

Lake Steward Notes: Gypsy Moths—Moving in the Wind

All around Big Gull Lake this summer we are seeing large numbers of caterpillars defoliate our trees. What is this non-native, destructive, invasive species?

Gypsy Moth: is an invasive forest pest from Europe. It was brought to the USA in the 1870's to try to start a silkworm industry but it escaped from captivity. It slowly spread out from Massachusetts, reaching eastern Canada around 1924 and Ontario in 1969.

Life Cycle: In late summer, the white female moths lay a mass of tiny grey eggs close to where they themselves emerged from their pupal cases. The mass of eggs can be laid from the base to quite high in a tree. They are also laid in many other sites around your property, including on cars and other vehicles. Thus, people may move egg masses and cocoons to distant new sites. An egg mass can contain as many as 1000 eggs. They are roughly oval, and 2–5 cm long by 0.5-2 cm wide, the mass is covered by the female with a coating of tan-coloured hairs. Egg masses over winter where laid, and miniature 3 mm long, grey-black, hairy larvae (called an instar) hatch just as the trees start to put out new leaves. The instar moves up the trees to the tips of branches where they start to feed on buds and leaves. As it moves up the tree, the young larva spins a silk thread, suspends itself from it, and is easily picked up by the wind and carried to other host trees. **They can be airborne for up to a kilometer.**

Older larvae are hairy, black, or brownish, with two rows of large spots down the back—five blue pairs, followed by six pairs of red. To become bigger, larvae must periodically discard their exoskeleton and grow a new larger one. After about eight weeks, males reach maturity in the fifth instar, and are 4-5 cm long. Females mature in the sixth instar, when they are 6-7 cm long. Mature larvae find a resting place, usually on a tree trunk or in the leaf litter, where they rest and surround themselves with a silken nest in which to pupate. The pupa is dark brown with reddish hairs. The moth emerges as an adult after developing inside the pupal case for about two weeks.

THIS IS THE STAGE WE ARE NOW AT

The female cannot fly, they crawl around close to where they emerge to emit pheromones to attract the grey-brown, flying male moths. Almost immediately, the female deposits her eggs.

What do they eat?

- Gypsy moth larvae cause the destruction; adults do not eat.
- They prefer leaves of oak and other deciduous trees, also feed on white pine and hemlock, as well as shrubs and hundreds of other plants

Who eats them?

- Many birds may feed on gypsy moth larvae; some sources say chickadees, blue jays, grackles, nuthatches, and robins
- Small mammals such as white-footed mice, squirrels, chipmunks, and raccoons will prey on pupal cocoons

What can we do?

The short answer is very little. To date, no control methods have been completely successful and some harm beneficial species. In 1986 and early 1990's we had severe outbreaks of gypsy moths, wide areas were defoliated, and a number of trees were killed. Fortunately, nature has a way of taking over and repairing the damage. Some trees died and healthy trees regained their foliage. For example, all five oak trees in front of my cottage have survived two previous defoliations. Another piece of good news is that as caterpillar numbers grow they're vulnerable to a virus called baculovirus that literally melts the caterpillar from the inside out, until they drip from the trees and infect other caterpillars feeding on the leaves below them.

This current outbreak will invariably follow the historic pattern of a surge followed by a crash.

The executive of BGLEECA has decided to make available up to 5 gypsy moth pheromone traps for each association member. These will not eradicate the problem but offer some control on the number of moths that will affect your property. We have a limited supply of kits on hand as well as replacement inserts and pheromones. We will be ordering more for next year.

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