Bug-Wise

No. 9
September 14, 2007

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Home-invading Spiders: Although they prey on insects, and thus help control many pests, most homeowners consider spiders unwelcome pests. Most spiders produce venom and are capable of biting, but only three Mississippi species: the black widow, the brown widow, and the brown recluse, are commonly associated with serious bites to humans. Symptoms associated with the bites of most other spiders range in severity from not noticeable, to a small short-lived pin prick, to pain and swelling similar to a wasp or bee sting. Some of the spiders that are most commonly found inside Mississippi homes are briefly discussed below.

American House Spider, *Achaeranea tepidariorum*: These are the small, brown, globular-shaped spiders that build their unsightly cobwebs in the upper corners of garages, windows, and infrequently used rooms. They are one of the most commonly encountered spiders in the state, but they go largely unnoticed, primarily because they are so common. Although these spiders belong to the same family as the black widow, they rarely bite humans and are not especially venomous. They are nuisances because of their unsightly webs.

Southern House Spider, *Kukulcania hibernalis*: These are relatively large spiders, up to ¾ inch excluding the legs that build small funnel-like webs in cracks, and crevices. They occur in basements, closets, barns, storage rooms, and other areas where items are stacked and stored for long periods of time. The females have robust dark brown bodies and legs, but the area where each leg joins the body is silver-colored. The males look much different. They are light brown, long-legged and slender bodied and are often mistaken for brown recluse spiders. These spiders occasionally seek refuge in coats and other articles of clothing that are not worn for some time. They can administer a painful bite when trapped against the skin.

Wolf Spiders, *Lycosa spp*.: Wolf spiders are ground-inhabiting spiders that do not build webs, but wander about on the ground in search of prey. They are relatively large spiders, up to ¾ inch excluding the legs. Although they do not normally live inside, they often wander into garages or houses, where they usually attract attention because of their size. The most commonly encountered species is tan in color with dark brown longitudinal stripes on the back. Female spiders carry their large, round egg sacs attached to their abdomen, and newly hatched spiderlings ride about on the back of the female. These spiders can produce a sharp, pin prick-like bite when trapped against the skin, but they are not aggressive.

Jumping Spiders, *Phidippus spp*.: There are many species of jumping spiders. One of the most commonly encountered, the bold jumping spider, is black and white and about ½ inch long. These spiders do not use webs to catch a meal, but stalk their prey and then jump forward to capture it. Unlike most spiders, they prefer to hunt during the day in well-lighted areas. They do not normally live inside, but frequently wander into homes. They are capable of biting, and bites can cause local swelling, but they are usually not aggressive.

Spitting Spider, *Scytodes spp*.: Spitting spiders are often encountered in homes, especially in closets and other dark, relatively undisturbed areas. They do not build webs but slowly stalk their prey and capture it by spitting their glue-like venom onto it. Mature spitting spiders are about 1/3 inch long, excluding their long, thin legs, and are light brown with dark, writing-like markings. Like brown recluse spiders, spitting spiders have only six eyes, arranged in three pairs (most spiders have eight eyes).

Brown Recluse, *Loxosceles reclusa*: Brown recluses are sometimes referred to as 'fiddle-back' or 'violin' spiders, because of the distinct, dark fiddle-like shape on the front portion of their back (see above photo). While most spiders have eight eyes, brown recluses have only six, grouped into three pairs. Although brown recluses may live outside, they are more common in homes and other buildings, where they build their irregular webs in cracks and crevices in undisturbed areas, and some buildings can harbor heavy infestations. Brown recluses often live in basements, attics, storerooms, or closets. They often hide in crevices created by the folds of infrequently used coats, bed clothing, or other clothing, and bites often occur when such items are worn without first checking for spiders.

Although there seems to be considerable variability in individual response to bites, brown recluse bites can be quite serious, resulting in extensive localized tissue damage. The bite itself is not especially painful and may initially go un-noticed. The venom causes localized tissue death, which may slowly spread from the point of the bite. Because early treatment can lessen the effects of a bite, persons who suspect they have been bitten by a brown recluse should seek immediate medical attention. When possible, it is helpful to capture the spider that caused the bite so that it can be positively identified. See Extension Publication 2154, Spiders: Brown Recluse & Black Widow for additional information about brown recluses.

