

25. *BELÉNOPSIS MESENTINA*, var. *LORDACA*, Walker.  
Dhobar, 21st, Beichen, 22nd January ; Berbera, January.
26. *SAPÆA PARADISEA*, var., Butler.  
Dimoley, 23rd January.
27. *RHOPALOCAMPTA ANCHISES*, Gerst.  
Dhobar, 21st January.  
Apparently a common species.

#### HETEROCERA.

All of these excepting one are referable to the *Noctuae*.

28. *AGROTIS* sp. (too bad for recognition).  
Dhobar, 21st January.
29. *ACHÆA MELICERTE*, Drury.  
Dhobar, 21st January.
30. *SPHINGOMORPHA MONTEIRONIS*, Butler.  
No special locality recorded.
31. *ORTHODES TIRHACA*, Cramer.  
Goolis Mountains, Galeed, 13th February.
32. *AVATHA LEUCOPTERA*, Hampson.  
Beichen, 22nd January.
33. *CASAMA VILIS*, Walker.  
Beichen, 22nd January  
This is a *Liparid*.

2. On the Mammals obtained by Mr. A. Whyte in Nyasaland, and presented to the British Museum by Sir H. H. Johnston, K.C.B.; being a fifth Contribution to the Mammal-fauna of Nyasaland. By OLDFIELD THOMAS.

[Received October 25, 1897.]

(Plate LIV.)

In June and July 1896 Mr. Alexander Whyte, the well-known collector, made an expedition into Northern Nyasaland for the purpose of investigating the fauna of that part of the territories administered by Sir Harry Johnston. The expedition proved remarkably successful, for besides the large number of specimens of other groups obtained, Mr. Whyte brought back the fine collection of mammals of which the present paper gives an account.

The chief localities where Mr. Whyte collected were the Nyika Plateau (about 10° 30' S., and 33° 30' E.), the Masuku Plateau, slightly further northwards, and Fort Hill (about 9° 40' S., 33° 20' E.), these localities all lying just to the west of the north end of Lake Nyasa, and at altitudes of from four to seven thousand feet. A few odd specimens were also obtained at Karonga and Ruarwe on the lake shores.

I have also included in the list some few additional specimens from Zomba and the south end of the lake, and among others the very interesting results of a trip made by Mr. Whyte to Mount Malosa, just north of Mount Zomba, in November, where he obtained examples of several species not previously recorded from Nyasaland.

Now that Mr. Whyte has retired from his labours in the tropics, it is only fitting that in this, the last paper that will appear on his Mammals, special reference should be made to the great value of the services he has rendered to zoology in general, and to our knowledge of mammals in particular, and to the way in which, during the past six years, he has utilized the opportunities given him by the generosity and public spirit of Sir Harry Johnston.

As in previous papers, a few specimens are included which the Museum owes to other members of the Nyasa Administration, notably to Mr. Alfred Sharpe, and now that Mr. Sharpe has succeeded to Sir Harry Johnston's post, we may hope that by his help our knowledge of the riches of the Nyasa Protectorate will still continue to increase.

The northern region visited by Mr. Whyte proves to have a very close affinity with that explored by the German travellers Böhm, Reichard, and Kaiser south and south-west of Lake Tanganyika, the mammals collected by whom were worked out by Dr. Noack. Thus Mr. Whyte has obtained examples of several characteristic species described from their collections, notably *Rhynchocyon reichardi* and *Gerbillus böhmi*, both of which are forms quite new to the fauna of Nyasaland.

The following is a list of the new species contained in the present collection, those marked with an asterisk having been described in a previous preliminary communication<sup>1</sup> to the Society :—

*Macroscelides brachyrhynchus malosce.*

*Crocidura lixa.*

*Myosorex sorella.*

\**Funisciurus lucifer.*

*Graphiurus johnstoni.*

\**Mus nyikæ.*

\**Saccostomus elegans.*

\**Georychus whytei.*

\**Thryonomys sclateri.*

<sup>1</sup> *Suprà*, pp. 430–433. See "Abstract of Proceedings" for May 4th, 1897 (published May 7th).

## 1. CERCOPITHECUS ALBIGULARIS MOLONEYI, Scl.

*a, b.* Giant Forest on top of Masuku Plateau, 7/97.

*c, d.* 2 fœtus in spirit. Ditto.

*e-g.* No exact localities.

## 2. COLOBUS PALLIATUS, Pet.

*a-c.* Skins. No exact localities.

2 *a.* COLOBUS, sp. inc.

*a, b.* 2 young skins, bought from natives. "From the mountain-ranges east of Fyfe Station."

## 3. PAPIO PRUINOSUS, Thos. (?).

*a.* ♂. Fort Johnston. Shot and presented by Mr. H. C. McDonald.

*b, c.* ♂. Skin, and a separate skull, Zomba, 11/96.

