

# Purpose

The purpose of this presentation is to familiarize Navy personnel with snake species (venomous and non-venomous) potentially occurring in the Murphy Canyon Housing Area of Naval Base San Diego and initial first aid procedures in the event of a venomous snake bite.



This presentation was developed by the Department of Defense Partners in Amphibian and Reptile Conservation (DoD PARC) group.

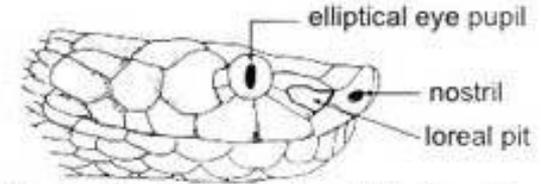
# General Characteristics of Snakes

- No legs, ears or eyelids
- Adapted to live in most habitats of the planet (deserts, forests, prairies, oceans)
- Great variation in size and color
- Approximately 45 species of snakes live in California
- The rattlesnake is California's only native venomous snake and nine species inhabit the state.

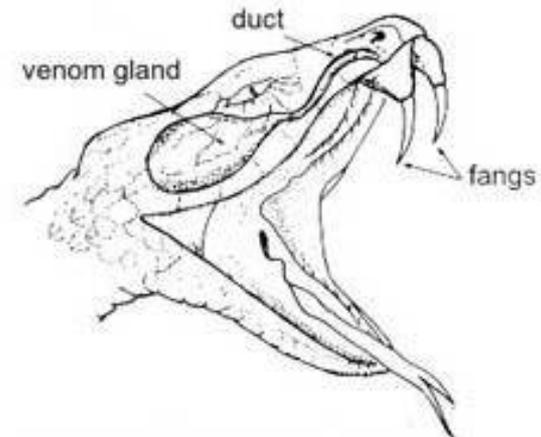


# Features of Rattlesnakes

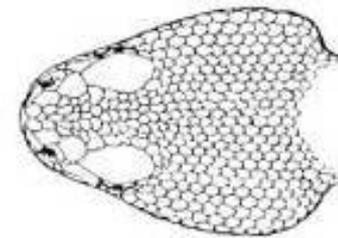
- Elliptical eye pupil
- Pit organ
- Fangs
- Triangle shaped head
- Rattle on end of tail



Pit viper head showing the elliptical pupil and location of the loreal pit.



Rattlesnake venom injection system.



Rattlesnake head. Note the triangular shape.

# Snakes

Two species of venomous rattlesnakes (Southern Pacific Rattlesnake, Red Diamond Rattlesnake) and four species of non-venomous snakes (San Diego Gopher Snake, California Striped Racer, Red Racer, San Diego Night Snake) have the potential to occur in the Murphy Canyon Housing Area of Naval Base San Diego. The following slides describe each species.



# Southern Pacific Rattlesnake (*Crotalus oreganus helleri*)

Venomous



**Length:** Adults 30 - 44 inches long, sometimes up to 54 inches.

**Color:** Ground color is brown to olive-brown. Dark brown blotches on the back which are completely outlined by light pigment. These blotches turn to bars toward the tail. Tail is surrounded with dark rings.

**Behavior:** Primarily active during the early evening or during periods of excessive daytime heat, but also active during daylight when the temperature is more moderate.

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



**Venomous**

# Red Diamond Rattlesnake (*Crotalus ruber*)



**Length:** Adults are 30 - 65 inches in length, typically 2 - 4.5 feet long.

**Color:** Ground color is variable and may be pink, reddish-tan, reddish-brown or brick red. Diamond-shaped blotches, usually with light edges, mark the back. Black and white rings surround a thick tail.

**Behavior:** Primarily active during the early evening or at night during periods of excessive daytime heat, but also active during daylight when the temperature is more moderate. Not active during cooler periods in winter.

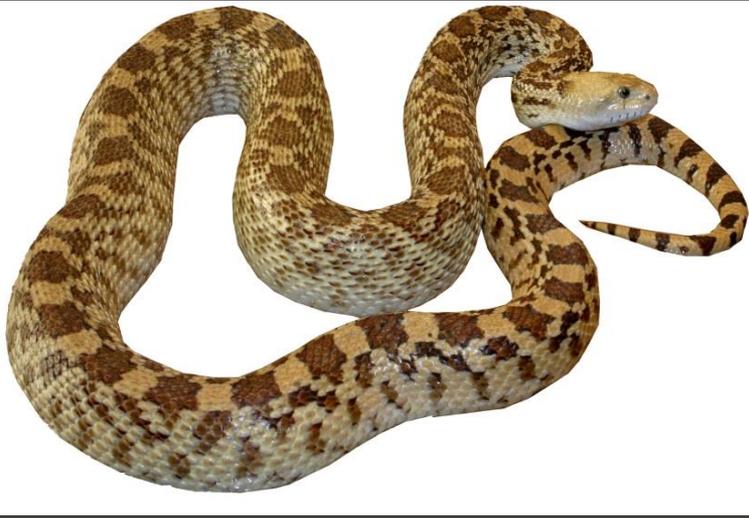
**Habitat:** Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats.



