

Brown Recluse

RICHARD VETTER



Perception is all, and it is often visceral. Try convincing someone who fears flying that the drive to the airport is actually much more dangerous. Or try to launch a calm, data-driven discussion about guns or climate change. Then there are spiders and snakes. The few that are genuinely harmful make far too many humans fear all of them. It doesn't help that most of us are terrible at identification. I can't tell you how many times I've had friends kill snakes they swore were copperheads when they weren't. And don't get Richard Vetter started on the brown recluse spider.

On second thought, let's do. Vetter, an entomologist with the University of California at Riverside, has been known to rail — loud, long and in print — about the misinformation that drives our reaction to spiders.

"Mostly what pest control operators are dealing with," he says, "is a psychological problem rather than an entomological one. Folks want spiders out of their homes because of fear and/or repulsion. Because of the rare occasion of a deleterious venom incident, almost all spiders are lumped into the category of 'squish first and ask questions later.'"

South Carolinians are not exempt. There are many

"brown recluse spider bites" reported in the Palmetto State each year, but according to a study published in the *Journal of the American Board of Family Medicine* that was conducted by Vetter, Dr. Ivar Frithsen, formerly of the Medical University of South Carolina, and Ian Stocks, formerly of Clemson University's Department of Entomology, Soils and Plant Sciences, the number of injuries diagnosed as brown recluse spider bites each year by physicians in South Carolina is far greater than the number of brown recluses ever collected in the state, which is outside their normal range, the southern Mississippi River Valley.

"The number reported just didn't make sense," says Frithsen. There have been just a few dozen specimens collected since 1953, in Abbeville, Charleston, Chester, Greenville, Lexington and Pickens counties. Still, many people are mistakenly convinced they've seen or been bitten by one.

"There just seems to be some ecological reason why we don't find them in Florida or South Carolina or in the Smoky Mountains," says Stocks. "When we do, they've usually been brought in with household goods or commercial products from places within the known range. Maybe it's competing species or climate, but they seem unable to set up naturally occurring populations

Brown Recluse

Loxosceles reclusa (slant-legged recluse)

Description: 3/8" body; 1-1/4" including legs. Light to dark brown. Three sets of eyes set in a semicircular pattern.

Range and Habitat: Much of the lower Mississippi Valley. Few reported instances in South Carolina.

Reproduction: Female stores sperm from male and later lays about 50 tiny yellow eggs in silken sac. Spiderlings emerge within weeks and undergo several molts.

Viewing Tips: Rare in South Carolina. May be found in dry, out-of-the-way places like sheds and attics.

[here] over a long period."

Still, people often report seeing them where they aren't.

"They're often living in fear of every spider they see and may use expensive and unnecessary chemical treatments to get rid of them," says Clemson Professor of Entomology and Extension Specialist Eric Benson. "And if a wound isn't a brown recluse spider bite, but a doctor thinks it is, people may get the wrong treatment."

Even where they are plentiful, bites are rare.

"Spiders typically bite only once as a last ditch defensive effort before they are crushed between flesh and some object," says Vetter.

They are indeed reclusive, and most documented bites occur when people put on clothing in which a brown recluse is hiding, roll over on one in bed, or move or dig into boxes or bags in attics, garages and sheds. They can't bite through clothing, and often the bite isn't felt.

"Their fangs are very small," says Stocks, "and their venom probably does not contain enough of the chemicals that fire our nerve signals right away, like with a yellow jacket or bee sting."

So why are they so often blamed for damage they didn't do?

"There are a lot of medical conditions that can look like a spider bite," says Frithsen, "especially the staph infections known as MRSA's. People get one and figure it's a spider bite, because that's what they've heard about. Physicians also appear to erroneously diagnose brown recluse spider bites."

Diagnosis is difficult unless someone witnesses the bite and collects the spider, and there are other spiders with roughly fiddle-shaped markings, the field mark we've been taught to look for. A lot depends on the amount of venom injected and the person's sensitivity to it. Some people are unaffected. For others, there's redness, swelling and burning that may spread, and the bite may blister.

Loxosceles reclusa is the most widespread of eleven recluse species native to the U.S. They seek out warm, dry places, and we're kind enough to provide them with barns, sheds, wood and rock piles, attics and basements. "Brown" is a loose concept here, as they range from yellowish through tan to chestnut. Including their legs, they're about the size of a U.S. quarter, and the best aid in identification, although you're going to need a

magnifying glass, is the fact that the brown recluse has six eyes, arranged in three groups of two, rather than the eight eyes that most spiders have.


You're most likely to encounter the male, which is, like the female, seeking live or dead insects as food, but which is also seeking the hidden females. In order to mate, the male must first convince the female, whose pheromones he has followed, that he is male and a brown recluse, rather than a meal.

The male's sperm is stored in the pedipalps, limb-like structures inside the forelegs.

Once deposited, it is kept by the female in receptacles near her ovaries, sometimes for a period of months. When the time is right, she lays about fifty tiny yellow eggs inside a sticky silken sac less than an inch in diameter and may produce several sacs over a period of months. Depending on temperature, it can take four to six weeks for the young to emerge from the egg sac. Newly hatched white spiderlings go through several molts, gradually assuming adult coloration. They reach adult size in about a year.

Outdoors, they are likely found in caves or under rocks or overhangs. They have easy access to most homes through even the tiniest cracks in foundations or around doors, in vents or under eaves or soffits. Clutter is tailor-made for them. They make small "retreat" webs rather than prey-capturing webs, spinning silk from fingerlike spinnerets at the tip of the abdomen. They can survive months without food or water and tolerate bitter cold or heat.

This is not the kind of creature we're used to staking out and enjoying, close up or at a distance. We're generally interested in ridding them from our lives, although again, according to Stocks, there is a great deal of "misdirected fear" at work when it comes to that. "The world of things to worry about is large enough without adding to it," he adds.

It's worth knowing that a) they're rare here, and that b) they are nowhere near the threat we've heard them to be. We could do worse than to take normal precautions and appreciate these much-maligned creatures if presented with the rare opportunity to see one. 

— Rob Simbeck

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