These two specimens are coloured more like the ordinary E. African *P. thoth*, and I am not certain of their identity with the peculiar hoary-coloured *P. pruinus*, although, on account of locality, they may be provisionally referred to that species.

I am informed by Dr. Rendall that the type specimen of *P. pruinus* did not come from Fort Johnston itself, but from Lesumbwe, Monkey Bay, on the Livingstone Peninsula, Lake Nyasa.

## 4. OTOGALE KIRKI, Gray.

*a, b.* Young, Zomba, 11-12 Feb., 1897.

## 5. XANTHARPYIA STRAMINEA, Geoffr.

*a-d.* Mt. Malosa, 21-29 Nov., 1896.

## 6. RHINOLOPHUS CAPENSIS, Licht.

*a.* ♂. Fort Hill, July 1896.

## 7. NYCTERIS CAPENSIS, Geoffr.

*a.* In spirit. Ruarwe, W. coast Lake Nyasa.

8. PIPISTRELLUS, sp. (? *P. kuhli*, Natt.).

*a-c.* In spirit. N. Nyasa. "Label lost: either Nyika or Masuku."

I do not venture definitely to say that these Bats are *P. kuhli*, which is a native of the southern Palæarctic Region, and has never hitherto been found south of Abyssinia, but I can find no definite character on which to separate them. They even have the characteristic white edging to the wing-membrane so constantly found in the northern form.

9. MYOTIS<sup>1</sup> BOCAGEI, Peters.

*a-d.* Four in spirit. Kondowe, near Karonga, N. Nyasa.

I am unable to distinguish these specimens from Peters's *Vespertilio bocagei*, originally described from Angola.

<sup>1</sup> *Vespertilio auctorum*, nec Linn. See Milner, Ann. Mag. N. H. (6) xx. p. 379 (1897).

## 10. RHYNCHOCYON REICHARDI, Reichenow.

*a, b.* ♂ ♀. Fort Hill, July 1896.

These specimens are the first examples of this beautiful *Rhynchocyon* that the Museum has received.

## 11. RHYNCHOCYON CIRNEI, Pet.

*a.* Mt. Zomba, 5000 ft., 24 Dec., 1896.

## 12. PETRODROMUS TETRADACTYLUS, Pet.

*a.* ♀. Zomba, Aug. 1896.

Attention may be directed to the differences which distinguish from each other the East-African *Petrodromus* (*P. sultan*<sup>1</sup>), that occurring on the Rovuma R. (*P. rovumæ*), and the typical Zambesi form. (See above, p. 434.)

## 13. MACROSCELIDES BRACHYRHYNCHUS, Smith.

*a-f.* Nyika Plateau, 6000-7000 ft., June, July, 1896.

*g-i.* In spirit. Nyika Plateau, 6000-7000 ft., June, July, 1896.

*j-k.* Fort Hill, July 1896.

These specimens belong clearly to the same species as an Elephant-Shrew from Mashona and Matabili, of which the Museum possesses a considerable series, thanks to the efforts of Messrs. Darling, Selous, and Marshall.

For this species I had, until recently, considered that the proper name was *M. fuscus*, Peters, founded on a melanistic individual from Boror, near the mouth of the Zambesi, an individual which, Dr. Matschie is agreed with me, is specifically identical with the reddish specimens also obtained by Dr. Peters at Boror, Tette, and Senna. On sending one of the Nyika examples to Dr. Matschie I am assured by him that it is precisely identical with at least one of the Tette specimens (which are rather variable *inter se*), and may be accepted as representative of the typical non-melanistic coloration of *M. fuscus*.

But it has now been suggested to me by Mr. De Winton that this widely-spread Zambesi species is not really separable from Smith's *M. brachyrhynchus*, and after a careful comparison with Smith's types I cannot resist coming to the same conclusion. The two co-types have their hind feet slightly shorter than any of the examples of "*M. fuscus*," but otherwise I can find no reason for distinguishing them. At the same time I am assured by Dr. Matschie that Böhm's Marungu *Macroscelides*, referred by Noack to *M. alexandri*, Og., is also precisely similar to the Nyika example, a further instance of the resemblance between the faunas of these two localities.

## 14. MACROSCELIDES BRACHYRHYNCHUS MALOSÆ, subsp. n.

*a-c.* Mt. Malosa, 5500 ft., 22-27 Nov., 1896. *a.* Type.

Besides the series of *M. brachyrhynchus* sent by Mr. Whyte from

<sup>1</sup> Misprinted *sultani* in the original description. The name is a substantive in apposition.

Northern Nyasaland, there are three examples decidedly different in colour from Mount Malosa, just to the north of Zomba, a locality where Mr. Whyte states that a great many peculiar forms are found.

