainter below than on the back. The great wing-feathers are black; the secondary deep brown, with yellowish bands

mixed with white, particularly on the inner side, and at the points. The horns are not very remarkable. The eyes are surrounded with a well-marked circle of white, stiff, bristly feathers; the eyelids are fringed with black ones. The ears are oval and small. The bill is yellow, curved, and surrounded at the base by bristles, which are directed forwards, and are as long as the bill; those on the upper mandible black, on the lower white. The legs are feathered to the toes. Tail rather short, with white bands and tips. Wings equal in length to the tail.

This species agrees generally in character with the *Strix Bubo*, but has the colour of *S. nyctea*.

2. *SRIX LEMPIJI* *.

9 The second species resembles the *S. Scops* of Europe, being of the same size, but differs in some degree in its colours, which are a mixture of brown and buff, darker on the back and lighter on the breast, which is moreover marked with narrow arrow-shaped spots of black.

3. *STRIX SCUTULATA*.

10 The third is a hornless species, about ten inches in length, brown above, lighter and variegated with white below; the tail with black bands; legs feathered to the toes; yellow irids; and wings shorter than the tail.

PSITTACUS.

The species of this genus are much less numerous in Sumatra and the Malay peninsula than in the more eastern islands, particularly the Moluccas. The following are natives of the former countries.

* *S. Lempiji*. Dr. Horsfield, page 140 of this volume.

1. PSITT-

11 1. PSITTACUS ORNATUS, Linn.

Is found on the Malay peninsula.

12 2. PSITTACUS ERUBESCENS, Shaw.

BURONG BAYAU. بورغ بايو

This species is not unfrequent in Sumatra. The specimens in the collection are from the vicinity of Bencoolen. It is this species that figures in the fables and poetry of the Malays, in which it is represented to be endowed with a supernatural degree of intelligence.

13 3. PSITTACUS GALGULUS, Linn.

SERINDIT. سرينديت

Found in the interior of Bencoolen.

14 4. PSITTACUS MALACCENSIS, Lath.

TANOW, or PIALING. تانو فيالينج

15 5. PSITTACUS SUMATRANUS.

KEKE. كيكى

This species is about twelve or fourteen inches in length, entirely green, and with a moderately long even tail. The bill is light flesh-coloured; the feet blueish or lead-coloured. A naked blackish space surrounds the eye, which has the irids white. The feathers on the neck have a yellowish tinge, and those of the rump are blueish. On the rest of the body the green is pretty uniform, but is brightest on the head. The inside of the wings is blackish.

Besides

Besides these, there are numerous species met with in captivity, which have been brought from the more eastern islands, such as the *Psittacus Gigas*, *cristatus*, *sulphureus*, *Dominicella*, &c., which it is unnecessary to particularize, as they are for the most part well known. One of the most beautiful of these is the *P. cyanogaster*: an individual of this species has long been a familiar inmate of my house, and is remarkable for its extreme degree of familiarity and domestication. It is always left at perfect liberty, and associates freely with all the other animals in the house. It attends regularly at table, courts the caresses of all, and shows an extraordinary degree of jealousy if the slightest attentions are paid to any other favourite.

TROGON KASUMBA.

BURONG KASUMBA. بوریغ کسمبا

Appears to resemble *T. fasciatus*.

The bill is strongly notched near the point, not serrate, as in the rest of the genus. This beautiful species is about ten inches in length, and appears to vary somewhat in colour according to age and sex. In the larger specimens the colours are less bright. The back is there of a yellowish-brown; the lower parts yellowish mixed with red. The head and neck are covered with filiform feathers, partly black, partly grey. A whitish band divides it from the breast. The wing-coverts are black, with white fasciæ, which are wider and greyish on the larger coverts. The remiges are black, with a narrow edging of white on some of the feathers. The two upper tail-feathers are fawn-coloured tipped with black; the next black, sometimes tipped with brown; and the lower ones partly white. The bill is dark blue, approaching to black, short, broad at the base, with a prominent arched keel above, strongly

strongly notched near the point. The lower mandible is incurved at the edges, turned upwards at the point, and notched. The nostrils are oval, situated near the base of the bill, and partly covered by the feathers; above each is a fascicle of strong black bristles: there is another fascicle on each side of the lower mandible, and a single one on the chin. The tarsi are short, and covered with blackish feathers tipped with reddish-white, which radiate in such a manner as to form a kind of ring or circle above the toes. The feet are formed for climbing. In young and smaller specimens the colours are much more brilliant; the head is of a velvet-black; the neck, breast, abdomen and rump are bright red, and the back is ferruginous. The whole of the wing-coverts are finely and delicately striated with white. The arrangement of the colours of the tail is the same as above described. The bill appears to be rather more depressed. In both old and young there is a naked space of the same blue colour as the bill behind the lower mandible, and another above the eyes. The irids are brownish-red. The skin is thin, and the feathers weakly implanted in it, so as easily to be pulled out; and hence it is not easy to prepare good specimens.

BUCCO.

1. BUCCO PHILIPPENSIS, Linn.

CHANDA. چندا

This species does not appear to be different from the *B. Indicus*; and the latter name would probably be preferable, as being more general.

It is found in Sumatra.

2. BUCCO

18

2. BUCCO LATHAMI, Gmel.

AMPIS. امفيس

Is about six inches in length. Bill more compressed and arched than in the other species of the genus, and wanting the bristles at the base; almost black in the male, but yellowish in the female. The legs are red, but become yellowish by drying.

Found at Singapore, and also in the interior of Sumatra.

19

3. BUCCO VERSICOLOR.

TAKOO. تاكو

Is a large species found at Singapore and in Sumatra.

About $10\frac{1}{2}$ inches in length. General colour green; dark above and lighter below. Crown of the head red. Throat blue; sides of the head black, separated from the red on the top by a blue stripe. There are besides a spot of red behind the eyes, a second larger of orange-yellow on the side of the neck, and a third of red on the side of the breast. These colours are liable to vary, and some of the spots are often entirely wanting. Bill black, with the bristles at the base; the upper mandible curved a little outwards near the base. Wings and tail green above and brown beneath. Legs blackish-blue. Behind the upper articulation of the tarsus are sometimes found a few hard sharp tubercles, which may possibly assist the bird in climbing. Only males of this species have been found, and among them scarcely any two were perfectly alike; in some the breast was entirely black or grey; in others marked with a white spot; in some the crown of the head is grey, and the lateral red spot is frequently wanting.

4. BUCCO

20

4. BUCCO AUSTRALIS*.

Is about the size of the *Bucco Philippensis*, or $5\frac{1}{2}$ inches in length.

The female only has been yet met with, and is of a green colour, somewhat lighter below. The throat is a greenish-blue.

There are two red spots behind the eye, one rather above it, and the other larger below it. There is sometimes a black patch on the breast. Legs black; in which it differs from the *B. Philippensis*, whose legs are red.

CUCULUS.

21

1. CUCULUS FLAVUS, Gmel.

In the present specimen (a female) the tail is barred with brownish-yellow instead of white, as commonly described. The grey of the head extends to the breast. The nostrils are perfectly round and tubular, their edge forming a prominent ring.

Found at Pulo Penang.

22

2. CUCULUS TOLU†.

KRADOK, or BOOBOOT. كرايڤ بوبوت

The colours of this bird vary considerably at different ages.

When young it is of a greenish-black, with rufous wings. As it becomes older, the belly becomes whiter, the shafts of the feathers on the head and back acquire a light colour, and the upper feathers of the tail become barred with grey. It lives on insects, is chiefly observed on the ground, and has a weak flight.

* *Bucco australis*. Horsfield, p. 181.

† *Centropus lepidus*. Ibid. p. 180.

22 3. CUCULUS MALAYANUS.

This species has some affinity to the *C. lucidus*.

It is about seven inches in length; brown above, with a greenish gloss, particularly on the scapulars. The whole under parts are transversely barred with white and brown undulations. The wings are long, extending to about the middle of the tail; the coverts edged with ferruginous. The tail consists of ten feathers, of which the upper are greenish-brown, and the lower barred with brown, black and white. The bill is somewhat compressed at the base, and the nostrils are prominent. There is a row of white dots above the eyes. Native of the Malay peninsula.

23 4. CUCULUS BUBUTUS*.

This is one of the largest of the genus, being not much less than two feet in length. The whole body is of a deep blue colour with a greenish gloss. The wings are of a bright-red brown. The bill is black, compressed and arched. The nostrils narrow and oblique. The eyes are surrounded by a circle of black bristles. The irids are crimson. The tail, which is blueish-black, without spots or bands, is cuneated, and consists of ten feathers. The claw of the thumb-toe is longer than that of the others, but not proportionally so long as that of the *C. Tolu*.

It is a native of the forests of Sumatra, and feeds principally upon grasshoppers.

* *Centropus Bubutus*. Horsfield, p. 180.

5. CUCULUS

24

5. CUCULUS MELANOGNATHUS*.

INGGANG BALUKAR. اڠڠ بلوكر

It is about 17 inches long. Back and wings blueish-green with a metallic gloss. The first half of the tail is of the same colour, but the extremity is of a deep sanguine brown. The throat, breast and uropygium are also brown; the abdomen is blackish. The head is covered with stiff bristly feathers, of a greyish-black. The bill is of a glaucous-green colour, compressed, arched, and somewhat hooked at the point. The lower mandible is red, and similarly curved. The nostrils are round, situated near the edge of the upper mandible, and surrounded by a fascicle of stiff erect bristles. A large naked red space surrounds the eyes, and extends forward to the bill. The irids are black. The feet are lead-coloured.

