

Pacific Gophersnake

The background color of the Pacific gophersnake is glossy yellow to buff with black, brown, or reddish-brown blotches on the back. The scales are keeled and the tail pointed. Its general coloration and behavior mimic a rattlesnake. but the Pacific gophersnake is harmless. This snake is a good climber and burrower. It lays an average of 6-7 eggs in the spring to early summer, with the young hatching in about 70 days.

Length: 36-100 inches.

Habitat: They are found in many different habitats throughout California including blue oak, gray pine, and oak woodlands. Pacific gophersnakes are also found in chaparral, grassland, and riparian areas.

Food: They eat small mammals, birds, bird eggs, and lizards. These snakes often inhabit the same burrows as their prey.

The Pacific gophersnake is often mistaken for a rattlesnake and killed.

Slender head

shiny

body

Pointed

tail

Triangular head

> dull body

Rattles

Slender

Thick

Habitat: Rattlesnakes are found

Food: They eat small mammals, birds, and lizards.

Northern Pacific

Rattlesnake

The general coloration of the northern pacific rattlesnake varies, usually matching the background soil color, with brown or black dorsal blotches. The head is broad, flat, and triangular with facial pits and vertically oriented, elliptical eye pupils. The skin is dull with keeled scales. The tail. tapering with a "rattle," is made up of interlocking pieces of dry skin. This snake is most active in spring or fall, in morning and evening or at night in warm weather, and is live-bearing with an average of 4-12 young born September to October.

Length: 15-62 inches.

in a variety of habitats from coastal sand dunes to timberline. They prefer rock outcrops in annual grasslands, chaparral, blue oak, gray pine, and oak woodlands.



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On the cover: Pacific ring-necked snake. Snake photos courtesy Gary Nafis

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Common Snakes in the East Bay Regional Park District



Snakes are an amazing group of animals.

There are giant snakes longer than some buses and tiny ones that will fit in a tablespoon! Whether you are fascinated or frightened by snakes, they are sure to capture your attention when you see them. Although they are secretive in nature, every now and then you will find a snake quietly going about its business. Some, such as the northern pacific rattlesnake, may warn you of their presence. Others may see you and slip away before you know it. Whatever the case, it is fun to identify the snake and learn something about its life history. This brochure is designed to help you identify some of the snakes you may meet in the East Bay Regional Parks.

Spring and summer are the best seasons for observing snakes. Snakes are able to regulate their body temperature by moving in and out of shade. A warmer body allows a snake to move faster when trying to catch prey. Depending upon the kind of snake, they eat insects, slugs, frogs, birds, bird eggs, small mammals, and other reptiles.

Some snakes capture prey with their mouths and swallow them whole. Other snakes wrap their bodies around prey animals to constrict them. The jaw is expandable due to elastic muscles and ligaments in the throat and between bones in the jaw. This allows a snake to swallow prey larger than the width of its head. The snake uses its tiny

hooked teeth and flexible jaws to pull an animal into its mouth. You might find a snake with a bulge indicating that it has recently swallowed a prey animal.

Rattlesnakes use poison to kill their prey.

Although the poison is harmful to humans, its primary purpose is for catching food, not defense.

Rattlesnakes also have temperature-sensitive organs on each side of their heads called *loreal pits*. These pits enable rattlesnakes to locate prey even in dark burrows where the scent trail can be confusing.

Snakes use their tongues to help identify (smell) food and danger by flicking them in and out. The tips of the tongue fit into an organ in the roof of the mouth called the *Jacobson's organ* that helps identify the chemicals in the air. Snakes rely on "tasting the air" (their sense of smell), and the movement of prey when hunting for food.

As with all reptiles, snakes have bodies covered with scales. A clear scale protects each eye. Snakes shed their skin as they grow. You may be lucky enough to find a shed skin close to a rock or log. Snakes rub against these to help peel off this colorless layer of skin. Each time a rattlesnake sheds, a new rattle forms, which may occur two to three times a year. Therefore, the number of rattles on a rattlesnake shows how many times it has shed, not how many years it has lived.

