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FOUR HITHERTO UNRECOGNIZED SUBSPECIES OF AFRICAN RODENTS

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Herein are named and described three geographical variants of species of *Tatera* which have hitherto received insufficient attention in the areas from which I have selected the types. One of these is from a small series secured by Dr. H. E. Anthony, in the Red Sea Hills, and I am pleased to express my appreciation of his permission to describe the subspecies involved. A fourth subspecies named represents the genus *Mastomys*.

The color terms employed, when those of Ridgeway's Standards, are capitalized.

Tatera robusta taylori, new subspecies

Type.—American Museum of Natural History, No. 82300. Taylor Sudan Expedition, No. 3111. Female adult. Collected at Khor Birum, Red Sea Hills, Sudan, April 15, 1927, by H. E. Anthony. The type is a study skin with skull, both in good condition, except that the tips of the nasals are broken. The molars are greatly worn.

PARATYPES.—Three adult female topotypes, skins with skulls, collected the same morning as the type. A. M. N. H. Nos. 82299, 82301, 82302.

GENERAL CHARACTER.—This subspecies is closely similar to T. robusta robusta, except for its slightly smaller foot and skull, and for the color of the tail hairs, which in T. r. robusta is a deep blackish brown, and in T. r. taylori is a light brown, near the color of the back. The hairs of the terminal third of the tail are shorter than those on T. r. robusta.

Description.—General color above, Ochraceous-Tawny, darker on the rump, paling on the sides. The pure white belly is sharply demarcated from the flanks. Facial markings are fairly prominent; the supraorbital and jugal light areas distinct; the suborbital and nasal bars well marked, almost black. The ears are blackened terminally.

The skull of T. r. taylori differs from the skull of T. r. robusta only in its smaller size, and the greater prominence of the posterior palatal tubercle.

Measurements.—Collector's measurements of the type, followed in parentheses by the maximum and minimum measurements of the three paratypes are: total length, 323 mm. (346-322); tail vertebrae, 180 (190-182); hind foot with claw, 38 (38-38). Cranial measurements of the type, followed in parentheses by those of the paratype No. 82299, are: greatest length, ? (40.8 mm.); condylo-incisive length, 35.1 (35.3); zygomatic breadth, 20.3 (20.0); interorbital breadth, 7.6 (7.0); breadth of brain case, 16.0 (16.1); greatest height of skull, 14.3 (14.7); length of nasals, ? (18.0); width of zygomatic plate, 7.7 (7.9); length of bullae, 11.1 (10.9); palatilar length,

18.2 (18.2); length of anterior palatal foramina, 7.2 (7.8); least width of palate inside of M^1 , 3.7 (3.5); crown length upper tooth row, 5.8 (6.0); width of M^1 , 2.1 (2.1); condylo-incisive length of mandible, 24.3 (23.8).

The race is named for Mr. Irving K. Taylor, sponsor of the expedition which collected these gerbilles, and co-collector with Dr. Anthony, of the larger mammals secured.

Tatera nigrita beniensis, new subspecies

Type.—American Museum of Natural History, No. 82659. Ruwenzori-Kivu Expedition, No. 73. Male adult. Collected at the new post of Beni (Bungulu), eastern Belgian Congo (3900 feet altitude) October 26, 1926, by James P. Chapin. The type is a study skin with skull. The skin is in good condition. The skull is perfect except for the nasals and anterior palatal region which were smashed by the trap. The molars are lightly worn.

PARATYPE.—A. M. N. H. No. 82663. A juvenile female collected at the same locality as the type, October 26, 1926, by Doctor Chapin. Skin with skull.

GENERAL CHARACTER.—Similar to *Tatera nigrita* from northwestern Uganda (to the type of which I have compared the type of the subspecies here proposed) but larger, shorter tailed, darker colored. *T. n. beniensis* has shorter posterior palatal foramina, and the outline of M¹ as seen in the ventral view, is more pyramidal than in the earlier named form, but the skulls do not differ greatly in other respects.

Description.—General color above, blackish, suffused with Wood Brown. The flanks are near the latter color. Belly, throat, chin, and the lower cheek hairs, pure white, as are also those of hands and feet. No facial markings. Outer surface of the ear clothed with blackish-brown hair. Hairs of the dorsum of the tail blackish brown, those of the underside, white. There is no sharp line of demarcation between the two. The hair of the middle of the back measures about 16 mm. long. The ears are relatively small.

Measurements.—Collector's measurements of the type are: total length, 274 mm.; tail vertebrae, 128; hind foot with claw, 35. Cranial measurements of the type (followed in parentheses by corresponding measurements which I have taken from the type of T. nigrita) are: basilar length, circa 31.3 (29.8); condylo-incisive length, circa 35.0 (34.5); zygomatic breadth, 19.8; interorbital breadth, 6.6 (6.4); squamosal breadth of brain case, 16.5 (16.5); height of brain case from basal suture, 12.8 (12.2); height of brain case from bullae, 15.1 (14.9); length of bullae, 10.3 (10.8); width of palate inside the posterior loph of M¹, 3.2 (3.3); length of posterior palatal foramina, 2.6 (3.4); alveolar length of upper tooth row, 7.2 (7.0); width of M¹, 2.6; condylo-incisive length of mandible, 24.2.

In the Musée du Congo Belge are two specimens of this race, one collected at Beni by Lt. Bonnevie and one at Boga by M. Collart.

