

# Alameda Whipsnake: The Fastest Snake in the West

by Mike Westphal

A narrow footpath circles the crest of Mt. Diablo. The sunlight comes early to this high place and in May will warm the rocky soil around the manzanita bushes early in the morning, once the fog has burned away. If you were a snake - a fast snake, a snake that hunted lizards by day - you would live in a place like this, a place among the shrubbery where you could heat up and go. If you, on the other hand, up and go. If you, on the other hand, were a person and wanted to pay a call on the Alameda whipsnake, you might also come here.



Photo by Sheila Larsen / USFWS

A simple wooden rail follows the footpath on the downhill side. Walk slowly along the rail and watch the ground. Be quiet and alert. The Alameda whipsnake does not wait. If it sees you and doesn't want to hang around, it will be gone before you even know what you're looking at. If you are careful enough, you may see a rare and beautiful snake - a snake built for speed. Its body is long (to six feet) and whiplike (hence the name). The neck is slender, topped with a darting head that houses the big eyes of a visual predator. In color, it is the deep, deep green traditional to British racecars; it is detailed on either side with a bold orange

stripe. The whipsnake is polished and glossy in the morning sun. Stare at it as long as you can, for this is no "sit-and-wait" predator, and will soon move away to chase down a fat lizard for breakfast.

Alameda whipsnakes, *Masticophis lateralis euryxanthus*, are thought to live only in the mountains of Contra Costa, Alameda, and northeastern Santa Clara counties. "Lateralis" means "striped" and "euryxanthus" refers to the orange color of the Alameda whipsnake's stripes. The Alameda whipsnake is considered to be a subspecies of the California whipsnake, *Masticophis lateralis*, which lives in the Coast Ranges and the foothills of the Sierra Nevada all the way from Red Bluff down to Baja California. Striped whipsnakes elsewhere usually have yellower stripes and a paler background color than Alameda whipsnakes. However, the most reliable difference between Alameda whipsnakes and other California whipsnakes is the width of the stripes on their sides. Alameda whipsnakes have broad stripes, with the orange color covering a whole scale

in a row of scales (a row of scales crosses a snake's back diagonally) and half of the scales above and below it. All other California whipsnakes have thin stripes, covering only the lower half of one scale and the upper half of the one right below it in the row.

The Alameda whipsnake was listed under the Federal Endangered Species Act as threatened on December 5, 1997. The primary threat to the snake is habitat loss due to urbanization, where open land is replaced by a pattern of homes, streets, businesses, golf courses, etc. Most readers of this article live in places that have been urbanized. Most of the plants you see originally came from outside of California, and were planted because they remind people of the places they or their ancestors left behind, or because they make better hedges or lawns, or because they stay green year-round.

If you are one of the lucky few people in California who live on a ranch, most of the land is open and looks like it has for hundreds of years. The land goes dry in the summer, the ground gets hot, and only tough chaparral shrubs and bunch grasses stay green. These are the kind of plants Alameda whipsnakes like to live around, and the snakes like places that get hot, because it helps keep their body temperature high. Snakes are reptiles, and most reptiles are ectothermic - they don't maintain a stable body temperature as humans and other mammals do, but depend on the surrounding environment to heat them up or cool them down. However, whipsnakes and other snakes that live in hot places seem to be able to keep their body temperatures fairly stable. Animals that do this are said to be heliothermic.

If your very existence depends on being in a hot place, you wouldn't live in a cool, damp place. This is one reason urbanized areas that are kept moist year-round are not suitable for Alameda whipsnakes. Alameda whipsnakes and other animals that rove and hunt by day are called diurnal (animals that hunt at night are nocturnal). Alameda whipsnakes cover a lot of ground when they hunt, whether they are hunting for prey (which includes invertebrates, small mammals, other snakes, and birds as well as lizards), for mates, or for places to lay their eggs; however, they usually like to stay in the vicinity of shrubs where they can hide from the sun if their body temperature gets too hot. The kind of habitat in California where there's lots of sun and lots of shrubs is called chaparral. You can see patches of chaparral on hillsides and mountaintops all around the Bay Area. Some people call chaparral the "elfin forest" because the shrubs are tough and woody like trees, but grow not much taller than a person.