It lives on insects, and not, as has been stated, on fruits. It is found on the hills of Sumatra and the neighbouring islands; but is not easily procured, as it commonly perches on the summits of the highest trees.

25

6. CUCULUS SUMATRANUS.

SEPANDO of the Sumatrans. سيفندوق

Is a smaller species, nearly related to the preceding.

It has the same yellowish-green curved bill and naked red space round the eyes, and the same colours on the back and wings. The nostrils are similarly situated, but are not so round, their opening being somewhat elongated upwards. The length of this is about 15 inches, and the tail is nearly twice the length of the body. The head, throat, and breast are of a uniform

* *Phanicophaeus melanognathus*. Horsfield, p. 178.

dark grey. The tail, like the back and wings, is of a metallic blueish-green, and each feather is tipped with white. The abdomen is nearly black, shading into rufous towards the breast and vent.

Inhabits Sumatra and the adjacent islands, and lives on insects. It appears to resemble very nearly the *C. pyrocephalus*.

7. CUCULUS CHLOROPHÆUS.

BOOBOT. بوبوت

The characters of this species are in some degree intermediate between the true Cuckows and those of the two preceding, which belong to the division called after Le Vaillant *Malcoha*.

The eyes are surrounded by a naked space of the same green colour as the bill, which however is nearly straight, strong, and hooked at the point. The bird is about 13 inches in length, and the tail is longer than the body. The general colour is fawn or ferruginous, lighter on the under-parts, and passing into black at the extremity of the wing-feathers. The abdomen is blackish. The tail is dark coloured, regularly marked with numerous bands of black, while the extremity of each feather is white. The legs are blueish.

This species inhabits the forests of Sumatra, but is not common. It feeds on insects, like the rest of the genus.

PICUS. TUKKI. تكي :

1. PICUS AFFINIS.

TUKKI BAWANG. تكي باواڠ

Is related to the *Picus viridis*, differing, however, in several particulars.

This

This species is about 10 or 11 inches in length, dusky green above, with a shade of yellow on the lower part of the back; cinereous or slightly ferruginous below, mixed with brown on the abdomen. Quill-feathers brown spotted with white. Tail-feathers brown, pointed as usual in this genus; the two uppermost with a few lighter-coloured spots along their inner margin. A grey patch encircles the eyes, bounded below by a black stripe mixed with white spots, which runs from behind the lower mandible.

In the male the crown of the head is red, often variegated with black, each feather being black at the base and red at the tip; in the female it is entirely black. The bill and feet are blackish-blue.

28 2. PICUS PUNICEUS*.

TUKKI BAJUKARAP, OF BELATU. تكي باجوكارب بلاتو

This species is about nine inches in length, of a dusky green above, shading into yellow on the lower part of the back; dark brown below, with lighter-coloured undulations and a slight green tinge on the sides of the throat and abdomen. It is remarkable in having the wings of the same crimson-red as the crown of the head. The two outer wing-feathers and the tips of the others are brown; and the inside of the wings is of the same colour, spotted with white. The tail-feathers are black. The bill is blueish-black, and the legs are cinereous.

29 3. PICUS BADIUS.

TUKKI KALABU. تكي كلابو

This appears to have a considerable resemblance to the *P. undatus* and *P. rufus* of Cayenne.

* *Picus puniceus*. Horsfield, p. 176.

It

It is little more than eight inches in length, and is throughout of a ferruginous-brown colour waved with black, scarcely varying in intensity on any part of the body. Below the eyes are several small red spots or dots. The bill and legs are black.

4. PICUS TRISTIS*.

TUKKI BOREH. تكي بوريه

Is only six inches in length; black, with transverse white undulations, which are numerous, and fine on the head and breast; larger and fewer on the back, abdomen, wings and tail. The rump is whitish, and there is a red stripe behind the lower mandible. The bill is black, and the legs blueish. The female has more of a brown tinge, with finer and more numerous undulations, which become scarcely perceptible on the head.

5. PICUS MINOR. VAR. TUKKI LILIT. تكي ليليت

6. PICUS TIGA†.

TUKKI BESAR, or *T. rufa*. تكي بسر

This is a very singular three-toed species of *Picus*, remarkable for wanting the thumb-toe, and differing therein from the *Picus tridactyla*, which is deprived of the outer toe.

It is above ten inches in length, orange-coloured on the back and wings, red on the rump, and variegated with white and black below. The outer quill-feathers and the tail are brownish-black. The nape of the neck is black, the sides white, with a black stripe from behind the eyes. The male has a red crest. In the female the head is black, with white spots,

* *Picus tristis*. Horsfield, p. 177.

† *Picus Tiga*. Ibid.

and is not crested. The bill is blueish-black, and the legs are blueish.

BUCEROS.

Of this genus, three species are abundant in Sumatra and the adjacent countries.

33 1. BUCEROS RHINOCEROS, Linn.

INGGANG DANTO of the Malays. اڠڠ دانت

The female differs from the male in being rather smaller, the horn being more recurved, and in having the iris white, while that of the male is red.

34 2. BUCEROS CAVATUS.

INGGANG PAPAN. اڠڠ پاپان

BURONG OONDAN (Malay). بورڠ اوندان

35 3. BUCEROS MONOCEROS.

KIKI at Malacca. كيكي

BUCEROS MALABARICUS, Gmel.

ANGKA ANGKA. اڠك ۲ of the Sumatrans.

All these species vary considerably at different ages in the colours of the plumage, and the form of the prominences on the bill. They inhabit the forests, and live principally on wild fruits. They are occasionally kept tame, and the last in particular is easily domesticated.

36 4. BUCEROS GALEATUS, Gmel.

Besides these, I have recently procured heads of another species, which is probably the *B. galeatus*, differing from most of the

the genus in the comparative shortness and the greater solidity and strength of the bill. The prominence, which is somewhat squarish, is rounded at top and truncated in front.

In Major Farquhar's collection of drawings, made at Malacca, is one of this species taken from a living specimen, which appears to differ in some respects from the description of that contained in the British Museum, particularly in having the two middle feathers of the tail more than twice as long as the rest. They are all white, and crossed by a black band near the tips. On the throat below the bill is a loose, naked, red skin. The naked space round the eyes and the legs are also red. The iris is orange-coloured. The head is black, with a spot of reddish-brown on the sides behind each eye.

This species is called Toko توکوک; and Burong Gading بورغ گدیغ in Sumatra; and Tibbang Mantooa تیبغ منتوا at Malacca.

5. BUCEROS MALAYANUS.

37 In a paper (already quoted) sent by Major Farquhar to the Asiatic Society, and accompanied by drawings and specimens, is an account of several species of Hornbills found in the neighbourhood of Malacca. Among these is a species very nearly resembling the *B. coronatus* of Africa.

It is about the size of a Raven, and is particularly distinguished by a white stripe extending from behind each eye to the back of the neck, and so encircling the head. The bill is yellowish-white, and surmounted by a moderate sized crest, which slopes gradually in front to the curvature of the bill. The whole of the body is black, with the exception of the stripe above mentioned, and the tips of the three outer tail-feathers on each side, which are also white; the middle ones are black to the ends. The legs are of a greenish colour.

6. BUCEROS

38 6. BUCEROS PUSARAN.

The Sumatrans distinguish another species by the name of Pusaran فوسارن of which I have a living specimen, as yet too young to allow of being accurately distinguished, the horn being only partially developed. On its throat is a bag capable of being distended with air, of a bright yellow colour.

ALCEDO.

Of this genus there are six species in the collection.

39 1. ALCEDO LEUCOCEPHALA, Gmel.

BANG KAKO. بنغ كاکو

The belly is generally of a fawn-colour.

40 2. ALCEDO ATRICAPILLA, Gmel.

BURONG UDANG. برنغ اودنغ

In this species the wings are crossed at the middle by a band of light whitish-blue, which is only observable when the wings are expanded; below them is a similar band of white.

41 3. ALCEDO CHLOROCEPHALA, Gmel.

BANG KAKO. بنغ كاکو

42 4. ALCEDO ISPIDA. VAR. BENGALENSIS.

BINTI. بنتي

43 5. ALCEDO CYANOCEPHALA Shaw. = *anyzona*

BINTI.

44 6. ALCEDO TRIDACTYLA, Linn.

BINTI ABANG. بنتي ابنغ

MEROPS.

1. MEROPS SUMATRANUS.

45 The upper parts of the head and neck, and the back between the shoulders, are of a beautiful chesnut colour. The posterior part of the back, the wings above, and the belly, are pure emerald-green. The plumes of the throat, as well as of the rump and vent, have a pale azure tint with a reflection of sea-green.

By the blue colour of the throat, as well as by the pure green of the back, wings and belly, it is sufficiently distinguished from the Senegal Bee-eater of Shaw, or the chesnut Bee-eater of Gmelin, which it resembles in the chesnut colour of the head, neck, and anterior portion of the back.

The extremities of the quill-feathers and the tail beneath are blackish-brown. The tail above is blue, with a diluted tint of sea-green; the two middle tail-feathers are greatly elongated, and towards the extremity the blueish tint is diluted: this is also the case with the vent-feathers. The wings underneath are ferruginous.

2. MEROPS JAVANICUS*.

46 BIRI BIRI بیری

In the specimens found here there are light blue streaks above the eyes, but I have not observed white lines. Both species are frequent in Sumatra and the eastern islands.

