

California Wildlife Habitat Relationships System
California Department of Fish and Wildlife
California Interagency Wildlife Task Group

DESERT POCKET MOUSE

Chaetodipus penicillatus

Family: HETEROMYIDAE
M093

Order: RODENTIA

Class: MAMMALIA

Written by: P. Brylski
Reviewed by: H. Shellhammer
Edited by: R. Duke

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

In California, occurs in 3 disjunct populations: in Death Valley National Monument, southeastern Kern and northeastern Los Angeles cos. east to central San Bernardino Co., and in the southeast corner of the state from central Riverside Co. east to the Colorado River and south to the border of Mexico. Locally common resident of desert habitats including desert wash, desert succulent shrub, desert scrub, and alkali desert scrub. Elevational range from below sea level (Death Valley) to 820 m (2700 ft).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds mainly on seeds of forbs, grasses, and shrubs. Forages on sandy or gravelly soils beneath shrub canopy. Seeds are stored in burrow and in dispersed caches. Green vegetation and insects also are eaten (Arnold 1942, Reynolds and Haskell 1949).

Cover: Burrows are excavated in silty, sandy, or gravelly soil and used for refuges, seed storage, and neonatal care. Generally associated with moderate canopy but experimental removal of canopy did not result in fewer desert pocket mice (Rosensweig 1973).

Reproduction: Young are born and raised in nest chambers within the burrow.

Water: No direct evidence, but probably obtains water from food.

Pattern: Silty, sandy, or gravelly substrate with sparse to moderate canopy is preferred.

SPECIES LIFE HISTORY

Activity Patterns: Nocturnal. In California, may be active year-round, though inactive in winter in southern Arizona (Hall 1946, Arnold 1942).

Seasonal Movements/Migration: None.

Home Range: In Arizona, high densities were observed in sandy/gravelly plots with saltbush and mesquite (Arnold 1942). In southern Arizona, home range varied from 0.1 to 0.2 ha (0.25 to 0.5 ac) (Reynolds and Haskell 1949).

Territory: Aggressively solitary. Territory probably equals home range.

Reproduction: Breeds from February to September, though most activity is in April-May (Whitford 1976). Gestation period is 23 days. Litter size averages 4 young (range 1-7) (Reynolds and Haskell 1949, Wilken and Ostwald 1968).

Niche: The desert pocket mouse is a small-bodied granivore, specialized for extreme arid

environments. Competitors include other heteromyids, especially *Dipodomys merriami*, and cricetids. Predators include owls, snakes, and predatory mammals.

REFERENCES

- Arnold, L. W. 1942. Notes on the life history of the sand pocket mouse. *J. Mammal.* 23:339-341.
- Hall, E. R. 1946. *Mammals of Nevada*. Univ. California Press, Berkeley. 710pp.
- Reynolds, H. G., and H. S. Haskell. 1949. Life history notes on Price and Bailey pocket mice of southern Arizona. *J. Mammal.* 30:150-156.
- Rosensweig, M. R. 1973. Habitat selection experiments with a pair of coexisting heteromyid rodent species. *Ecology* 54:111-117.
- Rosensweig, M. R., and J. Winakur. 1969. Population ecology of desert rodent communities: habitats and environmental complexity. *Ecology* 50:558-572.
- Whitford, W. G. 1976. Temporal fluctuations in density and diversity of desert rodent populations. *J. Mammal.* 57:351-369.
- Wilken, K. K., and R. Ostwald. 1968. Partial contact as a stimulus to laboratory mating in the desert pocket mouse, *Perognathus penicillatus*. *J. Mammal.* 49:570-572.

M093

Life history accounts for species in the California Wildlife Habitat Relationships (CWHR) System were originally published in: Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. *California's Wildlife*. Vol. I-III. California Department of Fish and Game, Sacramento, California. Updates are noted in accounts that have been added or edited since original publication.