

markedly concave above. Nasals comparatively broad behind. Palatal foramina unusually short, falling nearly a millimetre short of the level of the front of  $m^1$ ; well open, not narrowed behind.

Incisors slender, narrow, bevelled laterally. Molars as usual, the length of the tooth-row noticeably greater than in Swiss specimens.

Dimensions of the type (measured in flesh):—

Head and body 115 mm.; tail 66; hind foot 21; ear 13.

Skull: greatest length 27; condylo-basilar length 24.3; zygomatic breadth 14.5; nasals, length 7.5, breadth behind 2.2; interorbital breadth 4; palatilar length 12; palatal foramina 4.5; length of upper molar series (grinding-surface) 5.8.

*Hab.* Aspromonte, Calabria, extreme South Italy. Type from S. Euphemia. Altitude 1000 m.

*Type* Male. B.M. no. 6. 8. 4. 9. Original number 2575. Collected 18th July, 1906, by A. Robert.

When Mr. Miller wrote his revision\* of the European forms of *Evotomys* no species of the genus was known from the south of Italy, and the capture of a specimen in the Aspromonte mountains by Mr. Robert is therefore of much interest. I am, however, informed by Dr. Forsyth Major that Dr. Cavanna obtained an example on Monte Pollino about 1880, so that this is not absolutely the first discovery of the genus in the "great toe" of Italy.

*E. N. hallucalis* may be readily distinguished from its Swiss relative by its large size, long tail, long skull, short palatal foramina, narrow incisors, and long molar series.

XXXIII.—*Two new Genera of small Mammals discovered by Mrs. Holms-Tarn in British East Africa.* By OLDFIELD THOMAS.

THE British Museum owes to Mrs. Holms-Tarn a small collection of mammals obtained by her in British East Africa not far from Nyeri. Although only ten species were obtained altogether, it is remarkable that two of them are not only new, but represent new genera, thus showing how much more there is still to be done in this rich region in spite of all that Dr. and Mrs. Hinde have achieved in the same district.

The other animals collected were *Funisciurus Jacksoni*, de Wint., *Graphiurus murinus*, Desm., *Otomys irroratus*

\* Proc. Wash. Ac. Sci. ii. p. 83 (1900).



*tropicalis*, Thos., *Lophuromys aquilus*, True, *Arvicanthis* sp., *Leggada minutoides*, Sm., *Mus Hindei*, Thos., and *Dendromus insignis*, Thos. The two last-named are rare species, and these additional examples are most welcome.

The prize of the collection is the remarkable little mole-like shrew trapped on the Aberdare Mountains at 9500', to which I propose to apply the following name:—

*SURDISOREX*, gen. nov. (*Soricidae*).

Most nearly allied to *Myosorex*, but with no external ear-conches, with the fore claws enormously enlarged, with only three upper unicuspid, the minute penultimate premolar absent, and with the minute lower supplementary tooth more normal in shape and position.

Type *S. Noræ*.

This genus is clearly related to *Myosorex*, but is more fossorial in character, as evidenced by the aborted ear-conches, long fore claws, and short tail, all of which tend to make it look more like a mole than a shrew. The comparatively normal position of the extra lower unicuspid shows an even more primitive condition than in *Myosorex*, which is the only other genus of *Soricidae* that has retained this tooth.

*Surdisorex Noræ*, sp. n.

Size rather larger than in any known species of *Myosorex*. Fur close and mole-like, rather coarser than in average *Myosorex*; hairs of back about 6 mm. in length. General colour above dark bistre with a greenish iridescence; individual hairs slaty grey for five-sixths their length, their ends pale brown with darker tips. Under surface similar but rather paler, without line of demarcation. Ear-conches absent. Upper sides of hands and feet dark brown; fore claws very long and powerful, those of the second, third, and fourth digits subequal, about 5.5 mm. in length (measured from the base above); pollex with a pointed claw over 2 mm. long; median hind claws about 2.5–2.8 mm. in length. Tail very short, not twice the length of the hind foot, closely hairy, without longer bristles, dark brown above and below.

Skull longer than in any known species of *Myosorex*, but more slender, the palatal area actually narrower than in the smaller *M. Sclateri talpinus*, though decidedly longer. Teeth much as in *Myosorex*, but the second upper unicuspid is proportionally larger, about one third the size of the first in cross section, and the third is more elongated and nearly touches the large *pm*<sup>4</sup>, leaving no space for a fourth unicuspid. Below



there is a marked difference in the shape and position of the minute extra tooth characteristic of *Myosorex*. In the latter it is nearly in the centre line of the tooth-row, jammed closely between the two usual unicuspid teeth, its transverse several times greater than its longitudinal diameter, and looking more like a piece of the cingulum of the first unicuspid than a separate tooth. On the other hand in *Surdisorex* the tooth is nearly circular in section, and is placed in a more normal position in the inner angle between the two larger teeth—in fact, almost exactly as in the bat *Trachops*.

Dimensions of the type (measured in the flesh):—

Head and body 108 mm.; tail 25; hind foot 14.

Skull: greatest length, including incisors, 26·5; basal length 23; greatest breadth 12·8; front of  $i^1$  to back of  $m^3$  11·2; breadth of palate between outer corners of  $m^2$  7; length of lower tooth-row 10.

*Hab.* East side of the Aberdare range, near Nyeri, British East Africa. Alt. 9500'.

*Type.* Adult female. B.M. no. 6. 7. 8. 1. Original number 7. Collected 5th November, 1905, by Mrs. Holms-Tarn. One specimen.

This mole-like shrew is a most interesting little animal, and Mrs. Holms-Tarn is to be congratulated on its discovery. She states that it appeared to be rare, as she only saw this one example, although trapping in the locality for some little time.

