

HOMEOWNER Guide to

by Edward John Bechinski, Dennis J. Schotzko, and Craig R. Baird BUL 871

Spiders

around the home
and yard



University of Idaho
Extension

“Even the two potentially most harmful spiders – the **black widow** and the **hobo spider** – rarely injure people in Idaho.”



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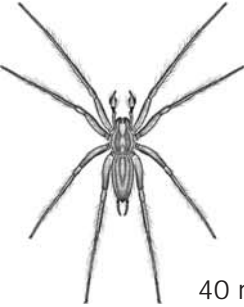
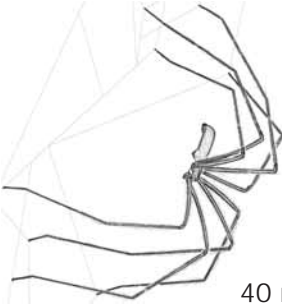


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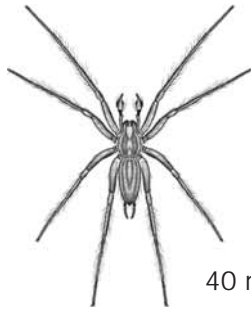




QUICK GUIDE TO COMMON SPIDERS IN IDAHO

Note: spiders are shown as typical life-size adults; immatures will be smaller

Spiders on webs			
<i>If web looks like a . . .</i>	<i>and the web is located . . .</i>	<i>and the spider looks like . . .</i>	<i>then it might be . . .</i>
vertical bull's-eye of concentric rings	outside under the eaves OR between landscape plants	 30 mm	orb weaver see page 11
flat trampoline that narrows into a funnel	outside on evergreen shrubs and rock gardens OR inside the corners of basements and garages	 40 mm	funnel-web weaver see page 11
messy cobweb	inside garage, shed, basement, crawlspace OR outside under decks	 40 mm	cellar spider see page 12 OR
		 10 mm	cobweb weaver see page 13
thin, small oval purse	outside within a rolled-up leaf OR inside along ceiling and wall	 8 mm	sac spider see page 22

Spiders NOT on webs

<i>If the spider is . . .</i>	<i>and the spider looks like . . .</i>	<i>then it might be a . . .</i>
sitting motionless on a flower	 13 mm	crab spider see page 15
outside running quickly across the ground OR inside running across the floor	 27 mm	wolf spider see page 16 OR
	 40 mm	funnel-web weaver see page 11
crawling on the ground (esp. after rain or lawn watering)	 32 mm	folding-door spider see page 15
walking with short, jerky hops	 8 mm	jumping spider see page 14

Line drawings courtesy of N. Dupérré, American Museum of Natural History (previously published in Ubick, D., P. Paquin, P.E. Cushing, and V. Roth (eds). 2004. *Spiders of North America – An Identification Guide*. American Arachnological Society.)

SPIDERS ARE AMONG THE MOST FEARED and loathed organisms encountered around the home. Yet almost all Idaho spiders are best considered beneficial because they prey on insect pests. Even the two potentially most harmful spiders – the black widow and the hobo spider – rarely injure people in Idaho.

This publication will help you identify the harmless, non-poisonous spiders most frequently seen in and around the home. We correct some common misconceptions about spiders and describe simple approaches to controlling spiders inside homes. We also discuss the few medically important spiders that do pose some threat to human health in Idaho.



PART 1 – SPIDER PRIMER

A. BASIC EXTERNAL BODY STRUCTURE

Spiders are arachnids, the technical name given to eight-legged arthropods. Arthropod is the broad identification category for animals that have an external skeleton of hardened plates rather than an internal skeleton of bones. Insects, spiders, and pillbugs are familiar examples of arthropods.

All spiders are arachnids, but not all arachnids are spiders. Examples of arachnids other than spiders include ticks, scorpions, and daddy longlegs.

The external body of all arachnids – spiders and non-spiders alike – is organized into two main parts, the **cephalothorax** (pronounced seh-fah-low-THOR-aks) and the **abdomen** (figure 1).

Spiders differ physically from other arachnids in that their two body regions are joined by a thin stem-like connection. In contrast, the two body regions of ticks, scorpions, daddy longlegs and other non-spider arachnids are joined so broadly that their body appears as a single structure rather than as a distinct cephalothorax and abdomen.

The cephalothorax of all arachnids bears a pair of jaws called **chelicerae** [kell-IH-sir-ee] attached to the front of the face (figure 2). The paired chelicerae are the main external mouthpart structures. In spiders, these jaws are tipped with hollow fangs that inject venom into their prey. The actual

mouth of the spider (i.e., the opening of the digestive system) is located behind the base of the chelicerae.

All arachnids also have another pair of segmented appendages called the **pedipalps**, which hang behind the chelicerae but in front of the legs. The pedipalps of adult female spiders as well as all immature spiders look like short legs (figure 2) but are used like fingers to manipulate prey. In contrast, the pedipalps of adult male spiders are swollen knobs (figure 3); these serve as external sex organs that transfer sperm from the genital opening on the underside of the male's abdomen to the opening on the female's abdomen. One can always recognize an adult male spider because the swollen pedipalps make it look like it has boxing gloves at the front of the head.

The pedipalps of adult male spiders are complex structures that differ from one species to the next. Whereas body color and pattern can differ from individual to individual even within the same species, the microscopic structure of the adult male's pedipalps is uniform within a species. This makes the male pedipalps an important feature for species identification. But it also complicates diagnosis because it often means that to definitively identify a spider, the specimen must be a male spider. *Color pattern by itself is a poor way to identify spiders and usually results in an incorrect identification.*

Another distinguishing feature of all arachnids is eight walking legs on the cephalothorax. The legs of spiders are tipped with tiny claws for manipulating silk. Some spiders also have tiny brushes of specialized hairs at the tips of their legs that help them walk on slippery surfaces. Many spiders have spiny legs; indeed, it is the hairy legs of spiders that some people find especially repulsive. In many spiders, these hairs are sensory organs that detect wind currents and other vibrations. Some spiders have hairs so sensitive, they can sense the disturbance of air currents from the flapping wings of a nearby flying insect.

Most spiders in Idaho have eight eyes arranged in two rows across the top and front of their face. A few only have six eyes. Eye size and arrangement help differentiate broad groupings of spiders from each other.

Unlike insects with compound eyes consisting of thousands of lenses, the eyes of spiders are single lenses. As a conse-



Figure 1. The body of spiders is divided into two main parts: (A) the cephalothorax, which bears the mouthparts, pedipalps and 8 legs, and (B) the abdomen, which has no appendages except for small silk-spinning structures at the tip. Photo by Dennis Schotzko, University of Idaho. All rights reserved.

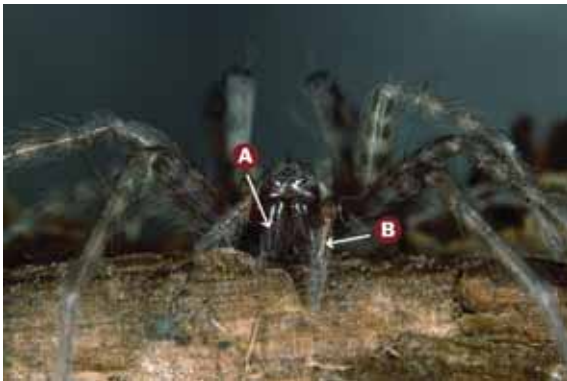


Figure 2. Front view of a female spider showing paired chelicerae (external jaws)(A) that bear fangs at their tips. A pair of pedipalps (B) hangs behind the jaws and in front of the legs. Six eyes are visible on the face of this specimen; two more eyes are out of view on the sides. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 3. The pedipalps of all adult male spiders are swollen at the tips; adult female spiders and all immature spiders instead have thin finger-like pedipalps that lack swollen tips. Photo by Dennis Schotzko, University of Idaho. All rights reserved.

quence, most spiders have poor eyesight. *Even if it seems that a spider is deliberately running towards you, most likely the spider cannot see you.* Most spiders depend on vibrations rather than vision to capture prey. This is especially true for those spiders that spin webs. Spiders, like all arachnids, never have antennae.

