

L.L.C.

A 19th of January 1833

CATALOGUE
OF
THE MAMMALIA
AND
BIRDS

LIBRARY OF
CALIFORNIA

OBSERVED IN DUKHUN,
EAST INDIES :

BY
LIEUT. COL. W. H. SYKES, F.L.S., F.G.S., &c.

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A
CATALOGUE
OF
THE MAMMALIA
OBSERVED IN DUKHUN, EAST INDIES

BY
MAJOR W. H. SYKES, COR. MEMB. Z. S., &c.

*(Read before the Committee of Science and Correspondence of the
Zoological Society of London,
JULY 12, 1831.)*



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CATALOGUE
OF
THE MAMMALIA
OBSERVED IN DUKHUN.

Homo sapiens, L.—The people inhabiting Dukhun have the Georgian form of skull; their stature is low; the colour of the skin brown, with shades running into yellow white in the higher classes, and black in the lower. The females are not distinguished for fertility, the average number of births to a marriage being less than in Europe. More males are born than females, and in nearly four millions of people I found the proportions of females to males to range in different districts from eighty to ninety females to one hundred males.

Semnopithecus Entellus, F. Cuv. *Makur* of the Mahrattas.—This species is found in large troops in the woods of the Western Ghauts. It is not venerated by the Mahratta people, nor do they object to its being killed.

SEMN.? ALBOGULARIS, Sykes. *Semn.?* *suprà flavo nigroque, infrà albo nigroque, irroratus; gula albâ; artubus nigris: mystacibus latis aures penè obvelantibus; superciliarum pilis rigidis exstantibus.*

Hab. in Madagascar?

This species (a living individual of which is now in the Garden of the Society) appears to be new to science. It is only provisionally classed as a *Semnopithecus*, pending our inability to examine its posterior molars. The animal was obtained at Bombay, where it was believed to have been taken from Madagascar; and as it has some characters in common with the *Cercopitheci* (especially with the group of which the *Cerc. Sabæus* forms a part) and the *Semnopitheci* of India, it may ultimately prove to be a connecting link between the African and Asiatic monkeys. It wants the long limbs of the *Semnopitheci*; and although its tail is very long, it is not particularly thin.

The following is the description of the animal—a male. Canines remarkably long (nearly $\frac{3}{4}$ of an inch), slender, sharp; incisors very short and even. Head rounded and short. Ears very small, nearly rounded, and for the most part concealed in the long hair about the head. Eyes deeply seated, and shaded by a continuous arch of long hairs directed forwards. *Irides* broad; of a brown ochre colour. Hair forming a bunch on each cheek and resembling whiskers: no beard. Cheek pouches rudimentary only, not observable externally, even when filled, being concealed by the bushy hair of

the cheeks. Thumbs of anterior hands short and distant ; those of the posterior long. Whole of the upper surface of the animal of a mingled black and yellowish ochre colour, each hair being banded black and ochre ; the black prevailing on the shoulders, the ochre on the back and flanks. Under surface grizzled white and black. Anterior limbs uniform black ; posterior black with a little of the dorsal colour. Chin and throat pure white. Tail black, half as long again as the body.

The manners of this monkey are grave and sedate. Its disposition is gentle but not affectionate : free from that capricious petulance and mischievous irascibility characteristic of so many of the African species, but yet resenting being teased, and evincing its resentment by very smart blows with its anterior hands. It never bit any person on board ship, but so seriously lacerated three monkeys, its fellow passengers, that two of them died from the wounds. It readily ate meat, and from choice would pick a bone even when plentifully supplied with vegetables and dried fruits.

Macacus radiatus, Geoff. *Waanur* of the Mahrattas.—This well known species inhabits the woods of the Western Ghauts in small troops. A female brought to England by me and presented to the Society was capricious and mischievous in disposition, but of surprising courage and marked intelligence. It manifested considerable attachment to myself, which was less transient than I had anticipated, as it greeted me with evident demonstrations of joy on my visiting it in the Gardens, after the lapse of a month without seeing me. The natives of Western India educate this monkey to perform certain tricks.

Pteropus medius, Temm. *Wurbagool* of the Mahrattas.—This species is very numerous in Western India. Such variations are found in the colouring of different individuals in the same troop, that two or three species might be supposed to exist in it ; but the great mass so closely resembles the *Pter. medius* of M. Temminck, that I do not consider myself justified in describing the *Roussette* of Dukhun as a distinct species. The only persons in Western India who eat these bats are the native Portuguese, but I can personally testify that their flesh is delicate and without any disagreeable flavour. I have measured individuals with a greater length of body ($14\frac{1}{2}$ inches) than is given to the *Pter. Javanicus* of Dr. Horsfield.

Nyctinomus plicatus, Geoff. (*Vespertilio plicatus*, Hamilton ?)

This bat bears a very close resemblance to Dr. Horsfield's *Nyct. tenuis*.

RHINOLOPHUS DUKHUNENSIS, Sykes.—*Rhin. supra murinus, infra albido brunneus : auribus capite longioribus : antibrachio corpore longitudine æquante.*

This bat belongs to the same section as Dr. Horsfield's *Rhin. insignis*, but differs from that species in being much smaller ; in having the ears larger and more rounded ; the nose-leaf with the upper lobe concave, ridged beneath and revolute above ; and the front lobe oblong and notched in the centre. It differs from the *Rhin. crumeniferus*, Pér. and Le Sueur, (which is the *Rhin. marsupi-*

alis of M. Geoffroy's lectures, and the *Rhin. Speoris* of M. Desmarest,) in being much smaller, this species having the fore arm nearly half as long again as the Dukhun bat. The upper nose-leaf also is much more produced, and finally the colour of the fur in this species is reddish. The fore arm of the *Rhin. Speoris* as figured is 2 inches 2 lines long, and the body and head 2 inches 2 lines. In the Dukhun species the fore arm is only the length of the body. Expansion of its wings 10 inches.

Sorex Indicus, Geoff. *Cheechondur* of the Mahrattas.—These troublesome and disagreeable animals are very numerous in Dukhun, but much more so in Bombay. They do considerable damage in cellars by tainting the wine; and the passage of an individual over a vessel of water impregnates the whole mass with the scent of musk. I have had occasion to remark that the sebaceous glands in an old male were very large, and the odour of musk from them almost insupportable; while in an adult female the glands have been scarcely discoverable, and the scent of musk very faint. The Indian Shrew is as much carnivorous as insectivorous. Having killed the *Sorex Indicus* and *Sor. giganteus* in the same room, and seen them frequently together, I look upon them as of the same species.

Ursus labiatus, Blainv. *Aswail* of the Mahrattas.—The system of dentition of this well-known animal appears to be anomalous; for instead of six incisors in each jaw, I have never seen more than four in the upper and six in the lower; the two centre teeth standing a little in front of the line of the rest. I have had opportunities of examining many skulls of animals of very different ages, and possess specimens at the present moment, all of which agree in the number and position of the incisor teeth. One of these individuals is so young that I do not conceive that the deficient incisors can have fallen out; nor is there any appearance of dentition having existed in the places which they should have occupied. It might be deemed advisable therefore to remove this animal from the genus *Ursus*.

An *Aswail* brought to me from the woods when quite young, and which lived some time in my possession, fed by choice almost exclusively upon roast mutton and fowl; rejecting all fruits and vegetables. It ate, however, steeped grain (*Cicer arietinum*), and was very fond of buttermilk. These animals when taken young are readily instructed.

Lutra Nair, F. Cuv. *Juhl Marjur* or *Water Cat* of the Mahrattas.—The *Otter* of Dukhun differs only from the *Nair* in wanting the white spots over the eyes, in having a white upper lip, and in being somewhat larger; discrepancies which do not justify its being separated as a species.

CANIS DUKHUNENSIS, Sykes.—*Kolsun* of the Mahrattas.

Can. rufus, subtus pallidior: caudâ comosâ pendente: pupilla rotundatâ.

This is the *Wild Dog* of Dukhun, and differs from any wild species hitherto described. Its head is compressed and elongated; its nose, not very sharp. The eyes are oblique: the pupils round, *irides* light brown. The expression of the countenance that of a coarse ill-

natured *Persian Greyhound*, without any resemblance to the *Jackal*, the *Fox*, or the *Wolf*, and in consequence essentially distinct from the *Canis Quao* or *Sumatrensis* of General Hardwicke. Ears long, erect, somewhat rounded at the top, without any replication of the *tragus*. Limbs remarkably large and strong in relation to the bulk of the animal; its size being intermediate between the *Wolf* and *Jackal*. Neck long. Body elongated. Between the eyes and nose, red brown: end of the tail blackish.

From the tip of the nose to the insertion of the tail 33 inches in length: tail $8\frac{1}{2}$ inches. Height of the shoulders $16\frac{1}{2}$ inches.

These animals hunt in packs, and the specimen brought to me was found to have the stomach distended with the remains of a *Nylghau*.

None of the *domesticated Dogs* of Dukhun are common to Europe.

The first in strength and size is the *Brinjaree Dog*, somewhat resembling the *Persian Greyhound* in possession of the Society, but much more powerful. It is employed by the erratic people, the *Brinjarees*, in protecting their herds and in hunting. Its strength enables it to pull down the largest animals of the chase. It is courageous and intelligent.

The *Pariah Dog* is referable to M. Cuvier's second section. These animals are very numerous; they are not individual property, and breed in the towns and villages unmolested. Many of these dogs hunt very well by scent.

Amongst the *Pariahs* is frequently found the *Turnspit Dog*, long backed, with short crooked legs.

There is also a petted minute variety of the *Pariah Dog*, usually of a white colour and with long silky hair, corresponding to a common *Lap-Dog* of Europe; this is taught to carry flambeaux and lanterns.

The last variety noticed is the *Dog* with hair so short as to appear naked like the *Canis Ægyptius*. It is known to Europeans by the name of the *Polygar Dog*.

CANIS PALLIPES, Sykes.—*Landgah* of the Mahrattas.

Can. sordidè rufescenti albidus; dorso nigrescenti ferrugineoque vario; pedibus totis pallidè ferrugineis; caudâ sublongâ pendente.

This is the *Wolf* of Dukhun. Its head is elongated, and its muzzle acuminate: a groove exists between the nostrils. Eyes oblique: *irides* yellowish bright brown. Ears narrow, ovate, erect; small for the length of the head. Tail pendent, thin but bushy, extending below the *os calcis*. General colour of the fur a dirty reddish white or whited brown. Along the back and tail very many of the hairs are tipped black, mixed with others tipped ferruginous. The tail ends in a black tip. The inner surface of the limbs, the throat, breast and belly, dirty white. Legs pale. From the ears to the eyes reddish grey, with a great number of short black hairs intermixed; from the eyes to the nostrils, light ferruginous. The fur from the *occiput* to the insertion of the tail is two or three inches long, gradually shortening as it approaches the sides; hence all over the body very short and lying close.

The description is taken from two three-parts grown animals, which I had alive for a considerable time in my possession.

Length from tip of nose to insertion of tail 35 to 37 inches ; of the tail 11 to 12 inches ; the hair extending two inches beyond the measurement.

These animals are numerous in the open stony plains of Dukhun ; but are not met with in the woods of the Ghauts.

Canis aureus, Linn. *Kholah* of the Mahrattas.—The *Jackal* of Dukhun appears to be identical with the *Levantine* and *Persian Jackal*. They are numerous in Dukhun, and are terrible depredators in the vineyards. They are easily domesticated when taken young. I had a very large wild male and a domesticated female in my possession at the same time. The odour of the wild animal was almost unbearable. That of the domesticated *Jackal* was scarcely perceptible.

CANIS KOKREE, Sykes.—*Kokree* of the Mahrattas.

Can. supra rufescenti-griseus, infra sordidè albus ; caudæ comosæ apice nigro ; pedibus rufescentibus ; pupillâ elongatâ.

The *Fox* of Dukhun appears to be new to science, although it much resembles the descriptions of the *Corsac*. It is a very pretty animal, but much smaller than the *European Fox*. Head short ; muzzle very sharp. Eyes oblique: *irides* nut brown. Legs very slender. Tail trailing on the ground ; very bushy. Along the back and on the forehead fawn colour with hair having a white ring near to its tip. Back, neck, between the eyes, along the sides and half way down the tail reddish grey, each hair being banded black and reddish white. All the legs reddish outside, reddish white inside.

Chin and throat dirty white. Along the belly reddish white. Ears externally dark brown, and with the fur so short as to be scarcely discoverable. Edges of eyelids black. Muzzle red brown.

Length 22 and 22½ inches : of the tail 11½ to 12 inches.

Viverra Indica, Geoff., (*Viv. Rasse*, Horsf.) *Juwadee Marjur*, or *Civet Cat* of the Mahrattas.—There are two varieties of this species of *Viverra* in Dukhun ; one inhabiting the woods along the Ghauts ; the other the country eastward of the Ghauts. The animal of the Ghauts exactly resembles a specimen now in the Museum, and formerly in the Menagerie, of the Society ; the ground colour being much grayer, and the lines more distinctly broken into spots. The other variety resembles in its ferruginous tint the specimens of the *Rasse* presented to the Society by Major-General Hardwicke, but has the four black longitudinal lines or stripes on the sides of the neck more marked, and is considerably larger : two of my specimens from Dukhun being 27½ and 28½ inches long.

The Dukhun variety exhales a very powerful odour of musk, and the organs for the secretion of this drug are of considerable size.

The specimen presented by me to the Society died on board ship ; and some hundreds of capillary worms were found all over the body lying between the skin and the flesh.

Herpestes griseus, Desm. *Moongus* of the Mahrattas.—The *Moongus* of Dukhun is no doubt the *Herp. griseus* of M. Desmarest ;

but very considerably exceeds in size the published measurements of that species; my specimens measuring from 19½ to 20½ inches from the tip of the nose to the insertion of the tail, and the tail 15 to 16½ inches. This animal is decidedly plantigrade. In movement it appears to slide along the ground, rather than trot or canter. It is believed by the Mahratta people to have a natural antipathy to serpents, and in its contests with them to be able to neutralize the poison from the bite of the serpent, by eating the root of a plant called *Moongus-wail*; but no one has ever seen the plant. Probably they allude to the *Ophiorhiza Mungos*.

Paradoxurus Typus, F. Cuv. *Ood* of the Mahrattas.—This animal, which is by no means rare in Dukhun, is always lively, and a specimen in my possession was remarkable for the energy with which during the night time it chased round its cage. Its carnivorous propensities were so strong that it snapped off and devoured the heads of all fowls that incautiously approached its cage; but on board ship it was fed entirely on rice and clarified butter. In the stomachs of some individuals examined at Poona, I found fruit, vegetables, and *Blatta*.

Hyæna vulgaris, Cuv. *Turrus* of the Mahrattas.—*Hyænas* are numerous in Dukhun. They are susceptible of the same domestication as a dog. The animal given by me to the Society was allowed to run about my house at Poona; and on board ship it was in the habit of gamboling like a dog. It allowed persons to put their hands into its mouth without attempting to bite ill-naturedly. It was fed on rice and clarified butter.

Felis Tigris, L. *Puttite Wagh* or *Striped Tiger* of the Mahrattas.—Royal tigers are so numerous in the province of Khandesh, that 1032 were killed from the years 1825 to 1829 inclusive, as appears by the official returns handed to me. They are much less numerous in the collectorates of Poonah, Ahmednuggar, and Dharwar.

Fel. Leopardus. *Cheeta* of the Mahrattas.—This would appear to be the *Leopard* of M. Temminck's monograph of the genus *Felis*. It is a taller, longer, and slighter built animal than the succeeding, which I consider the *Panther*. It differs also in more of the ground colour being seen, and in the rose spots being much more broken: there are also other specific differences which the nature of this catalogue does not admit of my entering into. The natives of Dukhun consider the *Cheeta* and succeeding Cat as distinct animals. The *Cheeta* is rare. The *Panther* very abundant. I do not possess a specimen of the *Leopard*; the only one I was enabled to obtain having been given by me to the East India Company.

Fel. Pardus. *Beebeea Baugh* of the Mahrattas.—This species is so abundant that 472 were killed from 1825 to 1829 inclusive, in the four collectorates of Dukhun. It exactly resembles the animal figured as the *Panther of the ancients* in Mr. Griffiths's 'Translation of the Règne Animal.' It differs from the preceding in its smaller size, stouter make, darker ground colour, and in its crowded rose rings. The Society is in possession of several of these Cats;

amongst others a half-grown animal from the Dukhun, which I presented to it in December last.

Fel. jubata, L., and *Fel. venetica*, H. Smith. *Cheeta* of the Mahrattas.—These presumed species appear to me to be identical, the specific differences deduced from the hair originating in domestication. I have a skin of the wild animal with a rough coat, in which the mane is marked, while domesticated animals from the same part of the country are destitute of a mane and have a smooth coat. They are led about like greyhounds; but when carried out to hunt are placed upon a cart.

Fel. Chaus, Guld. *Mota Rahn Manjur* or *Larger Wild Cat* of the Mahrattas.—This species has a very extended geographical range, being found in Egypt, on the Caspian, in Persia, at Bangalore, and in Dukhun. It frequents bushy moist situations. The only addition I can give to the published descriptions of it, is that the *irides* are of a bright reddish light yellow.

Fel. torquatus, F. Cuv. *Lhan Rahn Manjur*, or *Lesser Wild Cat* of the Mahrattas.—This animal is a pest, from the damage it does in poultry-yards in Dukhun. It inhabits the grass roofs of houses, and thick hedges, and obscure places of our cantonments, shunning the face of man and the light, but is constantly on the alert at night. My specimens differ only from the *Fel. torquatus* figured in the third volume of the 'Histoire Naturelle des Mammifères' in the ears externally being tipped dark brown, and in having two narrow stripes behind the eyes instead of one. The sexes resemble each other in colour, marks and size.

Mus giganteus, Hardw. *Ghoos* of the Mahrattas.—This is the well-known *Bandikoot Rat*. In fully grown individuals none of the teeth are tuberculous. Two specimens in my possession exceed in size any yet described, measuring respectively $16\frac{7}{8}$ inches, and $14\frac{4}{5}$ inches on the body. Tail $11\frac{3}{4}$ and $11\frac{1}{4}$ inches.

Unlike the *common Rat*, these animals seem to be entirely granivorous. They burrow under walls, and make such considerable excavations as to injure the foundations of buildings.

Mus decumanus, Pall. *Chooa* of the Mahrattas.—This species, the well-known *Norway* or *Brown Rat*, abounds in Dukhun. It has been seen to migrate in thousands, destroying the crops in its march.

Mus Musculus, L.—This mouse is comparatively rare in Dukhun.

Mus ———. Bright light chestnut above, reddish white below, Tail much longer than the body: size of the common mouse. Found only in fields and gardens. I believe this species to be new, but until I can recover the specimens which I brought to England, I refrain from naming it.

SCIURUS ELPHINSTONII, Eykes.—*Shekroo* of the Mahrattas.

Sc. supra nitidè castaneus, infra rufescenti-albidus; caudæ dimidio apicali pallidè rufescente.

This very beautiful animal is found only in the lofty and dense woods of the Western Ghauts, and has rarely been seen by Europeans in Dukhun. It is of the size of the *Sc. maximus*, and the

general arrangement of its colours is the same; and as the *Sc. maximus* passes through some gradations of colour, the *Sc. Elphinstonii* might be supposed by casual observers to be a variety of that species. I am enabled to state, however, from personal observation, that the latter does not change its colour at any period of its life; specimens being in my possession of the most tender and mature ages.

Ears and whole upper surface of the body, half way down the tail, outside of the hind legs and half way down the fore legs outside, of a uniform, rich reddish chestnut. The whole under surface of the body, from the chin to the vent, inside of limbs and lower part of fore legs, crown of the head, cheeks and lower half of tail, of a fine reddish white, the two colours being separated by a defined line and not merging into each other. Feet of a light red. Forehead and down to the nose reddish brown, with white hairs intermixed. *Irides* nut brown. Ears tufted. Length of a male in my possession from the tip of the nose to the insertion of the tail 20 inches. Length of tail 15½ inches.

The cry of this animal is *Chook, chook, chook*; at first uttered slowly and then rapidly, and it is so loud as to have a startling effect.

I have dedicated this *Squirrel* to a very distinguished person and a zealous promoter of scientific research, the Hon. Mountstuart Elphinstone.

Sc. Palmarum, Briss. *Khurree* of the Mahrattas.—This well-known *Squirrel* is so abundant in gardens in Dukhun that I have repeatedly caught two or three at once by simply planting out under a tree, a common wire rat-trap, baited with a little flour. Nothing can be more light and elegant than the movements of these little creatures. I have witnessed some singular instances of affection for their young in this species, which my limits do not permit me to detail.

