

Spiders¹

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There are about 1000 species of spiders in the United States. They live everywhere, even inside homes and buildings. Some species are able to bite humans and inject a venom into the skin. The brown recluse and the widow spiders are considered venomous spiders; however, most spiders are not harmful to man.

Biology and Description

All spiders have eight legs and two body regions (Figure 1). They are predators, feeding primarily on insects and other arthropods. When feeding, spiders inject a digestive fluid into their prey, then suck up the digested food. They can survive for long periods of time without feeding. Some spiders have been kept alive for over two years without feeding.

Because spiders feed entirely on living insects or other animals, they may actively search for their prey, hide and wait for them to pass, or build webs to trap flying insects. Most web-spinning spiders build and abandon several webs per year. The webs are produced by glands on the spider's abdomen. The silk is a liquid which hardens when exposed to the air.

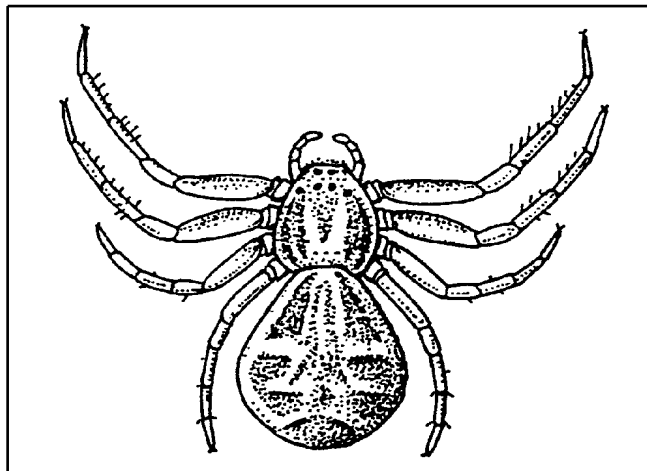


Figure 1. Crab spider (actual size 1 1/2").

Silk is used to construct webs, safety lines, and egg sacs, and is used as parachutes for traveling long distances.

Spiders reproduce by laying eggs in a silken egg sac. The egg sac is either carried around by the female or hidden in the web. Egg sacs of large spiders may contain several hundred eggs. The eggs hatch in about 2-3 weeks after they are deposited. Most young spiders mature to adults in about one year. Male and female spiders live separately and only come together

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to mate. Males are usually smaller and color-marked differently than females.

Almost all spiders found in Florida are harmless to humans and most species do not attempt to bite unless they are provoked. Spiders usually remain hidden and do not seek out and bite humans. Most spiders cannot penetrate the skin of a human with their fangs (Figure 2). Almost all spiders possess venom, but only a few are considered dangerous to humans.

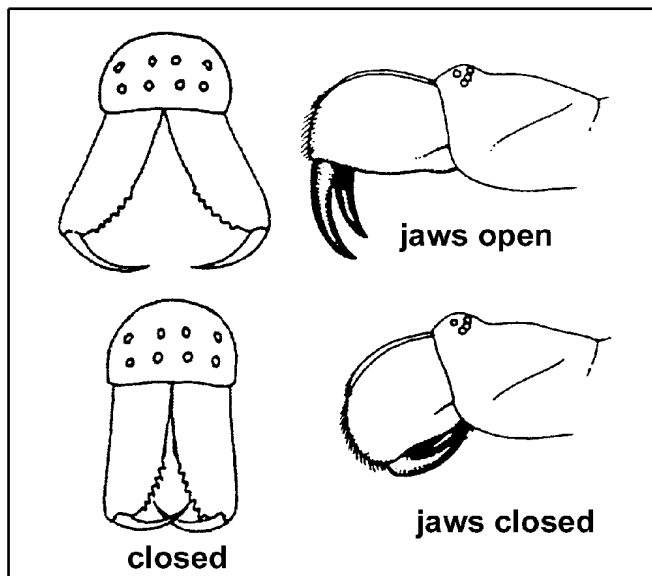


Figure 2. Fangs of the most common spiders.

