

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract

Element Code: AMAFF03020

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Peromyscus merriami* Mearns, 1896
COMMON NAME: Merriam's Deermouse
SYNONYMS: *Peromyscus goldmani* Osgood, 1904
OTHER COMMON NAMES: Mesquite Mouse
FAMILY: Cricetidae. Subfamily: Neotominae

AUTHOR, PLACE OF PUBLICATION: Mearns, 1896, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 2; preprint of Proc. U. S. Nat. Mus., 19:138.

TYPE LOCALITY: Mexico, Sonora, Sonoyta, on Sonoyta River.

TYPE SPECIMEN: USNM 59234 (adult female, skin and skull), collected by E. A. Mearns and F. X. Holzner, 1894. Original number 2815.

TAXONOMIC UNIQUENESS: One of 58 species in the genus *Peromyscus* found in North America. One of 8-9 in Arizona. Over the years, the taxonomy for this species has been waffled back and forth at times. According to Wilson and Reeder (2005), "*P. eremicus* species group. Osgood (1909) placed *merriami* under *P. eremicus*, a synonymy overturned by Hoffmeister and Lee (1963a), who documented their sympatric occurrence and morphological differentiation. Geographic variation evaluated by Hoffmeister and Diersing (1973), who retained *goldmani* as a subspecies; Lawlor (1971b) did not. Generally related to *P. eremicus* sensu lato (Avise et al., 1974; Lawlor, 1971a) and *P. pembertoni* (Lawlor, 1971a, 1983); based on mitochondrial DNA sequences, viewed as cognate species to *P. eremicus* sensu strict, which together form a sister group to the clade *P. eva-P. fraterculus* (Riddle et al., 2000a, c). Includes the insular form *dickeyi* according to mitochondrial DNA (COIII) comparisons (Hafner et al., 2001)."

DESCRIPTION: A small-medium sized mouse with insignificant sexual dimorphism. Total length is 18.5-22.5 cm (7.28-8.86 in); head and body length 9.7-10.2 cm (3.82-4.02 in); length of tail 9.5-12.0 cm (3.74-4.72 in); hind foot 20-24 mm; and weight 20-30 g (0.705-1.058 oz). Upperparts ocher-buff overlaid with dusky, producing dull gray overall appearance. Underparts whitish with buff or tawny wash. The nearly naked tail is bi-colored, dusky above and whitish below, more than half the length of the head and body. The ears are small and without white rims. They have two pairs of mammae. (Wilson and Ruff 1999).

AIDS TO IDENTIFICATION: Slightly larger than the Cactus Mouse (*P. eremicus*), otherwise difficult to distinguish in the field. Most other deer mice are much browner overall with a distinctly bicolored, well-haired tail. Habitat use may also be used to distinguish *P. merriami* from *P. eremicus*. *P. merriami* found in riparian or desert floor habitats consisting of dense thickets or brush including mesquite bosque, while *P. eremicus* usually found in rocky habitats, especially on hillsides.

ILLUSTRATIONS:

TOTAL RANGE: South-central Arizona, USA, through W Sonora to C Sinaloa, México.

RANGE WITHIN ARIZONA: Currently found in Pima County.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Nocturnal species that is active throughout the year.

REPRODUCTION: May breed throughout the year, having a gestation period of approximately 21 days, and an average litter size of 2.2-2.8 young. Whitaker, Jr. (1996) states 2-4 young per litter.

FOOD HABITS: Granivore, herbivore, invertivore. Probably similar to *P. eremicus*, which feeds on fruit, flowers, and seeds of shrubs, insects and some green.

HABITAT: Riparian or low desert habitats. Found in dense brush, mesquite bosque.

ELEVATION: In Arizona, observed at 1,390 and 1,425 ft (424 & 434 m) (unpublished data, HDMS, AZ Game & Fish Department 2011).

PLANT COMMUNITY: At Wilmot Station southeast of Tucson, they were taken in thick stands of mesquite, cholla, prickly pear, paloverde, and grasses (BISON 2000).

POPULATION TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS:	None
STATE STATUS:	3 (AZGFD, AWCS 2022) [None (AGFD SWAP 2012)]
OTHER STATUS:	Forest Service Sensitive (USDA, FS Region 3 2007)

MANAGEMENT FACTORS: This species should be of concern when channelization or other alteration/destruction is planned along both permanent and intermittent riparian areas, including adjacent desertscrub. The loss of mesquite stands due to cutting for firewood, and grazing by livestock is a concern in the continued existence of proper habitat for *P. merriami* (BISON 2000).

PROTECTIVE MEASURES TAKEN: Occurs on the Organ Pipe Cactus National Monument, however, known localities are near the border with Mexico and may be threatened with border crossing activity.

SUGGESTED PROJECTS: Population and life history studies are needed to better understand this species, along with studies of the effects of land management practices on current populations.

LAND MANAGEMENT/OWNERSHIP: NPS – Organ Pipe Cactus National Monument.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Arizona Game and Fish Department. 2012. Arizona's State Wildlife Action Plan 2012-2022. Phoenix, AZ.
- Arizona Game and Fish Department. 2022. Arizona Wildlife Conservation Strategy: 2022-2032. Arizona Game and Fish Department, Phoenix, Arizona. 378 pages.
- Biota Information System of New Mexico. 2000. BISON Species Account 050477: Merriam's Mouse (*Peromyscus merriami*). New Mexico Game & Fish, http://www.fw.vt.edu/fishex/nmex_main/species/050477.htm. pp. 1-7.
- Burt, W. H., and R. P. Grossenheider. 1980. A Field Guide to the Mammals: North America north of Mexico. Third Edition 2001. Houghton Mifflin Company, Boston. p. 157.
- Cockrum, E. L. 1960. The recent Mammals of Arizona: their taxonomy and distribution. The University of Arizona Press, Tucson. pp. 173-174.
- Hall, E. R. 1981. The Mammals of North America. Volume II, Second Edition. John Wiley & Sons, New York. pp. 661-662.
- Poole, A. J., and V. S. Schantz. 1942. Catalog of the type specimens of mammals in the United States National Museum, including the Biological Surveys Collection. United States Government Printing Office, Washington. Smithsonian Institution, U. S. Nat. Mus. Bull. 178. p. 328.
- USDA, Forest Service Region 3. 2007. Regional Forester's List of Sensitive Animals.
- Whitaker, Jr., J. O. 1996. National Audubon Society Field Guide to North American Mammals. Revised Edition. Alfred A. Knopf, New York. pp. 594-595.

Wilson, D. E. and D. M. Reeder, eds. 2005. Mammal species of the World: A taxonomic and Geographic Reference, Third edition, Volume 1. The Johns Hopkins University Press, Baltimore, Maryland. 1074.

Wilson, D.E. and S. Ruff. 1999. The Smithsonian Book of North American Mammals. Smithsonian Institution Press, Washington. Pp:577-578.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

May occur sympatrically with *P. eremicus*.

Revised: 2001-02-28 (SMS)
2011-01-28 (SMS)
2023-03-12 (MBL)

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Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.