TWO RODENTS FROM THE MASAI RESERVE.

By Prof. Dr. Augusto Toschi,

Lecturer in the Bologna University.

Among the mammals collected by the Coryndon Museum Staff at Olorgesailie, Magadi Road (Masai Reserve) in August, 1943 and 1944, there are two very interesting forms, which I think in some respects appear to be new.

At the request of Dr. L. S. B. Leakey, I am giving this short account of the systematic position and geographical distribution of these two rodents from the Masai Reserve. Biological notes will appear later in a report of the mammals collected at Olorgesailie.

Xerus rutilus massaicus subsp. nov.

Type from Olorgesailie, 20 miles north of Magadi, on the Magadi Road (Masai Reserve), Kenya Colony; altitude 3,450 feet. No. 3055, Coryndon Memorial Museum; adult male collected May 8th, 1944, by Mr. F. Meneghetti.

Diagnosis: A rather large *Xerus*, somewhat like *X. r. rufifrons* Dollman, but without the great extension of the rufous tinge on the forehead so typical of that form and washed more with yellow on the throat and under-parts. Skull larger, with zygomatic arch thicker showing a higher orbital aperture.

Description: Size and general proportions as in *rufifrons*. General colour of the upper-parts, head, back and rump, white-yellowish pink, speckled black; the posterior part of the back darker than the anterior, but not as dark as the head; the anterior third part of the head and muzzle reddish-yellow; the red tinge not so diffuse and bright as in *rufifrons*, but rather as in *X. r. dorsalis* Dollman. Flanks rufous pinkish without black speckling. Under-parts whitish-yellow; the yellow wash brighter along the sides of muzzle, neck and flanks. Ring around the eyes and spot in front of ears whitish. Single hairs of the back are ringed from below to above: whitish, black, whitish-yellow, washed pink, black with whitish tips; those of the flanks whitish, pale rufous-pinkish, whitish. The forelegs are a reddish-yellow. The feet show yellow-whitish colour: the anterior ones have a more intense tinge. Thighs are coloured like the flanks. Tail as in *rufifrons*.

The skull is much like that of *rufifrons* and of *dorsalis*, but distinctly larger and thicker especially regarding the zygomatic arch where the jugal is higher and thicker, and seems to reach a lower level than in the other forms; the orbital aperture as a result being more roomy.

Measurements in mm.: Average of four selected specimens, measured on the flesh by the collector: head and body 234.7; tail 195.2; hind foot 54.2; ear 15.2.

Type specimen: head and body 240; tail 220; hind foot 56; ear 16. Skull: greatest length 56; condylo-incisive length 50; basilar length 41.3; condylo-basilar length 44.6; zygomatic breadth 31.2; interorbital breadth 16; breadth of brain case across squamosal region 25; greatest length of nasals 18.2; palatal length 23.3; width of palate inside first molar 6.9; length of upper cheek-teeth 9.9.

DISCUSSION AND REMARKS: The new race differs from the related forms as follows: It is readily distinguishable from *X. r. saturatus* Neumann because this latter shows a dark reddish general tinge very typical and unmistakable. It differs also from *dorsalis* because of its more uniform and less sharply defined coloured parts of the body. On the other hand *dorsalis* shows darker head, a lack or a lesser amount of yellow tinge on the flanks, white under-parts and feet, instead of whitish yellow as in *massaicus*. The latter is distinct too from *rufifrons* for the rufous tinge on the front and head are very much less extended and less bright and the shorter light rings of the hairs of the back are more whitish instead of yellowish as in *rufifrons*, and the under-parts more yellow than in the last mentioned form.

In the Coryndon Museum collections there are five specimens from Kismayu, one from Lovernovu, one from Marsabit, and one from Serenli, which were identified by the British Museum Staff as *X. r. stephanicus* Thomas. I have not examined *stephanicus* from the type locality and descriptions are in general not available for an exact identification as are the direct comparisons of the skins and skulls. In every case *massaicus* differs very much from the specimens from North-Eastern Kenya which are remarkably more pale yellow and rosy throughout. They show the reddish forehead, a character in common with *rufifrons*, but do not agree perfectly with the specimens from the typical locality of *rufifrons* from the Northern Uaso Nyiro because they are less black speckled. de Beaux (1934) assigns to *rufifrons* the specimens from Southern Coastal Somaliland, but it may be that he has not compared these specimens with typical *rufifrons* from the Northern Uaso Nyiro. The lack of specimens of *stephanicus* from the type locality prevents me establishing what may be the exact systematic position of the population of ground-squirrels from the coast of Southern Somaliland and the coast of North-Eastern Kenya, but as I have pointed out, they seem to differ in some respects from the specimens of *rufifrons* from the type locality.

