

WINTER MOTH



WHAT IS THE THREAT:

Winter Moth (*Operophtera brumata*), an invasive pest introduced from Europe and the Near East, causes severe defoliation of hardwood trees. Winter Moth is appropriately named, as adult moths are generally active from November through January. The larvae begin feeding early on developing leaves; severe infestations will cause noticeable tree defoliation. In June, they drop to the ground to pupate in the soil until the fall. Canadian research has shown that four consecutive years of defoliation can ultimately lead to tree mortality.

WHERE IS THE THREAT:

As an invasive species, winter moth is found in Nova Scotia, coastal New England (Massachusetts, Maine, Rhode Island, Connecticut, and New York) and also the Pacific northwest (Oregon, Washington, and Vancouver Island). Winter moth caterpillars eat holes in the leaves, blossom and developing fruitlets of many tree and shrubs, with preference for oak and apple, but also feed on maple, birch, hornbeam, chestnut, beech, larch, poplar, cherry, pear, rose, raspberry, blueberry, willow, and elm.

SYMPTOMS:

Early detection of Winter Moth is difficult, as the first instar larvae begin feeding while the pre-formed leaf is still in the bud. The first symptoms will be visible only after buds break and leaves unfurl, revealing small feeding holes in the leaves; at this point, the larvae are still generally too small to be seen. Over the early weeks of the spring, the feeding damage on the leaf will become more obvious and the caterpillars can grow to a visible size. The caterpillars may also be seen descending from the canopy on silken threads. Extensive populations of Winter Moth can cause severe defoliation of the tree.

WHAT TO DO ABOUT IT:

Trunk injections of TREE-age® or ACE-jet should be made in early spring, before buds break, when Winter Moth outbreaks are expected. TREE-age® can provide protection for 2 years. Alternatively, treat with ACE-jet when leaf injury first appears, or when caterpillars are first observed. One application is sufficient to control Winter Moth. ACE-jet remains active to protect the tree canopy for approximately 3 – 5 weeks.



Adult Winter Moths mating



Winter moth eggs



Early Winter Moth caterpillar damage to maple leaf.



Defoliation caused by winter moth

Header Image: Milan Zubrik, Forest Research Institute - Slovakia, Bugwood.org, Adult: Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org, Eggs: Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org, Caterpillar Damage: Joe Elkinton, U-Mass-Amherst, Defoliation: Hannes Lemme, Bavarian State Research Center for Agriculture, Bugwood.org

TREE-age® Insecticide is a Restricted Use Pesticide and must only be sold to and used by a state certified applicator or by persons under their direct supervision.