NORFOLK WOODLOT OWNERS ASSOCIATION NEWSLETTER

www.norfolkwoodlots.com

April 2022

President's Message

NWOA is now on a one-year trial, from January 1, 2022 to December 31, 2022 as the Norfolk Chapter of OWA. NWOA members can decide at that time, by vote, whether to join with OWA permanently. The vote is to take place probably during mid to end of October 2022.

To learn more about OWA please check out https://www.ontariowoodlot.com/about-owa . There is a lot of information at this site that can be useful on how to manage your woodlot for many different objectives. It is a website well worth exploring.

Becoming a Chapter of OWA would not curtail NWOA independence. We would continue to operate with our current Board members (we would welcome the addition of some new Board Members), continue to publish our own Newsletter, continue with our AGM event and tours. We would be covered by OWA insurance for our tours, directors, AGM and other such events. We will be able to attend OWA events including annual meetings and tours held in different locations across the province. And, a NWOA Board member has one seat, with one vote, on the OWA General Board which meets quarterly.

Lymantria dispar dispar LDD moth or spongy moth formerly known as gypsy moth, is a forest defoliating insect found in Ontario. This invasive species, native to Europe, is as defoliator feeding on a variety of trees. In 2008 Norfolk County experienced a serious outbreak. Some localized outbreaks in parts of Norfolk County have occurred over the past couple of years. So, read on, for information on spongy moth.

Next year NWOA 2023 AGM will be held at the German Home in Delhi on March 1, 2023 7pm.

Contact Information:
Mail: Norfolk Woodlot Owners Association (NWOA), P.O. Box 1146, Waterford, Ontario N0E 1Y0
NWOA website: www.norfolkwoodlots.com
NWOA email: membership@norfolkwoodlots.com
Call me at 519-426-278
email me at johndewitt@kwic.com

Please review the list of generous sponsors at wwww.norfolkwoodlots.com and make every effort to patronize their business. They make all the difference in making NWOA AGM as great as it is!

Norfolk Woodlot Owners Association President
John de Witt

P.S. There is a woodlot tour scheduled for April 23. Check the last page in this Newsletter.

Members Who Made Contributions to NWOA Above Renewal Dues

Susan & Howey MacLaren	Michael Zona
Neil & Isabelle Adcock	John Barkovsky
Margaret & Pauline Ridzon	Paul DeCloet
Madaline Wilson	Frank & Natalie Hahn
Dolf & Anne Wynia	Elizabeth Garrioch
Fred Zimmer	Tony Jovan

The NWOA Board of Directors thanks these members for there generosity and commitment to the continued success of the organization.

NWOA AGM Prize Winners

Name	**AGM Prize**	**Sponsor**
Estelle & Mischa Van Kleef / Geven	Chainsaw – 250 STIHL Early Bird Prize Draw	Norfolk Tractor
Sherwood & Shelley Lefler	Chainsaw – 170 STIHL AGM Draw	Premier Equipment & NWOA

DOOR PRIZE WINNERS

Mark Murray	Echo Tree Pruner	Echo
Jonathon & Dawn	Car Blanket & Hat	Carquest
Ed & Iria Lukosius	Echo Safety Helmet	Brian Vanrooy Delta Farm Equip.
David & Inga Curry / Hinnerischsen	Echo Hat	Echo
Greta M. Lebeer	Echo Hat	Echo
Jeff & Ann Vermeersch	Echo Hat	Echo
Gerry Dertinger	Echo Hat	Echo
Anton Jopko	Echo Pruner	Echo
Rick Aleliunas	Echo Toque	Echo
Stan & Judy Gates	Echo Toque	Echo
Chris & Theresa Paret	Echo Toque	Echo
Jayson Kitchen	Fiskars Brush Cutter	Delhi Home Hardware
Bernard Wesseling	Flashlight	Westburne
Bert Cronkwright	Fur Hat	Echo
Brian & Edna Leebeeck	Fur Hat	Echo
Elizabeth Garrioch	Fur Hat	Echo
Camiel & Erma Dedeyne	Gift Certificate	McKee Sport
David De Leebeeck	Hat	Turkstra Lumber
Jean Oatman	Hat	Vanden Bussche
Michael O'Conner	Hat	Echo
Ken Person	Hat	Carquest
Alan Schreiber	Hat	Turkstra Lumber
William Valoppi	Hat	Carquest
Robert Wilson	Hat	Echo
John Benson	Lawn Sprinkler	Vanden Bussche
Roger Cruickshank	Miracle Grow – Seed Starer	Scotts
Robert Griffin	Miracle Grow – Seed Starter	Scotts
Tony Jovan	Miracle Grow – Seed Starter	Scotts
Steve Leonard	Miracle Grow – Seed Starter	Scotts
Steve & Anita Buehner	Miracle Grow – Seed Starter	Scotts
Mary & Randi Fowler	Miracle Grow – Potting Mlx	Scotts
Stephen Kilbridge	Miracle Grow – Potting Mlx	Scotts