HYSTRIX LEUCURUS, Sykes.—*Sayal* of the Mahrattas.

Hyst. caudá albá.

This animal appears to be distinct from the European species, which it closely resembles in form and covering. It is nearly a third larger. All the spines and tubes of the tail are entirely white, which is not the case in the *Hyst. cristata*. The spines of the crest also are so long as to reach to the insertion of the tail. The ears are much less rounded, and the nails are shorter, infinitely deeper and more compressed, and with deep channels below. The white gular band is more marked; and, finally, the Asiatic species is totally destitute of hair, spines where wanting being replaced by strong bristles even down to the nails.

This species is abundant in Dukhun and is very good eating. Like the African *Porcupine*, when alarmed or irritated it shakes the tubes and spines of its tail violently, producing a startling noise. It stamps also with great energy with its hind feet; and when it assails an adversary it runs obliquely backwards, transfixing the foe with its spines.

Lepus nigricollis, F. Cuv. *Sussuh* of the Mahrattas.—This species of *Hare* is so common in the stony and bushy hills of Dukhun that I have had nearly a dozen brought to me, in the course of a few hours, by two or three men using nets called *Waggurs*.

Manis crassicaudata, Griff. *Kuwlee Manjur*, or *Tiled Cat* of the Mahrattas.—This species is very common in Dukhun. They are incapable of climbing trees, and invariably move with the fore-claws doubled under the feet, so that they appear to walk on their knuckles. They live on white ants, and lap water like a dog; and like a dog also they are infested by the large blue tick. Their only defence is in coiling themselves up, and so strong is the muscular power of the tail, that I have had two men attempt in vain to unroll an animal.

Sus Scrofa, L. *Dookur* of the Mahrattas.—*Wild Hogs* abound in Dukhun, and the males attain to a very great size. I am not satisfied that there is any specific difference between the European and Asiatic *Wild Hog*. Every village abounds with *Hogs*, but any property in them is equally abjured by individuals and the community. They live in the streets, are the public scavengers, and dispute with the *Pariah Dogs* the possession of offal matters thrown out from the houses. They are certainly of the same species as the *Wild Hog*. The flesh of the latter is eaten by almost all casts of Hindoos excepting the Brahmins and Buneas; but the flesh of the village *Hog* is not even touched by the carrion-devouring outcast the Mahr. The *village Hog* is of the same colour as the wild animal, mostly a rusty black, and the only variations are slate black or slate intense brown; but it is not above two-thirds of the size of the latter. Tail never curled or spirally twisted.

Equus Caballus, L. *Ghora* of the Mahrattas.—A fine breed of *Horses* exists on the banks of the Beema and Mahn rivers in Dukhun, supposed to have been improved by the Arabian blood. I have been assured by a Brahmin that as much as 10,000 rupees (1,000*l.*) has been paid by a native chief for an animal of this breed.

The variety of the horse called *Pony* by us, and *Tuttoo* by the Mahrattas, is sedulously propagated in Dukhun, on account of its great use in the transport of baggage. The *Tuttoo* is remarkable for its vicious propensities.

Equus Asinus, L. *Gudha* of the Mahrattas.—The *Ass* of Dukhun is very little larger than a good mastiff or Newfoundland dog, but I have not remarked any other difference between it and the ass of England. Wild asses do not exist in Dukhun, but they are said to be found in Katteewar.

Camelus Dromedarius, L. *Oont* of the Mahrattas.—The *Dromedary* is rarely bred in Dukhun, but is in very general use; indeed armies in India could scarcely move without its aid. The two-humped *Camel* is not known.

Moschus Meminna, Erxl. *Peesoreh* of the Mahrattas.—This beautiful little animal is found in considerable numbers in the dense woods of the Western Ghauts, but never on the plains. It readily

reconciles itself to confinement, and a friend of mine had a pair that bred yearly. Its *irides* are of a deep brown. The flesh is excellent eating.

Cervus equinus, Cuv. *Sambur* of the Mahrattas.—This animal, which abounds in the Ghauts of Dukhun and in Khandesh, is no doubt the same as the Malayan *Rusa* figured in Griffiths's 'Translation of the Règne Animal'. It wants the size of the *Cerv. Aristotelis* of Bengal, also called *Sambur* (not *Samboo*), and is not so dark in colour.

Cerv. Muntjak, Zimm. *Baiker* of the Mahrattas.—This beautiful species of *Deer* is a native of the Western Ghauts of Dukhun, and is never seen on the plains. An examination of the animal now in the Society's Gardens will afford satisfactory evidence that those who have hitherto figured the animal, in works on Natural History, have been unhappy in not representing its true character. It always runs with its head down and back arched. It is supplied with large suborbital sinuses which it uses in the manner of the *Ant. Cervicapra*.

Antelope Cervicapra, Pall. *Bahmunnee Hurn* of the Mahrattas.—This animal abounds on the plains of Dukhun, in flocks of scores, but is not met with in the Ghauts. The suborbital sinuses are capable of great dilatation, and the animal applies them to objects as if for the purpose of smelling.

ANT. BENNETTII, Sykes. *Ant. cornubus nigris, lyratis, apicibus levibus leviter introrsum antrorsumque versis, ad basin ultra medium annulatis (annulis 8-9); rufescenti-brunneus, infra albus, fasciâ laterali haud conspicuâ; fasciâ mediâ strigatâ ab angulo oculi ad oris angulum extensâ nigris; caudâ nigrâ.*

Kalseepee or *Black Tail* of the Mahrattas. *Goat Antelope* of Europeans.

This *Antelope* is found on the rocky hills of Dukhun, rarely exceeding three or four in a group, and very frequently solitary. It belongs to the same section as the *Ant. Dorcas*. Horns erect, slightly diverging from each other, bending slightly backwards at first, subsequently with their points bending forward. Ringed for $\frac{2}{3}$ of their length. The whole upper surface and outside of the limbs rufous or red brown. Under surface and inside of the limbs white. Tail black. A black patch on the nose. A black narrow streak from the anterior corner of each eye towards the angle of the mouth. Suborbital sinuses very small; in dried skins not observable; nor does the animal dilate them unless very much alarmed. Limbs long and slender; black tufts at the knees. Body light. The female has horns, but they are slender, cylindrical, and without rings. The buttocks present a heart-shaped patch of white. Unlike the *Ant. Cervicapra* it carries its tail erect when in rapid motion. It stands as high as the *Bahmunnee Hurn*, but has less bulk.

Ant. ———. *Brown Antelope.*

I possess the skin of a three-parts grown *Antelope*, a native of Dukhun, which lived for some months in my possession, but which its immature age prevents me from identifying. It had much the air of the *Ant. rufescens* and *Ant. silvicultrix*. It promised to have

been a stouter animal than the *Ant. Bennetti*. Its habits were quite different, and it was remarkable for the impunity with which it fed, like a goat, upon the poisonous *Euphorbia Tirucalli*. The whole animal was brown above, whited brown below. Horns cylindrical, pointed, without rings.

Capra Hircus, Linn. *Bukee* of the Mahrattas.

The goats in Dukhun are gaunt, stand high on their legs, have the sides much compressed, and are covered with long shaggy hair, which in most is black. Ears nearly pendent. *Irides* ochrey yellow or reddish yellow. Tail always carried erect in movement.

Ovis Aries, Linn.—*Sheep* are most extensively bred in Dukhun, and as many as 20,000 or 30,000 sheep and goats may be seen together in the uncultivated tracts. The Dukhun variety has short legs, short thickish body, and arched chaffron. The wool is short, crisp and coarse, and in nine out of ten sheep is black. Coarse blankets only are made of the wool. In most sheep there is a white streak or line from the anterior angle of each eye towards the mouth, and a white patch on the crown of the head. Away from our cantonments sheep are bought at 2s. per head.

Ant. picta, Pall. *Damalis risea*, H. Smith. *Rooee* of the Mahrattas. *Nylghaz* of the Persians.

This animal is an inhabitant of the Western Ghauts of Dukhun. The female is of a much redder slate hue than the male, and the young are absolutely rufous, changing and deepening to gray-slate with age.

Bos Taurus, var. *Indicus*. (*Bos Indicus*, Linn.) *Pohl* and *Byl* of the Mahrattas.

This animal, remarkable for its hump, is when early training to labour or to carriage nearly destitute of it. The *Brahmunny Bull*, of which the Society has a fine specimen, in its free state is scarcely able to move from obesity, but employed in the yoke or in carrying loads it would hardly be recognized as belonging to the same race. Park cattle are most extensively bred by the singular erratic people the Brinjarees, and an army rarely moves in the field without 15,000 or 20,000 bullocks to carry its grain. Dwarf cattle are not met with in Dukhun.

Bos Bubalus, Br. Male called *Tongah*; Female, *Muhees* of the Mahrattas.

The *Buffaloe* of Dukhun, which is the long-horned variety, is mostly bred in the Mawals or hilly tracts along the Ghauts. In those tracts much rice is planted, and the male *Buffaloe*, from his superior hardihood, is much better suited to resist the effects of the heavy rains, and the splashy cultivation of rice than the bullock. The female is also infinitely more valuable than the cow, from the very much greater quantity of milk she yields.

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A
CATALOGUE
OF
THE BIRDS

OBSERVED IN DUKHUN,

EAST INDIES :

BY
LIEUT. COL. W. H. SYKES, F.L.S., F.G.S., &c.

*(Read before the Committee of Science and Correspondence
of the Zoological Society of London, April 24,
Sept. 25, and Oct. 9, 1832.)*

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1832.

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CATALOGUE
OF
THE BIRDS

OBSERVED IN THE DUKHUN.

ORDER I. RAPTORES, *Ill.*

Fam. *Vulturidæ*, Vigors.—Genus *Vultur*, Auct. *Vulture*.

1. *Vult. Indicus*, Lath. *Vautour Indou*, Temm., Pl. Col. 26. *Mahah Dhoh* of the Mahrattas.

Irides deep brown. Length 42 inches, inclusive of tail of 10 $\frac{1}{4}$ inches. A stone half an inch in diameter was found in the stomach of one bird. The proportional length of the intestine to the body in these birds is 3 to 1, while in the *Neophron Percnopterus* it is 5.20 to 1. They congregate in flocks of twenty or thirty. On a dead camel, or horse, or bullock being thrown out on the plain, numbers of these *Vultures* are found assembled round it in an incredibly short time, although they may not have been seen in the neighbourhood for weeks before. Col. Sykes's specimens are no doubt referable to M. Temminck's species, although the latter bird is described as having whitish *irides*.

2. *Vult. Ponticerianus*, Lath. *Vautour Royal de Pondicherry*, Sonn., p. 182. pl. 104.

The *irides* are described by Shaw as red, while in two of Colonel Sykes's specimens they were of a deep brown, and in the third of a bright straw-yellow; but as the last had allowed itself to be captured by hand, had only grass and stalks of herbaceous plants in the stomach, and was evidently ill, the pale colour of the *irides* may be attributed to disease. Sexes alike in plumage. Mostly solitary: Colonel Sykes seldom, if ever, saw more than two together. The remarkable flatness of the crown, and very great width of the *cranium*, would seem to indicate

A

a generic difference between this species and the *Vult. fulvus* and *Bengalensis*. Length of bird 36 inches, inclusive of tail of 11 inches.

3. *Vult. Bengalensis*, Gmel. *Bengal Vulture*, Lath. *Geed* of the Mahrattas.

Of a smaller size, and with shorter and stouter legs than *Vult. Indicus*. Habits similar. Sexes alike. Length 30 inches, inclusive of tail of 10 inches. Colonel Sykes was induced to consider this species of Gmelin as distinct from *Vult. cinereus*, with which it has been classed by M. Temminck, in his *Manuel d'Ornithologie*, p. 4.

Genus *Neophron*, Sav.

4. *Neophron Percnopterus*. *Vultur Percnopterus*, Linn. *Rachamah*, Bruce, *Trav. Append.* p. 163.

Irides intense red brown. Gregarious. Sexes alike in adult birds; but non-adult birds vary in plumage from fuscous to mottled brown and white. These birds are always found in cantonments and camps. For the most part of the day they continue on the wing, soaring in circles. When on the ground, they walk with a peculiar gait, lifting their legs very high. They are efficient scavengers. Length 29 inches, inclusive of tail of 11 inches.

Fam. *Falconidæ*, Leach.

Sub-Fam. *Aquilina*. *Eagles*.

Genus *Haliaëtus*, Sav. *Sea Eagle*.

5. *Hal. Ponticerianus*. *Falco Ponticerianus*, Lath. *Aigle de Pondicherry*, Buffon, p. 136. Pl. Enl. 416. Called *Bruhmany Kite* by Europeans in India.

Irides reddish brown. It is seen constantly passing up and down rivers at a considerable height, but prepared to fall at an instant on its prey. Usually it seizes while on the wing, but occasionally dips entirely under water, appearing to rise again with difficulty. It is quite a mistake to suppose it feeds on carrion. Colonel Sykes has examined the contents of the stomach and craw of many specimens, and always found fish, and fish only, excepting on one occasion, when a crab was met with. Sexes alike. Female lays two large white eggs. Length, inclusive of tail, 19 to 21 inches: tail 9 inches.

Genus *Circaëtus*, Vieill.

6. *Circ. brachydactylus*. *Falco brachydactylus*, Wolf. *Aquila brachydactyla*, Meyer. *Falco Gallicus*, Gmel., p. 295. sp. 52. *Le Jean le blanc*, Pl. Enl. 413.

Colonel Sykes's specimen was a female. *Irides* deep orange at the external margin, passing to straw-yellow at the internal margin. The remains of a snake and two rats were found in the stomach. Length, inclusive of tail, 30 inches: tail 11 inches.

Genus *Aquila*, Auct.

7. *Aq. chrysaëta*. *Falco chrysaëtos*, Linn. *Golden Eagle*, Lath.
Colonel Sykes's specimen differs so slightly from the European bird as not to justify its separation.
8. *Aq. bifasciata*, Hardwicke and Gray's Ind. Zool.
Irides brownish yellow ochre. Sexes alike in plumage; non-adult birds paler than adults. A whole rat found in the stomach of one bird. A second bird was shot by Colonel Sykes at the dead carcass of a royal tiger; but it had not tasted the banquet, as the stomach was empty. Length, inclusive of tail, 30 inches: tail 11 inches.

Genus *Hæmatornis*, Vigors.

9. *Hæm. Bacha*. *Falco Bacha*, Daud. pl. 22. *Le Bacha*, Le Vaill., Ois. d'Afr. pl. 15.
Colonel Sykes does not possess a specimen, but he identified a specimen in the possession of a friend, shot in the Dukhun.

Sub-Fam. *Accipitrina*. *Hawks*.Genus *Accipiter*, Ray. *Sparrow Hawk*.

10. ACCIPITER DUKHUNENSIS. *Acc. supra fusco-brunneus, plumarum marginibus pallidioribus, capite postico nuchâque albo variegatis; subtus albus, pectore abdomineque notis subrotundatis grandibus, femorum tectricibus parvis, rufescentibus striatis; rectricibus fusco fasciatis, fasciis externarum confertioribus; tarsis subbrevibus.*
Irides stramineo-flavæ, margine gracili nigro circumdatæ.
Longitudo corporis $14\frac{1}{2}$ unc., caudæ $6\frac{1}{2}$, tarsi $1\frac{1}{4}$.
Sexes alike in plumage. Resembles the *Acc. fringillarius*, but differs in the longitudinal broad reddish patches on the breast, in less red on the sides, in a black narrow streak down the throat, in shorter wings, in the tail having six broad bars instead of four, in the male bird being as large as the European female, and finally in the shorter *tarsi* and centre toes.
11. *Acc. Dussumieri*. *Falco Dussumieri*, Temm., Pl. Col. 308. female.
Irides bright yellow, with an exterior narrow margin of black. Wings short. Tail long and narrow, being only the width of the upper feather. M. Temminck's specific characters are taken from a female, the male being unknown. Colonel Sykes has but one specimen, and that a female, the male being unknown to him. Length, inclusive of tail, $12\frac{1}{2}$ inches: tail $6\frac{1}{2}$ inches.

Genus *Astur*, Auct. *Goshawk*.

12. ASTUR HYDER. *Ast. corpore supra et subtus brunneo, dorso imo rufescenti, plumarum rhachibus fuscis, alarum tectricibus albo notatis; abdomine maculis albis fasciato; frontis fasciâ gracili guttureque albis, hoc lineis tribus latis fuscis, unâ in medio, cæteris utrinque ad latera, notato; femorum tectricibus crissoque albis, rufo fasciatis; caudâ supra rufâ, fasciis quinque gracilibus, ferè obsoletis, alterâque prope basin latâ, fuscis notatâ;*

remigibus fusco-brunneis ad apicem fuscis, pogoniis internis fasciis quinque fuscis gracilibus, alboque ad basin notatis.

Rostrum ad basin flavum, ad apicem nigrum. Pedes flavi; unguibus nigris. Longitudo corporis 16½—17 unc., caudæ 6½—7.

This bird has the three stripes upon the throat, and the aspect of *Falco trivirgatus*, Temm., fig. 303, but it is a much larger bird than M. Temminck's, and has otherwise characters in the plumage to entitle it to a specific distinction. A couple of mice were found in the stomach of one bird. Sexes alike in plumage. Female a little larger than the male.

Sub-Fam. *Falconina*.

Genus *Falco*, Auct. *Falcon*.

13. *Falco Tinnunculus*, Linn. *Kestrel*.

Irides intense brown. A very abundant bird in the Dukhun. Both sexes are absolutely identical with the European birds in their characteristic plumage. Colonel Sykes, nevertheless, mentions his being in possession of a male bird exactly like the female of the *Kestrel* in plumage and size, and, consequently, larger than the male *Kestrel*: and as this was shot from a party of five or six, perched on the same tree, and without a male *Kestrel* in company, he is induced to believe there is a distinct species, in which both sexes have the plumage of the female European *Kestrel*. Remains of rats, mice, lizards, grasshoppers, and a bird, were found in the stomach of several specimens. In one stomach the remains of no less than four lizards were met with.

14. *Falco Chicquera*, Lath. *Le Chicquera*, Le Vaill., Ois. d'Afr. pl. 22

Irides sanguineous. A common bird in the Dukhun. Sexes alike in plumage. Female usually the larger bird; but Colonel Sykes has a male quite as large as any female. A sparrow was found in the stomach of one male bird, and a young bat in the stomach of another.

Sub-Fam. *Buteonina*. *Buzzards*.

Genus *Circus*, Auct. *Harrier*.

15. *CIRCUS PALLIDUS*. *Circ. pallidæ griseus, alis dorsoque saturatioribus; subtus albus; uropygio albo, griseo fasciatim notato; rectricibus, duabus mediis exceptis, griseo alboque fasciatis; remigibus tertid quartâ quintâque fuscis.*

Irides viridi-flavæ. ♂. Longitudo corporis 19½ unc., caudæ 9½; ♀ corporis 21½; caudæ 10.

This bird has usually been considered the *Circ. cyaneus* of Europe; but it differs in the shade of its plumage (male and female); in the back-head of the male not being white spotted with pale brown; in the absence of dusky streaks on the breast; in the rump and upper tail-coverts being white barred with brown ash; in the inner webs of four of the tail-feathers not being white; and in the bars of the under tail being seven instead of four. The female resembles the female of *Circ. cyaneus*, but

the plumage is two shades lighter, the tail is barred with six broad fuscous bars, instead of four, and the tail-feathers are much more pointed. The remains of six lizards were found in the stomach of one bird. Colonel Sykes never saw these birds perch on trees. They frequent the open stony plains only. The sexes were never seen together.

16. **CIRCUS VARIEGATUS.** *Circ. capite suprâ, nuchâ, ptilis, pectoreque rufis, plumis in medio latè brunneis; dorso, scapularibus, remigibusque externis intensè brunneis; pteromatibus, remigibus internis, caudâque griseis; abdomine femorumque tectricibus rufis; caudæ tectricibus superioribus rufo albo brunneoque, inferioribus griseo saturatiore, notatis.*
 Longitudo corporis 21 unc., caudæ 10.

This is a very remarkable bird, and in its plumage seems to possess much of the united characters of the sexes of this genus, which are known generally to exhibit a marked difference. Colonel Sykes possesses but one specimen, a male.

