

Jumping Spiders



Female *Phidippus* jumping spider. Photo by Alex Wild.

Jumping spiders belong to the family Salticidae. This is a large diverse group of spiders of about 4,000 species worldwide, and 300 in the United States. These spiders are relatively small, usually less than 1 cm long. They are often brightly colored with reds, whites and even metallic green, particularly their chelicerae (jaws). They are extraordinary jumpers, and are known to be able to jump distances more than 10 to 40 times their body length.

Male jumping spiders often have the brightest coloration in addition to highly modified front legs. They use these colors and other modifications to attract females for mating but to also avoid being eaten in the process.

The commonest jumping spiders in California belong to the genus *Phidippus*. *Phidippus audax* has black males, with several white spots on the abdomen and bright metallic green chelicerae. Other species may be black with a bright red abdomen.

One of the most fascinating things about jumping spiders is their vision. Most spiders catch prey on webs and have a keen tactile sense for detecting vibrations. These spiders

are not known for their vision because they rely on detecting prey on their webs. Jumping spiders, on the other hand, do not construct webs for catching prey. They actively hunt during the day, sneaking up on and catching their prey. As a result they need very good vision to capture prey.

Jumping spiders have eight simple eyes (not compound as in insects). One pair of these eyes are especially large on the front of the cephalothorax. These larger eyes have excellent resolution and are stereoscopic, like our own eyes, for detecting distance. The smaller eyes are less sensitive and may be good at detecting motion. Jumping spiders cannot move the lens of the eye, but are able to rotate the retinas within their eyes. Because the retina is the darkest part the eye, as it moves the eye appears to change color, and due to this color change you can see the spider track your movements.

Jumping spiders are carnivores and can be effective garden pest control agents. They eat insects and other spiders about their size or smaller. They do not spin webs for catching prey, but may use a silken thread as an anchor as they climb down a vertical surface.

These spiders are generally harmless to humans. They can bite, but this normally only happens when the spider is being crushed or other similar situation where its threatened with damage. The bites range from asymptomatic to small, mosquito-bite-sized welts. They are not as severe as a bee sting.



Male *Phidippus audax* face. Photo courtesy of Oposterser, Wikipedia.

