PENNSTATE
College of Agricultural Sciences • Cooperative Extension
Entomological Notes
Department of Entomology

PSEUDOSCORPIONS

House pseudoscorpion, *Chelifer cancroides* (L.)
Arachnida, Pseudoscorpiones

Pseudoscorpions are tiny arachnids, 2 to 8 millimeters in length, with four pairs of legs and one pair of relatively large pedipalps (pincer-like claws). Most people do not notice or recognize pseudoscorpions, which is primarily due to the secretive nature and small size of these animals. Frequently, homeowners discover pseudoscorpions in bathroom sinks and tubs, and many believe they are either ticks or small spiders. Pseudoscorpions are neither dangerous, nor destructive; they eat many small arthropods, including caterpillars, flies, ants, beetle larvae, and booklice. Most of the more than 2000 described species inhabit the tropics, where they occupy animal nests, crevices of bark, and leaf litter. Several dozens species are present in Pennsylvania. The pseudoscorpion species commonly encountered by Pennsylvanians is cosmopolitan—the house pseudoscorpion, *Chelifer cancroides* (L.).

Figure 1. House pseudoscorpion.

DESCRIPTION

The house pseudoscorpion (Fig. 1) adult is 3 to 4 millimeters in length and has a rich mahogany color. Its four pairs of legs increase sequentially in length. It has one eye on each side of its cephalothorax (head plus thorax) and a 12-segment abdomen (only ten are easily visible). Overall, the body resembles a teardrop. The pedipalps, located in front of the first pair of legs, are more than twice as long as the legs. When extended, crab-like, they measure 7 to 9 millimeters across.

LIFE HISTORY AND BEHAVIORS

The mating behavior of *C. cancroides* is interesting. Mature males create a mating territory 1 to 2 centimeters in size. They rub their ventral surface on the center of this territory, which some arachnologists postulate as pheromone placement. When a female enters this area, the male begins a mating dance by rapidly vibrating his body and displaying his pedipalps. He deposits a sac that contains sperm (spermatophore) on the substrate, moves backwards over it, and guides the female on top of the sac, where she then picks up the sperm. The entire mating process takes from 10 minutes to 1 hour.

The female produces 20 to 40 eggs that she carries beneath her abdomen. After the young house pseudoscorpions, which look like small adults, emerge, they stay with the female for several days, sometimes riding on her back. The entire brood then disperses. This process, from egg deposit to brood dispersal, can take 3 weeks.

The young house pseudoscorpions molt three times before adulthood; these stages are protonymph, deutonymph, and tritonymph. The developmental period is temperature dependent and takes 10 to 24 months. Adults do not molt and can live for 3 or 4 years.

Older house pseudoscorpions are less agile. They often have difficulty climbing smooth surfaces and are less likely to right themselves after flipping onto their backs. These factors, plus their increased visibility due to their large size, may explain why only adult specimens are submitted for identification.

MANAGEMENT

Peudoscorpions pose no hazards for homeowners. Their presence may diagnose a high level of atmospheric humidity and/or a population of other arthropods, on which the pseudoscorpions are feeding. Using pesticides to control these animals is not recommended.

WARNING

Pesticides are poisonous. Read and follow the label directions and safety precautions. Handle them carefully and store in original, labeled containers—out of the reach of children, pets, and livestock. Dispose of empty containers quickly, in a safe manner and place. Do not contaminate forage, streams, or ponds.

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