

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

FIVE NEW RICE RATS OF THE GENUS *ORYZOMYS*
FROM MIDDLE AMERICA.

BY E. A. GOLDMAN.

The following descriptions of new species and subspecies of *Oryzomys* are published in the course of a revision of the North and Middle American forms of the genus now in progress. These represent widely differing groups, three forms being from Mexico, one from Panama, and one from Costa Rica included with other material from that country kindly loaned by Dr. J. A. Allen, Curator of Mammalogy, American Museum of Natural History.

***Oryzomys guerrerensis* sp. nov.**

Type from Omilteme, Guerrero, Mexico. No. 127,517, male adult (molars moderately worn), U. S. National Museum (Biological Survey Collection), collected by E. W. Nelson and E. A. Goldman, May 20, 1903. Original number 16,454.

General characters.—A small species similar in general to *O. melanotis*, but decidedly smaller; color darker; ears wholly black [inner sides clothed with rusty reddish hairs in *melanotis*]; skull with very low, flat braincase.

Color.—Type (fresh pelage): Upperparts ochraceous-tawny (Ridgway, 1912), purest on cheeks, shoulders and sides, the face, top of head, and back darkened by a moderate admixture of black hairs; underparts dull grayish white, the plumbeous basal color of the fur showing through; outer and inner sides of ears well clothed with deep, glossy black hairs; feet whitish, the claws of longer toes overlapped by tufts of silvery bristles; tail brownish above, irregularly flesh color below to near tip, which is dusky all around.

Skull.—Similar in general to that of *O. melanotis*, but much smaller and lighter, with more slender zygomata; braincase similarly broad, but very much lower and flatter; outer wall of antorbital foramen with anterior border more rounded and less noticeably projecting forward as viewed from above; interparietal smaller; anterior palatine foramina about as broad anteriorly as posteriorly [broader posteriorly in *melanotis*]; teeth as in *melanotis*, but smaller.

Measurements.—Type: Total length, 220; tail vertebrae, 118; hind foot, 27. *Skull* (type): Greatest length, 26.3; zygomatic breadth, 14; interorbital breadth, 4.9; length of nasals, 10.1; length of anterior palatine foramina, 4; length of palatal bridge, 5.5; length of upper molar series, 3.8.

Remarks.—Six specimens from the type locality represent a form apparently allied to *O. melanotis*, of Jalisco, but specifically distinct. The wholly black ears and remarkably flat skull are distinguishing characters.

***Oryzomys nitidus alleni* subsp. nov.**

Type from Tuís (about 35 miles east of Cartago), Costa Rica. No. $\frac{9631}{7971}$, young adult male (teeth slightly worn), American Museum of Natural History, collected by George K. Cherrie, July 15, 1894.

General characters.—In external appearance closely resembling *Oryzomys nitidus nitidus*, the pelage long and very soft as in that form (hairs on back about 12 millimeters in length); skull with higher, much more fully expanded braincase.

Color.—Type: Upperparts between ochraceous-tawny and cinnamon-brown, purest on cheeks, shoulders and sides; the face, top of head, and back heavily mixed with black, the very dark basal color of the fur showing through and producing a blackish effect; underparts dull whitish; ears black, thinly clothed with very short inconspicuous hairs; feet flesh color; tail nearly unicolor, dark brownish above, slightly paler below.

Skull.—Similar in general to that of *O. n. nitidus*, but braincase much more distended; interorbital constriction about the same, but supraorbital ridges more strongly divergent and frontal region decidedly broader posteriorly; dentition about the same.

Measurements.—Type: Total length, 218; tail vertebrae, 111; hind foot, 29. *Skull* (type): Greatest length, 28.2; zygomatic breadth, 14.3; interorbital breadth, 5.5; length of nasals, 10.9; length of anterior palatine foramina, 3.5; length of palatal bridge, 5.5; length of upper molar series, 4.3.

Remarks.—Specimens from San Javier and Carondelet, northern Ecuador, some of which have been identified by Mr. Oldfield Thomas with the Peruvian form described as '*Hesperomys laticeps* var *nitidus*' have been used for comparison. The Costa Rican animal agrees with these in many essential respects; it differs most noticeably in the expansion of the braincase, the swelling extending forward between the orbits and resulting in a greater lateral development of the frontals.

The new form is named for Dr. J. A. Allen, of the American Museum of Natural History, to whom I am indebted for many courtesies.

Specimens examined.—Three, from the type locality.

***Oryzomys alfaroi dariensis* subsp. nov.**

Type from Cana, eastern Panama (altitude 2,000 feet). No. 178,660, female adult, U. S. National Museum (Biological Survey Collection), collected by E. A. Goldman, March 4, 1912. Original number 21,453.

