

**For Immediate Release: June 22, 2020**

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### **Disaster Hits Bristol Mountain Area**

There is a serious outbreak of gypsy moth caterpillars this year in the Bristol Mountain area and several other locations within Ontario County. Trees are being defoliated. This caterpillar in its later growth stage can eat up to a square foot of leaf surface in a single day. Stand near a tree and it sounds like it is raining, but it is not. What you hear are the fecal pellets from the caterpillars falling down through the tree leaves. Cornell Cooperative Extension has been receiving numerous calls and e-mails from home owners wanting to know what they can do? How long will it last? Will their tree die?

Trees and shrubs in the home landscape can be chemically treated with an insecticide, but time is running out. If you are going to take this action you need to do it now, within the next 7-10 days. In some cases it may be too late to be cost effective. For others the cost is just too much to have them treated. They are going to wait it out and hope for the best. Hardwood trees (oaks, maples, hickories, etc.) may be able to survive two or more years of defoliation, if they are in good health to begin with. Evergreens on the other hand are likely to die after one year of defoliation.

This caterpillar usually hatches in April and May, but with this year's cold spring many didn't hatch until mid-May with some not until early June. When they first hatch they are a quarter inch in size, black and fuzzy. They will hang from a silken thread and be windblown to the next branch or another tree nearby. They go through five or six growth stages depending on the sex of the caterpillar. At about one inch in size five pairs of blue dots and six pairs of red dots begin to appear on the back of the caterpillar and the hairs get longer. When full grown they are two to two and a quarter inches long and about as big around as a pencil. The caterpillar stage last about seven weeks from the time of hatch to time of pupation ( cocoon stage). Moths emerge in July and August. The male is brown with black markings and flies in a zig zag fashion. The female is white with dark markings and does not fly. Mating and egg laying occurs during this same time period. Each egg mass contains several hundred eggs. These eggs overwinter and hatch the following spring starting the cycle over again.

The question, will next year be as bad? Often these caterpillars will be in high numbers for two or three years depending on food availability and disease pressure. When caterpillars get stressed from lack of food and/or disease sets in we see a collapse in the population. So it is a good bet that we can expect next year to be similar to this year.



# Gypsy Moth

*Lymantria dispar* (Linnaeus); Family: Lymantriidae

## Injury

The gypsy moth is one of the most important forest pests in the Northeast. The caterpillars feed on leaves of forest, shade, ornamental and fruit trees, and shrubs. A single defoliation can kill some evergreens, but usually two or more defoliations are needed to kill hardwoods.

## Description



*Larvae (caterpillars).*  
Photo from [www.forestryimages.org](http://www.forestryimages.org)  
USDA APHIS, Oxford, North Carolina Archives.

Small larvae are dark brown to black and very hairy. As they reach maturity they become slate colored and have 2 rows of blue spots (5 pairs) followed by 6 pairs of red spots on the back. Fully-grown larvae are 2 to 2 1/4 inches (50-56 mm) in length.



*Pupae.*

Photos from [www.forestryimages.org](http://www.forestryimages.org)  
Terry McGovern, USDA APHIS PPQ.



*Adult moths.*

Pupae are brown and teardrop shaped. A few threads of brown silk hold the pupae in place on the tree trunk.

Male moths are brownish with black markings and have a wingspan of 1 to 1 1/4 inches. Females have white wings with dark markings and a tan to buff colored body. Females are heavy bodied and do not fly.



*Egg mass and hatching larvae.*

Photo from [www.forestryimages.org](http://www.forestryimages.org)

William M. Ciesla, Forest Health Management International.

The egg masses are 1 1/2 inch long by 3/4 inch wide (38 x 19 mm), covered with a dense mat of buff colored hairs. They are often found on trunks of trees or underside of larger branches. Current year egg masses have a good buff tan color and are hard and velvety to the touch; older ones are faded, and soft to the touch as the eggs have hatched.