The only external appendages on the abdomen are the **spinnerets**, the external openings of the silk glands. Unlike the comic book superhero Spider-Man who shoots silk from his hands, the spinnerets of spiders appear at the tip of the abdomen as tiny but visible fingerlike tubes. Most spiders have six spinnerets arranged as three pairs. The two spinnerets of any one pair are identical, but adjacent pairs can differ in size and shape.

Spider silk is a liquid protein produced by internal abdominal glands and exuded from microscopic spigots at the tip of each spinneret. The liquid hardens into a thread by stretching rather than from exposure to air. The output from several spigots is interwoven to make a single silk thread. Spiders as a group make six different types of silk that vary in stickiness, but no single spider makes all six types.

B. SPIDER BIOLOGY & BEHAVIOR

LIFE CYCLE

Spiders grow from eggs into adults by gradually developing through a series of immature stages called **spiderlings**. Spiderlings look like adult spiders but are smaller. Development from one life stage to the next occurs by **molting**: the spiderling sheds its skin and grows to the next larger stage. The exact number of immature stages depends on the species and ranges from 5 to 10. Once they reach adulthood, most spiders stop molting and do not grow to larger sizes. Tarantulas are exceptions: they continue to shed their skins and grow as adults.

Life cycles of Idaho spiders have hardly been studied. Based on work elsewhere, it seems likely that the majority of our spiders survive the winter as immature spiderlings in protected places, though some instead overwinter as eggs and adults. Most require one to two years to complete egg-to-adult development.

SILK SPINNING

One trait that explains why spiders as a group can live in so many habitats is their use of silk. *All spiders make silk, but not all spiders use their silk to make webs.* Other common uses of silk include draglines, egg-case coverings, and ballooning.

Web spinners and non-web spinners use silk as **draglines**, single threads that they trail behind them much like safety ropes used by a person climbing a mountain. When threatened, the spider quickly drops to the ground on the dragline and escapes danger. Draglines often become household nuisances when the threads become covered in dust and appears as cobwebs in corners and along ceilings.

Female spiders protect their eggs by wrapping them into a case with a tough outer silk coat. The so-called “eggs” seen on webs or attached to the tip of the female’s abdomen are in fact **egg cases** or **egg sacs** containing dozens or hundreds of eggs. Spiderlings hatching from eggs normally remain inside the egg case without



BALLOONING SPIDERS

Spiders can literally be carried across oceans by ballooning, and so are among the first animals to colonize lands where widespread natural disasters have eliminated living creatures. After the eruption of Mount St. Helens, spiders drifted in one summer at nearly 10 individuals per square foot.

feeding until their next molt a week or so later, after which they escape the sac and live independently.

Immature spiders often disperse to new habitats by **ballooning** or **parachuting**. The spider climbs to the top of a plant or other perch and makes a silk strand that is lifted by the wind. When the silk line is long enough, the spider is randomly carried aloft to a new location. The seemingly invisible webbing that you feel across

your face or arms probably is the silk thread of a ballooning spider.

FOOD HABITS

All spiders are carnivorous. Most feed on insects, other arachnids, and other small arthropods. They tend to be generalist predators, eating whatever prey they trap in their webs or hunt down and capture.

Spiders kill prey by envenomization – they bite prey with their fangs and

inject it with venom. Some spiders entangle prey in silk before they bite it so that the spider is not injured by large, struggling prey.

Spiders can only ingest liquid foods. Most spiders inject prey with digestive enzymes that dissolve body tissues, which then are sucked up as liquids into the stomach. Some spiders macerate prey between their chelicerae and then ingest the fluids.

C. SPIDER BITES

Technically speaking, essentially all (99.6%) North American spider species are venomous – they produce chemical toxins that they inject into their prey by means of fangs located at the tip of their jaws. But except for the black widow spider and the hobo spider, the spiders that occur in Idaho are not poisonous to people. Either they cannot bite people, or if they can bite, their venom is not toxic enough to harm humans.

Most of our spiders have jaws (chelicerae) that are too small or too weak to puncture human skin with their fangs and inject venoms. These species pose no risk to humans. Even most spiders with jaws stout enough to pierce human skin should be considered non-poisonous, because the venom is essentially non-toxic to humans. Bite pain of most spiders is similar to a bee sting – it goes away in an hour or so without any other lingering health effects.

Except for people with known allergies to spider venom, spiders generally pose insignificant bite threats to people. Documented allergic reactions to spider bites – in which the body over-reacts to essentially harmless proteins in the venom rather than to the poisonous effects of the venom -- are almost unheard of. If you have a known allergy to spider venoms, you should consider any spider bite a medical emergency.

Idaho spiders are not aggressive; they do not deliberately search out and attack people. To the contrary, many flee from perceived threat. But spiders do bite defensively. People usually are

bitten when they accidentally touch a spider on its web or otherwise trap a spider against their skin. If a spider should accidentally crawl on your skin, flick it away with a snap of your index finger rather than squashing it against you.

Spiders are often blamed for skin lesions that turn out to be caused by something else. Nearly 50 different types of skin infections, vascular diseases, and other medical conditions produce symptoms that look like spider bites. Unless you actually see a spider bite you, it is equally possible that the red mark or lesion is in fact a bacterial skin infection or some other medical condition.

An infectious condition called CA-MRSA (short for Community-

Associated Methicillin-Resistant *Staphylococcus aureus*) commonly is misdiagnosed as a spider bite, even though it is a bacterial infection that has nothing to do with spiders. Bites from mosquitoes, fleas, bed bugs, and other blood-sucking insects likewise are incorrectly identified as spider bites.

Theoretically, one might physically diagnose spider bites from the two small puncture marks left where the paired fangs penetrate the skin. In reality, fang marks hardly ever are seen, even in cases of known spider bites, because the fangs are so small. It is not possible to diagnose a spider bite solely from the appearance of a skin lesion.



IF YOU ARE BITTEN BY A SPIDER

Try to remain calm. The only medically important spider in Idaho with venom that can produce an immediate reaction is the black widow. The Idaho Department of Health & Welfare has no records of human deaths from spider bites in our state.

Immediately contact your physician or emergency room if any bite causes unusual reactions like excessive swelling or breathing difficulty.

If possible, collect the spider -- even if you have smashed it -- into a small plastic container with a tight lid and take it to your nearest office of the University of Idaho Extension for proper identification. Spiders are soft bodied and shrivel into unidentifiable remains after they die, so preserve the specimen in rubbing alcohol or spirit grain alcohol (such as vodka).

Be prepared to describe the detailed circumstances about your bite, especially:

Where and when did you encounter the spider?

What were you doing when the spider bit you?

What symptoms resulted from the bite?



HEALTH HAZARDS IN PERSPECTIVE: CARS, DOGS, SPIDERS and PEOPLE

According to the U.S. Centers for Disease Control (CDC), the single leading cause of human deaths from *injuries* is car accidents, with nearly 3 million people treated in emergency rooms and *over 33,000 people killed during 2001*.

