

Winter Moth is here to stay -- some steps to take

You may have noticed the “lacy effect” on the leaves of many trees in Lexington, where the infestation of Winter Moths has been increasing. Some fruit trees, among others, are completely defoliated. It’s pretty bad, but there are some things you can do; read on. If you understand the life cycle of these critters you will better understand how and when to combat them.

Life cycle: Winter Moths (*Operophtera brumata*) live in the ground as pupae most of the year. From around November 15th to January 1st the insect form emerges from the ground as winged males and flightless females. The females climb straight up the trees or shrubs, being intercepted by the males to mate on the way up. They lay their fertilized eggs in the leaf buds and on bark. They don’t feed during this mating season, so they can bear icy weather. The tiny larvae do some damage to the leaf while it is still in bud, but in the spring, when the buds break into leaves, they start feeding heavily and may defoliate the tree. Each female lays about 150 eggs, which grow into 1 ½” light green hairless caterpillars. See the UMass website for full information.

http://www.umassgreeninfo.org/fact_sheets/defoliators/wm_id_man.html

Preferred Trees: Not all trees are susceptible to Winter Moth damage. The insects prefer Maples, Oaks, Ashes, trees from the *Prunus* family (Purpleleaf plums, some Cherries), Apples, Crabapples, Amelanchier (Serviceberry) and Blueberries. They don’t attack evergreens. If you had a lot of damage on a certain tree last spring, you will have even more this spring, as the population growth is exponential.

Harm caused: The caterpillars can nearly, or completely, defoliate a tree. The tree may put out a second set of leaves after the caterpillars disappear in June, but it weakens the tree. Several years of defoliation can kill it.

Evaluation of Infestation, Fall: First, figure out if you are going to have a problem. When you see the male moths start to fly around lights at night, set your traps to intercept some of the females as they race up your trees. Encircle the tree with something sticky like wide duct tape, putting it sticky side out to make it easy to remove later. Stuff any gaps between tape and trunk with leaves or anything handy. Enhance the stickiness by smearing the duct tape with Tree Tanglefoot or a similar substance (maybe molasses would work??). If the tape becomes clogged with bodies, you will know that you have problems and should plan for control measures in the spring. (Take the tape off when you stop seeing the males flying around at night, around the first week of January.) Sometimes a hard winter will reduce the infestation.

Control, Spring: Arborists spray the trees in late winter or early spring, just when the caterpillars are hatching, with a second spraying a few weeks later. One spray they use is dormant oil, which is not a chemical insecticide. Dormant oil acts by smothering the insects when the oil coats their bodies. Other sprays used are biological agents (Bt.k), as well as insecticides, so discuss and specify in advance what you wish them to do. Treatment substances are sprayed onto tall trees from pressurized hoses on the ground,

making the treatment of even mature trees reasonably priced. Even if you think it is too late for controls (May, June) there may be some benefit from spraying, and if you value your trees, you should consider this. Sometimes neighbors or a whole neighborhood can cooperate on spraying to reduce costs.

Water: If your trees have been damaged, give them extra water throughout the spring and summer. They will be struggling to put out new leaves.

Expectations: Professional arborist treatment is quite effective. Your Fall sticky trap efforts will probably not have much effect, other than to help you evaluate the problem. However, every female caught represents 150 caterpillars that won't be chewing up your trees in the spring.

Forecast: There is a known biological control, a parasitic wasp, which preys on the caterpillars. It effectively controlled a Winter Moth outbreak in Nova Scotia some fifty years ago. It will be a few years before this wasp can be bred in large enough quantity to be sufficient against this serious infestation in Massachusetts.

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Lexington Tree Committee

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