



Norfolk Woodlot Owners Association Newsletter

Special Edition

Special Release for NWOA Members

Gypsy Moth Update

Presidents Message

This Newsletter is devoted to addressing the Gypsy Moth situation in Norfolk County for NWOA members. The following map shows areas that have a potential for a serious outbreak in 2021.

After carefully reading this Newsletter and if your woodlot has significant amount of Gypsy Moth egg masses and/or tree defoliation and you would like to spray; then fill in the Gypsy Moth Treatment Information Request Form (GMTIRF). The information on this form will help us ascertain the amount of interest among NWOA members in a Gypsy Moth control program. If there is sufficient interest then NWOA can determine how best to recruit, organize and coordinate an effective and cost-effective control program.

If you are interested in controlling the gypsy moth on your trees in 2021 then fill in the GMTIRF form and mail back to us by October the 1st, 2020. The logistics of putting together a control program requires we start planning by mid- October for a spring Gypsy Moth Treatment.

We welcome your comments, thoughts and ideas for our newsletter, workshops and Annual Meeting. Especially on the AGM, we work hard to make it fun and informative, so your feedback is essential. Thanks. You can post them on our website www.norfolkwoodlots.com or call me at 519-426-2782 or email me at [johndewitt@kwic.com](mailto: johndewitt@kwic.com)

Gypsy Moth Update- Forecasting for 2021

Introduction

Gypsy Moth is a non-native insect to North America, arriving from Europe in the 1860's. Gypsy Moth was first detected in Ontario in 1969, and has become an established pest locally, with periodic outbreaks in population approximately every 8 to 12 years. The last Gypsy Moth outbreak in Norfolk County peaked in 2007-2008 and subsequently collapsed by the end of summer in 2008.

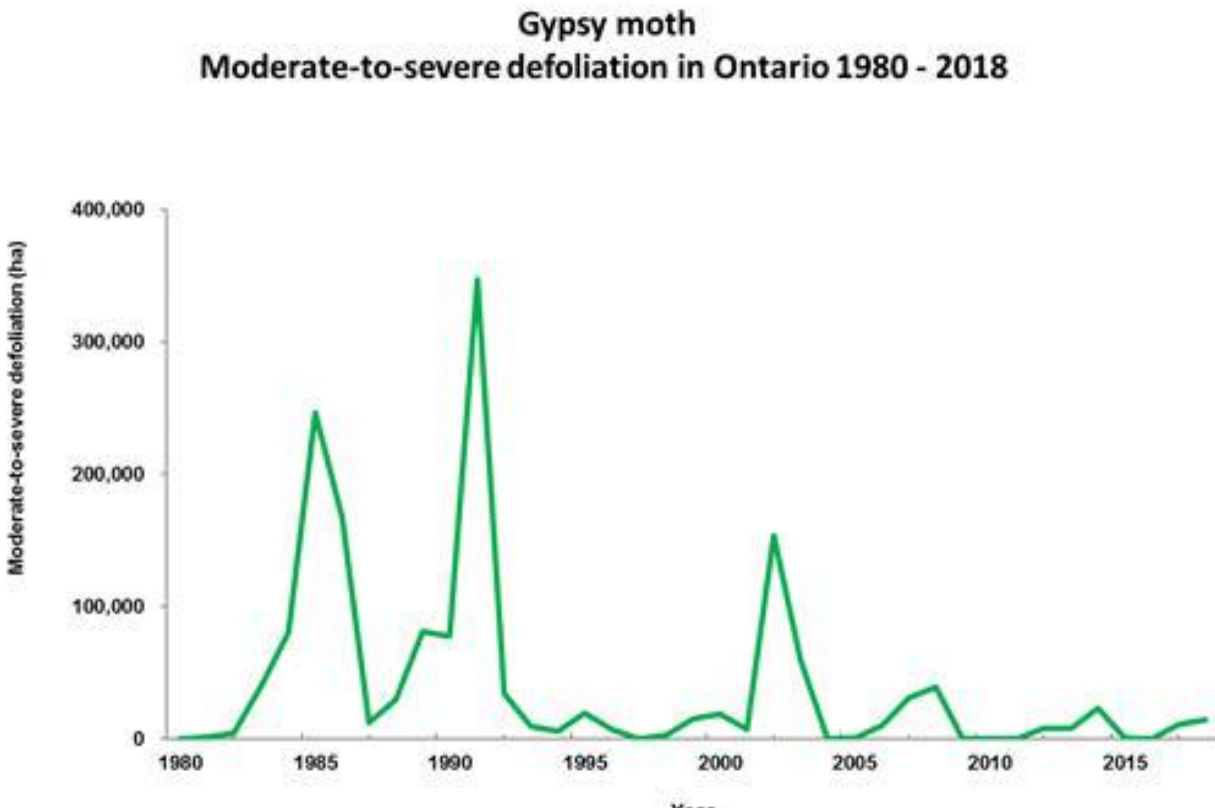


Fig. 1. Gypsy Moth Defoliation in Ontario (Ministry of Natural Resources and Forestry)

Are All Trees are Affected?

