

Peromyscus pseudocrinitus.

By Sergio Ticul Alvarez-Castañeda.

Published 4 December 1998 by the American Society of Mammalogists

Peromyscus pseudocrinitus Burt, 1932

Coronados Island Canyon Mouse

Peromyscus pseudocrinitus Burt, 1932:173. Type locality "Coronados Island lat. 26°06'N, long. 111°18'W, Lower California [Baja California Sur], México."

CONTEXT AND CONTENT. Order Rodentia, Suborder Sciurognathi, Family Muridae, Subfamily Sigmodontinae, Genus *Peromyscus* (Musser and Carleton, 1992), Subgenus *Haplomyiomys* (Carleton, 1989). *Peromyscus pseudocrinitus* is monotypic (Hall, 1981).

DIAGNOSIS. *Peromyscus pseudocrinitus* is quite distinct from other *Peromyscus* and seems to combine the characters of the subgenus *Haplomyiomys* with those of *Peromyscus* (even more so than does *P. crinitus*) in that external characteristics are suggestive of the *eremicus* type of mouse, but the teeth are of the type found in the subgenus *Peromyscus* (Burt, 1932). Hooper (1968) allocated this species to the *P. crinitus* species-group, and Lawlor (1971) believed it to be a member of the *P. eremicus* species-group (Carleton, 1989; Lawlor, 1983). Burt (1932) believed it to be the closest relative to *P. collatus* from Turner's Island; however, *P. pseudocrinitus* (Fig. 1) differs from *P. collatus* in larger size, darker coloration, and broader nasals which do not taper posteriorly. The skull (Fig. 2) in general outline is similar to that of *P. crinitus* but larger and with relatively less-inflated auditory bullae (Burt, 1932). In the M1 and M2 the accessory tubercles between the outer primary tubercles are more prominent than in *P. crinitus* (Burt, 1932).

GENERAL CHARACTERS. According to Burt (1932), specimens are extremely dark-colored (darkest of the Gulf island forms); the long, scantily-haired tail is indistinctly bicolored on the proximal two-thirds. Color of upperparts is "plumbeous-black" washed with "cinnamon"; underparts are white. Skull in general outline is similar to that of *P. crinitus*, but larger and with relatively less-inflated auditory bullae; nasals are broad, bluntly rounded at the posterior termination, and the lateral edges are parallel; premaxillae extend slightly beyond nasals; accessory tubercles between outer primary tubercles in M1 and M2 are present and more prominent than in *P. crinitus*; shelf of bony palate is shorter than length of maxillary tooth row; and the interparietal was divided in four out of seven specimens. The baculum closely resembles that of *P. eremicus*, and the glans is *eremicus*-like in every respect (Lawlor, 1971; Fig. 3). Average measurements (in mm) of six adults (Burt, 1932) are as follows: total length, 194; length of the tail, 110; length of hind foot, 21; length of ear from crown, 16; greatest length of skull, 25.3; condylobasal length, 23.0; basilar length of Hensel,



FIG. 1. *Peromyscus pseudocrinitus* from Coronados Island, Baja California Sur, Mexico. Photograph by S. T. Alvarez-Castañeda.

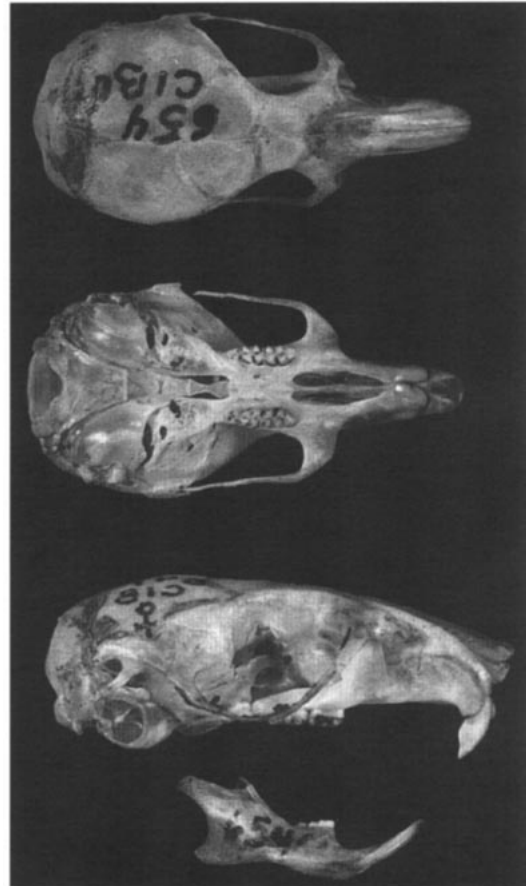


FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of *Peromyscus pseudocrinitus* (adult male from Coronados Island, Baja California Sur, Mexico, number 654). Greatest length of cranium is 23.92 mm. Photograph by Sergio Rosas.

