

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

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BROAD-FOOTED MOLE

*Scapanus latimanus*

Family: TALPIDAE  
M018

Order: INSECTIVORA

Class: MAMMALIA

Written by: J. Harris

Reviewed by: H. Shellhammer

Edited by: S. Granholm

Updated by: CWHR Program Staff, May 2000

#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The broad-footed mole is common in most of California from the Oregon border to San Pedro Matir, Baja California, Mexico and eastward into western Nevada excluding the hot deserts and portions of the Central Valley (Yates 1999). Optimal habitats are annual and perennial grassland, pasture, montane and valley foothill riparian, and aspen. Also occurs in cropland, orchard-vineyard, wet meadow, and a variety of open forest habitats. Its elevational range extends up to 3000 m (9840 ft) (Yates 1999).

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** Important foods include earthworms, insects (adults, larvae, and pupae), spiders, centipedes, and some plant food. Occasionally eats small mammals, crustaceans, and seeds. Feeds just below the ground surface by burrowing. Detects some prey by feeling vibrations in the soil. May feed at deeper levels when conditions are dry or cold.

**Cover:** Largely subterranean, requiring friable soil for burrowing.

**Reproduction:** Makes a nest of grass and leaves in an additional tunnel, greater than 0.3 m (1 ft) deep.

**Water:** No data found.

**Pattern:** Prefers moist, friable soils. Avoids flooded soils. Most common in moist meadows and near streams.

#### SPECIES LIFE HISTORY

**Activity Patterns:** Active yearlong, intermittently day and night. Especially active after rain, probably in response to increased activity of prey, and easier digging.

**Seasonal Movements/Migration:** Moves away from flooded areas. May move into chaparral, or other dry habitats, when conditions are moist.

**Home Range:** Home range consists of a tunnel system. No data found on home range size for this species. The similar European mole (Lund 1976) had a home range of 0.02 to 0.2 ha (0.05 to 0.5 ac), depending on food availability. The eastern mole had a home range of 0.3 to 1.1 ha (0.75 to 2.75 ac) (Yates and Pedersen 1982). The broad-footed mole may travel at the rate 5.5 m (18 ft) per hr after rains.

**Territory:** Moles are highly territorial, defending and patrolling the burrow system. This species probably is solitary, except when mating or caring for young.

Reproduction: Breeds from February to May (Jackson 1915). The single yearly litter ranges from 2-5, with an average of 4 young. Lactation lasts from 30-35 days. Young leave the nest in June.

Niche: Predators include owls. This species does not occur with other moles in California. Moles may play an important role in soil development through their burrowing activities.

#### REFERENCES

- Giger, R. D. 1973. Movements and homing in Townsend's mole near Tillamook, Oregon. *J. Mammal.* 54:648-659.
- Grim, J. N. 1958. Feeding habits of the southern California mole, *Scapanus latimanus occultus*. *J. Mammal.* 39:265-268.
- Grinnell, J., and H. S. Swarth. 1912. The mole of southern California. *Univ. Calif. Publ. Zool.* 10:131-136.
- Grinnell, J., and T. I. Storer. 1924. Animal life in the Yosemite. Univ. California Press, Berkeley. 752pp.
- Jackson, H. H. T. 1915. A review of the American moles. U.S. Dep. Agric., North Amer. Fauna No. 38. 98pp.
- Lund, M. 1976. Control of the European mole, *Talpa europaea*. *Vertebr. Pest Conf. Proc.* 7:125-130.
- Palmer, F. G. 1937. Geographic variation in the mole *Scapanus latimanus*. *J. Mammal.* 18:280-314.
- Scheffer, T. H. 1923. American moles as agricultural pests and as fur producers. USDA., Farmers Bull. No. 1247. 23pp.
- Scheffer, T. H. 1949. Ecological comparisons of three genera of moles. *Trans. Kans. Acad. Sci.* 52:30-37.
- Storer, T. I., and R. L. Usinger. 1963. Sierra Nevada natural history. Univ. California Press, Berkeley. 374pp.
- Yates, T. L., and R. J. Pedersen. 1982. Moles. Pages 37-51 in J. A. Chapman and G. A. Feldhamer, eds. *Wild mammals of North America*. Johns Hopkins Univ. Press, Baltimore, MD. 1147pp.
- Yates, T. L. 1999. Broad-footed mole: *Scapanus latimanus*. Pages 57-58 in Wilson, D. E. and S. Ruff, editors. *The Smithsonian book of North American mammals*. Smithsonian Institute Press, Washington and London. 750pp.

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