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A NEW LOUISIANA HERON AND A
NEW ROUND-TAILED GROUND SQUIRREL FROM
LOWER CALIFORNIA, MEXICO

BY

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Among some of the more recent specimens secured in Lower California by representatives of the San Diego Society of Natural History, which, under special permit from the Mexican government, has been conducting field work in that territory for several years, are a series of breeding Louisiana herons and a series of round-tailed ground squirrels that are markedly different from the forms hitherto known. Proposed new names for them, together with their descriptions, and supplementary remarks, are here presented.

***Hydranassa tricolor occidentalis*, subsp. nov.**

WESTERN LOUISIANA HERON

Type.—From Scammon Lagoon, Lower California, Mexico, lat. $28^{\circ} 04'$ north, long. $114^{\circ} 05'$ west; no. 10644, collection of the San Diego Society of Natural History; male, breeding; collected by Laurence M. Huey, skinned by George G. Cantwell, on May 25, 1926.

Subspecific Characters.—Similar to *Hydranassa tricolor ruficollis* (Gosse), but has larger wing, tarsus, middle toe and beak; also, the neck has a much greater area of purplish maroon, which extends from the occipital region down the full length of the neck on either side.

Measurements.—*H. t. occidentalis*: Averages and extremes of nine adult breeding males (including the type): wing, 268.5 (258.0-281.0); tail, 86.2 (82.1-90.0); tarsus, 100.7 (94.1-105.9); middle toe, 69.6 (64.7-72.9); culmen, 104.2 (97.3-107.8). Averages and extremes of six females (including one sub-adult): wing, 253.0 (245.0-265.0); tail, 81.6 (78.8-85.4); tarsus, 92.9 (91.2-

97.8); middle toe, 65.6 (64.5-66.5); culmen, 98.6 (97.4-99.8). *H. t. ruficollis*: Averages and extremes of seventeen adult males: wing, 259.3 (247.0-268.0); tail, 87.3 (81.3-90.5); tarsus, 98.3 (94.1-100.6); middle toe, 67.3 (64.3-71.6); culmen, (16 specimens), 99.0 (95.2-102.3). Averages and extremes of five adult females: wing, 250.0 (238.0-264.0); tail, 81.6 (76.1-86.4); tarsus, 90.9 (85.0-97.4); middle toe, 64.1 (61.5-69.1); culmen, 93.6 (90.0-97.4).

Range.—So far as is known, this subspecies occupies the peninsula of Lower California, though examination of further specimens will probably prove that the breeding birds of the northwestern coast of Mexico belong to this race. Birds referable to this form have been taken as far north in winter as San Diego Bay, California.

Specimens examined.—*H. t. occidentalis*: 1 from Sweetwater Slough, San Diego Bay, California;¹ 1 from La Punta, San Diego Bay, California;² 5 from Scammon Lagoon, Lower California, Mexico;¹ 6 from Pond Lagoon, Lower California, Mexico;¹ 2 from San Ignacio Lagoon, Lower California, Mexico.¹ *H. t. ruficollis*:³ 1 from Frogmore, South Carolina; 3 from Miami, Florida; 4 from Smyrna, Florida; 1 from Oak Lodge, Florida; 2 from Merritts Is., Florida; 2 from Enterprise, Florida; 1 from Big Marco, Florida; 1 from Allen Creek, Florida; 1 from Suwanee River, Florida; 1 from Julinton, Georgia; 1 from Point Isabel, Texas; 1 from Matamoros, Mexico (near southeastern border of Texas); 1 from San Blas, Mexico (west coast); 2 from Preston, Cuba. The specimens of *ruficollis* were practically all taken in the months of February, March and April, and those of *occidentalis* in April and May. The series were thus comparable, especially in view of the later nesting season in the west.

Remarks.—The specimens examined, when placed in a series beginning with those from the furthest east (Cuba) and ending with those from the furthest west (Lower California) show a gradual increase in size of bill, toes and tarsus and a brighter and more purple neck toward the west. However, the single bird available for examination from the west coast of Mexico (San Blas) conforms to the characters of *H. t. ruficollis* more nearly than it does to the form here described.

Acknowledgments.—The writer is indebted to Mr. Outram Bangs of the Museum of Comparative Zoology for the loan of specimens of *H. t. ruficollis*, which have made this diagnosis possible.

¹Specimens in collection of San Diego Society of Natural History.

²Specimen in collection of Laurence M. Huey.

³Specimens in collection of Museum of Comparative Zoology.

Citellus tereticaudus apricus,⁴ subsp. nov.

TRINIDAD VALLEY ROUND-TAILED GROUND SQUIRREL

Type.—From Valle de la Trinidad, Lower California, Mexico, lat. 31° 20' north, long. 115° 40' west; no. 6308, collection of the San Diego Society of Natural History; adult male; collected by Laurence M. Huey, July 13, 1927.