Size and general characters as in ordinary Zambesi examples of *M. brachyrhynchus*, but the upper colour, instead of being pale rufous, is, in ordinary lights, grizzled greyish or mouse-colour, not far from the "hair-brown" of Ridgway. Looked at with the light behind one, and with the animal's head pointing almost directly away (a position which turns the pale rufous of *M. brachyrhynchus* into a silvery lilac), the colour turns nearly a pure ashy grey. Sides buffy, belly white. On the rump the hairs surrounding the naked area at the root of the tail are pale rufous, exactly as in *M. brachyrhynchus*, but owing to the difference in the dorsal colour they present a marked contrast to the rest, so that the rump is conspicuously different to the back. Face, like back, greyer than in *M. brachyrhynchus*; the whitish ring round the eye is slightly interrupted in the centre above, and broadly so at the posterior canthus, where a blackish streak or smear is formed, running backwards from the eye; the hairs in the same position in *M. brachyrhynchus* are not darker than the rest of the face.

Skull apparently not markedly different from that of *M. brachyrhynchus*, allowing for the range of variation found in that animal. It is, perhaps, rather narrower across the brain-case, the nasals are slightly broader for their middle third, and the teeth, especially the premolars, seem to average rather smaller.

Measurements of the *type*, an adult ♀ in skin:—

Head and body (stretched) 144 mm.; tail 103; hind foot 29; ear 17.5.

Skull: basal length 29.8; greatest length 34; greatest breadth 17.4; interorbital breadth 5.6; breadth of brain-case 13.4; front of i.<sup>1</sup> to back of last molar (m.<sup>2</sup>) 16.5.

*Hab.* Mount Malosa, 5500 ft. Coll. 22 Nov., 1896.

*Type.* B.M. No. 97. 10. 1. 41.

In his report on one of these specimens sent to him for examination, Dr. Matschie tells me that the four Tette *Macroscelides* examples in the Berlin Museum are very variable in colour, ranging from the ordinary rufous of *M. brachyrhynchus* to a much darker shade, and it is owing to this fact that I now consider the Malosa form as merely a subspecies. The type of *M. fuscus*, as already noted, is a melanistic example, still in milk-dentition, of the ordinary Zambesi form. That it is not *M. b. malosæ* is shown at once by the dark colour of its belly and eye-rings.

15. *CROCIDURA* (CR.), sp. inc.

*a.* ♂. Fort Hill, July 1896.

A large species, apparently allied to *C. anchietæ*, Boc.

16. *CROCIDURA* (CR.), sp. inc.

*a-c.* Kombe, Masuku Range, 7000 ft., July 1896.

*d, e.* Nyika Plateau, 6000–7000 ft., June, July, 1896.

*f-i.* In spirit. Nyika Plateau, 6000–7000 ft., June, July, 1896.

*j, k.* Zomba, Aug. 1896, and 6 Feb., 1897.

*l-n.* Mt. Malosa, 22–26 Nov., 1896.

*o.* Mt. Milanji, 27 Nov., 1896.

Medium-sized Shrews, allied to *C. hirta* and *C. annellata*, Peters.

# 17. CROCIDURA (CR.), sp. inc.

*a.* Nyika Plateau, June 1896.

A small species, allied to *C. silacea*, Thos.

A specimen of this same Shrew was sent from Zomba by Mr. Whyte in 1894.

# 18. CROCIDURA (PACHYURA) LIXA, sp. n.

*a.* ♂. In spirit, Nyika Plateau. *Type* (No. 97. 10. 1. 62).

*b.* ♀. In spirit. “N. Nyasa, Nyika or Masuku.”

A small *Pachyura* with tail of medium length, the second unicuspid smaller than the third.

Size about the same as in the last species. General colour pale greyish, but spirit-specimens only examined. Belly-hairs slaty basally, white terminally. Lateral gland well developed in male, small in female, just level with the wrist when the arm is laid backwards. Upper surface of hands and feet white. Tail longer than the body without the head, pale brownish above, white below, the usual long hairs distinct.

Anterior upper incisor rather short, well hooked, its posterior cusp about half the height of the second incisor, the anterior unicuspid. Third unicuspid decidedly larger than the second, which is unusually small, but little larger than the well-developed fourth<sup>1</sup>.

*Dimensions* of the type, an adult male in spirit:—

Head and body 67 mm.; tail 51; hind foot 12.

Skull: basal length 17.2; greatest length including teeth 20.1; greatest breadth anteriorly 6.2, posteriorly 8.7; interorbital breadth 4.4; palate length from gnathion 8.1.

Specimen *b*, ♀, has its head and body 64 mm.; tail 50 and hind foot 12 mm.

# 19. MYOSOREX (?) SORELLA, sp. n.

*a.* ♂. In spirit, Masuku Plateau, 6000 ft. *Type* (No. 97. 10. 1. 64).

A small Shrew with a very long tail; number and proportions of teeth as in *C. (Pachyura) lixa*.

