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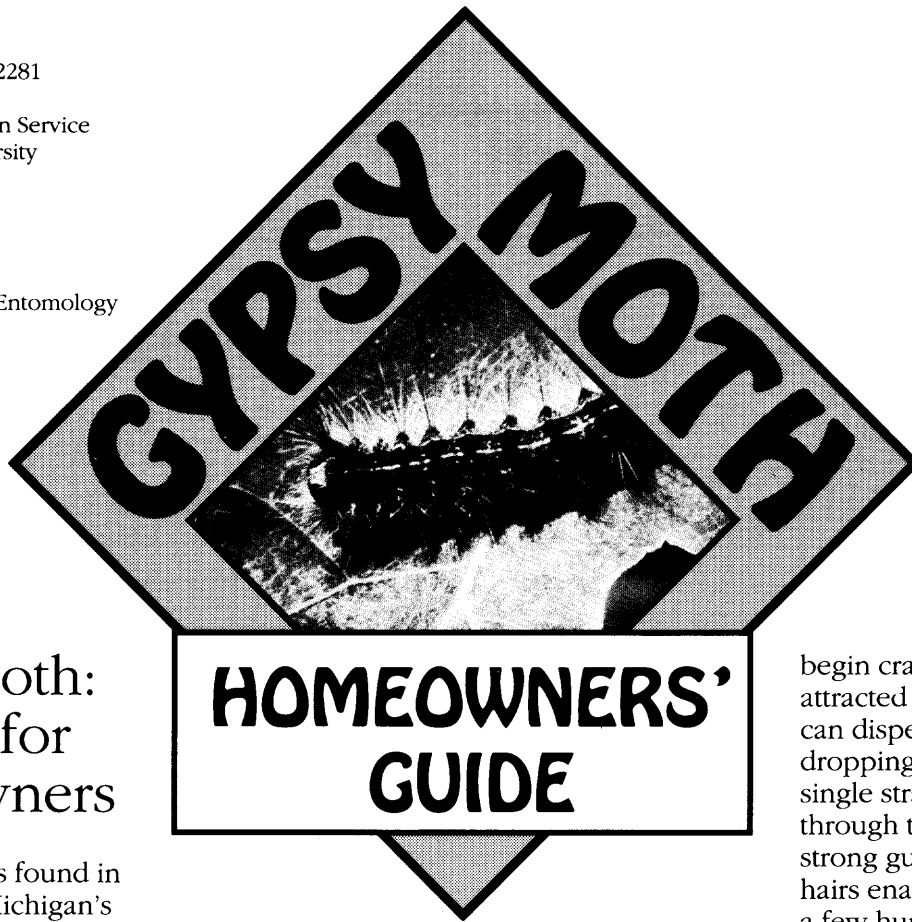
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Gypsy Moth: A Guide for Homeowners'
Michigan State University
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Gary Simmons, Extension Specialist, Entomology
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Gary Simmons
Extension Specialist, Entomology



Gypsy Moth: A Guide for Homeowners

The gypsy moth is found in every county in Michigan's Lower Peninsula and in certain areas of the Upper Peninsula.

Gypsy moth caterpillars can be annoying. Although they feed on trees, large caterpillars will wander onto the house, garage, patio, deck, yard furniture, or any object associated with residential living. When they do this in large numbers, especially after stripping trees of foliage, the experience is unpleasant and upsetting.

When feeding, the gypsy moth caterpillar can leave trees stripped of foliage. Caterpillars eat leaves of several hardwood trees including oak, birch, basswood, apple and aspen. Unhealthy trees are weakened when defoliated, making them susceptible to other insects and disease problems that can kill them.

HOMEOWNERS' GUIDE

The Gypsy Moth: What to Look for

Eggs

Gypsy moth eggs are laid in fuzzy, buff-colored clusters during July and August. Each cluster contains 50 to 1,000 eggs. The female deposits these egg masses on any convenient surface, including the bark of trees, the underside of cars and trailers, on picnic tables and on rocks and twigs. The gypsy moth overwinters in the egg stage until the following May. Gypsy moth eggs are quite cold-resistant and can survive temperatures as low as -20 F.

