



spider savvy

Education helps identify the beneficial from the harmful



When we moved out of an urban setting to a small acreage on the prairie, I was a spider-killing machine. Whenever I saw one of the big, leggy, ugly things, they were stomped on immediately! I didn't need them endangering my family and homestead.

Thirty-five years later, I've mellowed. Now, you might find me with my camera, capturing a momma wolf spider carrying her 200 kids on her back or photographing a jumping spider in my livingroom window that just nabbed a housefly. Orb-weaving spiders catch flying insects like the mosquitoes that carry West Nile virus. Ground-living spiders munch on many of the insects that damage our garden plants such as thrips, aphids, and caterpillars; however, involuntary expletives still fly from my mouth whenever I encounter a black widow spider.

What's changed? I became a Master Gardener through the University of Wyoming Cooperative Extension Service (UW CES) and learned how beneficial most spiders are for landscapes and how they truly do avoid human contact. Because the Natrona County Master Gardener's office often fields inquiries about spiders and receives horror stories about alleged bites, I searched to learn more about spiders with scary reputations.

Science-based information about spiders and their behavior includes the following:

1. Brown recluse spiders don't live in Wyoming. The closest they come is southeast Nebraska.
2. Hobo spider bites, like brown recluse spiders, are suspected of causing slow-healing, ulcer-like wounds. Hobo spiders live in Wyoming, but there is no evidence to support the accusation the hobo bite is any more significant than other spider's.

Not that a spider bite can't cause medical problems. If a bite victim is diabetic, has allergies, or has a compromised immune system, he/she might experience more problems. There is rarely a direct connection with an ulcerative, slow-healing wound and a spider. Many assume they've been bitten by a spider when they have no other explanation for a wound (see side story).

3. Spiders generally are not aggressive and will not "attack" humans. People often think if a spider is running toward them, it must be attacking. Most spiders don't have good "distant" vision and are most likely just running to get from point A to point B without ever seeing the human in their pathway.
4. Spiders bite when they're pressed on from above in a last-resort, defensive maneuver when they sense they're about to be squashed. If their microscopically small fangs happen to penetrate a human's thick skin, the bite is likely to be a "dry" bite, with no venom injected. The spider's venom is used for sedating and dissolving prey.
5. Spiders are super-efficient predators of undesirable insects. As a group, they eat more insects than birds do.
6. Of the more than 3,000 named species of spiders in the United States, only black widow spiders are considered of serious health importance

in Wyoming. The black widow venom is a neurotoxin (a toxin that damages or destroys nerve tissue). If the spider bites a human, the effects are quick and painful. One should seek immediate medical intervention. Human deaths are rare, but bite victims report one may “wish they could die” after experiencing the symptoms of severe anxiety, acute cramping, and sweating. In the most severe cases, muscle spasms can restrict breathing.

Paula Cushing, curator of invertebrate zoology at the Denver Museum of Nature and Science, provides the following information regarding the effects of black widow bites on various pets and barnyard animals:

- Cats, Guinea pigs, horses, and perhaps llamas and alpacas, are highly susceptible to serious injury and death from a black widow bite.
- Rats are moderately susceptible. Dogs may experience severe gastrointestinal distress, but high doses of venom are required to cause death in a dog.

- Rabbits and sheep are both considered to be highly resistant to the spider venom.

When encountering the non-dangerous spiders, think of the good work these insect predators do. Instead of killing them, discourage them from entering a home by stacking firewood away from a house, sealing cracks and other openings in the foundation, and keeping window wells clear of leaf litter.

Sticky traps that can be purchased at hardware stores can be set if you believe there is a serious indoor spider problem. After a week or so, take the traps to a local UW CES office for spider identification and advice on spider controls. A list of CES offices is online at www.uwyo.edu/UWCES/Counties.asp.



Many wounds misdiagnosed as spider bites

Rick Vetter and Kirk Visschser, entomologists with the University of California, Riverside, list 14 medical reasons that are more likely to cause slow-healing, ulcer-like wounds.

Conditions, which can cause necrotic wounds, have been misdiagnosed as or could be confused with the brown recluse spider bite. They include:

- erythema chronicum migrans, the characteristic lesion of Lyme disease, which is transmitted by ticks.
- Stevens-Johnson syndrome, a severe, inflammatory eruption of the skin and mucous membranes, usually following a respiratory infection.
- toxic epidermal necrolysis (Lyells syndrome), a skin disorder.
- arthritis-dermatitis syndrome.
- erythema multiforme, a skin disease associated with allergies, seasonal changes, or drug sensitivities.
- herpes simplex, a recurrent viral disease marked by eruption or fluid-containing vesicles on the mouth, lips, face, or genitals.
- erythema nodosum, a skin disease.
- purpura fulminans, a severe and fatal form of idiopathic thrombocytopenic purpura, usually following an infection illness.
- diabetic ulcer, or bed sores.
- poison ivy/oak infection.
- vasculitis, inflammation of a vessel of the body.
- thromboembolic phenomena.
- polyarteritis nodosa.
- lymphomatoid papulosis.
- pyoderma gangrenosum.
- sporotrichosis.
- warfarin poisoning.
- Rocky Mountain spotted fever.
- bite of the pajaroello tick (*Ornithodoros coriaceus*, an Argasid tick).

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