Snakes protect themselves by not moving, relying on their colors to camouflage them, or by quickly slithering away. A rattlesnake may rattle as a warning, while some other snakes might emit a foul-smelling fluid if handled. When threatened, some snakes will also bite in defense. As a *precaution*, do not put your hands or feet over rocks, logs or other places where you cannot see. The best procedure when encountering a snake is to keep a respectful distance and watch quietly — *do not try to pick it up*.

All snakes in the East
Bay Regional Park District are
protected. It is our responsibility to see
that these animals are allowed to survive in
their natural environment. Outside the
Regional Parks, housing developments,
new roads, and other construction
projects reduce the habitat and
chances for their survival. People
who harm snakes or remove them
from their habitat also threaten
their continued survival.

Fortunately, with your cooperation, our parklands will remain a refuge for wildlife and provide a place to view and enjoy these interesting creatures.

Remember: Snakes are an important resource in the natural environment. They are prime controlling agents of rodent, insect, and other reptile populations. They must be enjoyed and left where they are found.

It is illegal to

collect, kill, or remove any plants or animals from the East Bay Regional Park District. Please help us to protect wildlife and their environment for present and future generations.

In Snake Country:

- 1. Look at the ground ahead of you as you are walking.
- **2.** Look carefully around and under logs and rocks before sitting down.
- **3.** Avoid placing your hands or feet where you can't see clearly.
- **4.** Check the immediate area around picnic tables, campsites, and barbecues before using them.
- **5.** If you find a rattlesnake in a picnic or camp area, notify park staff. Do not disturb it.
 - **6.** If you see a rattlesnake or a snake you can't identify, give it plenty of room and leave it alone.

What to Do if Bitten by a Snake:

- 1. If bitten by a rattlesnake, stay calm and send someone to Call 911. The victim should remain calm by lying down with the affected limb lower than the heart. Do Not waste precious time on tourniquets, "cutting and sucking," or snake bite kits. If you are by yourself, walk calmly to the nearest source of help: another person, a park employee, or a phone to Dial 911. Do Not Run.
- 2. If bitten by any other kind of snake, leave the snake alone. Wash the wound with soap and water or an antiseptic and seek medical attention.
- 3. If you are not sure what kind of snake bit you, check the bite for two puncture marks (in rare cases one puncture mark) associated with intense, burning pain. This is typical of a rattlesnake bite. Other snakebites may leave multiple teeth marks without burning pain.

Common Snakes in the East Bay Regional Park District

Western Yellow-bellied Racer

The western yellow-bellied racer has large eyes and a long slender body which is olive-green, blue-gray, or tan on top with a yellow belly. This snake is extremely fast, which is essential for capturing certain prey. The young resemble small gopher snakes except for their large eyes and shiny, smooth scales. This snake lays 12-24

eggs in the early summer.

Length: 22-78 inches.

Habitat: Yellowbellied racers are
primarily found in
foothill grasslands,
brushlands, and moist
environments.



Diablo Range Gartersnake

The coloration of the Diablo range gartersnake varies greatly depending upon the subspecies. The back is usually blotched brown to black with a dorsal stripe. This snake is live-bearing with 7-25 young born late summer to fall.

Length: 18-57 inches.

Habitat: Primarily aquatic, they are found in and along streams, rivers, ponds, and lakes from coastal brackish marshes to the high mountains.

Food: They eat fish, frogs, salamanders, and mice. This snake is one of the few that can eat the highly toxic California newt.



Coast Gartersnake

The coloration of the coast gartersnake varies greatly depending upon the subspecies. The subspecies in the East Bay has a bright yellow stripe down the middle of the back. Bright red or orange flecks or blotches usually present on belly and sides, including side stripes. The scales are keeled. This snake is live-bearing with 4-19 young born July to September.



Length: 18-42 inches.

Habitat: Coast gartersnake are found throughout Northern California, the Sierra Nevada, and east of the Sierra Nevada. They prefer areas along streams, among bushes, damp meadows, clearings, and chaparral with permanent water.

Food: They eat tadpoles, frogs, fish, small mammals, and occasionally birds.

