



Bug-Wise

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Spiders: This issue is devoted to four species of spiders that are commonly seen this time of year and often generate questions from clientele. Two, the black and yellow garden spider and the golden silk spider, are impressively large spiders that build large, conspicuous webs in landscape and woodland settings. These spiders are somewhat similar in appearance and are often confused with one another. The other two are the black widow and the brown widow. These two species of widow spiders seem to be more common than usual this year, especially in the southern portion of the state.

Black and Yellow Garden Spider, *Argiope aurantia* (see above picture): Garden spiders belong to the group of spiders known to as orb weavers. They occur throughout the country, including all parts of Mississippi. These spiders build large, wagon wheel-like webs with a distinct ‘zipper’, or stablimentum, in the center. They are sometimes called ‘zipper spiders’ because of this distinctive web. Mature females have a large, oval, yellow and black abdomen, and the front section of the body, known as the cephalothorax, is silver. The bodies of mature females are about an inch long and their legs span about 2 ½ inches, while males are much smaller. There are several other related species, but this is our most common.

People tend to notice these spiders in late summer and fall, after the females are fully grown, because the webs are usually built two to eight feet above the ground, or about eye level. Eggs are deposited in a round tan egg sac that is suspended from the web. Young spiderlings hatch in the fall, but spend the winter inside the egg sac.

When sufficiently disturbed, these spiders will rock rapidly back and forth on their web in a rather intimidating manner that some folks wrongly interpret as preparation for a jumping attack. Despite this behavior and their large size, these spiders are harmless. They can bite if mishandled, but they won’t go out of their way to bite, and their bite is not especially venomous. Many gardeners consider it an omen of good luck to have one of these in their landscape and others just enjoy watching them.

Golden Silk Spider, *Nephila clavipes*: This is another large orb weaver. They are often called ‘banana spiders’ and most people in south Mississippi know them by this name. Mature females range from 1 to 1 ½ inches long and have a leg span of 3 to 4 inches. The abdomen is orange or yellow with white markings and is elongate and tube-shaped; the front part of their body is silver. The legs are yellow, banded with black, and have distinctive tufts of black hairs concentrated at the joints.

Golden silk spiders suspend their webs between trees and shrubs in open woods and wooded landscapes. They can be quite numerous in the southern part of the state, and it is not uncommon to see several spiders nesting near one another, presumably sisters that developed from the same egg mass. Like garden spiders, these creatures can inflict a painful bite if mishandled, but they are not aggressive and the bite is usually not serious. Because they can be so numerous, these spiders can be a bit of a nuisance to hikers, bikers and others who work or play outside. It’s always somewhat of a shock to feel one of these large spiders crawling up the back of your neck after you have unknowingly blundered through its web.

This spider produces one of the strongest silks, and hence one of the strongest fibers, known to man. It gets its name from the golden color that the silk has in certain lighting. Golden silk spiders occur throughout the Southeast and in Central and South America. They are quite common in the southern third of the state, but it is unusual to encounter them much north of I-20. If you do encounter these spiders in the northern part of the state, we would like to know about it.

Southern Black Widow spider, *Latrodectus mactans*: Black widows are well known as the most venomous spider in North America. They are readily identified by their shiny black abdomen and the distinctive red hourglass on the underside of the abdomen. Fortunately, bites are uncommon and, with proper medical treatment, seldom fatal. These spiders occur throughout the state but, as with most animals, their populations rise and fall from year to year. Some years they are so common that there seems to be one under every rock and in every water meter. Other years they are hard to find. This seems to be a 'bumper year' for black widows in the southern portion of the state. Some folks speculate that this may be due to the large amount of debris left by hurricane Katrina, and there is no question that this provides more harborage for black widows. Fortunately, black widows do not like to nest inside homes, presumably because it is drier than they like, but they are sometimes found in basements and garages, especially if they are moist.

Southern Black widows prefer to nest in moist, secluded areas that are at or near ground level. Woodpiles, debris piles, water meters, overturned flowerpots, and similar sites are good places to find black widows. Though these spiders don't go looking for people to bite, they will attack if they are accidentally crushed against the skin or if their egg sac is threatened. Gardeners and homeowners need to be alert for black widows when cleaning up limbs and debris. Wearing gloves when doing clean up work is one of the best precautions against being bitten.