Black Widow, *Latrodectus mactans*: Female black widows are easily identified by the distinct red, hourglass shape on their usually black, shiny abdomen. There are exceptions; some specimens can be chocolate brown and some specimens may have additional red spots on the back of the abdomen. Black widows are not often encountered indoors, but are common in outdoor areas around the home, where they nest in dark, secluded areas near the ground, such as piles of wood or refuse, under steps or crawl spaces, in water meter boxes, and under infrequently used items. The web is made of strong strands of silk that are rather indistinctly organized. One or more smooth, tan sack-like egg cases are often present in the webs of mature females. Indoor infestations most often occur in garages, storerooms, or basements.

The brown widow, *Latrodectus geometricus*, is a related species that has recently become established in the state. These spiders are more common in the southern part of the state, but infestations have been documented as far north as Desoto County. Brown widows also have an orange hourglass shape on the underside of the abdomen and are similar to black widows in size and body shape. Their abdomens are brown with white markings and their legs are light brown with dark brown bands. Brown widows are often mistaken for American house spiders, and vice versa, because their nesting habits are similar. The egg sacs of brown widows are covered with spike-like tufts of silk, so that they somewhat resemble the balls from sweetgum trees. These spiky egg cases are easy to distinguish from the smooth egg cases of black widows and American house spiders. Within their area of occurrence, brown widows are more likely to be found in and around homes than black widows.

The venom of widow spiders is neurotoxic and can result in intense pain and cramping of muscles, especially in the abdomen and upper legs. Persons who suspect that they have been bitten by a widow spider should seek immediate medical attention. When it is possible to quickly and safely do so, it is helpful to capture the spider for identification. See Extension Publication 2154, Spiders: Brown Recluse & Black Widow for additional information about black widows.

Daddy-Long-legs (many species in the Order Opiliones): Also known as harvestmen, these are not true spiders. They are easily identified by their long, thread-like legs and their small, oval body. Daddy-long-legs are seldom encountered indoors, but are often seen around the outside of the house, occasionally clustering in large numbers under the eaves or in some other protected location. They forage on dead insects and other decaying organic matter. Contrary to common urban mythology, they are not venomous, but they do produce an unpleasant odor when disturbed.

Controlling Spiders: Control of outdoor spiders, such as wolf spiders and jumping spiders that occasionally wander indoors can be as simple as catching/crushing and discarding the invader. It takes considerably more effort to effectively deal with a heavy infestation of indoor-dwelling spiders, such as brown recluses or American house spiders. Exclusion and sanitation are important steps in spider management. Insecticides can be useful in certain situations, but if you rely solely on insecticides for spider control, you are likely to be disappointed.

Exclusion: Keeping screens on windows and over vents in soffits, gables, and crawlspaces; using weather stripping and door sweeps and taking other precautions to make the house as 'bug-tight' as possible helps keep out spiders as well as insects. Because indoor dwelling spiders, such as American house spiders and brown recluses, prey on insects that get inside the house, any steps taken to exclude insects will indirectly help reduce spider populations. Exterior lighting attracts many night flying insects. This in turn attracts spiders, such as the American house spider, which like to build their webs near such an abundant supply of prey. In addition to keeping exterior lights turned off when not needed, you can also reduce the number of insects that are attracted to exterior lighting by using yellow 'bug-lights' or sodium vapor lights, rather than mercury vapor lights.

Sanitation: Sweeping cobwebs out of the corners of garages, windows and rooms is an effective way to remove the cobwebs, but the spiders that built them often escape, and promptly build more webs. Use a vacuum to remove the webs and the spiders that built them. Spiders such as brown recluses and southern house spiders like to nest in dark, undisturbed storage areas. Keeping such areas clean and well-organized helps discourage spiders. Storing items, especially cloth items in insect-tight plastic containers rather than cardboard boxes, is especially helpful.

