

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

SIERRA GARTERSNAKE

Thamnophis couchii

Family: NATRICIDAE

Order: SQUAMATA

Class: REPTILIA

R063

Written by: T. Kucera, 1997

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The Sierra gartersnake occurs in the western Sierra Nevada from the Pit and Sacramento rivers south to the western end of the Tehachapi Mountains, and also in the Owens Valley (Rossman et al. 1996). Elevations range to about 2,438 m (7,500 ft) (Stebbins 1985). Rossman and Stewart (1987) demonstrated that *T. couchii* is a species distinct from *T. atratus*, *T. gigas*, and *T. hammondi*. Associated with permanent or semi-permanent bodies of water, especially rocky creeks, from slow-moving, low-elevation seasonal creeks to high-elevation mountain streams, ponds, and lakes in a variety of habitats including Montane Riparian, Montane Hardwood Conifer, Montane Chaparral, and Sierran Mixed Conifer (Rossman et al. 1996). Low-elevation snakes may be active 10 months per year; at higher elevations the active season may be less than 4 months (Fitch 1940, Rossman et al. 1996).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Highly aquatic, these gartersnakes forage primarily in and along water. In ephemeral water sources, they take anuran and salamander larvae and newly transformed adults. In permanent streams, *T. couchii* takes fishes, especially trout, Sacramento suckers, and mosquitofish (Fitch 1941, Rossman et al. 1996).

Cover: The preferred nocturnal retreats of this active diurnal snake are thought to be holes, especially mammal burrows, crevices, and surface objects. During the day this gartersnake often basks in streamside vegetation. When disturbed it usually retreats rapidly to water. In milder areas mammal burrows and surface objects such as rocks and rotting logs serve as winter refuges.

Reproduction: Courtship and mating normally probably occur in spring, later at higher elevations (Fitch 1940, Rossman et al 1996). Young are born alive, between July and September, usually in secluded sites such as under the loose bark of rotting logs or in dense vegetation near pond or stream margins (Fitch 1949, Stebbins 1985, Rossman et al. 1996).

Water: No information on water requirements. This species is normally found in the immediate vicinity of permanent or semi-permanent sources of water.

Pattern: Associated with permanent or semi-permanent bodies of water in a variety of habitats, from near sea level to 2,438 m (7,500 ft).

SPECIES LIFE HISTORY

Activity Patterns: An active diurnal snake. During the warm days of summer most activity occurs during the morning and afternoon. During the cooler weather of spring and fall, and at higher elevations, snakes restrict their activity to the warm afternoons.

(Stebbins 1985).

Seasonal Movements/Migration: Migration is not expected.

Home Range: The nature of the home range of gartersnakes in California is not well known. There is likely considerable overlap in the home ranges of neighboring individuals.

Territory: Not thought to be territorial. Although this species is not well studied, other gartersnakes have not been observed exhibiting behaviors suggesting territoriality.

Reproduction: Courtship and mating occur in the spring soon after emergence. Five to 38 young are born in July through September (Fitch 1949, Rossman et al. 1996).

Niche: Sierra gartersnakes are taken as prey by mammals, birds, and other snakes; predation by red-tailed hawks has been documented (Fitch 1949).

REFERENCES

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- Rossman, D. A., N. B. Ford, and R. A. Siegel. 1996. The garter snakes: evolution and ecology. University of Oklahoma Press, Norman. 332pp.
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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.