

## AFRICAN ZOOLOGY:

By DR. SMITH.

Continued from page 32.

GENUS MACROMERUS. *Smith.*

Incisors  $\frac{1}{1}$ , canines  $\frac{1}{1}$ , molars  $\frac{3}{3}$ ,—30. Upper jaw,—incisors contiguous, unequal, the intermediate two much the largest; canines long, pointed, slightly curved, and somewhat triangular; first and second molars crowned with one point, third and fourth with four, and the fifth with two, and an elevated somewhat dentated edge behind. Lower jaw,—incisors horizontal, nearly equal; canines almost the same length as the molars, slightly pointed and somewhat triangular; first molar with one point, second and fourth with five, and the third with four; muzzle short; head roundish; ears small and rounded; body slender; thighs very long; tail about the length of the body, and covered with shortish fur; thumbs of hinder hands very long, depressed, and broadest at the points, which extend considerably beyond the nails; nail of index finger long, slender, and pointed; the nails of all the other fingers short, flat, and somewhat pointed.

*Macromerus typicus.* (Long-legged Lemur.) Face surrounded by a circle of white fur; upper and lateral parts of head and neck deep clear black; shoulders and anterior portion of back grizzled black and clear silvery grey; posterior part of back dull silvery white; outsides of extremities tawny or pale rufous white; throat, breast, and belly, clear white; inner sides of extremities and tail white with a faint tinge of tawny; anterior hands black; face black with a semicircular space under each eye, covered with very short white hair. Length from nose to base of tail nineteen inches; length of tail sixteen inches.

Inhabits the interior of Madagascar.

*Obs.* The only specimen of this beautiful species which I have yet seen is in the possession of Mr. Verreaux, the Curator of the Museum of the South African Literary and Scientific Institution. With a liberality characteristic of his countrymen, and at the expense of his specimen, he spared no trouble to extract the skull in order to furnish me with the means of detailing the generic characters.

GENUS CHEIROMYS. *Cuvier.*

Incisors  $\frac{2}{2}$ , canines  $\frac{0}{0}$ , molars  $\frac{3}{3}$ ,—18. Incisors very strong, excessively compressed, corresponding perfectly in both jaws like the incisors of the gnawers; molars with flat crowns; anterior extremities short; thumbs of anterior hands short and free, the fingers very long; thumbs of posterior hands short, opposable, and furnished with a flat nail; tail long and bushy, two inguinal mammae; muzzle sharp and pointed; eyes and mouth large.

*Cheiromys Madagascariensis*, Desm. (The Aye Aye.) Head, spaces round eyes, the upper parts of body, and the extremities, ferruginous brown; the outer sides of the latter and back with a blackish tint; the sides of the head, the neck, the lower jaw, and belly, greyish; tail entirely black. Besides the more regular covering there are some greyish coloured woolly hairs of about two or three inches in length, scattered over the whole body. Length from nose to base of tail from fourteen to eighteen inches; tail about the same length.

Inhabits Madagascar.

*Lemur psylodactylus*, Schreb. *Supp.* Shaw, *Zool.* 1. 109.  
*Sciurus Madagascariensis*, Gm. *Sys. Nat.* Aye Aye, Sonnerat, *Tvy. aux Ind.* ii. 142. Aye Aye Squirrel, Pennant 2. 142.

### GENUS CHEIROGALEUS. Geoffroy.

*Incisors*  $\frac{1}{6}$ , *canines*  $\frac{1}{1}$ , *molars*  $\frac{6}{6}$ ,—36. *Upper jaw*,—*Incisors* in pairs much apart, the foremost of each pair largest; *canines* conical and curved, first molar subconical compressed and like the canines, the second three-sided and pointed, the third with two tubercles, one on the outer and one on the inner side, the fourth, fifth, and sixth with three tubercles, two on the outer edge and one on the inner. *Under jaw*,—*Incisors* nearly horizontal, the outermost of each side largest; *canines* somewhat conical, inclined forwards, and slightly curved; first molar inclined to conical with an obtuse point, the second, third, fourth, and fifth each with a blunt tubercle towards the anterior edge and a deep excavation behind. Head rounded, face short and covered with fur; eyes approaching; anterior extremities shorter than the posterior; nail of index finger of all the hands pointed, elevated and slightly elongated; nails of the other fingers flat, pointed, and in contact with the soft parts below; ears membranous, projecting beyond the fur, and with a thin sprinkling of short hair; tail about the length of the body, cylindrical and slightly flattened beneath.\*

*Cheirogaleus typicus*.—Upper parts of head, back of neck, space between shoulders and anterior part of back, pale reddish brown, more or less grizzled with silvery grey; rest of back, sides, outer parts of extremities, and tail, ashy brown; the colour darkest along the middle of the back, angles of mouth, throat, breast, belly, inner sides of extremities, and an oblique short stripe on each side of neck, white or ashy-white; sides of face, and space around eyes black. Length from nose to base of tail ten inches and a half, length of tail nine inches.

Inhabits Madagascar.