#### MYLOMYS, gen. nov. (*Muridae*).

General external characters and skull not markedly different from those of *Pelomys*. Fore limbs slender, the forearms long and thin; fifth finger rudimentary, with a short nail instead of a claw, like the pollex. Hind feet long, the fifth toe shortened, little longer than the hallux.

Upper incisors each with a single clearly defined groove; the grooves more external than in *Pelomys*, the outer portion of the tooth only about one half the breadth of the inner. The outer part is also at a lower level, the groove and inner part clearly visible in a lateral view.

Molars large, the space between the two upper first molars less than their breadth. Their structure peculiar, somewhat as in *Enomys*, though more modified. In each lamina of the upper series the centre cusp is raised in the middle to a point and curved backwards, its grinding-surface pointing backwards and deeply concave, its enamel walls sharp and angular; inner cusp in each case about two thirds the size of the central



one.  $M^2$  with a large antero-internal and a minute antero-external secondary cusp; inner cusp of main lamina (and also the corresponding cusp of  $m^1$ ) large, projected backwards to the level of the posterior lamina, which has no postero-internal cusp.  $M^3$  with its antero-external cusp almost obsolete; its main cusp longer antero-posteriorly than broad, sharply separated from its large inner cusp, with which it does not fuse.

Lower molars with their deeply concave grinding-surfaces facing forwards, their beak-like hinder edges highly raised.  $M_1$  with its two anterior cusps unusually small in proportion to the others, perhaps in cross section one third the area of the cusps next succeeding them. No external cingular cusps present.

Type *Myiomys Cuninghamei*.

The highly modified teeth of this rat compel me to distinguish it from *Pelomys*, which it resembles in its general appearance and in the grooving of its upper incisors. The molars of *Pelomys* are much more rounded in all respects, with low central cusps and without angular projections connecting the laminae. In some respects the molars of the Abyssinian rats which in 1902 \* I assigned with doubt to *Pelomys*—"P." *dembeensis* and *Harringtoni*—are intermediate between those of *Myiomys* and *Pelomys*; but I am now convinced that these animals should not be included in *Pelomys*, and think they may be provisionally looked upon as aberrant members of *Ænomys*, the so-called grooving of their upper incisors being hardly worthy of the name, and their molars being very similarly formed to those of that group.

In any case the striking rat discovered by Mrs. Holms-Tarn cannot be assigned to any known genus, and needs a special one to be formed for its reception.

*Myiomys Cuninghamei*, sp. n.

General appearance very much as in *Pelomys fallax*. Fur coarse and harsh; hairs of back about 15 mm. in length. Colour above coarsely grizzled brown or dull buffy, becoming rather more rufous on the rump. Under surface dull whitish, the bases of the hairs slaty. Ears broad, rounded, uniformly brown. Arms grizzled brown and buffy; hands dark buffy. Legs and feet reddish buffy, the skin of the feet brownish. Tail well haired throughout, the hairs almost hiding the scales, which are large, about ten to the centimetre; in colour it is markedly bicolor, blackish brown above, dull buffy below.

\* P. Z. S. 1902, ii. p. 313.



Skull strongly built, arched above, the zygomata not widely spread, tapering forwards. Supraorbital edges finely beaded. Palatal foramina extending to the level of the front lamina of  $m^1$ . Parapterygoid fossæ deep, ending some way behind the front of the mesopterygoid, whose ledge is level with the middle of  $m^3$ . Bullæ fairly large. Teeth as described above.

Dimensions of the type (measured in the flesh) :—

Head and body 155 mm. ; tail 102 ; hind foot 33·5 ; ear 17.

Skull : greatest length 34·5 ; basilar length 28 ; greatest breadth 17 ; nasals  $13 \times 4·5$  ; interorbital breadth 4·6 ; palatilar length 16 ; diastema 9 ; palatal foramina  $8 \times 2·4$  ; length of upper molar series 7·7 ; breadth across outside  $m^1$  6·8, breadth of  $m^1$  2·3.

*Hab.* British East Africa, east of the Aberdare Mts. Alt. 4480'.

*Type.* Adult male. B.M. no. 6. 7. 8. 9. Original number 2. Collected September 1905. One specimen.

I have named this interesting rat after Mr. R. J. Cuningham, to whose tuition Mrs. Holms-Tarn owes her skill in the capture and preservation of small mammals, and to whom the Museum is indebted for many valuable specimens.

#### XXXIV.—*The Morphology of the Madreporaria.*—VIII.

*The Primary Septa of the Rugosa* \*. By J. E. DUERDEN, Ph.D., A.R.C.S. (Lond.), Professor of Zoology, Rhodes University College, Grahamstown, Cape Colony.

In the first paper of this series, published in 1902, entitled "The Relationships of the Rugosa (Tetracoralla) to the Living Zoanthææ," I confirmed Count de Pourtalès's observation that the rugose coral *Lophophyllum proliferum*, E. & H., has six primary septa (protosepta), all equal in size and situated at

\* The first two parts of this series of papers appeared in the 'Johns Hopkins University Circulars,' vol. xxi. nos. 155 & 157, and were reprinted in the Ann. & Mag. Nat. Hist. ser. 7, vols. ix. & x., May and August 1902 ; the third and fourth parts appeared in the Ann. & Mag. Nat. Hist. vol. x., November 1902, and vol. xi., February 1903 ; the fifth and sixth parts in the 'Biological Bulletin,' vol. vii., July 1904, and vol. ix., June 1905 ; the seventh part in the Ann. & Mag. Nat. Hist. vol. xvii., May 1906. The work is being carried out with the assistance of an appropriation from the Carnegie Institution, Washington. I am under great obligations to Prof. Sydney J. Hickson, F.R.S., for seeing the paper through the press in England.



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