Albert Lava	Miracle Grow – Potting Mlx	Scotts
Graham Secord	Miracle Grow – Potting Mlx	Scotts
Dan Verhoeve Farms	Miracle Grow – Potting Mlx	Scotts
Fred Zimmer	Miracle Grow – Potting Mlx	Scotts
Eric & Mary Ferguson	Picards Assortment	Picards
Paul Donohue	Pocket Knife	Bert Conkwright – Firearms Safety
Gloria Ann Benke	Scotts Turf Builder	Scotts
Jerry Dadurka	Scotts Turf Builder	Scotts
Frank Y Natalie Hahn	Scotts Turf Builder	Scotts
Karen Culver	Socket Shelf	Crompton Home Hardware Delhi
Paul De Cloet	Sweatshirt	Turkstra Lumber
Joe Overdevest	Sweatshirt	Turkstra Lumber
James Cowan	Utility Knife	Carquest Waterford
Eugene Gawaziuk	Water Bottle	Westburne
Dr. Robert Dukelow	Work Light Power Station	Warrens Home Center - Burford

Spongy or LDD Moth Update- Forecasting for 2022

Are All Trees are Affected?

Although LDD 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 LDD 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 2022.

Will LDD Moth Kill My Trees?

Despite enduring an attack from LDD 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 LDD Moth for multiple years, and will be impacted again in 2022 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 LDD 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 LDD 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 LDD Moth on your property, especially if you are dealing with few trees.

Important Note on Controlling LDD Moth!!!

It is important to note, that regardless of the approach used to control LDD 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 LDD Moth population is reliant on naturally occurring viral and fungal agents. LDD 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 LDD 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 LDD 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 LDD 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 LDD 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 2022, please visit https://zimmerair.com/ .

Other Control Options for LDD Moth on Your Property

Stem Injection of Pesticide

If you know you are going to be dealing LDD 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 LDD 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 LDD 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 LDD 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.

Scraping Egg

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

Masses off Trees over Winter Months

LDD 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.

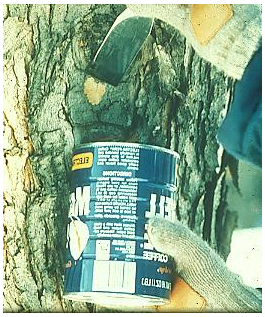

Fig. 8. LDD Moth egg masses being scraped into a container of soapy water.

Additional information and resources may be located online
Lymantria dispar dispar (LDD) moth | ontario.ca

Spongy Moth | Ontario's Invading Species Awareness Program

A New Tool To Control a Familiar Forest Pest With a New Name

Woodlot owners in Norfolk County are all too familiar with the sight of trees stripped bare in early summer due to outbreaks of the voracious European Gypsy Moth caterpillars. Just last year the NWOA newsletter provided the above detailed information on this invasive forest pest and various control options. There are some new developments on this file that we'd like to share.

First, the name of the insect has recently been changed to Spongy Moth by the Entomological Society of America. The previous name contained a term that is culturally offensive slur. The new common name refers to the sponge-like egg masses. It is also referred to as the LDD Moth (an acronym of its scientific name *Lymantria dispar dispar*).

Second, a pesticide product called "BioVir" has recently received an emergency registration for use to control Spongy Moth in Ontario. BioVar is a biological pesticide that uses a naturally occurring "MNPV" virus (multicapsid nuclear polyhedrosis virus) that is lethal to Spongy Moth caterpillars but is not harmful to any other moth or butterfly species, or to other insects and wildlife. This specificity to Spongy Moth is a significant environmental advantage over the commonly used BTK pesticides which use a bacteria (*Bacillus thuringiensis kurstaki*) which is lethal to the caterpillars of any moth or butterfly species that eat the bacterial spores. The emergency registration allows for this product to be used in Canada, on a temporary basis, until full registration of the product is complete, and is granted by the Pest Management Regulatory Agency of Health Canada.

