

## **Bark Lice** **by Lloyd Eighme, retired entomologist**

When someone asks you how to help their sick plant you look for clues as to what is wrong. If there is no evidence of disease you look for insect damage. Any insects you find on the plant are suspects. It is very easy to make false accusations, especially if you do not know the insects very well. If you are really struggling to find something and you see tiny aphid-like insects running rapidly along the stems, you are likely to jump to the conclusion that this must be the culprit. Sometimes it takes a little detective work to come up with the right answer. The process of elimination of suspects is often helpful. These little specks running around are moving too rapidly to be aphids, which move slowly and clumsily. If you can see their mouthparts, they have jaws instead of the sucking beak of aphids. They are not mites, because they have 6 legs, not 8. If you can get one under the microscope in the right position you might be able to see a bulge on the front of the face that distinctly places this little insect in the family Psocoptera (pronounced without the P in front). They are sometimes called psocids, but more often by the common names book louse or bark louse.

Bark lice, psocids, are common and widespread, but usually overlooked because of their small size or they are assumed to be aphids and treated as such. Does it really matter? I cringe when I think of how many people have been advised to spray their plants with insecticide when there was no reason to do so. Bark lice do no harm to the plants. They do not eat green leaves. What do they eat?

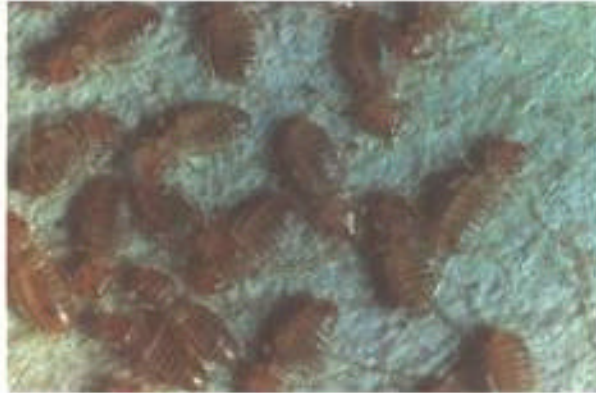
When I was working in the stored grains lab at Oregon State University, someone brought in a sample of wheat from farm storage that had little "specks" running around in it. My first assumption was granary mites, which are commonly seen in stored grain. Under the microscope they had only 6 legs so I knew they were insects, not mites. When we determined them to be psocids the next question was what are they doing there? The kernels of wheat showed no evidence of chewing. We sorted out some kernels of wheat that had no breaks in the smooth seed coat, put them in a closed container, and added psocids to see what they would do. We added a bit of moisture because the air in the lab was too dry for these soft bodied insects. The psocids began to multiply and prosper in the sample of wheat. We carefully examined the kernels of wheat every week to see if the psocids had been feeding on them. Several months went by with the psocids thriving and multiplying, but there was no evidence of any damage to the kernels of wheat. Our final conclusion was that the psocids were eating the microscopic fungal threads that are always present on field stored wheat.

The bark lice commonly feed on the lichens and fungi that grow on the surface of bark. The book louse is often seen in libraries where it feeds on the starch sizing of the paper and the paste used in book bindings or the mold on old books if the

humidity is high enough. Get acquainted with these little insects so you can recognize them and then confidently tell people not to worry because they do us no harm.



Adult psocid: winged species



Adult psocids: wingless species