

BALSAM WOOLLY ADELGID

The balsam woolly adelgid (*adelges piceae*) is becoming a significant problem in our urban forests causing failure of many true fir trees. Early diagnosis and proper treatment is extremely important since this pest can quickly kill even mature trees.

This invasive pest was introduced to the United States from Europe around 1900. The probable cause for introduction was through infested nursery stock. Balsam woolly adelgids (*adelges piceae*) are small wingless insects that target true firs. In the northwest, there has been a great impact on grand fir, silver fir, and subalpine fir. Serious infestations can multiply quickly since their lifecycle includes three generations per year. As it feeds with its piercing and sucking mouth parts, toxins are released in its saliva which causes disturbance in the sapwood and creates water stress. This often results in tree death in two to three years.

These phloem sucking pests can be identified by close observation of branches which have swelling at the nodes and at the tips of branches. Very small white cottony tufts on the bark are also signs of this pest. In time, leaves turn yellow, then to brown or red and the twigs and branches eventually die.

Control methods include hand wiping to remove minor infestations when possible. Infested trees can be hosed off with a strong stream of water to wash off the insects. Insecticidal soaps and horticultural oils can be effective. Horticultural oil should be applied during the winter and before new growth emerges in the spring. Stronger chemical treatment options include spraying full coverage high pressure sprays of carbaryl (sevin), cyfluthrin or endosulfan/Triodan.

Since pests generally attack trees which are already stressed, keeping trees healthy to begin with is the best preventative measure. Avoid crowding plants too closely, do not improperly prune increasing wounds or cause damage with turf care equipment, and water deeply during the hot summer months.