Compare those statistics with *dog bites* to humans. CDC estimated that 4.7 million dog bites occurred nationwide during a one-year period. Nearly 800,000 people required medical care for those bites. The CDC further reported 304 human deaths in the U.S. from dog bites over an 18-year period, including the deaths of two Idahoans, for an average of nearly *17 human deaths from dog bites each year*.

Now consider *spider bites*. Records maintained by the U.S. Department of Health and Human Services showed that over a 12-year period, 49 people in the U.S. died from spider bites, for a *yearly average of about 4 human deaths*. They estimate that 0.017 people out of every 1 million in the U.S. will be killed annually from spider bites.

MYTH #1

A sleeping person swallows eight spiders per year.



You can sleep easier knowing that this statistic (and its several variants) is total nonsense. An implausible chain of events -- starting with the spider crawling or falling into your mouth -- would be required for you to unknowingly swallow even one spider.

According to *Snopes.com* (a website that investigates urban legends), this myth began circulating during 1993 when a magazine columnist wrote about ludicrous things people believe because they read it in an email. Snopes says that the writer "offered her own made-up list of equally ridiculous facts, among which was the statistic cited above about the average person's swallowing eight spiders per year." Her example -- deliberately selected because it was so absurd -- since has become among the most repeated false "facts" on the internet (<http://www.snopes.com/science/stats/spiders.asp>).



PART 2 – COMMONLY ENCOUNTERED SPIDERS IN IDAHO

About 3800 different species of spiders are known from the U.S. and Canada, 800 of which live in the Pacific Northwest. Scientists deal with this diversity by classifying spiders into taxonomic groupings called families. For example, the spiders that share certain leg structures are grouped together into the family Theridiidae, the comb-footed spiders. Here we describe 10 of the 68 families of spiders known from the U.S., with emphasis on those most frequently seen by Idaho homeowners. The species in these 10 families together make up about 60% of known North American spiders.




We divide spiders into two ecological groupings: those that capture prey by spinning webs, and those that capture prey without spinning webs.

Explanatory Notes




The spider descriptions in part 2 of this publication include common names and technical family names, with a pronunciation guide for the technical names.

THE SYMBOLS

LIKELIHOOD OF A SPIDER BEING FOUND IN THE HOME

-  spiders found primarily outside
-  spiders that wander into homes but don't establish reproducing populations
-  spiders that often establish permanent populations inside homes.

SIZE OF SPIDER WITH LEGS EXTENDED

-  fits within the diameter of a U.S. dime
-  fits within the diameter of a quarter
-  larger than the diameter of a quarter

A. WEB-SPINNING SPIDERS

These spiders capture prey by making silk webs. Web shape and size often is distinctive enough by itself to confidently match these groups to the correct spider family.

Funnel-web weavers

(spider family Agelinidae [ay-gell-LINE-ih-dee], 85 North American species)



Agelinids spin flat, trampoline-like webs with a characteristic tubular funnel-shaped extension under a rock or other protected place where the spider hides (figure 4). Common web locations include tall grass, rock gardens, stacked firewood, and dense evergreen shrubs. Funnel weavers also inhabit corners of sheds, barns, and cellars where living prey are found.

Adult funnel-web weavers typically are medium-to-large, brown colored spiders that run with rapid, darting movements. In many species the spinnerets are long and can be seen extending from the tip of the abdomen when the spider is viewed from above (figure 5). Eyesight of these spiders is poor. They hide in the funnel portion of their web until vibrations from insects walking across the web alert the spider that prey is present; the web is not sticky, and the spider sprints out, biting and killing the prey. The funnel is open at both ends so that the spider can escape potential threats.

Individual funnel-web weavers sometimes accidentally wander into homes under patio doors and basement casement windows when garden watering or other disturbances flush the spiders from their webs along building foundations. Mature males also inadvertently enter home living spaces when they leave their webs in search of mates. Funnel-web weavers sometimes build webs in cluttered basements and crawlspaces where small crawling insects are present.

Idaho's most infamous funnel-web weaver is the hobo spider, *Tegenaria agrestis*, a species whose bite is associated with ulcerating wounds. The hobo spider is described in part 3 of this publication, "Poisonous Spiders of Idaho" (see page 20).

FUNNEL-WEB WEAVERS ≠ FUNNELWEB SPIDERS

Don't confuse our funnel-web weavers (family Agelinidae) with the similar-sounding but unrelated funnel-web spiders (family Hexathelidae). Hexathelid funnel weavers are relatives of tarantulas; they rank among the top five most medically important families of spiders in the world. One particularly notorious hexathelid from Australia – the Sydney Funnelweb Spider, *Atrax robustus* – has fangs that can penetrate a fingernail. It sometimes is characterized as "the world's deadliest spider" for its potentially lethal bite. Fortunately, Hexathelid funnel-web spiders do not occur in Idaho.



Figure 4. Funnel-web weavers build flat webs that narrow into a tubular retreat where the spider hides. Photo by Edward John Bechinski, University of Idaho



Figure 5. Arrow points to spinnerets extending from the abdomen of this funnel-web weaver. Photo by Edward John Bechinski, University of Idaho.

Orb weavers

(spider family Araneidae [air-ah-KNEE-ih-dee], 161 North American species)



Orb weavers spin the vertical, symmetric "bull's-eye" webs that consist of spiral rings of silk with radial threads from the center like spokes on a bicycle wheel. Web silk is sticky and ensnares flying insects. These spiders see poorly; vibrations made by prey trapped on the web alert the spider into attack. The prey is bitten, wrapped in silk, and carried back to the center of the web, where it is consumed.

Body size of araneid spiders ranges from small to large. Many have large, brightly colored abdomens with pointed protuberances and short, thick legs with spines. This group includes the so-called cat-faced spiders (figure 6). These spiders often build webs around porch lights under eaves

where the abundance of moths and other night-flying insects provides ample prey. The spider hides at the side of the web under a protected place. Cat-faced spiders are especially noticed during early autumn when their body size (without legs) has grown to the size of an olive.

Other commonly encountered orb weavers that cause exaggerated fear for their large size are garden spiders (figure 7). These vividly colored black and yellow-silver spiders with 2-inch leg spans sit in the center of the orb web they spin between bushes and tall weeds. Webs themselves can be 2 feet or more in diameter and often are suspended across garden paths. Prey can be seen wrapped in silk like mummies on the web. Though frightening in appearance, garden spiders pose no special threat to human health. They rarely bite people and then only cause minor localized pain.

Orb weavers are common around home landscapes, but with few exceptions, normally do not build webs inside homes. They are clumsy crawlers when removed from their webs and so do not accidentally crawl into homes like some other spiders.

Sheet-web spiders

(spider family Linyphiidae [linn-ee-FEE-ih-dee], 952 North American species)



There are more types of linyphiid spiders than any other family of spiders. Yet owing to their tiny body size, the spiders themselves – but not their webs – often go unnoticed around the yard. Most sheet-web spiders are about 1/8 inch in body size; the largest are no more than 1/4 inch (figure 8). They spin irregular horizontal layers or domes of web mainly on the soil surface but sometimes between leaves of plants.

Sheet-web spiders pose no threat to human health. They are confined to outdoor habitats and should be valued as beneficial predators.

Cellar spiders

(spider Family Pholcidae, [FOHL sih dee], 34 North American species)



Cellar spiders also are called daddy-longleg spiders because their long thin legs, small body, and light brown color (figure 9) makes them look like true daddy longlegs (figure 10). But the resemblance is superficial. Like all spiders, cellar spiders have two obvious body regions – the cephalothorax and the abdomen – joined by a thin stem-like connection. True daddy longlegs appear to have a single body region because their cephalothorax and abdomen are so broadly joined as to appear as one structure. Daddy longlegs are discussed in more detail on pages 17 .



