St. Clair County Gypsy Moth Program

A cooperative program between the County of St. Clair and Friends of the St. Clair River

Strategies for landowners to manage Gypsy Moth

- To avoid harming Michigan native species, please confirm what you are seeing is a Gypsy Moth, an invasive species. The Gypsy Moth Lifecycle information on the back of this sheet will help you identify gypsy moth
- Avoid damaging tree bark, which can leave the trees vulnerable to other pests and disease

January - April:

Remove and destroy egg masses prior to hatch. Every egg mass you destroy prevents 100 to 1,000 caterpillars from hatching.

- Search for gypsy moth egg masses on trees, firewood, outdoor furniture, siding, and other outdoor surfaces
- Scrape egg masses into a container of soapy water and let sit overnight, or burn or bury the egg masses
- Any eggs that fall to the ground or get left behind can still hatch

March - April:

Spray egg masses with biologic oil once temperatures are above 45 degrees.

- Biologic Golden Pest Oil: https://www3.epa.gov/pesticides/chem_search/ppls/057538-00011-20040309.pdf
- Make your own spray with soybean oil and water. See directions in the Homeowner's Guide to Gypsy Moth Management from West Virginia University Extension, page 11: https://bit.ly/manageLDD

March - June:

Wrap trees with sticky barrier bands to trap caterpillars as they move up and down the trunks.

- Follow precautions in the article to protect your trees from damage https://fyi.extension.wisc.edu/gypsymothinwisconsin/making-a-sticky-barrier-band/

Wrap trees with folded burlap barrier bands to trap the caterpillars.

https://youtu.be/9h6e5ZyLdKQ

Burlap barrier band

May - August:

Manage gypsy moth caterpillar, pupa, and moth populations.

- Drop caterpillars into a bucket of soapy water and let sit for 48 hours. Caution! Their hairs can be irritating. Use a brush or wear gloves when handling gypsy moth caterpillars.
- Spray caterpillars and moths directly with a strong mixture of dish soap and water. (Caution: can make surfaces slippery.)
- Monitor and maintain barrier bands.

In hot, dry weather, water prized trees defoliated by gypsy moth.

- Run a sprinkler for about an hour in the morning, soaking the ground under the spread of the branches https://extension.umn.edu/planting-and-growing-guides/watering-established-trees-and-shrubs

September - December:

Leave egg masses in place. Do not remove them until January to allow the Gypsy Moth Field Staff to complete its survey of gypsy moth egg masses to determine next spring's spray map.

FOR MORE INFORMATION

Report gypsy moth on your St. Clair County property: www.stclaircounty.org/Caterpillars/CaterpillarsSurvey.aspx
MSU Extension Integrated Pest Management for Gypsy Moth: canr.msu.edu/ipm/invasive_species/gypsy-moth/
Friends of the St. Clair River Contact Information: www.scriver.org · gypsymoth@stclaircounty.org · 810-294-4965

Funding for this program provided by St. Clair County Board of Commissioners
Literature adapted with permission from MSU Extension - Roscommon

GYPSY MOTH LIFECYCLE

September - May: Embryo and Diapause Stage

A single egg mass contains 100-1,000+ eggs insulated in a matting of hair from the female's body. Masses are tan colored, oblong, and range from 1 to 3 inches. Larva is fully formed and ready to hatch within a month. The larva goes into diapause, becoming insensitive to cold.

Mid - Late May: Hatching Stage

Hatching coincides with the opening of tree leaf buds. Newly hatched larvae are less than ⅛ inch long and appear black in color. They climb trees or other objects and drop on silken threads to be dispersed by the wind in a behavior called ballooning. Once landing in its host tree, the larva begins feeding. Hatching and ballooning may last for 7-10 days.

June - Early July: Larval Feeding Stage (caterpillar)

Caterpillars molt, shedding their exoskeleton (5 times for a male and 6 times for a female). Each molt is called an *instar*. Fourth instar caterpillars are identified by a beige head and dark marks, 5 pairs of blue dots followed by 6 pairs of red dots down their back. Larvae feed at night and generally rest during the heat of the day unless populations are very large and under stress. They continue to molt and feed until they are about 2 ½ inches long. A single caterpillar eats an average of one square meter of foliage during this stage.

Late June - Mid-July: Pupa Stage

During this stage the caterpillar looks for a protected place to pupate (change into a moth) where it will be safe from predators like mice, birds, and parasitic wasps. The caterpillar sheds its skin, and its new pupal skin is leathery and a dark reddish-brown color. It is usually attached to a tree trunk, rock, or other sheltered place by a loose net of silken threads. After about 10 days of metamorphosis the adult winged moth emerges, leaving the pupal case behind. Female pupae are larger than male pupae.

July - August: Mating & Egg Mass Laying Stage

The female moth cannot fly, and is larger and creamy white with dark chevron marks on her wings. Males are mottled brown and gray, and also have chevron wing bands. In the late afternoon they fly in zigzag patterns following the scent of female pheromones they sense with their large, feathery antennae. After mating, the female lays her eggs in a single mass she covers with hairs from her body. The adult gypsy moth cannot feed; its only function is to reproduce. The moth lives about two weeks, completing a one-year life cycle.

NATIVE SPECIES vs INVASIVE SPECIES

To avoid harming native species, it is important to confirm what you are seeing is a gypsy moth, an invasive species. The gypsy moth caterpillar is a destructive, invasive pest, but it is often confused with Eastern tent and Forest tent caterpillars, and fall webworms, all of which are benign native species. While some find their tents and webs unsightly, tent caterpillars and fall webworms are a natural and important part of our Michigan ecosystem. They clear foliage to allow sunlight to reach smaller plants at ground level and act as a food source for native birds and other animals.