Replacing hot, dry chaparral with green landscaping might create a place Alameda whipsnakes would not inhabit. Another reason urbanized places might be unsuitable habitat for whipsnakes is the large number of house cats which wander around, and, even when they are well fed by their owners, hunt and kill small animals. Cats that live in urbanized areas, especially in nearby parks, don't belong to anyone, but are allowed to live wild. Some people put food out for these feral cats in the belief that this is a humane alternative to euthanizing them. Unfortunately, cats maintained near wildlife habitat have been known to deplete populations of native species of small mammals, birds, and reptiles. Alameda whipsnakes might be hard for cats to catch. However, even

if cats can't catch the whipsnakes, they can and do catch the small animals that whipsnakes eat. Once these small animals disappear, the whipsnakes disappear also.

Alameda whipsnakes do not live where there is too little chaparral habitat. On the other hand, they may not live where there is too much chaparral. This was a possibility raised by the U.S. Fish and Wildlife Service in the Federal Register article that explained why the Alameda whipsnake was being protected under the Endangered Species Act. The problem with too much chaparral is that too many bushes close together create cool shady places that do not let whipsnakes get hot enough to maintain their active lifestyles. One important process that keeps chaparral from becoming too dense is fire. Before Europeans settled in California and built houses that needed to be protected from wildfires, fires naturally occurred every summer. Now fires are often put out as soon as they are detected. If this happens for many years and chaparral areas never get cleaned out by fire, they become "over mature" - shady places that are not suitable habitat for Alameda whipsnakes.



*Photo by Sheila Larsen / USFWS*

Natural resource managers are now experimenting with using fire to create habitats that look more like they did before Europeans moved to California. Prescribed fires are set carefully to avoid damaging people's property or putting people at risk. State and Regional Parks in Contra Costa County and Alameda County prescribe burns every year. When a burn is proposed, a plan is written to ensure the fire will be controlled and will not hurt people, property, or wildlife. It is often hard to get a burn approved near urbanized areas because of concern that fires will escape. Now that the Alameda whipsnake is protected under the Endangered Species Act, land managers may feel they have a better argument for undertaking prescribed burns. Protecting chaparral benefits other species besides whipsnakes. Many kinds of mammals, insects, reptiles, and especially rare plants and rare birds depend on these elfin forests. Last but not least, protecting the chaparral lands of Contra Costa and Alameda Counties benefits the human species. Whether you are taking a vigorous hike through the manzanita or resting your eyes on the wild hilltops during a rough commute, open space enhances the quality of life for everyone in the Bay Area.

The U.S. Fish and Wildlife Service has the serious responsibility for ensuring the survival of the Alameda whipsnake and for promoting its well-being to the point where it can, someday soon, be removed from the Endangered Species Act. Most of the lands where Alameda whipsnakes still live belong to the East Bay Regional Park District and the California Department of Parks and Recreation. Thanks to the supporters and employees of these public agencies, as well as non-profit organizations like Save Mount Diablo, the Alameda whipsnake has time to recover and will, with good planning, wise direction from the U.S. Fish and Wildlife Service, and a little luck, rove the sunlit slopes of Mt. Diablo forever more.

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### **Suggested Reading**

If you can find it, Robert Stebbins "Reptiles and Amphibians of the San Francisco Bay Region" published by the University of California Press is a great book for learning about our local reptiles and amphibians. "A Field Guide to Western Reptiles and Amphibians", also by Dr. Stebbins and part of the Peterson Field Guide Series published by Houghton Mifflin Company is a more comprehensive though less intimate book that has a wealth of information about life histories, identification, and distribution of reptiles and amphibians in our area. "Snakes: The Evolution of Mystery in Nature" by Dr. Harry W. Greene with photographs by Michael and Patricia Fogden and published by the University of California Press is a good book to read if you wish to learn about snakes and about nature by a distinguished scholar who deeply appreciates both. If you are a college student or biologist you may wish to read : "Snakes Ecology and Behavior" edited by Richard A. Siegel and Joseph T. Collins and published by McGraw-Hill for in-depth knowledge about snakes and what they teach us about life processes.