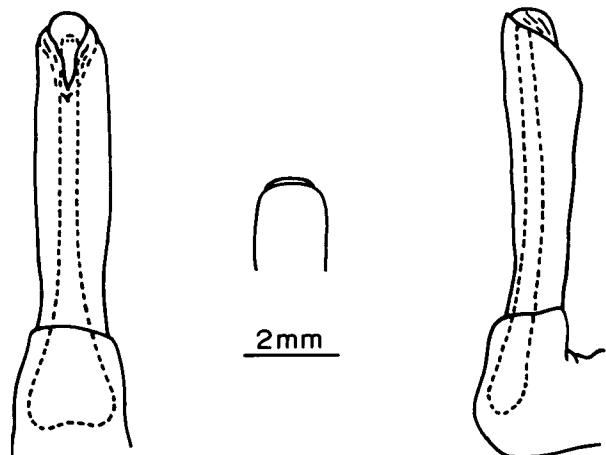


FIG. 3. Phalli of *Peromyscus eremicus*, which closely resembles those of *P. pseudocrinitus* (Lawlor, 1971).

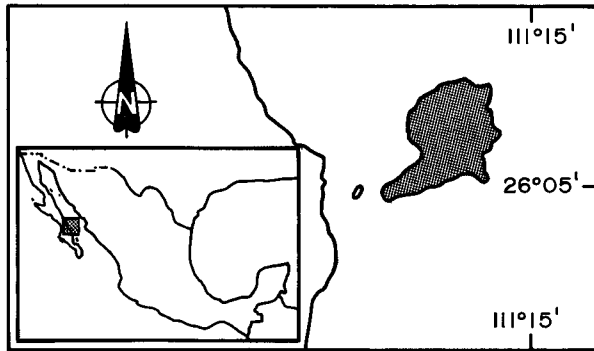


FIG. 4. Distribution of *Peromyscus pseudocrinitus* in Baja California Sur, Mexico (modified from Hall, 1981).



FIG. 5. Aerial view of Coronados Island. Photograph by S. T. Alvarez-Castañeda.

19.4; zygomatic breadth, 12.7; least interorbital constriction, 4.2; length and width of interparietal, 8.6 by 2.9; length of nasals, 9.3; length of shelf of bony palate, 3.4; and length of maxillary tooth row, 3.8.

DISTRIBUTION. *Peromyscus pseudocrinitus* is endemic to Coronados Island (Fig. 4), Gulf of California, Mexico (Alvarez-Castañeda and Cortés-Calva, in press; Hall, 1981). Fossils of *Peromyscus pseudocrinitus* are not known.

ECOLOGY. Coronados Island is 3.5 km E of the peninsular mainland of Baja California near Loreto, Baja California Sur and 11 km from Isla Carmen. Coronados Island, which is 3 km long by 2.5 km wide, is of volcanic origin, being only the cone of the volcano (Fig. 5). On the east side, it has a very large cliff, with a long sand spit extending from the southwestern edge of the island toward the mainland. Dark lava boulders are particularly prevalent on the west slope (Fig. 6).

Feral cats have been introduced to Coronados Island. The dissection of fecal pellets from feral cats indicates that they consume small rodents (Smith et al., 1993).

Smith et al. (1993) spent seven days on the island in 1989 and captured only one specimen of *Chaetodipus spinatus pullus*. In 1994, 20 specimens of *Peromyscus pseudocrinitus* were collected in one night; most were caught on the sand spit, and a few were obtained among rocks.

CONSERVATION STATUS. The Mexican Government considers *Peromyscus pseudocrinitus* to be threatened (NOM-059-Ecol).

REMARKS. In recent decades increasing population pressure and great accessibility of the islands of the Gulf of California to tourists and local fisherman have exacerbated human impact on endemic species (Bahre, 1983; Lindsay, 1983).

The name *Peromyscus* is derived from the Greek *pera*, meaning small, *mys*, meaning mouse, and *iskos*, a diminutive suffix (Alvarez-Castañeda and Alvarez, 1997). The specific name, *pseudocrinitus*,

