

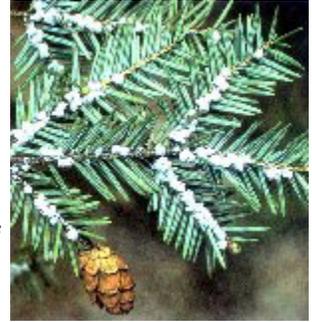
Hemlock Woolly Adelgid in Pennsylvania

What is the Woolly Adelgid?

The hemlock woolly adelgid is a sap-feeding insect that attacks hemlock trees throughout eastern North America along the Appalachian mountains and surrounding regions, including Pennsylvania. It is particularly bothersome to both the eastern hemlock (Pennsylvania's state tree) and the Carolina hemlock (found further south in the Smokey Mountain sections of the Appalachians). These adelgids are also found as far north as southern New England.

The insects appear as white sacs clinging to hemlock twigs, resembling the tips of cotton swabs. These sacs are on the underside of the twigs at the base of the needles, making them hard to see at first.

Hemlock woolly adelgids feed throughout the year, although spring is when they do the most tree damage. The pest sucks sap from the young twigs, depriving the needles and causing them to turn a grayish green (hemlocks naturally have a shiny, dark green color). Obviously, the loss of sap jeopardizes the trees' health, and within a few years of advanced infestation, hemlocks may lose most of their needles, and can often die if other stresses, such as drought, affect them. The insects are dispersed as they hatch in spring by wind, birds and various mammals.



These forest pests are becoming a larger problem, both in the forests and in residential stands of hemlocks. Since Pennsylvania's hemlocks prefer relatively remote locations, such as near a stream or a protected, shady locale, it is somewhat difficult to treat the trees to rid them of the pests. There are ways of combating the adelgid, however, which are reviewed elsewhere in this web site.

The hemlock woolly adelgid, *Adelges tsugae*, was introduced to North America in the Pacific northwest in 1924, probably from Japan. It was first spotted on the eastern seaboard (in Virginia) in the early '50s. Defoliation due to the insect has been occurring ever since, and it is spreading. It is commonly pronounced "WULL-ee uh-DELL-jed."

About 35 (out of 67) counties in Pennsylvania have now confirmed the presence of this adelgid, mostly in the southern and eastern counties. The pest first appeared in Pennsylvania (in Chester County) in the mid-'60s; at the time, they were confined to ornamental hemlocks. Over the last 20 years, however, the hemlock woolly adelgid has become a significant threat to Pennsylvania's state tree