

Peromyscus sejugis. By Sergio Ticul Alvarez-Castañeda

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***Peromyscus sejugis* Burt, 1932**

Santa Cruz Island Mouse

Peromyscus sejugis Burt, 1932:171. Type locality “Santa Cruz Island (latitude 25° 17' N., longitude 110° 43' W), Gulf of California, Lower California [Baja California Sur], Mexico.”

CONTEXT AND CONTENT. Order Rodentia, suborder Sciurognathi, family Muridae, subfamily Sigmodontinae, genus *Peromyscus* (Musser and Carleton 1993), subgenus *Peromyscus*. *Peromyscus sejugis* is monotypic (Hall 1981).

DIAGNOSIS. *Peromyscus sejugis* is poorly known (Carleton 1989) and is morphologically and genetically similar to *P. maniculatus* (Avice et al. 1974, 1979; Burt 1932; Lawlor 1983). However, *P. sejugis* is bigger and has a duller pelage, a lighter lateral line, a longer rostrum, and noninflated frontals compared to *P. maniculatus*.

GENERAL CHARACTERS. *Peromyscus sejugis* (Fig. 1) is a large insular mouse. Upper parts are grayish washed with “avellaneous,” giving a dull color. Underparts are white. Tail is distinctly bicolored with narrow dorsal stripe (about 1.5 mm wide in dry skin). Ears are dusky and fur inside ears is dark gray. Face is yellow-brown with gray and eyes have a black ring. A light yellow-ochre lateral line is often present. Skull is arched anteroposteriorly (Fig. 2). Rostrum is strong. Nasals are broad, tapering posteriorly, and terminating beyond premaxillae. Auditory bullae are relatively small. Length of shelf of bony palate is greater than length of maxillary tooth row (Burt 1932).

Specimens from San Diego Island differ from specimens from Santa Cruz Island because nasals are less tapering and sutures between frontals and parietals have a greater angle medially (Burt 1932). However, measurements of specimens from both islands do not differ. Average measurements (in mm, range in parentheses) of 25 (2 females and 23 males) adults from Santa Cruz and San Diego islands (Centro de Investigaciones Biológicas del Noroeste Collection) are: total length, 184 (160–197); length of tail, 85 (65–94); length of hind foot, 23 (20–25); length of ear, 19.2 (17–22). Skull measurements (in mm, range in parentheses) are: greatest length, 27 (26.6–27.4); zygomatic breadth, 13.4 (12.5–13.7); breadth of braincase, 11.0 (10.5–11.2); orbital constriction, 4.1 (3.7–4.3); length of nasals, 11.7 (10.5–11.5); palatal length, 13.4 (11.1–13.5); length of maxillary tooth row, 3.8 (3.1–3.9); length of mandibular

tooth row, 3.6 (3.5–3.6). Body mass averages 21.5 g (range 14–25 g).

DISTRIBUTION. *Peromyscus sejugis* occurs only on Santa Cruz Island (area 14 km²) and San Diego Island (area 1.3 km²) in Gulf of California, Baja California Sur, Mexico (Fig. 3—Alvarez-Castañeda and Cortés-Calva 1999). The islands are ca. 17 km east of peninsular mainland (Gastril et al. 1983; Nieto-Garibay 1999). No fossils of *P. sejugis* are known.

FORM AND FUNCTION. Average size of the testis of the males ($n = 23$) is 7.3 mm (6.0–12.0 mm). The phallus of *P. sejugis*



FIG. 1. Specimen of *Peromyscus sejugis* of Isla San Diego, Baja California Sur, Mexico. Photograph by Sergio Ticul Alvarez-Castañeda.



FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of *Peromyscus sejugis* (adult male from Isla Santa Cruz, Baja California Sur, México, in the mammal collection of the Centro de Investigaciones Biológicas del Noroeste, number 700). Greatest length of cranium is 27.14 mm. Photograph by Sergio Ticul Alvarez-Castañeda.