There are three birds belonging to the division of *Picæ gressoriæ*, which differ essentially from all hitherto described, and must constitute two new and distinct genera in that order.

* *Merops Javanicus*. Horsfield, p. 171.

The first, which I propose to name *Calyptomena* (à καλυπτω, *velo*), is characterized as follows :

Bill depressed and broad at the base, hooked at the point, and almost concealed by the feathers of the head. Nostrils round. Tongue short. Feet gressorial.

47 CALYPTOMENA VIRIDIS.

BURONG TAMPO PINANG. بورغ تمفوئينغ

This very singular and beautiful bird is about six inches and a half in length. Its colour is a brilliant green, like that of the Parrots. The head is rather large, and its feathers are directed forwards from each side in such a manner as nearly to conceal the bill, giving the face a very peculiar appearance. A little above and before the eyes the feathers are of a deep velvet-black at their base, and only tipped with green; and there is a similar spot of black immediately over the ears. The wings are scarcely longer than the body, green, but crossed on the coverts by three velvet black bands; the primary feathers, as well as the whole under-side of the wings, are dusky approaching to black, with the exception of the outer margins of some, which are edged with green. The tail is short, rounded, composed of ten feathers, which are green above and blueish-black below. The whole of the under-parts are green. This colour is lightest on the sides of the neck and round the eyes. The bill is short, wide, much depressed at the base, deeply cleft, and hooked at the point. Nostrils oval at the base of the bill, and concealed by the filiform feathers that project over them. The eyes are rather large; the irids blueish. Legs blueish-black. A few feathers come down over the upper part of the tarsi. Feet gressorial;

outer toe not much shorter than the middle one, with which it is united as far as the last joint.

The stomach of this bird contained nothing but vegetable substances, chiefly wild grains. It is found in the retired parts of the forests of Singapore and of the interior of Sumatra; and being of the colour of the leaves, and perching on the higher branches of the trees, it is not easily procurable. The female does not differ in appearance from the male.

The second genus*, also belonging to the order of *Picæ gressoriæ*, is characterized by a very large, thick, strong bill, wide and rounded at the base, hooked and slightly notched at the point. The edge of the lower mandible is incurved under the upper. Nostrils not covered. Feet gressorial.

Of this genus there are two species.

1. EURYLAIMUS LEMNISCATUS.

BURONG PALANO, or TAMPALANO. ثلانو تمثالانو

It is about eight inches in length, of a thick, stout and rather heavy make. Above it is of a full black colour, beneath dark red. The head, chin and breast are black; the throat is encircled by a broad red band of dense, stiff, filiform feathers, which extends upwards on each side to behind the eyes. The lower part of the breast, abdomen, rump and upper tail-coverts are dark red. The scapular feathers, which are long and very acute, are of a pure white colour, contrasting strongly with the deep black of the back and wings. There is an orange line at the upper angle and edge of the wing, and a white spot on its inside. The tail is black, three inches in length, and cuneate. On each side of the bill are two or three

* The genus *Eurylaimus* of Horsfield, p. 170

stiff bristles, which turn upwards. The bill is of a bright-blue colour, large, thick and strong, wide at the base, arched but scarcely carinate above, hooked at the point, where it forms a kind of rounded unguis, behind which is a slight notch. The lower mandible is scarcely shorter than the upper. The nostrils are narrow and horizontal, situated about the middle of the bill, and a furrow is continued both backward and forwards from them. Irids green. The feathers on the thighs are blackish; the legs are blue. The tarsi are rather long; the outer toe is connected to the middle one beyond the middle of the second phalanx. The claws are strong and hooked.

This species is found in the interior of Sumatra, frequenting the banks of rivers and lakes, and feeding on insects and worms. It builds its nest pendent from the branch of a tree or bush which overhangs the water, and is said to lay only two eggs.

49 2. EURYLAIMUS OCHROMALUS.

The second species is considerably smaller, being scarcely six inches in length. The head and chin are black, the back and wings black variegated with bright yellow. The scapulars are less distinct than in the preceding, and chiefly yellow. A white band surrounds the throat, divided from the breast by a similar one of black, which is incomplete in the female. The breast and abdomen have a light vinous-red tint; the uropygium is bright yellow. The tail is one inch and a half in length, composed of ten feathers, which are black, with a round white spot near the extremity of each. There are no bristles at the base of the bill, which is blue, like the preceding, but is more depressed at the base. It is somewhat arched, hooked, and notched at the point. In this, as in the former,

former, the upper mandible overlaps the lower, whose edges are incurved for the purpose. In this species the nostrils are round, and situated near the base of the bill. The feathers on the thighs are blackish, the legs reddish; the tarsi rather long; the outer toe united to the middle one as far as the last joint.

Found at Singapore and in the interior of Sumatra. They are seen in small flocks, and feed on insects, like the preceding.

CERTHIA.

Of this numerous and beautiful genus there are several species in the collection; but it is not easy, without extensive reference to figures, to determine them all. They are known to the Malays by the general name of Chechap چچف or the Suckers, as they are said to suck the juices of flowers.

1. CERTHIA SPERATA, Linn.

CHIRICHIT, CHECHAP, OR SIAP. چرچیت چچف سیف

This is probably a variety of the *C. Sperata*, but has also a considerable resemblance to the *C. Brasiliana*, the sides and back of the neck being of a velvet-black, and the tail having a tinge of blue. The head is of the most brilliant golden-green, the throat of a splendid purple, the breast and abdomen dusky-red, and the shoulders and tail-coverts black, with a changeable shade of green and purple.

2. CERTHIA ERYTHRONOTOS, Lath.

SIKRAT, OR SIPA PUTRI. سیکرت مشا فتری

3. CERTHIA

52 3. C^{ERTHIA} S^{IPARAJA}.

SIPA RAJA. سڠا راج

This species has a blue patch on the forehead, and a stripe of the same colour on each side of the neck. The back of the head, neck, and upper part of the back are dark-red; the breast of a lighter red; the abdomen, wings, and middle tail-feathers brown, while the tail-coverts and outer tail-feathers are blue.

53 4. C^{ERTHIA} J^{AVANICA}*.

This appears to have a considerable resemblance to the *Certhia lepida*. The head and neck are blue, with a gloss of green and gold, the tail-coverts and some of the tail-feathers bright blue, the wings brown, with a tinge of ferruginous red on some of the lesser coverts. Throat ferruginous, with bright-blue stripes along the sides, which almost meet on the breast. Abdomen and breast yellow. Sometimes the head and neck have more of a green colour.

54 5. C^{ERTHIA} L^{ONGIROSTRAT}†, Latham. *Anachlorus longirostris*

SIAP JANTUNG. سيف جنتونغ

This is larger than any of the preceding, and has a bill an inch and a half in length. Colour olive-green above, greenish-yellow beneath; a yellow patch below the eyes.

In all the *Certhiae* the colours of the females are duller than those of the males.

* *Nectarinia Javanica*. Horsfield, p. 167.

† *Cinnyris longirostra*. Ibid. p. 167.

PARADISEA.

BURONG DEWATTA. بورغ دیوات

All the species of this genus are natives of the Papuan archipelago, whence they are occasionally brought alive. I have had in my possession living individuals of the common species, the *P. apoda*. They were fed on grasshoppers, and lived with me several months. I have specimens of the *P. sanguinea* Viell., whose description is very exact, as is also the figure, with the exception of the wings, which are represented too short. They are, in fact, nearly as long as the true tail. In the specimen from which Viellot's figure was taken, the wings were wanting; which will account for this little inaccuracy.

CORVUS.

CORVUS CORAX, Linn.

GAGAH of the Malays. گاهی

This is not uncommon in the interior, but is scarcely ever seen on the coast near Bencoolen.

The other species belong to the short-tailed division, which has been separated from the true *Corvi*, under the name of *Myiothera*.

1. MYIOTHERA BRACHYURA, Illig.

CORVUS BRACHYURUS, Linn.

2. MYIOTHERA AFFINIS*.

SINTAR. سینتر

TURDUS CYANURUS Lath.

It differs in having the pectoral band and transverse lines black.

* *Myiothera affinis*. Horsfield, p. 154.

3. MYIOTHERA

58
3. MYIOTHERA CÆRULEA.

It is much larger than the former species, being above two inches in length, and seven or eight in height. It is of a thick heavy form, with a very short tail. The whole of the back, tail, and secondary wing-feathers are light-blue. The under-parts are brown, cinereous on the throat, with a greenish tinge on the breast, and a ferruginous one on the abdomen. A black collar surrounds the neck immediately above the shoulders. The crown of the head and back of the neck are also black, and a stripe of the same colour runs along its sides from behind each eye. The quill-feathers are black, with blueish tips. Bill blackish, strong, rather straight, curved at the point with a scarcely perceptible notch. Irids reddish. Tarse high, and of a dark colour. Claw of the hind-toe longer than the others. The female differs so considerably from the male, that it might be taken for a different species. It is somewhat smaller, of a reddish-brown or chesnut-colour above, with blue only on the tail and tail-coverts. Below it is of the same cinereous-brown as the male, and has the same black collar round the neck, and lines behind the eyes; but the crown of the head and neck have only transverse black lines on a ferruginous ground.

Here may be mentioned a bird that appears to differ very little from the *Corvus Papuensis*, now referred by Cuvier to the genus *Lanius*. It is very uniformly of a blueish-grey colour, with the exception of the wing- and tail-feathers, which are black. In the male the breast is often marked with transverse undulations of a dark colour*.