Tatera nyassae loveridgei, new subspecies

Type.—American Museum of Natural History, No. 55584. Female adult. Collected at Kilossa, Tanganyika Territory, December 16, 1920, by Arthur Loveridge. The specimen is a skin with skull, both in good condition.

PARATYPE.—A. M. N. H. No. 55499. An adult female, skin with skull, collected at the type locality, January 22, 1921, by Mr. Loveridge.

GENERAL CHARACTER.—A northeastern race of *T. nyassae* with a dark coloration approaching but not equalling in intensity that of a southern race of the same species, *T. nyassae shirensis*. In size it closely parallels the Nyassaland representatives. Cranial characters, if present, cannot at this time, be established.

Description.—General color above near Fuscous, changing on the sides to a bright Cinnamon-Buff. There is an obscure broad area of gray about the eye. The outer surface of the ears is a blackish brown. Belly, throat, chin, hands, and feet are pure white. The moderately well-haired tail is Cinnamon-Buff, sprinkled with black above, white below.

MEASUREMENTS.—Collector's measurements of the type, followed in parentheses by those of the paratype, are: head and body, 145 mm. (150); tail, 150 (153); hind foot, 31 (33); ear, 28 (23). Cranial measurements of these specimens are: greatest length, 39.0 (38.8); condylo-incisive length, 35.1 (34.9); zygomatic breadth, 20.0 (20.4); interorbital breadth, 6.4 (6.0); breadth of brain case, 15.9 (16.7); greatest height of skull, 14.7 (15.4); length of nasals, 14. 9(15.1); width of zygomatic plate, 7.7 (6.7); length of bullae, 10.4 (10.7); palatilar length, 17.7 (17.2); length of anterior palatal foramina, 7.4 (7.9); least width of palate inside M¹, 3.3 (2.8); crown length of upper molar row, 6.7 (6.5); width of M¹, 2.6 (2.6); condylo-incisive length of mandible, 24.7 (24.5).

Mastomys coucha itigiensis, new subspecies

TYPE.—American Museum of Natural History, No. 55571. Female adult. Collected at Gwaos, near Itigi, Tanganyika Territory, October 10, 1921, by Arthur Loveridge. The type is a skin with skull. The skull is complete. The molars are moderately worn.

Paratypes.—There are three paratypes in the American Museum: No. 55668, a young adult male topotype; No. 55526, a young adult male from Jumbe Mbulu's, near Singidda; and No. 55534, a young adult female, also from Mbulu's. Three additional topotypes from the same original collection are in the Museum of Comparative Zoölogy. These are Nos. 22919, 22920, 22921; adult male, adult female and subadult female.

GENERAL CHARACTER.—A pallid race closely related to victoriae.

DESCRIPTION.—The description, based on the type, would apply almost equally well to any of the paratypes, except the smallest, which is somewhat paler than the others.

General color above, from crown to tail base, Avellaneous, slightly overwashed with Natal Brown of the hair tips. The flanks are colored as the back, except that they lack the dark overwash. The face and cheeks are of much the same color as the flanks although below the eyes are slightly clearer in tone. The ears are contrastingly dark brown and sparsely covered with hairs, buffy inside the pinna, darker outside. The dorsum of each fore foot is covered with Warm Buffy hair. The hair of the hind feet is clear white. The scales and short hair of the dorsal surface of the tail are near Prout's Brown, those of the underside, white. There is not a sharp line of demarcation between the two. The entire undersurface of the body is covered with hair, the basal part of which is Neutral Gray, the tip White. There are eleven or more pairs of mammae.

Measurements.—Collector's measurements of the type and two paratypes, are given in the following table:

Number	Sex	HEAD-BODY	TAIL	Foor	$\mathbf{E}_{\mathbf{A}\mathbf{R}}$
\mathbf{Type}	Q	95	92	21	16
22920	ý,	110	120	22	16
22921	Q	95	101	20	16

Cranial measurements of the type are: greatest length, 26.7 mm.; condyloincisive length, 24.3; zygomatic breadth, 13.1; breadth of brain case, 11.8; interorbital constriction, 4.2; greatest length of nasals, 11.4; length palatal foramina, 6.2; width of palate across M¹, 5.8; greatest length upper tooth row, 4.7; width M¹, 1.6.

It may be here noted that Loveridge (1923, P. Z. S. London, p. 702) has observed of these specimens that: "Specimens from the thorn-bush steppe seem to average smaller and are paler, but can be matched by individuals picked out from the Kilosa District series." With the major part of the series to which Mr. Loveridge referred, here at hand, I have been unable to agree with the conclusion quoted. A few specimens of the other series, referred in the paper quoted to Mastomys c. microdon (Peters) but better referred to M. c. victoriae (Matschie), are pale, but none of them of quite the same light color shown in this series. One specimen from Isikisia, near Tabora, Tanganyika Territory, should also be referred to the race here described, but in its slightly darker coloration is not quite typical.

The Tanganyika representatives of this genus appear, as far as I have been able to determine, to sort into local types, as though representative of a single species. Specimens from the region of Mbulu (not Mbulu's) are about intermediate between *victoriae* and *panya*, the latter of which is known from localities in Kenya Colony, near the Tanganyika boundary. The greater number of specimens from the central section of the Territory may be referred to *victoriae*, a race differing in little but coloration from *panya*, and averaging much the same in size. *Mastomys c. itigiensis* appears to be confined to the thick thorny scrub which occupies the region of the type locality.

I am indebted to Mr. Loveridge for the loan of the Museum of Comparative Zoölogy specimens cited.