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\* Mr. Verreaux has lately been singularly fortunate in procuring a fine specimen of the *Cheirogaleus Medius* of Geoffroy, and to him I am indebted for the means of indicating the various characters of the Genus.

*Cheirogaleus major*, Geoff. Colour darkish brown, particularly towards the centre of the face. Length eleven inches.—*Geoffroy*.

Inhabits Madagascar.

*Ann. du Museum*, tom xix. p. 172.

*Cheirogaleus minor*, Geoff. Colour lightish; a black circle round the eyes. Length seven inches. *Geoffroy*.

*Ann. du Museum*, tom xix. p. 172.

*Cheirogaleus Commersonii*, Vigors and Horsfield. Hairs of the body fuscous at the base, brownish red in the centre, and black at the extremity. The red prevails along the ridge of the back and on the base of the tail. The ears are clothed with hairs at the base, inside and outside, their margins are naked; the extremity of the toes and nails are black. The length from the forehead to the root of the tail is thirteen inches and a half; of the tail seventeen inches: the height from the tip of the shoulder to the wrist seven; the length of the fore hand, from the wrist to the end of the middle nail, is two inches and three quarters; of the hind hand, similarly measured, three inches and a half. The hairs on the forehead of this animal diverge in the centre, leaving a white mark over each eye, while their extremities being black form a dark line on each side, which runs backwards gradually widening to the hind head.

*Obs.* This animal, though it can no longer be viewed as a species of the Genus *Cheirogaleus*, is probably of African origin, and on that account I have entered it here. Messrs. Vigors and Horsfield, who describe it, observe: \*—"The incisor teeth are four in number in each jaw, extremely regular; those of the upper jaw are unusually strong, and nearly cylindrical. The nails do not agree with those of *M. Commerson's* figures; they more resemble those of the *monkeys*." It will probably be found to form the type of a new genus.

## ORDER CHEIROPTERA.

Fingers of the anterior extremities connected by a membrane which spreads from the anterior to the posterior extremities, and in many of the species also connects the latter to each other, forming altogether an apparatus more or less effective for flight. Incisive teeth various in number; canines more or less strong; cheek-teeth, in general, having their crowns furnished with several acute points; but in the first genus a single regular furrow or indentation passes along the whole series; both sides of each tooth approaching the figure of the transverse section of a cone, a little convex, notched on the upper edge from right to left. Mammæ, in general two, pectoral.

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\* *Zoological Journal*, vol. ii. p. 111.

## FAM. VESPERTILIONIDÆ.

Fingers of the hands excessively elongated and supporting very fine membranes, thereby enabling the animal to keep up a continued and rapid flight; the thumb separate but not opposable.

Genus PTEROPUS. *Brisson.*

*Incisors* 4, *canines* 11, *molars* 22,—34. *Incisors* conical; *molars* with the crown truncated obliquely, and marked with a longitudinal furrow; head long and subconical; ears simple, without auricles; no crest or nasal appendage; tail short or none; interfemoral membrane sloped off.—An additional phalanx and nail on the index finger of each wing; tongue papillous.

\* Without a tail.

*Pteropus Edwardii.* (Edward's Rousette.) Upper parts of head, upper and lateral parts of neck, and anterior part of back bright reddish yellow, here and there tinted with ferruginous; rest of back brownish black, each hair being blackish towards its base and brownish towards the tip. Face, sides of head, and part of throat, inclined to black; breast reddish yellow or maroon colour; the bases of the hairs black; belly dull reddish yellow, with the bases of the hairs nearly black; ears and wing membranes black. Length from nose to extremity of back twelve inches, expanse of wings forty-five inches.

Inhabits Madagascar.

*Vespertilio vamprus.* Lin. Great Bat of Madagascar. Edward's *Nat. Hist. of Birds*, fig. 180.

*Pteropus vulgaris.* Geoffroy. (Common Rousette.) Head and vent pale ferruginous or reddish yellow; neck, anterior part of back, breast, and belly deep reddish brown; centre of back the same colour, only paler; sides of back dull tawny or pale reddish yellow; ears and muzzle black; wing membranes brownish. Incisors of upper jaw placed at equal distances from each other. Length from nose to hinder part of back twelve inches, expanse of wings forty inches.

Inhabits Mauritius and Bourbon.

*Vespertilio Ingens.* Clus. *Exotic Tab.* p. 94. *Vespertilio Vamprus*, Lin. *Chein volant*, Daub. Roussettè, *Brisson, Reg. Anim.* 216. Buff.

*Pteropus rubricollis.* Geoff. (Red-necked Rousette.) Neck orange or red coloured; all the other parts of the body greyish brown or greyish black; thighs reddish white; ears short and concealed in the fur. Incisors of the upper jaw approximate, the middle ones contiguous; those of the lower in pairs.

Length from nose to hinder part of back about eight inches, expanse of wings two feet.

Inhabits Mauritius and Bourbon.

*Pteropus fuscus*, Briss. *Reg. Anim.* p. 217. Rougette, Buff.