* This bird appears to belong to the genus *Cebblephyris* of Cuvier.

CORACIAS.

In this genus, the most remarkable is the beautiful Fairy Roller.

1. CORACIAS PUELLA, *Lath.*

BIANG KAPOOR. بياغ كاڤور

Nothing can surpass the richness of the colours which distinguish the male of this species. they far exceed what any painting can convey. The crown of the head, back, smaller wing-coverts, and upper and lower tail-coverts are of the most resplendent smalt-blue, while every other part is of the finest velvet-black. The bird is above nine inches in length. The bill black, strong, somewhat curved, compressed, strongly carinate above, and notched near the point; surrounded with short bristles at the base. Nostrils roundish, and partially covered by the feathers. Irids crimson. Legs short and black. In the female there is no trace of the brilliant colours of the male; and the whole body, with the exception of the wing- and some of the tail-feathers, is of a dull blue.

Adverting to the form of the bill, compressed, carinate and notched, it seems doubtful whether this bird be truly a species of *Coracias*; and it is remarkable, that the Malays class it with the Biang, a species of *Lanius*.

It is found in the interior of Sumatra and the adjacent islands, and lives on wild grains and fruits.

2. CORACIAS ORIENTALIS, *Linn.*

TIONG BATU. تيوغ باتو

This bird is classed by the Malays with the *Gracula religiosa*; and the affinity of the latter to the genus *Coracias* seems recently to have been noticed in Europe.

3. CORACIAS

62 3. CORACIAS SUMATRANUS.

This is a singular species of *Coracias*, which appears to be undescribed. It was found in the interior of Sumatra, and is rather less than the *C. orientalis*.

The bill is red, and unusually large and wide, depressed at the base, arched, hooked at the point and notched. There is a naked space round the eyes, which is also red. It is black above and on the abdomen, with orange-coloured throat and scapulars. The quill-feathers are black, with a white band near the middle; tail black. The nostrils are round, situated near the commencement of the feathers, but not covered by them. Irids brown. Legs blackish.

63 GRACULA.

GRACULA RELIGIOSA, Linn.

TIONG. تيوغ

A variety of this is sometimes found with whitish spots on different parts of the body.

It is remarkable, that the smallest quantity of salt occasions the sudden death of these birds. The natives also affirm that the mere sight of blood is equally fatal to them.

ORIOLOUS.

ORIOLOUS CHINENSIS, Linn.

64 TIONG ALOU, or PUNTING ALOU. تيوغ الو. ذنتبغ الو

LANIUS.

The limits of this genus not being accurately defined, it is difficult in many instances to determine the true place of some of the species, particularly where they graduate into the genus

Turdus. A more accurate comparison in Europe can only determine this point; and in the mean time the following notice of the specimens in the collection may be sufficient for general reference.

1. LANIUS BENTET*.

BURONG PAPA, or TIUP API. برغ ثا تيف ائي

Is perhaps a variety of the *Lanius Excubitor*, and is very common in the Malay countries and islands.

Bill very strong, and deeply notched; sides of the abdomen and lower part of the back tinged with ferruginous. Total length about nine inches; tail longer than the body.

66 2. LANIUS SUPERCILIOSUS, *Lath.*

Has the same strongly-notched beak as the preceding; and, like it, has also the point of the lower mandible turned upwards, which approximates them to those called *Vauga* by Buffon.

It is smaller than the former, being little more than seven inches in length, and is differently coloured. The upper parts are of a light fulvous or ferruginous-brown; the lower white, with a ferruginous shade towards the vent. The back and wings are sometimes mottled. The cheeks are marked with a broad black stripe, from the bill extending behind the eyes. Tail not so long as the body.

67 3. LANIUS GULARIS.

BAROU BAROU. بارو

Is about seven inches in length, and has the bill straighter, weaker, and less deeply notched than the two former. Colour above a cinereous or blueish-grey; beneath white, and

* *Lanius Bentet*. Horsfield, p. 144.

without ferruginous shade. Upper tail-coverts also white. A black stripe on the cheeks. Tail rather short, and without white. Wings extending to half the length of the tail.

68

4. LANIUS STRIGA*.

BURONG KAPAS KAPAS. بوریگ کانس

Is a smaller and more delicately-formed bird than the last, six inches and a half in length, and has the tail proportionally longer. Bill considerably shorter, smaller, and slightly arched. The crown of the head and back are of a shining blueish-black. The wing-coverts are of the same colour, but edged and tipped with fine white. The remiges are black, with a very narrow line of white on their outer edges; the rectrices also black, with white tips. The rump and upper tail-coverts light blueish-grey; a shade of which colour also appears on the breast, while the throat and abdomen are white. The cheeks are white, crossed by a black stripe from the bill to the neck. In the female the colours have a browner tinge, are less defined, and the glossy black of the head and back is entirely wanting.

69

5. LANIUS DIVARICATUS.

BERIBBA BURONG LILIN. برید بوریگ لیلین

Tephrocorys

About seven inches in length; tail as long as the body, and forked; upper-feathers blackish; lower ones white. The bill is straight, hooked, and notched at the point. The colour above is grey, becoming brown on the wings; below white. A black stripe from the bill to the eyes.

Found at Singapore; but it is also known in Sumatra. The above is the description of the female.

* *Cebblephrys Striga*. Horsfield, p. 145.

6. LANIUS

70 6. LANIUS LEUCORHYNCHOS, *Linn.*

Is seven inches and a half in length, and of a thick form and make. Bill light blue, darker at the point, strong, conic, somewhat arched, slightly notched, and scarcely hooked at the point. This species is peculiar in having the wings as long as the tail, and the first feather the longest. In most others it is the fourth feather which is the longest. The back, head and throat are of a greyish-brown; wing- and tail-feathers darker; breast, abdomen, rump, upper and lower tail-coverts white. Sides of the abdomen, under the wings, grey. Legs blackish.

71 7. LANIUS CORONATUS.

BURONG J'RI. برغ جريه

This is rather a large species, being upwards of ten inches in length. The feathers of the head rise into a kind of cone behind, and two of them are particularly elongated, being two inches in length, and form a crest, which is directed upwards and backwards. The bill is black, strong, straight, compressed, hooked and notched at the point, roundly carinate above. Nostrils large and roundish. Five or six strong bristles at the angle of the upper mandible. The colour of the bird is an uniform chesnut-brown, which becomes darker on the feathers of the tail and crest. There is a remarkable white spot on each side of the neck, immediately above the shoulder. Tail about four inches long; the wings extend nearly half its length. Legs blue; claws very strong.

12 8. LANIUS MALABARICUS, *Lath.*

BURONG SAWEH. برغ ساوي

9. LANIUS

9. LANIUS INSIDIATOR*.

BIANG, or KALALOYANG. بياغ. كالالويغ

Also BURONG KLING. بورغ كليغ

Is allied to the *L. Malabaricus*, particularly by the form of its bill, which is regularly curved, slightly notched at the point, and not hooked, carinate and arched above, the curve of the lower mandible corresponding with that of the upper. The tail-feathers are nearly equal, none of them elongated as in the preceding. The whole bird is of a greenish-black, with a glossy metallic lustre, exhibiting according to the light changing shades of copper and green. The wings extend to about half the length of the tail, and have the three first feathers of about equal length. The bill and legs are black. The irids crimson.

The name of Burong Kling has been appropriated to this bird, because he is black and has red eyes; sure signs, it is said, of a bad character; and also because, when he settles on a tree, he generally leaves behind him the seed of the fig or other parasitic plant, which, growing, in time chokes and destroys the tree that nourished and protected it. Such is said to be the conduct of the men of Kling or Coromandel to those who receive them.

10. LANIUS MUSICUS.

MOORAI, or MOORAI KICHOU. موري كيچو

The Dial Bird, or *Turdus Mindanensis* of Gmelin and *Gracula saularis* of Linnæus; now with more propriety placed under *Lanius*.

It is one of the few singing-birds of India, and its note is pleasing. It is about eight inches and a half in length. In the

* *Turdus chalybeus*. Horsfield, p. 148.

female

female the feathers of the throat and breast are whitish mottled with grey and brown ; and several of the wing-coverts are also white with reddish-brown shades. All the colours are duller than in the male.

11. LANIUS MACROURUS.

TURDUS MACROURUS, *Gmel.*

CHANGCHOOI of the Sumatrans. چڦچوي

Nearly resembles the preceding, but has the abdomen of a bright ferruginous colour, while the rump and lower tail-feathers are white. The tail is considerably longer than the body ; in the former it is of about equal length. This species also wants the white spot on the wings. It is about ten inches and a half in length, and has even a finer and sweeter note than the last. They are, in fact, the Nightingales of the eastern islands. Both kinds throw up and spread their tails in the manner of the Wagtails.

12. LANIUS*.

76 Is also nearly related to the two preceding, but is much smaller, being only five inches and a half in length. It is of the same shining blueish-black above, but is white on all the underparts. The throat and abdomen are pure white, while the breast is shaded with a light grey. The rump is white, as in the preceding species, but the whole of the tail-feathers are black. The tail is rather shorter than the body. In all these three species the bill is straight, somewhat compressed, curved at the point, and moderately notched.

The two first are frequent in all the Malay countries ; the latter I have only very recently procured ; but it is probably not uncommon.

* *Muscicapa obscura.* Horsfield, p. 146.

13. LANIUS

13. LANIUS RUFICEPS.

This species appears to resemble the *L. olivaceus*.