Although Gypsy Moth reportedly feed on over 300 host plant species, in Norfolk County they seem to show a strong preference for feeding on oak species, but will feed on several other species of tree including, poplar, willow, blue spruce, white pine, “Crimson King” Norway maple, and many different fruit trees (in particular apple species).



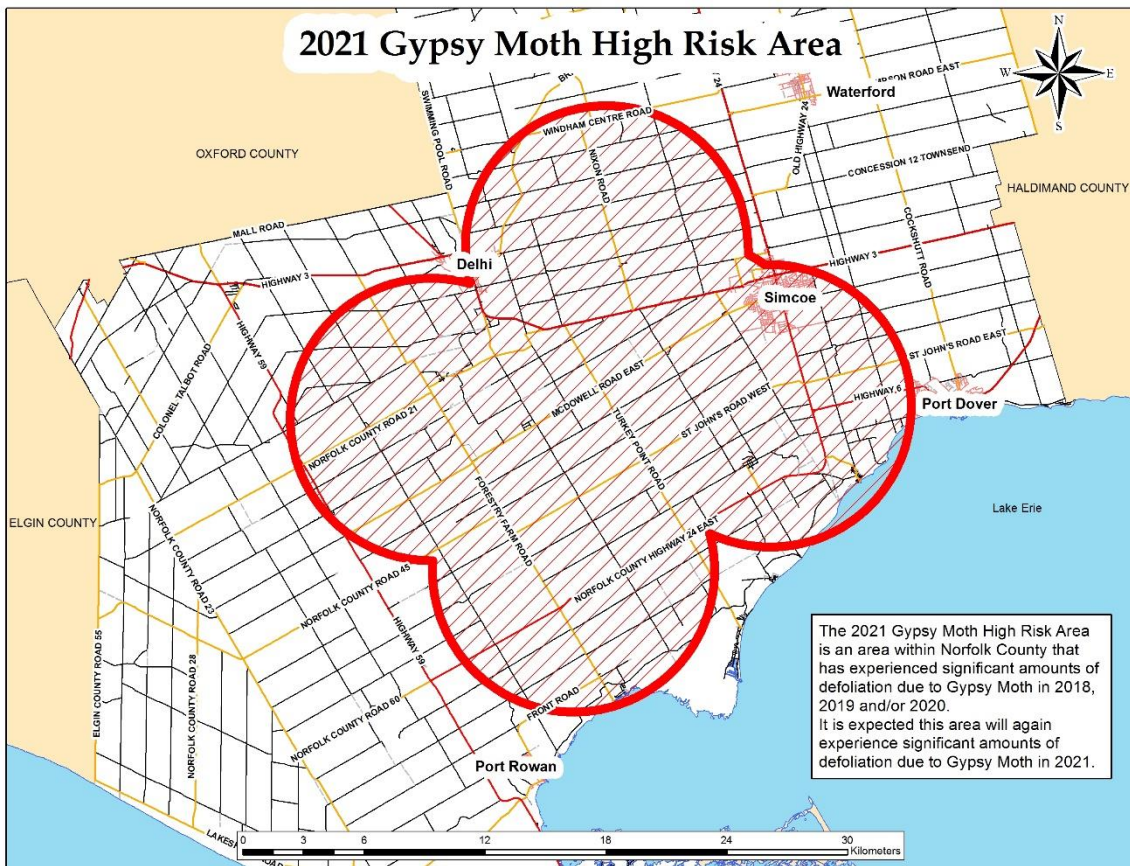
Current Situation in Norfolk County

Parts of Norfolk County have been experiencing a building gypsy moth population over the past 3 years. The south portion of Windham township, mostly around the Nixon area, and the east end of Charlotteville township, mostly around the Hillcrest area, was hit with significant Gypsy Moth defoliation in 2018 and 2019. Although the Nixon area seemed to have had some reprieve in 2020, Gypsy Moth defoliation was readily detectable throughout most of Norfolk County this past summer. Field observations by forest industry representatives indicate that Gypsy Moth will be a widespread problem throughout most of Norfolk County again in 2021.

