



U.S. Fish & Wildlife Service  
Sacramento Fish & Wildlife Office  
Species Account  
GIANT GARTER SNAKE  
*Thamnophis gigas*



CLASSIFICATION: Threatened  
Federal Register 58:54053; October 20, 1993  
[http://ecos.fws.gov/docs/federal\\_register/fr2446.pdf](http://ecos.fws.gov/docs/federal_register/fr2446.pdf)

CRITICAL HABITAT: None designated

RECOVERY: Draft recovery plan proposed  
Federal Register 64:36033; July 2, 1999  
Five-year review, June 2012  
[http://ecos.fws.gov/docs/recovery\\_plan/990702b.pdf](http://ecos.fws.gov/docs/recovery_plan/990702b.pdf).



[http://ecos.fws.gov/docs/five\\_year\\_review/doc4009.pdf](http://ecos.fws.gov/docs/five_year_review/doc4009.pdf)

#### DESCRIPTION

The giant garter snake (*Thamnophis gigas*) is one of the largest garter snakes, with females reaching an average length of about 34 inches in the San Joaquin Valley. Females tend to be slightly longer and proportionately heavier than males. Female giant garter snakes typically weigh 1-1.5 pounds. Garter snakes are in the family Colubridae, which includes most of the species of snakes found in the western United States.

Dorsal background coloration (the basic color on the snake's back) varies from brownish to olive with a checkered pattern of black spots, separated by a yellow dorsal stripe and two light colored lateral stripes. Background coloration and prominence of a black checkered pattern and the three light stripes are geographically and individually variable. The ventral surface (the snake's underside) is cream to olive or brown and sometimes infused with orange, especially in northern populations.

Giant garter snakes feed primarily on small fishes, tadpoles, and frogs. Habitat requirements consist of (1) adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; (2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; (3) grassy banks and openings in waterside vegetation for basking; and (4) higher elevation uplands for cover and refuge from flood waters during the snake's inactive season in the winter.

The giant garter snake inhabits small mammal burrows and other soil crevices above prevailing flood elevations throughout its winter inactive period. Giant garter snakes typically select burrows with sunny exposure along south and west facing slopes. The breeding season extends through March and April, and females give birth to live young from late July through early September.

Brood size is variable, ranging from 10 to 46 young, with a mean of 23. Young immediately scatter into dense cover and absorb their yolk sacs, after which they begin feeding on their own. Although growth rates are variable, young typically more than double in size within the first year. Sexual maturity averages three years for males and five years for females.

## DISTRIBUTION:

The giant garter snake inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley. Because of the direct loss of natural habitat, the giant garter snake relies heavily on rice fields in the Sacramento Valley, but also uses managed marsh areas in Federal National Wildlife Refuges and State Wildlife Areas. There have been only a few recent sightings of giant garter snakes in the San Joaquin Valley.

Giant garter snakes are typically absent from larger rivers because of lack of suitable habitat and emergent vegetative cover, and from wetlands with sand, gravel, or rock substrates. Riparian woodlands typically do not provide suitable habitat because of excessive shade, lack of basking sites, and absence of prey populations. However, some riparian woodlands do provide good habitat.

## THREATS:

Habitat loss and fragmentation, flood control activities, changes in agricultural and land management practices, predation from introduced species, road mortalities, water pollution and continuing threats are the main causes for the decline of this species.

Giant garter snakes can inhabit water bodies that contain predatory fish. When lots of cover is available, they seem to hold their own, even when numerous predators share the same habitats. Giant garter snakes are probably absent from larger rivers because the habitat is not suitable, not because of the fish. The major rivers have been highly channelized, removing oxbows and backwater areas that probably at one time provided suitable habitat.

## REFERENCES FOR ADDITIONAL INFORMATION

Note There is a special giant garter snake species account for 4th, 5th and 6th grade students.

[http://www.fws.gov/sacramento/es/animal\\_spp\\_acct/giant\\_garter\\_snake\\_kf.htm](http://www.fws.gov/sacramento/es/animal_spp_acct/giant_garter_snake_kf.htm)

ECOS (Environmental Conservation Online System) [Species Profile](#).

Hansen, R. W. and G. E. Hansen. 1990. *Thamnophis gigas* (giant garter snake) reproduction. *Herpetological Review*. 21(4): 93-94.

Thelander, C. ed. 1994. *Life on the edge: a guide to California's endangered natural resources*. BioSystem Books. Santa Cruz, CA. p 284-287.

Photo Credit: Eric Hansen, U.S. Fish & Wildlife Service

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