

# Pest Alert

FDACS-P-01695

Pest Alert updated 1-December 2009

**Florida Department of Agriculture and Consumer Services, Division of Plant Industry**  
**Adam H. Putnam, Commissioner of Agriculture**

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## Venomous Spiders in Florida

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In Florida, only two main types of venomous spiders occur: widow spiders and recluse spiders.

Three species of widow spiders are native to Florida, and a fourth species has been introduced. **No species of recluse spiders are native to Florida**, but three species have been intercepted, and occasionally have established populations in single buildings at scattered locations.

Both types of spiders tend to be found in similar places, which is in or under objects where their presence is not necessarily obvious. In the interest of safety, it is recommended that people engaged in activities where they cannot see where their hands are being placed (such as lifting boards or firewood, or reaching into storage boxes) should wear gloves to prevent being bitten by a hidden spider. Also, clothing--especially if unused for a considerable time--should be checked before wearing, as a spider may have taken up residence within it.

### WIDOW SPIDERS

The widow spiders, genus *Latrodectus* (family Theridiidae), are worldwide in distribution. Females range from 8-15 mm in body length; males are smaller, sometimes very small (2 mm). Most have globose, shiny abdomens that are predominantly black with red markings (although some may be pale and/or have lateral stripes), with moderately long, slender legs. These spiders are nocturnal and build a three-dimensional tangled web, often with a conical tent of dense silk in a corner where the spider hides during the day. In nature, most species are found under rocks and logs, but they readily adapt to human-altered environments, where they are most commonly found in outbuildings (sheds, barns, privies), water meter holes, nursery cans, and under any item or structure (e.g., barbeque grill, slide, sand box) that has been undisturbed for a lengthy period. Formerly, most bites by black widows (almost all by female spiders) occurred in outhouses, but presently, *Latrodectus* bites occur most frequently when the spider is trapped against human skin, either by reaching under objects where the spider is hiding or when putting on clothing, gloves or shoes containing the spider. Widow spiders are generally very timid and only bite in self-defense when they accidentally contact humans.

Bite symptoms are systemic, spreading through the lymphatic system, and usually start about 1-3 hours after the bite. The most common symptoms are intense pain, rigid abdominal muscles, muscle cramping, malaise, local sweating, nausea, vomiting, and hypertension. If left untreated, *Latrodectus* bite symptoms usually last 3-5 days. Calcium gluconate and/or antivenin may be administered to relieve or counteract symptoms.

### There are four species of widow spiders in Florida:

- *Latrodectus mactans*, the southern black widow
- *Latrodectus variolus*, the northern black widow
- *Latrodectus bishopi*, the red widow
- *Latrodectus geometricus*, the brown widow

The southern black widow is the most common of the native widow spiders. It is the epitome of the classic widow spider, occurring in all the normal widow spider habitats. It is a glossy jet black all over, including body and legs. The only red marks are the bright red hourglass mark on the underside of the abdomen, and a red spot just behind and above the



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spinnerets. It occurs throughout the state.

The northern black widow is very similar to the southern black widow, except its hourglass mark is broken into 2 triangle-shaped markings, and there is a row of red spots down the middle of the back. It has only been reported from the Florida panhandle. Its web is a large tangled mass placed at the tip of a low tree branch.

The red widow has a black abdomen with a single flattened red triangle on the underside. On the back are rows of red spots, each of which are surrounded by a yellow circle. The head region and legs are red-orange in color. The web begins as a typical tangle web in the interior of a small palm or palmetto, but then continues as a sheet of silk onto one of the lateral open leaves. This species is endemic to Florida. It occurs in sandpine scrub from Marion County to Martin County.

The brown widow is highly variable in color. It may be almost white to almost black. Typically, it is a light to medium brown, with an orange hourglass marking on the underside of the abdomen. The leg segments are banded, with one half of each segment lighter in color than the other half. The back often has a row of white spots (rarely orange or light blue), and there are a few white stripes on each side. Dark individuals lack these markings and are difficult to distinguish from black widows. If an eggsac is present, this is the best identifying characteristic. Brown widow eggsacs are tan, spherical, and have many small tufts of silk sticking out from them. They resemble a 'sandspur.' The other widows make white, smooth eggsacs that tend to be pear-shaped. The brown widow is an extremely timid spider which has rarely been reported to bite. However, it is an introduced species and is the most human-adapted of the species occurring in Florida. Its webs may occur anywhere there is sufficient space to make one. It may be extremely abundant on houses and other man-made structures (e.g., barns, fences, guard rails, bridges). It reproduces frequently and disperses rapidly, making it nearly impossible to control.