Size very small, scarcely larger than in *C. varilla*. Form slender.

General colour above dull slaty grey, so far as can be made out in the spirit-specimen; under surface, at least on chest, buffy white, the bases of the hairs slate. Hands and feet very slender, their upper surfaces pale brown. Lateral gland indistinguishable. Tail exceedingly long for a Shrew, nearly half as long again as the

<sup>1</sup> The relative proportions of the unicuspid are not unlike those of *C. dayi*, as figured by Dobson, Mon. Insect. pl. xxviii. fig. 6.

head and body, short-haired, brown above, rather paler below ; no longer hairs seem to be intermixed with the short ones, but owing to the partial loss of the hair it cannot be stated with absolute certainty that this is the case.

Skull fairly broadly built. Anterior incisors rather short, their posterior basal cusp very sharply pointed, reaching to scarcely one-third the height of the succeeding tooth so far as the latter's anterior edge is concerned. First unicuspid long and slender, third about half its length ; second and fourth quite small, subequal, about half the height of the third. Last upper molar of the squarish form found in *Myosorex varius*. Anterior lower incisors slender, their upper edges indistinctly notched.

Measurements of the type, an adult male in spirit :—

Head and body 60 mm. ; tail 85 ; hind foot 14·5.

Skull : basal length 15 ; greatest length, including incisors, 18·1 ; greatest breadth anteriorly 5·8, posteriorly 8 ; interorbital breadth 4·1 ; palate length from gnathion 7·2.

*Hab.* Masuku Plateau.

On the basis of Dobson's work, I have provisionally placed this distinct little Shrew in the genus *Myosorex*, as it seems allied by characters both of teeth and tail to the species he termed *M. morio* and *M. johnstonii* ; but I am by no means convinced that these species are really congeneric with *M. varius*, the type of the genus, and that they ought not to be considered simply as *Pachyura*. The length of the tail of *M. sorella* will distinguish it at once from any South-African Shrew hitherto described.

20. *NANDINIA GERRARDI*, Thos.

*a.* Native skin, Masuku Plateau.

It is unfortunate that this skin, like the two original ones, is native made and without a skull. The cranial characters of this striking species are therefore still unknown.

21. *HERPESTES GRACILIS*, Rüpp.

*a.* Karonga, Lake Nyasa, July 1896.

*b.* Lakangala, Zomba, 22 Feb., 1897.]

22. *CROSSARCHUS FASCIATUS*, Desm.

*a.* Yg. ♀. Mt. Malosa, 8000 ft., 20 Nov., 1896.

23. *LYCAON PICTUS*, Temm.

*a, b.* 2 ♀ (young). Mt. Zomba, 5/12/96.

Shot by Mr. Alfred Sharpe, high up on Mount Zomba.

Both specimens retain their milk-dentition, although they have nearly reached their full size.

24. *PÆCIOGALE ALBINUCHA*, Gray.

*a.* Kombe, Masuku Range, 7000 ft., July 1896.

*b.* Separate skull.

25. *SCIURUS MUTABILIS*, Pet.

a. Nyika Plateau, June 1896.

b, c. Kombe Forest, Masuku Range, July 1896.

d-g. Lakangola, Zomba, 23-28/2/97.

26. *FUNISCIURUS LUCIFER*, Thos. (Plate LIV.)*Xerus* (*Paraxerus*) *lucifer*, above, p. 430.

a, b. Kombe Forest, Masuku Range, 7000 ft., July 1896.

a. *Type* (B.M. No. 97.10.1.80).

c. Chidewah Mt., two days N.W. of Mt. Waller, 6000 ft., June 1896.

This splendid Squirrel is at the same time the most beautiful and the most distinct of all the mammalian discoveries made during the recent explorations in Nyasaland, and I have therefore thought it worthy of a figure. So distinct is it that it is difficult to say to what species it is most nearly allied. On the whole its nearest relation may be considered *F. pyrrhopus*, in spite of the extent to which its brilliant rufous coloration recalls *F. palliatus*. As it has been already sufficiently described, no further account of it is here necessary, but an explanation of the generic name adopted is required.

When using in the original description the term *Xerus*, subgenus *Paraxerus*, I was contented to accept provisionally Dr. Forsyth Major's arrangement of the family<sup>1</sup>, wherein he assigned about half of the species commonly termed "*Sciurus*" to *Xerus* and half to *Sciurus*, dividing each of these groups into several subgenera. This general arrangement being founded on such a careful and highly competent examination of the skulls and teeth, it was evident that it could not be ignored, and that systematic workers would have to consider how best they could utilize Dr. Major's invaluable contribution to the subject. Previous classifications had only sorted the Squirrels according to geographical distribution, size, or colour-markings, so that there was the greatest need of such a scientific revision as that now referred to.

