

Three other species of *Mormopterus* are known to science, viz., *M. albiventer*, *M. acetabulosus*, and *M. setiger*. The first of these is confined to Madagascar, the second has a wide range from South-east Africa to Madagascar and Mauritius, while the last has been taken in German East Africa.

M. Whitleyi differs from *M. albiventer* in being somewhat smaller, in having a well-defined antitragus in the ear-conch, and from all the three in having only four lower incisors instead of six.

M. Whitleyi differs from *M. acetabulosus* and *M. setiger* in having the ears close together on the forehead, in the more regularly triangulate shape of the ears, and in the squareness of the tragus.

Finally, *M. Whitleyi* differs from *M. setiger* in being smaller and in having the tragus rounded off above.

LXXIV.—A new Bat from Peru.

By GERRIT S. MILLER, Jr.

AMONG some Peruvian bats submitted for determination by Mr. Oldfield Thomas there are three specimens whose superficial appearance is much like that of *Pipistrellus hesperus* (H. Allen), but whose structural characters show relationship with the members of the genus *Rhogeessa*. The peculiarities of the ear and teeth, however, are so great that the species cannot be placed in any of the known genera of its family.

TOMOPEAS, gen. nov. (*Vespertilionidæ*).

Type *Tomopeas ravus*, sp. nov.

Characters.—Similar to *Rhogeessa*, H. Allen, except that there are only four incisors in the mandible and the structure of the ear is essentially like that of the small-eared species of *Nyctinomus*. Ear-conch provided with a distinct though rudimentary keel occupying the same position as in the members of the family *Molossidæ*. Anterior border of ear terminating simply, and without trace of basal lobe or "hem." Tragus low and rounded, no larger than in some of the species of *Nyctinomus*, and barely visible in the dried skin. Nostrils distinctly short-tubular. Upper lip broad and spreading.

Dental formula : $i. \frac{1-1}{2-2}$, $c. \frac{1-1}{1-1}$, $pm. \frac{1-1}{2-2}$, $m. \frac{3-3}{3-3} = 28$.

Tomopeas rarus, sp. nov.

Type.—Adult male (skin and skull), no. 689, collection of P. O. Simons, Yayan, Cajamarca, Peru (alt. 1000 metres), November 4, 1899.

Characters.—Slightly larger than *Rhogeëssa tumida*, H. Allen (total length about 75 millim., forearm about 33); ear broader, its anterior margin concave below tip, its posterior margin convex to base of antitragus; colour yellowish grey, almost exactly like that of *Pipistrellus hesperus* from the desert regions of the western United States, and more pallid than in any known species of *Rhogeëssa*; skull slender, the rostrum and brain-case depressed; teeth much as in *Rhogeëssa tumida*, but first and second upper molars with more distinct hypocone.



a. *Tomopeas rarus*; b. *Rhogeëssa tumida*.
(Somewhat enlarged.)

Muzzle and lips.—Muzzle produced in conformity with the broad lips, its extremity 3.5 millim. in front of incisors. Front of muzzle naked except for a sprinkling of fine short hairs at middle on upper surface. Nostrils with rim of aperture produced into a distinct though very short tube. The rim is slightly more produced at upper outer edge of nostril, forming there a distinct blunt point. Upper lips thin and widely spreading, the outer surface irregularly wrinkled and little swollen, the inner surface distinctly and finely transverse-wrinkled. Edge of lip conspicuously fringed, the hairs longest about midway between nostril and angle of mouth, but the fringe continuous across lower surface of muzzle. The lower lip is unusually tumid in front, but otherwise it shows no peculiarities.

Ears.—The ear is moderately long; laid forward it extends to nostril. The anterior margin arises simply and without trace of lobe or "hem" about 1 millim. above inner canthus of eye. It is at first abruptly convex, the convexity extending through lower three fourths, though less distinct above middle. At termination of main convexity the outline becomes abruptly concave. Beyond this it is straight to

narrow rounded tip. Posterior margin convex from tip to antitragus, though nearly straight through upper third. Antitragus small but well developed, and sharply defined from rest of ear. It is roughly rounded-triangular in outline, the anterior border faintly convex, the posterior slightly concave. The anterior border is continued forward to terminate at a distinct wart on lower lip at angle of mouth. Inner surface of conch nearly smooth, though inconspicuously sprinkled with very fine hairs. About halfway between meatus and tip of ear two or three faint cross-ridges may be detected. From anterior base of tragus there extends forward and upward a distinct keel about 3.5 millim. in length and nearly as well developed as in *Nyctinomus minutus*. Tragus scarcely rising above level of eye. In form it is much like that of a specimen of *Nyctinomus Kalinowskii*, though in size it is actually, as well as relatively, somewhat larger. Anterior border faintly concave immediately above base, then strongly convex, the convexity passing directly into that of tip, and this again into that of posterior border. Posterior border expanded near base into a narrow upright plate whose surface is vertical to that of tragus. From tip of tragus spring a few hairs, the length of which is about equal to height of tragus from anterior base.