Larvae (caterpillars)

The eggs begin to hatch in May. Hatch occurs earlier if the weather is unusually warm. The tiny black gypsy moth larvae

begin crawling into tree tops, attracted by overhead light. They can disperse in the wind, first dropping from branch tips by single strands of silk, then sailing through the air when caught by a strong gust of wind. Long body hairs enable them to travel up to a few hundred yards.

Following this dispersal period, small larvae feed during day and rest at night. As they continue to grow, the larvae develop five pair of blue spots and six pair of red spots on their upper side. They begin feeding at night and resting during the day in bark crevices on the trunk and branches. At the end of this feeding period, which lasts from about four to six weeks, the larvae are about two inches long.

Pupae (cocoons)

During the pupal stage, the gypsy moth begins to transform from a larva to an adult gypsy moth. The dark brown pupal cases hang in clusters, attached to the base of branches, in tree crotches, and in bark crevices. The insect is immobile during this stage and does not feed. It remains in this form for about 10 days.

Adults (moths)

The adults emerge, leaving the pupal cases behind, and begin to search for mates. The tan male moths are about an inch long and are strong fliers. The males search for female moths in a rapid zig-zag pattern. Female moths are larger, white, and cannot fly. Females emit a potent sex attractant which lures the male moths. Eggs are laid shortly after mating, often on tree trunks. The adult gypsy moth does not feed.

Dealing with the Gypsy Moth

There are two broad categories of methods to reduce the number of annoying, large caterpillars and to help trees live through gypsy moth feeding: 1) reducing or limiting caterpillar numbers; 2) keeping trees healthy through preventive maintenance.

Reducing Caterpillar Numbers

Gypsy moth caterpillar numbers can be reduced using mechanical means. Remove egg masses by scraping them off trees and other objects and dropping them into a soapy water solution or burying them. Reduce large caterpillar numbers by tying a band of burlap or denim or other dark cloth around the trunk of a tree. Then fold half the material over the string to give the caterpillars a place to hide. The caterpillars hiding under the cloth can then be swept off into soapy water and killed each day.

Caterpillars can also be reduced using biological controls. Many formulations of the bacterium,

Bacillus thuringiensis variety *kurstaki* ("Bt" for short), are available for use. Materials such as Dipel, Thuricide, Sok Bt, Foray, etc., are among commercial names for formulations of this biological insecticide. The material should be used when larvae are less than one inch long. A commercial applicator may be needed with the proper equipment to apply it to large trees.

Egg parasites also reduce caterpillars. An example is a tiny wasp that has about four generations during the early fall and late spring. The wasp lays its eggs inside the gypsy moth eggs. On sunny days in late summer and fall, the small, black wasps can be seen walking and buzzing on the gypsy moth egg masses. Egg masses that show such activity can be scraped off trees, attached to tape and placed on trees in your yard that have egg masses you can't reach to scrape off.

Keep Trees Healthy

Trees can be watered and fertilized to help prevent caterpillar feeding from seriously harming them. During the growing season trees should receive about 1 inch of water per week. Tree fertilizers can be applied during the fall as well.

Trees that are not susceptible to gypsy moth feeding can also be planted. Ashes, sycamores, maples, hickory, dogwood, mountain ash, rhododendron, locust, holly, cedar, walnut, butternut, juniper, honeysuckle and most conifers are largely ignored by gypsy moth and can be used in landscaping as a long-term method of minimizing future gypsy moth problems.

For More Information

For further information about gypsy moth, including color illustrations of various life stages, and what to do in woodlots or around the home, see Extension Bulletin E-1983, "The Gypsy Moth in Michigan." This is available from the Michigan State University Cooperative Extension Service county office nearest you. Just look in the white pages under county government.

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