But further consideration has convinced me that it would be most inconvenient, even if the world in general could be brought to do so, to accept the arrangement exactly in its present form, with *Tamias* a mere subgenus of *Sciurus*, with the peculiar, spiny-furred typical *Xeri* placed in the same genus as such very different forms as the little soft-furred "*X. isabella*", and with many other difficulties which would present themselves to every worker on the subject.

This being the case, I would now venture to suggest that all the subgenera (with the exception of "*Atlantoxerus*") in Dr. Major's scheme should be recognized for ordinary systematic purposes as full genera, especially as all of them have long been considered as perfectly natural groups, and have been arranged as such in the revisions of Trouessart and other authors.

<sup>1</sup> P. Z. S. 1893, p. 189.



J. Smit del. et lith.

Mintern Bros. imp.

FUNISCIURUS LUCIFER.

Unfortunately the names of these genera cannot stand as in Dr. Major's scheme, for (being busy with more important matters) he has ignored nomenclatural rules and has attached provisional names of his own to nearly all the subgenera. But these names being antedated for the most part by the terms of Gray or Trouessart must necessarily give way to the latter.

Using mainly Gray's revision of 1867<sup>1</sup>, and Trouessart's of 1880<sup>2</sup>, and, without making prolonged nomenclatural investigations, the following appear to be the names which the different groups of Squirrels should bear:—

1. *Rheithrosciurus*, Gray, 1867. Type, *R. macrotis*.
2. *Protoxerus*, Maj. 1893. Type, *P. stangeri*<sup>3</sup>.
3. *Xerus*, Hempr. & Ehr. 1833. Type, *X. rutilus*.  
*Geosciurus*, A. Smith, 1834. Type, *X. capensis*.  
*Atlantoxerus*, Maj. 1893<sup>4</sup>. Type, *X. getulus*.
4. *Funisciurus*, Trouess. 1880. Type, *F. isabella*.  
*Paraxerus*, Maj. 1893. Type, *F. cepapi*.
5. *Funambulus*, Less. 1832. Type, *F. palmarum*<sup>5</sup>.  
*Rhinosciurus*, Gray, 1843. Type, *F. laticaudatus*.  
*Laria* and *Palmista*, Gray, 1867. Types, *F. insignis* and *palmarum*.  
*Eoxerus*, Maj. 1893. Type, *F. laticaudatus*.
6. *Ratufa*, Gray, 1867. Type, *R. indica*.  
*Rukaia*, Gray, 1867. Type, *R. macrura*.  
*Eosciurus*, Trouess. 1880. Type, *R. bicolor*.
7. *Sciurus*, Linn. 1758. Type, *S. vulgaris*.  
*Macroxus*, G. Cuv. 1825. Type, *S. æstuans*.  
*Callosciurus*, *Baginia*, and *Erythrosciurus*, Gray, 1867.  
Types, *S. prevostii*, *notatus*, and *ferrugineus*.  
*Heterosciurus*, *Neosciurus*, *Parasciurus*, *Echinosciurus*,  
*Heliosciurus*, and *Tamiasciurus*, Trouess. 1880.  
Types, *S. erythræus*, *carolinensis*, *niger*, *hypopyrrhus*,  
*annulatus*, and *hudsonius*.

The limits of the genera would be those indicated in Dr. Major's paper.

## 27. FUNISCIURUS CEPAPI, A. Sm.

a. ♂. Monkey Bay, Lake Nyasa, July 1896.

This is the furthest locality northwards that the true *F. cepapi* has been recorded from, the East-African forms of the same group having been shown to be specifically distinct (see De Winton, Ann. Mag. N. H. (6) xix. p. 573, 1897).

<sup>1</sup> Ann. Mag. N. H. (3) xx. p. 270 (1867).

<sup>2</sup> Le Nat., Oct. 1880.

<sup>3</sup> As Dr. Major has not selected types for his group names, I have, as the "next reviser," ventured to do so for him, choosing in each case the species he has placed first.

<sup>4</sup> May be considered as a subgenus of true *Xerus*.

<sup>5</sup> 'Illustrations de Zoologie,' text to pl. xliii. (1832). Lesson's *Funambulus indicus* is the Palm Squirrel, not the big *Ratufa indica*.

28. *GRAPHIURUS MURINUS*, F. Cuv.

*a, b.* 2 ♂. Nyika Plateau, 6000–7000 ft., June and July 1896.

On distributional grounds these specimens should represent Noack's *Eliomys microtis*<sup>1</sup>, whose description applies better to them, so far as colour is concerned, than to the pigmy Dormice of the group to which the next species belongs. The nasals of *E. microtis* are, however, rather short for the *murinus* group, if the measurements published by Reuvens<sup>2</sup> are to be depended upon.

29. *GRAPHIURUS JOHNSTONI*, sp. n.