General characters.—A small form closely allied to *Oryzomys alfaroi*; color of upper parts richer, more rufescent; skull usually narrower. Similar to *O. gracilis* and to *O. alfaroi palmiræ*, but color more rufescent and skull differing in detail.

Color.—Type: General color of upperparts near ochraceous-tawny, purest on cheeks shoulders and sides, the top of head and back suffused with tawny, finely mixed with black; underparts dull white; ears black; feet white, the four longer toes of hind feet with tufts of silvery bristles projecting beyond the claws.

Skull.—Small and slender in form, the anterior palatine foramina broad, but much shorter than palatal bridge; audital bullæ small. About like that of *O. a. alfaroi*, but braincase and frontal region usually narrower. Closely resembling that of *O. a. palmiræ*, but shorter, with more widely spreading zygomata and smaller teeth.

Measurements.—Type: Total length, 203; tail vertebræ, 107; hind foot, 25.5. Average of five adult topotypes: 220 (212–226); 113 (107–117); 24.6 (23–26). *Skull* (type): Greatest length, 27.4; zygomatic breadth, 14.5; interorbital breadth, 5; length of nasals, 11.1; length of anterior palatine foramina, 3.7; length of palatal bridge, 5.5; length of upper molar series, 3.7.

Remarks.—This small, slender rice rat differs from typical *O. a. alfaroi*, of Costa Rica, mainly in richer, more tawny coloration. It is closely allied to the Colombian form described as *O. palmiræ* and the latter is clearly assignable to subspecific rank, if it does not prove to be identical with *O. gracilis*, the type of which came from farther north in the Cauca Valley. Comparison of *O. a. dariensis* with specimens from northern Ecuador, assigned to *O. gracilis* by Mr. Oldfield Thomas, and reference to the original description of that species indicate that the two are very nearly related. The description of the color of *O. gracilis*, however, seems to apply to the Ecuadorean specimens, or to *O. palmiræ*, rather than to the Darien animal. Moreover, the skull of the new form is distinguished from that of *O. gracilis*, as here understood, by the greater lateral expansion of the zygomata.

Specimens examined.—Ten, all from the type locality.

***Oryzomys couesi regillus* subsp. nov.**

Type from Los Reyes, Michoacan, Mexico. No. 125,945, male adult, U. S. National Museum (Biological Survey Collection), collected by E. W. Nelson and E. A. Goldman, February 17, 1903. Original number 15,962.

General characters.—A large richly colored form of the *O. couesi* group, with long, soft pelage. Similar in general to *O. c. couesi* but much larger and paler colored, the underparts usually white instead of buffy. Size and proportions about as in *O. albiventer*, but upperparts darker and more rufescent in color.

Color.—Type: Upperparts in general rich ochraceous-buff, the back and rump strongly suffused with tawny and lined with black hairs; under-

parts, including lips, dull whitish; outer sides of ears blackish, the inner sides clothed with buffy hairs; feet white; tail light brownish above, whitish or flesh color below on basal half, becoming brownish all around toward tip. In other examples the underparts vary from nearly pure white to light buff.

Skull.—In general form very similar to that of *O. c. couesi*, but much larger, with heavier dentition; anterior palatine foramina about equal to palatal bridge [usually longer than palatal bridge in *O. c. couesi*], and ending posteriorly near anterior plane of first molars; interparietal relatively smaller.

Measurements.—Type: Total length, 305; tail vertebræ 169; hind foot, 36. *Skull* (type): Greatest length, 33.4; zygomatic breadth, 18.3; interorbital breadth, 5.2; length of nasals, 12.5; length of anterior palatine foramina, 6.4; length of palatal bridge, 6.4; length of upper molar series, 4.9.

Remarks.—This handsome rice rat is a member of the widely dispersed *O. couesi* group. It is closely allied to *O. albiventer*, a near geographic neighbor, and examination of specimens from intermediate localities indicates gradation through intervening forms to typical *O. c. couesi*.

Specimens examined.—Ten, all from the type locality.

***Oryzomys fulvescens lenis* subsp. nov.**

Type from Los Reyes, Michoacan, Mexico. No. 125,941, male adult, U. S. National Museum (Biological Survey Collection), collected by E. W. Nelson and E. A. Goldman, February 14, 1903. Original number 15,948.

General characters.—Similar to *Oryzomys fulvescens fulvescens* but upper parts paler ochraceous-buff, the general tone more yellowish; skull broader and more massive.

Color.—Type (fresh pelage): Upper parts in general pale ochraceous-buff, becoming warm buff on cheeks, shoulders and lower part of sides; the face, top of head and back moderately lined with dark hairs; under parts light buff, except chin and lips, which are white; outer sides of ears blackish, inner sides clothed with ochraceous buffy hairs; feet white; tail light brownish above, flesh color below proximally, becoming dusky all around toward tip.