## **RECLUSE SPIDERS**

The recluse spiders (also known as violin, fiddleback, or brown spiders) belong to the genus *Loxosceles* (Family: Sicariidae). These spiders are found worldwide, most commonly in the tropics, with some species reaching temperate latitudes. Recluse spiders are medium-sized (6-12 mm body length), with uniformly-colored abdomens that can vary from a tan to dark brown. In many species there is a characteristic darkened violin-shaped pattern which occurs on the front half of the head region. However, other unrelated spiders may have a pattern which can easily be mistaken for the violin.

A more useful method of determining recluse spiders is by using the eye pattern. Most spiders have eight eyes arranged in two rows of four, but recluse spiders have six eyes arranged in three pairs (dyads), with one anterior dyad and a lateral dyad on each side. Some related spiders, particularly spitting spiders (which have a unique domed head region), have a similar eye pattern, but these are otherwise different. Recluse spiders make a protective silken retreat, but they are usually hunters that leave the web in search of prey. They can be abundant in human structures. Similar to widow spiders, recluse spiders usually bite only when they become trapped next to the victim's skin. Many wounds are erroneously attributed to this spider, but there are multiple other causes of necrotic wounds (see Related Links below).

Bites occur either when sleeping humans roll onto the spider or put on clothes into which the spider has crawled. Recluse bites range in intensity from no noticeable effect to severe necrosis. Typical symptoms are as follows: Symptoms start 2-6 hours after the bite. Blisters frequently appear at the bite site, accompanied by severe pain and pronounced swelling. A common expression is the formation of a reddish blister, surrounded by a bluish area, with a narrow whitish separation between the red and blue, giving a 'bull's-eye' pattern. By 12-24 hours, it is usually apparent if a *Loxosceles* wound is going to become necrotic because it turns purple in color. If necrotic symptoms do not express by 48-96 hours, then they will not develop. If the skin turns purple, it will then turn black as cells die. Eventually the necrotic core falls away, leaving a deep pit that gradually fills with scar tissue.

### **Three species of recluse spiders have been found in Florida:**

- *Loxosceles reclusa*, the brown recluse
- *Loxosceles rufescens*, the Mediterranean recluse
- *Loxosceles laeta*, the Chilean recluse

The brown recluse has been found in Alachua, Bay, Duval, Jefferson and Leon counties. It typically has a dark violin-shaped mark, although the color is variable.

The Mediterranean recluse has been found in Dade, Escambia, Orange and Osceola counties. It is very similar in appearance to the brown recluse, but the violin mark tends to be lighter in color and has parallel sides.

The Chilean recluse has only recently been found in Florida, in Polk County. It is the largest and most dangerous of the recluse species. The violin mark of this species is dark and wider in front than behind. DPI Pest Alert on the Chilean

recluse (<http://www.doacs.state.fl.us/pi/enpp/ento/loxoscel.html>)

More information about recluse spiders in Florida can be found in this citation Entomology Circular 406 (<http://www.fl-dpi.com/enpp/ento/entcirc/ent406.pdf>).

**OTHER SITES:** There are many Web sites devoted to spiders. A few are listed here.

- University of California
  - Spiders and Other Arachnids (<http://spiders.ucr.edu/>)



*Latrodectus mactans*, the southern black widow



*Latrodectus bishopi*, the red widow



*Latrodectus geometricus*, the brown widow



*Latrodectus geometricus*, brown widow egg sacs



*Latrodectus bishopi*, red widow underside





*Loxosceles reclusa*, the brown recluse



*Loxosceles reclusa*, brown recluse (close up of eyes)



*Loxosceles laeta*, the Chilean recluse  
(female)



*Loxosceles laeta*, the Chilean recluse  
(male)

Photo credit: Division of Plant Industry (Dr. G. B. Edwards, Jeffery Lotz), University of Florida (Dr. Lyle Buss, Dr. James L. Castner).