

CaliforniaHerps.com

A Guide to the Amphibians
and Reptiles of California

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Range in California: Green

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to the other subspecies.



Rattlesnake Sounds and Video



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Observations

Crotalus oreganus helleri - Southern Pacific Rattlesnake

(=*Crotalus helleri*)

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Adult, San Diego County



Adult, San Diego County
© Bruce Edley



Adult, San Diego County
© Chris Gruenwald



Captive adult, courtesy of the Arizona-
Sonora Desert Museum



Adult, San Diego County
© 2003 Chris Gruenwald



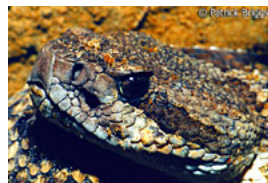
This adult was found crossing a road one morning in San Diego County when it made a quick U-turn and crawled back into a bush. You can see the tracks it made in these photos.



iPhone App
Electronic Field Guide to the
Reptiles and Amphibians of
Southern California
Available Now at the
[iTunes App Store](#).



Adult, Ventura County
© Patrick Briggs



Adult, Ventura County
© Patrick Briggs



Adult, Ventura County
© Patrick Briggs



Adult, Riverside County
© Michael Clarkson



Juvenile, San Bernardino County
© Patrick Briggs



Intergrade with *C. o. oregonus*, Santa
Barbara County © Benjamin German



Adult, Santa Catalina Island
© Nathan Smith



Adult, Santa Catalina Island
© Nathan Smith

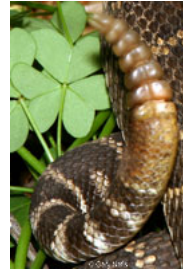




Snakes of two different color variations found in the same location in San Diego County. © [Steve Bledsoe](#)



Adult, Los Angeles County © [Koby Poulton](#)



Adult Tail and Rattle

Juveniles



Juvenile with yellow tail, Los Angeles County.
(Note that the rattle consists of only one segment which does not produce a sound.)



Juvenile, San Diego County. © [Lori Paul](#)



12 inch juvenile, Orange County,
flattening its body to appear larger.
© [David Fong](#)

Unusual Color Variations



Melanistic patternless adult, Riverside County. © [Tony Covell](#)



Melanistic Adult, Ventura County
© [Patrick Briggs](#)



Melanistic adult, San Gabriel Mountains,
Los Angeles County. © [Lori Paul](#)
This snake had a completely dark belly.



Pale juvenile, Orange County © [Steve Bledsoe](#)



Breeding Behavior



Steve Bledsoe, ©, photographed these two *helleri* mating in March in San Diego County.



Two adults, probably a mating pair, in San Diego County, as found underneath a board.



Males in combat, Ventura County
© 2006 Steve Broggie

Habitat



Habitat, Los Angeles County mountains



Habitat, San Diego County coastal scrub



Habitat, coastal San Diego County.
(This location was bulldozed and developed a few years later.)



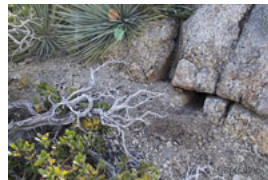
Habitat, coastal Riverside County



Coastal San Diego County grassland habitat that is rapidly disappearing due to development. © Brian Hinds



Habitat, riparian canyon, Los Angeles County

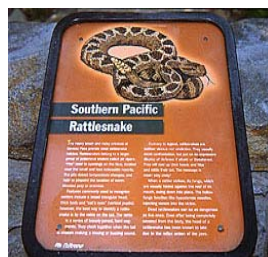


Den habitat, Los Angeles County
© Koby Poulton

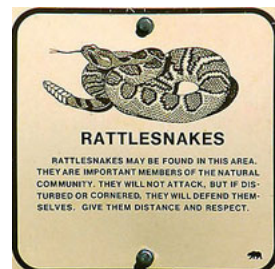
Signs



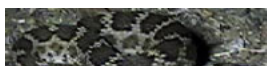
San Diego County park warning sign.
Click the picture to see more rattlesnake signs.



Sign at Santa Barbara County rest area



Short Video and Sounds





A Southern Pacific Rattlesnake poses and rattles and crawls away at night in Los Angeles County.

Listen to the rattling of a captive adult (shown above) courtesy of the Arizona-Sonora Desert Museum. © Jeff Rice / [Western Soundscape Archive](#) Not to be used without permission.

Rattlesnakes are important members of the natural community. They will not attack, but if disturbed or cornered, they will defend themselves. Reasonable watchfulness should be sufficient to avoid snakebite. Give them distance and respect.

