

California Mountain Kingsnake (*Lampropeltis zonata*)



Photo credit: USFWS

Species Description

At first glance, the California mountain kingsnake's vibrant red, white and black bands might make you think they are dangerous. However, these slender snakes lack both teeth and venom. They evolved to look almost identical to a poisonous species, the Arizona coral snake (not found in Oregon), so that potential predators would stay away from them. Unlike their poisonous doppelgangers, California mountain kingsnakes have red bands that are always bordered by black on each side. So, just remember the phrase "Red on Black – Friend of Jack," for peace of mind.

California mountain kingsnakes are slender-bodied, medium-sized snakes with heads that are about the same width as their bodies. Their bold red, black, and white pattern is composed of a series of black and red rings that form triads, where red is always bordered on both sides by black rings. These triads are separated from one another by white bands. They have a black snout and dark brown eyes. Despite their bright coloration, these secretive snakes are rarely observed as they spend much of their time underground or under cover objects. Hatchlings emerge from eggs at only 7 to 11 inches in length, and may grow to be 20 to 50 inches long as adults. Their size varies geographically; in Oregon, they only occasionally reach 40 inches in length.

Habitat Characteristics

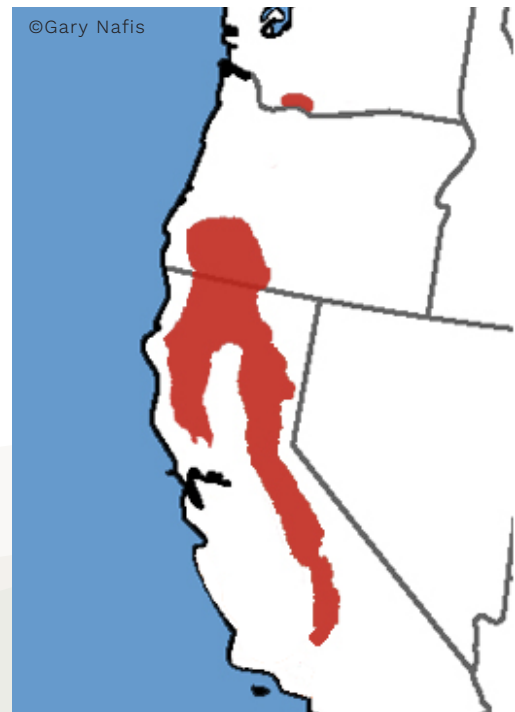
California mountain kingsnakes are habitat generalists. They make their home in a variety of forest habitats including pine forests, oak woodlands, and shrublands. Cover objects, including logs, rocks, or dense shrubs, are important habitat features. Kingsnakes are commonly associated with rocky outcrops or talus near streams or lake shores. They spend much of the time concealed under cover objects or wedged into rock crevices.

Shelters where groups of snakes overwinter, called hibernacula, are an important habitat component that is not well described for California mountain kingsnakes. Hibernacula are likely located within rocky outcrops or talus.

Range and Distribution

The range of California mountain kingsnakes includes coastal and interior mountains stretching from southwestern Oregon to northern Baja California, Mexico. There is a small disjunct population along the Columbia River Gorge in Washington, just north of Hood River Oregon.

In Oregon, California mountain kingsnakes can be found in the southwestern part of the state, from Roseburg west to the Oregon Coast Range, south to the Oregon-California border, and east to Klamath Falls.



● Approximate range of *Lampropeltis zonata*, California Mountain Kingsnake

Fun Facts

- Kingsnakes can use their powerful muscles to constrict and consume other snakes, which is where they get the name "king snake." They are also immune to rattlesnake venom, which allows them to hunt and eat young rattlesnakes!
- Nesting birds may notice the bright colors of California mountain kingsnakes and attack when the snakes get too close to their nests. It is thought that kingsnakes pay attention to the intensity and direction of the birds' attacks to help them locate nests in order to find and eat eggs.
- California mountain kingsnakes typically hatch in August or September. Some of the young go straight into hibernation before they have even had their first meal!

Diet and Foraging

Kingsnakes are constrictors; once they locate prey, they squeeze their prey with their body to immobilize them then swallow prey items whole. Like other snake species, kingsnakes have hinged jaws that they can disengage, an adaptation that allows them to eat food that is wider than their body. They find their prey by sight and smell, using their forked tongues to "taste" the air to help them locate prey items.

They are carnivores that consume a wide variety of prey items including lizard eggs, small snakes (even some of their own species!), bird eggs, small mammals and amphibians.

Life History and Ecology

Due to their secretive nature, the life history of California mountain kingsnake in the wild requires further study. They spend most of their time underground, concealed in rock crevices, logs, or shrubs. Like most reptiles, they rely on the environment to maintain their body temperature at the optimum level (they are ectothermic, or "cold-blooded"). They regulate their temperature behaviorally: they bask in the sun to warm up, and will move into the shade when they get too hot. They can be active any time of day, but are primarily nocturnal in hot weather. They become inactive during the winter when it is cool and their metabolism slows down, denning in burrows, caves, or deep in rock crevices, sometimes in large groups of snakes that consist of multiple species.

Reproduction of this species in the wild is poorly described. Much of the understanding of their reproductive biology is derived from observations of captive snakes. Evidence suggests that mating occurs in May. Research indicates that many females only breed once every other year. In Oregon, they lay eggs in June or July, which hatch about two months later between August and September. Habitat requirements for breeding and egg laying are poorly described, but small clutches of two to nine eggs are likely deposited in nests in well-aerated soil under cover objects such as rocks or decaying logs. Eggs do not receive any parental care. After hatching, the young, which are just as vibrantly colored as their parents, soon go straight into hibernation until the following spring.

The lifespan of wild California mountain kingsnakes is not known. In captivity, individuals have been documented to live as long as 26 years! Wild populations are also likely long lived, and may take several years after hatching to reach sexual maturity.

Seasonal movements and migration for this species are also poorly understood, though it is expected that they may undergo short seasonal movements to winter hibernacula in rocky areas. They exhibit site fidelity, and are able to navigate back to their home after being displaced up to a quarter of a mile away.

Conservation

Throughout their range, California mountain kingsnakes are a Federal Species of Concern. They are a Sensitive Species in Oregon, and an Oregon Conservation Strategy Species (Species of Greatest Conservation Need). Population trends and demographic data are not available for this species in Oregon. Habitat loss is an important threats to their conservation; this species may be limited by habitat availability. Urbanization in much of their historic range has resulted in the loss of important habitats.

Due to their bright coloration, California mountain kingsnakes have been collected for the pet trade. Collection is not permitted in Oregon, and can be devastating to wild populations. This practice threatens wild populations both due to the loss of snakes and to the destruction of important rock habitats that collectors sometimes engage in to get to snakes that are hiding in rocky crevices. Like many species of snakes, they are negatively affected by persecution due to fear and misunderstanding of the species.

To help protect California mountain kingsnakes and other snake species on your property, you can protect known hibernation sites and areas used by snakes, enhance habitat features like rockpiles and brush piles to provide suitable cover, keep your dogs and cats indoors or on leash, and leave snakes where you find them. Snakes often bask on warm roads and are can be killed by motorists. By paying attention to the road and safely avoiding snakes when you see them, you can help reduce this source of mortality.

For more information about the conservation status of California mountain kingsnakes including special needs, limiting factors, data gaps, and conservation actions, refer to the Oregon Conservation Strategy.