

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

DESCRIPTION OF A NEW RODENT OF THE GENUS
IDIURUS.*

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Among some African birds recently purchased by the United States National Museum were found a few mammal skins from Efulen, in the Cameroon district. Two of these are referable to the rodent genus described by Mr. Paul Matschie under the name *Idiurus*.† Although taken within seventy miles of Yaunde Station, the type locality of *Idiurus zenkeri*, these specimens are referable to a species quite distinct from the one represented by Mr. Matschie's unique type. The new form may be called:

Idiurus macrotis sp. nov.

Type No. 83625, United States National Museum, ♂ young adult, collected at Efulen, Cameroon district, West Africa, June 18, 1895, by G. L. Bates. Original No. 4.

General characters.—Much larger than *Idiurus zenkeri* Matschie; tail and ears relatively longer; color apparently darker; skull larger; bony palate narrower; second lower molar distinctly larger than first.

Fur and color.—Pelage formed of hairs of two kinds. Main body of fur composed of soft densely set hairs about 9 mm. in length. Interspersed with these are hairs about double as long and closely resembling those of the wrist and foot tufts. These hairs occur on the dorsal surface only, and are most numerous along the sides. Dorsal surface of membranes covered with fur somewhat less dense than that on body; extreme edges of membranes bare. Ventral surface of membranes very sparsely haired. Distribution of hair on tail and feet exactly as described in *I. zenkeri*.

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† Sitzungs-Berichte Gesellschaft Naturforschender Freunde zu Berlin, 1894, p. 194.

Color above sepia, slightly grayer on posterior half of back, and darkening to nearly black on membranes. A faintly indicated dark stripe from base of ear to muzzle. This is perceptible in certain lights only. Throughout the body fur the hairs are dusky plumbeous to within about



FIG. 15.—Front foot of *Idiurus macrotis*. ($\times 1\frac{1}{2}$.)

1 mm. of tip. This darker color appears everywhere irregularly at the surface. Ventral surface pale yellowish wood brown, irregularly darkened by the plumbeous bases of the hairs. Hairs on under side of membranes very dark brown and with none of the silver gray appearance described in *I. zenkeri*. Dorsum of manus and pes with short, scattered, dark brown hairs. Fringe on wrist (fig. 15) and side of hind foot dark brown. Tail dark chestnut brown, slightly tinged with yellowish near base.

Feet.—So far as can be determined from dry specimens, the feet are essentially as in *Idiurus zenkeri*. The front foot with its equal digits, rudimentary thumb, and fringed wrist is shown in figure 15.

Tail.—The generic characters of the tail, as described by Mr. Matschie in the type of *Idiurus zenkeri*, are exactly reproduced in *I. macrotis* (fig. 16). The pad of projecting scales occupies a space about 17 mm. in length and 4 mm. in width. The proximal end of the pad is about 25 mm. behind the anus. The lateral fringes begin on each side of the proximal end of the scale pad, but the ventral fringe reaches only to a point about 15 mm. behind the pad. The three fringes continue distinct to near the tip of the tail, where the hairs of which they are composed gradually become longer and finally blend with the long sparse hairs of the dorsal surface to form the terminal pencil. The hairs of all three fringes are about 4 mm. in length, those of the ventral fringe closely appressed. Long hairs on dorsal surface of tail 30–45 mm. in length.

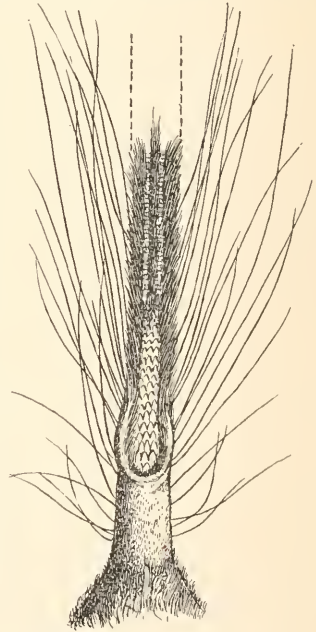


FIG. 16.—Base of tail (under side) of *Idiurus macrotis*. ($\times 1\frac{1}{2}$.)



FIG. 17.—Ear of *Idiurus macrotis*. ($\times 1\frac{1}{2}$.)

Ear.—The ears (fig. 17) are much larger than in *I.*

zenkeri and wholly naked both within and without, except on the external basal third, which is covered with fur similar to that of the head. With a lens a few very small hairs may be detected on the anterior border, but these are invisible to the unaided eye. In form the ear is very simple and strongly suggestive of that of

some of the smaller bats. Near the base of the auricle on the inner side are three well developed cross-ridges, and a fourth which is less distinct.

Skull.—The skull (fig. 18) is in general similar to that of *Idiurus zenkeri*.

