

# Adelges tsugae

Hemlock Woolly Adelgid - HWA  
Hemlock Woolly Aphid

Invasive to Maine

Upland  
Forests

## Larval Form



Robert Childs, Umass, Amherst

PERMITTED USE

Look for white waxy tufts covering the nymphs. These tiny nymphs (less than 1 mm) settle at the base of the needles on the underside of hemlock trees.

## Habitat



Morrisseau

PERMITTED USE

Look for hemlock trees with white fuzz on the **UNDERSIDE** of stems. Affected Hemlocks often have a grayish-green appearance with branch dieback.

## Life Cycle Description

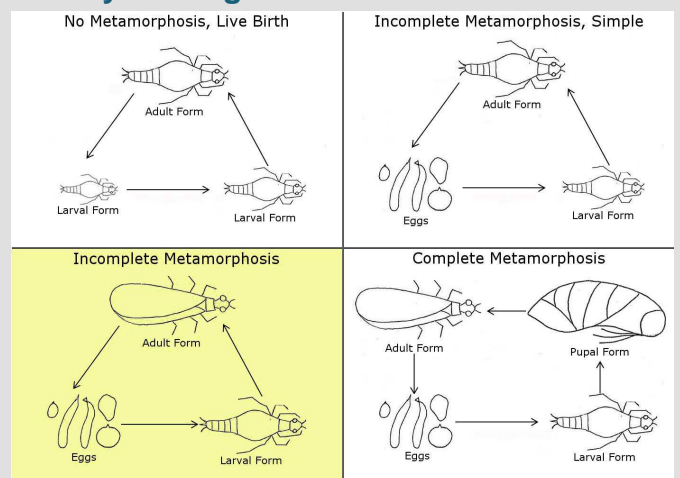


Robert Childs and NPS

PERMITTED USE

HWA are barely visible, though their white waxy covering is visible. When first laid eggs are reddish but then darken. Nymphs crawl, settle in one spot to feed, and secrete wax.

## Life Cycle Diagram



## Adult Form



Michael Montgomery, USDA Forest Service

PERMITTED USE

Half of the nymphs mature into winged adults. The other half of nymphs mature without wings and stay on the host tree. All adults are females and reproduce asexually.

## Similar Species

Hemlock woolly adelgids are similar to aphids and other adelgids in that they bore into the plant to feed on its sap. HWA feed only on hemlock trees. There is a balsam woolly adelgid that feeds only on balsam and Fraser fir trees.

## Fun Fact

The hemlock woolly adelgid has a thread-like mouth tube that it uses to pierce the tree to get sap. This mouth part is more than twice as long as its body! One HWA can be the grandparent of more than 22,500 HWA in a single year!

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Help us improve this species card! Contact us with your updates.



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