Spiders are of interest since some invade homes, others are considered poisonous, and some larger species are raised as pets.

House Spiders

Several species of spiders enter houses and become a nuisance to the homeowner. Many people simply dislike spiders and cannot tolerate their presence. When numerous, spiders are annoying because they construct webs. Abandoned webs collect dust, resulting in cobwebs. However, spiders are considered beneficial because they feed on insect pests and other spiders.

Newly hatched spiders are tiny and easily enter homes through screens or around loose fitting doors and windows. Careful screening will keep larger spiders out of homes. If insects they eat are not plentiful, spiders are less likely to infest a home.

Non-Chemical Control of Spiders

Non-chemical control of spiders is usually quite effective in reducing spider populations. Outside lights should not be left on at night. Large numbers of flying insects attracted to lights cause spiders to be numerous around garages and under eaves. Trash, lumber piles, bricks, weeds, and outside structures are good breeding places for spiders and should be cleaned up. Inside the home spider webs should be brushed down. The egg sacs should be destroyed to prevent hundreds of young spiders from emerging. Vacuum cleaner attachments may be used to clean walls, and the collected debris should be destroyed.

Chemical Control of Spiders

Chemical control of spiders is difficult outdoors because web spinning spiders do not tend to contact treated surfaces. Table 1 lists recommended insecticides that are used in household pest control.

Inside the house, space sprays containing pyrethrins or pyrethroids are effective in killing spiders. Space sprays have little residual activity and should be applied when spiders are noticed. When spraying enclosed areas, care should be taken so spiders agitated by the spray do not drop onto the person doing the spraying. Repeat the treatment in 4 weeks to kill young spiders that hatch from eggs.

Dust formulations can be used in crawl spaces, attics, and utility areas to provide long-term protection. The insecticidal dusts tend to cling to the spider webs for long periods of time. When spiders chew their webs to recycle the silk they consume the toxicant and die.

Poisonous Spiders

It is important to save any biting spider so it can be identified later. Most spider bites are not likely to be dangerous, but medical care and advice should be sought in each case.

Widow Spiders

Four species of widow spiders occur in Florida: the southern black widow, the northern black widow, the red widow and the brown widow. All these

species are rather large spiders about 1 1/2 inches long with the legs extended.

The southern black widow and the northern black widow are a shiny, jet-black color. The southern black widow (Figure 3) has a red hourglass marking on the underside of the abdomen and another red spot at the tip end of the abdomen. The northern black widow has a row of red spots located in the middle of its back and two reddish triangles resembling an hourglass on the underside of the abdomen. The red widow spider has a reddish orange head-thorax and legs with a black abdomen. The abdomen may have a dorsal row of red spots with a yellow border. The red widow lacks a complete hourglass under the abdomen but may have one or two red spots. The brown widow spider varies in color from gray to light brown or black. The abdomen has variable markings of black, white, red, and yellow. On the underside of the abdomen it has an orange or yellowish-red hourglass marking.

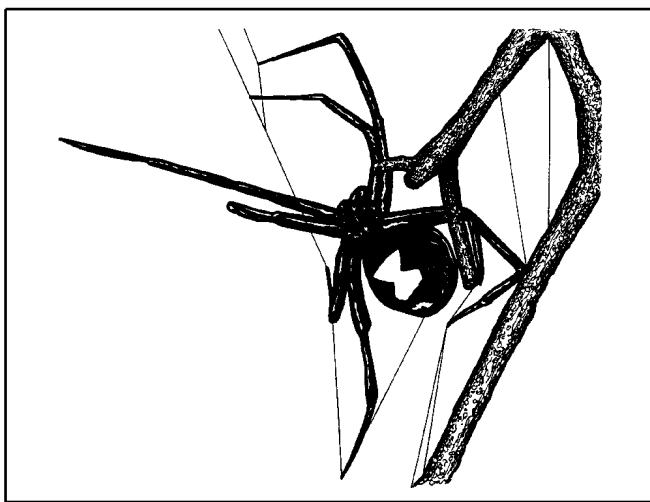


Figure 3. Southern black widow.