Skull.—Broader than that of *O. f. fulvescens*; zygomata more widely spreading; maxillary arms of zygoma and ascending branches of premaxillæ broader and heavier; dentition rather heavy, but equalled in some examples of *O. f. fulvescens*.

Measurements.—Type: Total length, 198; tail vertebræ, 115; hind foot, 23. *Skull* (type): Greatest length, 22.6; zygomatic breadth, 12.3; interorbital breadth, 3.4; length of nasals, 8.6; length of anterior palatine foramina, 3.9; length of palatal bridge, 4.1; length of upper molar series, 3.

Remarks.—*Oryzomys f. lenis* is a pale form of *O. fulvescens* ranging at the lower elevations along the Pacific side of Mexico. Aside from paler coloration, it is distinguished from *O. f. fulvescens* by the broader, more massive skull.

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A NEW SPECIES OF TAILLESS BATRACHIAN FROM
NORTH AMERICA.

BY LEONHARD STEJNEGER.

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A very interesting addition to the fauna of the United States was found in a recent collection kindly presented to the National Museum by Mr. R. D. Camp. It is a small species of the Mexican genus *Syrrophus*, already represented in Texas by the type species *Syrrophus marnockii* Cope, the original specimens of which came from near San Antonio. These Leptodactylid toads differ from *Eleutherodactylus* and *Lithodytes* in the absence of vomerine teeth.

Syrrophus campi new species.

Diagnosis.—Heel of extended hind leg reaches center of eye; diameter of tympanum slightly more than half that of eye; back coarsely granular; head wide.

Type.—U. S. Nat. Mus. Cat. No. 52,290; Brownsville, Texas; R. D. Camp, collector.

Description of type-specimen.—Tongue broadly pear-shaped, somewhat truncate behind with a tendency to a posterior lateral projection on each side; nostrils much nearer the tip of snout than the eye, their distance from the latter slightly less than the eye diameter and equal their distance from each other; upper eyelids much narrower than interorbital space which is wider than diameter of eye; tympanum distinct, circular, its rim interrupted above, slightly more than half the diameter of eye, distance from the eye one-third its own diameter; fingers with well-developed terminal disks which are truncate anteriorly; subarticular tubercles very strongly developed; palms strongly tuberculate; second finger scarcely longer than first; toes with considerably smaller disks; soles with small tubercles; both inner and outer metatarsal tubercles present and well developed; no tarsal fold; the bent limbs being pressed along the side, knee and elbow overlap; hind limb being extended along the side, heel reaches beyond posterior angle of eye; hind limbs being

placed vertically to the axis of the body, the heels overlap; skin above densely tubercular, except on snout and interorbital space which are nearly smooth; underside of body smooth, of femurs granular. Color (in alcohol) brownish gray above, with dark brown irregular markings which on the back join to form four ill-defined longitudinal bands; indication of a dark band across the interorbital space; ground color on top of snout anterior to this band and the outer space between the dorsal bands paler than elsewhere; a dark band from nostrils over lores, through eyes to above tympanum; sides with numerous small white spots; limbs with dusky cross bands and whitish spots on the light spaces; underside white, chin and throat minutely sprinkled with dusky.

Dimensions.—Tip of snout to vent, 24 millimeters; width of head, 8; nostrils to eye, 2.5; interorbital space, 3; diameter of eye, 2.75; diameter of tympanum, 1.5; fore leg from axilla, 14; hind leg from vent, 34; vent to heel, 19.

Coloration of living specimens.—Iris golden with black reticulations; ground color above olive clay, dark markings blackish; side of face dark with the loreal band blackish and whitish spots on upper lip and under eye; underside whitish, with more or less purplish tinge.

Variation.—The chief variation is found in the coloration of the alcoholic specimens, many of which are quite pale above with numerous small dusky spots without much indication of the pattern described in the type. A pale canthal stripe is often markedly set off from the dark loreal stripe, as is also a pale cross band in front of the interorbital black band. Younger specimens are often uniformly light brownish gray, and the very youngest, of which I have examined a number not measuring more than 7 mm. in total length, seem always to be without any dusky spots on back. All show more or less definite indications of cross markings on the legs. The skin above is equally tubercular in all the specimens, young as well as adult.

Remarks.—This species in many respects approaches *S. leprus* in general proportions and aspect (except coloration) but the head is somewhat narrower, the snout is longer and more pointed, the second finger is shorter and the foot longer. It differs from all the species described before by its coarsely granular upper surface.

This interesting novelty, according to information furnished by Mr. Camp, was "found under boxes and boards about buildings in city." A number of very young specimens, 7-8 mm. long, were collected with the adult ones. They show no trace of a tail and it is quite likely, as Dr. Thomas Barbour has suggested to me, that they are hatched fully developed from the egg, as we know to be the case with some of the species of *Eleutherodactylus*.