\*\* *With tails.*

*Pteropus Ægyptiacus*, Geoff. (Egyptian Rousette.) Fur woolly, and of a greyish brown colour, palest beneath; head shorter and broader than in the others of this division. Incisor teeth small, slender, and regularly placed. Length five inches, expanse of wings twenty inches.

Inhabits Egypt,—found by Geoffroy in the Pyramids.

Geoffroy. *Mem. de l'Institut d'Égypte*, and *Ann. Mus.* t. xv. p. 96.

*Pteropus Leachii*. (Leach's Rousette.) Above dusky brown or greyish brown; some specimens with pale cinnamon coloured variegations particularly about the neck; beneath, a dull smoke grey with a faint tawny tint: throat in some pale rufous or dull tawny; fur of the neck considerably longer than that of the body and extremities; muzzle and ears black; the latter nearly half the length of the head, and rounded at the tips; wing membranes blackish brown with several partial longitudinal veins on the inside of the fourth finger. Incisor teeth regular. Length of head an inch and three quarters; of body three inches and three quarters; of tail three quarters of an inch; expanse of wings eighteen inches.

Inhabits South Africa.—Found in gardens about Cape Town during the summer nights when the fruit is ripe.

*Zoological Journal*, vol. ii. p. 433. 1829. *Pteropus Hottentotus*, Tem. Smuts. *Dissert. Zool. exhib. enum. Mam. Cap.* p. 3. 1832.

### Genus NYCTINOMUS. Geoffroy.

*Incisors*  $\frac{2}{3}$ , *canines*  $\frac{1}{1}$ , *molars*  $\frac{4}{3}$ ;—28. *Upper incisors conical and contiguous, inferior ones very small; molars with pointed tubercles; nose flat, on a level with the lips, which are deeply cleft and wrinkled; ears large, united and lying over the face; auricle exterior; tail long and extending beyond the interfemoral membrane; wings large; thumb very short; index finger with only one phalanx; hinder feet covered with long hair.*

*Nyctinomus Ægyptiacus*. Geoffroy. (Egyptian Nyctinome.) Fur red above, brown beneath; tail slender, and half of it enveloped by the interfemoral membrane, which is destitute of muscular bands. Body about three inches long.

Inhabits Egypt.

Nyctinome d'Égypte, Geoff. *Mem. de l'Institut de l'Égypte Hist. Nat.* t. ii. p. 28, pl. 2, No. 2.

*Nyctinomus acetabulosus*, Desm. (Port Louis Nyctinome.) Colour brown-black; a bare spot on each side of the breast-bone; interfemoral membrane enveloping two-thirds of the tail; hair of the hinder feet very long. Smaller than the last species.

Inhabits Mauritius.

*Ency. Method. Art. Mammalogie*, sp. 263. *Vespertilio acetabulosus*, Herman, *Obs. Zool.* p. 19. *Nyctinomus Mauritanus*, Geoff. *Egypt. Hist. Nat.* ii. 130. Horsfield's *Java*, No. 5.

*Nyctinomus Condylurus*, (Knob-tailed Nyctinome). Fur very short and silky; above the surface colour is brown, beneath dull tawny white, verging upon dull brown on the sides; ears black and rounded at tips, each with a narrow stripe of fur on its outer surface, extending from the base almost to the circumference; lips with four or five deep furrows; wing membranes blackish brown; interfemoral membrane enveloping more than half of the tail, above it is thinly covered with short fur towards its base and below till near its posterior margin tail enlarged and wrinkled at the point. Length from nose to base of tail about three inches, the latter an inch and a half.—When the fur is reversed the hairs of the back and sides are found to be tawny towards their bases; those of the middle of the body beneath dull brown.

Inhabits South Africa,—about Port Natal.

*Nyctinomus dubius*. (*Caffer Nictinome*.) Fur rather long; above the surface colour is a dull deep brown, beneath a light tawny brown inclined on the sides to blackish brown. Ears brownish black and pointed; wing membranes dull black with a faint brownish tint; interfemoral membrane enveloping nearly two-thirds of the tail, the last third very slender and pointed; hairs on the feet dull white; furrows of upper lip very indistinct. Length from nose to base of tail about two inches, of tail an inch and a half.—On the back, each of the hairs is tawny white towards its base; beneath towards the middle of the body, tawny white throughout; on sides tawny white towards the base.

Inhabits South Africa,—between the Cape Colony and Natal.

#### Genus MEGADERMA. *Geoffroy*.

*Incisors*  $\frac{3}{3}$ , *canines*  $\frac{1}{1}$ , *molars*  $\frac{13}{13}$ ,—26. *Superior canines triangular*, each with a process behind, the inferior ones bent backwards; the first superior molar compressed and ending in a long slender point, the others crowned with many sharp tubercles; the inferior molars compressed, the first simple compressed, and with a single point; the others longer, uneven, and each

crowned with four points. Ears very large and united upon the forehead; auricles much developed. Three appendages to the nose, one vertical, one horizontal or foliaceous, and the third shaped like a horse-shoe; no tail; interfemoral membrane truncated; wings very large, with the third finger without the distal phalanx.