Though less common, Northern Black Widows, *Latrodectus variolus*, also occur in the state. They look much like the Southern Black Widow, but have some extra red spots on the back and the hourglass shape does not connect in the middle. They tend to nest higher off the ground than their sister species, preferring to nest in the ends of branches and in shrubs.

Brown Widow spider, *Latrodectus geometricus*: This is a tropical/sub-tropical species that now occurs in the southern part of Mississippi. This year it has been unusually abundant in the extreme southern counties of the state. Dr. David Held has received numerous calls about this spider at the Coastal Research and Extension Center and we have also received many inquiries here at MSU, all from the lower six counties. So far we have not received any specimens or inquiries from Hattiesburg north.

Brown Widows are similar to black widows in size and body shape, but are brown with white markings on the abdomen. The legs are tan with dark brown bands. Like black widows, they have an hourglass shape on the underside of the abdomen, but it is orange colored. Their egg case is somewhat distinctive. Unlike the smooth, tan, pea-sized egg sac of the black widow, the egg sac of brown widows looks more like a ball covered with spikes, or tufts, of silk.

This spider is in the same genus as the black widow and its venom is similar, but brown widow bites are generally less severe than those of black widows. Still, persons who are bitten should seek medical attention. Bites are most likely to occur when someone inadvertently sticks a hand into the web of a female guarding her egg sac or crushes a spider against a body part. Brown widows tend to nest higher off the ground and in more exposed sites than black widows and often build their webs on the sides of buildings and in carports, garages, and porches. This year we have received several complaints about heavy infestations on patios and carports.

The nesting habits and general body appearance of brown widows are similar to those of the American house spider, *Achaearenea tepidariorum*. Although American house spiders are related to the widow spiders, they are harmless. They are common in garages, carports, porches, patios, barns, and inside homes throughout the state. They can be distinguished from brown widows by the absence of the orange or yellow hourglass on the underside of the abdomen and by their egg sacs, which are smooth, rather than spikey. Don't panic and think you have an infestation of brown widows when you only have American house spiders.

Spider Control: Most people don't want or need to control garden spiders and golden silk spiders. These critters are too cool to kill. If you've just got to do it, you can kill these spiders with most labeled household insecticides, but you have to spray them directly. Most homeowners and gardeners keep a can of aerosol wasp spray handy during the summer, and any of these should work. Alternatively, you can use one of the insecticides listed below. Just be sure to read and follow the label. Using a stick to knock the web down and crushing the spider works too.

Most Mississippians are reasonably comfortable living around black widows—when they occur at normal population levels. We know the types of places where they are likely to be and exercise appropriate caution when working in such areas. Its when they have a population boom and begin to show up everywhere in the yard, and in places where we don't normally encounter black widows, that we get concerned and feel like we need to control them. Cleaning up debris and potential refuge areas is one of the most important steps in controlling black widows. Wear gloves when handling debris and be aware of the types of areas where black widows like to nest.

Widow spiders nesting around the house can be controlled with insecticide sprays. Direct sprays work best, but it is possible to get some residual control, especially with insecticides formulated as wettable powders. Brown widows nesting in garages and on patios can be controlled in this way and these treatments will also control other spiders and insects. Ready-to-use trigger pump sprays are a convenient way to treat small areas. Use a pump up hand sprayer with a properly diluted concentrate spray to treat larger areas. Be sure to read and follow label directions.

Examples of Treatments for Spider Control

Active Ingredient	Brand Name (example)
Ready-to-use sprays	
Bifenthrin (0.05%)	Ortho Home Defense Max
Cyfluthrin (0.1%)	Bayer Home Pest Control Indoor & Outdoor Insect Killer
Deltamethrin (0.02%)	Bonide Household Insect Control
Lambda-cyhalothrin (0.03%)	Spectracide Bug Stop Indoor Outdoor Insect Killer
Permethrin (0.25%)	Viper RTU
Tralomethrin (0.03%)	Schultz RTU Home Insect Killer
Concentrate Sprays (must be diluted before applying)	
Cypermethrin (40%)	Demon WP *
Cypermethrin (40%)	Cyper WP
Cypermethrin (26%)	Enforcer Overnight Pest Control Concentrate
Permethrin 10%	Hi-Yield Indoor/Outdoor Broad Use Insecticide

* Demon WP may not be available locally, but can be ordered from internet sources.

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