

CORPORATION OF THE TOWNSHIP OF MELANCTHON

The Township of Melancthon Environmental Sustainability Committee held a meeting on March 12, 2021 at 10:30 a.m. electronically through ZOOM. The following members were present: Chair; Margaret Mercer, Wayne Hannon and Darren White. Also present were: Donna Funston, Environmental Sustainability Committee Secretary.

1. Chair Mercer called the meeting to order at 10:32 a.m

2. Additions/Deletions/Approval of Agenda

Motion - Moved by Hannon, Seconded by White, that the Agenda be approved as circulated. Carried.

3. Declaration of Pecuniary Interest or Conflict of Interest

None.

4. Approval of Draft Minutes - February 12, 2021

Motion - Moved by Hannon, Seconded by White, the minutes of the Environmental Sustainability Committee held on February 12, 2021 be approved as circulated. Carried.

5. Business Arising from the Minutes

None.

6. General Business

1. Other/Addition(s)

Discussion around a Melancthon Environmental Day or Sustainability Day in the Township. This could be an event held in June at the Horning's Mills Hall and be a way to communicate with the community about invasive species, plants etc and some possible solutions. Conservation Authorities could have stations set up in the Hall with pamphlets and information for the community.

7. Delegations

1. 10:40 a.m.- NVCA Staff – Fred Dobbs, Byron Wesson, Dave Featherstone and Rick Grillmayer regarding Invasive Species Issues and Solutions

Chair Mercer welcomes the NVCA staff and thanks them for attending the meeting.

We heard from Dave Featherstone first about Invasive Species like Wild Parsnip, Giant Hogg Weed, Phragmites, Dog Strangling Vine etc. This presentation is attached to these minutes.

Next we heard from Rick Grillmayer about Invasive Pest Forestry like the Emerald Ash Borer, Gypsy Moth, Butternut Canker Disease, Hemlock Woolly Adelgid and Oak Wilt. This presentation is also attached to these minutes.

Then we heard from Fred Dobbs about Aquatic Species. He mentions waters around Melancthon are Noisy River, Pine River and Boyne River. Melancthon also has Lavendar Falls which is a barrier keeping species from entering these Rivers. In Horning's Mills the Pine River has cataracts to protect as natural barriers against invasive species however, the Boyne River has no protection. Aquatic species are mainly transported by boats. Mono Cliffs and Island Lake have been flooded with out of area people and campers and boating has exploded since the pandemic. People can still travel locally just not internationally. Invasive plants are spread on tires, boots, pets feet and in tracks of other vehicles. Byron reports a 60% increase use in Conservation Areas, the trails are now one third wider due to activity. Forestry is trying to keep a list of where the Hemlock Woolly Adelgid is, if an invasive species is caught early on we can win against them but if it's too late it becomes a total war. When doing roadside ditching or drain cleanouts a clean vehicle protocol could be considered. Vehicle tracks, equipment buckets and boots are ways that things spread from area to area quickly.

Currently County Forestry sees red oak wilt as a big concern. Dufferin County is heavily populated with red oak trees and plans are being made if red oak wilt is found here. Red oak wilt is not an insect, you can't see the disease, it's tough. Phragmites are a concern in Melancthon, on dry lands they can be managed a bit but can be expensive to control. On wetlands can cut them below water level to drown, can't herbicide on wetlands. Wind, water and animals are major reasons for spreading.

NVCA Staff leave the meeting at 11:20 a.m.

Discussion ensued about expanding this committee.

Next meeting in April will invite Caroline Mach, County Forestry Manager and possibly the GRCA and in May deal with beaver issues.

Chair Mercer will bring a notice of motion regarding the Sustainability Day to the Council Meeting on March 18, 2021. No motions or recommendations from this meeting.

8. Confirmation of Meeting

Motion - Moved by Hannon, Seconded by White, that all actions of the Members and Officers of the Environmental Sustainability Committee with respect to every matter

addressed and/or adopted by the Committee on the above date be hereby adopted, ratified and confirmed; and each motion, resolution and other actions taken by the Committee Members and Officers at the meeting held on the above date are hereby adopted, ratified and confirmed. Carried.

9. Adjournment and Date of Next Meeting

Motion - Moved by White, Seconded by Hannon, that we adjourn the Environmental Sustainability Committee at 11:35 a.m. to meet again on Friday April 16, 2021 at 10:30 a.m. or at the call of the Chair. Carried.