We need not discuss the probable affinity between *stephanicus* and *massaicus*, apart from their somatic characters, the two forms being separated by *dorsalis* and *rufifrons* in their geographical distribution.

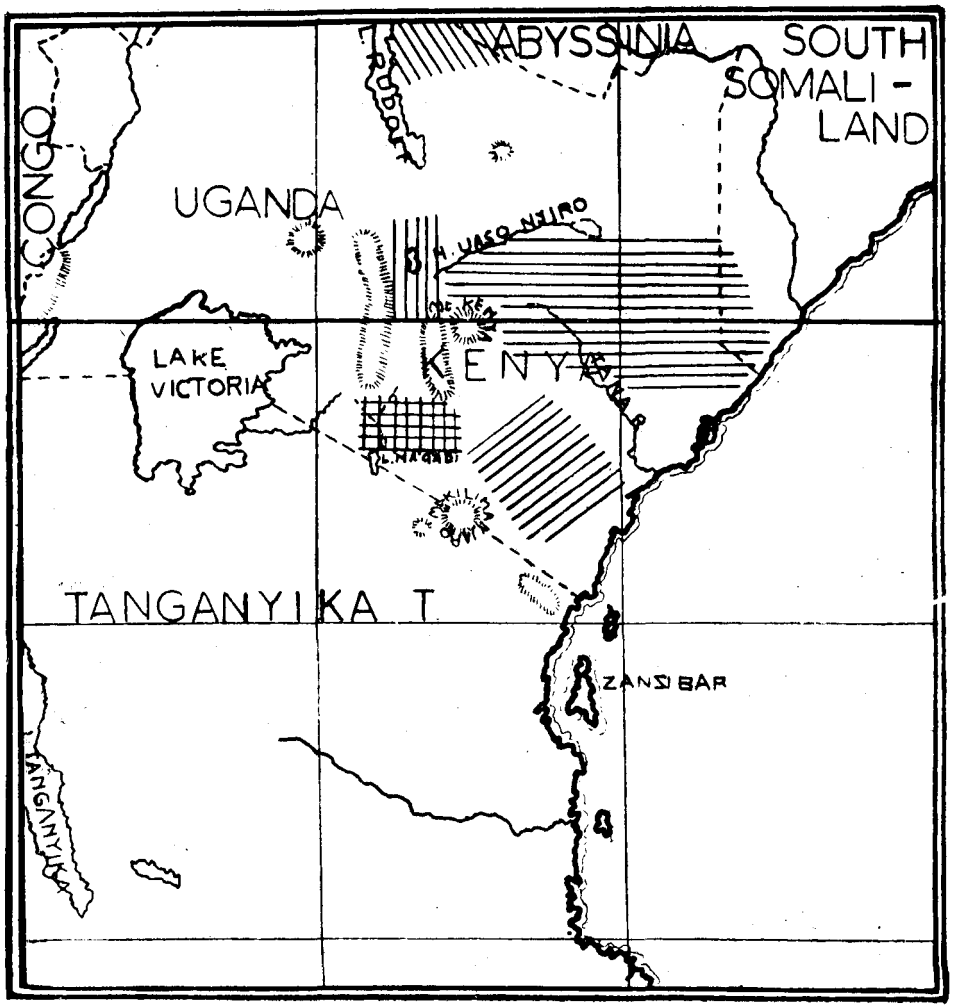
The specimen from Marsabit, near the range of *stephanicus* is a uniform rosy animal with very few black speckles.

Young specimens of *massaicus* are very much duller in general colour than the adults and are very different from a young specimen from Serenli (Juba River) in the Coryndon Museum collection which is a great deal brighter and redder than the young *massaicus* of about the same age. The specimen from Serenli is young and can hardly be compared with *rufifrons* from Kenya.