Northern Rubber Boa

The northern rubber boa is a stout-bodied snake that looks and feels like rubber. Sometimes called the "two-headed snake" because it's tail is shaped somewhat like it's head. It has shiny, smooth skin that can be brown to olive green on top and yellow to cream below. It is usually active at dawn and dusk, but in the spring it is occasionally active during the day. The northern rubber boa is livebearing with 2-8 young born August to November.



Length: 14-30 inches.

Habitat: They are found in moist grassland, woodland, and forested areas in and beneath rotting logs and where leaf litter and duff are on the ground. They burrow, swim, and climb.

Food: They eat small mammals, insects, and lizards.

California Mountain Kingsnake

The California mountain kingsnake is a colorful, shiny snake with black, red, and white bands and a black snout. This snake is harmless, but is often mistaken for the poisonous coral snake, which is not found in California. Its temperament is a bit nervous and defensive. It mates from April to May and lays 4-8 eggs in the summer.



Length: 20-40 inches.

Habitat: It lives in moist, cool canyons of mountainous regions of California, in coniferous forests, and woodlands mixed with chaparral. This is a very rare snake in the Park District.

Food: They eat lizards, small snakes, small animals, and bird eggs.

Alameda Whipsnake

The Alameda whipsnake is a slender, fast-moving, plain black, or dark brown snake with a conspicuous yellow or orange stripe down each side. It is listed as threatened by the California Department of Fish and Game and the U.S. Fish and Wildlife Service. It lays an average of 6 eggs in the summer.



Length: 30-60 inches.

Habitat: The whipsnake is usually found in grassland, coastal scrub, or chaparral close to a water source. At present, this subspecies' range is limited to Alameda and Contra Costa counties.

Food: They eat rodents, small birds, other snakes, and their primary prey, fence lizards.

California Kingsnake

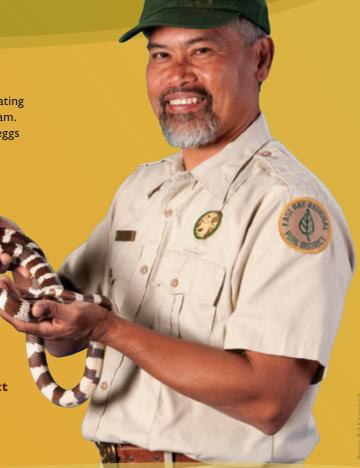
The California kingsnake has conspicuous alternating bands of black or dark brown with white or cream. The scales are smooth and shiny. They lay 6-12 eggs in early summer.

Length: 30-82 inches.

Habitat: California kingsnakes are found under logs, lumber, and rock outcrops in a variety of habitats throughout California. These habitats include forests, chaparral, grasslands, river bottoms, and deserts.

Food: They eat other snakes (including rattlesnakes), lizards, birds, bird eggs, and mice.

The California kingsnake, handled here by an East Bay Regional Park District naturalist, is becoming increasingly rare in the Bay Area and should be left alone when encountered.



Pacific Ring-necked Snake

The Pacific ring-necked snake is a small, slender snake with a topside that is olive, brownish, bluegray, or nearly black. It has a neck band that can be yellow, orange, or cream. The underside is redorange with black dots and the red intensifies on the underside of the tail. It lays 4-6 eggs in late spring.

Length: 12-30 inches.

Habitat: Ring-neck snakes prefer moist soil on north-facing slopes of foothill canyons, grassland, chaparral, and riparian areas.

Food: They eat mainly slender salamanders, but also small tree frogs, lizards, earthworms, and insects.

About Snake Skin

A snake's scaly skin is an incredible natural innovation, beautiful, supple and strong. It helps the snake move smoothly along the ground, through the grass, in and

out of holes, and even up into tall trees. A snake can do all of this with no arms or legs for help. A snake's skin can also be a kind of flexible armor, to protect the snake from cuts, or bites from other animals, but still stretchy enough to allow for a giant meal.



Gartersnake with newly shed skin.

It helps the snake stay dry in wet weather, and keeps it from drying out in the summer. It can display brilliant colors, or hide

a snake with a perfect blotchy camouflage. Amazingly, a snake's scales are part of its skin, as are the durable but clear "spectacles" covering its eyes. That's why, when a snake sheds, all the scales come off together, even the eye coverings, to reveal a perfect fresh skin and clear bright eyes underneath!