*Megaderma frons*. Colour fine grey with some yellowish tints; nasal leaf oval, half the length of the ears. Nearly three inches long.

Inhabits Senegal. Adanson.

La Fenille, Daub. *Mem. de l'Academie des Sciences An.* 1749. *Megaderma frons*. Geoff. *Ann Mus.* xv. 192.

### GENUS RHINOLOPHUS. Geoffroy.

Incisors  $\frac{3}{3}$ , canines  $\frac{1}{1}$ , molars  $\frac{5}{5}$ ,—30. Superior incisors very small and not permanent; inferior bilobed; molars crowned with sharp points; nose furnished with a crest shaped like a horse-shoe and surmounted with a leaf; ears distinct; interfemoral membrane large; tail long, and entirely enveloped. Two pectoral mammae, and two warts on the pub's having the appearance of mammae, but without lactiferous glands.

*Rhinolophus tridens*, Geoff. (Trident Rhinoloph.) Nasal appendage simple, erect, and terminated by three points; body about two inches long; expanse of wings nearly nine inches.

Inhabits Egypt.

Geoff. *Disc. de l'Egypte*, tom ii. pl. 2. and *Ann. Mus.* xx. 260.

*Rhinolophus Commersonii*, Geoff. (Commerson's Rhinoloph) Nasal leaf simple, the terminal margin rounded; no pouch on the forehead; tail only half the length of the legs. Length between three and four inches.

Inhabits Madagascar,—near Fort Dauphin.

*Rhinolophus clivosus*, Rupell. The surface colour above is an indistinct lightish brown, grey brown, or tawny brown; beneath reddish white or a pale grey brown: the hairs on the upper part, with the exception of their tips, are reddish white. Ears nearly the length of the head, broad at their bases and tapering to their points, which are acute; anterior and posterior surfaces towards bases of inner margins, thinly covered with short fur; towards outer margins marked by several short transverse wrinkles or muscular bands; auricular appendages large and semicircular; nasal leaf single and spear-shaped; between the nostrils, towards the centre of the horse-shoe membrane, a funnel-shaped cavity, and above and connected with it, an erect somewhat three-sided crest. Wing and interfemoral membranes blackish brown; sides of head and upper lip

covered with a dense short fur intermixed with some long fine hairs. Length from nose to base of tail three inches and a quarter; of tail an inch and a quarter; expanse of wings about thirteen inches.

Inhabits Mohila and South Africa,—common near Cape Town.

Rhinolophus Capensis, Licht. *Verzeichn der Doubl.* p. 4.  
Rhinolophus Geoffroyii, Smith, *Zool. Journ.* vol. ii. p. 433.

### GENUS NYCTERIS. Geoffroy.

*Incisors*  $\frac{1}{2}$ , *canines*  $1\frac{1}{2}$ , *molars*  $4\frac{1}{2}$ —30. Superior incisors very small, contiguous, and bilobed; inferior trilobed: molars crowned with pointed tubercles; nostrils covered, each by a moveable operculum; forehead with a deep longitudinal groove; interfemoral membrane large, and including the tail, which is terminated in the form of the letter T.

*Nycteris Thebaica.* (Geoffroy's *Nycteris.*) The surface colour of the back of the head and neck tawny or pale ferruginous, of the sides of the neck bright ferruginous, of the back a clear or a dull brown, and of the under parts of the neck and body a fawn or a dull greyish white: the bases of the hairs of the head and neck dark reddish brown, of those of the back dark dull brown, and of those of the under parts dark brown or blackish. Ears very long and broad, dark blackish brown, veined longitudinally, and both surfaces with a very thin sprinkling of fine short whitish hairs; tragus spiral and with a tuft of whitish hair on its point. Four membranaceous processes on the face in addition to those lying over the nostrils, viz. one immediately before the inner edge of the base of each ear, and another about half way between that and the nostril; all of them concealed by fur; a bare spot on the chin, shaped somewhat like the letter V, and on its anterior edge a small warty excrescence; wing and interfemoral membranes brown. Length from nose to base of tail three inches; of tail two inches; of ears nearly an inch; expanse of wings eleven inches.

Inhabits Egypt and South Africa.

Geoffroy's *Egypt*, tom ii. pl. 1. fig. 2, and skull f. 4, f. 111. *Ann. du Mus.* tom xx. p. 20. *Nycteris*, Geoffroyii, Desm. *Mam.* 127. *Nycteris affinis*, Smith, *Zoological Journal*, vol. ii. p. 433. *Nycteris affinis*, o. c. (*junior*).

*Obs.* When specimens from the Cape and Egypt are accurately compared together, I am inclined to think they will be found to be of different species.

### GENUS RHINOPOMA. Geoffroy.

*Incisors*  $\frac{2}{3}$ , *canines*  $\frac{1}{2}$ , *molars*  $4\frac{1}{2}$ —28. Nose long, truncated and surmounted by a small leaf, nostrils operculated; forehead



concave; ears large, united, and lying on the face; interfemoral membrane narrow and truncated; tail long, enveloped only at its base.

