

Appendix e

Oregon Spiders

Introduction

Although there is no current comprehensive list, Oregon probably has at least 500 species of spiders. Most spiders are small and rarely encountered, often living in forest litter, rock crevices, rotten logs, and similar habitats. There are a dozen or so that are frequently found in or near residences. Although all spiders have fangs and virtually all have venom, only a few are either known or thought to have bites poisonous to people. The rest are harmless (at least to people), feeding on a wide variety of insects and other invertebrates.

Spider bites

When a person gets too close to a spider, they may be bitten. Spiders bite people in self-defense. They otherwise have no interest in biting something they can't eat, particularly something that is likely to squash them. Normally people are not bitten unless they actually come in contact with a spider. People may be bitten when they place a hand on a spider (for instance, upon one sheltering in a wood pile or behind furniture or some boxes) or if they put on clothing or footwear that has a spider sheltering in it. Even if a spider bites you there is chance that it will be a "dry" bite, meaning there is no venom. If you do receive a venomous bite, the amount of toxin will vary from spider to spider, even bites within the same species. According to at least one arachnologist, spider bites are not very common. You are not likely to receive more than one or two bites in a lifetime.

The black widow, the hobo spider, and the yellow sac spider are of interest in Oregon because they occasionally enter homes and may bite people. Black widow bites should always be treated as potentially serious. Reactions from the bites of hobo spiders and yellow sac spiders are not well documented. Recently, questions have been raised as to whether hobo and yellow sac spider bites are truly dangerous. Some researchers believe that the symptoms associated with presumed bites from these spiders really have other causes. Since no one knows for sure, we believe it is best to treat suspected bites from hobo spiders (and to a lesser degree, those from yellow sac spiders) as potentially serious. A fairly well known poisonous spider, the brown recluse, *Loxosceles reclusa*, does not occur in Oregon, despite reports to the contrary. Most spiders in Oregon, even those most likely to be found in homes, are not known to be dangerous. Rarely, serious systemic ("allergic") reactions from spiders can occur.

If a spider bites you try to save it for identification. Having the spider identified will help to determine what type of treatment you need. Spiders can be brought to or mailed to identifiers at ODA, Oregon State University's Insect Clinic, local OSU extension offices, or to Oregon Health Sciences University (OHSU), as detailed below. OHSU is asking anyone that has been bitten by a spider to save the spider and follow their instructions. To take part in this research call the Oregon Poison Control Center at 800-222-1222 to report a bite and receive instructions about how to mail the spider to OHSU.

Please follow these tips on saving and mailing a spider for identification:

- If possible don't crush the spider.
- To kill the spider either place it in a container and put it in the freezer or submerge the spider in rubbing alcohol in a small leak proof container.
- To prepare a frozen spider for the mail be sure the spider is kept in a container with tissue paper to prevent it from rattling around and getting broken. Allow for a lot of airflow in the container if the spider is not completely dry because it will rot (poke some holes in the container if necessary). Spiders mailed in rubbing alcohol need to be in leak proof containers. All spiders mailed need to be in crush proof containers (such as film canisters or pill bottles).

- Do not send live spiders to identifiers in containers that you can't see through – the identifiers are not expecting a live spider so they could be bitten if they open the container.

How to avoid spider bites

Although most spiders are not harmful and bites are not common, there are steps you can take to avoid being bitten indoors and out. Below are a few tips to follow to reduce the number of spiders in your facility:

- make sure any small cracks and openings to your facility are well sealed
- remove spider webs from the foundation, eaves, windows, and door frames of your home
- install good window screens
- install rubber, plastic or brush gaskets underneath doors that lead outdoors or basements
- seal gaps in window frames with weather stripping, wood putty, or sealant; seal gaps around plumbing with construction foam
- watch for spiders if you bring firewood, potted plants, or other objects in from outside
- vacuum regularly and vacuum any visible spiders
- keep bedding several inches above the floor
- shake clothes and shoes before wearing
- use spider traps (If not correctly placed, traps are not normally very effective but will trap and kill at least a few spiders. Traps are most effective when placed on the floor in dark corners under furniture)

If you are outdoors follow these steps to protect yourself from spiders:

- wear protective clothing such as gloves, long sleeved shirts, pants, and a hat
- look before placing your hands on objects such as firewood, pots, outdoor furniture, rock walls, etc.
- keep wood piles, shrubbery, and other objects away from the outer walls of your facility

Spraying pesticides is generally not very useful nor is it generally necessary. Most of the time, short-term relief is all that is achieved since most of the available pesticides are effective for relatively brief periods and afterwards new spiders move in to replace those that were killed. Realistically, although it may not be comforting to realize, our facilities are "islands in a sea of spiders." Professional pest control may be helpful in a few circumstances.

