

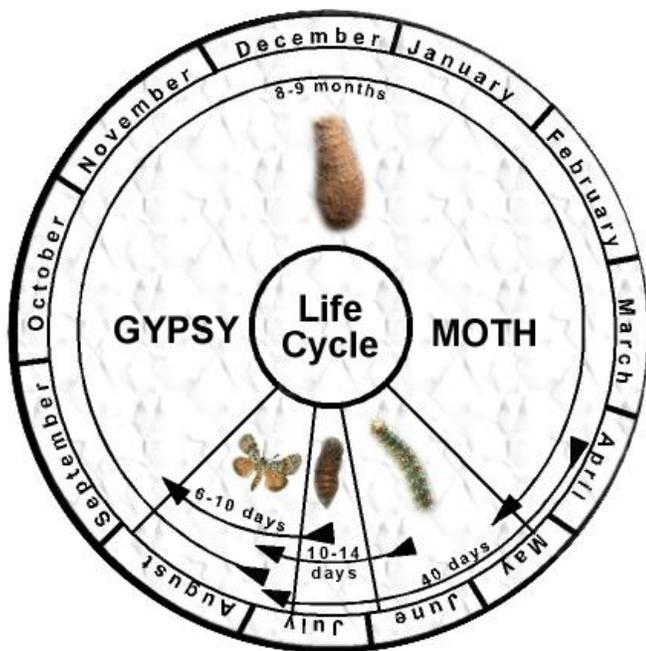
# Ringwood Environmental Commission

## April 2019 Bulletin – Gypsy Moth Information

The gypsy moth, *Lymantria dispar*, is one of North America's most devastating forest pests. For 150 years, this invasive species has feasted on the forests of the Northeast. Last year, extensive defoliation occurred near Sloatsburg Road in Ringwood State Park. This bulletin will explain the threat posed by the gypsy moth and offer some ideas on how to best counter its destructive potential.

Gypsy moths and their egg masses can cause allergic reactions in some people, so direct contact is not advised.

### Gypsy Moth Cycle



For most of the year, gypsy moths are in their protective egg masses on the sides of trees. In late April, they hatch and begin feeding on newly expanded leaves. The larvae begin feasting on new leaves and will grow into caterpillars. If the concentration is high enough, the caterpillars can completely defoliate a tree and entire tracks of forest can end up bare.

Typically, leaves will grow back after a few weeks, but after successive seasons of defoliation, trees will be weakened enough to begin dying.

Larvae molt through 5 to 6 stages before going through pupation. During this stage they are dormant in hard to reach areas. Their moth stage is very short and is only intended to reproduce via the fertilization of egg masses.

### Prevention

For most of the year, attacking egg masses is the only way to combat the pest. While many will not be reachable, the ones you can reach should be scraped into a bucket of dish soap and left to die for 48 hours. Do not just scrape the masses and stomp them as most eggs will still hatch. Another option is to spray the mass with approved horticultural oil.

The picture below was taken this fall in Ringwood State Park. The holes in the egg mass on top are a good sign. It may indicate the presence of the tiny parasitic wasp *Ooencyrtus kuvanae*. The egg mass below it is more typical and will likely produce hundreds of larvae this spring.



Once the larvae hatch and begin feeding, the best way to stop the nuisance is to trap the larvae on their way up and down the tree. You can purchase barrier bands or make your own using duct tape and a sticky material

such as TangleFoot® or Vaseline®. Do not put sticky material directly on the tree as it can harm the bark.



As the larvae grow into caterpillars, they will seek shelter to hide during the daylight hours. If you tie a piece of burlap around your trees, you can catch the caterpillars in the cloth and then place them in soapy water to kill them. This is a time intensive approach and should only be used on a few trees with major infestations.

Once the caterpillars turn into gypsy moths, they will not cause any further damage. There are treatments that can be applied at this stage, but that would not be appropriate for the individual homeowner.

#### Dealing with the Mess

One of the worst side effects of the caterpillars' yearly feast is the poop, called "frass." In heavily infested trees, the frass can sound like a light rain shower as they drop from the forest canopy. When they get wet, they turn into a slime that can be hard to remove.



A homeowner's best course of action is to sweep all hard surfaces of frass before they get wet. Once they

turn to slime, a thorough hosing should suffice, but soap or power washing may be required. If the falling frass is unbearable, you can take solace in knowing that this phase will only last a week or two. The next image shows the caterpillar frass with a centimeter scale.

#### Nature to the Rescue

There are many animals and fungi that will attack the gypsy moths. Mice love to eat the gypsy moth pupae. The parasitic wasp species was mentioned earlier. During wet springs, a fungus, *Entomophaga maimaiga*, can wipe out entire gypsy moth colonies. The nucleopolyhedrosis virus will kill gypsy moths, but it is also dependent on a wet spring.

We have had an unusually wet year in 2018. This is good for the fungi and another wet spring will help nature to control the gypsy moth population.

The good news is that trees can survive a few years of gypsy moth onslaughts. By keeping an eye on your local area, you will know if more drastic action has to be taken. There are options on a regional scale, such as aerial spraying, but these should only be used as a last resort.

#### Conclusion

By taking some preventative steps, you may be able to reduce the impact of the gypsy moth caterpillar in your own yard. During a large outbreak, you can only wait it out and clean up the frass before it turns to slime.

Like all things, nature will eventually find a way to restore the balance in our forests, but for individual homeowners that balance may not occur until trees have died. If your property's trees have had successive seasons of defoliation, it is best to check with a professional and see if your trees can be saved.

#### Additional Resources

<https://extension.tennessee.edu/publications/Documents/SP518.pdf>

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

<https://naldc.nal.usda.gov/download/CAT87213646/PDF>