*Rhinopoma microphylla*, Desm. (Small-leaved Rhinopome.) Fur ash coloured; tail very long and slender; nostrils with a valve as in the Seal. Length two inches; expanse of wings seven inches.

Inhabits Egypt.—Found in the pyramids.

*Vespertilio microphyllus* Brunnich, *Description of the Copenhagen Museum*. Chauve Souris d' Egypte Belon de la nature des Oiscaux, book ii. ch. 19.

### Genus TAPHOZOUS. Geoffroy.

Incisors  $\frac{3}{4}$ , canines  $\frac{1}{4}$   $\frac{1}{4}$ , molars  $\frac{2}{3}$   $\frac{2}{3}$ ,—26. Muzzle with a furrow but no laminous appendage; upper-lip very thick; ears moderate, separated from each other; no external lesser ears; interfemoral membrane large; tail not so long as the membrane, and exerted on its upper side.

*Taphozous Senegalensis*, Geoff. (Taphozous Bat of Senegal.) Brown above, mixed with ash colour on the under parts. Length two inches and a half.

Inhabits Senegal.

Loret Volant, Daub. *Mem. de l' Acad. des Scien. Année*, 1759.

*Taphozous Mauritianus*, Geoff. (Taphozous Bat of Mauritius.) Brownish or chesnut above, reddish beneath; auricle terminated by a sinuous border; nose more pointed than in the preceding; tail shorter than the thighs. Length three inches and a half; expanse of wings above nine inches.

Inhabits Mauritius.

*Taphozous perforatus*, Geoff. (Perforated Taphozous Bat.) Fur grey-red above, ash coloured beneath, with the base of each hair white; inner ears in the form of a hatchet, and terminated by a rounded edge.

Inhabits Egypt.—Found in the ancient buildings.

Obs. "M. Desmarest thinks it probable that this and the *T. Senegalensis* are the same."

### Genus VESPERTILIO. Linnæus..

Incisors  $\frac{3}{4}$ , canines  $\frac{1}{1}$ , molars  $\frac{4}{4}$ , or  $\frac{5}{5}$ ,—32 or 36.—Superior incisors separated in pairs, cylindrical and pointed; inferior approximate with a bilobed edge, directed forwards; anterior molars simply conical, posterior crowned with points; nose simple, without membraneous appendages, ridge, or furrow; ears

lateral and distinct; internal ear visible; index finger with one phalanx, the middle with three, the ring and little fingers with two; tail not exceeding the interfemoral membrane; sebaceous glands under the skin of the face.

*Vespertilio pipistrellus*, Lin. (The Pipistrelle.) Fur long, above brownish black, beneath brownish yellow; ears oval-triangular, shorter than the head; the tip of each inner ear rounded. Length of body one inch; tail nearly as long; expanse of wings about seven inches. The African specimens are slightly ash coloured.

Inhabits Egypt.

V. Le Pipistrelle, Daub. *Mem. de l' Acad. &c.* 1759. The Pipistrelle, Pen. *Quad.* ii. 318. Geoff. *Ann. Mus.* viii. pl. 47 and 48. *Descrip. d' Egypte*, fig. 1. f. 3. *Skull*, fig. 4. f. 585.

*Vespertilio nigrita*, Gmel. (Senegal Bat.) Fur above fawn coloured, beneath ashy brown; length of ears one-third of that of the head; muzzle large; lips long; the extremity of the tail free and projecting beyond the interfemoral membrane. Length of body about three inches; expanse of wings about fifteen.

Inhabits Senegal. Adanson.

Marmotte volante, Daub. *Mem. de l' Acad.* 1759. Chauve-souris Etrangere, Buff. t. x. Senegal Bat, Pen. *Quad.* 281. *Ann. Mus.* t. viii. p. 47.

*Vespertilio Borbonicus*, Geoff. (Bourbon Bat.) Fur above reddish, beneath whitish, with the tips of the hairs reddish; ears oval-triangular, and half as long as the head; head short and broad; muzzle tumid; nose prominent. Length nearly three inches.

Inhabits Bourbon.

*Vespertilio Temminckii*, Rupell. (Temmincks Bat.) Head and back dark mouse grey with a brownish shade, under parts of body shining snow white; ears round; posterior surface naked and brown, anterior surface covered with fine brown hair; tragus leaf-shaped, broad and rounded towards the tip; fur tufted behind the muzzle; wing membranes brown; the hinder portion of interfemoral membrane a little hairy. Length from nose to base of tail one inch and ten lines, of tail one inch and two lines; expanse of wings seven inches. The colours in the male, female, and young, are the same.

Inhabits Nubia,—about Dongola.