Figure 6. “Cat-faced” refers to the shape of the spider’s abdomen. When viewed from above, the pointed bumps on the abdomen give the impression of the ears of a cat, while dimples on the abdomen complete the caricature by resembling the eyes and nose. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 7. Large yellow-silver and black banded *Argiope* spiders spin large orb webs in habitats ranging from gardens to canyon creek bottoms. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 8. Sheet-web spiders spin flat scaffolds of web suspended from vegetation by criss-crossed threads. The spider waits for small prey insects by hanging upside down under the sheet web. Photo by Edward John Bechinski, University of Idaho.



Figure 11. Cobweb spiders have globular bodies and long, spindly legs. These spiders often hang upside down from their web of messy, tangled threads. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 9. Cellar spiders are also known as daddy-longleg spiders. They are not the same as daddy longlegs. Photo by Craig R. Baird, University of Idaho.



Figure 10. Daddy longlegs are not true spiders. Photo by Edward John Bechinski, University of Idaho.

As their name implies, cellar spiders commonly inhabit basements and other dark, damp, undisturbed places inside buildings, especially in corners of rooms and along the ceiling. They make tangled webs where the spider usually is seen hanging upside down. Closer inspection often will show two spiders on the same web – the larger female with her round, pea-sized egg mass, and the smaller male. When disturbed, cellar spiders vibrate back and forth on their web so rapidly as to become a blur.

The webs of cellar spiders (rather than the spiders themselves) can become nuisances inside residential buildings. Unlike some spiders that periodically make new webs, cellar spiders continually add to the same web, resulting in large cobwebs with numerous carcasses of dead prey. Heavy webbing in undisturbed crawlspaces can make working in such space quite uncomfortable. Substantial populations of cellar spiders also develop inside sheds and garages where lights are left on and doors remain open at night; these conditions attract insect prey that in turn support large populations of spiders.

Cobweb weavers

(spider family Theridiidae [thair-ih-DEE-ih-dee], 234 North American species)



These frequently encountered spiders spin irregular cobweb-style sticky webs in dry, protected places, often near the ground, both outside and inside the home. As a group, theridiid spiders are characterized by their globular, pea-shaped abdomens and thin, long legs that lack spines (figure 11). Theridiid spiders typically are found hanging upside down in their web, quietly waiting for prey insects.

Cobweb weavers also are called comb-footed spiders for their row of short bristles (tiny toothed hairs) that can be seen under magnification on the last section of the hind pair of legs. These hairs serve as a comb to help the spider throw silk strands to anchor prey.

Our most well-known cobweb spider is the black widow. See page 18 of this publication for more details.

Homeowners sometimes confuse other cobweb spiders named *Steatoda* (figure 12) with the immature life stages of the black widow. *Steatoda* spiders make the same types of webs as widows and have the same general globular, long-legged body shape. However, *Steatoda* spiders are tan to dark-brown with wavy, angular lines on the top of the abdomen, and they never have the red hourglass mark on the underside of the abdomen that identifies the black widow. Body size including legs is about the size of a dime. *Steatoda* spiders are beneficial predators that pose no special threat to human health.

Theridiid spiders, including the black widow and *Steatoda* species, readily build cobweb-style snares inside homes, garages, sheds, horse barns, and other buildings, as well as outside under raised patio decks, dog houses, stacked wood and debris piles, basement window wells, and other dry, protected habitats.

B. SPIDERS THAT DO NOT SPIN WEBS

ACTIVE HUNTERS

These spiders do not capture prey by means of webs, but instead run down and capture their food. Hunting spiders especially depend on eyesight to locate prey.

Jumping spiders

(spider family Salticidae [sal-TIH-sih-dee],
315 North American species)



Jumping spiders are the small to medium, stout-bodied spiders seen crawling along window sills and on home walls with short, jerky, hopping movements. Most are distinctively colored and covered with short, dense hair. One common species, the grey wall jumper, is marked in alternating black and white bands (figure 13); it is almost always seen crawling on the sides of buildings. Other common types are grey-black with small white spots; still others combine a black back (cephalothorax) with a vivid reddish-brown abdomen (figure 14). When viewed face-to-face, many have shiny green or other bright metallic-colored patches on their jaws (chelicerae).

The body feature that distinguishes jumping spiders from all others is the arrangement and size of their eyes. Salticid spiders have eight eyes: two large eyes pointing forward from the front of the face, and six small eyes along the upper edge of the face. When viewed face-to-face, jumping spiders seem to have two large headlights (figure 14).



Figure 12. *Steatoda* spiders are harmless relatives of the black widow; they lack the red hourglass mark under the abdomen. Photo by Dennis Schotzko, University of Idaho. All rights reserved



Figure 13. Many types of small to medium jumping spiders live around home landscapes. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 14. Jumping spiders can be identified by their two large eyes that point forward like headlights on the face. Together with four smaller eyes on the face and one on each side of the head, these give jumping spiders the acute vision needed to hunt and capture prey. Photo by Dennis Schotzko, University of Idaho. All rights reserved.

Salticids are believed to have the keenest eyesight of any spider. They react to nearby moving objects – such as a prey insect or your pointing finger – by turning to face the object. They hunt like cats, slowly orienting towards prey insects and then pouncing for the capture.



Figure 15. Antrodiaetid spiders have a tarantula-like appearance. Photo by Edward John Bechinski, University of Idaho.

Salticid jumping spiders are among the most commonly seen spiders inside homes. They are accidental invaders that enter homes at loose-fitting windows or doors. Jumping spiders are important natural predators of pest insects.

LIE-AND-WAIT AMBUSH HUNTERS

This group of spiders motionlessly waits for suitable prey to pass nearby.

Trapdoor spiders and folding-door spiders

(spider family Antrodiaetidae [an-troe-die-AY-tih-dee], 39 North American species)



These large, heavy-bodied, tan to black spiders (figure 15) are Idaho's closest relatives of true tarantulas – which do not occur in Idaho -- the jaws of antrodiaetids are hinged so that they only move up and down. They feed by raising their jaws upward and lunging downward at prey with their fangs. In contrast, non-tarantula types of spiders have jaws that move side-to-side across the front of their face. Because their fangs oppose each other, these spiders capture prey between their fangs with a pincer-like motion.

One antrodiaetid spider commonly seen in Idaho is the *Antrodiaetus* folding-door spider (figure 16). *Antrodiaetus* has a broad, flattened cephalothorax with thick spiny legs and stout jaws; spinnerets visibly extend from the end of the globular abdomen. The common name “folding-door spider” refers to the burrow it digs into soil and covers with a collapsible cover of silk and soil. Vegetation debris and soil camouflage the lid, making the lair almost impossible to see. The spider hides inside the burrow during the day and hunts at night by opening the cover and waiting at the entrance until vibrations from passing insects signal that prey is nearby.

Because they only live in burrows in the soil, folding-door



Figure 16. Folding-door spiders most commonly are seen crawling on the ground after a spring or fall rain. Photo by Edward John Bechinski, University of Idaho.

spiders cannot establish reproducing populations inside homes. Individuals occasionally wander into residences, especially during early spring and mid-fall when seasonal rainy periods flush spiders from their burrows. Mature males also unintentionally enter homes as they search for mates. Although their large size (up to 1.5-inch leg span) causes concern, folding-door spiders ordinarily are not pests. They rarely are known to bite people or pets, and their bites are no worse than a bee sting.