*a.* ♀. Zomba, Mar. 12, 1897. *Type* (No. 97. 10. 1. 86).

Size very small, as in *G. parvus*, *nanus*, and *smithii*. Fur rather short and close. General colour greyish buff, the hairs slaty grey with short buff-coloured tips. Under surface greyish white, the tips of the hairs being dull whitish; but this colour is not snowy white, as in the allied species, nor does it extend so high up on the sides of the neck and body. Eyes surrounded by a brownish ring, not strongly defined, and not continued on towards the ears. Ears short, practically naked. Hands and feet dull white above, the proximal part of the metatarsals slightly brownish. Tail broad, apparently much as in *G. smithii*, much broader than in *G. nanus*, the longest hairs about 15 or 16 mm. in length; pale brown above and below, a few of the proximal hairs only tipped with white.

Skull small and delicate; nasals extending backwards to the level of the premaxillary processes; brain-case less broad than in the allied species.

Molars rather large for the size of the animal, much larger than in *G. nanus*. Incisors unusually narrow, not flattened or grooved in front.

Dimensions of the type, an adult female, in skin:—

Head and body 81 mm.; tail, without hairs (c.) 58, with hairs 74; hind foot (moistened) 16.

Skull: tip of nasals to front of interparietal 21·6; greatest breadth (c.) 12·5; nasals 8·5 × 2·7; interorbital breadth 4; ante-orbital foramen, height 2·4; distance between outer corners of the two foramina 7·1; palate, length from hensenion 8; diastema 5·1; palatal foramina 2·6 × 1·7; length of upper molar series 3·5.

This pretty little Dormouse is clearly most closely allied to *G. nanus* and *G. smithii*, but, among other characters, it may be distinguished from both by its shorter fur, less snowy belly, and larger molars and narrower incisors.

From *G. microtis*, Noack, said to be synonymous with *G. murinus*, *G. johnstoni* differs by having no darker mark connecting the eye and ear, nor any lighter mark behind the latter, and there are several discrepancies in the detailed measurements of the skull. *G. microtis* came from Marungu, where the fauna seems to be very like that of the Nyika Plateau, and equally unlike that of Southern Nyasaland.

<sup>1</sup> Zool. Jahrb. ii. p. 248 (1887).

<sup>2</sup> Myoxidæ, p. 43 (1890).

The type specimen of *G. johnstoni* is evidently undergoing its autumn increase of fur, for the fine buff tips of the new hairs are to be distinguished halfway down in the fur among the old ones. The hairs are growing up evenly all over the body, and not in patches. On the other hand, in a specimen of *G. murinus* in the spring moult (Rustenberg, Transvaal, September 1895; coll. H. P. Thomasset) the moult is taking place in patches, so that we have in these animals (so far as the evidence of two specimens is to be trusted) a similar method of change to what we see in some of our own northern animals, *e. g.* the Squirrel, in which the spring moult is equally done in patches, while the autumn growth takes place uniformly all over the body.

30. GERBILLUS (TATERA) LEUCOGASTER, Pet.

*a-f.* Fort Hill, July 1896.

*g-j.* In spirit. Fort Hill, July 1896.

*k-m.* Karonga, July 1896.

*n-q.* Mt. Malosa, 5000 ft., 21-27 Nov., 1896.

31. GERBILLUS (GERBILLISCUS<sup>1</sup>) BÖHMI, Noack.

*a.* ♀. Fort Hill, July 1896.

This interesting Gerbille is no doubt in a general way allied to Lataste's subgenus *Tatera*, to which *G. leucogaster* belongs, but the marked difference between its incisors and those of the other subgenera seems to render advisable a special group for its reception. The unusual breadth of the incisors, their slight bevel, and their flatness (the two faint grooves being scarcely perceptible) render them quite unlike those of any other Gerbille. The type of the species was described from Qua Mpala, Marungu.

32. OTOMYS IRRORATUS, Bts.

*a-l.* Nyika Plateau, 6000-7000 ft., June and July 1896.

*m.* Fort Hill, July 1896.

*n, o.* Zomba, Aug. 1896.

33. DENDROMYS MESOMELAS, Bts.

*a-d.* Nyika Plateau, 6000-7000 ft., June and July 1896.

*e.* Fort Hill, July 1896.

34. DENDROMYS PUMILIO, Wagn.

*a-d.* Nyika Plateau, 6000-7000 ft., June and July 1896.

*e, f.* In spirit. Nyika Plateau, 6000-7000 ft., June and July 1896.

*g, h.* Fort Hill, July 1896.

*i-k.* Zomba, Aug. 1896.

*l-n.* Mt. Malosa, 5000 ft., Nov. 1896.

Some of the specimens from Nyasaland previously recorded by me as *D. mesomelas* are also *D. pumilio*, hitherto (but, as I now think, erroneously) united with *D. mesomelas*.