Sub-Fam. *Milvina.*

Genus *Milvus*, Auct. *Kûe.*

17. **MILVUS GOVINDA.** *Milv. capite, nuchâ, corporeque subtis rufescenti-brunneis, plumis in medio fusco lineatis; dorso, alis, caudâque satis furcatâ saturatè brunneis, illarum pteromatibus pallidioribus, hac fusco obsolete fasciato.*
 Longitudo corporis 26 unc., caudæ 11.

This bird differs from the *Falco Cheele* in the want of white spots on the wing-coverts, white before the eyes, and white bar on the tail; in having the inner webs of the tail-feathers barred with numerous narrow bars, and in the shafts of the feathers about the head and neck, and generally underneath, being very dark. Sexes alike. Constantly soaring in the air in circles; watching an opportunity to dart upon a chicken, upon refuse animal matter thrown from the cook-room, and occasionally even having the hardihood to stoop at a dish of meat carrying from the cook-room to the house.

Fam. *Strigidæ*, Leach.—Genus *Otus*, Cuv.

18. **Ot. Bengalensis**, Franklin, Proceed. Zool. Soc. I. p. 115. *Goobur* of the Mahrattas.
Irides, external margin dark orange, gradually changing to yellow at the internal margin. Very common in the Dukhun. Generally found on the open rocky plains. A whole rat, (the tail hanging out of the mouth, and the head and most part of the body in the stomach, and partly decomposed,) was found in one bird: another had a crab, a third a *Pastor*; but the usual food appeared to be rats.

Genus *Strix*, Auct.

19. **Strix Javanica**, Horsf.
 Although at a superficial view this species appears to be the *barn-*

door Owl of Europe (*Strix flammea*), a comparison of several specimens with the European bird satisfies Colonel Sykes that Dr. Horsfield was right in separating it. Neither sex is unspotted white underneath, nor has the Indian species a white disc. Sexes alike, with the exception of the plumage of the female being a shade or two lighter than that of the male. Length, inclusive of tail, 17 inches: tail 5 inches. One of Colonel Sykes's specimens was captured alive while lying on its back on the ground, defending itself against the attacks of a body of crows. *Irides* reddish dark brown.

20. **STRIX INDRANEE.** *Strix capite suprâ pallidè brunneo, plumis albido marginatis; dorso imo, pteromatibusque rufescenti-brunneis, fasciis albis fusco marginatis notatis; dorso medio, ptilis, remigibus caudâque brunneis, his rufescenti fasciatis, hâc fasciis albidis gracilibus notatâ, ad apicem albo marginatâ; gulâ crissosque albescentibus; abdomine subrufo, brunneo graciliter fasciato; regione circumoculari nigrâ; disco rufo, brunneo marginato.*

Irides rufo-brunneæ. Longitudo corporis 21 unc., caudæ 9. Inhabits the woods of the Ghauts: rare. The specimen described is a young bird, and a female.

Genus *Ketupa*, Less.

21. *Ketupa Leschenaulti*, Less., *Traité d'Ornith.* p. 114. *Strix Leschenaulti*, Temm., *Pl. Col.* 20. *Scops? Leschenaulti*, Steph., vol. 13. p. 53.

A rare bird in the Dukhun. Independently of the naked legs of this bird, its aquiline aspect authorizes its separation from the genera with which it had been placed previously to M. Lesson's arrangement.

Genus *Noctua*, Sav.

22. *Noct. Indica*, Frankl. *Peenglah* of the Mahrattas.

Irides King's yellow. Sexes alike. Mice and beetles found in the stomach. An exceedingly noisy bird, and frequently heard chattering during the day-time in dense trees. The Mahrattas have a superstition respecting this species; and a class of persons, called from it *Peengleh*, live on the credulity of the people by pretending to consult it, and predict events. Length, inclusive of tail, 9½ to 11 inches: tail 2½ to 3 inches. Numerous in the Dukhun, and found in families of four or five.

ORDER II. INSESSORES, *Vigors.*Tribus FISSIROSTRES, *Cuv.*Fam. *Meropidæ*.—Genus *Merops*, *Linn.*

23. *Merops viridis*, *Linn.* *Indian Bee-eater*, *Lath.* *Guépier à collier de Madagascar*, *Buff.*

Fam. *Hirundinidæ*, *Leach.*—Genus *Hirundo*, *Auct.*

24. *Hirundo filifera*, *Steph.*, vol. 13. p. 79. *Hir. flicaudata*, *Frankl.*
Very abundant in Dukhun, and very beautiful, with its thread-like tail-feathers floating behind when in flight.
25. *HIRUNDO JEWAN.* *Mas.* *Hir. capite, dorso, tectricibus alarum, uropygio, rectricibus mediis fasciâque latâ pectorali metallicè nigris; corpore subtùs rosaceo-albo; gutture rufo; remigibus rectricibusque lateralibus fusco-nigris, his internè albo maculatis.*

Fœm. et jun. *Gutturæ magis rufo notato.**Irides intensè rufescenti-brunnæ.* Longitudo corporis 6 unc., caudæ 3 $\frac{1}{2}$.

This bird differs from the common English Swallow, (*Hir. rustica*), only in its somewhat smaller size, larger bill, and in the lateral tail-feathers not being equally elongated. The tail is less forked, and the rufous colour of the throat extends more on the breast.

26. *HIRUNDO CONCOLOR.* *Hir. fuliginoso-brunnea, sericea; caudâ æquali, rectricibus, externis mediisque exceptis, internè albo guttatis.*

Longitudo corporis 5 unc., caudæ 2 $\frac{1}{2}$.

These birds live on the banks of rivers. The plumage of the sexes does not differ.

27. *HIRUNDO ERYTHROPYGIA.* *Hir. metallicè nigra; uropygio collarique nuchali rufis; corpore subtùs albo, pallidè rosaceo tincto, plumis in medio graciliter brunneo striatis.*

Longitudo corporis 6 unc., caudæ 3.

This species appeared in millions in two successive years in the month of March on the parade-ground at Poona: they rested a day or two only, and were never seen in the same numbers afterwards.

Genus *Cypselus*, *Ill.*

28. *Cypselus affinis*, *Hardw.* *Allied Swift*, *Hardw.*

These birds are so rare in Dukhun that Colonel Sykes obtained only two specimens.

Fam. *Caprimulgidae*, Vigors.—Genus *Caprimulgus*, Auct.

29. *Caprimulgus monticolus*, Frankl. *Great Bombay Goatsucker*, Lath.
 30. *Caprimulgus Asiaticus*, Lath. *Bombay Goatsucker*, Id.
 31. **CAPRIMULGUS MAHRATTENSIS.** *Capr. pallidè cinereo-griseus, brunneo ferrugineoque undulatus variegatusque; thorace, remigibus tribus externis in medio, reatricibusque duabus lateralibus ad apices, albo notatis.*

Longitudo corporis $8\frac{3}{4}$ unc., caudæ $5\frac{1}{4}$.

This species differs from the two preceding in the prevalent grayness of the plumage, and in the absence of the subrufous collar on the nape of the neck.

Fam. *Halcyonidae*, Vigors.—Genus *Halcyon*, Swains. *Crab-eater*.

32. *Halcyon Smyrnensis.* *Alcedo Smyrnensis*, Linn. *Smyrna Kingfisher*.

In the description of this bird authors appear to have omitted to mention the chestnut small wing-coverts, and fine rich chocolate black medial wing-coverts. This species frequents well irrigated gardens and old wells rather than brooks or rivers. Grasshoppers were frequently found in the stomach.

Genus *Alcedo*, Auct. *Kingfisher*.

33. *Alcedo rudis*, Linn. *Black and White Kingfisher*, Edw., pl. 9.
 In all Colonel Sykes's specimens the male bird is distinguished from the female by a single or broken double black bar across the breast.
 34. *Alcedo Bengalensis*, Gmel. *Little Indian Kingfisher*, Edw., pl. 11.
 This species affects brooks: it is never seen in gardens.

Genus *Ceyx*, La Cép.

35. *Ceyx tridactyla*, La Cép. Buff., Pl. Enl. 778. fig. 2.
 This very beautiful bird differs from Buffon's drawing only in a purple spot terminating the ridge of the bill, and in a reddish spot on each side of it.

Tribus DENTIROSTRES, Cuv.

Fam. *Muscicapidae*, Vigors.—Genus *Muscipeta*, Cuv.

36. *Muscipeta Paradisi*, Cuv. Mas. *Musc. alba; capite cristato collogue violaceo-atris; pteromatibus remigibusque atris albo marginatis; rhachibus reetricum atris.*

Fœm. Dorso, alis, caudæque castaneis; corpore subtus albo; gutture, collo, pectore, nuchæque griseis, hac saturatiori; capite cristato violaceo-atro; remigibus fuscis.

Longitudo corporis $10\frac{1}{2}$ unc., caudæ 6.

Muscipeta Paradisi, Linn. *Paradise Flycatcher*, Lath. *Avis Paradisiaca orientalis*, Seba, 1. t. 52. f. 3. *Pied Bird of Paradise*, Edw., pl. 113.

37. *Muscipeta Indica*, Steph., vol. 13. p. 111. Mas. *Musc. corpore supra castaneo, subtus albo; pectore grisescenti; capite cristato colloque violaceo-atris.*
 Fœm. mari similis, reatricibus duabus mediis paulum elongatis. Statura præcedentis. *Irides* intensè rufo-brunnæ.
Avis Paradisiaca cristata, Seba, 1. t. 30. f. 5. *Upupa Paradisea*, Linn. *Promerops Indicus cristatus*, Briss. *Crested long-tailed Pie*, Edw., pl. 325.

These two birds have lately been erroneously considered to belong to one species. They were never found however by Colonel Sykes (who shot many,) in the same locality, nor did he observe any intermediate stage of plumage. The difference between the females of the two birds noticed above at once decides the distinction of species. The two central tail-feathers of the males (not of the females) are elongated to three or four times the length of the body: in one specimen they are $15\frac{3}{4}$ inches long. They feed principally on the ground, and on very minute insects.

There has been much confusion among the early descriptions of these birds. Linnæus describes the *Musc. Indica* as an *Upupa*; Brisson as a *Promerops*; and others as a *Pica*, *Icterus*, *Todus*, *Manucodiata*, &c. The specific name of *Indica* seems to have the right of priority over that of *castanea* given by M. Temminck, (See M. Kuhl's 'Systematic Catalogue of the Pl. Enluménées,' page 5,) as having originally been assigned to the bird by Brisson. Other well marked species, nearly allied to the two preceding, the males of which have similarly elongated tail-feathers, are found in Africa and China.

38. *Muscipeta flammea*, Cuv. *Gobe-mouche flammea*, Temm., Pl. Col., 263. Male and Female.

The cry of this bird is *wheet, wheet, wheet*. In the colours, the female has yellow where the male has scarlet. *Irides* brown-black.

39. *Muscipeta peregrina*. *Parus peregrinus*, Linn. *Crimson-rumped Flycatcher*, Lath.

Genus *Muscicapa*, Auct.

40. *Muscicapa melanops*, Vigors. Figured in Gould's 'Century of Himalayan Birds.'
 41. *Muscicapa Banyumas*, Horsf. *Banyumas Flycatcher*, Lath. *Gobe-mouche chanteur*, Temm.

42. *MUSCICAPA POONENSIS*. *Musc. supra cinereo-brunnea; subtus sordidè alba; mandibulâ superiori nigra, inferiori ad basin alba.*

Longitudo corporis $4\frac{4}{8}$ unc., caudæ $1\frac{6}{8}$.

These birds sit on the extreme twigs of trees, and dart on passing insects in the manner of the *Merops viridis*.

43. *MUSCICAPA CÆRULEOCEPHALA*. *Musc. cinereo-brunnea, cæruleo levitèr tincta; capite thoraceque luzulinis; pectore sublazulino; abdomine crissoque albis.*

Longitudo corporis $5\frac{7}{8}$ unc., caudæ $2\frac{1}{2}$.

44. **MUSCICAPA PICATA.** *Musc. suprà atra, subtùs sordidè alba; strigá a mento ad nucham utrinque extendente, fasciá alarum, uropygio, crisso, apicibusque rectricum duarum lateralium albis.*
Longitudo corporis 5½ unc., caudæ 2¼.

Genus *Rhipidura*, Vigors & Horsf. *Fan-tailed Flycatcher.*

45. *Rhipidura albofrontata*, Frankl.
46. *Rhipidura fuscoventris*, Frankl.

Colonel Sykes has shot both these birds in the same localities. The male has a very sweet note. He spreads and raises his tail over his head in hopping from bough to bough. Both species have the aspect and habits of the Australian bird *Muscicapa flabellifera*, Gmel. Irides deep sepia brown.

Fam. *Laniadæ*, Vigors.

Genus *Dicrurus*, Vieill.—*Edolius*, Temm.

47. *Dicrurus Balicassius.* *Corvus Balicassius*, Linn.
48. *Dicrurus cærulescens*, Linn. *Lanius Fingah*, Shaw, t. 7. p. 291.

Genus *Hypsipetes*, Vigors.

49. **HYPSSIPETES GANEESA.** *Hyps. griseo-brunnea, subtùs pallidior; alis remigibusque brunneis; capite suprà vix cristato metallicè atro.*

Longitudo corporis 10 unc., caudæ 4. Irides intensè rufo-brunneæ.

Tongue bifid, and deeply fringed; sexes exactly alike. Stony fruit found in the stomach. Neck short, and head sunk into the shoulders; flight very rapid. Found only in the dense woods of the Ghauts. The tongue is that of *Pastor*, the legs those of *Dicrurus*.

Genus *Collurio*, Vigors.

50. **COLLURIO LAHTORA.** *Coll. pallidè griseus; strigá frontali per oculos utrinque ad nucham extendente, alis, rectricibusque mediis nigris; corpore subtùs, fasciá alarum, scapularium marginibus, rectricibus externis, apicibusque duarum sequentium albis.*

Longitudo corporis 9½ unc., caudæ 4½.

This is the variety C. of *Lanius Excubitor* of Dr. Latham. It is closely allied to the North American and European *Lan. Excubitor*, but differs in the black bar extending across the forehead. The male has a sweet note.

51. *Collurio erythronotus*, Vigors, Proceed. Zool. Soc. I. p. 42.
This bird differs from the *Lan. Bentet* of Dr. Horsfield only in the crown being ash-coloured instead of black, and in the defined black bar across the forehead.

52. Jun.? *abdomine graciliter fasciato.*

Supposed young of the above. Length 7½ inches: tail 3¼.

53. *Collurio Hardwickii*, Vigors, Proceed. Zool. Soc., I. p. 42. *Bay-backed small Shrike*, Lath.

Genus *Lanius*, Auct.

54. *Lanius Muscicapoides*, Frankl. *Keroula Shrike*, Lath.
A rare bird. Colonel Sykes's specimen, a female, corresponds with Major Franklin's specific characters, and with his specimen, a male bird.

Genus *Graucalus*, Cuv.

55. *Graucalus Papuensis*, Cuv. *Corvus Papuensis*, Gmel. *Papuan Crow*, Lath.
Irides rich lake.

Genus *Ceblepyris*, Cuv.

56. *Ceblepyris fimbriatus*, Temm. *Echenilleur frangé*, ♀ Pl. Col.
Irides orange.
Colonel Sykes's birds, full grown males, correspond only to the female of *Ceb. fimbriatus*, and not at all to the male. Met with only in thick hedges on the plains.
57. *Ceblepyris canus*. *Le Grand Gobe-mouche cendré de Madagascar*, Pl. Enl. 541.
Irides intense red brown. Black ants only found in the stomach. This bird does not correspond with the later descriptions of *Ceb. canus* (*Muscicapa cana*), and the history of both these species of *Ceblepyris* requires further illustration. Found only in thick bushes. Specimens of both species from Bengal and Wynaad resemble those collected by Colonel Sykes.

Fam. *Merulidæ*, Vigors.—Genus *Oriolus*, Auct.

58. *Oriolus Galbula*, Linn. *Golden Oriole*, Lath. *Mango Bird* of Dukhun.
Very abundant in Dukhun just before the rains. It is called *Pawseh* by the Mahrattas, from being the precursor of the monsoon. It is a quarrelsome bird. *Irides* rich lake.
59. *Oriolus melanocephalus*, Linn. *Black-headed Oriole*, Lath.
Rare. Seen by Colonel Sykes only in the immediate neighbourhood of the Ghauts. Found also in Africa.
60. **ORIOLOUS KUNDOO.** *Or. corpore suprâ flavo-viridi; uropygio, crisso, pogoniis internis rectricum ad apices, abdominisque lateribus nitidè flavis; alis olivaceo-brunneis; corpore subtus sordidè albo, brunneo striato; rostro nigro.*
Irides rufo-brunneæ. Longitudo *Or. Galbulæ*.
Both sexes alike. Size of *golden Oriole*, and much resembling the female of that bird; but the bill is always black, and the *irides* reddish-brown instead of lake.

Genus *Turdus*, Auct.

61. *Turdus macrourus*, Gmel. *Long-tailed Thrush*, Lath.
Rare. Found in dense woods of the Ghauts.
62. *Turdus Saularis*. *Gracula Saularis*, Linn. *Pastor Saularis*, Temm. *Little Indian Pie*, Edw., pl. 181.
63. *Turdus cyanotus*, Jardine and Selby, pl. 46.
This bird has the tongue of a *Pastor*. *Irides* intense red brown.

Stony fruit and *Cicadæ* found in the stomach. Has the naked spot behind the eyes, but the bird has not the air of a *Pastor*. Inhabits the Ghauts.

Genus *Petrocincla*, Vigors.

64. PETROCINCLA PANDOO. *Petr. brunnescenti-cyanea*; *pteromatibus, remigibus, rectricibusque fuscis*.

Irides fuscae. *Statura* minor quàm *Turd. cyanei*.

This bird differs from the solitary Thrush of Europe (*Turd. cyaneus*, Linn.) in its smaller size, slighter form, brighter cœrulean tint, want of orange eyelids and white tips to the feathers. Found only in the dense woods of the Ghauts. Flight low and rapid. It appears to correspond with var. A. of Dr. Latham's solitary Thrush, vol. 5. p. 47.

65. PETROCINCLA MAAL. *Petr. supra griseo-brunnea, subtùs rufescenti-alba, plumis brunneo marginatis; crisso rufescenti, fusco-brunneo fasciato*.

Statura præcedentis.

This bird corresponds as closely as possible with what is stated to be the female of the *Turd. cyaneus*, and may by analogy be supposed to be the female of *Petrocincla Pandoo*; but it inhabits only the prickly milk-bushes (*Euphorbia tortilis* and *pentagona*) of the rocky plains of the Dukhun. Colonel Sykes never saw it in the Ghauts, nor in company with *Petr. Pandoo*.

66. *Petrocincla cinclorhyncha*, Vigors, Proceed. Zool. Soc. L. p. 172. Figured in Gould's Century of Himalayan Birds.

Genus *Timalia*, Horsf.

67. TIMALIA MALCOLMI. *Tim. pallidè grisescenti-brunnea, uropygio pallidiori, remigibus rectricibusque mediis saturatioribus, his fusco obsoletè fasciatis; subtùs albescens, leviter rosaceo tincta; frontis plumis subcyaneis, in medio albo striatis*.

Irides flavo-aurantiæ. *Rostrum* brunneum, *mandibulâ inferiori ad basin flavescenti*. *Longitudo corporis* 11½ unc., *caudæ* 5½.

Kokuttee of the Mahrattas. Congregate in flocks of ten or a dozen; fly low, slowly, and with difficulty: never cease chattering, and all at the same time. Food, grasshoppers and grain. Colonel Sykes has dedicated this species to Sir John Malcolm, G.C.B., who zealously aided his researches in India.

68. TIMALIA SOMERVILLEI. *Tim. rufescenti-brunnea; abdomine, crisso, dorso imo caudæque dilutè rufis, hac saturatiori obsoletè fasciatâ; remigibus brunneis; gutturis pectorisque plumis in medio subcyaneo notatis*.

Rostrum pedesque flavi. *Longitudo corporis* 9½, *caudæ* 4½. *Irides* pallidè flavæ.

A size less than *Tim. Malcolmii*, but shorter. *Irides* bright yellow: same habits as the preceding, but found in the Ghauts only; the latter on the plains. Colonel Sykes has dedicated this bird to Dr. William Somerville, F.R.S. in testimony of his respect.

69. *Timalia Chataræa*, Frankl. *Gogoye Thrush*, Lath.?
Habits of the preceding, but about half the size of *Tim. Malcolmii*.
Irides red brown; legs yellow.

Genus *Ixos*, Temm.