*Vespertilio Capensis*, Smith. (Cape Bat.) Above the surface colour is a light greenish or pale tawny brown; beneath tawny or tawny white with shades of light brown; the middle and lower portions of each hair on the back a deep clear black; the

lower portion of each beneath a dull black. Ears naked and brownish, broad at the base, and emarginate on the outer side; the tips slightly elongated and acutely rounded; tragus broad, falciform, and slightly inclined inwards toward the point; muzzle and sides of face black with a slight sprinkling of black hair, the former cleft in front: nostrils opening to the sides. Wing membranes blackish brown; interfemoral membrane towards base, both above and below, with a thin sprinkling of short hair, above it is most abundant in the course of the tail. Length from nose to base of tail two inches and a quarter; of tail one inch; expanse of wings eight inches.

Inhabits South Africa.

*Zoological Journal*, vol. ii. p. 435.

*Vespertilio Hottentota*, Smith. (Hottentot Bat.) Above a dull indistinct dark brown, sometimes nearly black; beneath the surface colour is a sort of pale tawny brown or tawny white, lighter towards the pubis; the middle and basilar portions of the hair brownish black. Ears about half the length of the head, black and acutely rounded at their tips, the inner surface bare, the outer hairy towards the base; tragus linear tapering, and with a rounded point; muzzle covered with dense fur till near its point; wing membranes brownish black; interfemoral membrane with a sprinkling of fine short brownish fur for half its length above; claws pale flesh-coloured. Length from nose to base of tail two inches and a half, of tail two inches; expanse of wings twelve inches.

Inhabits South Africa,—Uitenbage and Albany.

*Vespertilio Dinguani*, Smith. (Dingan's Bat.) Fur long and silky; above, the surface colour is dull olive-green, beneath a pale greenish yellow; head short and broad; nostrils prominent; ears blackish brown, and slightly pointed; tragus long, falciform, and tapering towards the tip, which is rounded; auricular appendage semicircular, very distinct, and in a measure separated from the anterior and outer margin of the auricle, inside of the latter with a thin sprinkling of short olive-green hair; wing membranes black; interfemoral membrane pointed, with part of the last joint of the tail protruding beyond it; claws pale greenish yellow; lower incisors placed obliquely across the jaw. Length from nose to base of tail three inches and a half; length of tail two inches; expanse of wings about twelve inches.—Above the hairs are yellowish green, towards their bases below they are of one colour throughout.

Inhabits South Africa,—between Natal and Delagoa Bay.

*Vespertilio Natalensis*, Smith. (Natal Bat.) Fur soft and of moderate length, the surface colour above deep clear brown; beneath light brown, inclining to tawny brown; the basilar

half of all the hairs clear black. Ears naked, broad towards base, and slightly emarginate on the outer side, the tips rounded; tragus narrow, straight, and rounded at the point; muzzle and upper lip black, with a thin sprinkling of short black hair, nostrils opening directly in front; no appearance of a cleft in the fore part of the upper lip; wing and interfemoral membranes black. Length from nose to base of tail two inches, of tail an inch and a quarter; expanse of wings eight inches and a half.

Inhabits South Africa,—towards Natal.

*Vespertilio tricolor*, Temm. (Three-coloured Bat.) Fur soft, above three-coloured, viz. each hair brownish black at the base, yellowish white in the middle, and reddish at the apex; beneath two-coloured, dark brown at the base, and yellowish white elsewhere: the lateral parts of the neck and breast tinged with a clear red; membranes pale brown. Length from nose to apex of tail three inches and ten lines; expanse of wings twelve inches.

Inhabits South Africa.

Smuts *Diss. Inaug. exhib. enumer. Mamm. Capensis*, p. 106.

*Vespertilio epichrysus*, Temm. Fur dense, short, and smooth; above the hairs are brown at their tips, yellowish in the middle and white at their bases; beneath brown at their bases and a clear flesh colour at their tips. Ears of moderate length, erect, acuminate, and emarginate on the outer edge; straight and lanceform; muzzle slightly obtuse; tail very long; nostrils approximate.

Inhabits South Africa.

Smuts *Op. cit. folio* 106.

*Vespertilio platycephalus*, Temm. Fur dense, woolly, and of moderate length; above the surface colour is brownish red, and each hair towards its base is brownish black; beneath a sort of whitish brown; on the region of the pubis whitish; half of the upper surface of the interfemoral membrane hairy, the under surface naked. Head much depressed; mouth large; half of the outer surface of ears hairy. Length of body three inches and one line; of tail one inch; expanse of wings nine inches.

Inhabits South Africa.

Smuts *op. cit. folio* 107.

*Obs.* The three last described species appear to me to differ from any I have found in South Africa,

ORDER FERÆ. *Linnæus.*

Teeth of three sorts, incisors, canines, and cheek teeth, more or less of a trenchant or carnivorous character; four extremities proper for walking; mammæ abdominal or pectoral, varying in number; stomach simple membranous; intestines short.

FAM. INSECTIVORA. *Cuvier.*

Hinder feet always with five, and fore feet generally with five toes; soles of the feet bearing upon the ground; cheek teeth crowned with pointed tubercles; incisors variable in number; body covered with hair or prickles.