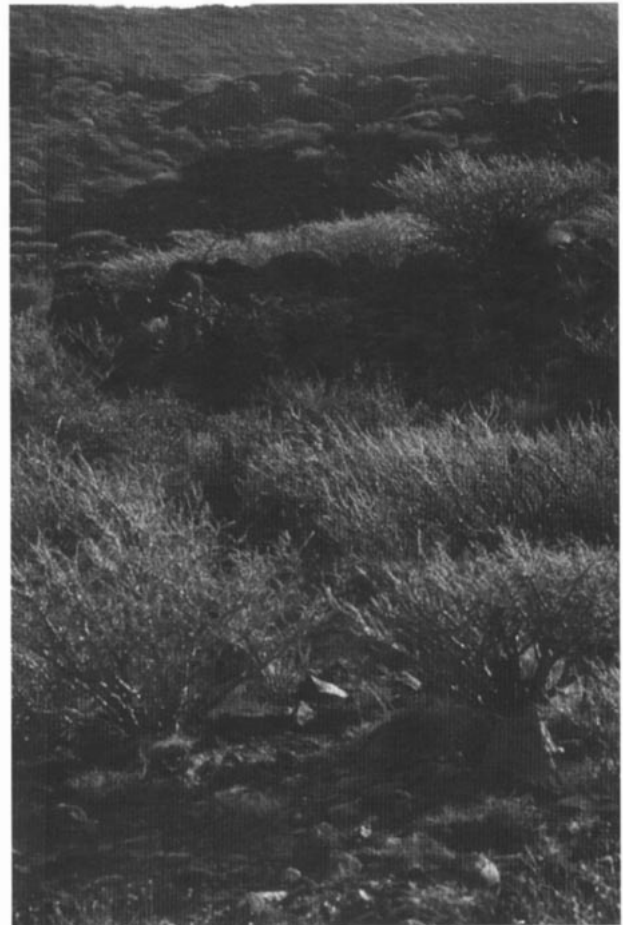


FIG. 6. Habitat of *Peromyscus pseudocrinitus*. Photograph by S. T. Alvarez-Castañeda.

is from the Greek *pseudēs*, meaning false, and *crinitus*, the name of another species of *Peromyscus*; thus the specific name means false *crinitus*. We thank D. Hafner for review of the manuscript. We acknowledge the Consejo Nacional de Ciencia y Tecnología, México, for financial support (CONACYT, I25252N).

LITERATURE CITED

- ALVAREZ-CASTAÑEDA, S. T., AND T. ALVAREZ. 1997. Etimologías de los géneros de mamíferos Mexicanos. *Ciencia*, 47:39–49.
- ALVAREZ-CASTAÑEDA, S. T., AND P. CORTÉS-CALVA. In press. Familia Muridae. Pp. 445–568 in *Mamíferos del Noroeste de México* (S. T. Alvarez-Castañeda, and J. L. Patton, eds.). Centro de Investigaciones Biológicas del Noroeste, S. C. La Paz, México.
- BAHRE, C. 1983. Human impact: the midriff islands. Pp. 290–306, in *Island biogeography in the sea of Cortez* (T. J. Case and M. L. Cody, eds.). University of California Press, Berkeley, 508 pp.
- BURT, W. H. 1932. Descriptions of heretofore unknown mammals from islands in the Gulf of California, Mexico. *Transactions of the San Diego Society of Natural History*, 7:161–182.
- CARLETON, M. 1989. Systematics and evolution. Pp. 7–141, in *Advances in the study of Peromyscus (Rodentia)* (G. L. Kirkland, and J. N. Layne, eds.). Texas Tech University Press, Lubbock, 367 pp.
- HALL, E. R. 1981. The mammals of North America. Second ed. John Wiley & Sons, New York, 2:601–1181 + 90.
- HOOOPER, E. T. 1968. Classification. Pp. 27–74, in *Biology of Peromyscus (Rodentia)* (J. A. King, ed.). Special Publication, American Society of Mammalogists, 2:1–593.
- LAWLOR, T. E. 1971. Distribution and relationships of six species of *Peromyscus* in Baja California and Sonora, Mexico. *Occasional Papers of the Museum of Zoology, University of Michigan*, 661:1–22.

- . 1983. The mammals. Pp. 265–284, *in* Island biogeography in the Sea of Cortez (T. J. Case and M. L. Cody, eds.). University of California Press, Berkeley, 508 pp.
- LINDSAY, G. E. 1983. History of scientific exploration in the Sea of Cortez. Pp. 3–12, *in* Island biogeography in the Sea of Cortez (T. J. Case and M. L. Cody, eds.). University of California Press, Berkeley, 508 pp.
- MUSSER, G. G., AND M. D. CARLETON. 1992. Family Muridae. Pp. 501–756, *in* Mammal species of the world, a taxonomic and geographic reference. Second ed. (D. E. Wilson, and D. M. Reeder, eds.). Smithsonian Institution Press, Washington, District of Columbia, 1206 pp.
- NOM-059-Ecol. 1994. Norma Oficial Mexicana NOM-059-ECOL-1994, que determina las especies y subespecies de flora y fauna silvestre terrestre y acuática en peligro de extinción, amenazadas, raras y sujetas a protección especial, y que establece especificaciones para su protección. Diario Oficial de la Federación, 16 Mayo.
- SMITH, F. A., B. T. BESTELMEYER, J. BIARDI, AND M. STRONG. 1993. Anthropogenic extinction of the endemic wood rat, *Neotoma bunkerii* Burt. Biodiversity Letters, 1:149–155.
- Editors of this account were ELAINE ANDERSON AND LESLIE N. CARRAWAY. Managing editor was BARBARA H. BLAKE.
- SERGIO TICUL ALVAREZ-CASTAÑEDA, CENTRO DE INVESTIGACIONES BIOLÓGICAS DEL NOROESTE, S. C., APARTADO POSTAL 128, LA PAZ, BAJA CALIFORNIA SUR, C.P. 23000, MÉXICO.