

GYPSEY MOTH in New Jersey



larvae have long, hair-like structures along the length of their bodies.

Feeding

When the larvae make contact with a leaf, feeding begins. Second and third instars feed during

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daylight on leaf edges. The fourth instars feed during the night.

Pupa

In late June and early July the larva forms a pupa. Two weeks later, moths emerge. The flightless females attract males by emitting a pheromone. After mating occurs, eggs are deposited. The adults die soon thereafter, leaving a new generation to hatch in the spring.

from weathering. From late April to early May larvae emerge over a three to five day period.

Instars

The larvae grow rapidly, molting every week or so into progressively larger instars. During the first instar, the tiny larvae may be blown by the wind several miles to spread the infestation. All instar

The insect pest the Gypsy Moth (*Lymantria dispar*) feeds on hundreds of varieties of trees and shrubs. The moth prefers the oak as a host tree - such as New Jersey's state tree, Northern red oak.

The problem

The Gypsy Moth, originally from Europe, was introduced to Massachusetts in 1869 by a French botanist trying to develop the silkworm industry. Once the insects escaped from his laboratory, they colonized and spread. Currently gypsy moths populate 19 states. Without intervention this pest spreads at about 13 miles per year and consumes the leaves of oak, apple, sweet gum, gray birch, hemlock, spruce, pine, and white cedar.

Controlling the spread

To control gypsy moths a property owner should

monitor populations, maintain the health and vigor of trees, remove and destroy egg masses, and trap larvae by banding trees with burlap. Heavy infestation may require treatment with insecticide such as Bt (*Bacillus thuringiensis*) - a naturally occurring bacteria made available commercially for spraying. Property owners may hire an arborist to apply Bt or other pesticides to suppress an infestation.

Tree damage

If a healthy tree is defoliated, the tree may re-leaf during the summer, but with smaller leaves. This stress to the tree makes it more susceptible to borers, fungus, and drought. A healthy tree may be able to survive one or two defoliations. A stressed tree may partially or totally die from defoliation and the impact may not be seen for many years.

Growing populations

In 1981, New Jersey suffered the worst gypsy moth defoliation of 800,000 acres. From aerial surveys, New Jersey foresters have determined that populations are on the rise again. From 42,000 acres defoliated in 2005, the infestation has risen to over 127,000 acres in 2006, and 324,000 in 2007. Without proper management, the defoliation could grow to 600,000 acres in 2008.

Life cycle

Gypsy Moths begin life in egg masses containing 200-1000 individual eggs. When first deposited egg masses are buff-colored, but may bleach



Gypsy moth caterpillars consume an oak leaf.