Miss J. St. Leger (1937) attributes some specimens of ground-squirrels from Turkwell and Northern Lake Rudolf to the *dabagala* race. This attribution worries me, for, if it is correct, the geographical distribution of *X. r. dabagala* would be discontinuous; the population of North-Western Kenya being separated from the typical one of Northern Somaliland by *X. r. intensus* of Central Somaliland and possibly by *X. r. stephanicus* and *X. r. rufifrons* from the north-east of the Colony.

As I have pointed out in the above the skull of *massaicus* seems larger and thicker with a higher jugal bone than in other races of *Xerus rutilus* examined.

GEOGRAPHICAL DISTRIBUTION: The ground squirrels belonging to genus *Xerus* inhabit Abyssinia, Somaliland, and Kenya. It is probable that some of the races described from the countries mentioned above may transgrade along the Sudan, Uganda, and Tanganyika borders, but no



Xerus r. stephanicus.

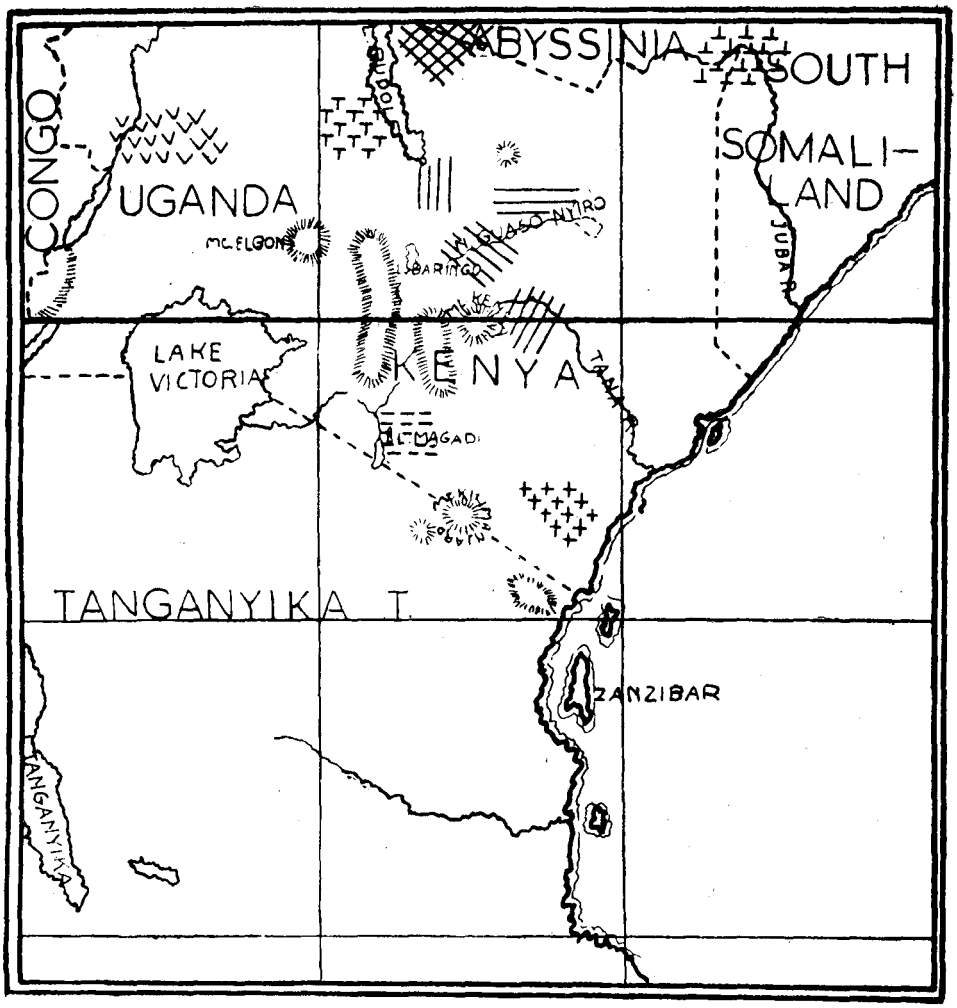
Xerus r. dorsalis.

Xerus r. rufifrons.

