Spermophilus perotensis. By Troy L. Best and Gerardo Ceballos

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Spermophilus perotensis Merriam, 1893
Perote Ground Squirrel
Spermophilus perotensis Merriam, 1893:131. Type locality “Perote, Vera Cruz, Mexico.”


DIAGNOSIS. Congeners that closely approach the range of S. perotensis are S. mexicanus and S. variegatus. Compared with S. mexicanus (total length, 280–380 mm), S. perotensis (total length, 243–261 mm) is smaller and does not have white spots on the dorsum that are arranged in longitudinal rows. Compared with S. variegatus (total length, 430–525 mm), S. perotensis is smaller and has hypsodont molars (Hall, 1981).

The Perote ground squirrel (Fig. 1) is similar to S. spilosoma (total length, 165–253 mm), but when compared with the geographically closest subspecies of S. spilosoma, S. perotensis is larger, the tail is shorter, the coloration is more yellowish (less pinkish), the dorsal spots are buffy rather than white, and are smaller and less conspicuous (often nearly obsolete), the underparts are buffy instead of white, and the head is marked with blackish. The skull (Fig. 2) of S. perotensis is similar to that of S. s. spilosoma, but larger, with relatively narrower and higher braincase. The auditory bullae of S. perotensis are broader and flatter, and the molariform teeth are heavier than in S. spilosoma (Hall, 1981; Howell, 1938).

GENERAL CHARACTERS. The upperparts of the Perote ground squirrel are grizzled yellowish-brown, vermiculated posteriorly by irregularly interrupted lines of black, which in immature individuals and probably also in new pelage in adults, form the posterior borders of indistinct buffy spots. The eyelids are white, and the underparts and the feet are buffy. Dorso-laterally, the tail is grizzled yellowish-brown and black, the black predominating on the distal one-half. Ventrally, the tail is ochraceous buff with a distinct subapical band of black encircling the distal 25–33% (Merriam, 1893). The braincase is high and narrow (Hall, 1981).

There is little variation among individuals of S. perotensis, except in the degree of visibility of the obsolescent spots and the tint of the upperparts. This difference results from the wearing off of the tips of the hairs (Merriam, 1893). Means and ranges of external and cranial measurements (in mm; n = 11) are: total length, 250 (243–261); length of tail, 71 (57–78); length of hind foot, 39 (38–40); greatest length of cranium, 43.5 (42.2–44.5); palatal length, 20.6 (20.0–21.5); vomerinc breadth, 26.4 (25.2–27.3); cranial breadth, 19.5 (19.1–20.0); interorbital breadth, 9.3 (8.8–9.8); postorbital constriction, 14.0 (13.3–14.7); length of nasals, 15.5 (14.5–16.5); length of maxillary toothrow, 8.7 (8.3–9.0—Howell, 1938).

Fig. 1. Spermophilus perotensis near Perote, Veracruz, Mexico. Photograph by G. Ceballos.

Fig. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of Spermophilus perotensis from 2 km W Limon, 2,250 m elevation, Veracruz, Mexico (female, University of Kansas Museum of Natural History 30003). Greatest length of cranium is 41.3 mm.
weasels (*Mustela frenata*) and domestic dogs (*Canis familiaris*—G. Ceballos, in litt.).

The Perote ground squirrel is a threatened species. Habitat destruction and fragmentation due to encroachment by agriculture is the greatest threat to the survival of *S. perotensis* (Ceballos and Navarro L., 1991; Ceballos and Rodriguez, 1993).

**GENETICS.** The diploid number of chromosomes is 32 and the fundamental number of chromosomal arms is 58. The X chromosome is large and the Y chromosome is minute. The chromosomes of *S. perotensis* are structurally and numerically identical to those of *S. spilossoma*, which indicates a close relationship between these species (Uribe-Alcocer et al., 1979).

**REMARKS.** *Spermophilus* is derived from the Greek *sperma* and *philos* meaning seed loving (Jaeger, 1955). The specific epithet *perotensis* refers to the type locality of Perote, Veracruz. *S. perotensis* also has been referred to as the Perote spermophile (Elliot, 1905) and in Spanish as moto (Hall and Dalquest, 1963).

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