

What's Eating You? Common Striped Bark Scorpion (*Centruroides vittatus*)

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C*entruroides vittatus*, the striped bark scorpion (order, Scorpiones; family, Buthidae), is the most common scorpion in the United States. Although it is most heavily concentrated in Texas, its range is broad and extends into Arkansas, Colorado, Illinois, Kansas, Louisiana, Mississippi, Missouri, Nebraska, New Mexico, Oklahoma, and Tennessee. It also is found in the Mexican states of Tamaulipas, Coahuila, Nuevo Leon, Chihuahua, and Durango. *C vittatus* (Figure) is commonly found indoors, especially when a building has been unoccupied or when there is neighboring construction. Outdoors, it is adaptable to a wide variety of habitats. Like other bark scorpions, it is largely nocturnal, hiding in cool dark places during the day. It is not uncommon, however, to find them in a cupboard, closet, or even a relatively well-lit room during the day.

Adult *C vittatus* scorpions are about 2½-in long, but the young small scorpion often has the worst sting. The body color varies from yellow to tan, and the intensity of stripes is highly variable. The tail is longer in males than females. Young scorpions tend to be light in color. The last segment of the body and the bases of the pedipalps are dark brown to black. Two important distinguishing characteristics are the 2 broad brown to black stripes on the upper surface of the abdomen, and the dark triangular mark on the front of the head region in the area over the median and lateral eyes. The triangle points backward and extends just beyond the eyes. Both the pedipalps and tail are slender and delicate. The scorpion's cuticle

fluoresces under UV light, and a battery-powered Wood lamp is helpful when collecting *C vittatus* scorpions at night.

The scorpions mate in the spring, early summer, and fall. The young (usually 30–50) climb on the mother's back after birth. After the first molting, they leave the mother to lead independent lives. During mating season, scorpions may be observed sparring. This elaborate courtship ritual, in which the scorpions grasp each other's pincers and dance back and forth, keeps the scorpions occupied for hours.

C vittatus scorpions hunt for spiders, centipedes, crickets, beetles, and other arthropods. They stalk their prey mostly at night. The scorpion will rear its tail when threatened, and it will strike if touched, stepped on, or grabbed by humans. The poison glands in the tip of the tail secrete neurotoxic venom that is deadly to its insect prey and is painful in humans. The sensation is a sharp stinging pain that lasts for about 15 to 20 minutes. In people allergic to the sting, it may induce anaphylactic shock.¹ There is evidence of venom-specific immunoglobulin E in patients with hypersensitivity reactions, but the occurrence of immediate reactions to an initial sting suggests that prior sensitization may occur. Sera from scorpion-allergic patients have been shown to react to imported fire ant whole-body extract,² suggesting that fire ant stings may be responsible for the prior sensitization and patients with immediate hypersensitivity reactions to scorpion stings could potentially benefit from immunotherapy with fire ant extract.

The most dangerous native scorpion in the United States is *Centruroides exilicauda*/*Centruroides sculpturatus*. Although classified as a single species,³ some evidence suggests that the 2 really are distinct species.⁴ *C exilicauda* Wood is more common in Baja California, Mexico, and *C sculpturatus* Ewing in Arizona. The greatest risk from envenomation is to small children and the elderly.

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Centruroides vittatus.

In a review of 483 cases of reported envenomation, the mean age was 20.8 months, with 133 patients (27.5%) presenting to an emergency department, 86 (17.8%) requiring antivenin, and 25 (5.2%) requiring hospital admission.⁵ Three patients (0.6%) were intubated. Forty-nine patients (57%) who received antivenin developed serum sickness. Progression of symptoms was rapid (average 14 minutes after envenomation), but hospital admission was less common among patients receiving antivenin.⁵

C sculpturatus envenomation can produce hypersalivation and respiratory distress. Atropine can dry secretions, but its use is controversial because

the stings of many foreign scorpions produce an adrenergic storm, and atropine can exacerbate adrenergic toxicity to the cardiopulmonary system. Serious adrenergic effects, however, are rare following *C sculpturatus* envenomation and, in one small case review, atropine was used safely. In these patients, the reversal of hypersalivation and respiratory distress obviated the need for further intervention.⁶

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