This is not a new product. BioVar is the Canadian equivalent of "GypCheck", a MNPV based pesticide that has been successfully used for many years in the United States to control Spongy Moth outbreaks, particularly in areas where rare or endangered native moth or butterfly species are present. Back in the 2008 outbreak, GypCheck was used at the St. Williams Conservation Reserve by the Canadian Forestry Service.

The third development on this file is that Long Point Region Conservation Authority and Norfolk County forestry staff are finding far fewer egg masses during their surveys this winter, indicating that the Spongy Moth population has declined in comparison to this time last year. While we are not expecting to see widespread severe defoliation issues in Norfolk forests this year, defoliation will still be noticeable in some locations and there may be localized hotspots in areas with more egg masses. Isolated trees such as those along roads or in your yard are more susceptible to significant defoliation than trees located in forests. So it is still a good idea to look for eggs masses and watch for signs of the caterpillars in May. If you think you have a tree or shrub that is susceptible and is under attack, use some of the home control options discussed last year and found readily online (scrape egg masses into soapy water, sticky bands/burlap wrapped around the trunk of the tree).

While local populations of this invasive forest pest have been knocked down for now, based on the past cycles we can expect to see a gradual buildup to outbreak levels over the next decade. Hopefully when that next Spongy Moth outbreak comes, BioVir will be available for use via full registration allowing private and public forest managers to consider a spray program using BioVir or a similar MNPV-based product as this is a much more targeted pesticide that won't harm other insects.

By: Audrey Heagy & Kristen Bernard. With input from Debbie Thain & Adam Biddle

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By: The Working Forest Staff

After a wet winter, forest fire conditions might seem favourable in Ontario. Experts say not so fast

CBC NEWS — April marks the official beginning of the forest fire season in Ontario, and while experts in the field are hoping for a quieter season than last, they're already preparing for the worst.

Last year, wildfires forced evacuations of a number of remote northwestern Ontario First Nations and burned more hectares of land in the province in 2021 than in any other year in history.

"It was a little intense at times," said Chris Marchand, a fire information officer with Ontario's Aviation Forest Fire and Emergency Services (AFFES), referring to the 2021 season.

“What is quite different about our situation in 2022 thus far is that in most places, at least around the northwest, are starting the season with a lot more snow on the ground than we had at this time last year,” said Marchand, who is based at the service’s northwest regional centre in Dryden.

Last year, April was an active month for forest fires in northwestern Ontario, with two fires being reported on the opening day of the season.

So far in 2022, much of northwestern Ontario is seeing significant snowfall one week into April, as yet another system passes through the region.

The prolonged snow coverage will help to slow the start of the fire season according to Marchand, but until it all melts it’s unclear how the winter will impact the spring and summer months on the landscape.

“Although the amount of snow depth plays a role in regulating the moisture content of the vegetation, the amount of rain that we saw last fall and weather conditions once an area becomes snow-free, are also important factors when determining how susceptible an area will be to wildland fire,” Marchand explained.

While the forecast and snow coverage might look promising for keeping forest fires tamed, conditions can still change quickly and crews are preparing for any outcome, said Marchand.

Drought forecast improves, but spring precipitation still key

For now, the snowy winters in the northwest and through to parts of the prairies, have been helpful in improving the drought forecast in multiple regions.

Agriculture and Agri-Food Canada’s latest drought outlook predicts conditions will improve in several parts of the country this spring. The area in dark green indicates “drought removal” and yellow indicates “drought improves.” (Agriculture and Agri-Food Canada)

The February drought monitor report from Agriculture and Agri-Food Canada showed many areas were still seeing severe drought to abnormally dry conditions. But in March, most areas have seen drought improvement and drought removal, according to the government agency.

Avoiding drought conditions at the start of the season might not mean parts of Ontario are out of the woods when it comes to wildfires.

- **Snowy winter provides blast of hope in some parts of drought-stricken Prairies**

Graham Saunders, an expert in climatology living in Thunder Bay, said forest fires seasons through the last few decades have shown rain is the critical element leading into the spring.

“If I go back to 1996, which was another super snow year, at this time of year we had a great deal of snow on the ground, and by the end of May, we had a serious fire season,” he said, adding there was a lack of rain after the spring melt that year.

Early forecasts are showing the possibility of a cool spring with normal precipitation, but some areas might see drier starts to the spring-like in the Red Lake, Kenora, Dryden and areas along the Manitoba border, said Marchand. (Ministry of Northern Development, Mines, Natural Resources and Forestry/Provided)

Saunders said those changes in conditions are also happening more quickly and drastically as the climate changes, and as we see more volatility in weather around the world.