It is about nine inches long, with a compressed rather curved bill, scarcely notched at the point: the curve of the lower mandible corresponds to that of the upper. Head of a light ferruginous colour. The upper parts of a light olive-brown, the lower grey, almost white under the chin. Wings a little longer than the body, the outer edge of their quill-feathers yellowish-green. The tail is about four inches in length.

14. LANIUS XANTHOGASTER.

Is a small but beautiful species, about seven inches in length.

Bill rather straight, compressed, hooked and notched at the point. Upper part of the body and head of an olive-grey; lower parts and sides of the forehead yellow. Wing-feathers black, edged with yellow. Upper tail-feathers black, lower yellow. A black line runs from the bill to the eyes, and there is a yellow spot on the wings. Bill and feet black. Nostrils covered with feathers.

TURDUS.

1. TURDUS COCHINCHINENSIS, Gmel.

BURONG DAUN. بونغ دان

This appears to be the same bird as the *T. Malabaricus*, 125 Gmelin, which latter name ought therefore to be cancelled.

The female is of an uniform bright green, wanting the yellow and black of the male, but having the blue spots at the base of the bill. There is a variety of this bird found in Sumatra which is nearly twice as large, and exhibits less brilliancy of colour.

colour. It is nearly of an uniform green, with the exception of the blue spots behind the bill, and the black face and throat. It wants the tinge of the wing and tail feathers. In the female the chin and face are of a light yellow, not black as in the male.

80

2. *TURDUS FLAMMEUS*.

MUSCICAPA FLAMMEA, *Gmel.*

81

3. *TURDUS ANALIS**. Two varieties.

BIRIBBA. بریه

The Biribba is said by the natives to elevate the feathers of the head when irritated.

90

4. *TURDUS DISPAR*†.

About seven inches and a half in length; yellowish-olive on the back, orange-coloured on the breast, shading into yellow to the vent. Head black; throat furnished with remarkable crimson feathers. Wing- and tail-feathers dark brown. Bill rather compressed, and very slightly notched. Irids red.

91

5. *TURDUS MELANOCEPHALUS*.

BURONG LILIN. برغ لیلین

Has considerable resemblance to the preceding, but is smaller, being six inches and a half in length. It is greenish-yellow on the back and breast, yellow on the abdomen and rump. Head of a glossy blueish-black. Tail-feathers yellow, with a black band near the end. Outer wing-feathers nearly black. Bill and legs black.

* *Turdus analis*. Horsfield, p. 147.

† *Turdus dispar*. Ibid. p. 156.

6. *TURDUS*

92 6. TURDUS.

Head, shoulders and breast blueish-grey, passing into white on the abdomen; back and wings yellowish-green; vent-feathers yellow. Outer wing- and tail-feathers deep brown or black. Bill and feet black. Irids reddish.

93 7. TURDUS SCAPULARIS*.

Seems to resemble the *T. chrysogaster*, except in being much smaller.

Head and back yellowish-green. Throat and breast golden-yellow. Vent-feathers white. Wing-feathers black, variegated with white, and tinged with green. Tail green and black.

94 8. TURDUS STRIGA.

Seven inches in length, with rather a thick heavy body. Back, wings, and crown of the head of a shining blue-black; underparts, forehead and neck greyish-white. Wing-coverts edged and tipped with white. Bill short, nearly straight, and scarcely notched. The colours of the female are much duller, and the upper parts are brown.

95 9. TURDUS AMBIGUUS.

A very small species, scarcely five inches in length; general colour blueish-grey, inclining to black on the head, breast, wing-feathers and tail, and nearly white on the belly and edges of some of the wing-feathers. There is a broad white stripe below the eyes. Bill short, curved, and without any perceptible notch.

* *Jora scapularis*. Horsfield, p. 152.

MUSCICAPA.

1. MUSCICAPA CÆRULEA, Gmel.

2. MUSCICAPA JAVANICA, Sparrm. Mus. Carls.

MOORAI KANDANG. موري كندڠ

3. MUSCICAPA RUFIGASTRA.

Dark blue above, passing into black on the wings and sides of the head. Under-parts ferruginous. Bill and legs nearly black.

4. MUSCICAPA LATIROSTRIS.

Is remarkable for the extreme breadth of its bill. It is a very small bird, less than five inches in length, of a light brown above, and whitish beneath.

MOTACILLA.

1. MOTACILLA INDICA? Gmel.

Resembles the *M. Indica*, but is white beneath.

2. MOTACILLA BISTRIGATA.

From six to seven inches in length. Tail as long as the body. Back greenish-brown; head dark grey; wing- and middle tail-feathers brown; breast and belly yellow, sometimes passing into white on the throat. Two feathers on each side of the tail white.

3. MOTACILLA GULARIS.

BURONG POODING. برونڠ پودينڠ

Brown above, yellowish beneath; head, wings and tail ferruginous; throat and breast marked with longitudinal black spots. Five inches in length.

4. MOTACILLA

183

4. MOTACILLA OLIVACEA.

Olive-brown above; throat and breast white; abdomen yellow; wings and tail brown, the latter with a black band near the tip. Is five inches and a half long.

104

5. MOTACILLA SEPIUM.

KACHICHI. كچيچي

Four inches and a half in length. Back, wings and tail dusky-green; under-parts white. Head ferruginous red; bill brown; legs reddish.

105

6. MOTACILLA FRONTALIS*.

The whole of the upper parts are a fine blue; the throat is nearly white; the belly of a dirty reddish-white. The forehead is black, and the eyes are encircled with the same. Irids nearly white. Bill red, straight, without notch, broader at the base. Legs dusky. Hind-toe remarkably long.

LOXIA.

166

1. LOXIA PHILIPPINA, Linn.

This species, well known by its curious hanging nests, is called by the Malays Tampooa, تمثرا; and by the Sumatrans Pintau, پينتر. It is the same as the Bayah of Bengal.

167

2. LOXIA MALACCA, Linn.

* *Sitta frontalis*. Horsfield, p. 162.

3. LOXIA

102

3. LOXIA ORYZIVORA, *Linn.*

GELATIK. گلاتیک. The Java Sparrow.

This species is comparatively rare in Sumatra.

103

4. LOXIA LEUCOCEPHALA.

PIPIT BONDOL. فیثت بندول

Is about the size of the *L. Malacca*, of a reddish-brown or chestnut colour, growing darker towards the tail, and becoming almost black on the abdomen. Head and neck almost white. Bill blueish; legs black.

104

5. LOXIA PRASINA, *Sparm. Mus. Carls.*

RANNAS. رانس

This is a very beautiful species, in some degree intermediate between *Loxia* and *Fringilla*.

It is of a bright green on the head, back and wings; blue on the throat and forehead; dirty green on the breast; red on the middle of the abdomen; and passing into a rusty yellow towards the vent. Tail-coverts and base of the tail-feathers vermilion, their extremity black, as are also the outer wing-feathers. The two upper tail-feathers are nearly twice as long as the rest. Bill of a fine black, conical, round at the base; both mandibles a little scolloped towards the middle, which is not very apparent when they are closed, as the lower is then received within the upper.

They are frequently seen in the rice-fields, and are great destroyers of the grain, as well as the other *Loxia*.

ALAUDA.

ALAUDA.

111

1. ALAUDA PRATENSIS, Linn.

LANCHA LANCHIA. لندجه ۲

Or, HAMBА PUYU. همب پويو

112

2. ALAUDA.

LETTI LETTI. لتي ۲

Smaller than the former; brownish above, yellow beneath.

113

HIRUNDO.

LAYANG LAYANG. لايع ۲

1. HIRUNDO ESCULENTA, Linn.

Little can be added at present to the accounts already given of this bird, and the edible nests for which it is so celebrated. There are caves in various parts of Sumatra to which these birds resort, but from want of care and management they are not productive.

114

2. HIRUNDO RUSTICA, Linn.

115

3. HIRUNDO URBICA.

CAPRIMULGUS.

116

CAPRIMULGUS EUROPEUS, Linn.

SANG SAGAN. سڠ سگن

Of this there are two varieties, one with much brighter and more marked colours than the other. They are very abundant in

in the neighbourhood of Bencoolen, and are always seen flying about in the evening. They make no nests, but lay their eggs on the bare ground.

COLUMBA.

POONAI. ثوني

119

1. COLUMBA JAMBU, *Gmel.*

POONAI JAMBU. وني جمبو

A most beautiful species, about ten inches in length, green above, pure white beneath. Head crimson, a stripe of deep cinnamon colour on the throat below the bill. A softened crimson spot on the middle of the breast. Tail-feathers equal, green, like the back, with whitish or cinereous tips. Lower tail-coverts fulvous. Bill yellow, nearly straight. A yellowish naked space round the eyes. Irids orange. Legs feathered nearly to the toes, which are red.

This species varies considerably at different ages. When very young it is almost entirely green. The head first assumes its red colour by degrees, the lower parts next become lighter, and it is not till the period of maturity that they acquire their full whiteness. The red spot on the breast is the last colour that appears; and it is doubtful whether the female ever has it.

112

2. COLUMBA JENEA, *Linn.*

PERGAM. فرگم

This is a very large and beautiful species, exceeding fifteen inches in length. The back and wings are of a brilliant deep green with a variable gloss of gold and copper. The head, neck and under-parts are of a claret-coloured grey. The tail
above

above is nearly of the same colour as the back, but with more of a blueish tint; below it is brown, and the lower tail-coverts are of a deep red-brown. The upper part of the tarsi is feathered; the feet are red. The bill is generally blueish, rather straight, hooked and gibbous at the point. Irids blue.