CHAIR

SECRETARY

Donna Funston

From: Dave Featherstone <dfeatherstone@nvca.on.ca>
Sent: Friday, March 12, 2021 12:06 PM
To: Donna Funston; Margaret Mercer
Cc: Fred Dobbs; Rick Grillmayer; Byron Wesson; Ryan Post; Doug Hevenor
Subject: Invasive Species Presentation and Links
Attachments: MelancthonEnvSustComm_Mar2021pdf.pdf

Thanks for the opportunity to speak with your committee this morning! My presentation is attached. A few links for you:

<https://www.nvca.on.ca/watershed-science/invasive-species>

<https://www.riscnetwork.org/> - the northeast US group that is looking at invasive species and climate change

<https://www.ontarioinvasiveplants.ca/> - Ontario Invasive Plant Council

<https://canadainvasives.ca/> - Canadian Council on Invasive Species – May 2021 Forum

Please contact me if you have any questions. Have a great weekend!

David Featherstone | Senior Ecologist

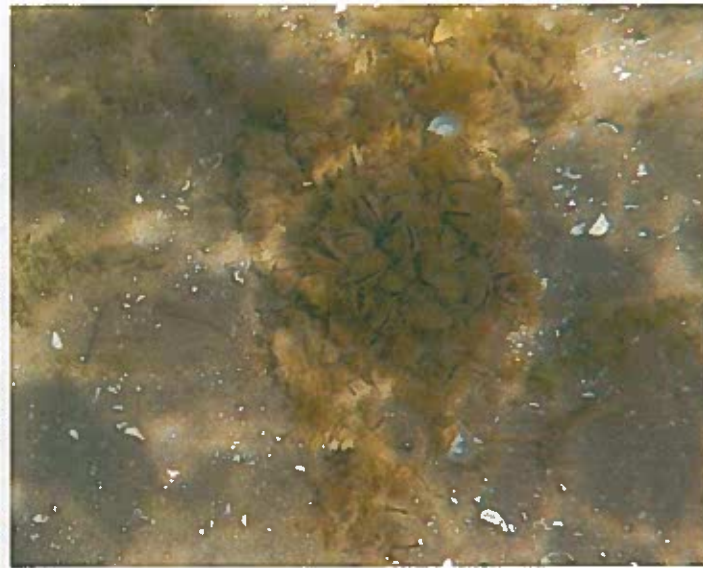
Nottawasaga Valley Conservation Authority
8195 8th Line, Utopia, ON L0M 1T0
T 705-424-1479, ext. 242 | F 705-424-2115
dfeatherstone@nvca.on.ca | nvca.on.ca

Important note: I am currently working remotely as the Nottawasaga Valley Conservation Authority is taking preventative measures to limit the spread of COVID-19. You may experience some delays or disruptions as we follow recommendations of public health experts.

Stay the Course

1. Wash hands
2. Social distance and use masks when distancing is not possible
3. Respect Others
4. Shop Local

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Invasive Species and the Nottawasaga Valley Conservation Authority – A Brief Overview!

Melancthon Township, Environmental Sustainability Committee

David Featherstone, NVCA | dfeatherstone@nvca.on.ca | March 12, 2021

Presentation Outline

- What is an invasive species?
- NVCA Involvement with Invasive Species
- NVCA's Dirty Dozen
- Melancthon Area Work
- Future Threats
- Off to Rick and Fred!



What Are Invasive Species???

Invasive species are non-native plant and animal species that outcompete native species for resources and dominate space. They may directly kill other species, introduce disease or hybridize with native species. Non-native invasive species typically prefer disturbed habitats, are aggressive, have high reproductive rates, and lack natural predators. Invasive species are spread with the assistance of humans and by animals, wind and water.



NVCA Program (at least Dave's side of it!)

- Started in 2005 (or thereabouts)
- Informal and, initially, driven to some extent by Ontario Federation of Anglers and Hunters summer student program (now defunct)
- Key species: Phragmites, Garlic Mustard, Dog Strangling Vine, Giant Hogweed, Wild Parsnip (though we tried to track others, too)
- Became more formal over time...fact sheets developed, invasive species strategy, larger projects with various partners
- Assistance with best management practices documents (Ontario Invasive Plant Council)
- Unfortunately, funding cutbacks have reduced capacity of many organizations to undertake work



NVCA Products

Invasive Species Fact Sheet - Giant Hogweed (*Heracleum mantegazzianum*)

Where does Giant Hogweed come from?
Giant Hogweed (*Heracleum mantegazzianum*) is a plant native to Asia. It was likely introduced to North America as an ornamental garden plant. With no known diseases or insect pests here in Canada, the plant has escaped into the wild and has become an invasive species which threatens our natural ecosystems.



Photo (above): NVCA
Photo (right): Linda J. Mohrhoff
University of Connecticut, Bugwood.org

What does it look like?
Giant hogweed resembles some of our native species such as Angelica, Queen Anne's Lace, and Cow parsnip. Unlike native species, Hogweed can grow up to 5 metres tall and has an herbaceous stem 5 to 10 centimetres in diameter. The stem and leaf stalks are hollow, covered with coarse hairs, and are often purple-spotted. The compound leaf is deeply grooved and can span one metre across. In summer, Hogweed produces a white umbrella-shaped flower from June to July, which will produce large flat oval seeds.

