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XLV.—*On some new Forms of Otomys.*

By OLDFIELD THOMAS.

IN the fine collection of mammals from Deelfontein, Cape Colony, prepared by Troopers Grant and Seimund, and presented to the National Museum by Col. A. T. Sloggett, R.A.M.C., there are a number of *Otomys* belonging to three species, and in working these out certain other members of the genus prove to need description.

The Deelfontein species are (1) *Otomys Brantsii*, A. Sm., (2) a local subspecies of *O. unisulcatus*, and (3) a new species allied to the last-named. This may be described as follows:—

*Otomys Sloggetti*, sp. n.

Essential characters of incisors, molars, and bullæ as in *O. unisulcatus*. Size less than in that animal. Fur soft, fine and thick. General colour of upper surface vinaceous brown, like the most strongly vinaceous specimens of *O. unisulcatus*. Sides gradually becoming dull buffy, and this passes without line of demarcation into the colour of the under surface, which is uniformly soiled buffy, with slaty bases to the hairs, from chin to anus. Head greyish brown, without vinaceous, contrasting markedly with the back. Eyes with narrow buffy lids. Ears not large, their hairs mixed brown and buffy, with a narrow darker edging at the backs of their anterior margin. Hands and feet small and lightly built, their upper surfaces clear buffy. Tail thin, short, finely haired, markedly less hairy than in *O. unisulcatus*, dull buffy below and on the sides, blackish, darkening terminally, along a narrow line on the top.

Skull smaller than that of *O. unisulcatus*, but closely similar in its proportions. Palatal foramina not widely open. Posterior nares narrow. Bullæ slightly larger than in true *unisulcatus*.

Upper incisors with one well-defined groove near the outer edge, but not quite so close to the edge as in *unisulcatus*, the broader portion about twice instead of about three times the breadth of the narrow. Lower incisors as in *O. Brantsii*, with one indistinct groove on each.

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

Head and body 134 millim.; tail 68; hind foot (s. u.) 22·5; ear 19.

Skull: greatest length 35; basilar length 28; zygomatic breadth 18·5; nasals, length 14; interorbital breadth 4·3; interparietal 3·8 × 8; palate length 16·6; diastema 9·2;

palatal foramina 7; length of bulla 8.1; length of upper molar series (crowns) 6.7.

*Hab.* Deelfontein, Cape Colony.

*Type.* Adult female. B.M. no. 2. 9. 1. 61. Original number 215. Collected 1st April, 1902. Presented by Col. Sloggett. Two specimens.

This animal at first sight looks like a small *O. unisulcatus*, but may be distinguished by its differently coloured head, its short, slender, thinly haired, and pale-coloured tail as compared with the comparatively long well-haired black tail of that species, and by the presence of indistinct grooves on its lower incisors, those of *O. unisulcatus* being quite smooth.

In Mr. de Winton's notes on the species of *Otomys*\* two names, *pallida* and *rufifrons*, have been placed under *O. unisulcatus*, but have apparently been transposed from the synonymy of *O. Brantsii*, to which they both unquestionably belong. The description of the second of them, *O. rufifrons*, agrees in some respects with *O. Sloggetti*, but fits still better an immature *O. Brantsii*, in which the normal yellowish colour of the upper surface is as yet only present on the head. In *O. Sloggetti* the head is greyer, not more yellowish, than the body.

*Otomys unisulcatus Grantii*, subsp. n.

Like true *O. unisulcatus* in all respects, but the grooves on the upper incisors, which are clear and distinct in that animal, shallow and faint, and in some specimens hardly distinguishable at all.

General colour of the same grizzled greyish brown, with a slight tinge of vinaceous, and all other colour-characters as in *unisulcatus*. The feet, however, are rather clearer yellowish. Tail long, heavily haired, black; greyish proximally below.

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

Head and body 166 millim.; tail 118; hind foot (s. u.) 27; ear 23.

Skull: greatest length 39.5; basilar length 33; zygomatic breadth 21.3; nasals 17 × 5.5; interorbital breadth 5; interparietal 5.2 × 8.5; palate length 18.5; diastema 10.5; palatal foramina 8; length of upper molar series (crowns) 8; length of bulla 7.6.

*Hab.* Deelfontein, Cape Colony.