The female scarcely differs in colour from the male.

119

3. COLUMBA BADIA.

LAMPATTU, or PERGAM KALABU. لمقتو

A larger species than the preceding, to which it seems to have considerable affinity. It is sixteen inches in length, of a chestnut-red on the back and wing-coverts. The under-parts are of a blueish vinous tint, which extends round the neck, and becomes a blueish-grey on the head and cheeks. The wing-feathers are of a deep brown approaching to black; those of the tail, which are long and nearly equal, are almost black, with a cinereous tinge at the tips. The lower tail-coverts are white. Bill and feet red. Legs feathered nearly to the toes. There is no naked space round the eye, but the circle of the eyelids is bright red. The iris is white.

126

4. COLUMBA JAVANICA? Gmel.

POONAI TANNA. ثوني تانه

LIMOO-AN of the Sumatrans. لموان

Back and wings of a bright metallic-green, with a gloss of gold.

Lower parts of a vinous red, paler on the abdomen. The back of the head and neck are of a cinereous blue, becoming whitish on the forehead and temples. The wing- and tail-feathers are black. The bill and feet are red.

It is called Poonai Tanna, because it is generally seen on or near the ground, and rarely upon trees. They are caught by means of the following device: A small mat shed is erected sufficient to conceal the fowler; a space is cleared in front of it, and a tame Pigeon placed on it: a trumpet is then blown within the hut, and the wild Pigeons are attracted by the sound; when they alight they are taken by a running-noose at the end of a wand, which the fowler manages without being seen by the birds.

5. COLUMBA VERNANS, *Linn.*

POONAI. ثونى

THE COMMON GREEN PIGEON.

The female is nearly of an uniform green colour. In the male the head is of a blueish-grey, becoming vinous on the neck, and with an orange patch on the breast. There is no naked space round the eyes.

6. COLUMBA CURVIROSTRA, *Gmel.*

POONAI UBAR. ثونى اوبر

The female wants the chesnut colour on the back. There is a naked space about the eyes of a bright glaucous colour.

7. COLUMBA AMBOINENSIS, *Linn.*

8. COLUMBA TURTUR, *Linn.*

BALAM, or TERKOOKU. بالم تركوك

9. COLUMBA

125 9. COLUMBA BANTAMENSIS, *Sparm. Mus. Carls.* *Peacock Dove*

KATITIRAN. كتييران

About eight inches in length. The colour on the breast is of a vinous red, much less bright in the female than in the male.

The natives reckon three varieties of the Katitiran, differing in size. They are very generally kept tame, and, as well as the Balam or Turtle, are trained to fight with each other. Poonai is the generic name of the Doves which the Malays distinguish from the Balam or Turtle family by being less exclusively granivorous. The Dove is a subject of Malay poetry as much as it is of European.

PAVO.

126

1. PAVO CRISTATUS, *Linn.*

M'RA, or MARAK. مرغ

The common Peacock is a native of the Malay peninsula and of Java, but is not common near Bencoolen.

127

2. PAVO BICALCARATUS, *Linn.*

KUAOW CHIRMIN. كوار چرمين

This beautiful bird is frequent throughout the Malay peninsula, and is also known in Sumatra.

128

PHASIANUS.

1. PHASIANUS GALLUS, *Linn.*

AYAM UTAN, or BROOGA. ايم هوتن بروگ

This is the *Gallus Bankiva* of Temminck, and is frequent in the forests of Sumatra.

2. PHASIANUS IGNITUS, *Latham.*

TUGANG. توك

This species is larger than a Cock, and is of a fine steel-black colour. The lower part of the back is of a fiery ferruginous tint. The four middle tail-feathers are white, and there are narrow white streaks along the middle of the feathers on the sides of the breast. The head is ornamented with a crest of tufted feathers, and the naked cheeks are of a fine ultramarine blue. The legs are armed with long and remarkably strong spurs.

The female is smaller, and has none of the brilliant colours of the male. It has no crest, and the whole plumage is of a mixed brown and black; there are no white feathers in the tail, and the flame-coloured patch on the back is wanting. In the young of both sexes the colours are equally dull.

3. PHASIANUS ARGUS, *Linn.*

KUAOW. كواو

This magnificent bird, the pride of the Malayan forests, in elegance of form and richness of attire is perhaps unequalled in the feathered race. They are found in the deep forests of Sumatra, generally in pairs; they are said by the natives to make a galangan, *i. e.* to dance and strut about each other in the manner of the Peacocks. The plumage is too well known to require description. Their total length is frequently five feet, and the two middle tail-feathers exceed three.

In a Malay poem, descriptive of the birds of Sumatra, the Argus Pheasant is thus shortly but aptly characterised: "In the superb and many-coloured Kuaow, it is impossible to discover a single fault save one, the difficulty of pronouncing its name."

4. PHASIANUS

131

4. PHASIANUS ERYTHROPHthalmus.

MIRA MATA. میره مات

This species is as large as a common fowl. The plumage is black, with a blue and green gloss; on the back and wings it is finely undulated with white or grey. The wing-feathers are brown. The feathers of the tail, disposed as usual in two inclined planes, are of a bright rufous or ferruginous colour. The tail-coverts are tinged with purple or violet. The naked space on the cheeks is of a bright red. There are no wattles or crest. The bill is blackish and strong; legs blueish, and armed with strong spurs.

The female differs from the male in being entirely of a steel-black, without white undulations or rufous tail. In the young ones also the tail is black.

132

5. PHASIANUS RUFUS.

BURONG TRAB. برغ ترب

This, which does not appear to have been hitherto described, is larger than a common Cock, being about twenty inches in length. The plumage above is of a deep ferruginous colour, finely mottled with black. The feathers of the breast are also ferruginous, but each has a black band, and is edged with white, while those of the abdomen are principally white and dusky. The chin is nearly white. On the head is a crest, which lies backward, but can be elevated in some degree. The naked space on the cheeks is blue. The irids are red. The tail is not long, and is similar in colour to the back. The legs are sometimes reddish, sometimes blueish, and are unarmed, there being only a small tubercle in place of a spur. The female differs but little from the male.

TETRAO.

TETRAO.

1. TETRAO VIRIDIS, Gmel.

BENIOL. بنيرل

The male of this species has been described under the name of *Columba cristata*, but its proper place is under *Tetrao*. I am at a loss to perceive any good reason for placing it under *Phasianus*, as Cuvier has lately done.

It is rather smaller than the common Partridge. The whole plumage of the male is of a glossy deep green, approaching to black. The quill-feathers are brown mottled with black. On the head is an elevated crest of filiform feathers of a bright red brown colour, in front of which are a patch of white and a small fascicle of erect black bristles. The eyes are surrounded by a narrow circle of red imbricated scales; and there is a small naked red space behind them. Irids yellowish. Legs red, unarmed; hind toe without a claw.

The female differs from the male in having no crest, and in being of a grass-green colour with the exception of the head, which is nearly black. There are sometimes a few long plumose bristles on the forehead.

2. TETRAO OCELLATUS.

BURONG TROONG. بورغ ترغ

This beautiful species is of the same size as the preceding. The head, neck, breast and belly are of a bright rufous or ferruginous colour, barred on the sides with black. The back is black, with yellowish bands across the upper part, and marked behind with arrow-shaped spots of the same rufous colour as the lower parts. The wings are blackish, each covert marked with

with a round black spot. The tail is short and black, with rufous variegations. The top of the head is marked with black, and there is a black stripe over the ears. There is no naked space about the eyes, in which it agrees with the *Coturnices*, but the legs of the male are armed with blunt spurs, sometimes double. The bill is black; the irids yellowish-grey. The hind toe has only a very small horny tubercle in place of a nail, which approximates this species to the *T. viridis*.

135 3. TETRAO CURVIROSTRIS.

LANTING. لنتینگ

This approaches nearest to the *T. Gingicus*, but must be considered a distinct species.

It is larger than the common Partridge, and is remarkable by having the upper mandible arched, and much longer than the lower, often forming a nail-like hook at the point. The top of the head and neck are dark brown; the throat and cheeks rufous. The upper part of the breast is of a blueish-grey or lead-colour, which extends nearly round the neck; the back and upper part of the wings are brown variegated with black and grey, while the shafts of the feathers are yellowish. The lower part of the back, wing- and tail-feathers are dull yellowish finely mottled with grey, and marked with some black points. The abdomen is light ferruginous, passing into white behind. The bill is black; the legs whitish or lead-coloured, armed with short thick spurs. There is a naked space behind the eyes; irids orange. The female is a little smaller than the male, and the young ones want the lead-grey on the neck.

4. TETRAO

136

4. TETRAO SINENSIS, *Linn.*

PIKAU. نيكو

The male of this has been fully described; the female differs considerably, wanting entirely the white on the throat. Its upper parts are grey mottled with black, and the shafts of the feathers white. The throat is yellowish-grey; and the under-parts are the same, with black bars.

They are seen in flocks, often a hundred together.

27

5. TETRAO LUZONIENSIS, *Gmel.*

PUYU. فريو

This is a tridactylous species of Quail. The colours vary much in different specimens. The head, back and wings are varied with black, brown, and fawn-colour, of which sometimes the one, sometimes the other predominates. In full-grown birds the head is generally black, spotted with white, particularly at the sides, while the back is more of a red-brown, and the wings are black banded with white. The breast also varies, being sometimes ferruginous, but at a later period becoming marked with transverse bars of black and white. The abdomen is always of a ferruginous colour. The throat is black in the males, generally whitish in the females. Bill rather long, yellowish, which is also the colour of the legs. The irids are white.