Where is it found?
Although native to Asia, Giant Hogweed has invaded many regions of the world, including Australia, Canada, the United Kingdom, and the United States. Locally, sightings have been reported in the towns of Collingwood and Mono and the townships of Adolph-Tasoronto and Essi. Hogweed is able to live in a variety of habitats, but is generally found in moist soils. It is often seen along roadside ditches, stream banks, and vacant lots.

How does Giant Hogweed impact our local environment?
With its broad leaves and dense canopy, Giant Hogweed often out-competes native species, reducing the variety of species that grow in the surrounding area. Its invasive potential is increased by the vast number of seeds it can produce - up to 50,000 per plant! These seeds can spread short distances by the wind, be carried by wildlife or human activity, or float downstream in rivers to colonize new areas. Generally they are found within 10 metres of the parent plants. Seeds can remain viable for 7 to 15 years.

Be cautious around Giant Hogweed
Giant Hogweed poses a serious health threat - if you come across it or think you have it on your property, DO NOT touch it. Hogweed stalks, leaves, and bristles contain a noxious sap that sensitizes skin to sunlight. Contact between the skin and sap can occur by brushing up against or breaking the plant's bristles, stalks or leaves. Once the sap comes into contact with skin, exposure to sunlight can cause severe burns and painful blistering, usually within 48 hours. Blisters can develop into purple and black scars, leading to years of recurring inflammation and dermatitis (skin irritation). In worst case permanent scarring. Contact between the sap and eyes can lead to temporary or permanent blindness.

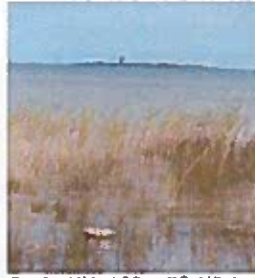


Photo: USDA APHIS PPQ website, USDA APHIS PPQ, Bugwood.org

European Common Reed (*Phragmites australis* (subsp. australis))

Invasive Grass Threatening Collingwood's Shoreline!


Description
European Common Reed, often referred to as *Phragmites* (pronounced frag-my-tees), is a tall, non-native perennial grass that has been spreading in Southern Ontario for decades. It grows up to 3 m in height and has large leaves which are beige to blue-green in colour. It has extremely dense seed heads that are spread by the wind. The grass also spreads outwards from existing stands by its persistent root and rhizome structure. The native subspecies (*Phragmites australis* subsp. *americana*) is not invasive, and is separated from its non-native counterpart by its sparse stand growth and smaller overall size. It also has reddish-brown stems with less-broad, yellow-green coloured leaves.



Phragmites establishing in Collingwood's Coastal Wetlands

Phragmites along Collingwood's Shoreline
Phragmites can aggressively spread over wetlands and shorelines and crowd out native vegetation. Dense stands of *Phragmites* provide poor habitat for wildlife species due to decreased availability of food and nesting sites. This may affect Species at Risk that currently occupy Collingwood's coastal marshes. *Phragmites'* prolific nature can obstruct views of and access to the shoreline by residents and visitors. It can also negatively impact recreational activities such as boating, angling and swimming. Dense stands of *Phragmites* are encroaching on the globally rare coastal marshes that occur along Collingwood's shoreline. These coastal marshes are endemic to Great Lake's shorelines (found nowhere else in the world), and contain extremely sensitive habitats. The low nutrient regime associated with Collingwood's coastal marshes may limit the initial distribution and growth of *Phragmites*. However, this does not mean that *Phragmites* will not spread over time.

- Did you know...**
- *Phragmites* can have a vertical stem growth of 4 cm per day and have a density of 200 stems per m².
 - One seed head can produce up to 2,000 seeds per year.
 - *Phragmites* can reestablish from a single fragment or seed! Clippings and roots should be dried and burned, never composted.
 - *Phragmites* is a large water-suck! It transpires water much faster than native vegetation.
 - Invasive *Phragmites* releases toxins from its roots that impedes the growth of and/or kills other plant species.
 - There are no herbicides currently approved for over or near-water use.



Phragmites & Invasive Species Action Plan

for the
Nottawasaga Valley
Watershed

Prepared by the
Watershed Monitoring Team
Nottawasaga Valley
Conservation Authority

May 2018



<https://www.nvca.on.ca/watershed-science/invasive-species>

Collingwood's "Dirty Dozen" Invasive Species



Giant Hogweed
(*Heracleum mantegazzianum*)

This tall herbaceous plant (2-4 m) looks similar to Queen Anne's Lace and Cow Parsnip. It has a hollow, hairy stem with purple spots and large white flower clusters. This plant contains toxins that cause severe burns when touched. **Avoid contact!** This plant can be found along the Oak St. canal.



Dog Strangling Vine
(*Vincetoxicum rossicum*)

This vine grows 1-2 m tall by entangling itself onto other plants. It has pinkish purple star-shaped flowers and bean-shaped seed pods. It can completely cover the forest floor, crowding out all other species. Dog Strangling Vine can be found along the shores of White's Bay.