70. *Ixos jocosus*. *Lanius jocosus*, Linn. *Jocose Shrike*, Lath.
This is also the *Lanius Emeria* of Shaw. The male has a sweet note. Found only in the lofty woods of the Ghauts. *Irides* fuscous. Lives on fruit: sexes alike.
71. *Ixos Caser*. *Turdus Caser*, Linn. *Cape Thrush*, Lath. *Le Cou-rouge*, Le Vaill.
Inhabits gardens: destructive to fruit: without musical notes. Sexes alike.
72. *Ixos fulvicatus*. *Motacilla fulvicata*, Linn. *Sooty Warbler*, Lath. *Traquet noir des Philippines*, Buff.
Sir J. Anstruther's variety. Lath., vol. 7. p. 112. Female sooty-black or brown-black.

Genus *Pomatorhinus*, Horsf.

73. POMATORHINUS HORSFIELDII. *Pom. olivaceo-brunneus*; *strigâ superciliari, collo in fronte, pectore, abdomineque medio albis*.
Irides fusco-sanguinæ. *Rostrum* flavum. *Pedes* fuscî. *Longitudo corporis* $9\frac{1}{8}$ unc., *caudæ* $3\frac{1}{8}$.
Minute insects (Dipterous) found in the stomach. Birds remarkably shy, and only met with in the dense woods of the Ghauts. The note of the male is *hoot, whoot, whoot*, uttered slowly: the female answers *hooe*. The tongue and habits of this bird are those of a *Thrush* or *Timalia*. I have dedicated this species to a gentleman to whom science is deeply indebted.

Fam. *Sylviadæ*, Leach.—Genus *Jora*, Horsf.

74. *Jora Tiphia*. *Motacilla Tiphia*, Linn. Lath., vol. 7. p. 128.
var. A. Brown's *Illust.* pl. 36.
Dr. Horsfield's *Jora scapularis* appears to correspond with the female of *Jora Tiphia*. *Irides* gray.

Genus *Sylvia*, Auct. *Warbler*.

75. *Sylvia montana*, Horsf. *Prinia montana*, Swains.
Differs from the type of *Prinia* in its rounded tail. *Irides* fuscous.
76. *Sylvia sylviella*, Lath. *Lesser White-throat*.
Differs from the European bird only in the reddish tint of the white below.
77. SYLVIA RAMA. *Sylv. pallidè brunnea, subtùs albescens*; *caudâ obsoletè fasciatâ*.
Longitudo corporis $4\frac{1}{8}$, *caudæ* $1\frac{1}{8}$.
Sexes alike. A size smaller than *Sylv. montana*, and might be mistaken for it; but Colonel Sykes has shot them male and female, in several places in Dukhun, full-grown birds.

Genus *Prinia*, Horsf.

78. *PRINIA SOCIALIS*. *Prin. capite dorsoque intensè cinereis; remigibus reatricibusque rufo-brunneis, his prope apices fusco-fasciatis; subtùs rufescenti-alba, abdominis lateribus saturatioribus.*

Rostrum nigrum. Pedes flavi. Irides pallidè aurantiacæ. Longitudo corporis 5 $\frac{2}{5}$; caudæ 2 $\frac{1}{5}$.

Sexes alike in size and plumage. This species constructs the same ingenious nest, and has the same habits, same note (*tooee, tooee*), and feeds in the same manner, as the *Orthotomus Bennettii*.

79. *PRINIA INORNATA*. *Prin. suprâ pallidè cinereo-brunnea, strigâ superciliari corporeque subtùs albescentibus, abdominis lateribus crissoque rufescentibus; caudâ obsolete fasciatâ.*

Irides rufo-brunneæ. Rostrum brunneum; mandibulâ inferiori ad basin flavâ. Longitudo corporis 4 $\frac{2}{5}$ unc., caudæ 2 $\frac{2}{5}$.

Sexes do not differ in size or plumage. Habits of *Prin. socialis*. Both the above species are remarkable for a struggling flight, as if they experienced difficulty in making their way.

Genus *Orthotomus*, Horsf. *Tailor Bird*.

80. *ORTHOTOMUS BENNETTII*. *Orth. olivaceo-viridis; subtùs albidus; capite suprâ ferrugineo; caudâ elongatâ obsolete fasciatâ.*

Irides flavæ. Longitudo corporis 6 unc., caudæ 2 $\frac{7}{10}$.

Two central tail-feathers elongated beyond the rest for one inch, and two-tenths of an inch wide only. Sexes alike. This bird is very remarkable for the ingenuity shown in constructing its nest by sewing the leaves of trees together with cotton thread and fibres. Colonel Sykes has seen nests in which the thread used was literally knotted at the end. This species very closely resembles Dr. Horsfield's *Orth. Sepium*, but on a comparison of the birds they were found to have specific differences.

81. *ORTHOTOMUS LINGOO*. *Orth. olivaceo-brunneus, subtùs sordidè albus.*

Longitudo corporis 5 $\frac{9}{10}$ unc.; caudæ 2 $\frac{1}{10}$.

This species differs from the type of *Orthotomus* in the short tail, but has the characters of the genus sufficiently marked to be included in it. Sexes exactly alike in plumage. Principal food black ants.

Genus *Budytes*, Cuv.

82. *Budytes citreola*. *Motacilla citreola*, Lath. This is the variety A. of *Mot. citreola* of Dr. Latham, vol. 6. p. 330.

Length 6 $\frac{7}{10}$ inches: tail 2 $\frac{9}{10}$.

This bird so closely resembles the European species that Colonel Sykes has not ventured to separate it. It has the habits of a *Motacilla*, but its long hind claw sufficiently distinguishes it, and M. Cuvier has facilitated research in forming a genus for such *Wagtails* as have this claw.

83. **BUDYTES MELANOCEPHALA.** *Bud. olivaceo-viridis*; corpore subtùs nitidè flavo; capite, nuchá, reatricibusque nigris, harum duabus lateralibus albo marginatis; alis fuscis, plumis olivaceo-flavo notatis.

Irides intensè rufo-brunneæ. Longitudo corporis 6 $\frac{1}{2}$ unc., caudæ 3.

These are solitary birds, and are rarely found, excepting in the beds of rivers. In seven specimens four birds only were examined, and they happened to be males; so that Colonel Sykes is uncertain with respect to the female.

84. **BUDYTES BEEMA.** *Bud. olivaceo-viridis, subtùs flavus*; capite suprâ griseo; strigâ superciliari albâ; alis fuscis plumis flavescenti marginatis; caudâ atrâ, reatricibus duabus lateralibus albis.

Irides flavo-brunneæ. Statura præcedentis.

This bird very closely resembles *Budytes flava* of Europe, but differs in the shade of the upper plumage, in the hind claw being two-tenths of an inch longer, and in the base of the lower mandible being whitish. This is a solitary bird in beds of rivers: female not known.

Genus *Motacilla*, Auct.

85. *Motacilla variegata*, Steph., vol. 13. p. 234. *Pied Wagtail*, Lath., vol. 6. p. 320. pl. 114. *Mot. picata*, Frankl.

86. **MOTACILLA DUKHUNENSIS.** *Mot. dorso scapularibusque pallescenti-griseis, caudæ tectricibus ad apicem nigrescentibus*; capite suprâ, nuchâ, gutture, pectore, reatricibusque mediis atris; frontis fasciâ latâ, corpore subtùs; plumarum marginibus, alarum remigibus primariis exceptis, reatricibusque duabus lateralibus albis; remigibus fuscis.

Irides intensè rufo-brunneæ. Statura *Mot. alba*.

Sexes do not differ in size or plumage; but young birds have the black less pronounced. This is the most common and abundant *Wagtail* in the Dukhun, frequenting not only the beds of rivers, but the plains; and Colonel Sykes has seen it in his own garden frequently. It very closely resembles the *Mot. alba*, of Europe, but differs in being of a light slate or cinereous instead of a blackish cinereous, and in the wing-coverts and secondaries being edged with broader white. It is almost identical with the *Mot. alba* of the Northern Expedition.

Genus *Megalurus*, Horsf.

87. **MEGALURUS? RUFICEPS.** *Meg. olivaceo-brunneus, subtùs albescens, pectore brunneo striato*; capite genisque brunnescenti-rufis, strigâ superciliari rufescente; capitis dorsique plumarum rhachibus pallidioribus; rostro pedibusque luteis.

Longitudo corporis 7 $\frac{1}{2}$ unc., caudæ 2 $\frac{1}{2}$.

Wings short: tail equal, narrow. Female unknown. Black ants only found in the stomach. This bird has the air of the *Anthus Richardi* figured in the *Planches coloriées*, 101. Frequents the plains only, like a *Lark*.

Genus *Anthus*, Bechst. *Pipit*.

88. *ANTHUS AGILIS*. *Anth. olivaceo-brunneus*; *subtùs rufescenti-albescens, fusco-brunneo striatus*; *remigibus flavo-olivaceo marginatis*; *ungue postico subelongato, subcurvato*.
Irides fusco-sanguineæ. *Longitudo corporis* 6 $\frac{1}{2}$ unc., *caudæ* 2 $\frac{3}{4}$.

Found on open stony lands: female unknown. Closely resembles the *Titlark* of Europe. Its chief difference is in the hind toe.

Genus *Saxicola*, Bechst. *Wheatear*.

89. *Saxicola rubicola*, Temm. *Stone Chat*.
Irides intense brown. These birds were met with only in low scattered bushes. Caterpillars, flies and ants found in the stomach.
90. *SAXICOLA BICOLOR*. *Sax. atra*; *fasciæ alarum, uropygio, abdomine medio, crissoque albis*.
Rostrum pedesque nigri. *Irides fuscæ*. *Longitudo corporis* 5 $\frac{1}{2}$ unc., *caudæ* 2 $\frac{1}{2}$.

Female unknown. Three males were examined. Black ants, caterpillars and beetles were found in the stomach. Habits of the preceding.

91. *SAXICOLA RUBECULOÏDES*. *Sax. cinereo-brunnea, subtùs alba*; *gulâ thoraceque rufis*; *rectricibus mediis nigrescentibus, cæteris ad basin albis*.
Irides intensè brunneæ. *Longitudo corporis* 4 $\frac{7}{8}$ unc., *caudæ* 2.
92. *SAXICOLA ERYTHROPYGIA*. *Sax. fusco-brunnea*; *subtùs rufobrunnea, abdomine fusco vix striato*; *uropygio rufo*; *crisso rufo tincto*.
Statura Sax. bicoloris. Male unknown.

Genus *Phœnicura*, Jard. & Selb.

93. *Phœnicura atrata*, Jard. & Selb. *Indian Redstart*, *Iid*.
This bird is of the size of the *Redstart* of Europe, and has the same habits. It has a very peculiar manner of vibrating its tail when seated on a bough, as if it had an ague fit. A pair of these birds built their nest in an outhouse constantly frequented by Colonel Sykes's servants, and within reach of the hand. They had no alarms.
94. *Phœnicura Suecica*. *Motacilla Suecica*, Linn.
Not differing from the European bird. *Irides* deep brown. Length 5 $\frac{1}{2}$ inches; tail 2.

Fam. *Pipridæ*, Vigers.Genus *Parus*, Linn. *Titmouse*.

95. *Parus atriceps*, Horsf. *Mésange Cap-nègre*, Temm., Pl. Col. 287. f. 2.
96. *Parus xanthogenys*, Vigers, Proceedings Zool. Soc. I. p. 23. Figured in Gould's 'Century of Himalayan Birds.'

Irides sienna brown. Tongue divided into four short *lacinia* at the tip. Wasps, bugs, grass seeds, and the fruit of the *Cacuts Opuntia* were found in the stomachs of both species.

Tribus CONIROSTRES, Cuv.

Fam. *Fringillidæ*, Vigors.—Genus *Alauda*, Auct.

97. *Alauda Gulgula*, Frankl.

This is the common *Lark* of the Dukhun, with the habits and notes of the *Skylark* of Europe. When confined in a cage and shrouded from the light, it learns to imitate the notes of other birds, and even quadrupeds. The male is crested. It is called *Chundoola* in Dukhun. *Irides* sepia brown. Length $6\frac{7}{8}$ inches; tail $2\frac{1}{8}$. Food, grasshoppers.

98. ALAUDA DEVA. *Al. rufescenti-brunnea brunneo intensiori notata; corpore subtùs stridique superciliari rufescenti-albis, pectore brunneo striato; capite cristato brunneo striato; rectricibus brunneis rufo marginatis.*

Statura minor quàm præcedentis.

99. ALAUDA DUKHUNENSIS. *Al. corpore supra griseo-brunneo, plumis in medio fusco-brunneo notatis; subtùs albescens, pectore stridique superciliari rufescentibus; rectricibus fusco-brunneis, duabus lateralibus albo marginatis.*

Irides intensè brunneæ. Longitudo corporis $6\frac{3}{8}$ unc., caudæ 2.

Grass seeds only found in the stomach. Frequents stony plains.

Genus *Mirafra*, Horsf.

100. *Mirafra phœnicura*, Frankl.

This bird is characterized by the lightness, shortness, abruptness, and sudden ascents and descents of its flight. *Irides* yellow-brown. Granivorous.

Genus *Emberiza*, Auct. *Bunting*.

101. *Emberiza melanocephala*, Scop.

This native of Corfu is common to Western India. It appears in considerable flocks at the ripening of the bread grain *Jowaree* (*Andropogon Sorghum*) in December. *Irides* intense brown. Length $7\frac{3}{8}$ inches: tail 3 inches. Granivorous. Allied to *Emb. luteola*, Mus. Carls. vol. 4. t. 93.

102. *Emberiza hortulana*, Linn. *Red-brown Bunting*.

This, although not absolutely identical, is so closely allied to the European bird that Colonel Sykes cannot separate it. *Irides* intense brown. Length $7\frac{1}{8}$ inches; tail 3 inches. Grass seeds only found in the stomach. Bird solitary.

103. *Emberiza cristata*, Vigors, Proceed. Zool. Soc. I. p. 35.

Length $6\frac{1}{2}$ inches: tail $2\frac{7}{8}$ inches. Rare in Dukhun, and found only on rocky and bushy mountains. Female of a uniform sooty brown. Grass seeds only found in the stomach. Native of China and Nepal as well as Dukhun.

104. EMBERIZA SUBCRISTATA. *Emb. supra intensè brunnea, plumis brunneo pallidiori marginatis; subtùs pallidè brunnea, fusco*

C

striata; alarum plumarum rectricumque lateralium marginibus, rectricibusque duabus mediis castaneis; capite subcristato.

Irides intensè brunneæ. *Rostrum* rufo-brunneum. *Longitudo corporis* 6 $\frac{1}{10}$ unc., *caudæ* 2 $\frac{1}{10}$.

Sexes alike in size and plumage. Birds rare and solitary, and found only in the open spaces on high mountains. This bird is pronounced in Europe to be the female of *Emb. cristata*; but setting aside the fact of both sexes of each bird being in the present collection, their localities are different, and they were never seen together by Colonel Sykes.

Genus *Linaria*, Bechst. *Linnet*.

105. *Linaria Amandava*. *Fringilla Amandava*, Linn.

These beautiful little birds, so common in Goojrat, are rare in Dukhun.

Genus *Ploceus*, Cuv. *Weaver Bird*.

106. *Ploceus Philippensis*, Cuv. *Philippine Grosbeak*, Lath.

The *Weaver Bird* is very common in Dukhun, and there are few wells overhung by a tree where their nests are not seen pendent. They live in small communities, and are very noisy in their labours. They associate so readily with the *common Sparrow* that at the season of the falling of the grass seeds Colonel Sykes, in firing into a flock of *Sparrows* on the grass plats in his own grounds, killed as many *Weaver Birds* as *Sparrows*. Fruit of the *Ficus Indica* and grass seeds have been found in the stomach. *Irides* intense brown.

107. *Ploceus flavicollis*. *Fringilla flavicollis*, Frankl.

This bird has so nearly the bill, tongue, *irides*, size and aspect of *Ploc. Philippensis*, that Colonel Sykes has considered it a *Ploceus*. Grass seeds and a few grains of rice found in the stomach. Very rare in Dukhun.

Genus *Fringilla*, Auct. *Finch*.

108. *Fringilla crucigera*, Temm., Pl. Col. 269. fig. 1. *Duree Finch*, Lath.

This minute bird has the strange habit of squatting on the high roads and almost allowing itself to be ridden over ere it rises. Smaller than a *Sparrow*. *Irides* red brown. Coleopterous insects, maggots, and seeds of *Panicum spicatum* found in the stomachs of many specimens. This bird has the straight hind claw of a *Lark*, and should therefore neither be classed as a *Fringilla*, agreeably to M. Temminck, nor as a *Passer*, agreeably to Brisson. Its habits also separate it from both these genera. M. Temminck in his Plate has placed it on a twig, but it never perches.

Genus LONCHURA.

Rostrum forte, breve, latum, altitudine ad basin longitudinem æquans; *mandibulis* integris, superiori in frontem angulariter extendente, cumque eo circuli arcum formante.

Alæ mediocres, subacuminatæ; *remigibus*, 1mâ brevissimâ subspuriâ, 2dâ 3tiâ 4tâque ferè æqualibus longissimis.

Cauda gradata, lanceolata; *rectricibus* mediis cæteras paullò longitudine superantibus.

Pedes mediocres, subgraciles.

The peculiar spear-head form of the tail, and the ridge of the upper mandible and the forehead, forming a segment of the same circle, together with the habits of the following species, afford sufficient characteristics to justify their separation from the genus *Fringilla* of M. Temminck. The *Gros-bec longicorne* of the Pl. Col. 96. (*Emb. quadricolor*, Lath.) belongs to the same group.

109. *Lonchura nisoria*. *Fringilla nisoria*, Temm. *Gros-bec épervin*, Pl. Col. 500. Fig. 2.

Found only in the Ghauts. Grass seeds in the stomach. Length 5 $\frac{1}{2}$ inches: tail 1 $\frac{3}{4}$ to 2 inches. Sexes alike.

110. *LONGCHURA CHEET*. *Lonch. pallidè cinnamomeo-brunnea*; *corpore subtùs uropygioque albis*; *remigibus rectricibusque intensè brunneis*.

Fœm. *coloribus minùs intensis*.

Irides intensè rufo-brunneæ. *Longitudo corporis* 5 $\frac{1}{2}$ unc., *caudæ* 2.

Tail lanceolate; central feathers longer than the rest, and ending in a point. Sexes alike. These birds live in small families. Colonel Sykes has frequently found them in possession of the deserted nests of the *Ploceus Philippensis*; but their own nest is a hollow ball of grass. Ten white eggs, not much larger than peas, were found in a nest. The cry of the bird is *cheet, cheet, cheet*, uttered simultaneously by flocks in flight.

111. *Lonchura leuconota*. *Fringilla leuconota*, Temm. *Gros bec leuconote*, Pl. Col. 500. fig. 1.

Found only in the Ghauts. Length 4 $\frac{3}{4}$ inches, inclusive of tail 1 $\frac{3}{4}$ inch. Sexes alike. Grass seeds only found in the stomach.

Genus *Passer*, Auct.

112. *Passer domesticus*, Briss. *Fringilla domestica*, Linn.

On submitting the *Indian Sparrow*, male and female, to a rigid comparison with *Sparrows* shot in the Regent's Park, they were found to be absolutely identical.

Fam. *Sturnidæ*, Vigors.—Genus *Pastor*, Temm.

113. *Pastor tristis*, Temm. *Gracula tristis*, Lath.

The *irides* are red brown, and remarkable for being studded on the external margin with regularly arranged yellowish-white specks. Sexes alike: omnivorous: quarrelsome, noisy. Length 11 $\frac{3}{8}$ inches, inclusive of tail of 3 $\frac{1}{8}$.

114. *PASTOR MAHRATENSIS*. *Past. suprâ griseo-niger, remigibus caudâque saturatoribus*; *capite genisque atris*; *corpore subtùs subrufescenti-griseo*; *crisso pallidiori, plumis albo marginalis*. *Rostrum pedesque flavi*. *Irides* pallidè griseæ. *Longitudo corporis* 9 $\frac{1}{2}$ unc., *caudæ* 2 $\frac{3}{8}$.

