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

SPRINGTAILS

Order: Collembola

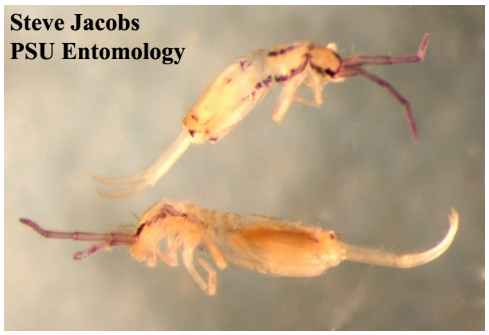
Springtails are very small, abundant, insect-like critters that inhabit a variety of moist environments. Although various springtail species range in size from 0.2 mm to 10 mm, most of the types that occasionally get into homes are 1- 2 mm in length. If they become a nuisance in homes, it is usually during extended droughts or prolonged, saturating rains.

DESCRIPTION

Springtails have antennae, three pairs of legs, a segmented body and can have simple mouthparts, such as piercing-sucking mouthparts, used to suck fluids from fungi or other liquid sources to very complex mouthparts that are highly specialized for some yet unknown reason. All of the different types of mouthparts are located and concealed within the head. It is principally this later characteristic that some authors believe separates the springtails from the rest of the class Insecta.

Their most identifiable morphological characteristic is called a furcula. It is a bi-forked appendage located on the underside of the fourth abdominal segment, is folded up underneath the springtail - held in place by a clasplike structure called the tenaculum - and is snapped downward to propel the springtail through the air. Presumably, this method of locomotion is used as a means to evade predators as it can propel the springtail up to 100 times its body length.

Springtails come in a variety of colors and shapes. Most are elongated, but some species are more globular. Their colors range from white to black, and some species are purple, red, orange, grey, yellow or mottled (multicolored).



Several types of Springtails found in structures.

LIFE HISTORY AND BEHAVIOR

Springtails require high humidity environments such as beneath leaf litter, in mulch, under thatch in damp lawns similar locations. Their numbers have been estimated to be as high as 100,000 per cubic meter (approximately 35 cubic feet). They feed on molds, mildew, fungi, bacteria and decaying plant material, occasionally causing damage to crops in gardens, fields, greenhouses, and to cultivated mushrooms.

In homes with high humidity and mold growth, springtails can sometimes maintain an indoor population. This is more common in bathrooms and basements but can also occur within walls of newly built homes that are supporting mold growth because of rains that soaked the floor and walls before they were covered. One species of springtails, *Hypogastrura nivicola*, are known as snow fleas. On warm winter days these black springtails can sometimes be seen on the snow surface searching for pollen spores. This event is more common in or adjacent to wooded areas.

MANAGEMENT

During droughty conditions, springtails will move from mulches and landscaping in search of more humidity. As previously mentioned, water saturated soils will also drive springtails from their habitats in search of, in this case, drier conditions. As the springtails seek more favorable environs they can inadvertently enter homes under doors, sill plates, siding and windows, and through screens.

The best method to manage or eliminate springtails in the home is by lowing the humidity through the use of air conditioning or de-humidifiers. This is of particular relevance in bathrooms, showers and saunas. Also, any mold and mildew should be removed.

Water house plants thoroughly and then allow the soil to dry before watering again.

Reduce the amount of mulch surrounding the home.

Hire a pest management professional (pest control company) to apply an insecticide to the exterior foundation and building perimeter.

WARNING

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

Steven B. Jacobs
Sr. Extension Associate
Dept. of Entomology
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