LDD moth infestations are a growing concern with the third year of population boom

By Rob Paul

LDD moth infestations have been an issue in the Caledon region, impacting tree health. The non-native moth species can cause defoliation of trees in Ontario and, though the infestations can occur in cycles, it won't necessarily happen every year.

The damage an LDD moth can do depends on the infestation but can range from light to nearly complete defoliation or loss of leaves?in some situations the tree can die. Entering the third year of a population boom for the moths, the Ministry of Natural Resources and Forestry (MNRF) is forecasting that they expect severe defoliation

The issues with infestations in Caledon are something the Town takes very seriously, and Mayor Allan Thompson says they're continually looking into how to deal with the problem and are completing egg mass scarring and ground sprays in priority areas.

?We asked staff to investigate other avenues to control the spread of LDD moths, and further educate residents about how to handle the infestation on their property,? said Thompson. ?LDD moth infestations are cyclical. We will continue to monitor and work to minimize their impact in future.?

LDD moths were imported to Boston from Europe decades ago for silk production purposes, but escaped and have been an issue in Ontario for 60 years with their mass reproduction and negative impact on trees.

Though Credit Valley Conservation isn't actively managing the issues with LDD moths due to their focus being on other more invasive species damaging the ecosystems, they are currently developing an Integrated Pest Management framework based on their latest reach which will include a LDD moth monitoring program for their properties. They're also working with their partners to increase collaboration and formalization of watershed initiatives.

?We're working with our municipal partners and providing ecology and invasive species expertise on a broader watershed-wide approach to the LDD moth outbreak,? said a CVC spokesperson. ?We've developed an invasive species strategy and are taking actions on invasive species in CVC parks. As we wrap up our work on addressing the devastating impacts of the invasive emerald ash borer, we are shifting our focus to LDD moths and other priorities.

?In order to pinpoint our efforts and ensure effective and efficient use of available resources, we're creating an integrated pest management framework. First, we need to monitor LDD (and other invasive species) on CVC properties to determine the areas where the impacts are greatest and the best strategies to address them. This planning is important. LDD outbreaks have been ongoing in Ontario since the early eighties and happen every 7 to 10 years. During outbreaks, the scale of the outbreak changes year-to-year based on local weather conditions, such as a warm spring. It is suspected that fewer extremely cold winter days due to climate change can result in greater LDD moth populations in the spring. Planning and monitoring allow us to adapt and be cost-effective in the fight against the many invasive species on our properties including LDD moths.?

The caterpillars emerge from their eggs in mid-to-late May and will spend approximately 40 days eating all the leaves and needles they can consume. Adult moths emerge from cocoons in June to July and focus solely on breeding and egg laying and will lay between 100 and 1,000 eggs.

?Healthy trees can typically survive three to five years of heavy moth feeding. A healthy tree will usually be able to regrow their leaves later in the season,? said a CVC spokesperson. ?However, if the trees are stressed due to drought, disease, fungi or other insects, this loss of leaves can deplete the tree's energy reserves and eventually result in death. Unfortunately, conifer trees can die after only one year of very heavy feeding.?

The major concern with LDD moths is an infestation, which though not every year, can leave a lasting impact.

?These outbreaks occur every five to 10 years and usually last between two and four seasons,? said the spokesperson. ?Outbreaks generally collapse due to the combined effects of natural controls: a fungus, a virus, and parasitic wasps and flies. The effectiveness of these natural enemies is dependent on weather conditions and the size of LDD moth populations.?

CVC says there are several methods to help a tree affected by the LDD moth and recommends trying a combination of them.

?You won't get rid of all the caterpillars, but you can reduce the amount of damage they cause,? said the spokesperson. ?If there are a few trees on your property that you're concerned about you can concentrate your efforts on them.?

Year-round they recommend keeping your trees healthy through watering and adding mulch to the soil because having a tree at its healthiest can help prevent LDD moth damage.

In August through early May, focus on scraping eggs off the trees and then fill a container with soapy water and let them sit for two days to kill the eggs before putting them in the garbage?scraping egg masses onto the ground will not kill them.

In May through July, wrap the trunk of trees to catch and dispose of caterpillars or try hand picking caterpillars off the tree and putting them in soapy water.

An alternate option is to spray the biopesticide Btk (bacillus thuringiensis kurstaki) to kill moths in the caterpillar stage. Spraying leaves will lead to the caterpillars eat the bacteria off them and ultimately killing them.

Although Btk products are publicly available, CVC recommends they are only applied by a registered pesticide applicator and that pesticide need to be used with caution.

Once July comes around, set out pheromone traps that can be uses to attract and trap adult male LDD moths to stop them from mating to help reduce egg mass loading.

CVC says the hairs on LDD moth caterpillars and in egg masses can cause irritation and allergic reactions in some people and recommend the use of gloves and protective wear whenever there's potential for contact.

For further information and management techniques from CVC, email invasivespecies@cvc.ca or visit invasivespeciescentre.ca/invasive-species/meet-the-species/invasive-insects/gypsy-moth/.

If Caledon residents see LDD moths on Town property, they're asked to contact Service Caledon at 905.584.2272 x. 7750 or email info@caledon.ca and it will be investigated by the Town arborist. If property owners see LDD moths on their private property, they are asked to consult a tree care professional to determine the best way to manage their property.