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# HOBO SPIDER

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## Integrated Pest Management for Homes, Gardens, and Landscapes

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The hobo spider, *Eratigena agrestis* (formerly *Tegenaria agrestis*) (Figure 1), is a European immigrant that was designated in the 1980s as potentially toxic in the United States. However, subsequent research has questioned the validity of this designation. Today the hobo spider is no longer considered of probable medical importance.

The hobo spider does not live in California. There are many cases, however, of common related spiders being misidentified as hobo spiders by the general public and even by pest control operators.

In North America, the hobo spider lives in the Pacific Northwest, from British Columbia east to Montana, Wyoming, and Colorado, and south through Oregon and northern Utah. Although once common in Seattle, the hobo spider has been competitively displaced by another European species, the giant house spider, *Eratigena atrica*, so the hobo spider is now less dominant. The name “hobo” is linked to the spider’s presumed spread to distant cities via railways.

It is conceivable that the hobo spider’s range may extend into the northernmost areas of California. However, there have been no documented verifications by a qualified arachnologist (spider specialist) to date.

Interest in the hobo spider has been growing in California because it is rumored to cause necrotic (rotting flesh) wounds similar to the occasionally-dramatic bites from brown recluse spiders, another spider that does not occur in California. (For more information on the brown recluse, see Pest Notes: *Brown Recluse and Other Recluse Spiders*.)

Some members of the California medical community have read about the supposed effects of hobo spider venom

and have diagnosed hobo spider bites without proof of the spider. The purpose of this Pest Note is to offer current information on the status of the hobo spider in California.

### IDENTIFICATION

The hobo spider is a member of the spider family Agelenidae, a common group that has many species throughout California and the rest of North America. Agelenid spiders can have very dense populations in certain habitats.

The hobo spider shares traits with many of its relatives in the Agelenidae family, including coloration. It is a light brown spider with pale markings, about 1/2 to 5/8 inch in body length.

However, unlike typical agelenids, hobo spiders build webs that are almost always hidden under objects and are not noticeably funnel-like (Figure 2).

More typical members of this family construct a funnel web, which is a trampoline-like, horizontal web constricting back into a funnel or hole (Figure 3). The web is typically found in a crack between bricks, or under wood, stones, or vegetation. The spider waits in the mouth of the funnel for prey to fall onto the horizontal surface and then rushes out, grabs the prey, and takes it back to its funnel to consume. If you go outside on a dewy morning,



Figure 1. Adult hobo spider, *Eratigena agrestis*.



Figure 2. Web of hobo spider, exposed on the underside of a piece of driftwood.

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# PEST NOTES

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you can often see many of these funnel webs.

There are dozens of similar-looking spider species in California that build funnel webs, including members of the genera *Agelenopsis* (2 species) (Figure 4), *Calilena* (13 species), *Hololena* (21 species) (Figure 5), *Novalena* (4 species), and *Rualena* (8 species). There is even a wolf spider genus, *Sosippus* (1 species), in California that, unlike its free-hunting relatives, builds a funnel web. Therefore, if you see such a web in California, you should suspect many other spiders before considering the hobo spider as a possibility. None of these species causes necrotic wounds or serious injury to humans.

To distinguish funnel-weaving spider species, the arachnid's reproductive structures must be examined, a task that requires the skills of a qualified arachnologist. Each spider species has a distinctive design of the male and female reproductive organs that allows for species identification in most cases. (See the pictorial guide by Vetter and Antonelli, listed under References). These physical features of the males and females generally are unique for each species and are used by arachnologists for species differentiation.

Until someone has examined reproductive features on dozens of hobo spiders and related species, it is unlikely that a hobo spider would be correctly identified with the naked eye. Therefore, virtually any supposed "hobo spider" identification by a non-arachnologist in California should be suspect.

If you have access to a magnifying device (hand lens, microscope, etc.), there is an easy way to determine that a spider you have IS NOT a hobo spider. All funnel-weaving spiders have eight eyes arranged in two rows. If you look at the spider head, however, most of the agelenid spiders in California have their two rows of eyes curved so strongly that it appears that they are actually in three horizontal rows with four eyes in the middle row and two eyes above and below this row. This is known as the 2-4-2 eye pattern (Figure 6, left).

Exceptions are the spiders of the genera *Tegenaria* and *Eratigena*, which have



Figure 3. Funnel web made by a typical agelenid spider.

eyes that are in the more common pattern of two rows of four (Figure 6, right). This is also the most common eye pattern for spiders in general; and unless you remove the spider from a funnel web, it will probably not be a funnel-weaving spider.

Nonetheless, it is not uncommon to find a funnel-weaving spider with two straight rows of eyes in California. There are two species of *Tegenaria* in the state, *T. pagana* and *T. domestica*. Their coloration is similar enough to that of the hobo spider, *E. agrestis*, that anyone except an arachnologist might easily confuse them with the hobo spider.

*Tegenaria pagana* is found in coastal California regions and slightly inland. *Tegenaria domestica*, however, is an extremely common spider, about 1/4 to 1/2 inch in body length, may be found throughout California and often inside homes, as is evident by the name "domestica." In fact, *T. domestica* is found throughout the world, having been carried by commerce. Neither of these spiders is considered toxic to humans even though they are closely related to the hobo spider.

