

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

PALE KANGAROO MOUSE

Microdipodops pallidus

Family: HETEROMYIDAE
M098

Order: RODENTIA

Class: MAMMALIA

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

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

In California, the pale kangaroo mouse occurs on the floors of the valleys lying east of the White Mts., mainly Fish Lake and Deep Spring Valleys (Mono and Inyo cos.). Occurs in alkali desert scrub and low desert scrub habitats, and requires sand substrate. Elevation ranges 1530-1590 m (5100-5300 ft).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Seeds of forbs, shrubs, grasses, insects, and leafy vegetation transported to the burrow in cheek pouches.

Cover: A moderate canopy-coverage of saltbush/greasewood is preferred.

Reproduction: Burrows are excavated in fine sand, and range from 1-2.5 m (3-8 ft) long, usually 0.3-0.6 m (1-2 ft) below the surface (Hall 1946, Ingles 1965). Burrow entrances are plugged with sand during the day.

Water: Water is obtained metabolically, and from moisture in foods such as leafy vegetation and insects (O'Farrell and Blaustein 1974).

Pattern: Locally abundant in alkali desert scrub habitat with a substrate of fine sand. Hafner (1978) indicated that this species is restricted to sparsely vegetated sand dune habitats.

SPECIES LIFE HISTORY

Activity Patterns: Nocturnal. Kangaroo mice are capable of entering torpor at very high, or very low, temperatures (Ingles 1965). Bartholomew and MacMillen (1961) induced torpor under laboratory temperatures of 5-26°C (41 -79°F), while Brown and Bartholomew (1969) noticed that low ambient temperature and reduced food induced torpor. Hall and Linsdale (1929) noted a major burst of activity just after sunset. Winter activity was reported by Hall (1946) and Brown and Bartholomew (1969).

Seasonal Movements/Migration: None.

Home Range: Ghiselin (1970) reported maximum distances between capture locations of 237 m (790 ft) for males, and 132 m (440 ft) for females.

Territory: Kangaroo mice are moderately aggressive, but true territoriality has not been documented.

Reproduction: The breeding season is from March to September, peaking in March to

April. Litter size averages 4 young, ranging from 2-6 (Hall 1946).

Niche: Little information available. Habits apparently similar to *M. megacephalus* (M097). See that account.

Comments: Kangaroo mice are exceptionally good jumpers (for their size). Their hind feet have densely haired soles (to aid in movement over sand), and they use their tails as fat storage organs (Hall 1946). They are only marginally present in sagebrush in California, the predominant habitat in Nevada of both conspecific populations and the closely related *M. megacephalus*.

REFERENCES

- Bartholomew, G. A., and R. E. MacMillen. 1961. Oxygen consumption, estivation, and hibernation in the kangaroo mouse, *Microdipodops pallidus*. *Physiol. Zool.* 34:177-183.
- Brown, J. H., and G. A. Bartholomew. 1969. Periodicity and energetics of torpor in the kangaroo mouse, *Microdipodops pallidus*. *Ecology* 50:705-709.
- Ghiselin, J. 1970. Edaphic control of habitat selection by kangaroo mice (*Microdipodops*) in three Nevada populations. *Oecologia* (Berlin) 4:248-261.
- Hafner, J. C. 1978. Evolutionary relationships of kangaroo mice, genus *Microdipodops*. *J. Mammal.* 59:354-365.
- Hall, E. R. 1946. *Mammals of Nevada*. Univ. California Press, Berkeley. 710pp.
- Hall, E. R., and J. M. Linsdale. 1929. Notes on the life history of the kangaroo mouse (*Microdipodops*). *J. Mammal.* 10:298-305.
- Ingles, L. G. 1965. *Mammals of the Pacific states*. Stanford Univ. Press, Stanford, CA. 506pp.
- O'Farrell, M. J., and A. R. Blaustein. 1974. *Microdipodops pallidus*. *Mammal. Species No.* 47. 2pp.

M098

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.