Spider Management

One of the easiest ways to minimize encounters with widow spiders is to reduce clutter around your home, which deprives them of places to make retreats. However, it is impractical to eliminate them completely by removing all clutter.

Regularly vacuuming or sweeping windows, corners of rooms, storage areas, basements, and other seldom-used areas helps remove spiders and their webs. Vacuuming spiders can be an effective control technique, because their soft bodies usually don't survive this process.

Store items such as in garages or shed in boxes that you can tape shut or that have a lid and can place off the floor and away from walls in order to exclude spiders. When cleaning up clutter in garages and other storage areas, be sure to wear gloves to avoid accidental bites.

Areas of concern include children's pedal-powered toy vehicles made of molded plastic that have open spaces facing downward where spiders can crawl in. Picnic tables and other large pieces of furniture where you place your fingers underneath to lift also can be a source of exposure.

Spiders can enter houses and other structures through cracks and other openings. To prevent spiders from coming indoors, seal cracks in the foundation and other parts of the building and gaps around windows and doors. Good screening not only will keep out many spiders but also will discourage them by keeping out the insects they eat. However, baby black widows have no problem crawling through regular window screen mesh.

Be careful that you don't carry spiders indoors on items such as plants, firewood, and boxes.

Eliminate places for spiders to hide and build their webs by keeping the area next to the foundation free of trash, leaf litter, and accumulations of other materials. Removing ivy and other heavy vegetation growing around foundations and trimming plant growth away from your home and other structures will discourage spiders, in general, from taking up residence near the structure and then moving indoors.

Outdoor lighting attracts insects, which in turn attracts spiders. If possible, keep lighting fixtures off structures and away from windows and doorways. Sweep, mop, hose, or vacuum webs and spiders off buildings regularly. Insecticides won't provide long-term control, so generally you shouldn't use them against spiders outdoors.

Hobo (*Tegenaria agrestis*) & giant house spiders (*T. gigantea*)

The most common spiders submitted for identification at ODA are hobo and giant house spiders. Both spiders were accidentally introduced from Europe. They can be found wherever people live in Oregon. This is because they prefer living in and around homes and because they "hitchhike" on people's belongings when people move. Most of these spiders are found in the late summer through early fall because the males have emerged from their normal shelters to look for females with which to mate. When these spiders are seen in homes they are usually somewhere on the floor, but they can also be found on walls and ceilings or in cabinets, tubs, and showers. These spiders do not make obvious webs and search for prey at night.



Male hobo spider

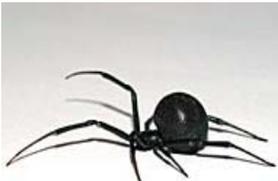
In Europe, the hobo spider and all other related species are considered harmless. In the northwest US Hobo spiders have gained the reputation as being dangerous. They are often referred to as "aggressive house spiders." This is not true – they are no more aggressive than any other spider.



Male giant house spider

It is often very difficult to tell hobo spiders and giant house spiders apart. Adult giant house spiders are larger than hobo spiders, especially the males. However, spiders grow gradually so that a young giant house spider may be smaller than an older hobo spider. Otherwise, these spiders look very similar. Identifiers familiar with these spiders know how to tell them apart, but this often requires examination under a microscope. If you suspect you have hobo spiders in your home or have been bitten by one, you should get specimens (safely!) and bring or mail them to one of the agencies mentioned under "Spider Bites."

The Western Black Widow spider (*Latrodectus hesperus*)



Black Widow spider



Underside of a Female Black Widow

Black widow spiders are most common in southwestern and eastern Oregon. They are much less so in northwestern Oregon, although they are present, most often on south facing slopes that are rocky and bare of

dense trees. They can also hitchhike when people move from other parts of Oregon to areas where black widows are uncommon. Black widows prefer dark places such as garages, basements, and crawl spaces. They make messy looking webs in tight corners and crevices near the ground or behind and underneath furniture or other items. Once they make a web, they rarely leave it unless disturbed.