Xerus r. saturatus.

Xerus r. massaicus.

Map. No. 1 showing the distribution of the races of *Xerus rutilus* in East Africa.



Taterillus e. emini.

Taterillus harringtoni.

Taterillus n. nubilus.

Taterillus tenebricus.

Taterillus n. meneghettii.

Taterillus lowei.

Taterillus e. zammarani.

Taterillus n. illustris.

Taterillus melanops.

Taterillus osgoodi.

Map No. 2 showing the distribution of the races of *Taterillus* in East Africa.

special form has been described up to now from these latter territories. Mammalogists recognise the following seven geographical races of the species *Xerus rufilus*. The typical one *X. r. rutilus* Cretzchmar, including the synonymous *Sciurus abessinicus* Gmelin, *Sciurus brachyotus* Hemprich and Ehremberg, *Sciurus fuscus* Huet, inhabits Eritrea and Abyssinia; *X. r. dabagala* Heuglin living along the coast of Northern and Eastern Somaliland; *X. r. intensus* Thomas from Central Somaliland or Ethiopian Somaliland (type locality: Gerlogoby Wells); *X. r. rufifrons* ranging, according to de Beaux throughout Southern Somaliland, to Northern Uaso Nyiro. Allen thinks that *Sciurus xerus flavus* of A. Milne-Edward may be a synonym of *X. r. rufifrons;* the type locality of *flavus* being not exactly known but supposed to be Gnelide or Ras Hafun (Somaliland). Only comparisons between large series of skins of ground squirrels from the coastal Somali strip between the Migiurtine to the Kenya borders and those of Northern Uaso Nyiro can solve the question. *X. r. stephanicus* inhabits the territories between Lake Rudolf and L. Stephanie and possibly further. *X. r. dorsalis* from L. Baringo. *X. r. saturatus* ranges throughout South-Eastern Kenya. *X. r. massaicus,* the race which I now propose, living in the Masai Reserve west of the range of *saturatus* and south of *dorsalis* and *rufifrons*. The west and southern limits of diffusion of *massaicus* have to be established.

SPECIMENS OF *Xerus rutilus* EXAMINED: Serenli, 1; Marsabit, 1; Kismayu, 5; Lovernovu, 1; Kumgu, north of Lamu, 1; Nyama Nyangu, 3; L. Baringo, 2; Tsavo, 1; and Olorgesailie, Masai Reserve, 10.

Taterillus nubilus meneghettii subsp. nov.

TYPE from Olorgesailie, 20 miles north of Magadi on the Magadi Road (Masai Reserve), Kenya Colony; altitude 3,450 feet. No. 3255, Coryndon Memorial Museum; adult male collected on August 5th, 1944, by Mr. F. Meneghetti.

DIAGNOSIS: Similar to *T. n. nubilus* Dollman but duller on the upper-parts and lighter on the cheeks and along the sides of the body, with the fore feet nearly white and the under tail lighter.

DESCRIPTION: Size and proportions of the body as in *T. n. nubilus* Dollman; colour of the upper parts slaty grey suffused with bright straw-buff. The single hairs of the upper-parts being coloured as follows, from below to above: for the most inferior part slaty grey, bright straw buff, tips dark brown. The straw tinge more developed on back. Stripe along the muzzle and the middle of head, blackish, but cheeks whitish buff. Flanks with a whitish tinge and intermingled with a tinge of bright straw buff. Under-parts pure white. Feet white with a slight wash of buff. Tail intermingled with dark brown hairs on upper side. Terminal brown tuft well-developed.

A very young specimen is darker, less slaty above with more buff tail blackish tuffed.

Juvenile specimens show a duller pale buff upper-parts.

Skull very much as in *nubilus*.

MEASUREMENTS IN MM.: Average of three selected specimens: head and body 116; tail 150.7; hind foot 29; ear 17.3.

Of the type: head and body 120; tail 158; hind foot 30; ear 19. Skull: greatest length 35; basal length 29; condylo-incisive length 31; zygomatic breadth 17.1; interorbital constriction 6.7; squamosal breadth of brain-case 15.2; length of nasals 14.4; palatal length 17.3; length of palatal foramina 5.7; length of upper molar series 4.2; length of the alveolar upper molar series 5.2.