Himalayan Balsam
(*Cortaderia selkiana*)

This 1-7 m tall herbaceous plant has a fleshy-pink stem and distinctly jagged, opposite leaves. It has an irregular cone-shaped pink flower and can be found along stream banks, such as the Oak St. canal.



Phragmites
(*Phragmites australis*)

Also known as European Common Reed, this invasive grass can grow up to 5 m tall. It has tan stems and large red seed heads. It is very aggressive, creating dense monocultures and it commonly seeds along shorelines and roadside ditches. Phragmites can be found inhabiting the shorelines of Georgian Bay.



Emerald Ash Borer (EAB)
(*Agrilus planipennis*)

The creamy white larvae (right) is between 26-32 mm, whereas the green metallic beetle (left) is 8.5 to 13.5 mm long. Signs a tree is infested include a yellowing or thinning canopy, young growth shoots, cracked bark and D-shaped exit holes. Beetles prefer to attack green, white and black ash trees.



Common Buckthorn
(*Rhamnus cathartica*)

This small tree grows between 5-6 m tall. It has smooth, dark green leaves that are finely textured, and apparently arranged along the stem. Most branches older than 1 year end in a thorn. It has small yellow flower clusters and berry-like black fruit in late summer and fall.



Common Carp
(*Cyprinus carpio*)

Common carp is not an invasive Asian carp, but were introduced here from Europe in the 1800s. Common carp impact our native fish species by eating aquatic vegetation used for habitat. They also crush up the shoreline which can smother native fish eggs.



Garlic Mustard
(*Alliaria petiolata*)

First year plants have a rosette of dark green foliage. In its second year, white flowers appear on a stalk that is up to 1.2 m tall. In mid-summer narrow seed pods are present. Young plants produce a strong garlic odour when crushed. It can be found under the forest cover in Harbourview Park.



Wild Parsnip
(*Pastinaca sativa*)

This plant is in the same family as Giant Hogweed, but has yellow coloured flowers and only reaches 1.5 m tall. The dense stands can outcompete native species. Do not touch! It's sap causes severe burns. Wild Parsnip can be seen growing along the Pretty River.



Japanese Knotweed
(*Polygona japonica*)

This plant is aggressive and has strong root systems. Stems are round, reddish-purple, smooth and have a bamboo-like appearance. Small flowers are greenish-white and ovate leaves. Japanese Knotweed is one of the hardest invasive plants to control. This plant can be seen along the boardwalk at Harbourview Park.



Zebra/Quagga Mussels
(*Dreissena polymorpha* & *D. bugensis*)

Zebra mussels are black or brown with white or yellow zigzagged patterns. Quagga mussels have dark concentric rings on their shell with a pale color near the hinge. Zebra mussels sit flat, whereas quagga mussels do not. These mussels occur offshore of Georgian Bay.



Round Goby
(*Neogobius melanostomus*)

This invasive fish is established in the Great Lakes and Lake Simcoe. It is 0 to 10 centimetres long with a cylindrical body and a rounded, blunt snout. The most distinguishing feature is the black spot on its dorsal fin. Caution: can be confused with native Sculpin!



NVCA's list is similar but doesn't include Himalayan Balsam, Common Carp or Japanese Knotweed. Instead, it includes Norway Maple, Rusty Crayfish and Exotic (Rough) Manna Grass.



GARLIC MUSTARD MONITORING ALONG THE BRUCE TRAIL IN THE NOTTAWASAGA VALLEY WATERSHED

April 22, 2010

Nottawasaga Valley Conservation Authority



Authors

David Featherston, Manager, Watershed Monitoring Program, NVCA
Kathleen Parks, Watershed Monitoring Technician, NVCA
Phoebe Gilman, UFAM Invasive Species Technician
Fred Hsu, NVCA Board member (Past Chair)



www.nvca.on.ca



Formal survey on Bruce Trail in 2009/2010. Partnership with Collingwood Nature League 2011-2016 (approximate 😊)