Rattlesnake bites can be extremely dangerous, but unlike the popular depiction of rattlesnakes in the media and folklore, they should not be considered vicious and aggressive. The display we often see in pictures and film, with the body partly coiled, the tail rattling loudly, and the head up ready to strike, is a defensive stance, used when they feel that crawling away to safety is a danger to them. This display is a warning not to come any closer or they will strike. When given some space and the chance to escape to a safe place, they will do so quickly rather than attack.

Rattlesnakes often use their cryptic color and pattern to blend into their surroundings to hide from other animals that could threaten them. They lie still to avoid detection and do not rattle, because that would give away their location. At other times they rattle readily, sometimes from a good distance, to warn potential enemies of their presence. In both cases they are doing everything they can to avoid confrontation and to avoid striking and biting and using up their valuable supply of venom.

Description

Venomous

The venom of this snake is potentially dangerous to humans.

Size

Adults 30 - 44 inches long, sometimes up to 54 inches. Newborns about 10 inches long.

Appearance

A heavy-bodied, venomous pit viper, with a thin neck and a large triangular head. Pupils are elliptical. Scales are keeled.

Ground color is brown to olive-brown. Dark brown blotches, completely outlined by light pigment, mark the back. These blotches turn to bars toward the tail, which is surrounded with dark rings. The last ring is not well-defined and is more than twice the width of the other rings. Young have a bright yellow tail. The underside is pale, sometimes weakly mottled.

A rattle, consisting of loose interlocking segments, usually occurs at the end of the tail. A new rattle segment is added each time the skin is shed. Newborn snakes do not have a rattle - just a single button which does not make a sound.

Heat sensing pits on the sides of the head help the snake to locate prey by their warmth. Long, hollow, movable fangs connected to venom glands inject a very toxic venom which quickly immobilize prey. The snake can control the amount of venom injected and the fangs are replaced if broken. Bites on humans are potentially dangerous without immediate medical treatment. Even a dead snake can bite and inject venom if the jaws reflexively open when they are touched.

Behavior

Primarily nocturnal and crepuscular during periods of excessive daytime heat, but also active during daylight when the temperature is more moderate. Not active during cooler periods in Winter.

Prey is found while the snake is actively moving, or by ambush, where the snake waits near lizard or rodent trails, striking at and releasing passing prey. The snake then follows the trail of the envenomated animal and swallows it whole.

When alarmed, a rattlesnake shakes its tail back and forth. The movement rubs the rattle segments together producing a buzzing sound which serves as a warning. Juveniles are born with only a silent button at the end of the tail.

Radiotelemetry studies have shown that the home range of male snakes is larger than that of females.

Diet

Eats birds, lizards, snakes, frogs, insects, and small mammals, including mice, rats, rabbits, hares, and ground squirrels. (Adult California Ground Squirrels are immune to rattlesnake venom and will intensely confront any snake they feel to be a threat.)

Reproduction

Live-bearing; young are born August - October. Breeding activity occurs twice per year - in the spring and in late summer/early fall. Male rattlesnakes search extensively for females during the mating season while females do not actively search for males. Male to male combat occurs.

Known to hybridize with the Northern Mohave Rattlesnake where their ranges overlap in the Antelope Valley.

Range

This subspecies, *Crotalus oreganus helleri* - Southern Pacific Rattlesnake, is found in California from Santa Barbara County, where there is a wide zone of intergradation with the Northern Pacific Rattlesnake north to around Morro Bay, east to the central valley and the desert slopes of the transverse and peninsular ranges, and south into the middle of the Baja California peninsula. Ranges north of the transverse ranges into the Mojave Desert in the Antelope Valley and just south of Barstow. Also found on Santa Cruz and Santa Catalina Islands, both of which are popular vacation destinations.

The species *Crotalus oreganus* - Western Rattlesnake, occurs from the Pacific Coast of northern Baja California north through most of California except the southern deserts, through Oregon and eastern Washington into British Columbia, Canada, and east into Nevada, Idaho, Utah, northern Arizona, extreme southwestern Wyoming, and extreme northwestern New Mexico.

Habitat

Found in a wide range of habitats from seaside dunes, to desert scrub, grassy plains, rocky hillsides, chaparral, open woodlands, and agricultural areas.

Taxonomic Notes

The taxonomy of Western Rattlesnakes is controversial and still being studied.