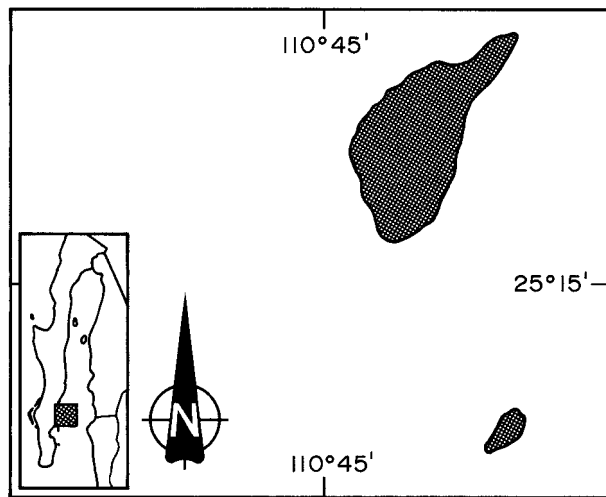


FIG. 3. Distribution of *Peromyscus sejugis* in Baja California Sur, Mexico (Alvarez-Castañeda and Cortés-Calva 1999).

closely resembles that of *P. maniculatus* (Hooper and Musser 1964).

ECOLOGY. San Diego Island is formed by a single mound with a rift at the southern end and a northwestern slope. Dominant vegetation on San Diego includes banderita (*Bouteloua radicata*), chaparro amargoso (*Castela peninsularis*), *Euphorbia magdalenae*, zacate (*Heteropogon contortus*), matacora (*Jatropha cuneata*), and cholla (*Opuntia cholla*). *P. sejugis* is very common along canyons with ground vegetation and cactus of several varieties, including cardón (*Pachycereus pringlei*) and cholla (*Cholla*). Specimens collected in San Diego were caught on a rocky hillside with very little vegetation, only a few patches of bush, and some bush grass among rocks (Burt 1932).

Vegetation on Santa Cruz Island includes torote (*Bursera microphylla*) campanilla (*Jacquemontia abutiloides*), matacora (*Jatropha cuneata*), and tacote (*Viguiera deltoidea*—León de La Luz and Pérez Navarro 1997). Soil is rocky and cats (*Felis sylvestris*) are present. Santa Cruz Island has many small hills dissected by creeks with steep slopes, lateral rocky walls, and some rifts. Most rodents were collected in the bottom of canyons; very few were found in slopes and hills. No pregnant or lactating females were collected.

GENETICS. *Peromyscus sejugis* is similar to *P. polionotus* based on analysis of allozymes (Avisé et al. 1974). Heterozygosity per individual ($n = 31$) was 1.7%, with 4.3% of the loci polymorphic. *P. sejugis* is highly differentiated morphologically and genetically from *P. maniculatus* of the mainland (Avisé et al. 1974, 1979). *P. sejugis* is probably derived from a *maniculatus*-like ancestor (Lawlor 1983) and is closely related to *Peromyscus maniculatus coolidgei*, based on mitochondrial DNA (Hogan et al. 1997).

REMARKS. *Peromyscus sejugis*, the only mammal known to inhabit Santa Cruz and San Diego islands, is somewhat larger than *P. maniculatus coolidgei* from the peninsula. In external and cranial characters, *sejugis* is clearly a member of the *maniculatus* group (Burt 1932); data on the male phallus support this viewpoint (Hooper and Musser 1964). *P. sejugis* is considered threatened by the Mexican Government (Norma Oficial Mexicana 1994).

Peromyscus is derived from the Greek *pera*, meaning small or small bag, *mys* meaning mice, and *iskos* diminutive suffix; meaning smaller mice (Alvarez-Castañeda and Alvarez Solórzano 1996). The specific epithet *sejugis* is from the latin *sex*, meaning six, and *jugum*, meaning yoke (Jaeger 1966).

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