Will Gypsy Moth Kill My Trees?

Despite enduring an attack from Gypsy Moth, most healthy trees with good growing conditions are able to withstand some levels of defoliation. Concerns over tree health arise when the tree is subjected to multiple years of defoliation, or the defoliation is compounded by added stressors such as an attack by other opportunistic insects or pathogens, drought, soil compaction or other poor growing conditions.

In Norfolk County, areas that have been impacted by Gypsy Moth for multiple years, and will be impacted again in 2021 are at a higher risk of experiencing long term damage to host trees. If you live in or near this area, you will want to evaluate the potential for Gypsy Moth damage on your property and have a plan in place to mitigate the potential impacts.



What Can You Do?

Sometimes it can be difficult to watch as trees on your property or in your neighbourhood are stripped of their leaves. The droppings from the caterpillars, referred to as frass, can also become quite a nuisance and make a mess of decks, driveways and pools. However, unless your trees have been defoliated for multiple years in a row, or are stressed due to other factors, it is likely that the trees will survive a gypsy moth outbreak.

Having some comfort level knowing your trees will likely survive an outbreak can be helpful, but you may still feel the need to want to do something. You may also be in an area that has been impacted by Gypsy Moth for multiple consecutive years and want to provide some protection to your trees for the coming year.

There are several control options to consider when trying to manage Gypsy Moth on your property, especially if you are dealing with few trees.

Important Note on Controlling Gypsy Moth!!!

It is important to note, that regardless of the approach used to control Gypsy Moth, in all instances, the objective is to **protect targeted trees from defoliation** and reduce the nuisances associated with Gypsy Moth within a target area. The control measure implemented is **not intended to control an entire Gypsy Moth population**, and will only be effective for that growing season, at most.

The “collapse” of a Gypsy Moth population is reliant on naturally occurring viral and fungal agents. Gypsy Moth is a cyclical insect, and history has shown they will go away once their natural control agents take effect.

Aerial Application of Pesticide

When seeking to protect trees against Gypsy Moth defoliation, aerial application of a pesticide is often a commonly sought after control method.

Aerial application of a product containing *Bacillus thuringiensis variety kurstaki* (Btk) is the most common approach. Btk is bacteria that effect only caterpillars, and only after they have consumed the product. The product is applied to the foliage in the spring, coinciding with larvae development and the emergence of leaves on the trees. There must be adequate foliage on the tree before the product can be applied, and the Gypsy Moth must be actively feeding. The use of Btk is much preferred over other chemical insecticides due to some of the harmful environmental issues usually associated with chemical sprays. Many chemical insecticides are also broad spectrum, meaning they may affect many different types of insects.

Aerial application of a pesticide requires the hiring of a qualified company or individual to undertake the work. In addition to the product and costs associated with applying the pesticide, there are typically other administrative costs to consider, including mapping of

the spray areas, the monitoring of leaf and larvae development prior to application, and monitoring of weather conditions during application times. Typically, individual landowners enter into a contract with an operator who is able to provide these services. There are often cost savings realized when multiple landowners coordinate together to spray larger areas under one contract, if some of the administration can be reduced. Aerial application costs will vary depending on the treatment area but will likely be close to \$100.00 per acre with a minimum cost of close to \$500.00.

If you are interested in having your property aerial sprayed with pesticide to protect against Gypsy Moth, you should contact a reputable contractor as soon as possible to make the necessary arrangements. Treatment is required early in the season, and the timing window is relatively small. Speaking with your neighbours and pooling resources to treat a larger area may help spread out costs amongst several different landowners and will result in protection over a larger area.

Zimmer Air Service conducted the majority of the Gypsy Moth aerial spraying in Norfolk County in 2008. To contact Zimmer Air Service to request a quote or to have your property evaluated for potential control in 2021, please visit <https://zimmerair.com/> .

Other Control Options for Gypsy Moth on Your Property

Stem Injection of Pesticide

If you know you are going to be dealing Gypsy Moth defoliation on your property, you may choose to treat valuable ornamental or landscape trees on your property with a pesticide that can be injected into the stem of the tree.

TreeAzin is probably the most widely used stem injection pesticide in Canada, as it has been used to protect thousands of ash trees across the country against Emerald Ash Borer. The same product will provide protection against Gypsy Moth defoliation if administered correctly. The pesticide is taken up through the conductive tissues of the tree and into the leaves. When gypsy moth consume the leaves, and thus the pesticide, it inhibits the growth of the larvae which reduces the amount of defoliation.