Phrag Fighters - Dufferin County

Public group · 215 members

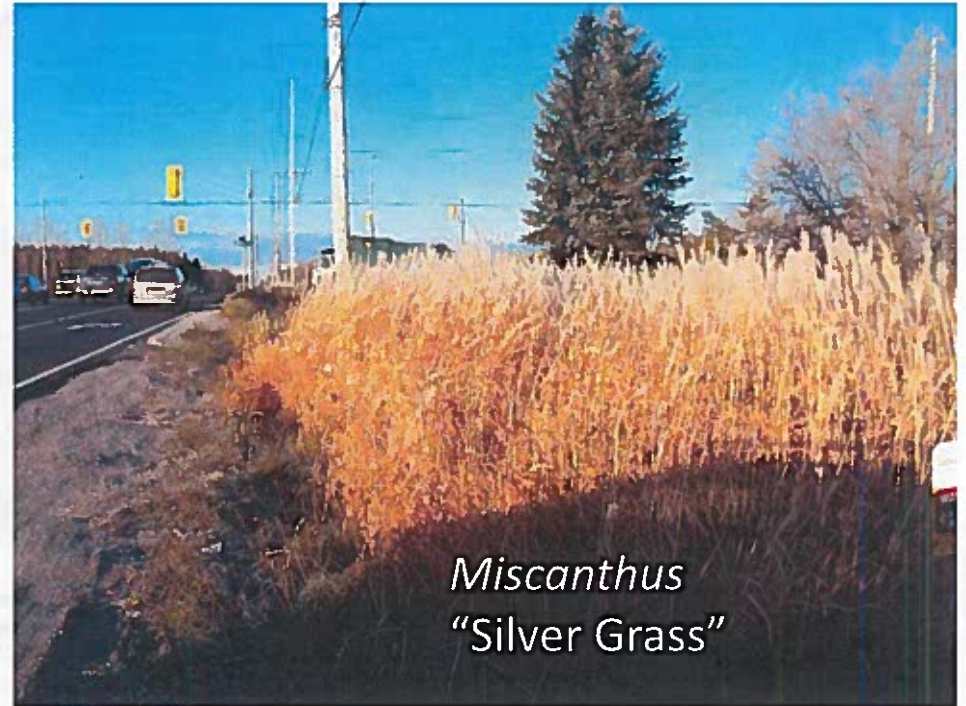
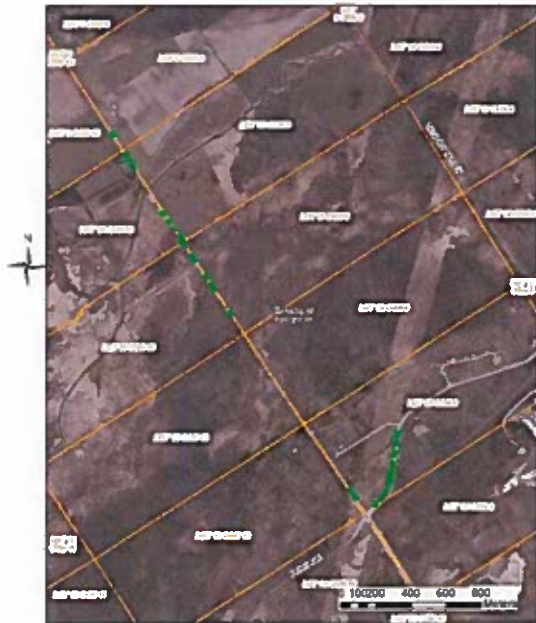


- "This group was formed primarily to fight the onset of phragmite australis in the Town of Mulmur but was expanded to include the towns that make up Dufferin County, Ontario Canada. The goal is to keep Dufferin "phrag free".
- The County Townships are primarily farm and rural but we have two **substantial** urban townships within. Orangeville & Shelburne, both of which currently have phragmites.
- Awareness is key.
- Phrag has a strong grip on Southern Ontario but by catching it in early stages of development we can stop it from spreading to the point where it's out of control.
- Although we are very focused on Dufferin County at the outset we welcome anyone from anywhere to join, learn and raise awareness about phragmites. It exists everywhere in the world except Antarctica (and we're not discounting that in the future either!)."



Emerging Threats and Climate Change

Miscanthus Mapping
George Johnston and Snow Valley Roads
November 2019



Miscanthus
"Silver Grass"



Kudzu... "the vine
that ate the south"

Invasion of kudzu near Leamington, Ontario, on the shores of Lake Erie. Photo: Sam Brinker, MNR



Double Trouble

Understanding risks from invasive species + climate change

Summary

Individually, invasive species and climate change are major threats to global ecosystems. Together they create new challenges for effective management. Before we can design management strategies to respond to this double trouble, we need to understand how these two forms of global change interact.

Why is risk higher in the Northeast?

All regions are likely to see interactions between invasive species and climate change (Figure 1). The Northeast is particularly vulnerable for the following reasons:

- Northerly latitudes are warming more than southerly latitudes, leading to more rapid environmental changes.
- Substantial urban and suburban development cause atmospheric CO₂ content to increase more rapidly in the Northeast compared to more rural areas, increasing the competitiveness of invasive plants.
- Trends towards more extreme precipitation are more pronounced in the Northeast than any other region of the U.S., increasing disturbance and stress to native ecosystems.
- Prevalent southerly invasives are shifting their ranges north, making the Northeast a future invasion hotspot.

