

Adelgids

Adelgids are sap-sucking insects. Loss of sap weakens and eventually kills infected trees.

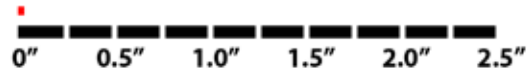
- Hemlock woolly adelgid
- Balsam woolly adelgid



Hemlock woolly adelgid infestation.

Photograph courtesy of Kris Light.

Hemlock woolly adelgid



Hemlock woolly adelgid is a serious pest of eastern and Carolina hemlock. The adelgids appear as white cottony sacs at needle bases, most prominent in early spring.

Wingless female adults overwinter on hemlock trees. They lay eggs in late winter and early spring that hatch in April. Young nymphs (crawlers) move to needle bases and begin to feed. When mature, females produce a white, waxy covering. Second-generation females lay eggs in this cottony mass during June.

Crawlers are very tiny—roughly $\frac{1}{32}$ "! Look at the photograph and compare their size to the hemlock needles! They may be dispersed by wind, birds, and mammals.

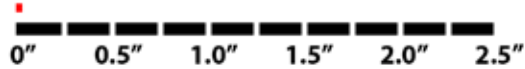


Pennsylvania Department of Conservation and Natural Resources—Forestry Archive, Bugwood.org.



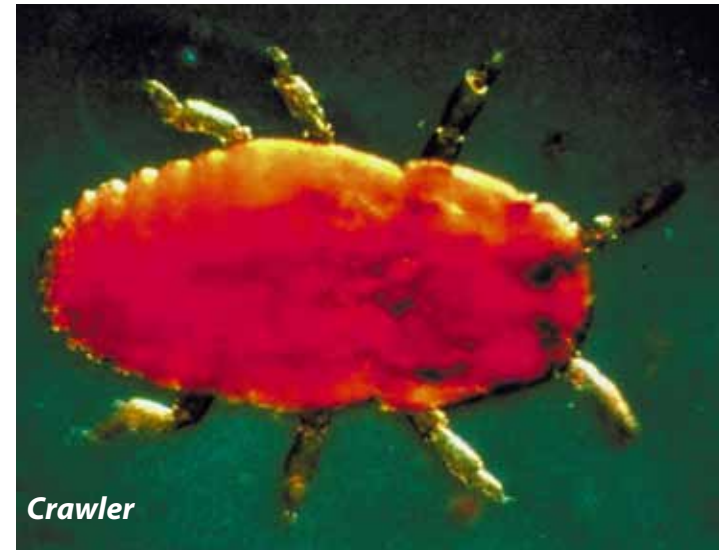
Terry Conners, Department of Forestry, University of Kentucky.

Balsam woolly adelgid



The most obvious indicator of the aphids' presence is the white "wool"-covered females on the bark of stems or branches during summer months. Without the wool, adults are about $\frac{1}{16}$ " long and dark purple to black in color. Overwintering nymphs are about $\frac{1}{32}$ " long, amber colored, flattened, and fringed with whitish wax. Gouts can be on outer branch nodes and terminal buds, and can stop production of new shoots.

The balsam woolly adelgid may be mistaken for damage caused by scale insects. "Wool"-covered females and gouts are distinctive. So far this pest is only found in northern Idaho.



Crawler
USDA Forest Service—Ashtville Archive, USDA Forest Service, Bugwood.org.



Ladd Livingston, Idaho Department of Lands, Bugwood.org.

Balsam woolly adelgid, continued



Scott Tunnock, USDA Forest Service, Bugwood.org.



Closer view.

Ladd Livingston, Idaho Department of Lands, Bugwood.org.