<sup>1</sup> Above, p. 433.

35. *STEATOMYS PRATENSIS*, Pet.

*a-c.* Fort Hill, July 1896.

36. *MUS ARBORARIUS*, Pet.

*a-c.* Nyika Plateau, 6000-7000 ft., June, July, 1896.

*d.* Fort Hill, July 1896.

*e, f.* Zomba, August and November 1896.

37. *MUS CHRYSOPHILUS*, De Wint.

*a-j.* Nyika Plateau, June, July, 1896.

*k, l.* Fort Hill, July 1897.

38 & 39. *MUS*, spp.

*a.* Ruarwe, Lake Nyasa, June 1896.

*b.* Nyika Plateau, June, July, 1896.

*c-n.* Fort Hill, July 1896.

*o, p.* Karonga, July.

*q.* Kombe, Masuku Range, July.

*r, s.* Zomba, August.

*t-y.* Mt. Malosa, November.

A large number of specimens belonging to the two groups characterized respectively by their numerous mammae (multi-mammate) and by having the mammary formula  $3-2=10$ . It is impossible to work them out more definitely at present.

40. *MUS NYIKÆ*, Thos.

See above, p. 431.

*a-f.* Nyika Plateau, 6000-7000 ft., June, July, 1896. *f*, the *type* (No. 97. 10. 1. 189).

This distinct new species seems to have no very near relations among described forms.

41. *MUS RATTUS*, L.

*a.* Ruarwe, June 1896.

*b-f.* Fort Hill, July 1896.

42. *LOPHUROMYS AQUILUS*, True.

*a-e.* Nyika Plateau, 6000-7000 ft., June, July, 1897.

43. *DASYMYS KAISERI*, Noack.

*a-e.* Nyika Plateau, 6000-7000 ft., June, July, 1896.

*f.* Fort Hill. July 1896.

There can be little doubt that Noack's *Mus kaiseri*<sup>1</sup> from Marungu is a *Dasymys*, and it seems to agree very closely with the present examples.

<sup>1</sup> Zool. Jahrb. ii. p. 228 (1887).

44. *SACCOSTOMUS ELEGANS*, Thos.*Suprà*, p. 431.

a. ♀. Karonga, Lake Nyasa, June 1896. *Type* (No. 97. 10. 1. 207).

45. *ACOMYS SELOUSI*, De Wint.

a-c. Nyika Plateau, 6000-7000 ft., June and July 1896.

This species was described by Mr. De Winton<sup>1</sup> from Matabili-land, whence examples were sent by Mr. Selous. The present specimens do not seem to differ from the original examples in any important respect.

46. *ARVICANTHIS DORSALIS*, A. Sm.

a. ♀. Nyika Plateau, June 1896.

b. ♀. Mt. Malosa, 5000 ft., 26 Nov., 1896.

47. *ARVICANTHIS PULCHELLUS*, Gray.

a-c. Fort Hill, July 1896.

d. Kombe, Masuku Range, 7000 ft., July 1896.

48. *GOLUNDA FALLAX*, Pet.

a, b. Nyika Plateau, June 1896.

c-j. Fort Hill, July 1896.

k-m. Mt. Malosa, Nov. 1896.

49. *GEORYCHUS WHYTEI*, Thos.*Suprà*, p. 432.

a. Old ♀. Karonga, Lake Nyasa, July 1896. *Type* (No. 97. 10. 1. 230).

b-l. Nyika Plateau, 6000-7000 ft., June, July, 1896.

m. In spirit. Nyika Plateau, 6000-7000 ft., June, July, 1896.

n-r. Fort Hill, July 1896.

50. *MYOSCALOPS ARGENTEOCINEREUS*, Pet. (?).

a-e. 2 ad. and 3 yg. Mt. Malosa, 5500 ft., 20-29 Nov., 1896.

"This differs from our common Zomba species, and throws up enormous mounds of earth, larger than I have seen the others do.

"These animals bite severely, and are generally brought in with their incisors broken."—A. W.

In some respects these animals differ from the ordinary Nyasan *M. argenteocinereus*, as Mr. Whyte has noticed, and approach the East-African *M. albifrons*, but without further and better material it would be impossible to separate them definitely.

51. *THRYONOMYS SCLATERI*, Thos.

See above, p. 432.

a. Old ♀. Nyika Plateau, 6000-7000 ft., June 1896. *Type* (No. 97. 10. 1. 253).

<sup>1</sup> P. Z. S. 1896, p. 807.

The differences between this and its ally *T. gregorianus* have already been detailed (*l. c.*). In naming it I have ventured to associate with it the name of Mr. Sclater, the Society's Secretary, to whose influence and assistance the commencement and continuation of the Nyasa explorations have been so largely due.