# San Diego Gophersnake

(*Pituophis catenifer annectens*)

Non-venomous



**Length:** Adults most commonly 4-5 feet long, sometimes up to 7 feet.

**Color:** Ground color is tan, light brown or yellowish, with large brown or blackish rounded blotches along the back and smaller markings on the sides. The underside is cream to yellow with dark spots.

**Behavior:** Active during the daytime, dawn and dusk. When threatened, it will elevate and inflate its body, flatten its head into a triangular shape, hiss loudly, and quickly shake its tail back and forth to make a buzzing sound which may be a mimic of a rattlesnake.

**Habitat:** Found in grassland, coastal sage scrub, agricultural lands, riparian areas, woodlands, and desert, from sea level to the mountains. Especially common in coastal areas.



**Non-venomous**

# California Striped Racer (*Coluber lateralis lateralis*)



**Length:** Adults are generally 30 - 48 inches long and may occasionally reach 60 inches long.

**Color:** Dark olive brown, gray, or black ground coloring with a pale yellow or cream colored solid stripe on each side which extends from the back of the eye to the tail.

**Behavior:** Active during the day. Very fast-moving and alert, quickly fleeing when threatened. This snake will strike repeatedly and bite viciously when threatened or handled.

**Habitat:** Open areas in canyons, rocky hillsides, brushy chaparral, scrub, open woodlands, pond edges, stream courses.



# Red Racer

(*Coluber flagellum piceus*)

Non-venomous



**Length:** Adults are generally 36 - 102 inches long.

**Color:** Light brown, pink or reddish above with pink, brown, or black bands across the neck. Color typically changes to a solid tan or reddish coloring along the length of the long thin tail.

**Behavior:** Active in the daytime. Often seen basking on roads in early morning. Good climbers, able to climb bushes and trees. Often strikes aggressively when threatened or handled.

**Habitat:** Inhabits open areas of desert, grassland, scrub, and sagebrush, including rocky, sandy, flat, and hilly ground. Avoids dense vegetation. Takes refuge in rodent burrows, under shaded vegetation, and under surface objects.



**Non-venomous**

# San Diego Night Snake (*Hypsiglena orchorhyncha klauberi*)



**Length:** Adults generally 8 - 12 inches long, rarely over 16 inches.

**Color:** Varies from light gray, light brown, beige, to tan or cream, with dark brown or gray blotches on the back and sides. Usually a pair of large dark blotches on the neck and a dark bar through or behind the eyes. Vertical pupils.

**Behavior:** Nocturnal, and may also be active at dusk and dawn. Can be found under rocks, boards, logs, and other surface objects.

**Habitat:** Found in a variety of habitats, often arid areas, from chaparral, Sagebrush flats, deserts, suburban lots and gardens, mountain meadows, grassland.



# Snake Bite Prevention

Hands, feet, and ankles are the most common sites for rattlesnake bites. Below are some common sense rules can prevent most snake bites:

- **If a snake is encountered, leave it alone and move away.**
- Always wear hiking boots when walking in areas where you cannot clearly see where you are placing your feet.
- Always stay on paths. Avoid walking in tall grass, weeds, and heavy underbrush where snakes may be present.
- Always look for concealed snakes before picking up rocks, sticks, or firewood.
- Baby rattlesnakes are venomous and can bite. Leave them alone.
- Never handle freshly killed snakes.
- Teach children to respect snakes and to leave them alone. Curious children who pick up snakes are frequently bitten.

# Initial First Aid Procedures for a Venomous Snake Bite

- Try to calm the victim.
- Wash the area with soap and water.
- The bitten appendage should be immobilized with a sling or similar type of device to the greatest extent practicable.
- Transport the victim to the nearest emergency medical facility.
- If a snake bite occurs, and it is uncertain whether the snake is venomous or non-venomous, attempt to safely take a photo of the snake (e.g., staying outside its strike range – a minimum of five feet) and promptly send it to a wildlife expert for identification.
- For additional information, call the California Poison Control System Call: 1-800-222-1222; or visit (<http://www.calpoison.org/>)

**Disclaimer:** the producers of this presentation are not liable for any harm or injuries that occur as a result of a venomous snakebite under any circumstances, whether it be purely accidental or otherwise.