Fig. 2. TreeAzin is administered to an ash tree for protections against Emerald Ash Borer

Application of Foliar Pesticide (small plants and shrubs)

For smaller trees, shrubs, ornamental and garden plants, you may purchase approved pesticides that can be applied to the foliage of the vegetation for protection against Gypsy moth defoliation. *Bacillus thuringiensis* var. *kurstaki* (or Btk for short) is a recommended pesticide for control of Gypsy Moth.

Safer's BTK Insecticide is one such product approved for use against Gypsy Moth, and it can be found at many garden/hardware stores or online. The pesticide is applied to the leaves of the plants after larvae have hatched and began feeding. After consuming the Btk, the larvae become ill and will die.

Fig. 3. Safer's BTK may be purchased at most local hardware stores or online



Folded Burlap Band around Stem of Tree

One non-chemical control method involves the use of burlap and twine to capture caterpillars on the trunk of a tree. A piece of burlap, approximately 2 feet in width or greater, is wrapped fully around the circumference of the tree trunk. The burlap is secured with a piece of twine or rope around its centre, so that at least half the width of the burlap is draped over the rope. The burlap should be tight enough around the tree that caterpillars cannot crawl behind the burlap and up the tree.

The caterpillars will crawl into the folded burlap to escape the heat of the sun, or accidentally as they try to climb the tree. The burlap needs to be inspected regularly, and caterpillars need to be manually removed and destroyed.



Fig. 4+5. Burlap bands used to capture Gypsy Moth larvae.

Sticky Band around Stem of Tree

Another non-chemical control method involves placing a sticky band around the trunk of the tree. The sticky band will trap caterpillars as they travel up the tree to feed, or down the tree to escape the heat of the day.

There are specific products designed for this purpose, such as Tree Tanglefoot, but home remedies such duct tape with the sticky side out, or Vaseline smeared on the non-sticky side of the duct tape may be used. These methods work best when caterpillars are still relatively small.



Fig. 6+7. Container of Tanglefoot used to catch Gypsy Moth larvae, and home-made sticky band using duct tape and Vaseline.

Scraping Egg Masses off Trees over Winter Months

Gypsy moth lay their eggs mostly on the trunks of trees, but in dense populations may lay them on houses, downed woody debris and in the leaf litter of a forest. In the winter months, egg masses can be scraped off the tree into a container of soapy water. The eggs masses, after soaking in the soapy water for a couple days, can then be discarded in the trash. Each egg mass can contain 100 to 1000 eggs, so destroying these egg masses can have a significant impact, particularly in low population levels.



Fig. 8. Gypsy Moth egg masses being scraped into a container of soapy water.

Summary of Control Options

Control Measure	Pros	Cons	Summary
Aerial Application of Pesticide	<ul style="list-style-type: none"> - Very effective at reducing Gypsy moth defoliation - Btk is specific to Lepidoptera species (butterflies and moths) and only effects those species feeding at time of application 	<ul style="list-style-type: none"> - Btk also kills caterpillars of other Lepidoptera species if they are feeding at the time of application - May be restrictions on spraying certain areas or obtaining necessary permissions - May require several applications (only effective for short period of time) - Potential for over-spray to non-target areas 	<p>Aerial application of pesticide may be the most effective way to reduce Gypsy Moth defoliation on your property.</p> <p>You would need to locate a qualified individual or company to provide the service.</p>
Stem Injection of Pesticide (Autumn or Spring)	<ul style="list-style-type: none"> - Trees can be treated in fall or spring - Can be applied from the ground - Pesticide administered directly into tree- no overspray and no risk to soils, aquatic habitats, birds, bees or mammals 	<ul style="list-style-type: none"> - Need to drill several small holes into stem of tree- may not always be ideal - May not be cost effective when treating a high number of trees or a large acreage 	<p>This is a practical control for treating a few number of trees.</p> <p>You would need to locate a qualified individual or company (landscape or tree service) to provide the service.</p>
Application of Foliar Pesticide (small plants and shrubs) (May to start of July)	<ul style="list-style-type: none"> - Btk is specific to Lepidoptera species (caterpillars) and only effects those species feeding at time of application - Pesticide administered directly to foliage of specific plants- little chance for overspray - Can be applied from ground (smaller trees, shrubs and plants) 	<ul style="list-style-type: none"> - Some potential to impact non-target species - May require several applications (only effective for short period of time) - Most effective on larvae in their early developmental stages, not so much on larger caterpillars - Effective only for smaller sized trees, shrubs and plants 	<p>This is a practical control for treating small trees, shrubs and plants, early in the summer.</p> <p>Product can be purchased at most hardware stores or online, for homeowner use.</p>

