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LIV.—On some new small mammals from East Africa

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of a darker brown than the four discal stripes, deflected strongly proximad at the pseudosutural foveæ, their anterior ends confluent with the sublateral stripes; extreme lateral and anterior margin of præscutum pale; scutal lobes dark; scutellum pale basally, the caudal margin dark; postnotum with a basal dark triangle, the apex directed backward, followed posteriorly by a pale yellow transverse stripe; caudal margin of postnotum narrowly darkened. Pleura grey, conspicuously variegated with brown, this not appearing as a distinct dorso-pleural stripe as in *C. conspicabilis*; a conspicuous light yellow dorso-pleural stripe passing beneath the wing-root across the postnotum as described above. Halteres broken. Legs with the coxæ grey; anterior coxæ with two longitudinal brown lines; mid- and hind coxæ with a single conspicuous brown blotch; trochanters yellow; femora brownish yellow, the apices broadly dark brown; a broad, conspicuous, yellow subterminal ring; tibiæ and tarsi brownish yellow. Wings with a strong brownish suffusion; stigma brown; a brown cloud at the fork of *Cu* and at *r-m*; veins brown. Venation as in the genus; the tip of *R*₃ bent strongly cephalad, so that cell *Rs* is abruptly widened outwardly.

Abdomen with the tergites dark brown, the lateral and caudal margins very narrowly pale yellow. Ovipositor with the valves horn-coloured.

Hab. Fiji.

Holotype, ♀, Labæa, October 1914 (*R. Veitch*).

Type in the collection of the British Museum (Natural History).

Ctenacroscelis fijiensis differs from the Australian *C. conspicabilis* (Skuse) in the stouter and differently coloured legs, the fulvous antennæ, and the pale dorso-pleural stripe that continues caudad across the mesonotal postnotum.

LIV.—On some new small Mammals from East Africa.

By P. S. KERSHAW.

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Elephantulus ocularis, sp. n.

A member of the *rufescens* group, with sternal gland, bicoloured short-haired tail of moderate length, and short sleek fur.

Colour of the head and back light fawn, between "ecru-drab" and "vinaceous cinnamon" (Ridgway), similar to

revoili and *deserti*, but lacking the pinkish tone of those species. There is none of the red tint of *rufescens* and *pulcher*, which are its nearest northerly neighbours. Paler on the sides. The transition to the white of the under surface is less abrupt than in *rufescens* and its allies. White markings round the eye very large and conspicuous, and interrupted posteriorly by a streak of "mummy-brown." The white colour above the eye measures horizontally 23 mm., and vertically at the widest part behind the eye 4.7 mm. There is a white tuft at the base of the ear and a cinnamon patch behind it. Under surface in the type white, with slaty bases to the hairs except in an area between the thighs about 25 mm. longitudinally, where the bases of the hairs are white. This slaty colour is a variable character, strongly marked in some specimens and almost wanting in others, while in one (out of thirteen specimens examined) the hairs are white to their bases on the whole of the under surface. In all cases the hairs in the area mentioned between the thighs are white to their bases. There is a small white patch of hairs visible from above on each side of the tail. Below the tail a large triangular naked patch, the apex pointing downwards, larger in the females than in the males. In the type this patch measures from root of tail to apex of triangle 18 mm., and about 14 mm. across at its broadest part. Tail clothed with brown hairs above and white hairs below. Of the specimens examined, nine have the tail shorter than the head and body, three have it longer, and in one specimen the lengths are equal. The difference, in any case, is never great—little more than 10 mm. Feet in the type white, with a suspicion of buff. This buffy tint is stronger in certain specimens.

Skull and teeth as in *rufescens*.

Measurements of the type (taken in the flesh):—

Head and body 140 mm.; tail 130; hind foot 32; ear 23.

Average of twelve adult specimens (all from the type-locality):—

Head and body 130 mm.; tail 130; hind foot 33; ear 23.

Skull: greatest length 35.8 mm.; condylo-incisive length 33.5; basal length 31.2; nasals, length 13.5; interorbital breadth 6.4; zygomatic breadth 20.7; length of upper tooth-row 18.2, of lower (to tip of incisor) 16.5.

Type-locality. Dodoma, Tanganyika Colony, 36° 10' E., 6° 5' S.

Type. Adult female. B.M. no. 20.9.5.10. Collector's

number 649. Collected by Mr. A. Loveridge on 7th December, 1918, and presented to the British Museum by Lord Swaythling.

Heller * treats all the forms in the *rufescens* group with the large chest-gland as subspecies of *rufescens*. The external characters of *ocularis*—notably the large and conspicuous white markings about the eye—and the large bare patch in the sacral region fully entitle it, in my view, to rank as a species.

Taterona swaythlingi, sp. n.

A long-tailed species, with small dark tail-tuft and small bullæ.

The colour of the dorsal region is fawn, finely grizzled with black almost exactly as in *T. lobengulæ*. There is more black on the face and round the eyes, however, and the tail is of the *vicina* type, i. e., black or very dark brown on the upper surface through its entire length, with a small tuft at the extremity. Under surface fawn-coloured, generally without trace of white hairs, though these are present in one or two specimens examined. Under surface and feet white.