De Beerst's *Aulacodus calamophagus* is said by Pousargues<sup>1</sup> to be larger, not smaller, than *T. swinderenianus*, a skull in the Paris Museum measuring 89 mm. in basal length by 68 in zygomatic breadth. While these dimensions do not exceed those of some of the British Museum examples of *T. swinderenianus*, they prove conclusively that *T. calamophagus* has nothing to do with *T. sclateri*.

52. *LEPUS CRASSICAUDATUS*, Geoffr.

*a, b.* ♂ ♀. Nyika Plateau, 7000 ft., June 1896.

"Hare shot on rocky ground on the highest peaks of the Nyika Plateau, at about 7000 feet. It is truly a 'rock-rabbit,' which term is generally wrongly applied here to the Dassies (*Procavia*). It has all the habits of the Dassies, living among rocks in absolutely bare and exposed places, and is very difficult to shoot as it dodges among the boulders. It is very local, living in colonies, and is only found in situations that suit its habits and mode of life."—*A. W.*

This Hare has only hitherto been recorded from the Cape, so that the present is a great extension of its known range.

53. *LEPUS WHYTEI*, Thos.

*a, b.* 2 young skins. Zomba, 12/95.

54. *PROCAVIA BRUCEI*, Gray.

*a, b.* ♀ and yg. Monkey Bay, Lake Nyasa, July 1896.

55. *POTAMOCHÆRUS CHÆROPOTAMUS NYASÆ*, Maj.

*a-c.* 3 young skins.

"Young wild-hogs caught near Zomba, and kept in captivity for a short time. The female forms a house or nest of grass in a burrow in thick grass-jungle."—*A. W.*

Dr. Major<sup>2</sup> has described the ordinary Nyasa River-Hog as a peculiar subspecies of the Cape animal, for which he finds the proper name to be *P. chæropotamus*, Desmoul.

56. *OREOTRAGUS OREOTRAGUS*, Zimm.

*a.* Nyika Range, 6000 ft., 7/96.

57. *OUREBIA HASTATA*, Pet.

*a.* ♂. Zomba Plains, 12/96.

*b.* Young ♀. Plains S. of Shirwa, 27/10/96.

Specimen *a* was shot by Mr. Beswick. It is a very fine old male.

<sup>1</sup> Bull. Mus. Paris, 1897, p. 160.

<sup>2</sup> *Suprà*, p. 367.

58. *ÆPYCEROS MELAMPUS*, Licht.*a.* ♀. Zomba, 2/3/97.

Shot by Mr. J. Charles Casson.

59. *HIPPOTRAGUS NIGER*, Harr.*a.* Ad. ♂. Zomba Plains, 10/10/96.

A very fine example, though the horns are unfortunately unsymmetrical.

60. *TRAGELAPHUS ANGASI*, Ang.*a.* Imm. ♂. "Lower river."

Shot by Mr. Alfred Sharpe.

61. *ORYCTEROPUS AFER*, Pall.*a.* Imm. ♂. Shirwa Plains, 15/10/96.

"This is the first 'Earth-pig' we have met with, though we have done our best to get it before. It is found on the plains, where it makes enormous burrows, and also inhabits caves under rocks. It seems lighter in colour than Cape specimens, and the hairs are but little bristly. Native name *Mbawe*."—A. W.

3. On a new Genus and Species of *Acaridea*.

By Rev. O. PICKARD CAMBRIDGE, M.A., F.R.S., &amp;c.

[Received October 26, 1897.]

(Plate LV.)

The singular Acarid of the family Trombidiidæ now described was kindly sent to me by the Rev. A. E. Eaton, who found it, along with another, running on sandy ground amongst tamarisk bordering the river-bed near Biskra in Algeria. Mr. Eaton writes that "in running it elevates the hindermost legs, which being quickly agitated, the tufts of hairs on the metatarsi look like a pair of minute Diptera dancing attendance on the mite."

Gen. nov. *EATONIA* (nom. propr.).

Form obtuse-oval, tolerably and uniformly convex above. Caput and thorax coalescing with scarcely a trace of junction. A pointed nasiform process issues from near the middle of the anterior margin, and from this process to the hinder extremity of the caput is a deepish longitudinal furrow or indentation bisecting the caput.

*Eyes* 4, in two groups of two eyes each, seated on either side of the caput on geminated tubercles.

*Legs* slender, 1, 2, 3 short, 4 long. Two on each side issue



Thomas, Oldfield. 1897. "On the Mammals obtained by Mr. A. Whyte in Nyasaland, and presented to the British Museum by Sir H. H. Johnston, K.C.B.; being a fifth Contribution to the Mammal-fauna of Nyasaland." *Proceedings of the Zoological Society of London* 1897, 925–939.

<https://doi.org/10.1111/j.1096-3642.1898.tb01397.x>.

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**DOI:** <https://doi.org/10.1111/j.1096-3642.1898.tb01397.x>

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