Color.—Closely resembling that of *Citellus tereticaudus vociferans*,⁵ but uniformly darker on the face and less grizzled dorsally. The younger animals of the form here described are darker, being more brownish than the young animals of either *Citellus tereticaudus tereticaudus* or *Citellus tereticaudus vociferans*.

Cranial Characters.—The skull of *C. t. apricus* shows marked contrast to that of either *C. t. tereticaudus* or *C. t. vociferans*. The tooth row is a great deal longer, the audital bullae much more inflated, and the interpterygoid notch wider and deeper. The brain case is also deeper and wider than in either of the other two mentioned races.

Measurements.—*Type*: Total length, 252; tail vertebrae, 93; hind foot 38; weight in grams, 123.0. Averages and extremes of seven adults and three sub-adults: Length, 244.4 (240-260); tail, 90.3 (83-98); hind foot, 37.0 (35-39); weight, 133.5 (101.0-191.0). *Skull (type)*: Condyllo-basal length, 38.0; zygomatic breadth, 23.5; length of tooth row, 8.1; depth of interpterygoid notch, 8.1.

Range.—Known only from the type locality, Valle de la Trinidad, Lower California, Mexico.

Specimens examined.—*Citellus tereticaudus tereticaudus*⁶: 10 from Bard, Imperial County, California, 7 miles north of Old Fort Yuma, California (type locality), and about as near the type locality as specimens can be obtained nowadays; 8 from La Puerta Valley, San Diego County, California; 2 from Harper's Well, Imperial County, California, west side of the Colorado Desert; 1 from Fish Springs, Imperial County, California. *Citellus tereticaudus chlorus*: 3 from Whitewater Ranch, Riverside County, California; 2 from Palm Springs, Riverside County, California (type locality). *Citellus tereticaudus vociferans*: 25 from San Felipe, Lower California, Mexico (type locality); 1 from 20 miles north of San Felipe, Lower California, Mexico. *Citellus tereticaudus apricus*: 55 from Valle de la Trinidad, Lower California, Mexico (type locality).

Remarks.—The finding of a *Citellus tereticaudus* in Valle de la Trinidad was totally unexpected and for the first time established the presence of a mem-

⁴*Apricus*, Lat. "that loves to be in the sun."

⁵Proc. Biol. Soc. Washington, vol. 39, pp. 29-30, July 30, 1926.

⁶All specimens in collection of San Diego Society of Natural History.

ber of this desert group of squirrels on the Pacific slope. Valle de la Trinidad is a narrow valley, approximately eighteen miles long by four miles wide, lying in an east to west direction. Its upper end, at an elevation of about 3200 feet, forms San Matias pass, which is the division between Sierra Juarez (called also Sierra del Pinal) on the north and Sierra San Pedro Martir on the south. The lower, western, end of Valle de la Trinidad is about 2500 feet in elevation. In physical characters, the valley is, in places, typical desert, marked by the conspicuous plants found on the deserts east of the dividing mountain ranges, for example, creosote bush (*Larrea tridentata* var. *glutinosa*), desert willow (*Chilopsis linearis*), honey mesquite (*Prosopis juliflora* var. *glandulosa*) and catclaw (*Acacia greggii*). Unquestionably this valley illustrates the best example of "spilling over" of desert influence into the more humid coastal belt to be found in Lower California, if not in the whole of the southwest.

Citellus tereticaudus apricus was found to be essentially diurnal, being active from sunrise to sunset in Valle de la Trinidad at the time of the writer's visit in July. Its numbers were extraordinarily great, the animals fairly swarming in the hotter, central parts of the valley. However, they were not so much in evidence during the extreme heat of the hottest days; but, on days when the breeze blew from the ocean, even though the sun was shining warmly, they were busy all day long. The habitat of the present form has the advantage of being at a higher elevation and under more temperate conditions than that of the California forms of round-tailed ground squirrels, whose habits are so well described by Grinnell & Dixon in their "Natural History of the Ground Squirrels of California."⁷

The Trinidad Valley Round-tailed Ground Squirrel was fairly active in trees. Near the writer's camp were several good-sized mesquites, which held an abundant crop of mesquite beans. These beans are contained in slender pods, eight to ten inches long, which grow, in clusters of a dozen or more, at the ends of slender twigs on the upper branches of the trees. To these branches, even though some of them were over fifteen feet above the ground, the squirrels readily climbed and cut the twigs holding the pod clusters, allowing them to fall to the ground. They would then collect them and either carry them to the mouths of their burrows or take them into the shade near the trunks of the trees for shelling. When alarmed in the branches, the squirrels would quickly scramble to the ground and hurry to their burrows for safety.

The younger animals, although very shy, were unusually playful, and, when not suspecting the presence of a human observer, would gather in small groups, at times numbering six individuals or so, and frolic in the most entertaining manner, sometimes for as long as half an hour at a time.

⁷Monthly Bull. State Comm. of Horticulture, 1918, vii, nos. 11-12, pp. 597-708.