Measurements of the type (taken in the flesh):—

Head and body 130 mm.; tail 166; hind foot 35; ear 21.

The average measurements of fifteen specimens are:—

Head and body 134 mm.; tail 164; hind foot 35; ear 21.

Skull: greatest length 40.5 mm.; condylo-incisive 35.2; condylo-basal 36.4; basal 34.5; basilar 31; condylo-basilar 32.4; palatal 21.5; palatilar 17.1; anterior palatal foramina 8.0; posterior 1.6; space between anterior and posterior palatal foramina 3.6; zygomatic breadth 20.7; breadth of brain-case 17.0; interorbital breadth 7.2; nasals 17.2; bullæ 10.0; upper molar series 6.

The dorsal aspect of the skull is flattened. Grooves of incisors well marked.

Type. Adult female. B.M. no. 21. 9. 5. 31. Original number 394. Collected by Mr. A. Loveridge on 25th November, 1918, and presented to the British Museum by Lord Swaythling.

Type-locality. Morogoro, 150 miles west of Dar-es-Salaam.

T. swaythlingi has points in common with both *T. vicina* from the Kenya Colony and *T. lobengulæ* from Matabeleland. It agrees with the former in the character of the tail, in the

* Smithsonian Misc. Coll. vol. lx. no. 12, p. 11 (Nov. 4, 1912).

dark face-markings, and in the length of the posterior palatal foramina, but differs in lacking the reddish body tint with black washing of *vicina*, and in possessing small bullæ. With *T. lobengulæ* it agrees in body-colouring, but differs in tail and face-markings and in the length of the posterior palatal foramina, which in *lobengulæ*, as in all the southern forms, are very short.

Taterona taboræ, sp. n.

A grey *Taterona*, with less ochraceous colour than in any species hitherto described. Tail equal in length to head and body, and untufted. Bullæ large.

General colour of back mouse-grey, tinged with buff. Sides clay-colour. Colour of head no darker than back. Hairs of under surface with slaty bases as in *liodon*, except in the sacral region, where they are white throughout. This slaty colour is strongly marked, and gives a dirty greyish-white appearance to the under surface, very different from the pure shining white of most species of *Taterona*. Hands and feet white. Tail greyish brown above, white below, untufted, and with no black hairs. The average length of the tail in six specimens examined is exactly equal to the length of the head and body.

Measurements of the type (taken in the flesh):—

Head and body 140 mm.; tail 130; hind foot 32; ear 21.

Skull: greatest length 39 mm.; condylo-incisive 36.5; basilar 31.5; condylo-basilar 34; palatilar 18.2; anterior palatal foramina 7.2; posterior 1.0; space between anterior and posterior palatal foramina 5.0; interorbital breadth 7.0; bullæ 12.0; upper molar series 7.0.

Dorsal aspect of skull convex, not flattened. Groove of incisors well marked.

Type. Adult male. B.M. no. 21.9.5.14. Original number 585. Collected by Mr. A. Loveridge on 10th December, 1918, and presented to the British Museum by Lord Swaythling.

Type-locality. Tabora, 5° S., 32° 40' E., in the Tanganyika Colony.

The predominance of grey colouring both above and below in itself separates *T. taboræ* from all other species of the genus. *T. liodon*, which shares with *T. taboræ* the distinction—rare in this genus—of having slaty bases to the hairs of the under surface, is at once distinguished by the slight almost imperceptible grooving of the incisors.

Taterona cosensi, sp. n.

A species with long untufted tail and short posterior palatal foramina.

Colour above ochraceous buff modified by black. Belly-hairs white to the base. Feet white. Tail short-haired, brown above, white below, with none of the long black hairs of more northern forms.

Type. Adult female. B.M. no. 20.6.10.44. Collector's number 1071. Collected by Mr. H. H. Swinny on 10th July, 1919, and presented to the British Museum by Col. G. P. Cosens.

Type-locality. Vihingo, near Ruwu Station, on the railway some 40 miles inland from Dar-es-Salaam. There are to hand eight specimens from the type-locality and six from Kisserawe Mission between Ruwu and Dar-es-Salaam.

Measurements of the type (taken in the flesh):—

Head and body 158 mm.; tail 179; hind foot 35; ear 21.

Average measurements of thirteen specimens:—

Head and body 158 mm.; tail 173; hind foot 34.4; ear 20.7.

Skull: greatest length 43.4 mm.; condylo-incisive 39.2; condylo-basal 39.7; basal 37.1; basilar 33.5; condylo-basilar 35.8; palatal 23.7; palatilar 20.3; anterior palatal foramina 8.5; posterior 1.5; space between anterior and posterior palatal foramina 5.0; zygomatic breadth 22.7; interorbital breadth 7.2; breadth of brain-case 17.5; nasals on median line 16.9; bullæ 12.0; length of upper molar series 7.0. The average condylo-incisive length of the skulls of eleven adult specimens is 38.3 mm.

Dorsal aspect of skull flattened. Groove of incisors well marked.

T. cosensi is externally in colour and appearance very like *T. inclusa* from the Gorongoza District of Portuguese East Africa, but is distinguished from that species by the much smaller hind foot and the large swollen bullæ.

