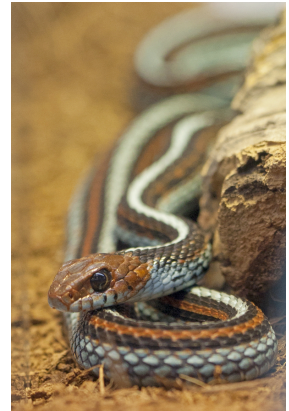




SAN FRANCISCO GARTER SNAKE

Squamata
Family: Colubridae
Genus: *Thamnophis*
Species: *sirtalis*
tetrataenia



Range: Western portion of San Francisco peninsula, along hillsides from San Francisco city line south to Crystal Springs Reservoir and along coast to Ano Nuevo State Nature Reserve.

Habitat: Dense vegetation bordering ponds and wetlands with nearby open hillsides.

Niche: Terrestrial, semi-aquatic, diurnal, carnivorous

Wild diet: Frogs and toads, adult and larval newts, small fish

Zoo diet: fish and baby mice

Life Span: (Wild)
(Captivity) 8 – 15 years

Sexual dimorphism: None, though males tend to be smaller than females, sometimes up to half the length and weight of a female.

Located in SF Zoo: California Conservation Corridor

APPEARANCE & PHYSICAL ADAPTATIONS:

San Francisco Garter Snakes (SFGS) have black bodies with turquoise and red stripes. SFGS teeth are aglyphic (solid teeth - do not have fangs for venom delivery) and teeth are on the upper, lower and intermaxillary bone. The SFGS has a red tongue with black tips. It is thought that this colored tongue acts like a lure to attract fish and other prey to approach the mouth of the snake. Garter snakes do not constrict their prey; instead they grab and swallow their prey in one motion. The smooth skin of fish and amphibians probably helps the snake to swallow easily.

Weight: 3.6 – 5.7 oz

Length: 18 – 51 in

STATUS & CONSERVATION

Much of the range of San Francisco garter snake lies within an intensively urbanized and agricultural area of San Mateo County. This snake is threatened by habitat loss from agriculture, commercial and urban development, illegal collecting for pet trade, the documented decline of the California red-legged frog (a main food item) and the introduction of bullfrogs, which prey on both SFGS and the red-legged frogs. The SFGS was officially listed as a federal endangered species in March 1967. The San Francisco garter snake was part of the first group of species listed as Endangered under the 1966 Species Preservation Act and the only snake on that first list. The U.S. Fish and Wildlife Services developed a species recovery plan in 1985.

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COMMUNICATION AND OTHER BEHAVIOR

Snakes use undulating, serpentine locomotion and are good swimmers. When cornered, this snake will escape into the water or make a spirited defense, often biting, and if picked up will smear its holder with excrement and contents of the anal gland. The garter snakes are the first snakes to appear in spring and the last to hibernate in fall. San Francisco garter snakes will sometimes aestivate (enter a dormant state) in rodent burrows if ponds dry up during the summer.

SFGS forage extensively in aquatic habitats. Primary food items include red-legged frogs, juvenile bullfrogs, and the California newt. Newborn and juvenile SFGS feed heavily on Pacific treefrogs. If newly metamorphosed treefrogs are not available, young SFGS may not survive. Garter snakes tend to stay near water, into which they retreat if frightened or disturbed.

COURTSHIP AND YOUNG

Females release pheromones during breeding cycle to attract males. Garter snakes mate in the spring and fall and are ovoviviparous. Female SFGS can store sperm through the winter and bear an average of 12 to 24 live young (ovoviviparous) in July or August. The newborns suffer a high mortality rate and are preyed upon by birds and large amphibians, such as adult bullfrogs.

Incubation: # of Young: 12 – 24 (ave. 16)	Sexual Maturity: 2 yrs Weight at birth: Length at birth: 4.7 – 7.1 in
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MISCELLANEOUS

Garter snakes are the snakes usually found in the pockets of schoolchildren as well as in the schoolroom terrarium. Keeping a garter snake as a pet is not recommended because of its speed and specific diet. The San Francisco garter snake is considered by many the most beautiful snake in the world.

SFGS and other members of the species *Thamnophis sirtalis* (the common garter snakes) are among the few predators that can eat Pacific newts (*Taricha* sp) without suffering lethal poisoning.

The SFGS is often confused with the California red-sided garter snake (*Thamnophis sirtalis infernalis*). SFGS have solid continuous red and black stripes on its side, while the California red-sided garter has a broken stripe checkered with black and red.

Sources:

<http://www.zoo.org/>
<http://www.epa.gov/>
<http://www.californiaherps.com/>
<http://www.parksconservancy.org/>
<http://www.sfzoo.org/>

updated 8/2011