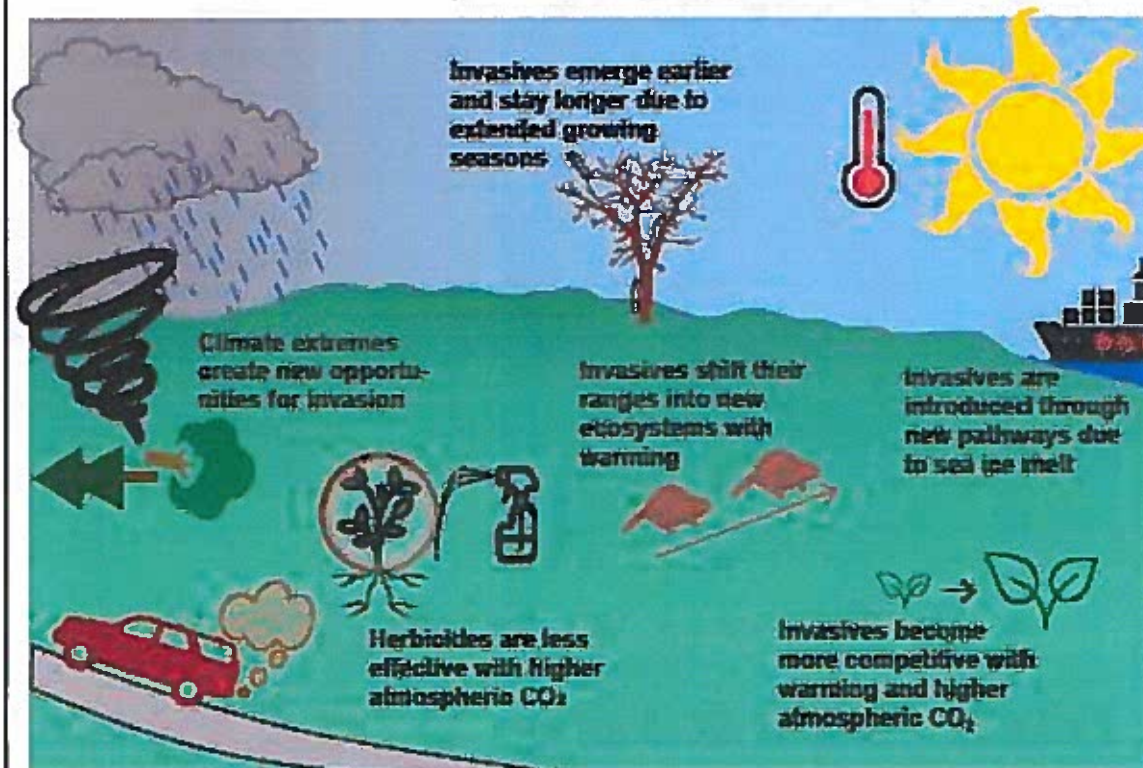


Figure 1. Major interactions between non-native invasive species and climate change.

Summary

Invasive Species

- Are all around us and impacting our communities and watersheds
- More on their way; climate change won't help
- Need to find effective ways to stop them from arriving in first place (and the will to enforce)

Local Control

- Know your enemy
- Partnerships are key – no agency/organization can do it all (even more true today ☹)
- Hit the small bits before they become overwhelming
- Focus efforts to where benefits will be greatest
- Celebrate the wins...no matter how small!!!



A photograph of a sunset over the ocean. The sun is a bright, glowing orb on the horizon, casting a long, shimmering reflection down the center of the water. The sky is filled with soft, orange and yellow clouds, transitioning to a darker blue at the top. The foreground shows the dark silhouette of a beach or dune. The text "Thank You!" is centered in the middle of the image in a white, serif font.

Thank You!

Donna Funston

From: Rick Grillmayer <rgrillmayer@nvca.on.ca>
Sent: Friday, March 12, 2021 11:42 AM
To: Donna Funston; Margaret Mercer
Cc: Fred Dobbs; Dave Featherstone
Subject: FW: Thank you for attending Assessing the risk of oak wilt in Canada: climate suitability and potential economic impacts

Hello Donna and Margaret,

The Invasive Species Centre is a great resource and they have some informative webinars if you have the time.

Rick

From: Invasive Species Centre <customercare@gotowebinar.com>
Sent: Friday, February 26, 2021 12:02 PM
To: Rick Grillmayer <rgrillmayer@nvca.on.ca>
Subject: Thank you for attending Assessing the risk of oak wilt in Canada: climate suitability and potential economic impacts



Invasive Species Centre

We hope you enjoyed our webinar. If you were unable to attend, please visit <https://www.invasivespeciescentre.ca/learn/webinar-series/> to view a recording and recordings of previous webinars in our series.

Please send your questions, comments and feedback to: rschroeder@invasivespeciescentre.ca.