Genus ERINACEUS. *Linnæus.*

Incisors 6, canines  $\frac{1}{2}$ , molars  $\frac{3}{4}$ ,—34. Intermediate incisors, above separate, long, cylindrical, and directed forwards; canines shorter than the molars. Body thick, covered above with prickles and beneath with coarse hair; muzzle pointed; ears medium size or very short, and rounded; toes armed with strong nails; tail short or none; mammæ ten, six pectoral and four ventral, no cœcum; clavicles complete: capable of rolling itself into a spherical shape.

*Erinaceus auritus*, Geoffroy. (Egyptian Hedgehog.) Above covered with slender brown spines, each with two rings, one whitish near its base, and the other yellowish towards the tip; the legs and belly covered with soft white fur. Ears large, oval, open, and naked, with softish white hair on the inner sides and an edging of brown; eyes bluish; tail short, nearly naked, and of a yellowish white colour; legs longer and more slender than those of the common hedgehog; muzzle furnished with four rows of whiskers; nostrils denticulated like the crest of a cock. A little smaller than the hedgehog of Europe.

Inhabits Egypt. *Geoffroy*.—Also, Asiatic Russia.

*Erinaceus auritus*, Pallas. *Nov. Com. Petrop*, tom xiv. *Herisson d'Egypte*, Geoff. *Egypt. Schreb. tab. 163.* Shaw, *Zool. vol. i. p. 2. p. 547.*

*Erinaceus frontalis*, Smith. (Cape Hedgehog.) Muzzle short and black; ears and tail short; spines numerous and about half an inch long, of a white colour, variegated with black towards their bases; forehead white, and from thence to the origin of the fore legs extends a broad white band, immediately in front of the spinous covering of back; chin and under parts covered with deep black hair. Length about eight inches.

Inhabits South Africa.

Specimens of this species are occasionally found in the northern parts of the district of Graaff-Reinet, but they are much more abundant in the

country towards Latakoo, where they are sometimes seen alongside of, or even upon the high roads.—*South African Quarterly Journal*, No. 5, Oct. 1831.

Genus SOREX. *Linnæus.*

*Incisors*  $\frac{3}{2}$  *spurious canines* or *lateral incisors*  $\frac{3}{2}$   $\frac{3}{2}$  or  $\frac{4}{2}$   $\frac{4}{2}$ , *molars*  $\frac{4}{3}$   $\frac{4}{3}$ ,—28 or 30. *Upper incisors* indented at their bases; *lower* horizontal towards their bases, turned up towards their tips; *spurious canines* conical, small and shorter than the molars, the latter crowned with points. *Head* elongated; *nose* prolonged and moveable; *ears* short and rounded; *eyes* small but perceptible; *tail* varying in length, round, compressed, or four-sided; *feet* with five toes; *nails* short, curved, and pointed; *sebaceous glands* on the flanks.

*Sorex Capensis*, Geoffroy. (Cape Shrew.) Fur short and soft; the surface colour of the upper parts of the head, of the back, and dorsal half of the sides, is an uniform yellowish brown, which varies in depth of tint in different individuals; the under parts ashy grey or grey-white: the bases of the hairs above dark slate coloured, of those beneath light slate coloured. Muzzle elongated and slender, two-lobed at the tip; whiskers long, particularly towards the angles of the mouth; ears large, naked, and of a pale brownish colour; inferior margin of each, together with the oblique septum upon the anterior surface, fringed with some long white hairs. Tail cylindrical, and above covered with a short reddish brown fur, intermixed with some long whitish hairs; beneath with ashy white fur. Length from nose to base of tail five inches and a half; tail two inches.

Inhabits South Africa.

*Sorex flavescens*, Geoff. *Mem. du Mus. d' Histoire Naturelle. Huitieme annee. Deuxieme cahier.* Scheer Muis of the Cape Colonists.

*Sorex Capensoides*, Smith. Fur moderately long and soft; above the surface colour is brownish, finely sprinkled with white; beneath greyish or reddish white; all the hairs towards their bases dark slate coloured: tail covered with a fine short fur, which is intermixed, particularly on the sides, with a number of long fine hairs. Muzzle elongated, the apex two-lobed; nostrils directed outwards; ears large, bare, and projecting beyond the fur; teeth dull white. Length from nose to base of tail three inches; tail an inch and three quarters.

Inhabits South Africa,—near Cape Town.

*Obs.* The specimen from which the description has been drawn up, appears to be an *adult*, but as it is not in a good state of preservation it is possible that it may be the *Sorex Capensis* in a different age. The tail, however, is longer in proportion to the body than that of the Cape Shrew.

*Sorex Indicus*, Geoff. (Indian Shrew.) Fur very short grey-brown, above tinted with reddish, in consequence of the tip of each hair being of that colour. Tail round and reddish brown. Length of body five inches and two lines, of tail one inch and six lines. *Geoffroy*.

Inhabits Mauritius and India.