These Quails are frequently kept tame, and the females are trained to fight with each other by the natives of the country. The superior courage of the females of this species has given rise to a common Malay proverb, in which a hen-pecked husband is compared

compared to a Puyu. The Puyu is always seen in pairs, never in flocks like the preceding.

I am at a loss to discover what species of Quail is intended by the *T. Suscitor*, or Indian Quail of Bontius. The Pikau and Puyu are the two generally known throughout the eastern islands. The latter is the most frequently domesticated, and becomes as tame as the common fowl. It is the one trained for fighting; and they will often combat with such fury as to kill each other. It is not however noisy, and in the wild state is only seen in pairs. The Pikau, on the contrary, has a loud clear note, is seen in flocks, will not become so tame as the other, and is not valued for fighting. It would seem as if the manners of both these were confounded in the account given of the *T. Suscitor*.

ARDEA.

138 1. ARDEA DUBIA, Gmel.

BANGOU SULA. باغو سوله

Or, BURONG KAMBING. بورغ كمبىڭ

Also, BURONG GAJA. بورغ گاجه

A small variety, with nearly black back and wings. The Argal is not so abundant in the eastern islands as in Bengal.

139 2. ARDEA ALBA, Linn.

BANGOU PUTI. باغو پوتى

140 3. ARDEA SUMATRANA.

A large subcrested Heron, with long slender neck and bill, of a blueish-grey, variegated with ferruginous; white on the chin.

141 4. ARDEA MELANOLOPHA.

Has a shorter thicker neck ; is of a chesnut colour mottled with black ; tail and crest black ; bill rather short. Belly variegated with white, black and brown. It is about eighteen inches long.

142 5. ARDEA CINNAMOMEA, *Gmel.*

BURONG KALADI. بونغ كالادي

Much smaller than the preceding ; subcrested ; of a bright chesnut colour, slightly mottled.

143 6. ARDEA PICTA. = 142

PUCHONG UDANG. پوچونغ اودانغ

Is about sixteen inches in length ; of a dark-brown colour, approaching to black, mottled with fawn and white. Legs and bill short, strong and greenish.

144 7. ARDEA JAVANICA*.

BURONG PUCHONG. بونغ پوچونغ

Is about fifteen inches in length, of a greenish-brown above, blueish-grey below. The feathers of the head are of a dark olive-green, and elongated into a pendent crest. The neck is rather short. The bill dusky and yellow. Lores green. Legs yellowish.

* *Ardea Javanica*. Horsfield, p. 190.

TANTALUS.

1. TANTALUS IBIS. VAR.

145 2. TANTALUS CINEREUS.

Is smaller than the preceding ; of a light-grey colour, with the exception of the abdomen and rump, which are white ; and the wing- and tail-feathers, which are black.

SCOLOPAX.

146 1. SCOLOPAX ARQUATA, Linn. VAR.

TEROK. تيروق

There are two varieties of this ; a large, called Terok Indo ayam, or Terok Gaja ; and a smaller, called Terok Padi.

147 2. SCOLOPAX GALLINAGO, Linn.

SEKADIDI. سكديدي

THE SNIPE.

148 3. SCOLOPAX CAPENSIS, Linn.

149 4. SCOLOPAX SUMATRANA.

KOONING KAKI. كونيغ كاكى

A small species, with long bill curved upwards. Grey above, white beneath. Quill-feathers blackish.

CHARADRIUS.

1. CHARADRIUS ŒDICNEMUS, Linn.

GADANG KAPALA. گدڠ کفال

Two varieties.

2. CHARADRIUS PLUVIALIS, Linn. VAR.

CHERULING. چرولینگ

3. CHARADRIUS HIATICULA, Linn. VAR.

BURONG BOOI. بورڠ بوي

RALLUS.

1. RALLUS GULARIS*.

AYAM AYAM. ايم ۲

Brown, with small white bands : lighter coloured beneath. Bill dirty red. Legs blackish.

2. RALLUS SUMATRANUS.

RUA RUA. رواق ۲

Nearly black above ; white beneath ; ferruginous near the vent. Bill blackish. Legs dusky.

3. RALLUS FASCIATUS.

Chesnut above ; breast and throat ferruginous ; abdomen transversely barred with black and white. Quill-feathers dark brown, with some white bars. Bill blueish-black. Feet red. Irids red.

* *Rallus gularis*. Horsfield, p. 196.

GALLINULA.

GALLINULA.

156 1. GALLINULA ORIENTALIS*.

This is probably only a variety of the *Gallinula Chloropus*.

STERNA.

157 1. STERNA STOLIDA, Linn.

158 2. STERNA CANTIACA? Gmel.

SAMAR LAUT. سامر لاوت

The prevailing colour is a delicate blueish-grey or lead; the head capped with black, with some white spots in front. Throat, cheeks and lower tail-coverts white. Wings much longer than the tail. Bill and legs dusky-red.

159 3. STERNA PANAYENSIS? Gmel.

Blackish-brown above, white beneath. A white stripe from the base of the bill to the eyes. Vertex black mixed with white; occiput, back of the neck and wings black. Tail of the colour of the body. Wings about the same length as the tail. Bill and legs black.

160 4. STERNA SUMATRANA.

A small species with short tail, and wings about the same length with it. The prevailing colour is white, tinged on the back, head and wing-coverts with light reddish-brown, and mixed with a few dark spots. A blackish crescent extends from eye

* *Gallinula orientalis*. Horsfield, p. 195.

to eye round the back of the head. Wing-feathers lead-grey, the first one nearly black. Lower parts snow-white. Tail of the same colour as the back.

PELECANUS.

161

1. PELECANUS PHILIPPENSIS, *Gmel.*

162

2. PELECANUS MANILLENSIS, *Gmel.*

LAMPIPI. لمثيبي

These two appear to be little more than varieties of the *P. Onocrotalus*. Further observations however are required to decide whether or not the differences they exhibit are sufficiently constant to entitle them to the rank of species.

163

3. PELECANUS LEUCOCEPHALUS, *Gmel.*

DANDANG LAUT. دنداڠ لوت

This appears to be sufficiently distinct from the *P. Aquilus*, though pronounced to be the same by M. Cuvier.

164

4. PELECANUS SULA, *Linn.*

THE BOOBY.

PLOTUS.

165

- PLOTUS MELANOGASTER, *Gmel.*

DANDANG AYER. دنداڠ اير

ANAS.

166
ANAS.

Of this genus the most common is a species of Teal, called Bilibi.

It is about twelve or fourteen inches in length, the back blackish, the feathers on the upper part tipped and edged with brown. Upper part of the wings dark-chesnut; quill-feathers black. Crown of the head dark-brown; neck cinereous, which colour passes into ferruginous on the breast and abdomen. The hind toe is free.

OF the remaining classes it would be tedious to enter here into a detailed account; the more particularly, as the largest proportion of the subjects are forwarded for examination and description in Europe, it being impossible to enter into minutiae in this country, without occasioning delay and detriment to other more pressing avocations. Drawings of the most remarkable have been made; and the specimens, for the most part preserved in spirits, and accompanied by a catalogue, will afford every facility for detailed examination at a distance. The following general account may therefore suffice for the present purpose.

AMPHIBIA.

In the first division of Amphibia, the species in the collection are not numerous. Of the Sea Tortoises, the *Testudo Mydas*, or Katong, کاتونگ, and *T. imbricata*, or Katong Kara, کاتونگ کاره, are the most common, and are found in most parts of these seas. The tortoise-shell of the latter is a considerable article of commerce at Singapore and other places.

Two species of fresh-water Tortoises are known by the names
of

of Labi لابي and Baning بانيح ; and the Land Tortoises are called Kúra Kúra كورا. One of those in the collection is probably the *T. serrata*.

Of *Lacerta*, the *L. Crocodilus*, or Buaya, بوي is abundant on all the coasts of these islands and at the mouths of rivers. It often attains to a great size. The next is a variety of the *L. Monitor*, called Biawak, بياوك, whose spots are of a bright yellow. It grows to be more than six feet in length, and often commits depredations in the poultry yards. A second variety is called by the Malays Biawak Poongor, and is chiefly distinguished by having a shorter tail. It is said not to eat flesh, like the preceding, but to live chiefly on leaves and fruit, and to reside mostly in the water.

Of the *L. Gecko* there are two kinds, one called Toké, توكي which is in the collection, and the other Gogok, گوك both which names are imitations of the cry of the animal. The people of Sumatra have no dread of them, but, on the contrary, sometimes keep them in their houses for the purpose of destroying vermin, and have no idea of their being poisonous.

There are two varieties, differing chiefly in colour and the arrangement of the spots, which appear to belong to the *L. scutata*, Linn. They are called Grooning گرونيغ by the Malays, and are said to change their colours, particularly in dying.

The Binkasa بيثكاس is a small long-tailed green Lizard.

The *Draco volans* (Chichak Terbang) چيچك تربح is frequent in the Malay islands, and is believed by the inhabitants to be very poisonous. All these animals are sufficiently known, not to require particular description.

Of *Rana* there are three species in the collection, called by the Malays Kodok botong botong, Kadok Kangkong, and Kadok Kessé. From the heart of the latter a poison is said to be prepared by the natives.

SER-

SERPENTES.