## MEDICAL ASPECTS

Hobo spiders have been erroneously reported to have a bite that can leave a necrotic wound that gradually enlarges over several days—similar to that which is occasionally caused in some circumstances by a brown recluse spider. A reported characteristic symptom of hobo spider bites is a headache that persists for 2 to 7 days and does not abate with pain relievers.

In its native European habitat, hobo spider venom is not considered toxic



Figure 4. *Agelenopsis aperta*, an adult funnel web spider.



Figure 5. *Hololena tulareana*, an adult funnel web spider.

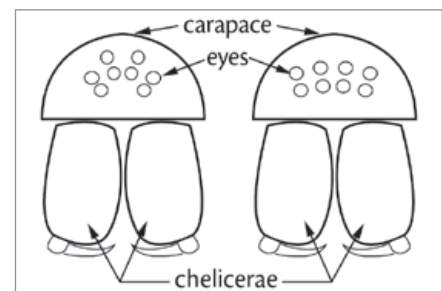


Figure 6. The 2-4-2 eye pattern common to many agelenid spiders (left) and the two rows of four pattern (right) found in many other spiders including those of the genera *Eratigena* and *Tegenaria*.



to humans. A study published in 2001 compared hobo spider venom from Pacific Northwest and European populations. The venom from these two sources was injected into the same strain of rabbits used in the initial research that implicated hobo spiders as potentially toxic to humans. Neither venom in the study produced necrotic wounds in the rabbits.

An editorial published in 2004 examined the medical literature on hobo spider bites and found that there is only one case of a verified bite by a hobo spider that resulted in a necrotic skin lesion; this was in a person who had a pre-existing medical condition that also leads to necrotic skin lesions.

A related study in Oregon, published in 2014, reported only one verified hobo spider bite: the victim was bitten in the calf and the only symptoms exhibited were pain, some redness and twitching in the leg for 12 hours before dissipating.

These studies demonstrate that *definitive proof is still lacking as to whether or not the hobo spider is a dangerous spider*. Until proof is provided, however, it would be prudent to consider the hobo spider to be of minor medical importance.

Also, on occasion, people have read about the Sydney funnel web spider from Australia which is highly toxic to humans. Because of similarity in the names, American funnel weaving spiders have erroneously been assumed to share this high toxicity. The Australian spiders are more closely related to tarantulas, not to the virtually harmless American funnel weavers.

If you do get a necrotic wound in California, you and your medical professional should consider many other common causes to be more probable than a bite from a hobo or brown recluse spider. If an arthropod is involved at all, one should first consider all those creatures that seek out mammals for blood meals and may cause necrotic-type wounds. For more information, see the individual Pest Notes on *Fleas*,

*Bed Bugs*, *Conenose Bugs*, and *Lyme Disease in California*.

In addition there is a long list of medical conditions and diseases that exhibit necrotic-type wounds, such as bacterial infections (see Swanson and Vetter 2005). Any and all of these situations are more likely than the bite of a hobo spider in California.

## MANAGEMENT

Because the hobo spider is not known to live in California, there is no need for control. However, reducing trash and rubble around the house and sealing windows and door jambs will help to reduce the number of spiders and other arthropods that can gain access into the home.

In the garage (a well-known haven for spiders), use plastic bags tightly sealed to store items that are used only sporadically such as gardening apparel (gloves, old shirts, boots) and sports gear (baseball mitts, roller skates). This will help to minimize encounters with spiders but not eliminate them completely.

Typically, pesticide applications targeting spiders are variable in efficacy unless you actually see the spider and are able to spray it directly. Various insecticides are available in retail outlets labeled for spider control. It is just as easy, and much less toxic, to crush the spider with a rolled up newspaper or your shoe.

Sticky traps placed along floorboards out of the reach of pets and young children offer a nonchemical way to trap spiders as well as provide an idea of population levels in the structure. A simple and effective way to minimize indoor spider populations is regular vacuuming, especially under furniture and in other nooks and crannies.

You can also remove a spider from your home by placing a jar over it and slipping a piece of paper under the jar to seal off the opening. If you plan to send the spider to an expert for identification, try to keep it in an undamaged condition, because a crushed specimen may be difficult to identify.

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Pest Notes are available at [www.ipm.ucanr.edu](http://www.ipm.ucanr.edu).



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#### WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in the original, labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Pesticides applied in your home and landscape can move and contaminate creeks, rivers, and oceans. Confine chemicals to the property being treated. Avoid drift onto neighboring properties, especially gardens containing fruits or vegetables ready to be picked.

Do not place containers containing pesticide in the trash or pour pesticides down the sink or toilet. Either use the pesticide according to the label, or take unwanted pesticides to a Household Hazardous Waste Collection site. Contact your county agricultural commissioner for additional information on safe container disposal and for the location of the Household Hazardous Waste Collection site nearest you. Dispose of empty containers by following label directions. Never reuse or burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

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