Sanitation is a critical first step in attempting to control heavy infestations of brown recluses, southern house spiders and other spiders that infest indoor storage areas. Systematically remove boxes and other items from the storage area, checking for spiders as the items are removed. Keep a vacuum and/or a can of an appropriate indoor insecticide spray handy to deal with any spiders that are encountered. Once all boxes and items have been removed from the area, sweep and/or vacuum thoroughly, taking extra care to vacuum corners, cracks and crevices where spiders might hide. After the storage area has been emptied and cleaned, it can then be treated with an appropriately labeled residual insecticide before stored items are replaced. Be sure to check inside storage boxes as they are removed.

Because brown recluses often hide and nest in the folds of infrequently used clothing and bedding, it is wise to carefully check such items before using them for the first time after a long period of storage, especially if the house is known to be infested with brown recluses. Doing so could prevent a bite from a spider that has been living in that coat that has been hanging in the basement since last winter or the sleeping bag that has been stored in the attic since the last camping trip.

Traps: Several companies sell sticky glue traps that can be placed along walls to capture spiders and other crawling insects. Traps are not especially useful for controlling spiders, but they can aid in determining the level of infestation and which species are present.

Insecticides for Spider Control: Insecticides containing active ingredients such as cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothrin, permethrin, tralomethrin or even pyrethrins (pyrethrum) can be applied according to label directions to control spiders that can be directly targeted with the spray. Pyrethrins will not provide residual control, but products containing the other active ingredients will provide relatively long residual control, especially when applied indoors where they are not exposed to sunlight. Such products can be applied to voids, cracks, crevices, and baseboards for control of spiders such as brown recluses that live in closets and other storage areas, or as spot sprays to control spiders such as American house spiders, that nest in corners of windows, basements, garages, etc. Be sure to read and follow all label directions.

Insecticides formulated as wettable powders, or WPs, typically provide better residual spider control than RTU formulations, but can be difficult to find in packages labeled for homeowner use. Demon WP (cypermethrin) is one example of a wettable powder type insecticide that is often used by pest control companies for spider control. Wettable powder products must be diluted in water and applied using a hand pump sprayer. Some of the other active ingredients mentioned are available as liquid concentrate type sprays, which must also be mixed with water and applied using a hand pump sprayer. However, many of these active ingredients are also available in 'ready-to-use' sprays, which are pre-diluted and sold in trigger-pump type sprayers. These ready-to-use sprays or aerosol sprays are a convenient means of treating limited infestations and are the most common formulation offered to homeowners for indoor use. Many insecticides are also formulated and sold as total release aerosol foggers, but these are generally less effective than sprays that can be directed into cracks, crevices, and voids.

In situations where spiders, such as brown recluses, are nesting in wall voids, other voids, or deep cracks and crevices, dusts containing the active ingredient deltamethrin can be especially useful. Drill small holes into voids and use a specially designed bulb duster to inject small amounts of dust into such voids and cracks and crevices. Dusts containing 0.05% deltamethrin are readily available at local retailers, but bulb dusters may have to be specially ordered.

Because professional pest control companies have access to an array of effective insecticides and the equipment to apply them properly and safely, many homeowners rely on professionals to control heavy spider infestations. However, it is still necessary for the homeowner to remove boxes and other items from storage areas and other areas to be treated, and to check for spiders inside boxes, before the treatment is applied.

Examples of Indoor Treatments for Spider Control

Active Ingredient	Brand Name (example)
Ready-to-use sprays	
Bifenthrin (0.05%)	Ortho Home Defense Max
Cyfluthrin (0.05%)	Bayer Home Pest Control Indoor & Outdoor Insect Killer
Deltamethrin (0.02%)	Bonide Household Insect Control
Deltamethrin (0.03%)	Enforcer BugMax 365
Lambda-cyhalothrin (0.03%)	Spectracide Bug Stop Indoor Outdoor Insect Killer
Permethrin (0.25%)	Viper RTU
Tralomethrin (0.03%)	Schultz RTU Home Insect Killer
Wettable Powders	
Cypermethrin (40%)	Demon WP * Cyper WP *
Dusts	
Deltamethrin (0.05%)	Terro Ant Dust
Deltamethrin (0.05%)	Enforcer Fire Ant Killer

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

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