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(Spermophilus spilosoma) from Tamaulipas, Mexico, by Ticul Alvarez**

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*** START OF THE PROJECT GUTENBERG EBOOK A NEW SUBSPECIES OF GROUND
SQUIRREL (SPERMOPHILUS SPILOSOMA) FROM TAMAULIPAS, MEXICO ***

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BY

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UNIVERSITY OF KANSAS
LAWRENCE
1962

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A New Subspecies of Ground Squirrel (*Spermophilus spilosoma*) from Tamaulipas, Mexico

[123]

BY TICUL ALVAREZ

When A. H. Howell (N. Amer. Fauna, 56:1-256, 1938) revised the North American ground squirrels, he had no specimens of the spotted ground squirrel, *Spermophilus spilosoma*, from Tamaulipas. Thirteen years later, Hall (Univ. Kansas Publ., Mus. Nat. Hist., 5:38, 1951) listed the species for the first time from the state when he recorded as *S. s. annectens* 13 specimens from the barrier beach 88-89 miles south and 10 miles west of Matamoros.

In 1953, Mr. Gerd Heinrich collected 10 individuals of *S. spilosoma* from the coastal plain of eastern Tamaulipas that extend southward the known range of the species on the east coast of México, provide the first specimens from the mainland of Tamaulipas, and represent a new subspecies that is named and described below.

Spermophilus spilosoma oricolus new subspecies

Type.—Female, adult, skin and skull, No. 55497 Museum of Natural History, The University of Kansas; from one mile east of La Pesca, Tamaulipas, México; obtained on May 27, 1953, by Gerd Heinrich, original number 6933.

Diagnosis.—Size medium for species (see measurements); general color cinnamon buff, almost pure on dorsal surface of hind foot and dorsal and ventral midline of tail; spots well marked; postorbital constriction narrow; auditory bullae small; viewed from front, lower border of maxillary plate forming continuously concave line with jugal; zygomatic process of maxillary narrow, having anterior border concave.

Comparisons.—From *Spermophilus spilosoma annectens* (specimens from Padre and Mustang islands, Texas), *S. s. oricolus* differs as follows: larger in external dimensions but smaller in cranial dimensions; postorbital constriction narrower, 13.4 (13.2-13.8) instead of 14.0 (13.5-14.7); rostrum slightly broader; greatest distance between posterior border of maxillary plate and squamosal arm of zygoma longer, averaging 9.9 (9.7-10.2) instead of 9.6 (9.0-10.1); zygomatic process of maxillary, viewed dorsolaterally above lacrimal narrower, having anterior border concave instead of almost straight; when skull viewed from front, lower border of maxillary plate forming continuously concave line with jugal instead of almost a right angle where jugal and maxillary meet; ramus of lower jaw narrower; general color paler; upper surface of hind foot washed with cinnamon instead of yellowish; postauricular spot absent (usually present in *annectens*).

From *Spermophilus spilosoma pallescens* (specimens from southeastern Coahuila), *S. s. oricolus* differs as follows: color more cinnamon especially on upper surface of hind foot; dorsal spots more distinct; smaller externally, except hind foot, which measures the same; braincase and postorbital constriction narrower; nasals shorter; auditory bullae conspicuously smaller.

From *Spermophilus spilosoma cabrerai* (specimens from eastern San Luis Potosí), *S. s. oricolus* differs mainly in pale (cinnamon) rather than dark (blackish) upper parts, but differs also in being smaller externally (judging from measurements given in the original description by Dalquest, Proc. Biol. Soc. Washington, 64:107, 1951), and in having a greater zygomatic breadth, narrower braincase and postorbital constriction, and narrower maxillary process.

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Measurements.—Average and extreme measurements of eight specimens from the type locality (four females, including type, and four males) are as follows: total length (only five specimens), 234 (212-245); length of tail vertebrae (five only), 67 (50-75); length of hind foot, 36.1 (35-37); length of ear from notch, 8.4 (7.5-10.0); length of head and body, 166 (155-171); greatest length of skull, 41.2 (40.6-42.7); zygomatic breadth, 24.4 (23.7-25.2);

cranial breadth, 18.4 (17.8-18.9); interorbital constriction, 9.2 (8.5-9.8); postorbital constriction, 13.4 (13.2-13.8); length of nasals, 14.0 (13.6-14.8); length of maxillary tooth-row, 8.0 (7.7-8.4); greatest distance between posterior border of maxillary plate and squamosal arm of zygoma, 9.9 (9.7-10.2).

Remarks.—The type locality of *S. s. oricolus* is nearly at sea level on the coastal plain of eastern Tamaulipas. In so far as now known, the population of ground squirrel here named as new is isolated, the nearest records of occurrence being those reported by Hall (*loc. cit.*) from a place on the barrier beach approximately 80 miles north of La Pesca. The nearest record from the mainland (*S. s. annectens*) is from southern Texas.

A possible explanation for the presence of the species at La Pesca is that it dispersed southward along the barrier beach, and that an isolated or semi-isolated segment finally reached the mainland where the barrier beach rejoins it just northeast of La Pesca. This possibility is strengthened by study of the specimens already mentioned from 88-89 miles south and 10 miles west of Matamoros, because they combine many characters of *annectens* and *oricolus*. The insular specimens differ from both *annectens* and *oricolus* in having shorter nasals and a shorter skull, narrower zygomatic and interorbital regions, and a relatively broader interpterygoid space. Also, the zygomatic process of the maxillary, viewed dorsolaterally above the lacrimal, is even narrower than in *oricolus* and has the anterior border even more concave. In color, specimens from the barrier beach are pale as is *oricolus*, but the over-all color is reddish cinnamon rather than cinnamon buff. Concerning the juncture of the zygomatic plate with the jugal, 12 of the 13 specimens studied resemble *annectens* in this character and one resembles *oricolus*. The specimens from the barrier beach may themselves represent an unnamed subspecies; more material than now is available is needed, because most of the specimens are not fully adult. Because the 13 specimens from the barrier beach resemble *oricolus* slightly more than *annectens*, all characters considered, they are tentatively assigned to *oricolus*.

The author is grateful to Professor E. Raymond Hall and Mr. J. Knox Jones, Jr., for permission to examine the specimens here reported and for helpful suggestions. Field work that yielded the specimens was financed by the Kansas University Endowment Association. The laboratory phases of the study were made when the author was a half-time Research Assistant supported by a grant, No. 56 G 103, from the National Science Foundation.

Specimens examined.—A total of 23, all from Tamaulipas: 88 mi. S, 10 mi. W Matamoros, 12; 89 mi. S, 10 mi. W Matamoros, 1; 1 mi. E La Pesca, 10.

Transmitted November 8, 1961.

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