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Book Lice or Psocids

Liposcelis sp.



GENERAL INFORMATION

Psocids are known as booklice because of their affinity for damp, moldy books. They are not truly lice and pose no threat to humans or pets. There are 4,408 species on all continents, including Antarctica with about 260 species in the United States and Canada. Booklice are small, and they need high humidity or moisture to live. Psocids are indicator species, indicating past or present dampness. They require foraging temperatures between 9-15°C, do not survive in RH below 50%, and die when temperatures rise above 37°C. Populations can increase rapidly at temperatures over 25°C. Common places for psocid populations to thrive include window sills, under household siding, tree trunks, shrubs, flowers, around garden hoses, under bricks and rocks, around light fixtures and under boxes. Outdoor populations of barklice (in the same family: Psocoptera) can occasionally come inside and be mistaken for booklice. Barklice generally have wings where booklice do not.

SIGNS OF INFESTATION

Book lice are slow eaters. This means that damage from local populations is usually minor unless populations go unchecked for long periods of time. Booklice may be spotted in the folds of food packets and in books and magazines.

FOOD SOURCES

The primary food sources for booklice are microscopic molds and other fungi, found on food, wheat starch paste, paper, etc. Certain species are known to feed on dead insects. They will eat just about anything and are able to change their diet as food availability changes.



DIAGNOSTIC MORPHOLOGY

Adults:

- less than 4mm in length (usually 1 -2 mm)
- soft bodied insects, with long, slender antennae and chewing mouthparts.
- common species are wingless
- outdoor related species of barklice often have wings



Immature Stage:

- incomplete metamorphosis (egg-nymph- adult)
- nymphs are similar in appearance to adults but smaller
- Young nymphs are paler and sometimes patterned

LIFE CYCLE

Studies of certain booklice species report that no males occur and that females reproduce parthenogenetically (reproduction without fertilization). These insects undergo simple metamorphosis to develop to maturity. Their white oval eggs may be covered with a crusty material, silk, or debris of various kinds and hatch 21 days after being laid. Eggs are laid in warm (30 °C), humid areas other than where they are feeding. These nymphs will reach sexual maturity in 24 to 65 days, shedding their skins several times as they grow. Booklice may lay anywhere from 20 - 50 eggs, depending on the time of year. Their total life span is from 24 to 110 days. Some species produce only one generation while others may have as many as eight per year, with a single generation completed in as little as 25 days under ideal conditions.

CONTROL & TREATMENT

The most effective method for controlling booklice is to reduce moisture and environments conducive to mold growth, which the psocids feed upon. Good air circulation, de-humidification, repair of any moisture problems and storage of materials above floor level will help to minimize dampness. If you have psocids expect them to prosper unless the conditions which they seek are changed.

Fact Sheet: Book Lice or Psocids

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