The life cycle of the widow spiders are all similar. The female lays approximately 250 eggs in an egg sac which is about 1/2 to 5/8 inch in diameter. The eggs hatch in 20 days and remain in the egg sac from about 4 days to 1 month. The young spiders then molt to the second stage and begin feeding. As the young spiders grow, they construct a loosely woven web and capture progressively larger prey. Male spiders molt 3 to 6 times before maturing. The females molt 6 to 8 times and occasionally eat the males after mating. In Florida all the widows except the northern black widow breed year-round.

The southern black widow is the most widespread widow spider in Florida. It is usually found outdoors in protected places such as in hollows of stumps, discarded building materials, rodent burrows, storm sewers, and under park benches and tables. Around houses, the southern black widow is found in garages, storage sheds, crawl spaces under buildings, furniture, ventilators, and rainspouts. The northern black widow is found west of Tallahassee. It is mainly found in forests with irregular, loosely woven webs 3-20 feet above the ground. The red widow spider makes its web off the ground in palmettos habitats and has only been found in sand-pine scrub associations. The web retreat is characterized by the rolled palmetto frond, and the web is spread over the fronds. The brown widow is established pretty much throughout the Florida peninsula. It is most common on, but not restricted to, buildings. They are also found on bridges and fences as well. The egg sac looks like an old naval mine or a sandspur seed. The spiders are extremely timid; the only bites reported have resulted from a spider being accidentally trapped against the victim's body. They reproduce rapidly, and one female can produce up to 18 egg sacs. Once encountered, a spider is indicative of a widespread population which is extremely difficult, if not impossible given available control methods, to eradicate.

Like most spiders, the widow spiders are shy and will not bite unless aggravated. All four species have a strong venom. The southern black widow is involved in most poisonous spider-bite cases in Florida. The bite of the black widow is not always felt, but usually feels like a pin prick. The initial pain disappears rapidly leaving a local swelling where two tiny red spots appear. Muscular cramps in the shoulder, thigh, and back usually begin within 15 minutes to 3 hours. In severe cases, pain spreads to the abdomen, the blood pressure rises, there is nausea and profuse sweating, and difficulty in breathing occurs. Death may result from the venom, depending on the victim's physical condition, age, and location of the bite. However, death seldom occurs if a physician is consulted, and treatment is prompt.

If you suspect that a widow spider has bitten you, capture the specimen for identification and immediately consult a physician. For additional

information, your doctor may wish to contact your local poison control center.

Brown Recluse

The brown recluse spider (Figure 4) is not an established species in Florida, but physicians have diagnosed its bites. The brown recluse spider is recognized by having a dark violin-shaped mark located behind the eyes. There are 3 pair of eyes on this species while most spiders have 4 pair. The brown recluse is a medium-sized spider about 1/4 to 1/2 inch in length.