- Sexes alike. Found only in the Ghauts. Stony fruit in the stomachs of three birds. Resembles *Past. tristis*, but is a size less, possesses no crest, and has gray *irides*.
115. *Pastor roseus*, Temm. *Turdus roseus*, Linn.
Irides intense red brown. Tongue bifid and fringed; not quite so much so as *Hypsipetes Ganeesa*. These birds darken the air by their numbers at the period of the ripening of the bread grains, *Andropogon Sorghum*, and *Panicum spicatum*, in Dukhun, in December. Colonel Sykes has shot forty or fifty at a shot. They prove a calamity to the husbandman, as they are as destructive as locusts, and not much less numerous.
116. *Pastor Pagodarum*, Temm. *Turdus Pagodarum*, Gmel. *Gracula Pagodarum*, Shaw, vol. 7. p. 471. *Le Martin Brame*, Le Vaill., *Ôis. d'Afr.* pl. 95. tom. 2.
Irides greenish white. Length $8\frac{1}{4}$ inches, inclusive of tail of $2\frac{1}{4}$ to 3 inches. Sexes alike. These birds are great frequenters of the *Ficus Indica*, *Ficus religiosa*, and *Cactus Opuntia*, for their fruit. Insects also are found in the stomach. Birds lively and elegant in flight.

Fam. *Corvidæ*, Leach. Genus *Corvus*, Auct.

117. *CORVUS CULMINATUS*. *Corv. supra splendenti-ater; subtus fuliginoso-ater; rostri culmine elevato.*
 Longitudo corporis 14 unc., caudæ 7.
 Smaller than the European Crow. These birds are remarkable for their audacity. Bill with a considerable *culmen*.
118. *Corvus splendens*, Vieill. *Common Crow* of India.
 This is no doubt Vieillot's *splendid Crow*, but in the thousand Colonel Sykes has met with he never saw the plumage ornamented with the pronounced green and blue in Vieillot's plate. Has the noisy, impudent, and troublesome habits of the English Crow. Length 18 inches, inclusive of tail of 6 inches. A wounded Crow was put into the cage with a *Viverra Indica*, in the expectation that the latter would make a meal of it. The Crow however stood so vigorously on the defensive, that a treaty of peace ensued, and they lived amicably together for several weeks, the Crow partaking of the food of the *Civet* until it died from its wound.

Genus *Coracias*, Linn. *Roller*.

119. *Coracias Indica*, Linn. *Coracias Bengalensis*, Steph. *Blue Jay* from the East Indies, Edw., pl. 326.
 Very common in Dukhun. Called *Tas*, from its note, by the Mahrattas. Sexes do not differ in size or plumage. *Irides* intense red brown. A grasshopper $2\frac{1}{2}$ inches long was found in the stomach of one bird. Length $13\frac{1}{4}$ inches, inclusive of tail of $4\frac{1}{4}$ inches.

Fam. *Buceridæ*, Leach.

Hornbills are by no means rare in Dukhun, but from accident Colonel Sykes had not a specimen to produce.

Tribus SCANSORES, Auct.

Fam. *Psittacidae*, Leach.—Genus *Palæornis*, Vigors.120. *Palæornis torquatus*, Vigors.

Appear in considerable flocks in Dukhun, and are very destructive to the crops, particularly to the *Carthamus Persicus*. Fond also of the fruit of the *Melia Azadirachta*. The female differs from the male only in wanting the collar, and has in consequence been considered to belong to a different species. The Mahrattas call the bird *Ragoo* and *Keeruh*. Length $17\frac{1}{2}$ inches, inclusive of tail of $9\frac{1}{2}$ inches.

121. *PALÆORNIS MELANORHYNCHUS*. *Pal. viridis, corpore subtus, notâ circumoculari, dorsoque imo pallidioribus; capite, collo in fronte nuchâque, columbino-canis; rostro, torqueque collari latâ nigris; fronte, remigibus, reatricibusque mediis cyaneis, illo pallidiori; reatricibus subtus, apicibusque suprâ flavis.*

Irides albæ, subflavo-marginatæ. Longitudo corporis $14\frac{5}{8}$ unc., caudæ $7\frac{5}{8}$.

Found only in the Ghauts. Sexes alike. This bird has the aspect of *Pal. columboides*, but differs in the black bill, broad black collar, pale green yellow beneath instead of dove colour, and in the want of the metallic green narrow collar and blueish rump.

Fam. *Picidae*, Leach.—Genus *Bucco*, Linn. *Barbet*.122. *Bucco Philippensis*, Gmel. *Barbu des Philippines*, Buff.

This well known bird is called *Tambut*, or the *Coppersmith*, by the Mahrattas. It sits on the loftiest and extreme twigs of trees, uttering the syllables *took, took, took*, deliberately, and nodding its head at each *took*; the sound and the motion originating the idea of a coppersmith at work hammering. *Irides* lake colour. Length $6\frac{1}{2}$ inches, inclusive of tail $1\frac{1}{2}$ inch. Fruit and insects found in the stomach.

123. *Bucco caniceps*, Frankl.

Scarcely distinguishable from *Bucco corvinus* and *Bucco Javanicus*. Found only in the dense woods of the Ghauts. Its note is quite startling, and makes the hills echo. *Irides* red deep brown. Length $8\frac{7}{8}$ inches, inclusive of tail of $2\frac{7}{8}$ inches: the bird is consequently smaller than Major Franklin's. Stony fruit only found in the stomach.

Genus *Picus*, Linn. *Woodpecker*.124. *Picus Mahrattensis*, Lath. * *Mahratta Woodpecker*, Id.

Irides rich lake. Length $7\frac{3}{8}$ inches, inclusive of tail of $2\frac{3}{8}$ inches. Although this is called the *Mahratta Woodpecker*, Colonel Sykes met with three birds only in Dukhun during six years.

Fam. *Certhiidae*, Vigors.—Genus *Upupa*, Linn. *Hoopoe*.125. *Upupa minor*, Shaw. *La Huppe d'Afrique*, Le Vaill.

Irides almost black. Length 12 to $12\frac{1}{2}$ inches, inclusive of tail from $4\frac{7}{8}$ to $4\frac{3}{8}$ inches. Feeds on the ground, and does not hop.

Fam. *Cuculidæ*, Leach.—Genus *Leptosomus*, Vieill.

126. *Leptosomus Afer*. *Cuculus Afer*, Gmel. *Edolian Cuckoo*, Shaw.
Cuculus Edolius, Cuv. *Cuc. serratus*, Shaw?
Irides reddish deep brown. Length $13\frac{1}{8}$ inches, inclusive of tail
of $6\frac{1}{8}$ inches. Rare in Dukhun.

Genus *Eudynamys*, Vigors & Horsf.

127. *Eudynamys orientalis*. *Cuculus orientalis*, Linn. Female
Cuc. Mindanensis.

Called *Koel* or *Koel* by the Mahrattas. A well known and noisy
bird, with singularly loud notes, not at all like those of a
Cuckoo. *Irides* rich lake. Length 17 inches, inclusive of tail
of 7 inches. These birds are frugivorous. In the stomachs of
many the fruits of the *Bergera Kænigi* and *Uvaria undulata*
only were found. The difference in the plumage of the sexes
is very remarkable. The female is the larger bird. The tongue
of this bird is exactly that of the *Cuc. canorus*.

Genus *Cuculus*, Auct.

128. *Cuculus canorus*, Linn. *Common Cuckoo*, Lath.
Irides yellow. Length $14\frac{1}{8}$ inches, inclusive of tail of $6\frac{1}{8}$ inches.
Rare in Dukhun.

129. *Cuculus fugax*, Horsf. *Bychan Cuckoo*, Lath.
Irides bright yellow. Length $13\frac{1}{8}$ inches, inclusive of tail of 6
inches. Tongue as in 127. This bird has so much the aspect
of a *Hawk* that Colonel Sykes passed it for one, until its note
of *koel, koel*, exactly resembling that of *Eudynamys orientalis*,
recalled him to the tree on which it was seated, and he shot
the bird.

Genus *Centropus*, Ill. *Coucal*.

130. *Centropus Philippensis*, Cuv. *Coucou des Philippines*, Buff.
Chestnut-winged Coucal, Lath. *Malabar Pheasant* of Eu-
ropeans.

Irides rich lake. Length $19\frac{1}{2}$ inches, inclusive of tail of $11\frac{1}{2}$ inches.
This is a very useful bird, as Colonel Sykes found a snake eight
inches long, centipedes, noxious insects, and lizards in the
stomach. In the stomach and *oesophagus* of one bird a lizard
thirteen inches long was found.

Tribus TENUIROSTRES, Cuv.

Fam. *Meliphagidæ*, Vigors.—Genus *Chloropsis*, Jard. & Selb.

131. *Chloropsis aurifrons*, Jard. & Selby?

Fam. *Cinnyridæ*, Vigors.—Genus *Cinnyris*, Cuv. *Sun-bird*.

132. *Cinnyris lepida*. *Certhia lepida*, Sparrm. *Nectarinia lepida*,
Temm.

Irides red brown. Length $4\frac{1}{8}$ inches, inclusive of tail of $1\frac{1}{8}$
inch. Female ashy brown above; light yellow below. Com-
mon in Dukhun. Feed on small insects; also suck honey.

133. *Cinnyris currucaria*. *Certhia currucaria*, Linn. *Grimpereau gris des Philippines*, Pl. Enl. 576. f. 2.

This has been considered a young bird; but Colonel Sykes can venture to affirm, from a long observation of its habits in his garden at Poona, that it is a species. *Irides* bright lake. Length $4\frac{3}{8}$ inches, inclusive of tail of $1\frac{3}{8}$ inch. A spider, a *Cicada*, and minute Coleopterous insects were found in the stomach of many birds of this species. They also hover before flowers, and suck the honey while on the wing, like the *Cinn. lepida*.

134. CINNYRIS VIGORSII. *Cinn. collo suprâ, nuchâ, ptilis, scapularibusque intensè sanguineis, collo infrâ pectoreque coccineo-sanguineis; strigâ utrinque mentali sub rictu ad pectus extendente maculâque auriculari splendidè violaceis; capite suprâ, caudæ tectricibus, rectricibus mediis, lateraliumque, externo excepto, pogoniis externis metallicè viridibus; alis, rectricibus lateralibus, dorsi inferioris lateribus, fasciâque subpectorali fuscis; abdomine griseo; dorso imo sulphureo.*

Irides intensè brunneæ. Longitudo corporis $5\frac{1}{2}$ unc., caudæ $2\frac{3}{8}$.

Larvæ of flies, a spider, ants, and minute insects found in the stomach. Inhabits only the lofty trees of the dense woods of the Ghauts.—“I will here beg leave to speak in the first person. I have dedicated this magnificent bird to a gentleman whose enlarged views of natural affinities in zoology have contributed essentially to enhance the value of the science, and to facilitate the labours of every zoologist. The dedication is also influenced by a desire to testify my sense of the many kind attentions of Mr. Vigors.”—W. H. S.

135. CINNYRIS MINIMA. *Cinn. capite nuchâque olivaceo-viridibus; pectoris notis, dorso, scapularibus, uropygioque intensè sanguineis, hoc violaceo splendenti; subtùs pallidè flavo; alis caudâque fusco-brunneis.*

Fœm. olivascenti brunnea, uropygio rufo.

Irides rufo-brunneæ. Longitudo corporis $3\frac{3}{8}$ unc., caudæ $1\frac{1}{4}$.

Met with only in the dense woods of the Ghauts. White ants and *larvæ* of flies were found in the stomach. One bird was seen sucking honey. Female of a uniform brown, with a patch of brick red on the rump and upper tail-coverts, and the yellow below fainter than in the male. Colonel Sykes believes this to be the smallest of the *Sun-birds*.

136. *Cinnyris Mahrattensis*. *Certhia Mahrattensis*, Shaw. *Cinnyris orientalis*, Frankl.

Dr. Latham does not mention the crimson joined to the yellow spot under the wing. These birds suck flowers while hovering on the wing; they eat minute insects also. Female not met with. Length $4\frac{3}{8}$ inches, inclusive of tail of $1\frac{3}{8}$ inch.

137. CINNYRIS CONCOLOR. *Cinn. viridi-olivacea, alis caudâque saturatoribus, corpore subtùs pallidiori.*

Irides intensè rufo-brunneæ. Longitudo corporis 4 unc., caudæ 1.

Insects with long *antennæ* were found in the stomach. As four specimens obtained by Colonel Sykes were all females, and as they were met with in the same locality as *Cinn. Vigorsii*, *Cinn. concolor* may be the female of that splendid species; but the difference in the size, form, and aspect of the bird, independently of colour, is opposed to this: they were never seen together. The bird has the outline of *Cinn. Mahrattensis*. The specific appellation of *concolor* is given provisionally.

THE END.

ORDER III. RASORES, III.

Fam. *Columbidæ*, Leach.—Genus *Ptilinopus*, Swains.

138. *PTILINOPUS ELPHINSTONII*. *Ptil. supra fusco-brunneus; corpore infra, capite, colloque cinereis; cervice nigro, plumis ad apices guttâ albâ notatis; interscapulio rubineo; collo pectoreque smaragdino, uropygio cinereo, nitentibus; remigum 2dæ, 3tiæ, 4tæ et 5tæ pagoniis externis excavatis.*
Irides ochraceo-flavæ. Longitudo corporis 10, $\frac{3}{5}$ unc., caudæ 5, $\frac{1}{5}$.

This very fine bird, forming a link between the *Pigeons* proper and *Vinago*, has quite the figure and air of *Ptilinopus porphyreus*, figured in Stephens, vol. 14. (*Columba porphyrea*, Reinw., Temm., Pl. Col. 106.), but is much larger: it is a rare bird in Dukhun, and met with only in the dense woods of the Ghauts. Not gregarious. Stony fruit found in the stomach. Sexes alike. Flight very rapid. The lateral skin of the toes is very much developed.

Genus *Columba*, Auct. Pigeon.

139. *COLUMBA MEENA*. *Col. capite, collo, interscapulio, gastræoque saturatè vinaceis, ventre dilutiore; crisso, caudæque tegminibus inferioribus apiceque albis; tergo uropygioque ardosiaceis; tegminibus caudæ superioribus ad apices vinaceis; scapularibus alarumque tegminibus nigris, castaneo latè marginatis; remigibus caudæque fusco-brunneis, illis castaneo marginatis; tegminibus alarum inferioribus cinereis; collo utrinque nigro maculato, plumis cærulescenti-albido ad apices marginatis.*
Fœm. Crisso dilutè vinaceo; tegminibus caudæ inferioribus pallidè cinereis; rectricibus 4 intermediis albo haud terminatis.
Irides aurantiacæ. Rostrum pedesque flavescentes. Longitudo corporis 8 unc., caudæ 5, $\frac{1}{5}$.

Brown and Chestnut Dove. Hhulgah of the Mahrattas.

This species might be mistaken for the European *Col. Turtur*, but on comparison is found to differ in the whole head, neck, shoulders, breast and belly being richer vinaceous; in the back and rump being ash, and vent and under tail-coverts in the female light cinereous; in the four upper tail-feathers in the female being red brown without white tips; in the upper tail-coverts being tipped with faint chestnut; in the forehead and chin not being dull white; in orange *irides* instead of yellow; and finally in its greater size. Gregarious, found only in the woods of the Ghauts. Webs of 2nd and 3rd quills narrowed as in the *Ptilinopus*.

140. *Columba tigrina*, Temm., Fig. Pl. 43. *Surat Turtle*.
 M. Temminck's figure does not sufficiently develop the dove-coloured or ochrey tips to the feathers of the back and wing-coverts, and the tips of the centre feathers of the tail are coloured reddish instead of being white. A remarkable feature in this bird is unnoticed in the description of it, namely, the elongated and subulated tail; unlike the last or most other species of *Dove*, instead of widening towards the tip, it is widest at the base when closed, and gradually narrows to the extremity; in fact, each feather is subulate. *Irides* lake colour or pinkish red. Sexes exactly alike. Found on the skirts of the woods in the Ghauts. Length, inclusive of tail, 12 inches: tail 5 inches.
141. *Columba humilis*, Temm., Pl. Col. 258 et 259. *Colombe terrestre*.
 M. Temminck says that this bird "vit habituellement à terre," but from long observation Colonel Sykes can testify that this supposed habit is no more characteristic of this species than of any other *Dove* in his possession. Gregarious; not an inhabitant of the woods, but affecting mangoe-tree groves in the neighbourhood of cultivation. Length, inclusive of tail, $9\frac{1}{8}$ inches: tail $3\frac{1}{8}$. Tail, as in the last species, narrower at the extremity than at the base when closed.
142. *Columba risoria*, Linn. *La Tourterelle à collier du Sénégal*, Buff., Ois. 2, 550 & 553. pl. 26. Pl. Enl. 161 & 244. Le Vaill., Ois. d'Afr. 6. pl. 268.
 Length, inclusive of tail, $13\frac{5}{8}$ inches: tail 5 inches. Gregarious, and common in the open country. Sexes alike. In spite of the proverbial gentleness of the *Dove*, Colonel Sykes has seen these birds fighting with the most inveterate hostility; seizing each other by the bill and rolling upon the ground together. Outer webs of 2nd, 3rd and 4th quill-feathers hollowed.
143. *Columba Cambayensis*, Lath., Ind. Orn. 2. sp. 56. Temm., Fig. Pl. 45.
 Colonel Sykes's bird is identical with the species figured in M. Temminck's plate, but it does not correspond with the description of the *Col. Cambayensis* of Shaw, vol. 11. p. 79. This species is distinguished from all other *Doves* with which Colonel Sykes has met, by the square red spots on the black patches on the side of the neck. Sexes alike. Frequents gardens and stable-yards. Length, inclusive of tail, $11\frac{7}{8}$ inches: tail $5\frac{7}{8}$ inches.
144. *Columba Œnas*, Linn. *Stock Pigeon*. *Parwa* of the Mahrattas.
 The most common bird in the Dukhun, congregating in flocks of scores, and a constant inhabitant of every old dilapidated building. Colonel Sykes saw the same species on board ship on the voyage to England, brought from China. *Irides* orange. Sexes alike. Length, inclusive of tail, $14\frac{1}{8}$ inches: tail $4\frac{3}{8}$ inches.
 The Dukhun bird differs from the European species in the bill being black instead of pale red, in the utter want of white or black in the quills, the want of white in the tail-feathers, and in the legs being brown instead of black. As these differences

are permanent, they might justify a specific name being applied to the *Dukhun Pigeon*.

Fam. *Phasianidæ*, Vigors.—Genus *Meleagris*, Linn. *Turkey*.

145. *Meleagris Gallopavo*, Linn.

The *Turkey* is met with only in the domestic state: it is reared in great numbers by the Portuguese.

Genus *Pavo*, Auct.

146. *Pavo cristatus*, Linn. *Peafowl*. *Mohr* of the Mahrattas.

The wild *Peafowl* is abundant in the dense woods of the Ghauts: it is readily domesticated, and many Hindoo temples in the Dukhun have considerable flocks of them. On a comparison with the bird as domesticated in Europe, the latter is found, both male and female, to be absolutely identical with the wild bird of India. *Irides* intense red brown.

Genus *Gallus*, Briss.

147. *Gallus giganteus*, Temm., Gall. Ind. 633.

Known by the name of the *Kulm Cock* by Europeans in India. Met with only as a domestic bird; and Colonel Sykes has reason to believe that it is not a native of India, but has been introduced by the Mussulmans from Sumatra or Java. The *iris* of the real game bird should be whitish, or straw-yellow. Colonel Sykes landed two cocks and a hen in England in June 1831: they bore the winter well. The hen laid freely, and has reared two broods of chickens. The cock has not the shrill clear pipe of the domestic bird, and his scale of notes appears more limited. A cock in the possession of Colonel Sykes stood 26 inches high to the crown of the head, but they attain a greater height. Length from the tip of the bill to the insertion of the tail 23 inches. Hen one third smaller than the male. Shaw very justly describes the habit of the cock, of resting, when tired, on the first joint of the leg.

148. *Gallus Sonneratii*, Temm., Gall. Ind. 659. *Jungle Cock*. *Rahn Komrah* of the Mahrattas.

Very abundant in the woods of the western Ghauts, where there are either two species or two very strongly marked varieties. In the valleys at 2000 feet above the sea, *Sonnerat's* species is found, slender, standing high on the legs, and with the yellow cartilaginous spots on the feathers even in the female. In the belts of wood on the sides of the mountains, at 4000 feet above the sea, there is a short-legged variety; the male has a great deal of red in his plumage, which *Sonnerat's* has not; the female is of a reddish brown colour, and is without cartilaginous spots at all: in fact, the female of this variety is the *Gall. Stanleyii* of Mr. Gray's 'Illustrations'. Eggs exactly like those of the domestic fowl in form and colour, but less in size. The wild hen would appear to sit on a much smaller number of eggs than the domestic, as Colonel Sykes shot a hen upon her

nest in which were only three eggs, and the process of incubation had evidently commenced some days. In the craw and stomach of many birds nothing whatever was found, excepting the seeds of a stone-like hardness called *Job's tears* (*Coix barbata*). *Irides* brownish deep orange. The crow or call of this species is like that of the *Bantam Cock*.