## Life History

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There are four distinct stages to the development of the Gypsy moth -- egg, larva, pupa and adult (moth). The eggs are round, black to brown in color, and deposited in masses of 100 to 600 eggs in July and August. The tiny caterpillar overwinters inside the eggshell, but does not hatch until the following April or May. When the eggs hatch, the 1/4 inch (6-8 mm) long caterpillars remain on the egg mass for a few days before climbing to the tree to feed.

The young caterpillars also spin silken threads and hang down from the tree branches. Wind often breaks the threads and carries the caterpillars to nearby trees and shrubs. This is called "ballooning." Long range dispersal is aided by man -- egg masses or pupae may be inadvertently carried on vehicles, outdoor furniture, plants and the like.

The female passes through 6 caterpillar growth stages; the male, 5 stages. Each time the larva grows it sheds its skin and a new larger skin forms. The larval stage lasts for about 7 weeks.

In June and early July, full-grown larvae may leave the host plant and seek out protected places to form the pupa or resting stage. At this time, the large caterpillars may be seen crawling across walkways or roads, or up the side of a house. The pupal stage lasts about two weeks.

Moths emerge from the pupae -- the males usually emerge first. Males are strong fliers and may be seen flying in a zigzag pattern during the daytime. The female does not fly, but remains near the pupation site and releases a sex attractant (pheromone) which attracts males. After mating she deposits her eggs in a single mass and then dies. There is one generation per year.

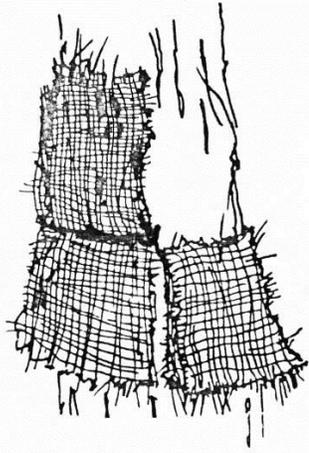
## Management

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Before mid-April, look for overwintering egg masses on tree trunks, rock outcroppings, fences, sides of buildings and woodpiles. Scrape off the fuzzy buff colored egg masses into a container, and destroy them.

Young caterpillars may be controlled by spraying. The homeowner can spray small trees and shrubs, but larger trees should be done by a professional arborist. READ and FOLLOW the manufacturer's instructions when using any pesticides. If needed, spray foliage in May after larvae hatch (90–448 GDD; growing degree days). If using Bt (*Bacillus thuringiensis* ssp. *kurstaki*), apply before larvae reach 1 inch in length.

Pupae may be crushed when found on the trees or in other protected places. It is not practical to try and control the adults. The females might be collected by hand and destroyed, but trapping the males or trying to catch them in flight is not effective for control in areas of high populations.



*Burlap folded over a string wrapped around a tree trunk.  
Left side of the burlap fabric is lifted up to show where to look for and  
remove any caterpillars.*

Older caterpillars can be controlled to a degree by banding the trees. The older larvae move up the trees in the evening to feed and back down at dawn to seek shelter during the day.

A burlap strip 12 to 18 inches wide can be cut and tied around the trunk with twine. Fold the top half of the band down and over the lower half to provide a sheltered area for the caterpillars to hide under during the day. Lift up the burlap and look between the layers, to collect and destroy caterpillars daily.

Alternatively, a 6 to 12 inch band of nonporous material can also be wrapped around the trunk and smeared with a sticky substance such as Tanglefoot (available at many garden supply centers.) The caterpillars will stick to the Tanglefoot as they try to move over it. Remove caterpillars by raking the band with a comb whenever they become numerous, and destroy them.

*NOTE: the hairs on the caterpillars can be irritating, causing itchy bumps on the skin. Use gloves or tools rather than bare hands, when picking up, brushing off, or crushing gypsy moth caterpillars.*

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*Prepared 1981 by Carolyn Klass, Senior Extension Associate, Dept. of Entomology, Cornell University  
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**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. READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

<http://idl.entomology.cornell.edu>