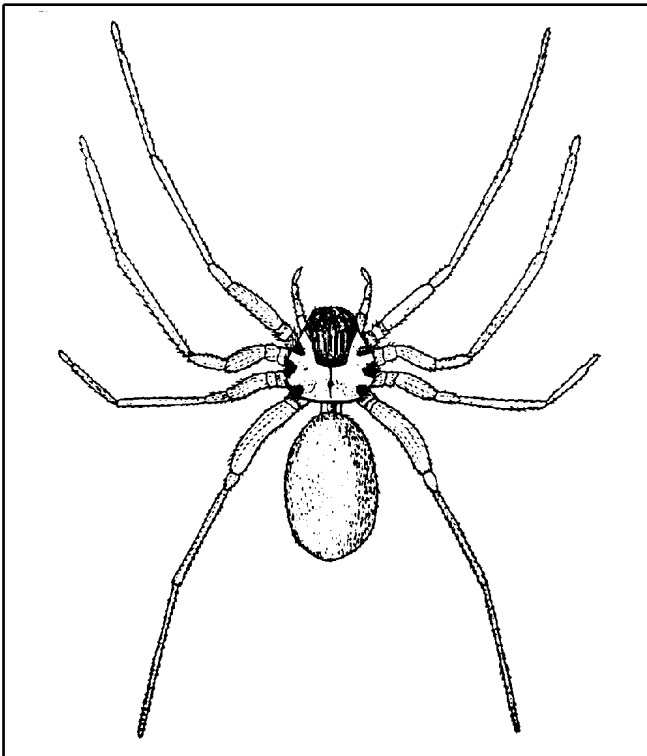


Figure 4. Brown recluse spider.

The brown recluse spider's natural habitat is along the Mississippi River valley, especially in northwestern Arkansas and southern Missouri. Because it can live in old boxes and furniture, it is easily transported by humans. Specimens of brown recluse spiders have been found in Florida, but there is no indication that it is able to survive and reproduce in Florida's environment.

The brown recluse spider is a shy species that bites humans when trapped in clothing or rolled onto when people sleep in bed. Persons bitten by the brown recluse usually do not feel pain for 2-3 hours. A sensitive person may feel pain immediately. A blister

arises around the area of the bite. The local pain becomes intense with the wound sloughing tissue often down to the bone. Healing takes place slowly and may take 6 to 8 weeks. If the bite of a brown recluse spider is suspected, collect the spider and consult a physician immediately.

Tarantulas

Tarantulas (Figure 5) are not found naturally in Florida; however, some people keep tarantulas as pets. The term "tarantula" refers to about 300 species of spiders some of which can weigh 2 to 3 ounces and have a 10 inch leg span. Tarantulas are sluggish, will not bite unless provoked, and are not poisonous. However, the bites of tarantulas can be quite painful since the fangs are large and cause considerable mechanical damage to the victim.

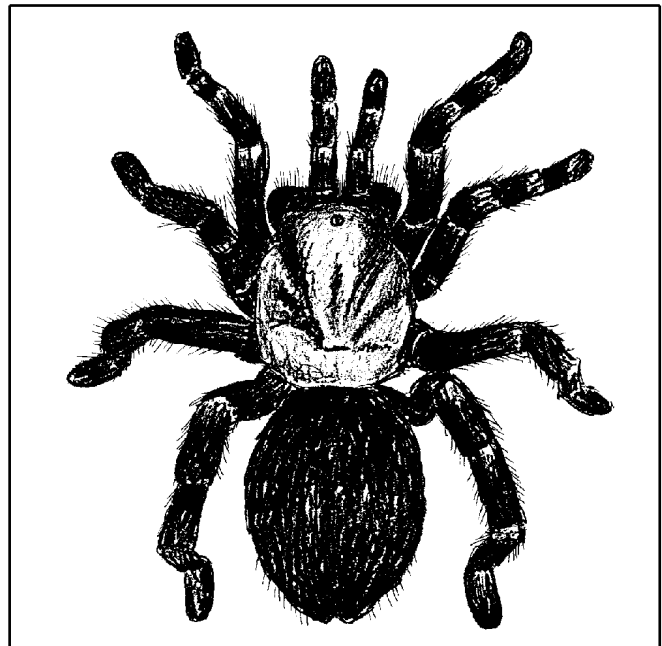


Figure 5. Tarantula.

Many tarantulas have a dense covering of stinging hairs on the abdomen to protect them from enemies. These hairs can cause skin irritation for humans. Most tarantulas that are desirable as pets have a bald spot on the abdomen and do not have stinging hairs.