149. *Gallus domesticus*, Ray. *Phasianus Gallus cristatus*, Linn.

The *domestic fowl* is so abundant in the Dukhun, that in parts of the country not much frequented by Europeans, Colonel Sykes has bought from eight to twelve full-grown fowls for two shillings. Many of the hens, particularly of the villages in the Ghauts, are not to be distinguished from the wild bird, excepting only in the want of the cartilaginous spot on the wing-coverts.

150. *Gallus Morio*, Temm., Gall. Ind. 560. Briss., Orn. 1. 174.

This supposed species very frequently occurs accidentally in the Dukhun. Although unsightly, the black fowl is very sweet eating.

151. *Gallus crispus*, Temm., Gall. Ind. 661. Briss. Orn. 1. 173. pl. 17.

Occurs accidentally like the last variety.

Genus *Numida*, Linn. *Pintado*.

152. *Numida Meleagris*, Linn. *Guinea Fowl*.

Met with only in the domestic state, and bred almost exclusively by European gentlemen. Thrives as well as in its native country.

Fam. *Tetraonidæ*, Leach.—Genus *Coturnix*, Cuv.

153. *Coturnix dactylisonans*, Temm., Gall. Ind. 740. *Tetrao Coturnix*, Linn., Syst. Nat. 1. 278, 20. *Lohah* of the Mahrattas. *Large Grey Quail*.

Rare in the Dukhun, and found only in pairs in tufts of grass near water-courses and ponds. Resembles the *Quail* of Europe in size and plumage: the *irides* are dusky red or reddish brown, like those of the European bird, which by mistake are described in Shaw as yellow. Female a little larger than male: one female measured 8 inches, inclusive of tail of 2 inches, but this was a large bird. Period of incubation in the monsoon.

154. *Coturnix textilis*, Steph., 11. 365. *Perdix textilis*, Temm., Pl. 35. *Perdix Coromandelica*, Lath., Ind. Orn. 2. 654. 38. *Black speckled-breasted Quail*.

Irides dusky red. Length $6\frac{1}{4}$ inches, inclusive of tail of $1\frac{5}{8}$ inch. In pairs in the monsoon; gregarious the rest of the year. Very abundant in *Jowaree* fields, (*Andropogon Sorghum*).

155. *COTURNIX ARGOONDAH*. *Cot. supra rufescenti-brunnea, fasciis angustis dilutè ferrugineis notata; infra sordidè alba, fasciis equidistantibus nigris; fronte mentoque ferrugineis; strigè superciliari rufescenti-albidà.*

Fœm. *Fasciis magis obscuris.*

Irides fusco-rubræ. Rostrum nigrum. Longitudo corporis 5 unc., caudæ 1 $\frac{3}{8}$.

Always gregarious ; frequenting only rocky places, or amidst low bushes. The covey rises with a startling whirl. Flight very short. Pugnacious, and used by the natives for combat.

156. *COTURNIX PENTAH. Cot. suprâ saturatè brunnea; infrâ rufescenti-albida nigro fasciata; ventre crissoque albido-ferrugineis; interscapulio scapularibusque nigro maculatis, plumarum rhachibus dilutè flavis; remigibus brunneis pallidè ferrugineo maculatis; strigâ superciliari sordidè albd; mento rufescente.*

Fæm. Infrâ rufescens, haud fasciata; plumarum rhachibus albis. Irides ochraceo-brunneæ. Rostrum rufescenti-brunneum. Pedes flavescentes. Longitudo corporis 5 $\frac{3}{8}$ unc., caudæ 1 $\frac{7}{8}$.

Has the habits and somewhat the appearance of the last species, but is found only on the most elevated table-lands and slopes of the mountains, amidst reeds and grass. Colonel Sykes's specimens were shot at 4000 feet above the sea.

157. *COTURNIX ERYTHORHYNCHA. Cot. suprâ saturatè brunnea, infrâ dilutè castanea, nigro (præter ventrem medium) undequaque guttata maculataque, scapularium maculis maximis, pectoris guttis minimis; scapularium tegminumque alarum superiorum albo fasciatarum rhachibus albis, crucefformantibus; remigum pogoniis externis rufescenti fasciatis maculatisque; fronte nigro; strigâ frontali utrinque supra oculum productâ gulâque albis.*

Fæm. Fronte, strigâ inde ad utrumque latus ductâ, gulâque dilutè castaneis.

Irides obscurè flavo-ochraceæ. Rostrum rubrum. Longitudo corporis 5 unc., caudæ 1 $\frac{5}{8}$.

Colonel Sykes has found this very handsome bird only in the valley of Karleh, where it frequents the same ground as the *black Partridge* (*Perdix picta*). Gregarious and abundant. In closing his notices of the *Quails*, Colonel Sykes mentioned that grass seeds constitute their principal food.

Genus *Perdix*, Briss. *Partridge*.

158. *Perdix picta*, Jard. & Selby, Pl. 150.

This is called the *black Partridge* in Dukhun, by Europeans. It affects uncultivated tracts in the country, covered with tufts of rank grass and low bushes, where it is abundant. Colonel Sykes has never met with it in gardens. The call of the male is a kind of broken crow. Sexes exactly alike. *Irides* reddish dark brown. Length, inclusive of tail, 10 inches: tail 2 $\frac{7}{8}$ inches. Does not roost on trees.

Genus *Francolinus*, Steph. *Francolin*.

159. *Francolinus Ponticerianus*, Steph., 11. 321. *Perdix Ponticeriana*, Lath., Ind. Orn. 2. 649. 18. Temm., Pl. Col. 213.

Ferruginous and Grey Francolin. Teetur of the Mahrattas.

Called a partridge in the Dukhun, where it is one of the most

common birds, frequenting gardens and cultivated lands. *Irides* intense red brown. Length, inclusive of tail, 14 inches : tail $3\frac{5}{8}$ inches. Not met with in the Ghauts, unless in well cultivated valleys, and not at all on the mountains. *Roosts* on trees ; and Colonel Sykes has on more than one occasion shot them on trees during the daytime ; but this is a rare occurrence.

160. *FRANCOLINUS SPADICEUS*. *Franc. castaneus, suprâ fusco tinctus, plumarum marginibus dilutioribus ; cupite, collo, ventre, crisso, tegminibusque caudæ inferioribus fusco-brunneis ; vertice nigrescenti-brunneo ; plumarum ventris crissique rhachibus elongatis, acutis.*

Fœm. *Suprà nigro castaneoque varius ; pectoris abdominisque plumis castaneis ad apices lunulâ latâ nigri notatis.*

Pullus. *Fusco-ferrugineus, vittis tribus dorsalibus latis, intermediâ saturatè rufo-brunnea, lateralibus flavescenti-albidis.*

Irides rufo-brunneæ. *Rostrum* pedesque rufescenti-cornei.

Longitudo corporis $9\frac{7}{8}$ unc., *caudâ* 5.

- Perdix spadicea*, Lath., Ind. Orn. 2. 644. 4. Temm., Gall. Ind. 719. *Tetrao spadiceus*, Gmel., Syst. Nat. 1. 759. 29. *Le Perdrix rouge de Madagascar*, Sonn., Voy. Ind. 2. 169. *Francolin spadice*, Temm., Pig. et Gall. 3. 315. *Koku-tree* of the Mahrattas.

The male only of this bird, which is very common in the thick brushwood of the Ghauts, appears to have been known to the writers quoted. Colonel Sykes has had both sexes alive in his possession for some time, and has no doubt they might be successfully introduced into Europe. They are excellent eating. Rarely take to wing or perch. Male has a harsh call of three syllables, *Kot-kut-ree*, whence the Mahratta name ; female in confinement uttered little notes like the twittering of a chicken. A male in Col. Sykes's collection has three large spurs on one leg, and two on the other.

Genus *Pterocles*, Temm. *Ganga*.

161. *Pterocles exustus*, Temm., Pl. Col. 354 & 360. *Rock Pigeon* of Europeans in the Dukhun.

A very common bird in the Dukhun ; gregarious ; frequenting open stony plains only. Characterized by the height at which it flies, the rapidity of its flight, and its peculiar and piercing note announcing its approach ere it can be well seen. It feeds on a quadrangular hard small seed, which Colonel Sykes has found in the stomach of only one other bird.

Irides reddish brown. Sexes of the same size. The male has two of the tail-feathers linear and elongated, which is not the case with the female. Male, inclusive of tail, $14\frac{7}{8}$ inches : tail 5 inches.

162. *Pterocles quadricinctus*, Temm., Gall. 3. 252. *Painted Rock Pigeon* of the Dukhun.

Rare, and met with only in pairs, on open ground at the foot of hills. *Irides* reddish brown. Sexes of the same size. Length, inclusive of tail, $13\frac{1}{2}$ inches : tail 3 inches.

Genus *Hemipodius*.

- 163.
- Hemipodius pugnax*
- , Temm., Pl. Col. 60. fig. 2.

Common in the Dukhun, and called the *Bustard Quail* by Europeans. Its reputed pugnacious qualities are not known. Solitary or in pairs, and mostly found in *Chillee* fields (*Capsicum annuum*). Irides light yellow. Length, inclusive of tail, $7\frac{5}{8}$ inches: tail $1\frac{5}{8}$ inch. Habits, tongue and internal organization of *Coturnix textilis*. M. Temminck describes the female as differing in plumage from the male; but in Colonel Sykes's specimens the sexes are exactly alike.

- 164.
- HEMIPODIUS TAIGOOR*
- .
- Hem. suprâ castaneus, plumis stramineo marginatis, nigroque undulatum fasciatis; tegminibus alarum stramineis nigro fasciatis; remigibus fuscis; mento gulâque albis; pectore nigro alboque fasciato; ventre crissoque dilutè ferrugineis.*

Irides pallidè flavæ. Rostrum nigrescens. Longitudo corporis $4\frac{1}{8}$ unc., caudæ $1\frac{7}{8}$.

Closely resembles the female of *Hem. pugnax* as described by M. Temminck, but the bill is longer and more slender, and Colonel Sykes has specimens of both sexes. Sexes alike.

- 165.
- Hemipodius Dussumier*
- , Temm., Pl. Col. Called the
- Button Quail*
- by Europeans.

Colonel Sykes never met with this bird otherwise than solitary: frequents thick grass or pulse fields, and sits so close as to expose itself to be trod upon. Flight so abrupt and short, that ere the gun is well up to the shoulder, the bird is down again. Irides straw-yellow. Length, inclusive of tail, $5\frac{7}{8}$ inches: tail $1\frac{3}{8}$ inches.

Fam. *Struthionidæ*, Vigors.—Genus *Otis*, Linn. *Bustard*.

- 166.
- Otis nigriceps*
- , Gould's Cent. Himal. Birds.

This noble bird is so common in the Dukhun, that one gentleman has shot nearly a thousand. Gregarious. Egg, a perfect oval, brown olive, with obscure blotches of darker brown olive. Length $3\frac{3}{8}$ inches, diameter $2\frac{7}{8}$ inches. One only found in a hole in the earth on the open plain, and that considerably advanced in the process of incubation. Irides deep brown. Length, male, inclusive of tail, $56\frac{1}{2}$ inches: tail $13\frac{1}{2}$ inches. Female $41\frac{1}{2}$ inches, inclusive of tail of $10\frac{1}{2}$ inches. Male supplied with the remarkable gular pouch common to the *Otis tarda*.

- 167.
- OTIS FULVA*
- .
- Ot. suprâ cacaoitico-brunnea, plumis fulvo marginatis variegatisque; tegminibus alarum, collo, pectoreque fulvis, punctis lineisve brunneis parçè notatis; ventre, uropygio, femoribus, tegminibusque caudæ inferioribus fulvo-albis; tegminibus alarum inferioribus lateribusque cacaoitico-nigris; caudâ fulvâ fasciis quatuor cacaoitico-brunneis notatâ; mento gulâque albis; vertice brunneo, strigâ mediâ longitudinali albâ. Irides rufescenti-lutescentes, radiis a pupillâ pallidè lutescentibus. Pedes flavescentes. Longitudo corporis ♂, $15\frac{5}{8}$ unc., caudæ $3\frac{3}{8}$; corporis ♀, $17\frac{5}{8}$, caudæ $3\frac{1}{8}$.*

The wings are of unequal length in the sexes ; and the quills are singularly acuminate.

Col. Sykes gives the following detailed description of the *Otis fulva* : Forehead, crown, back, scapulars, and first three quills rich chocolate brown ; feathers of the back and scapulars triangular at the point, edged with fulvous, and barred in the centre and near the base with a broad bar of fulvous mottled with chocolate. Round the eyes, a streak down the centre of the crown, whole neck, breast, wing-coverts, and tail buff or fulvous ; the back neck closely speckled with minute dots of brown. On the wing-coverts a few scattered lines and specks of brown. Tail with 4 distant fuscous bars, the intermediate spaces beautifully barred with flexuose lines of fuscous. The fourth and following quills and secondaries marked like the tail. Two irregular fuscous streaks down the fore neck. Breast fulvous, with a few faint lines and spots of brown. Belly, vent, under tail-coverts, and thighs yellowish white. Under wing-coverts and sides of the body fine chocolate brown. Occasionally a feather is tipped with white on the wing-coverts. Upper mandible fuscous, lower yellowish. Chin and throat white extending up towards the ears. Sexes exactly alike in plumage. The down at the base of all the feathers pink. Primary quills singularly acuminate, particularly in the male, terminating in a point as fine as that of a needle ; less so in the female, and the wings of the latter are from one to two inches longer than those of the male. This difference is constant.

Col. Sykes stated that his description was written from eight specimens lying before him, and that he had transmitted three similar to the India House.

Some of Col. Sykes's sporting friends in India having expressed a belief that the *Otis fulva* was the female of the *black Floriken* of the Dukhun, (a comparatively rare bird, the *Otis fulva* being common,) he was induced to pay particular attention to the organs of sex, and never found the *testes* and *ova* otherwise than fully developed. If therefore it be referable as an immature bird to a known species, (*Otis Bengalensis*, *Otis aurita*, or *Otis Indica*,) it appears in the Dukhun in hundreds, with all the indications of puberty, at a time when the supposed parents are rarely, if at all, to be met with. Col. Sykes's birds are identical with a specimen laid before the Society by Major Franklin on the 9th of August 1831, under the name of *Otis Indica* ; Major Franklin at the same time expressing doubts of it being the *white-chinned Bustard* of Dr. Latham. The description of the *Otis Indica* has only two features common to the *Otis fulva*, "chin white," and "under parts dusky yellowish cream-colour ;" as they differ in all other particulars, the birds cannot be identical ; and a reference to a figure of the *Otis Indica*, which is only to be met with in J. H. Miller, confirms the impression. Col. Sykes believes with Major Franklin that the present species has been usually mistaken for the fe-

male of *Otis aurita*.—A correspondent in the Magazine of Natural History, No. 16, for November 1830, under the signature of "A Subscriber," page 517, confirms Col. Sykes's opinion, stating that the *Churj* or *ochreous Floriken* (*small Bustard* of India) is not the *Otis Indica* (*white-chinned Bustard*), nor the *Otis Bengalensis*, nor the *black Floriken* (*Otis aurita*) or *Leek* of Hindostan.

Col. Sykes stated the food of the *Otis nigriceps* and the *Otis fulva* to be almost exclusively grasshoppers; and he pointed out the absence of a gizzard (the stomach being simple), combined with the remarkable shortness of the intestinal canal, scarcely exceeding the length of the body, as distinguishing these birds from all others that had come under his observation.

ORDER IV. GRALLATORES, III.

Fam. *Gruidae*, Vigors.—Genus *Grus*, Pallas. Crane.

168. *Grus Antigone*, Steph., 11. 531. *Grus orientalis Indica*,
Briss., Orn. 5. 378. 7. *Kullum* of the Mahrattas.
Appear in flocks of hundreds in Dukhun during the cold season.

Fam. *Ardeide*, Leach.—Genus *Ardea*, Auct.Section A. *Tarsi long.*

169. *Ardea Egretta*, Gmel., 1. 629. *Ardea Torra*, Buch. Franklin,
Zool. Proceedings. *La Grand Egrette*, Buff., Ois. 7. 377.
Pl. Enl. 925. *Large white Heron with yellow bill.*
Length, inclusive of tail, 35 to 36 inches: tail $5\frac{2}{3}$ inches.
Length of the European bird 42 inches. *Irides* bright yellow.
Solitary.
170. *Ardea Garzetta*, Linn., 1. 937. *L' Aigrette*, Buff., Ois. 7. 372.
Pl. Enl. 901. *Little Egret Heron.*
Length, inclusive of tail, 24 to 25 inches: tail 4 inches. Length
of the European bird 24 inches. *Irides* light yellow.
Gregarious. Toes, as in the European bird, yellowish green or
apple green, exhibiting a curious contrast to the greenish black
of the legs.
171. ARDEA ASHA. *Ard. suprà ardosiaceæ, dorso brunnescente;*
mento, gulâ, lineâ longitudinali jugulari, corpore subtus, teg-
minibusque caudæ inferioribus albissimis; tegminibus alarum
tertiariis albo angustè marginatis.
Irides dilutè flavæ. Rostrum corneum. Tarsi virescenti-
nigri. Longitudo corporis 20¼ unc., caudæ 3¼.
Slate-coloured Heron.
A very rare bird in Dukhun. Has a good deal the aspect of
Ard. Novæ Hollandiæ, and several points of resemblance to
Ard. gularis, *Ard. jugularis*, and the young of *Ard. cærulea*;
but differs from all.
172. *Ardea cinerea*, Lath., Ind. Orn. 2. 691. 54. *Le Heron huppé*,
Buff., Ois. 7. 342. Pl. Enl. 787.
Irides bright light yellow. Length, inclusive of tail, 38 inches:
tail 6 inches.
Identical with European specimens. Solitary.
173. *Ardea nigrirostris*, Gray, Zool. Misc. 20. Fig. Ind. Zool. Part
12th. *Large white Heron with black bill.*
Differing only in having a black bill from *Ard. Egretta*;
otherwise identical in size, form, colour, and internal or-
ganization; nevertheless as Col. Sykes has adult birds pre-
serving the black bill, he considers Mr. Gray's specific di-
stinction valid. *Irides* bright yellow.

Section B. *Tarsi* short.

174. *Ardea Malaccensis*, Gmel., 1. 643. *Crabier blanc et brun de Malacca*, Buff., Ois. 7. 394. Pl. Enl. 911. *Buglah* of the Mahrattas.

Irides light bright yellow. Length, inclusive of tail, 19 inches: tail 3 to 3 $\frac{1}{4}$ inches. One male bird measured 21 inches.

White capillary worms found on the mesentery.

175. *Ardea Caboga*, Penn., *Hindoos*. 2. 158. *Gibraltar Heron*, Lath., var. A. *Small pure white Heron*. *Batty bird* of Europeans in Dukhun.

Attend oxen while grazing, and pick insects from them. Gregarious. Length, inclusive of tail, 19 $\frac{1}{4}$ to 21 inches: tail 3 $\frac{1}{4}$ inches. *Irides* bright yellow. A shade of yellow ochre on the forehead in some individuals.

176. ARDEA GRAYII. *Ard. alba*; *dorso atro-rubente*; *capite, collo, pectore, scapularibusque sordidè flavescenti-albidis*; *occipitis plumis 3—5 longis, linearibus, albissimis*.

Irides nitidè flavæ. *Rostrum* ad apicem nigrum, ad basin flavescens. *Tarsi* fuscescenti-carnei. Longitudo (caudâ inclusâ) 18 $\frac{1}{4}$ —19 $\frac{3}{4}$ unc., *caudæ* 3.

Marone-backed Heron.

The deep chestnut or marone feathers of the back are decomposed, and extend nearly to the end of the tail. The immature bird bears a very close resemblance to the *Ard. Malaccensis*.

177. *Ardea Javanica*, Horsf., Linn. Trans. 13. 190. *Indian green Heron* of Dr. Latham, No. 74.

Col. Sykes's specimens are identical with those from Java, and on comparing them with the descriptions of *Ard. virescens*, Ill., and the plate of Buffon (Pl. Enl. 908, *Crabier de Cayenne*), they differ in wanting the red stripes down the throat and neck, and in the tail being dark metallic green instead of black, and in smaller size. Dr. Horsfield's trivial name is therefore valid. *Irides* bright light yellow, surrounded by a very narrow red ring. Length, inclusive of tail, 16 $\frac{1}{4}$ inches: tail 2 $\frac{1}{2}$. Sexes alike in size and plumage. Solitary on the woody banks of small streams.