About twenty species are in the collection, some of which are new. Among those already well known, may be enumerated the *Coluber Naja*, or *Cobra di Capello*, called by the natives Ular mataharee and Ular Sindo, اولر متھاري, اولر سندق, which is frequently met with in the neighbourhood of Bencoolen. Mr. Marsden appears to have fallen into an error in stating that this species was not known here; but it is remarkable, that notwithstanding the existence of this and other poisonous snakes, we scarcely ever hear of instances of any person being bitten, a circumstance which the people ascribe to the power of a Kramat, or burial-place of a saint; but which perhaps may be accounted for from the thinness of the population. The *Cobra di Capello* of Sumatra is of a lighter colour than that of India, and the spectacles of the hood are less distinct. The fangs also are smaller.

The *Coluber Bucephalus* is also found in Sumatra.

Of the *Coluber gramineus* there are two varieties, not uncommon in the islands.

The *Coluber mycterizans*, Ular Daun اولر داون of the Malays, is one of the commonest snakes of Sumatra and the neighbouring islands, where it is chiefly observed on trees.

There is another species considerably resembling it, and called Ular Lidi, اولر ليدي, which has the power of elevating the scales of the neck, which are of a darker colour on their under surface, and thus producing a variegation of colours, which disappear when the animal is at rest, much in the manner described by Russel of the Botla Paseriki, Pl. 13. The scale immediately above the anus has a black line along its middle, giving it the appearance of being double.

One of the most remarkable snakes in the collection is a green

one, called by the Sumatrans Ular Poochook, اولر فوجتى, which has some resemblance to the *C. gramineus*, but is larger and much more venomous, being peculiarly distinguished by having two fangs on each side, of extraordinary length.

This species appears to be undescribed, and may be named *C. Sumatranus*.

It is about four or five feet in length, and rather thick. The head is large and obtusely triangular, with two large plates above each eye. The general colour is green; but the body is encircled by several irregular black rings, and the tail is of a reddish colour. Each scale on the body is edged with black. The fangs are above half an inch in length, white and slender, curved backwards. The number of abdominal scales is 184; of caudal 69. It is found in the forests, chiefly upon trees, and considered very dangerous.

Another snake, which appears to be new, was found at Singapore, and is related to *C. Dipsas* by the large dorsal scales. It is not venomous; is about six feet long, and of a pretty uniform reddish colour, becoming rather dusky on the head and light on the belly. There are several other snakes of less importance, among which the Ular Tanna, or Ground Snake, and Ular Chindi, marked with red spots along the sides, may be principally noticed.

The *Boa Constrictor* is occasionally found in Sumatra. One in the collection measured eleven feet and a half in length. A portion of the skin of another was brought to me from the interior of Sumatra, which, when dry, was upwards of twenty-one inches in circumference.

The *Acrochordus fasciatus*, or *Hydrus granulatus* of Schneider, is sometimes but rarely met with on the coasts of Sumatra.

Of *Hydrus* there are three species or varieties, having considerable

derable resemblance to each other, and therefore not easily discriminated.

PISCES.

In this department the collection is deficient, most of the specimens procured at Penang and Singapore having been lost, and time not having been yet afforded to complete the drawings. The following is a list of those most commonly found in the Straits of Malacca, and of which outlines of the form and characters have been preserved. A few only have yet been procured on the west coast of Sumatra.

Muraena . . . one species.

Trichiurus } Lepturus, *Lim.*
 } argenteus, *Shaw.*

Argenteus, Shaw.

Gadus, *Linn.* } *my*

Batrachus, *Schn.* } *Tau.*

Echeneis Neucrates.

Coryphæna Hippurus.

Gobius Schlosseri.

——— *niger*, *var.* and two other species, probably
undescribed.

Cottus one species.

Zeus one species.

Pleuronectes bilineatus.

———— macrolepidotus ?

————— Zebra, and another species.

Chaetodon . . seven species.

Sparus two species.

Labrus one species.

Sciæna four species.

Perca ten species.

Gasterosteus, one species.

Scomber Madagascariensis, and five other species.

Trigla volitans.

Silurus two species.

Platystacus anguillaris.

Salmo one species.

Esox becuna.

—— *belone*.

—— *marginatus*.

Exocætus volitans.

Polynemus . . two species.

Clupea eleven species.

Ostracion cornutus.

Tetrodon hispidus.

Diodon Hystrix.

Syngnathus Hippocampus.

Balistes biaculeatus, and another species.

Raia guttata.

—— *Thouiniana*, and eight other species.

INSECTA, VERMES, &c.

Seseral cases of insects, arranged according to the Linnean order, have been forwarded for examination in Europe, and more are daily collecting.

Upwards of fifty species of Cancer, many of which are probably new, are also forwarded for arrangement and description in Europe.

In these classes generally it may be observed, that no opportunity has been lost of increasing the collection ; but from their nature they do not admit of that minute examination in this country which they require, and where time can ill be spared from the new and more important subjects which continually press upon the attention.

The

The Zoophytes have not been unattended to, and will hereafter be particularly considered when leisure shall be afforded to make drawings and examine the subjects with more accuracy. The coast of Sumatra is particularly rich in Madreporæ, Milleporæ, Isis, Antipathes, Gorgoniæ, Alcyonia, and Spongiæ, &c.

APPENDIX.

Since closing the preceding parts of this account, a specimen of a very singular and rare animal, called by the Sumatrans Singapooa سینگاپووا has been procured, and also a new species of *Buceros* and one of *Strix*. The former appears to be the *Lemur Tarsier*, hitherto imperfectly known.

LEMUR TARSIER.

This animal is about six inches in length from the nose to the tail, which is about nine more. The hind legs are remarkably long, and the feet are very peculiar. The extremities of all the toes, on both the fore- and hind-feet, are dilated into a round, flat, fleshy callosity, which seems to enable the animal to hold with more advantage on the trunks of trees. At many of the joints of the feet and toes are similar callosities, but not so large. On the toes of the fore-feet there are no claws, their place being supplied by small scale-like processes occupying the centre of the upper surface of the rounded extremities of the toes. On the hind-feet three of the toes are in like manner unarmed; but the fore and middle toes are furnished with claws, which are sharp, somewhat curved, and stand nearly erect from the middle of the flat rounded extremities of the toes. The head is round, and the face broad;
the

the mouth is wide, and the lips singularly crenated within. The pupils of the eyes are so large, that scarcely any other part of the eye is visible; the ears are large, and project laterally. The whole face has a peculiar and singular aspect, the grinning mouth giving it an odd expression of risibility. The number of teeth has been differently stated by authors. In this specimen there appear to be four above and the same number below, of which the middle two are the longest in the upper jaw, and the outer two longer in the lower. The canines of the upper jaw are longer than those of the lower, and are followed by a tooth which, from its proximity to the canine and distance from the other molars, might almost be taken for a second canine: in the lower jaw there is a vacant space between the canines and the molars. The tail is nearly naked to within an inch of the extremity, where it is tufted with hair.

The animal has been forwarded in spirits to Sir Everard Home: it will therefore be unnecessary to enlarge more upon it here.

The name Singapooa appears to be given to it from some fancied resemblance to a Lion, Singa signifying a Lion, and Pooa (the generic name of the Scitamineous plants) being employed figuratively to denote smallness. It is related in the fables of the country, that the animal was originally as large as a Lion, but has degenerated in modern times to the size we now find it.

It is only seen in the depth of the forests, and that very rarely, once perhaps in two or three years, and is said to live on various kinds of wild fruits and young leaves. It is said to ascend trees by short leaps, and to produce only one young one at a time. The inhabitants have a superstitious dread of these animals, insomuch that, if they happen to see one upon any tree near their ladangs or forest rice-fields, they will immediately abandon them and
seek

seek another spot; otherwise they believe some misfortune will certainly befall them or their family.

167 BUCEROS COMATUS, R.

This species differs from all the others of the genus in the acuteness of the keel or arch of the upper mandible, which is also much shorter than usual, being scarcely six inches in length. The head and neck are covered with white feathers, more or less black at their roots. These feathers are wiry or filiform, and stand nearly erect, particularly on the top of the head, while on the forehead they are directed forwards over the crest of the bill and conceal it in part. On the sides of the head the feathers lie flat, and are directed upwards, so that the whole head looks as if surmounted by a stiff mane, or the furred crest of a helmet. The bill is of a dark horny colour, somewhat triangular, being broad at the base, and sloping to the point. The arch of the upper mandible is acutely carinate, and the crest, in my single specimen, not much elevated, equally carinate with, and parallel to the arch of the bill, and sloped off to it a little beyond the middle. It will require the examination of other individuals to ascertain whether the crest ever grows larger; but I think it cannot alter much. The irids are of a greenish-yellow. The back, wings and tail are of a dark brown, the belly of the same colour mixed with white. The wing- and tail-feathers are all tipped with white at their points. The legs are nearly black.

168 STRIX.

Of this genus a very large and probably new species has recently been procured in the neighbourhood of Bencoolen.

It is about two feet in length. The ground-colour is a light fawn, the feathers in the upper part being broadly shaded with

with dark brown along their middle; those of the back, wings and scapulars being moreover marked with two dirty white spots, which are sometimes confluent, forming a transverse stripe. On the under-parts each feather is marked with a narrow longitudinal black line. The wing- and tail-feathers are blackish, and banded with white and fawn-colour, their tips being white. The feathers on each side the head are elongated into horns. The eyes are surrounded by an imperfect circle of bristly feathers. The ears are rather large; the bill is black and hooked; the claws very strong and arcuate.

T. S. R.

FORT MARLBOROUGH,
June 1, 1820.