Crab spiders

(spider Family Thomisidae [thoe-MISS-ih-dee], 130 North American species)



The common name of these small to medium spiders comes from the crab-like way they hold their legs. The first two pairs of legs are longer than the remaining two pairs and are turned out to the side and forward at right angles, giving the spider a definite crab-like appearance (figures 17-18).

Crab spiders are classic sit-and-wait ambushers. They often are seen waiting motionlessly on flowers for flies, bees, or other nectar-feeding insect prey. These crab spiders are often white or brightly colored so they blend in with their backgrounds; some can change their body color over a period of several days to match their backgrounds. Other species lie in wait on the soil surface.

Individual crab spiders inside homes usually have been carried in on cut flowers or other garden vegetation; they can be returned outside by sweeping them into a glass. Repeated sightings inside residences might indicate that outdoor flowers and shrubbery where spiders live are brushing against loose-fitting windows. Crab spiders encountered in



Figures 17 and 18. Crab spiders often are seen on blooming flowers where they capture nectar-feeding insects. Photos by Dennis Schotzko, University of Idaho. All rights reserved.

the yard and garden pose no threat and require no control action. Many species are important predators of pest insects in Idaho crops.

Wolf spiders

(spider family Lycosidae [lie-COE-sih-dee],
238 North American species)



Wolf spiders are the medium to large, dark-colored spiders with long, spiny legs that dart rapidly over the ground when you turn over rocks and boards lying on the soil surface (figure 19). Our largest species are up to 2 inches in diameter measured across their extended legs. Typical body color is dark-brown to grey-black with mottled light and dark flecks that camouflage spiders on the soil surface. Some wolf spiders are boldly marked with a pair of broad dark stripes that run the length of the cephalothorax.

Wolf spiders can readily be identified under magnification by the arrangement of their eyes (figure 20). When viewed under magnification, the six eyes on the face of the spider appear as two distinctively large “headlights” located above



Figure 19. Wolf spiders are large, spiny-legged, brown and grey spiders that dart across the ground when disturbed. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 20. Wolf spider showing characteristic arrangement of two large eyes over 4 smaller eyes. Two other eyes (one on each side of the face) are out of view. Photo by Craig R. Baird, University of Idaho.



Figure 21. Female wolf spider with silk case containing eggs. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 22. Hatchling wolf spiders ride on the back of their mother and then disperse. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 23. Tarantulas – large, hairy, slow-moving spiders - are not known to occur in Idaho. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 24. Daddy longlegs have an oval body with long, spindly legs. These non-spider arachnids pose no threat to human health. Photo from Reis Memorial Slide Collection. Used with permission of the Entomological Society of America.

a straight row of four smaller eyes; another pair of eyes is located on the head as one eye on each side. This arrangement provides the spider with excellent eyesight for stalking or ambushing prey.

Female wolf spiders often are seen carrying a round, grey egg case from their spinnerets at the tip of their abdomen (figure 21). Spiderlings hatching from the egg case subsequently ride for some time on the back (abdomen) of the female (figure 22).

Wolf spiders are common accidental household invaders during late summer and fall. They do not deliberately attack people but will bite if accidentally stepped on with bare feet or otherwise pressed against the skin. Bites are painful but do not pose health threats to people.

Tarantulas

(spider family Theraphosidae [thair-ah-FOE-sih-dee], 55 North American species)



Tarantulas are familiar to just about everyone as the large, heavy bodied, brown-black hairy spiders (figure 23) featured in science-fiction horror movies or sold in pet stores. Tarantulas never have been officially documented in the wild in Idaho. In the U.S., they mainly live in the southwestern states, but are known from mid-north Utah and Nevada. Tarantulas are nocturnal. During the day, they hide inside naturally occurring underground cavities (such as rodent burrows) about the diameter of a quarter that they line with silk. During the night, they wait in ambush for prey insects near their burrow.

Tarantulas are among the most long-lived of all spiders, requiring at least 5 to 7 years to reach reproductive maturity and then living (as females) up to 30 years in caged captivity. They generally are docile, retreating slowly from threats, but can be provoked into biting by rough handling, especially when approached from the front or when cornered. Some South American and Indian species have potentially dangerous venoms similar to that of the black widow, but the bite of our native U.S. species is only temporarily painful.

C. DADDY LONGLEGS

IDENTIFICATION AND BIOLOGY

Daddy longlegs are the familiar arachnids with a globe-shaped, brown-grey body and four pairs of long thin legs (figure 24) that break off when roughly handled. Their eight legs classify them as arachnids, but their body arrangement differs enough from true spiders that they are classified in their own grouping, the order Opiliones [oh pill ee OWN ees]. Daddy longlegs are also called harvestmen (i.e., “men of the harvest”) because some species gather together by the hundreds during the fall.

Daddy longlegs commonly occur on the ground around sheds, gardens, woodpiles, and sometimes inside damp basements and crawlspaces. Despite their awkward appearance, most daddy longlegs are agile predators of small insects and other

MYTH #2

Daddy longlegs are the most poisonous spiders known, but their fangs are too weak to pierce human skin.

WRONG, WRONG AND WRONG! This commonly repeated but totally false belief is incorrect on at least three levels:

FIRST, daddy longlegs technically are not spiders; they instead are classified into their own taxonomic group, the order Opiliones, which is separate from the taxonomic grouping of the spiders, the order Araneae.

SECOND, daddy longlegs do not produce any venom at all, let alone a highly poisonous toxin.

THIRD, daddy longlegs entirely lack fangs; some types of daddy longlegs in Idaho have mouthparts that form an enlarged pincer-like tooth and so perhaps might slightly pinch, but none bite.

This story probably originated because of the physical resemblance of daddy longlegs to cellar spiders – the so-called daddy-longleg spiders (see figure 9, page 13). Cellar spiders do produce biologically toxic venom, but indeed their jaws are too weak to bite people.

A simple way to distinguish living specimens of these two is from their web-spinning habits. Daddy longlegs do not spin webs and are seen running agilely over the ground; in contrast, daddy-longleg spiders do spin webs, where they are almost exclusively found. If they are knocked off their web, daddy-longleg spiders move clumsily on the ground.



arachnids. They typically seek shelter during the day and hunt prey at night. Some species scavenge on dead insects and plant matter.

PEST STATUS

Daddy longlegs are entirely harmless to people. Aggregations that look like tangled hair-balls of twisted legs sometimes occur on the sides of homes during the fall; these cause concern but pose no threat other than a nuisance.

PART 3 – POISONOUS SPIDERS IN IDAHO

Almost all spiders produce venom and so might be considered potentially dangerous. In reality, the venoms have evolved to subdue or kill invertebrates, not higher animals. As a consequence, almost all of our Idaho spiders are relatively harmless to humans. Further, most spiders are not aggressive; they do not seek out and bite people. Even if they do bite, the amount of venom injected is too small to produce any effect more than temporary pain and redness.

Two widely distributed spiders in Idaho can be considered poisonous to people – the western black widow and the hobo spider. But even here, health risk is relative – no human deaths from spider bites have been reported in Idaho. Nonetheless, if you think you have been bitten by one of our medically important spiders, immediately seek medical treatment.



Figure 25. Mature (full-grown) female and male western black widow spiders. Photo by Whitney Cranshaw, Colorado State University, Bugwood.org.

WESTERN BLACK WIDOW, *Latrodectus hesperus* (spider family Theridiidae, the comb-footed spiders)

IDENTIFICATION AND BIOLOGY

Black widow spiders are well known for their red-colored hourglass mark on the underside of the mature female spider (figure 25). Adult females have shiny black, globular bodies with long, thin legs. Overall size is 1 ½ inches in diameter, including the legs.