Control Measure	Pros	Cons	Summary
<p>Folded Burlap Band around Stem of Tree</p> <p><i>(May to August)</i></p>	<ul style="list-style-type: none"> - Relatively inexpensive and easy to implement on all sizes of trees - Can be effective in reducing defoliation on isolated trees - Can be implemented at all stages of larvae development 	<ul style="list-style-type: none"> - Trees with deeply furrowed bark require additional backing behind the burlap - Not very effective while larvae are small - Needs to be inspected and larvae removed daily - Will not capture larvae that remain in canopy of tree 	<p>This is a practical control that can be implemented at any time during the larvae development stage of the Gypsy Moth.</p> <p>May have limited effectiveness in very dense Gypsy Moth populations</p>
<p>Sticky Band around Stem of Tree</p> <p><i>(May to August)</i></p>	<ul style="list-style-type: none"> - Relatively inexpensive and easy to implement on all sizes of trees - Can be effective at reducing defoliation on isolated trees - Can be implemented at all stages of larvae development (most effective on smaller larvae) 	<ul style="list-style-type: none"> - As larvae get larger this method becomes less effective - Trees with deeply furrowed bark require additional backing behind sticky band - Not very effective in very dense Gypsy Moth populations - Non-selective, you will capture other non-target insects - Can be messy 	<p>This is a practical control that can be implemented at any time during the larvae development stage of the Gypsy Moth.</p> <p>May have limited effectiveness in very dense Gypsy Moth populations</p>
<p>Scraping Egg Masses off Trees over Winter Months</p> <p><i>(January to May)</i></p>	<ul style="list-style-type: none"> - Inexpensive to implement - Removing a single egg mass could result in up to 1000 less caterpillars - Materials already available at home 	<ul style="list-style-type: none"> - Can only access egg masses at or near ground level 	<p>This is a practical control measure that anyone can implement at virtually no cost.</p>

Should I be Considering Controlling Gypsy Moth on my Property?

Is the control being provided to prevent damage to a valuable landscape tree that is susceptible to Gypsy Moth defoliation?

Is the control being provided to eliminate the nuisance of having caterpillars and caterpillar droppings covering your property?

Is the control being provided to protect an oak forest with significant value (timber, social, ecological, etc.)

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What are the costs associated with providing the control?

Will the control be required for more than one consecutive year?

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What is the risk of not providing control?

Are the objectives worth the costs of providing control?

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Conclusion

The choice to control Gypsy Moth, or not, ultimately rests with each individual landowner. The MNRF does not carry out insect control programs on private land. Pest management is the responsibility of the landowner. Norfolk County will be considering control of Gypsy Moth on County owned lands (parks, cemeteries and forests), but will not be coordinating any private land control programs.

If you know you want to have Gypsy Moth controlled on your property in 2021, you should consider all the control options available, and implement those that are best suited to your needs and resources. Control options may be implemented in conjunction with each other to provide an integrated pest management approach to controlling Gypsy Moth on your property.

Additional information and resources may be located online at:

<https://zimmerair.com/>

<https://www.ontario.ca/page/gypsy-moth>

<http://www.invadingspecies.com/gypsy-moth/>

Information provided by:

Adam Biddle, Supervisor, Forestry, Norfolk County

adam.biddle@norfolkcounty.ca 519-426-5870 ext. 2224

Gypsy Moth Treatment Information Request Form

Name of Property Owner: _____

Mailing Address: Street: _____

City, Prov., Postal Code: _____

Is the above address the same as the Treatment location? Yes____ or No____

Please print the address location to be treated if different from mailing address.

Treatment Address: Street: _____

City, Prov., Postal Code: _____

Is the Treatment Property belong to a Road or Cottage Assoc. or group? Yes____ or No____

Please list the Tax Roll #'s of treatment location('s) (This allows accurate property boundary maps to upload to aircraft spray guidance system) _____

Please print the name of the person responsible for the property to be treated if different from above owner: _____

Please print the phone number of the above responsible person: _____

Please print alternate phone number of the above responsible person: _____

Please print the primary email address of responsible person: _____

Mail completed form to: Attention: NWOA
Norfolk County
95 Culver Street, Simcoe, ON
N3Y 2V5