

# Brown Recluse Spiders: Misidentified, Misdiagnosed and Misunderstood

[353]

**Jody Green**  
Extension Educator

Spiders are not insects, but arachnids. They have two body parts (carapace and abdomen), eight legs, produce silk and contain venom. The thought and sight of spiders create anxiety and fear in many people, but there is an exceptional level of fear reserved for brown recluse spiders.

## Identification

Brown recluse spiders are surprisingly plain, lackluster spiders. Adults are no longer than 1/2-inch in length (not including the legs), with long, slender legs. They are uniformly a light brown color, with a dark brown violin-shape on the carapace. The entire body is covered with hairs, but there are no spines, patterns, stripes, bands or spots on either the abdomen or legs.

Most spiders have eight eyes, but the brown recluse spider has six, arranged in three pairs. This is true even as juveniles, when there is no violin-shaped marking. Many brown-recluse lookalikes can be deciphered by the eye pattern.

## Distribution

Southeast Nebraska is close to the northern most range of the brown recluse spider. They are most concentrated in Missouri and Arkansas, between the Rockies and Appalachian mountains. They are not very good at dispersing and require human movement for introductions into new areas.



Photos: Jody Green, Nebraska Extension in Lancaster County

Brown recluse spiders can be identified by the arrangement of their six eyes.



A brown recluse spider on a finger.

## Behavior, Habitat, Food

Brown recluse spiders are as their name implies: shy, non-aggressive, secluded and avoider of conflict. They are found in seldom-disturbed areas such as attics, crawlspaces, cellars, woodpiles, basements, garages, closets, in cardboard boxes with clothing, shoes and other stored items. Instead of using



Distribution of brown recluse spiders.

silk, they wander nocturnally, capturing crickets, springtails, cockroaches, firebrats and other soft-bodied insects.

## Spider Bites

Brown recluse spiders possess a type of venom, called a cytotoxin, which can be medically important to humans. This toxin has the potential to inflict injury to the victim and be dangerous to the very young, old and immunocompromised if bitten. However, spider bites are quite rare and only 10 percent of bites ever need medical attention.

Doctors commonly misdiagnose mysterious wounds and painful sores as spider bites, overlooking approximately 40 different conditions (i.e. bacterial, viral or fungal infections, drug reaction, insect bites, tick-borne illnesses, poison ivy, chemical burn, skin cancer, etc.). There are typically no witnesses or spider body (dead or alive) to confirm a wound was the result of a spider bite.

Spiders do not require a blood meal to survive or lay eggs, unlike blood-feeding pests. There is no benefit for them to bite humans, so they avoid using

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their venom except as defense. In the instances when bites were confirmed, spiders were trapped in clothing, bedding or shoes and contact was made.

## **Integrated Pest Management**

Spiders are difficult to control with chemicals alone because they are able to avoid contact with treated surfaces. They can also go long periods of time without feeding, so by the time they do leave

their hiding areas, the chemical may have little toxicity left.

Non-chemical measures of control include the following: reduce clutter in and around the building, eliminate cardboard as storage containers, pull bed away from the wall, remove bed skirt and blanket touching the floor, shake clothes and shoes before wearing, look before reaching into storage containers, vacuum frequently and use of sticky traps to trap wanderers.

## **Summary**

It is important to understand spiders are a part of the food web and spying an occasional spider is just an indication there are prey items nearby. If a brown recluse spider is found in the building where you work, play or live, stay calm. Take the necessary precautions to avoid bites. If you have been bitten by a spider, catch it (dead or alive) and take it to your local Extension office to have it identified.