178. *Ardea cinnamomea*, Gmel., 1. 643. *Entire chestnut Heron*. Identical with specimens in the British Museum and India House. Length, inclusive of tail, 15 $\frac{1}{2}$ inches: tail 2 $\frac{1}{4}$ inches. *Irides* bright yellow.

Rare in Dukhun. Mostly solitary; never gregarious. Remarkably wary.

Genus *Botaurus*, Briss. *Bütern*.

179. *Botaurus stellaris*, Briss., Orn. 5. 444. *Ardea stellaris*, Linn., 1. 239. 21. *Le Butor*, Buff., Ois. 7. 411. Pl. Enl. 789. *Common Bütern*.

Identical with the European bird.

Rare in Dukhun.

Genus *Nycticorax*, Steph.

180. *Nycticorax Europæus*, Steph., 11. 609. *Ardea Nycticorax*, Linn., 1. 235. 9. *Le Bihoreau*, Buff., Ois. 7. 435. Pl. Enl. 758. *Night Heron*.

Irides broad, crimson. Length, inclusive of tail, 24 inches: tail $4\frac{2}{3}$ inches. Length of the European bird about 22 inches. *Irides* and legs of the same colour as those of the Asiatic bird.

Genus *Phœnicopterus*, Linn. *Flamingo*.

181. *Phœnicopterus ruber*, Linn., 1. 230. *Le Flammant*, Buff., Ois. 8. 475. Pl. Enl. 63. *Red Flamingo*. *Rajah Huns* of the Hindoos.

Irides light yellow. Length, inclusive of tail, $43\frac{1}{2}$ inches: tail 6 inches.

In the *duodenum* of a female were found two thick, remarkable white worms composed of *annuli*; one 7 inches long, the other $4\frac{1}{2}$ inches; and filling up the intestinal canal, so that liquid food only could have passed; nevertheless the bird appeared quite healthy.

Genus *Platalea*, Linn. *Spoonbill*.

182. *Platalea leucorodia*, Linn., 1. 231. 1. *La Spatule*, Buff., Ois. 7. 448. Pl. Enl. 405. *Crested white Spoonbill*.

Irides crimson. Length, inclusive of tail, $35\frac{1}{2}$ inches: tail $5\frac{1}{2}$ inches.

Although a little larger in size, it is otherwise absolutely identical with the European bird even to the colour of the *irides* and legs.

183. *Platalea junior*. The feathers with black shafts.

Mr. Stephens describes these birds as rarely occurring inland. Col. S.'s specimens were obtained 100 miles from the sea, and at an elevation of 2000 feet.

Genus *Ciconia*, Ray. *Stork*.

184. *Ciconia leucocephala*. *Ardea leucocephala*, Gmel., 1. 642. Lath., Ind. Orn. 2. 699. 78. *Le Heron Violet*, Buff., Ois. 7. 370. *Heron de la côte de Coromandel*, Buff., Pl. Enl. 906. *Violet Heron*. *Kandehsur* or *Kowruw* of the Mahrattas.

It is singular that this well-marked bird should have been classed as a *Heron* for a long period, and remain as such at the present moment in Shaw. Length, inclusive of tail, 33 to $34\frac{1}{2}$ inches: tail 8 inches.

Mostly seen on open stony plains or in ploughed fields. Food chiefly grasshoppers. Monogamous. *Irides* scarlet, margined with a narrow circle of black and an exterior circle of yellowish.

185. *Ciconia Argala*, Steph., vol. 11. p. 622. *Ardea dubia*, Gmel., 1. 624. *Ardea Argala*, Lath.

Is met with in Dukhun; but Col. Sykes has not a specimen. Called the *Adjutant* by Europeans, from its stiff soldier-like strut.

Genus *Anastomus*, Ill. Courly.

186. *Anastomus Typus*, Temm. *An. Coromandelianus*, Steph., 11. 632. *Ardea Coromandelica* (l'adulte) et *Ponticeriana* (le jeune), Temm. *Le bec ouvert des Indes*, Sonn., Voy. 2. pl. in p. 219. Buff., Ois. 7. 409. Pl. Enl. 932. *Cinereous Musclicatcher*.

Irides bright yellow. Length, inclusive of tail, 32 to 33 inches : tail $6\frac{1}{4}$ to $6\frac{3}{4}$ inches.

Buffon's figure is excellent. Lives on the animals of a new and large species of *Unio*. The stomach of this bird is not less remarkable than its bill : the last exhibiting a beautiful adaptation of means to their end ; the form of the mandibles enabling the bird to hold and open the bivalve shell of the *Unio*. Solitary.

The proportional length of the intestinal canal exceeds that of any other bird in the order *Grallatores*, in one specimen being five times the length of the body, neck and bill inclusive.

Genus *Tantalus*, Linn.

187. *Tantalus leucocephalus*, Lath., Ind. Orn. 2. 706. *Le Tantal de Ceylon*, Cuv., Règne Anim. 1. 481. *White-headed Ibis*.

Irides yellow. Length, inclusive of tail, $40\frac{1}{2}$ to 43 inches : tail $6\frac{1}{2}$ inches.

A large diaphanous spot on each side of the base of the upper mandible before the eyes does not appear to have been noticed in the description of the bird.

The generic characters, if this bird be made the type, require modification. The stomachs of three birds were distended with fibrous vegetable matters in a comminuted state. A fourth had the same vegetable matters and the half of a carp 9 inches long.

Genus *Ibis*, La Cép. *Ibis*.

188. *Ibis religiosa*, Cuv., Règne Anim. 1. 483. *Sacred Ibis*. *L' Ibis sacre*, Cuv., Recherches sur les Ossemens Fossiles, 1. 161. *Tantalus Ethiopicus*. *Ibis Macei*, Cuv., Ann. Mus. 11. 125. *White Ibis with purple black secondary quill decomposed feathers*, Ind. Orn. 2. 706.

Col. Sykes carefully compared the descriptions and measurements of the larger *Mummy Ibis* of Cuvier ; and is induced to believe the present bird is the same. Col. Sykes puts into juxtaposition the measurements of Cuvier's *Mummy Ibis* from Thebes and one of his own birds :

| | <i>Mummy Ibis</i> . | <i>Dukhun Ibis</i> . |
|---------------------------------------|---------------------|----------------------|
| | Inches. | Inches. |
| Length of beak and head together..... | 8·27..... | 8·15 |
| Head | 1·85..... | 1·80 |
| <i>Tibia</i> | 5·90..... | 5·80 |
| <i>Tarsus</i> | 4·01..... | 3·80 |
| Middle toe..... | 3·81..... | 3·50 |
| <i>Ulna</i> | 6·01..... | 5·95 |
| Hand | 4·92..... | 4·80 |

The individual of which the measurements are given has the two first quills tipped with violet, their shafts of the same colour, and four of the secondary quills are also violet and with their webs decomposed, according with Cuvier's description. The violet colour is not so deep as in the *Æthiopian Ibis*; but as in all Col. Sykes's specimens (nine in number) the violet feathers are in progress of development, the colour would no doubt subsequently be darker. Cuvier mentions that the *Mummy Ibis* varied a little in size. Col. S. has birds larger and smaller than that of which the measurements are given.

Appear in Dukhun in the cold weather only. Gregarious.

Irides narrow, lake colour. Food water-crickets, crabs, beetles, shrimps. Length, inclusive of tail, 30 to 35½ inches: tail 5 $\frac{3}{8}$ to 5 $\frac{7}{8}$. Bill and head to occiput 7 $\frac{3}{8}$ to 9 $\frac{3}{8}$ inches. Bill to the gape 6 $\frac{4}{5}$ to 7 $\frac{3}{5}$ inches.

189. *Ibis ignea*. *Tantalus igneus*, Lath., Ind. Orn. 2. 708. 12. *Ibis falcinellus*, Temm., Man. d'Orn., 2nd Edit. 2. 596.

Col. Sykes's birds, male and female, are identical with two European specimens in the British Museum labelled *Ibis ignea*, and viewed as the immature birds of *Ibis falcinellus*. Col. Sykes however has seen so many of both in India, appearing in different flocks at the same period of the year, and not having, as M. Temminck describes the birds before they are three years old, "partie inferieure du cou, poitrine, ventre, et cuisses d'un noir cendré; haut du dos et scapulaires d'un cendré brun," but of a rich fuscous brown, with brilliant metallic reflections; differing also in the proportions of the internal organization; and Dr. Latham moreover describes even the youngest birds of *Ibis falcinellus* as characterized by reddish brown. Herodotus speaks of the *smaller Ibis* as entirely black, a description inapplicable to the *Ibis falcinellus*, but applicable to the present species, which at a short distance appears entirely black. Col. Sykes is therefore induced to adopt the opinion of those writers who considered the bird distinct from *Ibis falcinellus*. Its measurements correspond with those of the smaller species of *Mummy Ibis* given by Cuvier; and it agrees in plumage (intense blackish brown with metallic reflections, without any mention of chestnut or marone, the livery of the *Ibis ignea*;) with the descriptions of the ancients; it is therefore very probable, as M. Temminck suggests, that it is the sacred species worshiped and embalmed by the Egyptians.

Length (male), inclusive of tail, 25½ inches: tail 4½ inches. Female 23½ inches: tail 4 inches.

Black beetles, *larvæ* of water insects, and numerous univalve shells found in the stomachs of these birds.

190. *Ibis papillosa*, Temm., Pl. Col. 304. *Black screaming Ibis*, *Indian variety of Bald Ibis*, Lath., 9. 156.

Soar high in the air in circles, uttering melancholy screams. Monogamous. Found in the stomach of several birds aquatic insects, multitudes of black beetles, *Jowaree* seeds, *Gryllotalpæ*,

and vegetable matters. Col. Sykes's birds are much less brilliant in plumage than the specimen described and figured by M. Temminck.

Irides pale red. Length, inclusive of tail, 25 to $28\frac{1}{2}$ inches: tail $7\frac{1}{2}$ inches.

191. *Ibis falcinellus*, Temm., Man. d'Orn. 2nd Edit. 2. 599. *Tantalus falcinellus*, Linn., 1. 241. Gmel., 1. 648. *Le Courlis verd*, Buff., Ois. 8. 29. *Courly d'Italie*, Buff., Pl. Enl. 819. *Marone Ibis*.

Sexes do not differ in plumage; but the female is somewhat smaller than the male.

Length, inclusive of tail, 26 to $26\frac{1}{2}$ inches: tail $4\frac{1}{2}$ inches. Multitudes of black beetles and grasshoppers, and univalve freshwater shells, found in the stomach. An immature bird in possession of the Zoological Society, unlike the supposed immature bird (*Ibis ignea*), is characterized by the marone livery of the *Ibis falcinellus*.

Fam. *Scolopaciæ*, Vigors.—Genus *Totanus*, Bechst. *Sandpiper*.

192. *Totanus ochropus*, Temm., Man. d'Orn. 420. *Tringa ochropus*, Linn., 1. 250. *Green Sandpiper*.

Absolutely identical in plumage with a specimen from Hudson's Bay in the British Museum, and with English specimens.

Irides fuscous brown. Length, inclusive of tail, $9\frac{1}{2}$ to 10 inches: tail $2\frac{1}{2}$ inches.

For the most part solitary. The stomach approximates to a gizzard. Sexes alike. Cry, *Cheet, Cheet, Cheet*.

193. *Totanus Glareola*, Temm., Man. d'Orn. 2nd Edit. 2. 654. *Tringa Glareola*, Linn., 1. 250. *Wood Sandpiper*.

Differs from one specimen of *Tringa Glareola* in the British Museum in a defined white line over the eyes to the bill, more white on the throat and less brown speckled on the breast, and slightly longer bill; but is identical in plumage with another specimen.

Irides fuscous brown. Length, inclusive of tail, 9 to $9\frac{1}{2}$ inches: tail $2\frac{2}{3}$ inches. Sexes alike. In April as delicate eating as the common *Snipe*. Cry, *Chit, Chit, Chit*; but the alarm cry is like the grating of a rusty hinge.

194. *Totanus hypoleucos*, Temm., Man. d'Orn. 424. *Tringa hypoleucos*, Linn., 1. 250. *Common Sandpiper*. *Tringa Guinetta*, Brit. Mus. *La petite Alouette de Mer*, Buff., Pl. Enl. 850.

Irides fuscous brown. Length, inclusive of tail, $8\frac{1}{2}$ to 9 inches: tail $2\frac{2}{3}$ inches.

Cry, a sharp whistle like *Wheet, Wheet, Wheet*. Jerk the tail in a curious manner. Sexes alike. Generally solitary.

Genus *Limosa*, Briss. *Godwit*.

195. *Limosa Glottoides*. *Totanus Glottoides*, Gould's Century of Himalayan Birds.

Col. Sykes agrees with Mr. Gould in the propriety of separating

this bird from the *Totanus Glottis* (*Scolopax Glottis*), or *Green-shanks* of Europe.

Irides fuscous red brown. Length, inclusive of tail, 14 to 14½ inches: tail 3 inches.

Sexes do not differ in plumage or size. Cry in flight, a sharp, shrill *Queek, Queek*. Very wary birds. Commonly seen alone; rarely three or four together. Minute fish, *larvæ* of water insects, and univalve shells found in the stomach.

196. LIMOSA HORSFIELDII. *Lim. suprâ brunnea, plumarum rhachibus lineisque transversis angulatis nigris; mento, corpore infrâ, uropygio, dorsi dimidio, caudâ, marginibusque plumarum superiorum albis; remigibus fuscis rhachibus albis; caudâ lineis plurimis angulatis angustis nigris notatâ.*

Irides intense rufo-brunnæ. *Rostrum* pedesque (hi gracillimi) nigri. *Longitudo corporis* 8—8¼ unc., *caudæ* 2½.

This is a miniature likeness of the preceding, but quite distinct, although similar in habits, manners, flight, and cry; but with a permanent difference in size and some markings. It is comparatively a rare bird. Col. Sykes had at first considered it a young bird of *Tot. Glottoides*, until an observation of some years convinced him of his mistake. So wary as to be rarely within reach of the gun. Female with the spots and markings fainter than in the male. Bill 1 ⅝ inch long.

Genus *Gallinago*, Ray. *Snipe*.

197. *Gallinago media*, Ray. *Scolopax Gallinago*, Linn., 1. 244. *Becassine*, Buff, Ois. 7. 483. Pl. Enl. 883.

Appears only from November until March in Dukhun. Same as the European bird, with trifling exceptions, resulting probably from age. *Irides* intense brown. Size of *common Snipe*. Found in the stomach, vegetable matter, minute univalve shells, earth-worms, *larvæ* of water insects, and fine gravel. Sexes alike.

198. *Gallinago minima*, Ray, Syn. 105. A. *Scolopax Gallinula*, Linn., 1. 244. 8. *Becassine sourde*, Temm., Man. d'Orn. 440. *Jack Snipe*.

Appears and disappears with the preceding species. Identical with the European bird and precisely similar in its habits. *Irides* intense brown. Length, inclusive of tail, 8 ⅞ inches: tail 2 ⅓ inches. Food the same as that of the *common Snipe*. Sexes alike.

Genus *Rhynchæa*, Cuv.

199. *Rhynchæa picta*, Gray, Proc. Zool. Soc. *Rhynch. Capensis*, Steph., 12. 65. *Scolopax Capensis*, Linn., 1. 246.

Col. Sykes has specimens in such states of plumage as to correspond with the above species, shot on the same ground. Migratory. *Irides* red brown. Length, inclusive of tail, 10 inches: tail 1¾ inches. Sexes alike. Feed like *Snipes*.

Genus *Pelidna*, Cuv. *Dunlin*.

200. *Pelidna Temminckii*, Steph., 12. 103. *Tringa Temminckii*, Leisl. Temm., Man. d'Orn. 401. *Small Dunlin*.

Identical with the European bird. *Irides* dark brown. Length, inclusive of tail, 6 to $6\frac{1}{2}$ inches: tail 2 inches. Feed like *Snipes*. Gregarious. Excellent eating.

Fam. *Rallidæ*, Leach.—Genus *Parra*, Linn. *Jacana*.

201. *Parra Sinensis*, Gmel., 1. 709. *Yellow back-necked Jacana*. Fig. in Gould's Century of Birds.

The immature bird is the *Parra Luzoniensis*. Dive remarkably well despite their long toes. *Irides* fuscous brown. Length, inclusive of tail, 18 to 19 inches: tail 9 to 10 inches. Found in the stomach of many birds vegetable matter, two species of univalve shells, bugs (*Cimex annulatus*), and fine gravel. Gregarious, and common on the rivers in Dukhun.

Genus *Gallinula*, Ray. *Gallinule*.

202. *Gallinula Javanica*, Horsf., Linn. Trans. 13. 196. *Poule Sultane de la Chine*, ou *Poule Sultane brune*, Pl. Enl. 896. *Pan Komree* of the Mahrattas.

This is the Variety β of the 'Index Ornithologicus.' Dr. Horsfield has judiciously separated it from the *Gall. phœnicura*. Col. Sykes's specimens differ from Dr. Horsfield's only in being a little larger. *Irides* fuscous red. Length, inclusive of tail, $11\frac{1}{2}$ to $12\frac{1}{2}$ inches: tail $2\frac{3}{4}$ to 3 inches. *Larvæ* of water insects found in the stomach. Legs very long.

Genus *Rallus*, Auct. *Rail*.

203. RALLUS AKOOL. *Rall. corpore suprâ lateribusque olivaceo-fusco-brunneis; alis caudâque fuscis; gutture, pectore, ventre, uropygioque cinereo-brunneis; tegminibus alarum caudæque inferioribus saturatè brunneis; mento albo.*

Rostrum virescenti-nigrum. Pedes carneo-brunnei. Longitudo corporis 8—9 unc., caudæ $2\frac{1}{2}$.

The only spot of white on the bird is at the chin. Wings and tail short. This bird appears quite distinct from any described species of *Rallus* or *Gallinula*. The nearest approach to it is the *Rall. niger* of Gmelin from the Cape of Good Hope. Sexes alike. Frequents sedgy and marshy places amidst low bushes. Shuns observation.

Genus *Porphyrrio*, Briss.

204. *Porphyrrio smaragnotus*, Temm., Man. d'Orn. 2nd Edit. 2. 700. *Fulica Porphyrrio*, Linn., 1. 258. *Le Taleve de Madagascar*. Buff., Pl. Enl. 810.

These very beautiful birds are found on most of the very large tanks or ponds, the surface of which is a good deal covered with the broad leaves of the *Lotus*, on which the birds walk. Vegetable matters only found in the stomach of several birds,

particularly parts of the green capsules of *Trapa bispinosa*. Sexes alike. *Irides* blood red. Length, inclusive of tail, 18 inches: tail $3\frac{1}{4}$ inches. Stomach a true gizzard.

Genus *Fulica*, Auct. Coot.

205. *Fulica atra*, Linn., 1. 257. *Le Foulque*, Buff., Ois. 8. 211. Pl. Enl. 197.

Differs only from Javanese specimens in being larger, and a shade lighter below. Much larger than the *common Coot* of Europe, but with the same coloured *irides* (crimson), and does not otherwise differ. Length, inclusive of tail, 18 to 19 inches: tail 2 inches. It has the habits of *Podiceps*, and with the gizzard, long *cæca*, and general internal organization of a *Duck*, seems to belong to the order *Natatores*. Water weeds and coarse sand found in the stomach.

Fam. *Charadriadæ*, Leach.—Genus *Cursorius*, Lath. *Courser*.

206. *Cursorius Asiaticus*, Lath., Ind. Orn. 2. 751. 2. *Cour-vite de Coromandel*, Buff., Ois. 8. 129. Pl. Enl. 892.

Irides dark brown. Length, inclusive of tail, 10 inches: tail $2\frac{1}{2}$ inches. Sexes alike. Numerous in Dukhun; but only on the open stony and grass plains. This bird has the shortness of the intestine of the *Bustard* (equal to the length of the body), with a stomach nearly similar; feeding in the same manner on insects and their *larvæ* and with the same cursorial habits, and should therefore be placed near the *Struthionidæ*, after *Otis* and *Tetrao*.

Genus *Vanellus*, Briss. *Lapwing*.

207. *Vanellus Goensis*, Steph., 11. 514. *Tringa Goensis*, Lath., Ind. Orn. 2. 727. 7. *Parra Goensis*, Gmel., 1. 706. *Vanneau armé de Goa*, Buff., Pl. Enl. 807.

