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Pseudoscorpions

Erin W. Hodgson
Extension Entomology Specialist

Brooke Lambert

Alan H. Roe
Insect Diagnostician

What You Should Know

- Pseudoscorpions are harmless to people and pets.
- They "hitchhike" on flies and beetles, and sometimes can accidentally enter the home.
- Pseudoscorpions are considered beneficial to humans because they feed on clothes moth larvae, carpet beetle larvae, booklice, ants, and mites.

Pseudoscorpions, also known as false scorpions or book scorpions, are arachnids in the order Pseudoscorpionida. There are more than 3,300 different species of pseudoscorpions throughout the world, with the most dense populations found in the tropics and subtropics. They can be found throughout Utah. As the name suggests, pseudoscorpions look very similar to scorpions except they do not have a stinger at the end of the abdomen like true scorpions. In general, pseudoscorpion adults range from 2 to 8 mm in length, and have flattened, pear-shaped bodies (Figs. 1-5). They have four pairs of legs and a pair of large pedipalps, that protrude forward from the front of the body. The pedipalps have venoms glands used for subduing prey. Pseudoscorpions also have mouthparts called chelicerae that help break down food and spin silk. The body color varies from yellowish-tan to dark-brown; however, the pedipalps are typically black. Some species have two to four eyes while others have none.

Fig. 1. A pseudoscorpion collected from a home in northern Utah in 2007.[1]

Fig. 2. A pseudoscorpion, *Chelifer cancroides*, note the enlarged pedipalps for grasping prey.[2]

Life Cycle

Pseudoscorpions have an extended life cycle of 1 to 3 years, depending on the location and temperature. The mating ritual for pseudosporpions is similar to the dance of true scorpions. The male pseudoscorpion produces a spermatophore, or sperm packet, and pulls the female over it during the mating dance. The female carries a silken egg pouch of 12 to 24 eggs on her belly for about 3 weeks. The hatched brood ride on the females back until they get older. The young look like the adults except smaller; they will molt three times over several years before becoming adults. Adults live for 2 to 3 years and females may produce several broods a year. Pseudoscorpions overwinter in silken cocoons.

Fig. 3. Pseudoscorpion.[3]

Habitat Description

Pseudoscorpions are harmless to people and animals. They normally occur where moisture is present, such as in sinks, bathtubs, and drains. They have also been found between book pages and in stacks of newspapers. Outdoors they have been found in mulch, moss, leaf litter, under stones, under tree bark, in manure, and between boards in buildings.

Pseudoscorpions are most active during warm days in the spring, summer, and fall. Pseudoscorpions are common, but not seen or recognized often due to their size. These arachnids are not very mobile, but they will attach themselves to the legs of flies, beetles, and other insects. As they "hitchhike" to new habitat, they can be accidentally introduced inside structures.

Pseudoscorpions cannot bite people or pets and should be considered beneficial. The young and adults feed on clothes moth larvae, carpet beetle larvae, booklice, ants, mites, small flies, and small earthworms. Like true scorpions, pseudoscorpions inject venom into prey and ingest the liquefied remains.

Management

Control methods for pseudoscorpions are usually not warranted; however, exclusion of insects and arachnids in structures is generally encouraged. Efforts should be made to reduce accidental migration inside the home. Minimizing pseudoscorpion prey availability will also discourage infestations.

• Eliminate places where pseudoscorpions live will also help. Dry out damp areas in the house (e.g., laundry room, furnace, bathroom, etc.), and around the exterior perimeter.

• Caulk or seal openings or foundation cracks, windows, and around plumbing, gas, or electrical conduits. Use weather stripping around doors and windows. Expanding-foam sealants may be of value in protecting hidden recesses and other areas not readily visible.

• Completely sealing any structure may be impossible. If needed, collect individuals with a broom and dustpan and discard or simply vacuum any pseudoscorpions found in the home.

Fig. 4. Pseudoscorpion.[4]

Fig. 5. Size comparison of a dime and a pseudoscorpion.[5]

[1] Image courtesy of Erin Hodgson, Utah State University Extension (www.utahpests.usu.edu).

[2] Image courtesy of Chris Buddle (www.biology.ualberta.ca/bsc/news24_1/pseudoscorpions.htm).

[3] Image courtesy of Key Gray collection at Oregon State University (www.uidaho.edu/so-id/entomology/Spiders.htm).

[4] Images courtesy of the Backyard Arthropod Project (http://somethingscrawlinginmyhair.com/category/arthropods/arachnids/pseudoscorpions/).

[5] Image courtesy of Bill Capman (http://www.augsburg.edu/biology/photoofmonth/pseudoscorpion.html).