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Invasive Pests Forestry

Rick Grillmayer | NVCA | March 2021

Emerald Ash Borer

Now widespread throughout most of Ontario



Emerald Ash Borer

Cannot be stopped, only try to mitigate the loss of the ash



Gypsy Moth

Defoliator – big, ugly, in your face but never stays long



Gypsy Moth



2020 infestation biggest on record – no one really knows why



Gypsy moth 2020

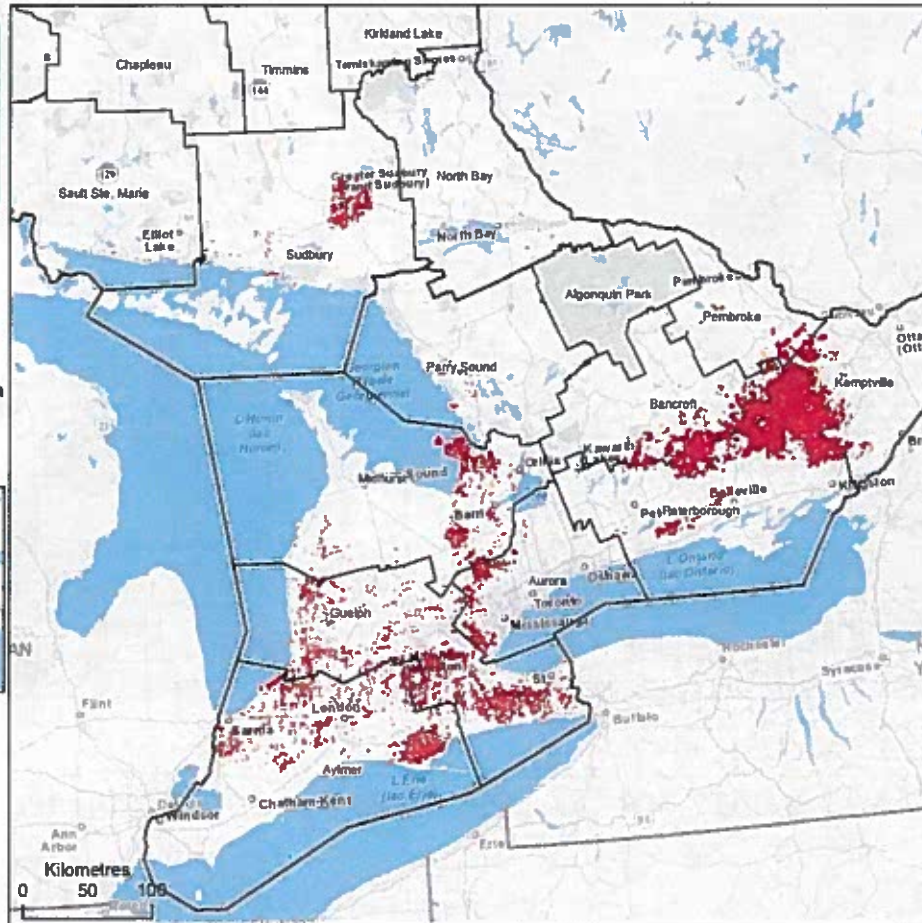
Areas in Ontario where gypsy moth caused defoliation

Light = 17,002 ha
Moderate to severe = 569,384 ha

-  Area of light defoliation
-  Area of moderate to severe defoliation



Disclaimer:
This map is illustrative only. Do not rely on this map as being a precise indicator of routes, locations of features, nor as a guide to navigation. This map was produced by the Ministry of Natural Resources and Forestry.



