Homeowner Tactics to Reduce Gypsy Moth Caterpillars

The citizens of Rochester Hills are the Natural Resources Division's greatest allies in our efforts to reduce the gypsy moth population within the city. Whether or not an aerial spray to control gypsy moth in a particular year is planned, citizens should be prepared to help do their part to reduce caterpillar numbers in the community. A number of tactics can be employed to help reduce tree injury and to contain the gypsy moth population at a tolerable level. The tactic or combination of tactics chosen will depend on the specific conditions of the site and the level of infestation. These tactics include:

- Locating and destroying egg masses
- Using and servicing burlap hiding flaps
- Applying pesticide treatments
- Promoting the health and vigor of trees

Gypsy moth egg hatch begins in early to mid-May. Citizens should locate and destroy as many egg masses as possible in March - April. Each egg mass may contain between 50 and 1,500 eggs. Gypsy moth egg masses are fuzzy, tannish brown, and irregular in shape, being wider at one end than the other. Generally, they are laid against hard objects like tree trunks and limbs, not on the leaves or fine twigs. They are often found on the underside of tree limbs, under the eaves of houses, and under deck railings and play structures. Birdhouses are magnets for female gypsy moths looking to lay eggs.

A few days after the eggs hatch, the gypsy moth caterpillars can be controlled with applications of the biological insecticide Bacillus thuringiensis (Bt), a naturally occurring bacterium. It must be applied to the foliage of the plants the caterpillars are feeding upon and will only control them while they are still very small, becoming less effective as they grow larger (mid to late June). Homeowners can treat small trees relatively easily using handheld sprayers. For larger trees, residents may need to hire a tree service to do the spraying. Be sure to get multiple quotes from reputable companies (check their references and insurance coverage) and look for companies having "certified arborists" on staff.

As the caterpillars grow larger and more noticeable, they begin to make daily migrations down the tree during the day to hide and rest. Beginning in June, you can place and service burlap hiding flaps. Hiding flaps can be made from 18" X 24" sections of burlap. Fold the top half down over the bottom half, creating a double flap 18" X 12". Place the burlap at a convenient working height on the trunk of the host tree and staple to the tree's bark at the fold. Lift the flaps one at a time and hold up by using a thumbtack or pushpin. Use a small brush to sweep the caterpillars into a container of soapy water, which kills them quickly (insecticidal soap works best). The caterpillars should be removed and destroyed daily. The best time to service the burlap is mid-day, but late afternoon or early evening may also be effective.
Leaving the burlap in place during caterpillar pupation and the adult egg-laying period (July – August) will often encourage the female to deposit the egg mass behind the flaps. Providing that type of hiding place enables the homeowner to more easily locate and destroy the egg masses. You can remove the burlap by September. Do not destroy the egg masses until March - April to allow egg parasites to complete their life cycles and to allow Natural Resources staff and volunteers to conduct the annual egg mass survey.

Finally, keeping trees healthy by proper watering, mulching, and fertilizing will maximize their ability to sustain attack from the gypsy moth. These practices alone will not prevent caterpillars from feeding, but healthy trees have greater energy reserves and can therefore rebound more readily after being defoliated. Maintaining a diversified landscape that includes tree and shrub species that are rarely attacked by the gypsy moth also tends to reduce impacts to your tree canopy and landscape. Tree species that are not normally defoliated by gypsy moth include maples, horse chestnuts (buckeyes), hackberry, locusts, coffeetree, tuliptree, blackgum, planetree (sycamore), baldcypress, and elms.

Natural Resources staff is available to demonstrate the proper placement and servicing of burlap hiding flaps and also has written information available to citizens detailing how to identify the gypsy moth at all stages of its life cycle, as well as effective control strategies that can be implemented throughout the year.

If you have any questions, please contact the Rochester Hills Natural Resources Division at 248-656-4673 during normal business hours.