Tarantulas usually live in burrows in the ground. These burrows may be dug by the spider or may be those abandoned by rodents. The tunnels are lined with silk and form a webbed rim at the entrance which conceals it. The females deposit 500 to 1000

eggs in a silken egg sac and guard it for 6 to 7 weeks. The young spiders remain in the burrow for some time after hatching and then disperse by crawling in all directions. Tarantulas do not occur in colonies since they do eat each other.

Tarantulas may live for many years. Most species require 10 years to mature to adults. Females kept in captivity have been known to live more than 25 years and have survived on water alone for 2 1/2 years. Females continue to molt after reaching maturity and therefore are able to regenerate lost legs. Males live for only one year or less after maturity.

A tarantula can be kept as a house pet. A terrarium (an empty aquarium) with a sandy bottom provides an ideal habitat. Tarantulas can be fed live crickets or other insects.

Table 1. Products labeled for indoor crack and crevice or surface treatment of spiders.^{1,2}

Common Name	Homeowner Trade Name ¹	Commercial Trade Name ¹
Acephate		PT Orthene Crack & Crevice Pressurized Residual
Beta-Cyfluthrin	Bayer Power Force Carpenter Ant & Termite Killer Plus	
Bifenthrin		Talstar F Insecticide/Miticide Talstar Termiticide/Insecticide
Boric Acid		PT Perma Dust Pressurized Boric Acid Dust
Cyfluthrin	Bayer Advanced Home, Home Pest Control Indoor & Outdoor Insect Killer	PT Cy-Kick Crack & Crevice Pressurized Residual PT Cy-Kick CS Controlled Release Cyfluthrin PT Cy-Kick CS Pressurized Crack & Crevice Residual Tempo 20 WP Tempo SC Ultra
Cypermethrin		Cynoff EC Cynoff Power Spray Insecticide Cynoff WP Cynoff WSB Prevail FT Termiticide
Deltamethrin		DeltaDust Suspend SC Insecticide
Imiprothrin, Deltamethrin	Raid Max Roach Killer 7	
Lambda Cyhalothrin		PT 221L
Permethrin		Dragnet SFR Termiticide/Insecticide
Prallethrin		PT ULD SPY-300
Prallethrin, Esfenvalerate, MGK-264 synergist	Ortho Roach, Ant & Spider Killer	
Propetamphos		Catalyst
Pyrethrins		PT Tri-Die Silica & Pyrethrum Dust PT ULD BP-300
Pyrethrins and Others		PT 565 Plus XLO PT Microcare CS Controlled Release Pyrethrum PT Microcare Pressurized Pyrethrum Capsule Suspension PT Tri-Die Pressurized Silica & Pyrethrin Dust PT ULD BP-100
Pyrethrins, MGK-264, Permethrin	Ortho Ant-B-Gon	
Pyrethrins, PBO		PT P.I. Contact Insecticide PT ULD BP-50
Pyrethrins, PBO, Silica Gel		Drione
Pyrethrins, PCO		Pyrenone 50

Table 1. Products labeled for indoor crack and crevice or surface treatment of spiders.^{1,2}

Common Name	Homeowner Trade Name ¹	Commercial Trade Name ¹
Tetramethrin, Phenothrin	Ortho Flying Insect Killer 1	
Tralomethrin		Saga WP Insecticide
¹ Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 2. Products labeled for indoor space treatment of spiders.¹

Common Name	Homeowner Trade Name ¹	Commercial Trade Name ¹
Prallethrin		PT ULD SPy-300
Pyrethrins		PT ULD BP-300
Pyrethrins and Others		PT 565 Plus XLO PT Microcare CS Controlled Release Pyrethrum PT Pro-Control PT Pro-Control Plus PT ULD BP-100
Pyrethrins, PBO		PT P.I. Contact Insecticide PT ULD BP-50 Turbocide Gold with Pyrenone
Pyrethrins, Permethrin	Ortho Indoor Insect Fogger	
¹ Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 3. Products labeled for voids and attic treatment of spiders.¹