*Ann. du Mus. tom 1 et 17, p. 183.* Geoff. *Mem. du Mus. d' Histoire Naturelle. Huitieme annee.—Deuxieme cahier, p. 133.*

*Obs.* It has not yet been satisfactorily ascertained whether *S. Indicus* and *S. Capensis* be identical or not. I have only had an opportunity of examining one specimen of the former, which was sent me from Mauritius, and it appears not to be full grown. The tail was much longer in proportion to the body in it than in the Cape Shrew.

*Sorex varius*, Smuts. (Variegated Shrew.) Fur soft and rather longer than that of the last; the surface colour of the upper parts of the head, of the back, and of the sides, is variegated or grizzled pale yellowish brown, obscure grey-white and bluish black; beneath it is reddish white: the bases of all the hairs, both above and beneath, dark slate-coloured. Muzzle moderate; ears scarcely projecting beyond the fur; both their anterior and posterior surfaces with a thin covering of yellowish brown hair; whiskers long; tail cylindrical, and covered with short reddish white hairs, of equal lengths; nails long, and nearly colourless. Length from nose to base of tail four inches, the tail an inch and a half.—*Dissert. Zool. f. 108.*

Inhabits South Africa:—Wynberg, Swellendam, &c.

*Sorex giganteus*, Geoffroy. Above ash coloured with a tint of reddish, beneath a pure ash colour; ears large, not concealed in the fur; tail rounded. Length from nose to base of tail about five inches and a half, tail three inches.

Inhabits India.

*Mummies*, supposed of this species, were discovered in tombs in Egypt, by *Olivier* and *Passalacqua*.

*Sorex religiosus*, (Sacred Shrew.) Colour greyish like that of the common mouse; ears very large; tail four-sided, angles prominent; thumb very short. Length from nose to base of tail about two inches and a half; tail about the length of the body.

Found in the catacombs of Thebes. *Passalacqua*.

*Obs.* As far as we know, the *Sorex giganteus* does not inhabit any part of Africa, and the *Sorex religiosus* has not yet been identified with any existing species. Another embalmed shrew, from the same locality, has been examined by M. Geoffroy, and has been considered by him as constituting a third species. In its figure and proportions it resembles very much the *Sorex araneus* or common shrew of Europe; and he remarks that he has in vain sought for a character to distinguish them precisely from each other. He is, however, not inclined to consider them as identical.\*

\* *Memoires du Mus. d' Histoire Naturelle. Huit. annee Deux. cahier.*

## Genus MACROSCELIDES. Smith.

*Incisors*  $\frac{2}{2}$ , *canines*  $\frac{1}{1}$ , *molars*  $\frac{5}{5}$ —40. Upper jaw—*incisors* separated, compressed, and pointed; *canines* short, separate, and more or less two-pointed; the first and second molars crowned with five points, the third and fourth with four, the fifth somewhat triangular and three-pointed. Under jaw—*incisors* slanting and with cutting edges; *canines* contiguous, the first three-pointed, the others with two points; the first and second molars compressed, and three-pointed; the third, fourth, and fifth four-pointed; muzzle narrow, terminating in a long subcylindrical proboscis, having the nostrils at its apex; eyes moderate; ears large and rounded; tail rather long, scaly annulated, and thinly sprinkled with short hair; feet plantigrade, five-toed; hinder extremities very long.

*Macroscelides typicus*, Smith. (Cape Elephant Mouse.) Fur long and soft; the surface colour of the upper and lateral parts of the head pale reddish brown, sprinkled with white; of the back a pale brown clouded with black; of the sides pale grey-white or red-white sprinkled with black; beneath it is a clear white; legs with a covering of short white hair; ears large, with a thin sprinkling of short whitish hair on both surfaces; proboscis white; whiskers long, some of the hairs white, the rest black; tail thinly covered with blackish hairs above, and with white ones beneath. Length from nostrils to root of tail four inches and three quarters; length of tail three inches and a quarter.

Inhabits South Africa.

Sorex Araneus Maximus Petiver, *t. xxiii. fig. 9.* M. typus, Smith. *Zoological Journal*, v. ii. p. 436.

*Macroscelides rupestris*, Smith. (Namaqua Elephant Mouse.) Fur long and soft; the surface colour of the upper parts of the head pale tawny, of the back and sides of the neck bright tawny, inclined to pale rufous; of the back pale yellowish brown, sprinkled with black; on the sides it is pale reddish white, and beneath pure clear white: the bases of all the hairs a dark slate-colour. Ears with a thin sprinkling of very short hair, tawny without and white within; whiskers long, and the hairs principally black; proboscis reddish white; legs covered with short reddish white hair; tail variegated with black, with tawny, and with white, short, hairs. Length from nostrils to base of tail six inches; length of tail four inches.

Inhabits South Africa,—rocky mountains of Namaqualand.

*South African Quarterly Journal*, No. 5, p. 10. Oct. 1831.

The *M. rupestris* is rather larger than the *M. typicus*, and is at once distinguished from it by the pale rufous patch on the back of the neck. The former is met with upon rocky mountains, where it lives under the loose stones; the latter occurs only in low flat districts, and lives in holes in the ground.

(To be continued.)