*Type.* Old male. B.M. no. 2. 9. 1. 50. Original number 127. Collected 13th February, 1902, by C. H. B. Grant,

\* Ann. & Mag. Nat. Hist. (7) ii. p. 5 (1898).

and presented by Col. Sloggett. Seventeen specimens examined.

All the examples of the *O. unisulcatus* group hitherto seen have the grooves on the upper incisors clear and well defined, but the series from Deelfontein have these grooves shallow and indistinct, and in some cases (*e. g.*, no. 2. 9. 1. 52) they are scarcely or not perceptible at all to the naked eye. This would seem to be a local peculiarity worthy of a subspecific name.

*Otomys Broomi*, sp. n.

Size and tooth-characters of *O. unisulcatus*. General colour far paler, the back between "drab-grey" and "drab" of Ridgway. Sides greyer and passing evenly into the pale whitish buffy of the tips of the belly-hairs. Long bristle-hairs of rump unusually numerous, broadly tipped with whitish. Face like back; eye-rings not marked in the general pale colour. Ears very large, their surface covered inside and out with short pale buffy hairs; the long hairs at their anterior base broadly tipped with whitish; postauricular patch large and prominent, dull whitish. Upper surface of hands and feet pale yellowish white. Tail long, thickly haired, dark brown above (in one specimen scarcely darker than the back), dull white on sides and below.

Skull as in *O. unisulcatus*, with clear and well-defined incisive grooves, but the bullæ, in correlation with the large external ears, are also perceptibly larger than in that species, although nothing like the huge swollen bullæ of *O. Brantsii*.

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

Head and body 159 millim.; tail 102; hind foot (*s. u.*) 28; ear 27.

Skull: greatest length 35; basilar length 28.5; zygomatic breadth 18.2; nasals  $14 \times 4.7$ ; interorbital breadth 4.6; interparietal  $4.4 \times 7.5$ ; palate length 16.4; diastema 8.2; palatal foramina 6.5; length of upper molar series 7.5; length of bulla 8 (in second specimen 8.2).

*Hab.* Port Nolloth, Little Namaqualand.

*Type.* Female. B.M. no. 98. 9. 3. 4. Collected 25th March, 1897, and presented by Dr. R. Broom. Two specimens.

This animal is evidently a pallid desert representative of *O. unisulcatus*, with the enlarged ears so commonly found in desert animals. I have great pleasure in naming it after its captor, to whom the National Museum is indebted for some very interesting and valuable Namaqualand animals.

*Otomys irroratus tropicalis*, subsp. n.

The northern strong-coloured form of *O. irroratus*, with seven laminae to the last upper molar.

Size slightly larger than in *O. irroratus*. General colour deep brown, nearest to "vandyke-brown" of Ridgway, very different therefore to the grizzled grey of true South-African *irroratus*. In each case the colour varies considerably, but the general tone seems always darker in the northern animal. Sides clearer brown. Belly slaty, with the tips of the hairs buffy; in *irroratus* they are comparatively clear grey. Sides of muzzle dark fulvous. Eyes without lighter rings. Ears of medium length, well-haired, rather paler than the head. Upper surface of hands and feet dark brown, the digits darker than the metapodials. Tail less than half the length of the head and body, well-haired, broadly black above, dull whitish below.

Skull apparently much as in true *irroratus*, but the nasals, though very variable, tend to be more broadly expanded anteriorly, and the interorbital space is commonly narrower. Teeth as in *irroratus*, but the last upper molar with seven laminae.

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

Head and body 195 millim.; tail 93; hind foot (s. u.) 30; ear 23.

Skull: greatest length 43·5; basilar length 35; zygomatic breadth 21·7; nasals 18 × 7·5; interorbital breadth 3·3; palate length 19·5; palatal foramina 8·2; length of upper molar series (crowns) 8·5; length of bulla 7·2.

*Hab.* Eastern Tropical Africa, from British East Africa to Nyasaland. Typical locality, western slope of Mt. Kenya, British East Africa. Altitude 10,000 feet.

*Type.* Old male. B.M. no. O. 2. 1. 20. Collected 22nd August, 1899, by Mr. H. J. Mackinder.

The difference in general colour and in the number of molar laminae between northern and southern specimens of this group has long been known, and it is quite time that a name should be applied to the former. Examples from Mashonaland vary in the number of the laminae, and for this reason I do not at present distinguish the East-African form as a species, but only as a subspecies. The Mashona skins are distinctly southern so far as colour is concerned, while Nyasa ones are clearly northern.