

HOME GROUNDS FACT SHEET

CORNELL

Cooperative Extension
Nassau County



Nassau County
Horticulture Program
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Gypsy Moth *Lamantria dispar*

Tree species preferred by the larvae of gypsy moth are oaks, willows, poplars, speckled alder, basswood, apple, gray birch and river birch. Less favored but also eaten by the larvae are the cherries, elm, hickories, chestnut, hornbeam, maples, sweet birch, paper birch, yellow birch, sassafras, black tupelo and larch. Older larvae will eat native eastern pines and spruces, southern white cedar, hemlock and beech.

One complete defoliation will not usually kill thrifty hardwoods but may be fatal to conifers. However, repeated defoliation of hardwoods will reduce their vigor so other insects and disease-producing organisms may cause death. Tree losses have been noted after only one or two years of complete defoliation during drought periods on poor sites.

Description

The female moth is nearly white with yellow to buff hairs on the abdomen. The forewings are marked with irregular blackish bands. There is a line of black dots near the outer edge of the wings. The wingspread is about two inches. The female does not fly. The male moth has a brown body and light to dark brown wings with black markings. Its wings expand to about 1 1/2 inches. It is a strong day flier and follows zig-zag flight patterns.

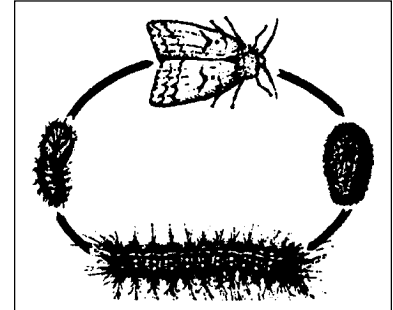
Eggs are deposited in masses of 100 to 700 or more and covered with buff to yellowish hairs from the abdomen of the female. These egg masses are normally about 1 1/2 inches long and about 3/4 of an inch wide. In fresh egg masses, the surface feels like velvet and when the mass is opened the eggs feel like buckshot. The fresh masses tend to have a more "lively" color than the older ones, which may present a bleached-out appearance or be otherwise "off color" from weathering. The 2 1/2 inch hairy caterpillar of the gypsy moth has a dusky to sooty or slate-colored body. When mature, it will have a double row of blue spots (5 pairs) followed by red spots (6 pairs) on the back and behind the head. Second instar caterpillars are small, black and hairy with orange dots on the back. This is

the best time to control the caterpillars.

Life cycle

The female deposits eggs during late July or August on undersides of branches, tree trunks, under loose bark, in stone walls, on fences or any shady, protected place. The insect overwinters in the egg stage.

The following spring the larvae hatch about the time the trees are coming into leaf in early May. The all black newly hatched caterpillars spin silken threads on which they may be borne long distances by wind. While young, they eat "pin holes" in leaves or preferred plants. As they become larger, the larvae devour all green plant material on the host plants. In about seven weeks, or by early July, they are fully grown and seek a place to pupate. They spin a few strands of silk and transform to the pupal or resting stage. In about 7 to 17 days the moths emerge. The males usually appear earlier than the females. There is one generation each year.



Integrated Pest Management (IPM)

Considerations

IPM is a common sense approach to pest control and plant care. It employs a number of measures to prevent, control or reduce plant problems. These include using resistant plant varieties, proper plant selection and placement, good aftercare and biological and/or mechanical controls. As a last resort, after all other remedies have been explored, a pesticide* that is least toxic to people and natural predators, can be considered. Prior to using any pesticides, plants should always be monitored for the degree of infestation and a sensible control measure considered.

* A pesticide is a substance that kills, or attempts to kill, a particular pest, e.g. **insecticide**, **fungicide**, **herbicide**, etc.

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E-1-17 DWM reviewed RT 1/03

Building Strong and Vibrant New York Communities

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associations, county governing bodies, and U.S. Department of Agriculture, cooperating.

Natural control

Gypsy moth population is regulated by various factors:

- Winter temperatures of 22° below zero for several days during the egg stage may cause considerable egg mortality in unprotected situations. Mechanical disruption of egg masses with a broom or high pressure spray will provide excellent management on the home property.
- Biological control agents include bacteria such as *Bacillus thuringiensis* and a fungal disease that provide limited control. The latter is a natural control that may reduce large population, especially when the population is large enough to cause food scarcity and bring about a pre-disposing weakness associated with starvation. The fungus needs moisture to infect the caterpillars. Very dry weather may allow gypsy moth populations to increase greatly.
- Natural or biological conditions that may limit the gypsy moth population are not predictable enough to be relied upon. Therefore, serious or new infestations of the gypsy moth may require the use of an insecticide to produce satisfactory tree protection. The combination of several control methods including sprays is known as “integrated control.” This technique emphasizes an ecological approach to insect control.

Insecticidal control

In forest protection programs by federal and state agencies, especially when they include spraying, first consideration is given to the safety and health of man, livestock and wildlife, and great care is taken to avoid contamination of reservoirs, lakes and rivers. Aircraft spraying is the most practical method for covering large acreages of forest and results in adequate spray cover-

age and efficient control using a minimum deposit per acre.

Chemical pesticides may be available. If you choose to use a chemical pesticide, contact your local Cooperative Extension office for specific recommendations.

Forests, shade and ornamental trees can be protected from gypsy moth by insecticides applied in May during the caterpillar stage. For a few trees or single trees, conventional hydraulic sprayers and mist-blowers can be used.

For best results, gypsy moth management should be accomplished on a community-wide basis.



WHENEVER YOU USE A PESTICIDE,
ALWAYS READ THE LABEL AND FOLLOW
THE MANUFACTURER'S INSTRUCTIONS
AND PRECAUTIONS.

“This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office (631) 444-0341. Read the label before applying any pesticide. Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied.”