

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

CHANNEL ISLANDS SLENDER SALAMANDER *Batrachoseps pacificus*
Family: PLETHODONTIDAE Order: CAUDATA Class: AMPHIBIA
A016

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Locally common yearlong resident of the San Miguel, Santa Rosa, Santa Cruz and Anacapa Islands off the coast of Santa Barbara (Stebbins 2003). Many subspecies of the broadly-distributed *B. pacificus* complex, once considered a single species, have been elevated to specific status (Jennings and Hayes 1994, Jockusch 1996, Jockusch et al. 2001, Wake et al. 2002). Individuals occur along washes and moist wooded canyons in montane and valley foothill riparian communities, and along streams in coastal oak woodlands.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeding probably occurs both above and below ground (Hendrickson 1954). Stebbins (1951) reported that a similar species, the California slender salamander (*B. attenuatus*), fed on earthworms, small slugs, a variety of terrestrial arthropods including sowbugs and millipedes, and insects including collembolans, aphids, caterpillars, small beetles, beetle larvae, and ants. *B. pacificus* probably eats a similar array of prey items.

Cover: *B. pacificus* does not usually excavate burrows. It relies on passages made by other animals, or produced by root decay or soil shrinkage (Yanev 1978). Usually found under boards, rotting logs, rocks and surface litter (Stebbins 1954).

Reproduction: Most reproductive activities probably occur underground (Yanev 1978). Eggs usually are laid in communal sites underground, but near, or under, a flat surface object (Stebbins 1954).

Water: Surface activity is limited to rainy winter months (Yanev 1978).

Pattern: Use relatively small semi-mesic areas (e.g., swales, drainages, etc.) with an overstory of trees or shrubs and abundant rocks, litter, or woody debris.

SPECIES LIFE HISTORY

Activity Patterns: Pacific slender salamanders are active underground from April or May until November or December. After the first winter rains, when moisture and temperature conditions are favorable, they increase surface activities (Stebbins 1954). Normally active at night, and return to cover during daylight. During periods of extended rainfall, they may remain on the surface during the day to feed (Hendrickson 1954). Surface activity is limited by extremes of temperature and unfavorable moisture conditions.

Seasonal Movements/Migration: Highly sedentary; hatchlings presumably disperse, but no data found (Yanev 1978).

Home Range: Probably have a decided tendency towards occupying a home range. Hendrickson (1954) found that adults of *B. attenuatus* moved within a mean range of 1.5 m (5 ft) from their home cover over 2 years, and 59% of the individuals were found repeatedly under the same cover.

Territory: No data.

Reproduction: Lay eggs during late fall and winter. Egg sets have been found from December 8 to January 18. The number of eggs per set ranged from 13 to 20. Hatchlings emerge during winter and early spring. It is not known if adults tend their young (Stebbins 1954).

Niche: As *B. pacificus* is incapable of excavating its own burrows, except in loose soil and leaf litter (Stebbins 1954), competition for cover sites may occur between individuals of the same species and other species with similar habitat requirements (Yanev 1978). Potential predators include spotted and striped skunks, raccoons, ringtails, gray foxes, ringneck snakes, and various skinks, moles, and shrews.

REFERENCES

- Hendrickson, J. R. 1954. Ecology and systematics of salamanders of the genus *Batrachoseps*. Univ. Calif. Publ. Zool. 54:1-46.
- Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. 225 pp.
- Jockusch, E. L. 1996. Evolutionary studies in *Batrachoseps* and other Plethodontid salamanders: correlated character evolution, molecular phylogenetics, and reaction norm evolution. Ph.D. Diss., Univ. Calif., Berkeley. 220pp.
- Jockusch, E. L. 2001. Molecular phylogenetic analysis of slender salamanders, Genus *Batrachoseps* (Amphibia: Plethodontidae), from central coastal California with descriptions of four new species. Herpetological Monographs 15:54-99.
- Stebbins, R. C. 1951. Amphibians of western North America. Univ. California Press, Berkeley. 538 pp.
- Stebbins, R. C. 1954. Amphibians and reptiles of western North America. McGraw-Hill, New York. 536pp.
- Stebbins, R. C. 2003. Western reptiles and amphibians. Third edition. Houghton Mifflin Co. Boston and New York. 533 pp.
- Wake, D. B., K. P. Yanev, and R. W. Hansen. 2002. New species of slender salamander, genus *Batrachoseps*, from the Southern Sierra Nevada of California. Copeia 4:1016-1028.
- Yanev, K. P. 1978. Evolutionary studies of the plethodontid salamander Genus *Batrachoseps*. Ph. D. Diss. Univ. Calif., Berkeley. 251pp.
- Yanev, K. P. 1980. Biogeography and distribution of three parapatric salamander species in coastal and borderline California. Pages 531-550 in D. M. Power, ed. The California Islands: proceedings of a multidisciplinary symposium. Santa Barbara Mus. Nat. Hist. Santa Barbara, CA 787pp.