Membranes.—The membranes are thin, delicate, and in no way peculiar in structure. Wing from ankle, its attachment on outer and lower side. Uropatagium ample, enclosing tail to base or middle of penultimate vertebra.

Feet.—The foot is small, about one third as long as tibia. Its structure calls for no comment. Calcar about as long as tibia, its tip forming a small but distinct lobe. Keel narrow and inconspicuous.

Fur.—The fur is soft and dense, its length over entire dorsal surface about 8 millim. Beneath it is shorter. It is very closely confined to body, barely extending on extreme base of membranes. The uropatagium both above and below is sprinkled with fine hairs. Basal half of ear and entire face densely furred.

Colour.—Dorsal surface pale wood-brown, faintly washed with ecru-drab across shoulders. Underparts dull buff, fading to whitish cream-buff posteriorly. Face, ears, and membranes blackish. Basal half of fur everywhere dull slaty grey.

Skull.—The skull of *Tomopeas ravus* resembles in a general way that of *Rhogeessa tumida*, but is less robustly formed, and the brain-case is less elevated. Zygomata very slightly flaring, much less prominent than in *Rhogeessa tumida*.

Viewed from the side, the rostrum is seen to be much flattened as compared with that of *Rhogeëssa*. The flattening is visible in dorsal view also, though less conspicuous. Ant-orbital foramen separated from rim of orbit by a wide space, in the middle of which the relatively large lachrymal foramen opens directly outward. Bony palate as in *Rhogeëssa tumida*, except that the backward extension behind plane of molars is shorter and without median spine.

Teeth.—Except in their uniformly smaller size and in the absence of the outer incisors the mandibular teeth do not differ appreciably from those of *Rhogeëssa tumida*. The maxillary molars, on the other hand, are immediately distinguishable by their greater development. The first and second are each provided with a distinct hypocone separated from the commissure of the protocone by a deep notch. In *Rhogeëssa* the hypocone is so merged with posterior commissure of protocone as to have practically lost its identity. Third molar much broader than in *Rhogeëssa tumida*, owing to the presence of a well-developed metacone.

Measurements.—External measurements of type (skin): head and body 42 millim.*; tail 32*; tibia 10; foot 5 (4.2); calcar 11; forearm 33.4; thumb 4.6; second digit 27; third digit 56; fourth digit 48; fifth digit 38.

External measurements of an adult female from Chosica, Peru (in alcohol): head and body 39*; tail 34*; tibia 10; foot 5.6; calcar 12; forearm 32.6.

Measurements of an adult female from Tolon, Peru (in alcohol): head and body 36.4; tail 33; tibia 11; foot 5; forearm (broken) 31; ear from meatus 12; ear from crown 10.4; width of ear 11.6; height of tragus from anterior base 1.8.

Cranial measurements of type: greatest length 12.6; basal length 11.4; basilar length 9; zygomatic breadth 7; lachrymal breadth 4.8; least interorbital breadth 3; greatest breadth of brain-case above roots of zygomata 6.6; depth of brain-case 4.4; mandible 8.6; maxillary tooth row (exclusive of incisors) 4.4; mandibular tooth-row (exclusive of incisors) 5.

Remarks.—While *Tomopeas rarus* is so readily distinguishable from other bats as to require no special comparisons, its relationships are much involved. The general external structure, so far as wings, membranes, feet, and tail are concerned, shows no departure from a strictly Vespertilionine type. The somewhat tubular nostrils and the broad upper lip show, on

* Collector's measurement.

the other hand, a distinct tendency toward Molossine characters; while the ear, in all the essentials of structure, is practically identical with that of some of the species of *Nyctinomus*. Probably the questions suggested by this combination of peculiarities can only be answered after detailed study of the skeleton.

The type specimen will be presented by Mr. Thomas to the British Museum* and the spirit-specimen from Chosica to the United States National Museum.

LXXV.—*Reptiles and Batrachians collected in German New Guinea by the late Dr. Erik Nyman.* By Dr. EINAR LÖNNBERG.

DURING his visit to New Guinea last year my late friend, the Swedish botanist Dr. Erik Nyman, made a collection containing the following reptiles and batrachians, which were sent home to Upsala. It is not very large, which can easily be understood, as Dr. Nyman laid most stress on making large botanical collections, in which he succeeded. Nevertheless the zoological collection treated of in these pages is of great value, as it includes several forms new to science and also adds to the zoogeographical knowledge. All the specimens were collected in German New Guinea. The following geographical names are found on the labels:—

Stephansort.

Simbang.—In a bay at the outlet of a river, a missionary station on a hill 50 metres above the sea-level.

Sattelberg.—A missionary station about 800 metres above the sea.

Friedrich Wilhelms Hafen.

Most of the specimens are from Sattelberg. Some of the labels had, however, fallen off during transit. "Sattelberg" was written on all except one, on which "Fr. Wilhelms Hafen" was inscribed. Consequently one of the specimens recorded in this paper, for which no exact locality is given, is from Friedrich Wilhelms Hafen, but all the others are from Sattelberg. In those instances where the locality is indicated it is quite certain, and quoted from an original label

* [B.M. no. O. 3. 1. 101.—O. T.]



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