



Department of
Environmental
Conservation

Gypsy Moth

What is It?

The gypsy moth (*Lymantria dispar*) is a non-native insect from France. Its caterpillar (larva) stage eats the leaves of a large variety of trees. A sample of some of the many species it eats includes oak, maple, apple, crabapple, aspen, willow, birch, mountain ash, pine and spruce.

What Does It Look Like?

The larval stage of the gypsy moth is a caterpillar that hatches in the spring from eggs laid the summer before. It hatches about the time oak buds start to open. The younger caterpillars need to eat tender new leaves. As it grows, it can eat older, tougher leaves. It grows to about 2 1/5 inches in length. Gypsy Moth caterpillars have five pairs of raised blue spots followed by six pairs of raised red spots along its back. Female moths are white with brown markings. Males are brownish. Females do not fly. Egg masses are buff colored, fuzzy patches on tree trunks, branches, firewood, or in a sheltered spot, even on lawn furniture. There are 600-700 eggs in each egg mass.

Tent caterpillars look similar to gypsy moths and also feed in the spring. See the [Caterpillar Comparison Chart](#) to determine which type you have.

How Did It Get Here?

Gypsy moths were accidentally introduced in 1869 when they were brought to the U.S. in the hope that they could breed with silkworms to create a hardier variety of silkworm and develop a silk industry in the US. Even though they failed as a textile producer, some of the gypsy moths escaped and established their first U.S. population in Medford, Massachusetts. Populations vary over the years from very few and not noticeable to many and tree defoliation is very noticeable.

Why is it a problem?

Its populations rise and fall in cycles. Gypsy moths have "naturalized" in our forest communities. These caterpillars will always be around, sometimes in small, unnoticeable numbers. When populations are high, thousands of acres can be damaged. Although gypsy moths do not pose a major threat to New York's forests, they are not native and their populations can reach high, destructive (outbreak) levels.

Gypsy moths eat young, tender leaves in the spring. Deciduous trees (trees that lose their leaves each fall) can regrow a new set of leaves by July and can usually withstand 2-3 successive years of defoliation (removal of leaves) without being killed. However, defoliation does reduce the vigor and resistance of the tree; it becomes more susceptible to pests and diseases. Mortality can occur when other stresses such as disease or other insect



Gypsy moth. Minn Dept of Natural Resources Archives, <http://www.forestryimages.org/>



Gypsy moth adults and eggs

outbreaks attack trees in the same year. Evergreens are eaten when populations of gypsy moths are very high. Evergreens do not regrow leaves as easily as deciduous trees and can die as a result of complete defoliation.

What Can I Do?

When populations are low, gypsy moth caterpillars and adults can be killed by squishing them. Egg masses can be destroyed by scraping them off trees or other structures and dropping them in a container of detergent.

During outbreaks, manual removal may not be practical. You can use the [egg sampling survey \(PDF, 230 KB\)](#) to determine if you will have a large infestation and may want to consider spraying.

Natural Control: Caterpillars are attacked by birds, rodents, parasites, and diseases. Extremes in temperature can also reduce population numbers.

Should I spray my trees?

Maybe. If dense concentrations of tent or gypsy moth caterpillars cause a decline in the trees' health or threaten an economic resource such as a sugar bush, spraying may be an option.



gypsy moth feeding on branch
Tim Tigner, Virginia Department of Forestry,
<http://www.forestryimages.org/>

Various insecticides for gypsy moths are available at garden centers. Insecticides are divided into two general groups: microbial/biological and chemical. Microbial and biological pesticides contain living organisms that must be consumed (eaten) by the pest. They are most effective on small, young caterpillars. As they mature, caterpillars become more resistant to microbial pesticides. The most common microbial and biological insecticide is *Bacillus thuringiensis* (Bt). Bt occurs naturally in soil and on plants. It is harmless to people, animals, and plants, but does affect young moth and butterfly larvae. When Bt is eaten, the caterpillar becomes paralyzed, stops feeding, and dies of starvation or disease.

honeybees), so they should be used wisely.

Chemical insecticides are contact poisons. These chemicals can have a potential impact on a variety of beneficial insects (such as

Professional pesticide applicators can be found in the yellow pages under Tree Service. In order to use restricted insecticides, applicators must be certified. [Read more about Certified Pesticide Applicators.](#)

In certain cases it may be economically feasible to spray large areas. Maple syrup producers may be interested in aerial spraying since severe defoliations can reduce maple syrup production.

Spraying is not effective against pupae or egg masses, and is less effective once caterpillars reach 1 inch long. Nesting birds, beneficial insects, and other animals could be endangered by use of chemical insecticides.

Is there a way to predict next year's defoliation?

Yes. If you are interested in sampling your woodlot or forest to determine the likelihood of defoliation by gypsy moths for the following growing season, sampling protocol is provided. (See important links.) If you do sample your woodlot or forest, your data is valuable to us for tracking annual populations. We would appreciate if you mailed or emailed you sampling data to:

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