Climate change forces changes to preventative measures

Climate change and unpredictable weather patterns are also pushing more agencies to work on improving data collection techniques when it comes to forest fires.

Chelene Hanes, a fire researcher with the Canadian Forest Service in Sault Ste. Marie, said scientific models that inform things like the Forest Fire Danger Rating System is one of the areas that are getting revamped.

Canadian fire agencies use elements of the Forest Fire Weather Index System to guide fire management decisions, including the settings to display on roadside fire danger risk signs. (Natural Resources Canada)

While the national system works well and has for decades, it’s not perfect, according to Hanes. She adds looking at aspects of the fire season that weren’t measured in the past will also become more important as drought conditions become more frequent, and as wildfires worsen.

- **Ontario forest fires burned record area of land this summer as they displaced First Nations in northwest**

“So these things that were one-offs in the past are becoming more frequent. So I guess that’s cause for concern … we’re trying to add more science to that because we feel that, you know, in the future, we may need to rely more on it,” she said.

Canadian Forest Service anticipates more spring fires

Hanes has also been conducting research to broaden the understanding of drought impacts from season to season in Ontario.

She said through studying moisture content at different levels of the forest floor, the service found drought conditions in the fall can impact the number of fires in the following spring.

- **How some small towns in northwestern Ontario are tackling climate change with limited resources**

“We found that for some of these regions, you can get up to, you know, at least a 25 percent increase in the number of fires the following spring. Keep in mind that these spring fires are often human-caused, and they’re often small fires,” she said.

Hanes said more attention is now being put toward monitoring conditions in the winter months, and based on the studies that have been done, the region can anticipate more fires this spring.

“Whether or not that drought carries over into this spring will really depend on what happens with the snow and how much snow actually evaporates, and how much actually gets back into the ground to recharge any deficit that we had from the previous fall,” she added.

Wood-based Textile Fibres Win MWP

By: The Working Forest Staff

The 2022 Marcus Wallenberg Prize has been awarded to Professor Ilkka Kilpeläinen and Professor Herbert Sixta for the development and use of novel ionic liquids to process wood biomass into high-performance textile fibres

The future demand for textile fibres is growing due to global population growth. Production of cotton, the predominantly used cellulose fibre for textiles, is not expected to keep up with the demand. Therefore, man-made cellulose fibres would be an excellent complement for cotton as these fibres have similar properties.

The main processes to produce man-made cellulose textile fibres are the viscose process, where cellulose is solubilized using alkali and carbon disulphide and the Lyocell process, where N-methylmorpholine-N-oxide (NMMO) is used to dissolve cellulose. The viscose process has, however, become environmentally controversial due to the use of toxic carbon disulphide as the main reagent. The Lyocell process on the other hand is hampered by the instability of the NMMO.

These challenges have led to extensive research on different solvent systems for cellulose to produce regenerated cellulose fibres. Ionic liquids have gained interest as green alternatives for organic solvents in different processes. Ionic liquids are salts that can be melted below 100^{o}C and have unique properties including low vapour pressure, high thermal stability, and high dissolving capability of different organic and inorganic substances.

Man-made cellulose fibres from wood with high technical quality have been developed by two research teams in Finland, at the University of Helsinki and at the Aalto University. In this concept, the design and use of novel superbase ionic liquids to process wood pulp into high-performance textile fibres was developed and currently tested for scaling-up. The team led by Prof. Kilpeläinen at the University of Helsinki developed superbase ionic liquid solvents for dissolution of wood biomass e.g. bleached or unbleached pulp or recycled cellulose pulp. Prof. Sixta and his team, at the Aalto University, developed the ionic liquid-based fibre shaping process based on dry-jet wet spinning.

“This unique collaboration has resulted in novel sustainable concept of textile fibre production from wood. The innovation is expected to result in a large range of new product and business opportunities for the forest industry”, says Johanna Buchert, Chairperson of the Marcus Wallenberg Prize Selection Committee.

NWOA Woodlot Tour - See Natural Regeneration in a Harvested Pine Plantation

On Saturday April 23, 2022 the walk with Q&A begins at 10am sharp.
Located in the northwest corner of the intersection at Charlotteville Road 10 and Charlotteville West Quarterline.

There is plenty of room to park along the south side of the woodlot and on the north side of Charlotteville Road 10, which is the first intersection north of Pinegrove.

It is an informal walk, for those interested in seeing natural regeneration up close in a former pine plantation.