Adult male widows are no more than half the size of the female. They often are olive brown but sometimes are black. The upper surface of the abdomen is marked with light stripes and a band down the middle; the lower surface of the abdomen occasionally has a yellow hourglass mark (figure 26).



Figure 26. Upper (top) and lower (bottom) body surface of dark form of adult male western black widow spider. Note that male black widows occasionally have a yellow hourglass mark on the bottom of their abdomen. Photos by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 27. Western black widow spiderlings are pale colored as they emerge from the egg sac. They gradually take on adult color patterns with successive molts. Photo from Oregon State University, Ken Gray Slide Collection.



Figure 28. Female western black widow spider with egg sacs in web. Photo from Oregon State University, Ken Gray Slide Collection.

Color patterns of immature black widows vary; they initially are pale (figure 27) with rows of red or white stripes or spots along the back, or a single red spot at the posterior end.

Black widows make loose, irregular webs in dark, undisturbed places. They occur statewide but are most common in the southern third of the state. Natural sites for webs are inside old animal burrows or under rocks, low bushes and woodpiles. Dark corners of utility rooms, garages, sheds, crawlspaces, barns, and similar protected storage places are prime widow habitat. They mainly are active on their webs at night.

Females usually are seen with eggs sacs hanging from their webs (figure 28). Each whitish-brown pea-size egg sac contains several hundred eggs, and one female may produce up to 20 egg sacs during her one-year lifetime. Spiderlings initially stay on their mother's web but disperse by ballooning within a few weeks. Egg-hatch to adult maturity requires 2 to 8 months.

BITE SYMPTOMS

Widows do not seek out and bite people. Undisturbed widows with abundant food can live close to people without incident. Most people are bitten when they accidentally squeeze the spider or put their hand into the web. In the past, many bites occurred as people used outdoor privies where spiders were living under the rim.

Visible puncture wounds usually cannot be seen because the fangs are so small.

Widows produce a nerve poison that quickly produces whole-body effects. At first the bite itself feels like a bee sting, but within an hour, intense pain spreads to the limbs and abdomen. If a finger is bitten, the pain spreads up the arm and to the shoulder. The chest is affected next, and the

abdomen may cramp. It may become difficult to breathe as the diaphragm becomes partially paralyzed. Bite victims also may suffer nausea, headache, and fever.

Mature female widows pose the greatest hazards to people because their fangs are strong enough to pierce human skin and because they produce more venom than the adult male or spiderlings. Female spiders are more prone to biting immediately after they produce an egg sac. Adult male widows and immatures do not pose much of a hazard at all because their mouthparts are too weak to puncture the skin. Small children and the elderly are at greatest risk for serious reactions.

SEEK IMMEDIATE MEDICAL ATTENTION IF YOU HAVE BEEN BITTEN BY A BLACK WIDOW.

HOBO SPIDER, *Tegenaria agrestis*
(spider family Agelenidae, the funnel-web weavers)

IDENTIFICATION

The hobo spider is a European species first collected in Seattle during the 1940's. It was first detected in Idaho during the late 1960's and was established statewide by the early 1990's. It now occurs throughout Oregon and Washington as well as in parts of Colorado, Montana, Nevada, Utah, and Wyoming; populations also have established in southern British Columbia and Alberta.

People usually notice hobo spiders as lone specimens running across ground-level floors inside homes from mid-July through the first killing fall frost. These spiders inevitably are mature males that accidentally wandered in from their outdoor webs in search of mates. Hobo spiders are not good climbers; if you see a spider running across the ceiling or high on the wall, it is probably not a hobo spider.

Color and markings alone are an unreliable way to identify a hobo spider. Species identification requires expert examination with a microscope, but figures 29 and 30 give some general identification guidelines.

One quick way to decide if a suspect specimen could be a hobo spider is to place the spider in a transparent container and look at its legs under a bright light. If you can see alternating dark



Figure 29. Hobo spiders are tan-grey with five to six pale triangular marks down middle of abdomen. Overall body size is 1 3/4-inches in diameter with legs extended. Definitive identification requires microscopic examination by an expert. Photo by Edward John Bechinski, University of Idaho.



Figure 30. The hobo spider is marked with a series of light colored triangular loops on the abdomen. Typically, the first mark has a smudged appearance (A). The next three loops form triangles complete with two side borders and a bottom (B). The marks that follow are incomplete; they have two sides but lack the bottom border (C). Definitive identification requires microscopic examination by a trained expert. Photo by Edward John Bechinski, University of Idaho.

MYTH #3 Widow-makers

The name black widow comes from the misconception that the female always kills and eats the male after mating. According to one account, "she lures the male within striking distance, and pounces upon and binds him in a mummy casket of web, subsequently feasting upon his life juices" (Thorp and Woodson, 1976, pp. 129-130).

Mating between any type of spider can prove fatal if one sex -- usually the female -- mistakes the other for prey. The presumed cannibalistic mating behavior of black widows seems to come from studies made in closed containers that trapped the male with the female, and so does not represent normal behavior. To the contrary, in one species of U.S. widow (the "red widow" spider, *Latrodectus bishopi*), the male lives together with the female in the same web. This spider does not occur in Idaho.

But in at least one type of *Latrodectus* widow -- the Australian red-back (which does not occur in Idaho) -- the male seldom survives mating. Here the male spider somersaults his abdomen during mating so that it is next to her mouthparts. He literally tries to distract the female during mating by offering himself as food, and she usually -- but not always -- accepts his offer.





Figure 31. The alternating dark and light bands on the legs of this funnel-web weaver disqualify it as being the hobo spider. Legs of hobo spiders are uniformly tan, without any striping, spotting or banding. Photo by Edward John Bechinski, University of Idaho.

and light marks on the legs like the spider in figure 31, your specimen is not a hobo. The hobo spider has legs uniformly colored the same tan-brown without any regular pattern of darker or lighter marks. But many spiders have legs uniformly colored tan, so it is not possible to know by leg color alone if the specimen indeed is the hobo spider.

If you have a suspect specimen, take it in alcohol to your local University of Idaho Extension office.

BIOLOGY

The hobo spider is one of our many species of funnel-web weavers (see page 11 of this publication), meaning that it spins flat webs of non-sticky silk with a tubular retreat where the spider hides. Hobos normally build webs outdoors around any low landscape feature with cracks or crevices (such as rock gardens or low-growing shrubs) that can shelter the tubular part of the web. The web by itself does not identify the hobo spider because many other species of funnel-web weavers build similar webs outside and inside residences.

EYE TO EYE WITH A HOBO

Another body feature that quickly separates hobo spiders from some look-alikes is eye pattern. Under magnification, the eight eyes of the hobo spider appear as two slightly curving rows of four eyes each. All eight eyes are the same size and the same color. If your specimen has some eyes that are obviously bigger than others, it is not a hobo spider.

Egg-to-adult development requires two years. Hobo spiders survive winters both as fall-laid eggs and as first-year spiderlings that hatched the prior spring. Eggs hatch during spring and immatures are active through mid-October. After two summers of growth, spiderlings mature during fall into reproductive adults that mate and lay eggs in silk sacs outdoors under rocks and other protected areas.

BITE SYMPTOMS

There is disagreement among scientists about the danger posed by hobo spider bites. Some experts argue that evidence of injury to humans from hobo spider bites has yet to be proven. We believe that until there is conclusive evidence to the contrary, the prudent approach is to assume that hobo spider bites really are a medical threat to people.

