

Status

- ☑ Venomous sting
- ☑ Possible health threat

Scorpions

General Information

Scorpions are predatory arthropods that feed on ground-dwelling insects such as crickets, grasshoppers, and caterpillars. They are active mostly at night, always on the hunt for food. Most species glow (**fluoresce**) when lit by moonlight or black light. You can search for scorpions at night by shining a black light on the ground and looking for the glow. They sleep during the day, often beneath fallen logs, leaf litter, or bark; some species burrow into soil. There are about 1500 species of scorpions in the world and 70 in North America; about 10 species are found in Orange County.

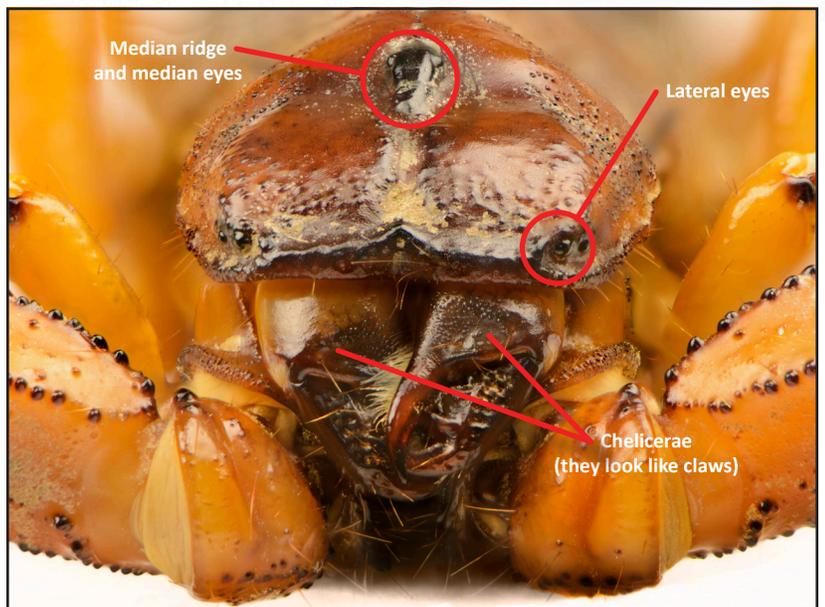
The earliest known scorpions were **aquatic**. Fossil scorpions have been dated at over 400 million years old, 200 million years before the first dinosaurs. One extinct scorpion measured over 1 meter (39 inches) long. The largest currently-living (extant) species is the giant emperor scorpion at about 20 cm (8 inches) long. The smallest extant species is the middle eastern scorpion at 1.3 cm (0.5 inches) long. Most species in Orange County are between 2.5-10 cm (1-4 inches) long when adult.

What Do They Look Like?

The body of a scorpion is long and cylindrical or flattened. The front third of the body is a solid piece called the **carapace**. At its center is a **median ridge** with a **median eye** on each side. At the front of the carapace are two groups of **lateral eyes**. The **abdomen** extends from the carapace to the end of the body. A long jointed six-segmented tail (**metasoma**) ends in a venom-filled bulbous segment (**telson**) tipped with a **stinger**. Scorpions have eight similar-looking legs used for walking and running; they cannot jump. In front of the legs are two **pedipalps** tipped with strong crab-like claws (**chelae**). They use their chelae to capture and hold insects, then sting and inject venom to paralyze their prey. Some scorpions don't inject venom, instead they capture insects and immediately feed on them. They hold their meal like you would hold a corn cob. Their mouthparts (**chelicerae**) are like small versions of their chelae; each of the two sets of chelicerae work up and down to chew (compare this with insect mandibles, which work side-to-side, and your single mandible, which works up-and-down). There is no venom in the bite of a scorpion. While chewing, they expel digestive fluids, digest the food into liquid form, then suck it into their **mouth**, which sits between the chelicerae.

California Swollenstinger Scorpion

Anuroctonus pococki pococki



Life Cycle

Scorpions have only two life stages in their life cycle: nymph and adult. Females give birth (they do not lay eggs) to live young (nymphs), which climb up her legs and onto her back. They remain there for one to two days, then climb off and hunt for food, never to return to their mother. As the nymphs eat and mature, they outgrow their skin, grow a new skin layer, and shed the old one, a process called molting. They undergo multiple growth-molts until after their final molt and become adults. Depending on food availability, temperature, and other environmental factors, they reach adulthood in 3 to 7 years. Adults are known to live for 8 to 25 years.

Health Risks

The venom from a sting of our local species is relatively mild and causes sharp but localized pain lasting from a few minutes to several hours, fever, itching, sweating, nausea, vomiting, and stomach pain. These typically last no more than 24 hours. Only one species is considered a serious health hazard, the Arizona bark scorpion. A native of Arizona, New Mexico, and Mexico, it sometimes hitchhikes to Orange County in recreational boats, vehicles, and camping gear. It is a pale, flat, slender scorpion with narrow chelae and sometimes a tiny bump or spine just above the stinger. Symptoms of its venom include intense local pain, rigid abdominal muscles, convulsions, drooling, heart rate increase, fever, and breathing difficulty. The very young and very old may die from its sting. If stung by any kind of scorpion, the victim should seek professional medical care. If possible, the scorpion should be captured in a sealed container and given to professionals for identification. Keep the victim calm, give no sedatives, pain killers, or alcohol, and transport immediately.

Protect Yourself: Avoid Scorpions

Never pick up a wild scorpion!

Around your home:

- Keep grass mowed low so you can see scorpions
- Remove debris piles to remove their hiding/sleeping spots
- Don't bring excess firewood into the home; get only what you need and place it in the fireplace immediately
- Wear gloves when working in the yard
- Routinely check and replace under-door seals where scorpions and other animals could enter your home

When camping or hiking:

- Sleep in a tent or on a cot; not on the ground
- Keep shoes, clothes, and luggage inside your car or tent overnight
- Shake out shoes and clothes before wearing them
- Wear long pants, socks, and shoes
- Do not pick up or roll over logs, rocks, etc.
- Keep your hands and feet where you can see them and avoid a hidden scorpion
- Stay on groomed trails
- For night-hiking, use a flashlight to check the trail ahead and/or black light to look for and avoid scorpions

Arizona Bark Scorpion

Centruroides exilicauda



Very slender chelae (claws)

Telson

Sometimes has a small bump or spine just before the stinger

Pseudoscorpions - Harmless Relatives



Pseudoscorpions are related to scorpions, but are very small, have no tail, and are harmless.



Pseudoscorpions live under bark and are much smaller than a penny.