Black widows are the most poisonous spiders in Oregon and the USA. Even so, the amount of venom received from a bite is not usually enough to cause a serious reaction in most people. Black widow venom causes very different symptoms than those associated with hobo spider and yellow sac spider bites. It damages the nervous system, leading to symptoms such as abdominal muscle cramps, nausea, profuse perspiration, tremors, fever, labored breathing, and restlessness. These symptoms often last for only a few days. While black widow bites can be very serious, fewer than one out of a hundred of those bitten die. However, anyone who believes they've been bitten by a black widow should immediately seek medical attention.

Female black widows are easily identified because they have a distinctive hourglass shaped bright red spot on the underside (not the top of) their abdomen. They also have a very round abdomen and are glossy black, with slender legs. Male black widow spiders are much smaller and differently colored and are rarely encountered. There are several Oregon spiders often found in or around homes that closely resemble female black widows, including the false black widow. However, false black widows are all black and do not have the red spot on the underside of the abdomen. As with hobo spiders, if you think you've been bitten by a black widow, try to save the specimen so an identifier can confirm whether that is so.

Yellow sac spiders



Yellow Sac Spider

There are several hundred species of yellow sac spiders in North America. They are small spiders that are pale yellow to yellow green, with few other markings. Yellow sac spiders don't make webs but actively search for prey at night. These spiders can be found outside during the day in silken sacs under objects such as planters, firewood, and rocks and on plants in curled up leaves. When they enter homes (usually during cooler weather), they hide in white silken sacs where the ceiling meets the wall or other similar corner. These sacs are also often found along windowsills.

As with hobo spider bites, bites of yellow sac spiders have been reported to cause long term or severe tissue damage. However, also as with hobo spider bites, there have been few confirmed instances of yellow sac spider bites, let alone of those leading to these symptoms. According to one published report, 20 verified cases of yellow sac spider bites in the US and Australia showed no significant tissue damage. In addition, of 39 verified yellow sac spider bites in international literature there was only one case with mild tissue damage from such a bite in Europe. One of ODA's staff was bitten by a yellow sac spider in Salem. The bite burned and was painful for a short time. A small, reddish welt eventually formed, which mildly itched and lasted for about a week. No further damage or symptoms developed. Of course, other people bitten may have different reactions. As with suspected hobo spider bites, the spider should be saved for identification and, especially if severe symptoms develop, medical attention may be advisable.

Other Tips

Children should be taught not to tease spiders in their webs or poke at them, and to not put their hands in dark crevices without looking first. The dangers of spider bites should be explained without exaggeration to avoid unnecessary fears. Teach students and staff that the "black spiders" they see walking around are not likely to be black widows, since the females (males aren't dangerous) do not travel away from their webs.

PROTOCOL FOR TREATING OREGON SPIDERS

Threshold: 1 per room

A. When staff observe an Oregon Spider of concern they will complete the following steps:

- 1st) Perform a routine, thorough cleaning, particularly storage/cubby areas. Regular dusting and clutter reduction removes hiding places. Pay particular attention to removing webs from doors, windows, vents.
- 2nd) Reduce clutter in classrooms and/or offices.
- 3rd) Reduce clutter in storage cupboards and spaces; do not place your hands where you cannot see what you are picking up.
- 4th) Use a vacuum to remove webs, unwanted spiders and egg sacs on a continuous basis.
- 5th) Seal cracks in the foundation and other parts of the building and gaps around windows and doors (what can be done in less than 15 minutes)
- 6th) Report action taken in pest log

B. Maintenance/Custodial staff will complete the following steps:

- 1st) Perform a routine, thorough cleaning of exterior of buildings. Removing spiders and webs, paying special attention to foundations.
- 2nd) Trim weeds around the building foundation and remove wood, building materials, and debris to discourage insects and spiders from living next to a structure. Reduction of heavy dense vegetation will help reduce spider populations.
- 3rd) Check for tight-fitting window screens and door seals.
- 4th) Consider installing yellow or sodium vapor light bulbs outside entrances because these lights are less attractive to insects and thus draw fewer spiders to the area.
- 5th) Follow the guidelines for general exclusion e.g. sealing cracks, fitting door sweeps and eliminating other possible entry points to prevent spiders from moving indoors.
- 6th) Seal cracks in the foundation and other parts of the building and gaps around windows and doors.
- 7th) Report action taken in pest log.

Chemical control need only be considered if there are a number of sightings reported in the area and occupants are at risk. Spiders seen can simply be vacuumed. A small amount of boric acid crystals can be vacuumed up prior to cleaning out spiders and webbing. To be extra careful, remove the vacuumed bag and discard in an outside garbage container immediately after vacuuming.