Common Name	Homeowner Trade Name ¹	Commercial Trade Name ¹
Acephate		PT Orthene Crack & Crevice Pressurized Residual
Boric Acid		PT Perma Dust Pressurized Boric Acid Dust
Deltamethrin		DeltaDust Suspend SC Insecticide
Pyrethrins		PT Tri-Die Silica & Pyrethrum Dust
Pyrethrins and Others		PT 565 Plus XLO PT Tri-Die Pressurized Silica & Pyrethrin Dust
Pyrethrins, PBO		PT P.I. Contact Insecticide
¹ Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 4. Products labeled for outdoor barrier treatment of spiders.¹

Common Name	Homeowner Trade Name ¹	Commercial Trade Name ¹
Acephate		PT Orthene Crack & Crevice Pressurized Residual
Beta-Cyfluthrin	Bayer Power Force Carpenter Ant & Termite Killer Plus	
Bifenthrin	Ortho Home Defense Perimeter & Indoor Insect Killer Ortho Termite & Carpenter Ant Killer	Talstar F Insecticide/Miticide Talstar Termiticide/Insecticide
Carbaryl	Ortho Bug-B-Gon Multipurpose Insect Killer Ready-to-Use Granules	
Cyfluthrin	Bayer Advanced Home, Home Pest Control Indoor & Outdoor Insect Killer Bayer Advanced Lawn & Garden Multi-Insect Killer Bayer Power Force Ant Killer Ready-to-Use Granules Bayer Power Force Multi-Insect Killer Ready-to-Spray Bayer Power Force Multi-Insect Killer Ready-to-Spread Granules	PT Cy-Kick CS Controlled Release Cyfluthrin PT Cy-Kick Crack & Crevice Pressurized Residual PT Cy-Kick CS Pressurized Crack & Crevice Residual Tempo 20 WP Tempo SC Ultra
Cypermethrin		Cynoff EC Cynoff Power Spray Insecticide Cynoff WP Cynoff WSB Prevail FT Termiticide
Deltamethrin		DeltaDust
Esfenvalerate	Ortho Bug-B-Gon Multipurpose Insect Killer Ortho Bug-B-Gon Multipurpose Insect Killer Ready-to-Use	
Lambda Cyhalothrin		PT 221L
Malathion	Ortho Malathion 50 Plus Insect Spray	
Permethrin	Ortho Bug-B-Gon Multipurpose Insect Killer Ready-Spray	Astro Insecticide Dagnet SFR Termiticide/Insecticide
Prallethrin, Esfenvalerate, MGK-264 synergist	Ortho Roach, Ant & Spider Killer	
Pyrethrins		Kicker PT Tri-Die Silica & Pyrethrum Dust
Pyrethrins and Others		PT Microcare CS Controlled Release Pyrethrum PT Microcare Pressurized Pyrethrum Capsule Suspension PT Tri-Die Pressurized Silica & Pyrethrin
Pyrethrins, MGK-264, Permethrin	Ortho Ant-B-Gon	
¹ Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 5. Products labeled for outdoor broadcast treatment of spiders.¹

Common Name	Homeowner Trade Name¹	Commercial Trade Name¹
Beta-Cyfluthrin	Bayer Power Force Carpenter Ant & Termite Killer Plus	
Bifenthrin	Ortho Lawn Insect Killer Granules	Talstar F Insecticide/Miticide Talstar Termiticide/Insecticide
Cyfluthrin	Bayer Advanced Home, Home Pest Control Indoor & Outdoor Insect Killer	Tempo 20 WP Tempo SC Ultra
Esfenvalerate	Ortho Bug-B-Gon Multipurpose Insect Killer	
Malathion	Ortho Malathion 50 Plus Insect Spray	
Permethrin		Dragnet SFR Termiticide/Insecticide
¹ Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.		