Some researchers still use the species *Crotalus viridis* and this snake remains *Crotalus viridis helleri*.

In a 2002 study, Douglas, Douglas, Schuett, Porras, & Holycross
[[2002. Phylogeography of the Western Rattlesnake (*Crotalus viridis*) Complex, With Emphasis on the Colorado Plateau].
Pp. 11-50. In Biology of the Vipers [Schuett, Höggren, Douglas, and Greene (editors). Eagle Mountain Publishing, Eagle
Mountain, Utah]
split *C. viridis* into **7 distinct species**:

Crotalus oreganus oreganus becomes ***Crotalus oreganus***,
Crotalus oreganus helleri becomes ***Crotalus helleri***, and
Crotalus oreganus lutosus becomes ***Crotalus lutosus***.

The common names remain the same.

This taxonomy **was accepted** by a snake systematist group in 2009 and is already in use by the **CNAH**. The SSAR will most likely use this taxonomy in its next list.

Some naturalists believe that rattlesnakes on Santa Catalina Island are distinct from those on the mainland and will be recognized as a different subspecies once DNA studies are completed. [LA Times Article 11/28/09](#)

Conservation Issues ([Conservation Status](#))

None.

Taxonomy

Family	Viperidae	Vipers
Genus	<i>Crotalus</i>	Rattlesnakes
Species	oreganus	Western Rattlesnake
Subspecies	<i>helleri</i>	Southern Pacific Rattlesnake

Original Description

Crotalus viridis - Rafinesque, 1818 - Amer. Month. Mag. Crit. Rev., Vol. 4, No. 1, Nov. p. 41
Crotalus viridis helleri - Meek, 1905 - Field Columb. Mus. Publ. Zool., Vol. 7, p. 17

from [Original Description Citations for the Reptiles and Amphibians of North America](#) © Ellin Beltz

Meaning of the Scientific Name

Crotalus - Greek - krotalon - a rattle - refers to the rattle on the tail
oreganus - belonging to the state of Oregon - referring to the type locality, "banks of Oregon or Columbia River"
helleri - honors Heller, Edmund

from [Scientific and Common Names of the Reptiles and Amphibians of North America - Explained](#) © Ellin Beltz

Alternate Names

Crotalus viridis helleri

Crotalus helleri

Related or Similar California Snakes

C. o. lutosus - Great Basin Rattlesnake
C. o. oreganus - Northern Pacific Rattlesnake
C. ruber - Red Diamond Rattlesnake
C. atrox - Western Diamond-backed Rattlesnake
C. s. scutulatus - Northern Mohave Rattlesnake
C. c. laterorepens - Colorado Desert Sidewinder

More Information and References

[Natureserve Explorer](#)

[California Dept. of Fish and Game](#)

Living With Rattlesnakes

Tucson Herpetological Society: [Living With Venomous Reptiles](#) pdf

California Department of Fish and Game: [Rattlesnakes in California](#)

University of California: [Rattlesnakes Management Guide](#)

Florida Museum of Natural History: [How to Get Along with Snakes](#)

Southwestern Field Herping Associates: [Venomous Snake Safety](#)

Rattlesnake Bites

[California Poison Control System](#) (search for "rattlesnake bite")

University of Arizona: [Rattlesnakes](#)

Justin Schwartz' Rattlesnake Bite [Story and Pictures](#)

Sean Bush MD: [Venom ER - When snakes strike!](#)

eNature - [How to Avoid Snakebites and How to Treat One](#)

When a Pet Gets Snake Bitten: [The amazing story of Andy Cat](#), a very lucky cat who was bitten by a rattlesnake and survived, thanks to the smart actions of its owners.

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Eric A. Dugan, Alex Figueroa, and William K. Hayes. Home Range Size, Movements, and Mating Phenology of Sympatric Red Diamond (*Crotalus ruber*) and Southern Pacific (*C. oreganus helleri*) Rattlesnakes in Southern California. Pp. 353-364 in W. K. Hayes, K. R. Beaman, M. D. Cardwell, and S. P. Bush (eds.), *The Biology of Rattlesnakes*. Loma Linda University Press. 2008.

Conservation Status

The following status listings come from the [Special Animals List](#) which is published several times each year by the California Department of Fish and Game.

Organization	Status Listing
U.S. Endangered Species Act (ESA)	None
California Endangered Species Act (CESA)	None
California Department of Fish and Game	None
Bureau of Land Management	None
USDA Forest Service	None
Natureserve Global Conservation Status Ranks	
World Conservation Union - IUCN Red List	