Since the late Mr. R. C. Wroughton wrote his monograph on the genus *Tatera** a large number of skins and skulls of the African genus *Taterona* have been added to the British Museum collection. In the preparation of the present paper I have gone through all this material, and take this oppor-

* Ann. & Mag. Nat. Hist. (7) xvii. p. 474 (May 1906).

tunity of putting on record some conclusions I have reached :—

(1) *Taterona* can be divided into forms with tufted and forms with untufted tails. The former are either heavily tufted, as in the Asiatic genus *Tatera*, e. g., *Taterona nigricauda*, or slightly tufted, e. g., *T. vicina*.

(2) The tufted forms are all, with one exception (*T. guineæ*, from Gummal, in Portuguese Guinea), confined to North-east Africa. These are all to the north of a line drawn from Mombasa to Morogoro, and thence to Muansa on the south shore of Lake Victoria Nyanza, and of a line drawn from the north-east corner of that lake to Mt. Elgon, and thence to the Nile at the northern extremity of Lake Albert. The untufted forms are found all over Africa except the north-west, and share North-east Africa with the tufted forms.

(3) In the untufted forms the posterior palatal foramina are short and in the tufted long. This is what we should expect to find, since, in the heavily tufted *Tatera* of Asia, the posterior palatal foramina are very long. In *Tatera persica* they are almost as long relatively as in *Taterillus*. Where the posterior foramina are long, the space between the anterior and posterior foramina is short, and *vice versâ*. In the untufted forms, of which there are thirty-one type-specimens in the British Museum, this space measures anything from 3 to 5 mm., except in *nigrita* from Uganda, where it measures 2.6 mm. In the tufted forms, of which the Museum possesses six type-skulls, it measures 2.5 to 3 mm., except in the remote *guineæ* (3.5 mm.) and in *swaythlingi*, the southernmost form (3.6 mm.).

I have treated as "tufted" in this paper *T. robusta*, *macropus*, *nigricauda*, *vicina*, *mombasæ*, *phillipsi*, *umbrosa*, *shoana*, *potheri*, *guineæ*, and *swaythlingi*, and as "untufted" all the other forms, ignoring the subgenus *Gerbilliscus*.

Vide also on this subject Hinton and Kershaw, *Ann. & Mag. Nat. Hist.* (9) vi. p. 98 (July 1920).

Rattus pernanus, sp. n.

Among a collection of skins sent by the Nairobi Museum in the Kenya Colony to the British Museum recently for identification, there are two of a *Rattus*, which requires description as a new form :—

Type. Young adult male. B.M. no. 21.9.6.15. Original number 34. Collected by Mr. R. B. Woosnam on 3rd November, 1912, and presented to the British Museum by the Nairobi Museum.

Type-locality. Amala River (also called Mara River), which rises at Kabalolot Hill in the Sotik, Kenya Colony, and enters Lake Victoria Nyanza in the Tanganyika Colony at $1^{\circ} 30' \text{ S.}, 34^{\circ} \text{ E.}$

Description.—This is a dwarf form of *Rattus*, in size a trifle smaller than *Mus musculus*. The type measures:—Head and body 76 mm.; tail 65; hind foot 15; ear 14. The measurements of the other specimen are about the same. The hair is soft and long, about 10 mm. in length on the back. Colour very similar to that of *Rattus coucha panya*. The sides and flanks are a rich brown, between “mummy” and “Prout’s” (Ridgway); the back darker, owing to the hairs being tipped with black or dark brown; hairs of the under surface slate-grey with white tips, resulting in a general pearl-grey colour. There is a fairly well-defined fawny-ochraceous stripe dividing the colours of the upper and under surfaces. Tail shorter than head and body, thickly clothed with short appressed hairs, longer on the terminal third, and forming a perceptible pencil at the tip. Colour of tail brown on the proximal two-thirds, and black clothed with whitish hairs on the distal portion; lighter below. Feet and hands white. Large white spot behind the ear.

Skull: total length 23.3 mm.; condylo-incisive length 21.3; greatest breadth (at posterior of zygomata) 12.0; breadth of brain-case 10.3; length of nasals on median line 8.8; inter-orbital constriction 4.

The palatal foramina extend back to about the middle of the anterior central cusp of m^1 ; m^1 equal in length (1.8 mm.) to m^2 and m^3 combined. The incisors and molars are typical of *Rattus* (as distinct from *Mus*), there being no distortion of the first lamina of m^1 nor any subapical notch in the upper incisor.

The two specimens received of this interesting diminutive rat are both males, so that it is not possible at present to give the mammary formula. The indications are that it will prove to belong to the subgenus *Mastomys*, since it has little in common with the other African subgenera of *Rattus*. In general appearance it is like a dwarf *R. (Mastomys) coucha*, and the proportion of tail to body—about 85 per cent.—is characteristic of the multimammate rats. Practically all the small mouse-like African rats belong to the subgenus *Praomys*, all the known species of which have very long tails.

The teeth of the type are not much worn, and show that the specimen, though adult, is young. Thus, the measurements given may prove to be on the small side.