

EUROPEAN GYPSY MOTH

A destructive pest threatening forests



What is it?	Trees at risk	Impacts
<p>European gypsy moth (EGM; <i>Lymantria dispar dispar</i>) is an invasive and destructive pest that poses a risk to deciduous and coniferous tree species.</p>	<p>Gypsy moth has over 300 known plant hosts, including many hardwood and some softwood tree species. Favoured tree species include oak (<i>Quercus</i> spp.), maple (<i>Acer</i> spp.), birch (<i>Betula</i> spp.), white pine (<i>Pinus strobus</i>), and white spruce (<i>Picea glauca</i>).</p>	<ul style="list-style-type: none">• A single gypsy moth caterpillar can eat one square metre of leaves in a season<ul style="list-style-type: none">• Repeated defoliation makes trees susceptible to other pests and diseases, and can eventually lead to tree death• Defoliation in orchards can increase vulnerability to agricultural pests and diseases and can negatively impact farm stock• Loss of species in natural areas can affect biodiversity and forest wildlife

Life cycle

Eggs: Tan-coloured and can be found on tree trunks, bark, or other hard surfaces. Egg masses are about 4 cm and contain 100-1,000 eggs.

Larvae: Charcoal grey with a double row of five blue and six red dots on its back. This is the life stage that causes defoliation.

Adult females: Larger than males with white colouring and dark zig-zag markings. Adult females are flightless.

Adult males: Greyish-brown with dark markings and can fly and survive about one week, mating with several different females.



July – April
Eggs



April – June
Larvae (Caterpillars)



July – August
Adult Moths



June – July
Pupae

How to manage European gypsy moth



Method	Description
MONITORING	Monitor for defoliation and egg masses throughout the season on high-risk trees. Inspect outdoor equipment, trailers, and vehicles before moving from a regulated area to an uninfested area and always buy and burn local firewood.
HAND REMOVAL	Egg masses should be removed from trees between August and May to reduce infestations in forthcoming years. Use a scraper to carefully remove the masses off of tree trunks, branches, and outdoor equipment throughout all seasons. After removal, dispose of masses in a soap and water mixture or burn them.
BIOLOGICAL CONTROL	<p>For private homeowners, Btk (<i>Bacillus thuringiensis kurstaki</i>) is available for purchase from local hardware stores to use against EGM. This biopesticide can be applied by a registered pesticide application company or by homeowners who have carefully read application instructions. Btk is a product that affects the digestive system of caterpillars and should only be applied between May and early June, when EGM are still in the larval (caterpillar) stage. Two spray applications are usually required for effective control. Application of Btk after mid-June is not an effective way to manage EGM.</p> <p>On a larger scale (multiple properties or a forested area), Btk should only be applied by a professional pesticide application company and is most effective when supported by a team of landowners, landowners' association, or municipality looking to manage EGM.</p> <p>Gypsy moth populations are also affected by a number of pests, including mice, birds, wasps, and a specific fungus and virus. The fungus and virus are believed to be the reasons gypsy moth populations crash for ten or more years.</p>
BURLAP/ TRAPPING	Caterpillars can be successfully trapped using burlap. Start by wrapping a 45 cm (18 in) wide strip around the tree at chest height. Tie a string around the centre and fold the top portion down to form a skirt, with the string acting as a belt. Pick off the caterpillars daily and dispose of them (see hand removal above).

CAUTION: European gypsy moth caterpillars have long hairs that can cause skin irritation or allergic reactions for some people. For safety, use gloves while handling caterpillars.



Report sightings of European gypsy moth to:

- EDDMapS Ontario: 1-800-563-7711 or www.eddmaps.org/ontario
- Canada-wide: www.invasivespeciescentre.ca/report-a-sighting

For more information, visit:

- Invasive Species Centre: www.invasivespeciescentre.ca
- Canadian Food Inspection Agency (CFIA): <https://www.inspection.gc.ca/plant-health/plant-pests-invasive-species/insects/gypsy-moth/fact-sheet/eng/1330355335187/1335975909100>



Burlap method: Pennsylvania Department of Conservation and Natural Resources - Forestry, Bugwood.org; Defoliated tree: Karla Salp, Washington State Department of Agriculture, Bugwood.org; Defoliated branch: Tim Tigner, Virginia Department of Forestry, Bugwood.org.