



Topic of the Month Spider Myths



Figure 1: Brown Recluse Spider – Not established in Florida



Figures 2 and 3: Left - view of the BRS eye pattern. Notice three pairs of eyes
Right – view of the wolf spider eye pattern. Notice four pairs of eyes.



Figure 4: Wolf Spider. Notice four pairs of eyes.

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Halloween is just around the corner, so this issue addresses a fear of many people, the Brown Recluse Spider.

Brown Recluse Spider

There are only a few spiders that are considered medically important, but there is really only one spider that seems to cause true fear in most people, the brown recluse spider (BRS). The good news for us is that the brown recluse is *not* established in Florida but myths about this spider have been perpetuated, making it the default culprit for unexplained skin lesions.

A study:

.....but they are perceived to exist throughout the United States. This statement is from the title of a forum article published in the last year (Vetter, R. 2005. J. Med. Entomol. 42(4): 512-521). Vetter announced a “Brown Recluse Challenge” (spiders.ucr.edu) in May 2000, offering to identify any spider from anywhere in the U. S. that was believed to be a brown recluse spider (BRS). Samples were received from 49 states, Delaware being the only state without a submission. The study ended in January 2005. During that time, he received 1,773 arachnid samples. Of the samples he received, only 18.3% (n=324) were BRS. Additionally, all but four came from states where the BRS was established.

Florida is considered a state *outside* the known distribution of the BRS. Florida residents submitted 129 samples (7.3% of the total) and none of them were BRS. Georgia falls into the category of states where less than half of its land area is known to contain BRS. Georgia, had 32 submissions, with 1 being a BRS. These numbers are in contrast to states where the BRS is known to be endemic. Missouri residents had the highest rate of spiders identified as BRS (89.2%). They submitted 65 samples and 58 of them were BRS.

Misdiagnosis

There seems to be a knee-jerk reaction from those in the medical community that any “idiopathic dermal necrosis” (death of skin tissue, cause unknown) should be attributed to “spider bites.” The diagnosis often happens in the ABSENCE of a spider specimen. In a true IPM program, you wouldn’t treat an area unless you had evidence of an infestation of some sort. Yet, doctors have confirmed people’s fears in the *absence* of the spider specimen (and without puncture marks). Many reports of the “numbers of spider bites” in Florida from “credible” websites also neglect to emphasize that the reports are based on SUSPECTED or “reported”, not CONFIRMED or “verified” bites. Also, many medical diagnoses of spider bites have been proven to be incorrect.

Here are some facts about the Brown Recluse Spider. They:

- Are **not** an aggressive species
- Are active in temperatures from 45 to 110°F.
- Prefer to remain hidden in areas of low moisture (probably not anywhere in Florida!).
- Feed on insects that get caught in their web
- Can live up to two years in captivity
- The scientific name of the BRS is *Loxosceles reclusa*. There are about 13 other *Loxosceles* spiders in the genus.
- Have only been collected from 5 Florida counties **over the past 100 years**. The specimens (usually one) could be traced to a recent move from another area of the US.

Identifying the BRS.

- The web of BRS is irregular in pattern.
- Female body is about ¼ to ½ inch long. When the leg span is included, it is about 1 inch in diameter. The males are about half the size of the female.
- Spider bodies are generally divided into two parts: Cephalothorax: the fused head and thorax, and Abdomen
- A violin or fiddle outline can be seen on the cephalothorax (Fig. 2).
- The cephalothorax also contains *three* pairs of eyes.
- The BRS (Fig. 1) is commonly mistaken for the wolf spider (Figs. 3 and 4), but the wolf spider has *four* pairs of eyes on the cephalothorax.

Medical conditions that can be confused with a spider bite include:

- Bacterial infections such as *Staphylococcus*, *Streptococcus* and cutaneous anthrax.
- Viral infections such as *Herpes* simplex, including shingles.
- Fungal infections
- Vascular disorders
- Reactions to drugs
- Arthropod induced symptoms, including Lyme disease and Rocky Mountain Spotted fever
- Poison ivy
- Chemical burns

Finally:

The BRS is medically important in other states, but the probability of an infestation in Florida is extremely low. It is possible that BRS can be brought in while moving boxes from an area in the US where it is known to be established. But as one spider expert put it, the occasional BRS should not be cause for alarm.

Mystery of the month . . .



Question: Is this reaction from a spider bite?

The camp leaders thought so.

The nurse thought so.

The ER doctor thought so and wanted to prescribe Zyrtec, Benadryl and antibiotics.

Answer: There were no puncture wounds. This was NOT a spider bite. After the pediatrician prescribed an application of a corticosteroid, the swelling immediately started to go down and no other action had to be taken.

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