

Leaf Eating Caterpillars

Situation: There will be a significant amount of tree defoliation this year in parts of the region due to forest tent caterpillars, eastern tent caterpillars and gypsy moth caterpillars. It is important to be able to distinguish these pests from each other in order to deal with them effectively.

Forest tent caterpillars are very similar in appearance to Eastern tent caterpillars in appearance but they differ in two main ways:

Both are dark-colored, hairy caterpillars that grow from less than one-eighth of an inch to about two or three inches over a six to eight-week period beginning in April and ending by the end of June .

Eastern tent caterpillars have a solid white stripe down the center of their backs while forest tent caterpillars have a series of white spots down their backs that resemble a series of 10 to 12 white footprints directly in a line.

Eastern tent caterpillars construct tents or nests in the branch crotches of black cherry and apple trees while forest tent caterpillars do not construct tents or nests. Forest tent caterpillars spin silk strings acting as parachutes that they use to move up and down from the crowns of trees. Mass quantities of forest tent caterpillars may form white mats of spider web like material that may cover sections of a tree trunk but these are not the same in appearance as the tents.

Gypsy moth caterpillars do not form tents, nests or mats of spider like material at all. In addition, gypsy moth caterpillars have rows of blue and red spots on their backs, not white spots or a white line like the tent caterpillars.

The damage from Eastern tent caterpillars is pretty much limited to black cherry and or apple or crab apple trees while forest tent caterpillars feed on oak, aspen, ash, sugar maple, red maple, birch, ironwood and many other tree species as well as many shrubs including witch hazel and viburnums. Tent caterpillars generally avoid evergreens.

Gypsy moth caterpillars feed primarily on oak, aspen, apple, and basswood but may attack almost any species of hardwood and in outbreak conditions they may even eat evergreens such as hemlock, spruce, fir and pine.

Overall Forestry Considerations: Most healthy hardwoods can withstand one or two consecutive years of defoliation if conditions allow for the trees to re-leaf within the same season. Evergreens often die after a single defoliation. Stressed hardwood trees or trees on poor sites may succumb after a single defoliation. Drought may increase mortality as will secondary invaders such as bark beetles, borers or other pests or diseases. Since some forestlands in our region are in their second year of defoliation, I do expect significant mortality. Loggers may be requested to do some salvage harvests of recently killed trees. Some maple producers have sprayed their sugar bush and some forest owners with high quality timber have also sprayed with airplanes. The average price to aeri-ally spray an acre is in the range of \$35 to \$55 for a minimum of 10 acres. At this time there is no easy way to predict future defoliation prospects. Egg mass counting during the winter is tedious at best and

determining the economic thresholds for spraying is even more difficult. I am investigating the use of a pheromone lure similar to the lures that are used for gypsy moths as a way to predict defoliation, but at this time I have no data to report.

Natural controls: Only a few species of birds feed on these hairy caterpillars, notably scarlet tanagers and both black and yellow billed cuckoos. Small mammals such as mice and chipmunks may also feed on the caterpillars. Natural enemies including various parasites and diseases will eventually cause populations to collapse. No one seems to be able to predict when that will happen. **Another common parasite is a large fly that resembles a typical housefly. These flies may appear by the thousands in an infested area. These flies are also extremely annoying since they seem to be attracted to humans and land on arms, hands and face.**

Biological controls: The biological insecticide *Bacillus thurigeinsis* (often abbreviated as Bt and sold under various trade names i.e, Dipel, Thurcide, Biotrol, organic caterpillar killer etc., acts as a stomach poison (must be ingested) and is very effective if applied when the caterpillars are still small. This insecticide is specific for caterpillars that eventually turn into moths or butterflies. It does not kill bees, beetles, birds or other non-caterpillar insects.



The picture shows last years forest tent caterpillar egg mass on top and this year's egg mass on the bottom.

Chemical controls: A number of over-the-counter insecticides including

carbaryl (Sevin) and malathion will also kill the caterpillars by ingestion or contact. Avoid the use of any broad spectrum chemical insecticide on any plants that are in flower since these materials will also kill bees. A certified pesticide applicator may use other compounds. ***Read and follow all label directions before applying any pesticides.***

Commercial Applicators: The following commercial applicators are certified to spray shade trees and other ornamental plants.

*** This may not be a complete list and is not a NYSDEC or Cornell Cooperative Extension recommendation of any firm.**

Davey Tree Company, Latham NY 785-9692

Onderdonk's Tree Care, Schodack Landing NY 732-4233

All Season's Tree Service, Latham NY 783-7363

Aerial Pesticide Applicators Registered with NYSDEC*

The Department of Environmental Conservation presents this list for informational purposes, with no intended endorsement of particular pesticide applicators, their qualifications or services rendered. DEC does not guarantee or warrant the performance of these applicators. No criticism is implied or intended of applicators not listed.

Airspray Inc.

136 Lewis Landing
Middletown NY 10940

845-355-8531

Duflo Spray Chemical Inc.

8369 State Route 812
Lowville, NY 13367

315-376-2155

Arkport Air Service Inc.

8790 Oak Hill Rd. 315-376-2155
Arkport NY 14807

607-295-7243

Paddock Airways

35948 NYS Route 12
Clayton, NY 13624

315-686-3298

Delaware Valley Air Sprayers

PO Box 62
Callicoon, NY 12723

845-887-5455

Rebecca Lynn Flying Service Inc.

PO Box 175
Livingston NY 12541

518-537-7433

Sunline Aviation LLC

15 Lazzaro Lane
Oswego NY 13126

315-343-8940

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