The bony palate, however, is at its widest point scarcely wider than the first molar, while at its narrowest point it is decidedly narrower than this tooth. In *I. zenkeri* the palate is about double as wide as the tooth row.* Surface of frontals slightly and evenly convex, with scarcely a trace of the six protuberances mentioned in the description of *I. zenkeri*; orbital edges knife-like and slightly overhanging. Incisive foramen a narrow slit, 1 mm. long and about one-third as wide.

Mandible very short and deep, the greatest depth contained only one and one-half times in greatest length. Coronoid process joined with articular process by a thick bridge, below which the bone is thin and semitransparent, but not fenestrate as in the type of *I. zenkeri*.†

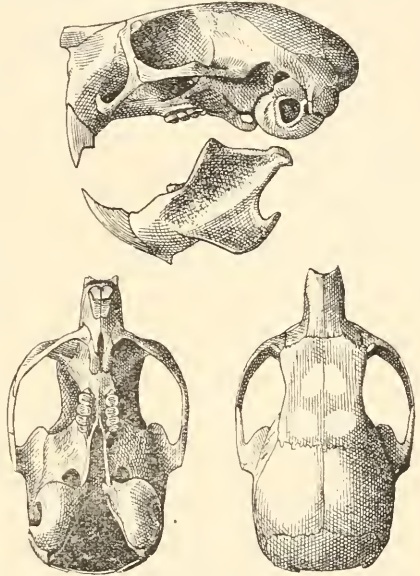


FIG. 18.—Skull of *Idiurus macrotis*. ($\times 1\frac{1}{2}$).

Teeth.—Upper molar rows slightly convergent anteriorly. Combined length of three true molars equal to antero-posterior diameter of incisor. Premolar about three-fourths as large as first molar, which is the largest upper tooth. Second molar distinctly smaller than first and about twice as large as third. The crowns of the premolars and the first and second molars are each crossed by two ridges of enamel, isolating three narrow depressions, the posterior of which is so narrow as to be practically invisible to the unaided eye (fig. 19, *a*). Third molar with one ridge and two depressions in the type, two ridges and three depressions in an older specimen with very much worn teeth.

First and second lower molars (fig. 19, *b*.) essentially equal in size, but second slightly the larger. Third molar considerably smaller than second

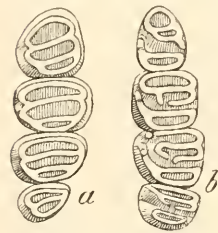


FIG. 19.—Teeth of *Idiurus macrotis*; *a* upper, *b* lower. ($\times 7\frac{1}{2}$.)

* "Gaumenbein fast doppelt so breit wie die Zahnreihe . . ."

† The fenestration in *I. zenkeri* may be due to injury during preparation of the specimen.

and about equal to premolar. Enamel pattern essentially as in the maxillary teeth, but less regular.

General remarks.—The type of *Idiurus zenkeri* is an old adult female ("ein sehr altes Weibchen"), while the two specimens of *I. macrotis* are males, one young adult, the other old. Yet the differences between the two forms are too great to be ascribed to sexual variation. That two or more species of a genus so peculiar as *Idiurus* should occur in the Cameroon district is not at all improbable. Neither can it be wondered at that animals so perfectly protected by color and form (the general appearance is well shown in Mr. Matschie's figure) should successfully escape notice, especially if, as is probably the case, they are strictly nocturnal in habits.

Measurements of Idiurus macrotis and I. zenkeri.

| | <i>I. zenkeri.</i> | <i>I. macrotis.</i> | |
|--|--------------------|---------------------|-------|
| Number | | 83625 | 83626 |
| Sex | ♀ | ♂ | ♂ |
| Total length | | 241 | 228 |
| Head and body | 65 | | |
| Tail vertebrae | 100 | 133 | 123 |
| Pencil | 30 | 36 | 38 |
| Hind foot | 15 | 21 | 22 |
| Ear: from meatus | 12.5* | 18 | 17 |
| from crown | | 16 | 15.5 |
| width | | 10.6 | 10 |
| Skull: Basal length | 17 | | |
| Greatest length | 22 | 26 | 27 |
| Zygomatic breadth | 13 | 15 | 16 |
| Length of frontals | 9 | 9.6 | 9.8 |
| Least width of frontals | 6 | 7 | 7 |
| Length of nasals | 5 | 7 | 7 |
| Greatest breadth of nasals | 3.25 | 3.25 | 3.3 |
| Tip of nasals to gnathion | 8.75 | 10 | 9.8 |
| Incisor to premolar | 6 | 6 | 6.8 |
| Upper tooth row | 2.8 | 3.8 | 4 |
| Greatest distance between inner border of molars (m. 3) | | 2.2 | 2 |
| Least distance between inner border of molars (m. 1) | 2† | 1.2† | 1.2 |
| Width of first true molar | | 1.4 | 1.6 |
| Mandible: Greatest length | 11.5 | 15 | 16 |
| Greatest depth | 8 | 10 | 10.6 |
| Lower tooth row | 2.5 | 4 | 4 |

* By 'Ohr' Mr. Matschie may mean ear from crown.

† "Entfernung der inneren Ränder der beiden Reihen."