Irides fuscous crimson. Length, inclusive of tail, 14 inches: tail 5 inches. Affect open plains and beds of rivers. Gregarious. Water insects, shells, and corn found in the stomach. A watchful and noisy bird at night; uttering cries of *Did he doo it, Did he doo it*. Sexes alike.

208. *Vanellus bilobus*. *Charadrius bilobus*, Gmel. 1. 691. *Le Pluvier de la côte de Malabar*, Buff., Pl. Enl. 880.

The bird has a black bill, yellowish at the base; and not a yellow bill, as described in the 'Index Ornithologicus.' There are one or two other minor discrepancies; but no doubt it is the species figured by Buffon. Although it wants the hind toe, and is therefore, agreeably to generic characters, a *Charadrius*, its habits, figure, food, and almost its cry, are those of the preceding species. Col. Sykes has therefore classed it as a *Vanellus*. *Irides* yellowish. Length, inclusive of tail, $11\frac{3}{4}$ to 12 inches: tail $3\frac{1}{4}$ inches. Gregarious. Found only on the open stony and grass plains. Like the *Van. Goensis*, a restless noisy bird at night, crying *Deewit, Deewit*. Sexes alike.

Genus *Charadrius*, Auct. *Plover*.

209. *Charadrius pluvialis*, Linn., 1. 254. 7. *Le Pluvier doré*, Buff., Ois. 8. 81. Pl. Enl. 904. *Golden Plover*.

Identical with Javanese specimens. Smaller than one North American specimen and two English specimens in the British Museum; but absolutely identical with other British specimens. A rare bird in Dukhun, and appearing only in the cold weather. *Irides* almost black. Length, inclusive of tail, 10 inches: tail $2\frac{3}{8}$ inches. Gregarious. In the stomach were found beetles, land insects, and coarse sand.

210. *Charadrius Philippensis*, Lath., Ind. Orn. 2. 745. 11. *Petit Pluvier à collier de Luçon*, Sonn., Voy. Ind. 84. pl. 46.

This little bird has the habits of *Totanus*; frequents the shores of fresh water only; and in firing into a flock of *Sandpipers* it is frequently killed in company with them. *Irides* fuscous crimson. Length, inclusive of tail, $7\frac{1}{2}$ inches; tail $2\frac{3}{8}$ inches. Gregarious. Sexes alike. Sonnerat, in his description, omits to mention that the margins of the eyelids are bright yellow; instead of which he calls the *irides* yellow.

Genus *Himantopus*, Ray. *Longshanks*.

211. *Himantopus melanopterus*, Horsf., Linn. Trans. 13. 194. *Charadrius Himantopus*, Linn., 1. 255. *L'Echasse*, Buff., Ois. 8. 114. Pl. Enl. 878.

There are slight discrepancies in the plumage between the birds of Java, India, and Europe; and in case of these being permanent, and not the result of nonage, specific differences might be established. *Irides* narrow, lake or crimson colour. Length, inclusive of tail, 16 inches; tail $3\frac{1}{2}$ inches; to the end of the toes $22\frac{1}{2}$ inches. Gregarious. Vegetable matters, *larvæ* of water insects, and minute univalve shells found in the stomach. These birds are strangely polluted with visceral worms of the tape and capillary kinds.

Genus *Ædicnemus*, Cuv. *Thick-knee*.

212. *Ædicnemus crepitans*, Temm., Man. 322. *Otis Ædicnemus*, Lath., Ind. Orn. 2. 661. 11. *Charadrius Ædicnemus*, Linn., 1. 255. *Le grand Pluvier*, Buff., Pl. Enl. 919. *Great-headed Thick-knee*.

There is no visible difference between the Dukhun and British species. Eyes of very great size. *Irides* very broad, of a greenish yellow. Length, inclusive of tail, 17 to 18 inches; tail $4\frac{3}{4}$ inches. Gregarious. Frequents bushy wilds as well as grass plains. Not met with in woods. Land insects and seeds found in the stomach. Sexes do not differ in size or plumage. This bird rests on the first joint of the leg like the *Gallus giganteus*.

ORDER V. NATATORES, III.

Fam. *Anatidæ*, Leach.—Genus *Plectropterus*, Leach.

213. *Plectropterus melanotos*, Steph., 12. 8. *Anas melanotos*, Gmel., 1. 503. *L'Oie bronzée de Coromandel*, Buff., Pl. Enl. 937. *Black and white Plectropterus*. *Nukta* of the Mahrattas.

The very large vertical compressed process on the upper mandible; the white lower part of the back; cinereous rump; and rudimentary black mane down the back neck are not noticed in descriptions of this species. This noble and splendid bird is not common in the Dukhun. Female considerably less in size than the male, and with the metallic reflections much less brilliant; destitute also of the comb or crest on the upper mandible. Seen in pairs. Horny process on the bend of the wing obtuse. Length, inclusive of tail, 30 to 34 inches; tail $5\frac{1}{2}$ to 6 inches. Seeds of water-grasses, and the remarkable quadrangular hard seeds met with in the stomach of the *Plectropterus exustus* found also in the stomach of the *Plectropterus*. Digastric muscle of the remarkable thickness of $1\frac{2}{3}$ inch.

Genus *Anser*, Briss.

214. *Anser Girra*. *Anas Girra*, Gray, Indian Zool. Illust. No. 4. fig. 6. *Girra Teal*, Lath. *Colton Teal* of Europeans in Dukhun, from the quantity of white in the plumage. *Irides* bright crimson.

This handsome bird is one of the smallest of the *Anatidæ*. Length, inclusive of tail, $12\frac{1}{2}$ to 14 inches; tail 3 to $3\frac{1}{4}$ inches. Sexes exactly alike. Monogamous. Vegetable matter and gravel found in the stomach. These birds, when wounded, dive, and on returning to the surface show only the bill above water, keeping the body below at pleasure.

Genus *Tadorna*, Leach.

215. *Tadorna rutila*, Steph., 12. 71. *Anas Casarca*, Linn., App. 3. 224. *Shieldrake*. *Bruhmuny Duck* of Europeans in Dukhun.

Irides yellowish brown. Length, inclusive of tail, male 28 inches. female 25 to 26 inches; tail $5\frac{1}{2}$ inches. For the most part of the year these birds are in pairs; but on the Nerbudda river in Guzerat, Colonel Sykes has seen them congregated 'in hundreds in April. Found in the stomachs of many birds, grass seeds and vegetable matters only. The female is destitute of the black ring round the neck ornamenting the male. The intestinal canal twice the proportional length of that of the *Plectropterus*.

Genus *Anas*, Auct.

216. *Anas strepera*, Linn., 1. 200. *Chipeau*, Buff., Pl. Enl. 958. *Chestnut lesser wing-covert Duck*.
Males identical with specimens in the British Museum from Kent. No females for comparison. Length, inclusive of tail, male 24 to 25 inches, female 22 inches; tail 4 inches. Numerous in Dukhun. Gregarious. A tape-worm was found protruding through the coat of the intestine in one bird, without affecting its health or flesh.

Genus *Rhynchaspis*, Leach, MSS.

217. *Rhynchaspis virescens*, Leach, MSS. *Anas clypeata*, Linn., 1. 200. *Souchet*, Buff., Ois. 9. 191. Pl. Enl. 971, 972. *Black-headed Shoveler*.
Identical with British specimens of the common *Shoveler*; but differing from the description of that bird in Shaw. *Irides* yellowish brown. Length, inclusive of tail, 20 to 21 inches; tail 4 inches. Grass seeds, vegetable matters, pulse-like seeds, and gravel found in the stomach. Gregarious. The intestinal canal is more than seven times as long as the body, neck, and bill included; and in this particular is not approached within nearly two-sevenths by any other bird of the order *Natatores*.

Genus *Mareca*, Steph. *Wigeon*.

218. *Mareca pæcilorhyncha*, Steph., 12. 134. *Anas pæcilorhyncha*, Gmel., 1. 535. *Spotted-billed Duck*, Lath.
Irides red fuscous brown. Length, inclusive of tail, 22 to 25 inches; tail 4 to 4½ inches. Sexes alike in plumage. Grass seeds, vegetable matters, and small stones found in the gizzard. Colonel Sykes's birds identical with a specimen in the British Museum, from the Himalayan mountains. The spot at the end of the bill invariably yellow, but in books it is stated to be white. The digastric muscle thicker than the diameter of the cavity of the gizzard. Colonel Sykes does not consider this species a true *Mareca*.
219. *Mareca fistularis*, Steph., 12. 131. *Anas Penelope*, Linn., 1. 202. *Canard Siffleur*, Buff., Ois. 9, 169. Pl. Enl. 825. *Wigeon*.
Irides red fuscous brown. Length, inclusive of tail, 19 to 20 inches (males), 18½ to 19 inches (females); tail 3½ to 3¾ inches. Gregarious. Absolutely identical with specimens from Devonshire. Contents of the gizzard as in the preceding species.
220. MARECA AWSUREE. *Mar. nigrescenti-brunnea; plumarum scapularium dorsique apicibus flavescenti-brunneis; tegminibus alarum minoribus caudæque superioribus saturatè castaneis; vertice lineaque cervicali fuscis; capite, collo, pectoreque pallidè flavescenti-brunneis, ventre uropygioque saturatioribus ferrugineis; mento tegminibusque caudæ inferioribus sordidè albis.*

Rostrum pedesque nigri. Longitudo (caudâ inclusâ) 18½—20 unc., caudæ 2½. Whistling Teal.

This bird, of which Colonel Sykes has many specimens, is identical with a bird in the British Museum, from Africa; one in the Zoological Society, from Bengal; and one in the India House, from Java. In the whole of these, the lunules on the breast, neck, and upper part of the back, and the strong black short mane of the *Anas arcuata* are wanting. It is also larger than that bird, and Colonel Sykes is therefore led to believe this to be a distinct species, although strongly resembling it.

Gregarious, and abundant in Dukhun. Sexes alike in plumage. These birds are characterized by a very peculiar whistle when disturbed, by a proportionate length of intestine one-third shorter than that of any other species of the *Anatidæ*, and by the inferior *larynx* being dilated into two oblong chambers, placed rather in front of, than lateral to the *trachea*.

Genus *Querquedula*, Ray. *Teal*.

221. *Querquedula Circia*, Steph., 12. 143. *Anas Circia*, Linn., 1. 204. *Sarcelle d'été*, Buff., Ois. 9. 268. Pl. Enl. 946. *Gargany Teal*.

Length, inclusive of tail, 16½ to 17½ inches; tail 3 to 3,¼ inches. Female the smaller bird, and quite dissimilar in plumage. Identical with British specimens. Gregarious. In addition to similar contents of the gizzard in other species, rice in the husk was found.

222. *Querquedula Crecca*, Steph., 12. 146. *Anas Crecca*, Linn., 1. 204. *Petite Sarcelle*, Buff., Ois. 9. 265. Pl. Enl. 947. *Common Teal*.

Identical with male and female British specimens. Length, inclusive of tail, 15½ to 16 inches; tail 3 inches. Water-weed and gravel in the stomach. Colonel Sykes has in his possession specimens (male and female) resembling the female of *Querq. Crecca*; but in which the proportional length of the intestinal canal differs so much from that of *Querq. Crecca* (3.30 to 1, and 5.57 to 1), that he is induced to believe they may belong to a distinct species. It will be observed that the proportional length of the intestine (5.57 to 1) closely approximates to that of a widely-different bird, the carrion-devouring *Percnopterus*.

Genus *Fuligula*, Steph. *Pochard*.

223. *Fuligula rufina*, Steph., 12. 188. *Anas rufina*, Pall. *Le Canard Siffleur huppé*, Buff., Ois. 9. 282. Pl. Enl. 928. *Red-headed Pochard*.

Length, inclusive of tail, 25 inches; tail 3½ inches. Digastric muscle remarkably thick. Rare in Dukhun. Vegetable matters and gravel in the stomach.

224. *Fuligula* ———. *Ash-brown Pochard with white speculum*. This bird has a considerable resemblance to the female of *Ful. rufina*, as described by Mr. Stephens, but it has a black bill; and

Colonel Sykes is not able to meet with a specimen to institute a rigid comparison; he therefore leaves the bird for future consideration. Length, inclusive of tail, 24 inches; tail $3\frac{1}{2}$ inches. A coloured figure in Hunt's British Ornithology (Norwich) represents the female of *Ful. rufina* with a red bill, red legs, and reddish-brown plumage, which militate against its identity with the present bird.

225. *Fuligula cristata*, Steph., 12. 190. *Anas Fuligula*, Linn., 1. 207. *Morillon*, Buff., Ois. 9. 227. Pl. Enl. 1001. *Tufted Duck*.

Differs only in the more pronounced amethyst reflection of the back neck in the male from British specimens. Female identical. *Irides* bright yellow. Length, inclusive of tail, 18 to 19 inches; tail $2\frac{3}{4}$ to $2\frac{7}{8}$ inches. Female the smaller bird.

Fam. *Colymbidæ*, Leach.—Genus *Podiceps*, Lath.

226. *Podiceps Philippensis*, Steph., 13. 16. *Indian Grebe*, Lath., 10. 29. described from drawings of Sir John Anstruther. *Le Castagneux des Philippines*, Buff., Ois. 8. 246. Pl. Enl. 945. Buffon's plate is excellent.

Irides broad, of an ochry yellow; they dilate and contract. Length, from the bill to the rump, $9\frac{1}{2}$ to $9\frac{3}{4}$ inches; tail none. Common in Dukhun, where their unceasing habit of diving occasions their being called *Divers* by Europeans, although quite distinct from the genus *Colymbus*. From their remarkable quickness of eye, Colonel Sykes has known a dozen unsuccessful shots fired at the same individual, which constantly disappeared under water ere the shot reached him. Gregarious. Stomach simple, resembling that of *Herons*, and wholly unlike that of *Ducks*. Found in the stomach *larvæ* of water insects and shrimps, aliments common to the *Heron* tribe, and not found by Colonel Sykes in the gizzard of *Ducks*.

Fam. *Pelecanidæ*, Leach. Genus *Phalacrocorax*, Briss. *Cormorant*.

227. *Phalacrocorax Javanicus*, Steph., 13. 90. *Carbo Javanica*, Horsf., Linn. Trans. 13. 197. Figured in *Illust. Ind. Zool.*, part 10. fig. 9. *Shag* of Europeans in Dukhun.

Absolutely identical with Dr. Horsfield's specimens from Java. Differs from *Pelecanus Africanus* (*Phal. Africanus*), with which it has been confounded, in the scapulars and wing-coverts being reddish-fuscous-brown instead of blue-gray, and being margined and tipped with lighter brown instead of black; in the first three quill-feathers being black instead of pale brown; in the secondaries not being so long as the quills; tail graduated instead of cuneiform; in the front of the neck being reddish and fuscous instead of black and white; finally, in the belly being rusty black instead of white varied with dusky. There can be no question, therefore, of the propriety of its being considered a distinct species by Dr. Horsfield. Colonel Sykes has seen hundreds of them, and notes these differences with several specimens lying before him. *Irides* remarkably nar-

row, crimson. Length, inclusive of tail, 22 to 23 inches; tail 6 inches. Sexes alike. The only spot of white on the bird is at the chin. Very numerous in Dukhun, appearing in the rivers in flocks of hundreds. Fish (some 3 inches long) and prawns found in the stomach of many birds; also capillary worms. Colonel Sykes remarks, that the generic character, "Face and throat naked" is inapplicable to this species.

Genus *Plotus*, Linn. *Darter*.

228. *Plotus melanogaster*, Gmel. 1. 580. *Anhinga noir du Senegal*, Buff., Ois. 8. 453. Pl. Enl. 960 & 107. *Black-billed Darter*, called the *Snake-bird* in Dukhun.

Irides bright yellow. Length, inclusive of tail, $37\frac{1}{2}$ inches; tail $9\frac{1}{2}$ inches. Solitary. Rare in Dukhun, but frequently met with below the Ghauts. This bird has the singular faculty of being enabled to swim with the whole of its body under water, the long neck and head alone being visible, looking like a snake. Colonel Sykes's limits do not permit him to enlarge on the very peculiar formation of the stomach, more resembling that of a ruminant than a bird. Seven small carp and much deep-green vegetable fibre were found in the stomach of a female.

Fam. *Laridæ*, Leach.—Genus *Sterna*, Linn. *Tern*.

229. *Sterna acuticauda*, Gray, *Illust. Ind. Zool.*, part 6. fig. 3. *Small yellow-billed Tern*. *Sterna melanogaster*, Temm., Pl. Col. 434? *Irides* reddish deep brown. Length, inclusive of tail, $13\frac{1}{2}$ to $14\frac{1}{2}$ inches; tail $6\frac{3}{4}$ to 7 inches, very forked and acute; the lateral feathers being subulate. Fish found in the stomach. Although the wings are so long, the flight is slow and with a good deal of flapping. Take their prey while on the wing by darting obliquely upon it. Do not dip under water, nor dart perpendicularly, like *Alcedo rudis*. This elegant and slender species Colonel Sykes shot 160 miles inland, and at an elevation of 1800 feet above the sea. Gregarious. Common in Dukhun.
230. *Sterna similis*, Gray, *Illust. Ind. Zool.*, part 6. plate 8. fig. 2. *Tern with a fuscous lake-coloured bill*.

Length, inclusive of tail, $11\frac{1}{2}$ to 12 inches; tail $3\frac{3}{10}$ to $3\frac{8}{10}$ inches; slightly forked, and without the lateral, elongated, and subulate feathers of *Sterna acuticauda*. Fish only found in the stomach. Gregarious. Habits and locality of the last species. Colonel Sykes states it as curious, that all his specimens, seven in number, of *Sterna acuticauda* and *Sterna similis* proved to be females. Common in Dukhun.

231. STERNA SEENA. *Sterna suprâ cinerea; fronte, vertice, cervicæque saturatè nitidè atris; corpore infrâ albo, hypochondriis parùm cinereo tinctis; reatricibus lateralibus albis*.
Irides saturatè rufescenti-brunneæ. Rostrum forte, flavum. Pedes rubri. Longitudo (caudâ inclusâ) 17—17½ unc., caudæ 8—8½, rictûs 2½.

This species differs from *Sterna affinis* of Ruppell, tab. 14. p. 23, in its smaller size, and having red instead of black legs; in the white not being so brilliant, and in a stronger bill. Ruppell's *Sterna velox* appears to correspond in size with it. In the numerous species in the British Museum there is not one with which it can be identified. Proportionably to the shortness of the legs the claws are long, much arched, slender and sharp, and turn outwards. Hind claw never touches the ground. Same locality and habits as the preceding species, although rare in Dukhun. In the stomach and *oesophagus* of one bird were found the extraordinary number of thirteen *Cyprini*, one of them $2\frac{1}{2}$ inches long. Tail very much forked; lateral tail-feathers subulate, white, 8 inches long. Wings very narrow and long, reaching nearly to the end of the tail.

Genus *Viralva*, Leach.

232. *Viralva Anglica*, Steph., 13. 174. *Sterna Anglica*, Mont., Orn. Dict. *Sterna aranea*, Wils., Amer. Orn. 8. 143. pl. 72. fig. 6? *Marsh Tern*, Lath. *Gull-billed Viralve*.

Colonel Sykes's specimens correspond exactly with specimens of this rare British bird in the British Museum, both in their winter and summer plumage. *Irides* deep red brown. Length, inclusive of tail, $14\frac{1}{2}$ to $16\frac{1}{2}$ inches; tail $4\frac{1}{2}$ to $5\frac{3}{4}$ inches. Sexes alike in plumage, but the female somewhat smaller than the male. Numerous fish found in the stomach of many birds. With the aspect, length of wing, lazy flight, and habits of the *Tern*, this bird has a bill approximating to that of the *Gull*, not quite identical with the bill of the *Viralve*.

Colonel Sykes states, that the *domestic Duck* (*Anas Boschas*) is extensively bred by the Portuguese in Western India, and that it is subject to a kind of apoplexy, which carries it off in a few minutes, although previously in apparent health. He has known a trader lose a flock of more than thirty in the course of one day; and he has himself had ten ducks struck simultaneously, stagger about for a short time as if drunk, run round in circles, fall on their backs, and die. He has not been able to discover any morbid appearances in the brain. In no instance, in the stomachs of the *Anatidæ*, were animal matters met with; the contents consisted of grains, seeds, vegetables, and gravel.

Colonel Sykes, in closing his Catalogue of the birds of Dukhun, mentioned that the details he had given resulted from personal observation of the specimens, in a living or recent state. With few exceptions, the whole were shot by himself; and, to guard against false impressions, he accumulated several individuals of the same species and of both sexes, and was rarely confined to a solitary bird.

THE END.