It is believed that the hobo spider produces venom that kills skin tissue around the bite wound over the course of days or weeks. This slow-to-develop, localized cell-killing injury contrasts with the nerve-poison of the black widow, which produces whole-body symptoms within hours of the bite.

The following symptoms have been attributed to the hobo spider (figure 33). The bite itself is almost painless but produces a red area within 30 minutes. By a day and a half later, the bite blisters and then scabs over as a slow-to-heal lesion up to an inch in diameter that can persist for weeks. Whole-body symptoms attributed to hobo spider bites include headache, nausea, and general weakness.

MYTH #4

Hobos are the spiders with "boxing gloves"

Although male hobo spiders do have enlarged pedipalps that give them a "boxing-gloved" appearance (figure 32), that characteristic is not unique to the hobo. All adult male spiders have enlarged pedipalps that give them a boxing-gloved appearance. The only thing that one confidently can conclude about spiders with "boxing gloves" is that the specimen is a mature male. To positively identify a specimen as a hobo spider, microscopic examination of pedipalps structure is required.



Figure 32. Male hobo spider showing "boxing gloved" appearance. This feature is not unique to the hobo spider but instead is characteristic of all male spiders regardless of species. Photo by Dennis Schotzko, University of Idaho. All rights reserved.



Figure 33. Skin lesion on finger attributed to the bite of the hobo spider. Photo by Roger Akre, Washington State University.

YELLOW SAC SPIDER, *Cheiracanthium* species
(spider family Miturgidae; no common name for this family of spiders)

IDENTIFICATION

Yellow sac spiders are small pale yellow spiders (figure 34) that build silken sac-like hiding places outdoors in rolled leaves or under rocks, and indoors along ceiling and wall corners. They are night-active hunting spiders found around outdoor landscapes, agricultural crops and inside houses. Several dozen species in addition to yellow sac spiders also build tubular silken sacs for resting and egg-laying, so web presence by itself is not enough to correctly identify the spider.

BITE SYMPTOMS

Yellow sac spiders may account for more bites to people than any other spider. Known symptoms are rather mild. The bite is about as painful as a sharp bee sting and develops into a red itchy welt around the bite area that lasts a day or so. No human deaths anywhere are known from this spider. Although there are reports that yellow sac spiders produce ulcerating skin wounds, scientific studies have failed to verify these claims.



Figure 34. Yellow sac spiders can bite with stinging but temporary pain. Photo by Edward John Bechinski, University of Idaho.

BROWN RECLUSE SPIDER, *Loxosceles reclusa*
(spider family Sicariidae, the brown spiders)

IDENTIFICATION AND BIOLOGY

In spite of what you may have read in a newspaper or even been told by your physician, *the brown recluse spider DOES NOT OCCUR in Idaho* (figure 35). The only documented record from our region occurred during 1978 in Washington when a family from Kansas (where the spider is common) evidently accidentally transported the spider in household moving cartons.

The brown recluse is also known as the violin or fiddleback spider for the dark violin-shaped mark on the top of the first body section, the cephalothorax (figure 36). *This mark by itself is not enough to confidently identify the brown recluse.* Other Idaho spiders -- especially some cellar spiders -- also have violin-like marks along the body.

MYTH #5 **Hobo spiders are unusually aggressive**



Although the approved name for *Tegenaria agrestis* is the hobo spider, some references instead call it the "aggressive house spider" for its supposed easy-to-provoke bite response when cornered. Consider the following published account: "We also have a record of an aggressive house spider that ran to and attacked a dog that was 2 ft away sniffing at the spider. It did not release its hold on the lip of the dog but had to be physically removed and destroyed" (Akre and Myhre, 1991, p. 22).

We do not believe that hobo spiders are any more likely to defensively bite than any other Idaho spider. It is true that hobo spiders (like many spiders) rush out onto their webs in response to small prey insects. It even may seem like hobo spiders directly charge towards you. In reality, it is unlikely the spider even can see you. Hobo spiders depend on their sense of touch, not eyesight.

Ironically, its species name -- *agrestis* -- comes from the Latin word for "of the fields," a reference to its common habitat, and doesn't have anything to do with the word aggression.

The spider's common name -- hobo -- comes from its initial U.S. discovery along railroad tracks and its presumed movement via commercial shipping -- like a hobo -- to surrounding regions.



THE HOBO CONTROVERSY

The evidence that hobo spiders cause ulcerating wounds is largely circumstantial – a person living in a home infested with hobo spiders develops skin lesions but never actually observes a spider in the act of biting, or a person with bite symptoms finds a squashed spider under bed covers but the specimen never is identified by a spider expert.

In order to be absolutely sure about cause and effect, three conditions are required:

- (1) a spider must be observed biting a person,
- (2) the victim then must develop characteristic medical symptoms, and
- (3) a professional entomologist or arachnologist must identify the captured spider specimen.

Often only the second criterion is met: a person develops symptoms that might be a spider bite. It is rare for a spider to be captured in the act of biting.

Lab studies have not provided clear-cut answers. Hobo spider bites have produced lesions on lab animals, but that does not mean they cause the same response in people.

Another contrary point is that hobo spiders occur widely in Europe, yet there are no reports of medical problems to people from their bites. One explanation – now largely disproven – is that the North American strain of hobo spiders evolved venom more toxic to people than the European strain. Molecular study of venom chemicals from North American and European hobo spiders showed that chemical makeup is nearly identical – but not exactly identical – between the two populations.



Figure 35. Documented range (red) of the brown recluse spider. No verified cases of even a single brown recluse spider are known from Idaho. Graphic by Edward John Bechinski, University of Idaho.



Figure 36. The brown recluse spider is tan-brown with a violin-shaped dark mark behind the head. The neck of the violin points backwards toward the abdomen. Photo from Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org.

Unlike almost every other spider, the brown recluse has six eyes distinctively arranged in three sets of two each along the top and sides of the face (figure 37). Almost all other spiders have eight eyes, not six eyes. The arrangement of the eyes, in combination with the violin mark, differentiates brown recluse spiders from all other spiders.

Eye number and pattern are best observed microscopically by an expert. If you have captured a suspect, take it in alcohol to your nearest University of Idaho Extension office for proper identification.

BITE SYMPTOMS

The venom of both female and male brown recluse spiders can produce large, ulcerating skin wounds around the bite site. Death due to kidney failure has been reported among children but is rare. In most cases, symptoms are minor and the bite heals by itself.

Brown recluse spiders are often blamed for skin lesions actually caused by some other medical condition. Physicians mistakenly diagnose recluse bites in states where the spider does not even occur. As a case in point, nearly



Figure 37. Brown recluse spiders are tan to dark brown with a violin-mark on the top of the body (white arrow) and with six eyes arranged in sets of two (black arrows). This spider DOES NOT OCCUR in Idaho. Photo from Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org.



70 brown recluse bites were reported one year to Poison Control Centers in Idaho, Oregon and Washington, yet the nearest brown recluse spiders are many hundreds to thousands of miles away.

As its name suggests, the brown recluse indeed is reclusive, hiding by day and hunting prey at night. It does not aggressively attack people. In the Midwestern U.S., infestations of dozens to hundreds of brown recluse spiders have been documented inside homes without any cases of human bites. People typically are bitten when they accidentally press a spider against their skin, such as putting on clothing dropped on the floor overnight into which a spider crawled.

PART 4 — DEALING WITH SPIDERS AROUND THE HOME

Control action for spiders inside homes or outside around residences – particularly application of insecticides – is only warranted when you know you might encounter black widow spiders or hobo spiders. The other types of spiders commonly seen outside are beneficial natural enemies of insect pests, and never require control action.

