



Texas Agricultural Extension Service

The Texas A&M University System

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BARKLICE and BOOKLICE

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Booklice and barklice are members of a order of insects called Psocoptera. They are not true lice and are generally harmless. Members of this group are generally small soft-bodied insects, and most species have four wings in the adult stage. Booklice do not have wings as adults.

Booklice

When Howard E. Evans, author of *Life of a Little Known Plant* (1966), dedicated his book, he meant what he said, literally:

"This book is dedicated to the booklice and silverfish that share my study with me. May they find it digestible!"

Booklice, *Liposcelis corredens* Heymons, are very small (less than 1/16 in long), mobile, flesh-colored insects that share our homes and feed on microscopic molds, together with dried or decaying plant and animal materials. Often, they are noticed on starchy book bindings, photographs, wall paper, stored dry goods, or in the vicinity of these items. These insects may become particularly abundant in dark, damp places such as basements, storerooms, homes closed for the summer, and closets during the warmer periods of the year. As a group, booklice do little actual

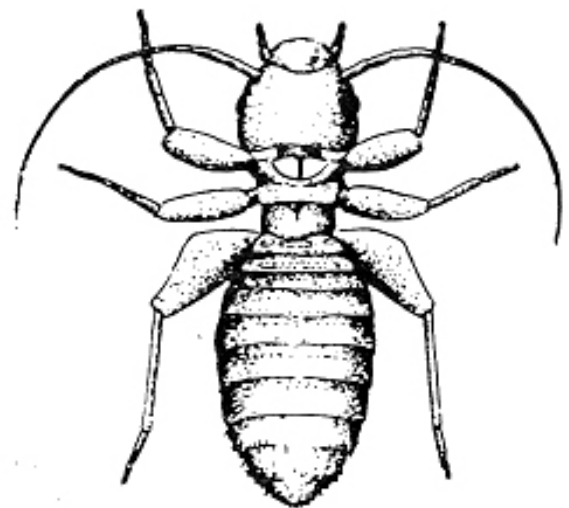


Fig. 1. A booklouse

damage, except when contaminating stored food and food packaging material, but their presence in large numbers can be very annoying making control desirable. Although booklice are not true lice and never bite or live on animals, ancestral forms of these creatures are thought to have evolved into lice as a result of the long association between the host's dwelling, the host, and these scavengers.

Management

Total control of booklice in dwellings is not possible in many cases, such as in loosely constructed buildings. These insects can and will easily come in from outdoors, where they commonly occur. For control, clean the infested areas thoroughly, taking as many objects as possible outside and drying them in the sun on a bright day. Open the windows and doors, turn off any humidifiers and air the room thoroughly using a fan or dehumidifier. Occasionally, faulty air conditioner systems promote damp, humid conditions. These systems should be repaired. If feasible, raise the room temperature. Since booklice are soft bodied insects, they dry out easily when exposed to heat and dry air.

Locate breeding sites such as upholstered furniture, moldy wood, old mattresses, damp papers or books, etc and remove, treat or discard them. Also discard infested food or treat it by heating (place in oven at 180°F for 30 minutes) or freezing (placing in freezer at 0°F for 4 days). Protect uninfested foods by using tight-sealing moisture-proof containers (refer to L-2046, "Pantry pests" for additional control in stored food).

Following the sanitary control measures described above, chemical control may not be required. However, if the infestation persists, household insecticides containing pyrethrins, rotenone, allethrin, chlorpyrifos or propoxur labeled for crawling insects or booklouse control may be needed for spot-treating areas of persistent infestations. In non-food storage areas, one pound naphthalene flakes or paradichlorobenzene (PDB) per 100 cubic feet will be effective. Always follow carefully the instructions on the insecticide label.

Barklice

Barklice occur on the trunks of a number of trees where they feed on lichens, molds and fungi growing on the bark. Therefore, they may actually be considered to be beneficial insects since they perform the service of cleaning the trunks of trees.

Species belonging to two families of barklice are commonly encountered in Texas: Psocidae and Pseudocaeciliidae. Psocidae are about 1/4 of an inch long and are black in color. They live in clusters on the bark made up of many individuals in similar stages of development.

Consequently, tight clusters of wingless immatures and clusters of winged adults located on the trunks of trees such as Arizona ash are encountered at about eye level. From a distance these clusters often look like knotholes. The aggregated clusters of barklice move like herds of cattle on the bark.

The Pseudocaeciliidae are much smaller in size, duller in color and adults bear wings. The species most noticeable,

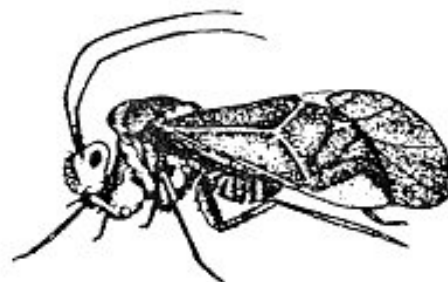


Fig. 2. Psocid barklouse

Archipsocus nomas Gurney, makes unsightly silken webs on tree trunks and branches. These webs can completely wrap a tree's trunk to the tips of each branch. Underneath this protective webbing, the barklice feed on lichens and fungi. Host trees commonly include oaks and pecans, although any tree with lichen and fungal growth on the bark can support a barklouse population. Silk-wrapped trees harboring this barklouse appear to occur at specific periods of the summer (July and August) when conditions are favorable for their development. The appearance of webbing often causes concern to homeowners and landscape maintenance personnel that are not familiar with this insect.

Pseudocaeciliid barklice are harmless to trees and no insecticides are recommended for their control. Once silken webbing appears, it will not be removed by chemical treatments. If removal of the silk is desired, it may be removed using spray of water under high pressure. Left undisturbed, these barklice apparently remove the silken webbing at the end of the summer. However, an observation has been made in pecan orchards that the use of fungicides will kill lichens. Lichens are, of course, symbiotic associations of an algae and a fungus. One cannot survive without the other. Without lichens, barklice will have nothing on which to feed and thus populations will fail to develop.



Fig. 3. Pseudocaeciliid bark louse and silk-wrapped tree.

Suggested pesticides must be registered and labeled for use by the Environmental Protection Agency and the Texas Department of Agriculture. The status of pesticide label clearances is subject to change and may have changed since this publication was printed. The USER is always responsible for the effects of pesticide residues on his livestock and crops, as well as problems that could arise from drift or movement of the pesticide from his property to that of others. Always read and follow carefully the instructions on the container label.

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[Return to top of page](#)

[Return to Department of Entomology Home Page](#)

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