

HEMLOCK WOOLLY ADELGID



WHAT IS THE THREAT:

The Hemlock Woolly Adelgid (*Adelges tsugae*) aka HWA is a tiny piercing and sucking insect that is difficult to see to the naked eye. HWA feeds on the sap of eastern hemlock and can be found at the base of the needles. Adults are dark in color and nymphs (crawlers) are reddish brown. The easiest way to find HWA is to look for white woolly material or ovisacs, which are especially visible in the winter months. HWA completes two asexual generations per year on Eastern Hemlock, both of which overlap as adults in the spring.

WHERE IS THE THREAT:

HWA is an invasive species from Asia that was first reported in the Eastern United States in 1951 near Richmond, Virginia. It has since infested the US east coast forest from Maine to Georgia, as well as parts of Michigan. Multiple counties have continued to document new infestations from 2016 onward.

SYMPTOMS:

The earliest visible sign of HWA is the presence of white cottony masses usually located on the twigs and at the base of the needles. Populations tend to be denser in the lower limbs, but can reside anywhere on the tree. Symptoms will progress to fading, thinning and dying limbs, which begin at the base of the tree and move upwards. Left untreated, tree mortality can occur over the course of 3-5 years.

WHAT TO DO ABOUT IT:

Arborjet recommends a trunk injection of IMA-jet® insecticide using systemic injection equipment. To increase the resilience of the tree, a follow up application of NutriRoot® or Mn-jet Fe is recommended. Fall treatments typically coincide with HWA feeding. HWA mortality occurs after ingestion, generally within 14-28 days, and continues for up to 2 years. Cottony masses remain for some time, but eventually turn gray in color.



A: Healthy hemlock tree
B: Hemlock infested with Hemlock Woolly Adelgid



Settled Hemlock Woolly Adelgid nymph



Hemlock Woolly Adelgid eggs

Photo Credit: Insect: Kelly Oten, North Carolina Forest Service, Bugwood.org ; Photo B taken by: John A. Weidhass, Virginia Polytechnic Institute and State University, Bugwood.org; Nymph: Kelly Oten, North Carolina Forest Service, Bugwood.org; Eggs: Pennsylvania Department of Conservation and Natural Resources - Forestry, Bugwood.org