The key to dealing with nuisance problems inside residences is that spiders are predators: they only can survive where there is ample prey. Unless substantial infestations of small insects also are present, no spider can establish inside any residence.

ELIMINATE OUTDOOR HABITATS NEXT TO HOME FOUNDATIONS

Landscape rocks, timbers and coarse bark mulches are refuges for ground-dwelling hunting spiders and funnel-web weavers. Consider replacing these materials with finer-grained products that do not make cracks and crevices where spiders can hide.

Regular, heavy watering of foundation planting beds with sprinklers also discourages spiders such as funnel-web weavers from establishing but may create ideal conditions for slugs, sowbugs and other pests. But occasional watering after lengthy dry intervals can increase problems by flushing spiders into homes from plantings where they have already established.

Trim back ground covers, grass, shrubs, and trees so that they do not touch your house, including the roof. Dense vines growing along windows especially can be a source of problems. Remove weeds and trash that accumulate in window wells. Stack firewood away from buildings.

Don't leave porch lights on all night. Lights attract small flying insects that in turn serve as food for web-spinning spiders. Orb weavers routinely build webs under eaves next to lights.

Forcefully spray off webs under eaves and around lights with a garden hose or power washer.

SPIDER-PROOF YOUR HOME

Keep spiders out of your home by weather-stripping and caulking around doors, windows, and utility lines. Fill in cracks in siding and around the foundation; reset loose bricks and siding. This will also help keep out nuisance invading insects that serve as food for spiders.

Inspect firewood for spiders and egg sacs before bringing into the house.

PROTECT YOURSELF FROM BITES WHEN WORKING AROUND SPIDER HABITATS

Wear gloves when gardening, especially when placing your hands into dense vegetation or when hand-weeding along landscaped soils. Wear long-sleeved shirts and pants if you work around crawlspaces or cedar-shake shingled rooftops where spiders can hide.

PHYSICALLY TRAP SPIDERS INSIDE RESIDENCES

Commercially available sticky traps can capture large numbers of crawling spiders inside residences. Traps are sold under several brand names (figure 38) and all are equally effective. Traps that consist of open-ended boxes (like figure 39) are less messy to use than traps designed as an unenclosed pad.

Traps are especially useful in late summer through the first freezing fall temperatures, when many types of spiders accidentally wander into homes. Some traps say they are "pre-baited." All this means is they are ready to use, not that



Figure 38. Examples of widely available sticky traps for home use. Photo by Edward John Bechinski, University of Idaho.



Figure 39. Open-ended box traps capture spiders and other crawling pests that wander into homes from outdoor landscapes. Photo by Edward John Bechinski, University of Idaho.

they are baited with a spider-attracting odor. Place traps on floors along walls, near doors, behind furniture, and other places where you see crawling spiders (figure 39).

REDUCE CLUTTER IN INDOOR STORAGE SPACES

Boxes and other household goods stored in undisturbed basements, crawlspaces, garages, and closets provide spiders with places where they can hide.

VACUUM WEBS INSIDE HOMES AND GARAGES

Remove spiders, egg cases, and webs by vacuuming room corners and behind furniture. Shop vacuums are good for accumulated webs in basements and crawlspaces. Place the bag (or empty the vacuum contents) into a zip-lock bag so that any surviving spiders do not escape into the home.

APPLY INSECTICIDES AS OUTDOOR BARRIER SPRAYS ALONG FOUNDATIONS

Insecticides by themselves probably will not stop problems with spiders that move into residences from outdoor landscapes. But if you still routinely find spiders inside home living spaces after following all of the prior advice, you can apply insecticides as outdoor barrier sprays along the foundation.

Products containing any one of the following pest-killing active ingredients should be equally effective as foundation sprays: beta-cyfluthrin (β -cyfluthrin), bifenthrin, carbaryl, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, gamma cyhalothrin, lambda-cyhalothrin, and permethrin. These pest-killing chemicals are sold under dozens of different commercial trade names.

All of these chemicals are broad-acting nerve poisons that kill both by direct contact with the wet spray, and when pests crawl over the dry but treated surface. A single spray of any one of these products should provide immediate control that lasts at least 10-14 days.

DO NOT SPRAY any yard and garden plants – especially vegetable plants, berries, and fruits for human consumption – unless the pesticide label specifically lists your plant.

DO NOT SPRAY FIREWOOD. Treated logs may produce toxic fumes when burned.

NEVER USE YARD AND GARDEN PESTICIDES INSIDE YOUR HOME unless the pesticide label states the chemical is safe for indoor use.

The US-EPA classifies most of these home barrier products as slightly toxic to people by inhalation, skin contact, or ingestion; these have the word CAUTION printed on the label, which designates the lowest (least toxic) EPA category. A few are moderately toxic to people; these say WARNING on the label. None of the homeowner products carry the word DANGER, the label signal word that identifies products that can seriously burn skin or eyes.

Unless otherwise directed by the label, spray a 1 or 2-foot wide continuous band of insecticides on the soil outside around the building foundation, spraying upwards on the exterior foundation another 2 feet. Spray around doors, windows, utility line entrances, vents, and other exterior-wall openings.

It is neither necessary nor desirable to spray entire landscape beds. Broad-scale sprays kill pest and beneficial species alike, including earthworms, lady beetles, and pollinators. Indeed, when spiders remain outside the home, they too are best considered beneficial species.

“Least-toxic” alternatives to broad-acting pesticides include diatomaceous earth and plant-derived botanical insecticides. These products pose reduced risks to people, pets, and wildlife, but are not necessarily less toxic to beneficial insects and earthworms.

All of these products have limited usefulness as outdoor barrier treatments for home-invading pests. Only three diatomaceous earth products are available to homeowners for outdoor use: Safer Brand Ant & Insect Killer, Natural Guard Crawling Insect Control, and Concern Diatomaceous Crawling Insect Killer. These should be applied as a light, dry dust to patios, window wells, and around doors thresholds.

Plant extracts include pyrethrin (which is sold under many different commercial trade names) and the GreenLight Bioganic product line of clove, thyme, and sesame-oil sprays. Botanicals can kill when spiders come into direct contact with the wet spray, but these natural pesticides quickly evaporate, break down, and disappear.

USE INDOOR SPRAYS ONLY WHEN ALL ELSE FAILS

Pressurized aerosol sprays containing pyrethrins, tetramethrin, allethrin, resmethrin, phenothrin, or bioallethrin may be used to kill spiders. It takes little spray to kill a spider. These kill quickly but do not last as long as residual foundation sprays.

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ABOUT THE AUTHORS

Edward John Bechinski is a University of Idaho Professor of Entomology and coordinator of pest management for University of Idaho Extension; contact him at (208) 885-5972 or edb@uidaho.edu. Dennis Schotzko is a retired Research Support Scientist III, and Craig R. Baird is Professor Emeritus, both formerly with the Division of Entomology, University of Idaho, Moscow.

PESTICIDES

ALWAYS read and follow the instructions printed on the pesticide label. The pesticide recommendations in this UI publication do not substitute for instructions on the label. Due to constantly changing pesticide laws and labels, some pesticides may have been cancelled or had certain uses prohibited. Use pesticides with care. Do not use a pesticide unless both the pest and the plant, animal, or other application site are specifically listed on the label. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock. Trade names are used to simplify the information; no endorsement or discrimination is intended.

Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Charlotte V. Eberlein, Director of University of Idaho Extension, University of Idaho, Moscow, Idaho 83844. The University of Idaho provides equal opportunity in education and employment on the basis of race, color, national origin, religion, sex, sexual orientation, age, disability, or status as a disabled veteran or Vietnam-era veteran, as required by state and federal laws.

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