DISCUSSION AND REMARKS: The present race differs from the typical one, being duller on the upper-parts. In spite of the fact that the straw-buffy tinge may sometimes be brighter, the general effect is of a duller animal because of the more marked dark speckling of the hairs of the back. The same thing is true about the comparison with *T. n. illustris* Dollman, which is paler than the typical race and with the dark stripe of the forehead and muzzle scarcely defined. *T. n. illustris* is regarded as a pale coloured race of *nubilus,* but in *meneghettii* the cheeks and flanks are possibly lighter and the fore legs especially more whitish with only a very pale wash of buff.

We need not compare this race from the Masai Reserve with *T. osgoodi* Wroughton, a very bright reddish *Taterillus* or with the dark *T. tenebricus* Dollman, or with *T. melanops* G. M. Alle, *T. e. emini* (Thomas), and generally with the other subspecies from East Africa.

GEOGRAPHICAL DISTRIBUTION: *T. n. meneghettii* is with *T. osgoodi* one of the most southern races of this genus as shown in the accompanying small map (No. 2), *T. e. emini, T. e. zammarani, T. lowei, T. harringtoni, T. n. nubilus, T. n. illustris,* and *T. tenebricus,* are distributed north of the equator. The range of *T. melanops* extends throughout it, while *T. n. meneghettii* and *T. osgoodi* live south of the equator.

The nearest races to *meneghettii* geographically speaking, are *melanops* to the north and *osgoodi* to the east, but it is separated from both by the hills of the Machakos country. On the other hand until now no particular race of *Taterillus* seems to have been described from Tanganyika. The systematic affinity between *T. n. meneghetii* and the other races of *nubilus* could not be explained by a probable communication of these forms along the Rift Valley, but the limits of diffusion of the race, which I am describing must be established by further research.

SPECIMENS OF *T. n. meneghettii* EXAMINED: Olorgesailie, Masai Reserve, seven.

I have named this form after my friend Mr. F. Meneghetti, who has collected and skinned most of the specimens.

BIBLIOGRAPHY.

Allen, G. M., 1912. *Bull. Mus. Comp. Zool.*, **57,** 446, April, (*Taterillus*).
Allen, G. M., 1939. *Bull. Mus. Com. Zool.*, **83,** February, "A Check List of African Mammals," (*Xerus; Taterillus*).
de Beaux, O., 1922. *Atti Soc. Ital. Sci. Nat. &. Mus. Civ. Stor. Nat.*, Milano, **61,** 27, February, (*Taterillus*).
de Beaux, O., 1934. *Atti Soc. Ital. Sci. Nat. & Mus. Civ. Stor. Nat.*, Milano, **73,** October, (*Xerus*).
Dollman, G., 1911. *Ann. Mag. Nat. Hist.* (8), **7,** 518-520, May, (*Xerus; (Taterillus*).
Dollman, G., 1911. *Ann. Mag. Nat. Hist.* (8), **8,** 656, November, (*Taterillus*).
Dollman, G., 1914. *Abstr. Proc. Zool. Soc.*, London, No. 131, p. 25, 14, April, *Taterillus*).
Ellerman, J. R., 1940. *The Families and Genera of Living Rodents,* London, **1,** 11, (*Xerus; Taterillus*).
Hollister, N., 1919.. *Smithsonian Institution, U.S.N. Museum, Bulletin,* 99 Part II, (*Xerus; Taterillus*).
Lönnberg, E., 1912. *Kungl. Sven. Vet. Akad. Handling,* **48,** No. 5, pp. 87-89, (*Xerus*).
Neumann, O., 1900. *Zool. Jahrb. Syst.*, **13,** 546, 10, October, (*Xerus*).
St. Leger, J., 1937. *Ann. Mag. Nat. Hist* (10), **113,** 528, May, (Xerus).
Thomas, O., 1892. *Ann. Mag. Nat. Hist.* (6), **9,** 78, January (*Taterillus*).
Thomas, O., 1906 *Ann. Mag. Nat. Hist.* (7), **18,** 301-303, October, (*Xerus; Taterillus*).
Wroughton, 1910. *Ann Mag. Nat. Hist.* (8), 293, September, (*Taterillus*).