

STRATEGIES FOR LANDOWNERS TO MANAGE SPONGY MOTH

(FORMERLY GYPSY MOTH)

January - April:

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

-Search for spongy moth egg masses on trees, firewood, outdoor furniture, and other outdoor surfaces.

-Scrape egg masses into a container of soapy water and let sit overnight, or burn or bury the egg masses.

-Burn brush piles infested with spongy moth egg masses.

*Don't leave the eggs or bits of egg mass on the ground – those eggs can still hatch the following spring.

*Take care not to damage tree bark, which may leave the tree vulnerable to disease or infestation.

March - April:

Saturate 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

-Neem Oil: https://www3.epa.gov/pesticides/chem_search/ppls/070051-00002-20180531.pdf

-50/50 mix of soybean (or other vegetable) oil and water with one tablespoon of dish soap per two cups of solution.

Mid-May - August:

Manage spongy moth caterpillar, pupa and moth populations.

-Treat smaller trees with a product containing Btk (*Bacillus thuringiensis kurstaki*). See details at <http://www.roscommoncounty.net/219/Bacterial-Insecticide>.

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

<https://fyi.extension.wisc.edu/gypsymothinwisconsin/making-a-sticky-barrier-band/>

<https://www.nj.gov/agriculture/divisions/pi/pdf/GMBarrierBands.pdf>

*Follow precautions stated in the articles to protect your trees from damage.

Mid-May - August continued:

-Wrap trees with folded burlap bands to trap caterpillars:

<https://fyi.extension.wisc.edu/gypsymothinwisconsin/making-a-burlap-barrier-band-trap/>

-Suck up caterpillars, pupae and female moths with a shop vac with a solution of dish soap and water in the vac tub.

-Brush caterpillars, pupae and female moths into a bucket of soapy water and let sit for 24 hours. (Caution: their hairs can be irritating.)

-Spray caterpillars directly with a foamy mixture of dish soap and water. (Caution: can make surfaces slippery.)

-Install, monitor and maintain barrier bands. Remove bands by July to avoid harming native species.

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

-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 to allow the Gypsy Moth Program to complete its survey of spongy moth egg masses to determine next spring's spray map.

-Do *not* purchase *Trichogramma* wasp eggs. These wasps parasitize native species of Lepidoptera, many of which are not pests, but they do *not* parasitize spongy moth eggs.

Avoid broad-spectrum insecticides (and companies that use them). They harm native, non-target species and have very little effect when applied to spongy moth egg masses.

If traveling, clean and check your vehicle and any outdoor items you are transporting to avoid spreading spongy moth.

Roscommon County Gypsy Moth Suppression Program

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MORE INFORMATION

Roscommon County Gypsy Moth Suppression Program:
roscommoncounty.net/218/Gypsy-Moth-Program

Roscommon County Gypsy Moth Suppression Program
Facebook:

facebook.com/GypsyMothRoscommon/

MSU Extension Integrated Pest Management:

Lymantria Dispar:

canr.msu.edu/ipm/invasive_species/gypsy-moth/

LIFECYCLE OF SPONGY MOTH (FORMERLY GYPSY MOTH)

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. Larvae are fully formed and ready to hatch within a month. The larvae go 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 1/8 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, 6 for a female). Each molt is called an *instar*. Fourth instar caterpillars are identified by a beige head and dark marks, 5 pair of blue dots followed by 6 pair of red dots down their back. Larvae feed at night and rest during the heat of the day unless populations are very large and under stress. They continue to feed and molt until they are about 2.5" long. A single caterpillar eats an average of one square meter of foliage during this stage.



Late June - Mid-July: Pupal 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 spongy moth cannot feed; its only function is to reproduce. The moth lives about two weeks, completing a one-year life cycle.



Native vs Non-native

To avoid harming native species, it is important to confirm that what you are seeing is a spongy (formerly gypsy) moth. The spongy moth caterpillar is a destructive, non-native pest, but it is often confused with Eastern tent and forest tent caterpillars, which are benign native species. While some find their tents unsightly, tent caterpillars are a natural and important part of our Michigan ecosystem, clearing foliage to allow sunlight to reach smaller plants at ground level and serving as an important food source for native birds and other animals.



Eastern and Forest Tent Caterpillars - NATIVE



Spongy (formerly gypsy) moth - NON-NATIVE

All links in this document can be accessed at our website:

roscommoncounty.net/218/Gypsy-Moth-Program



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