Gypsy Moth

2021 could be difficult for some, less of an issue for others



Gypsy moth egg mass survey results

Defoliation forecast 2021

- Severe
- Moderate

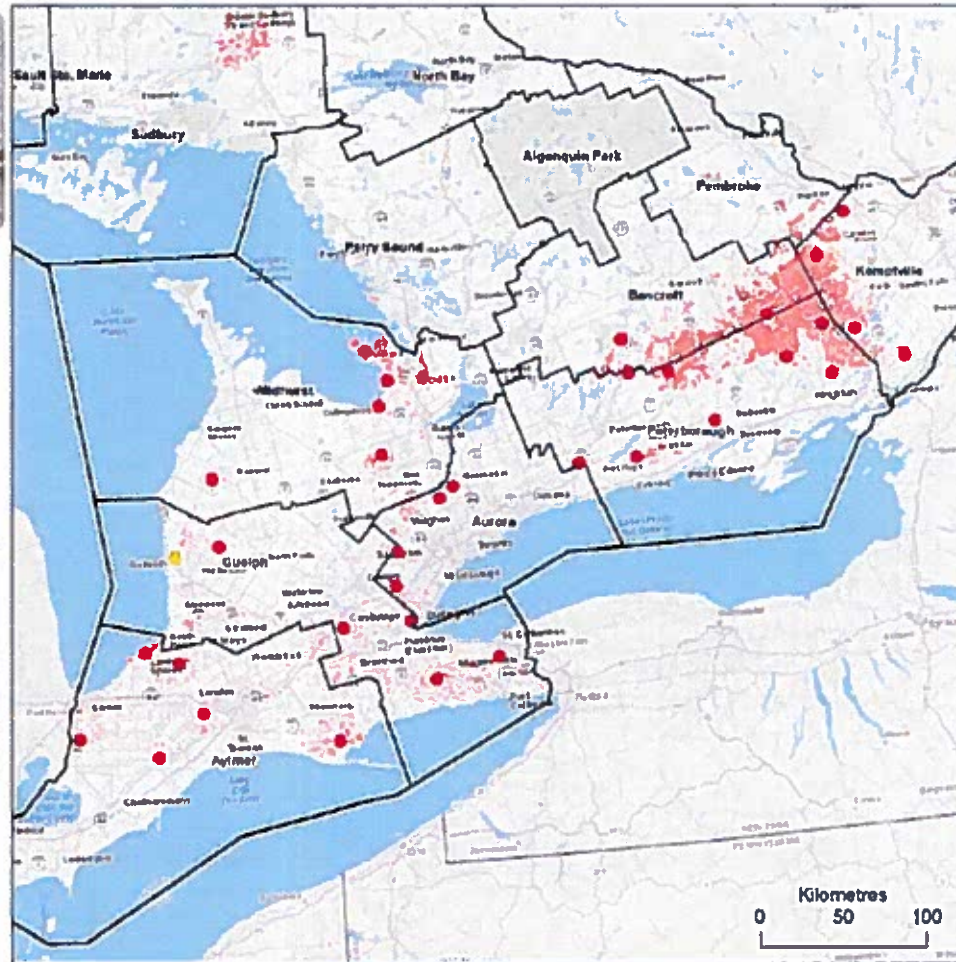
Gypsy moth damage 2020

- Area of moderate to severe damage
- Area of light damage



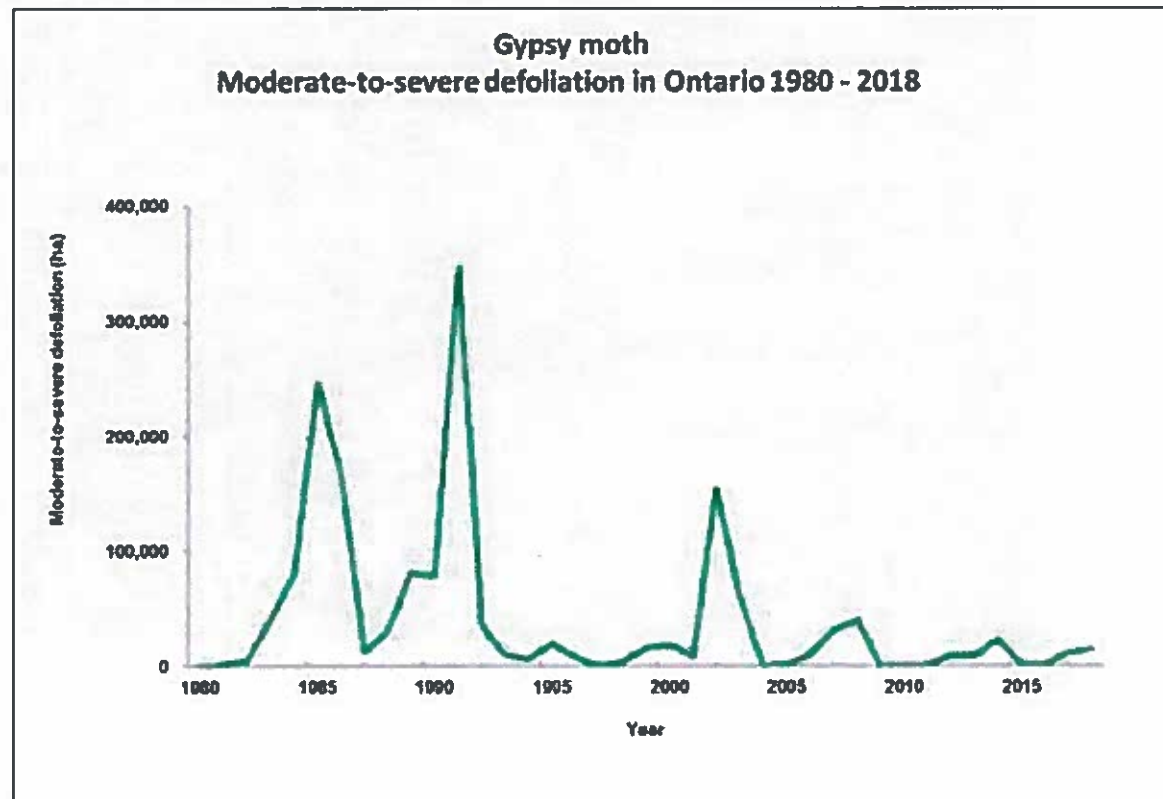
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Ontario 



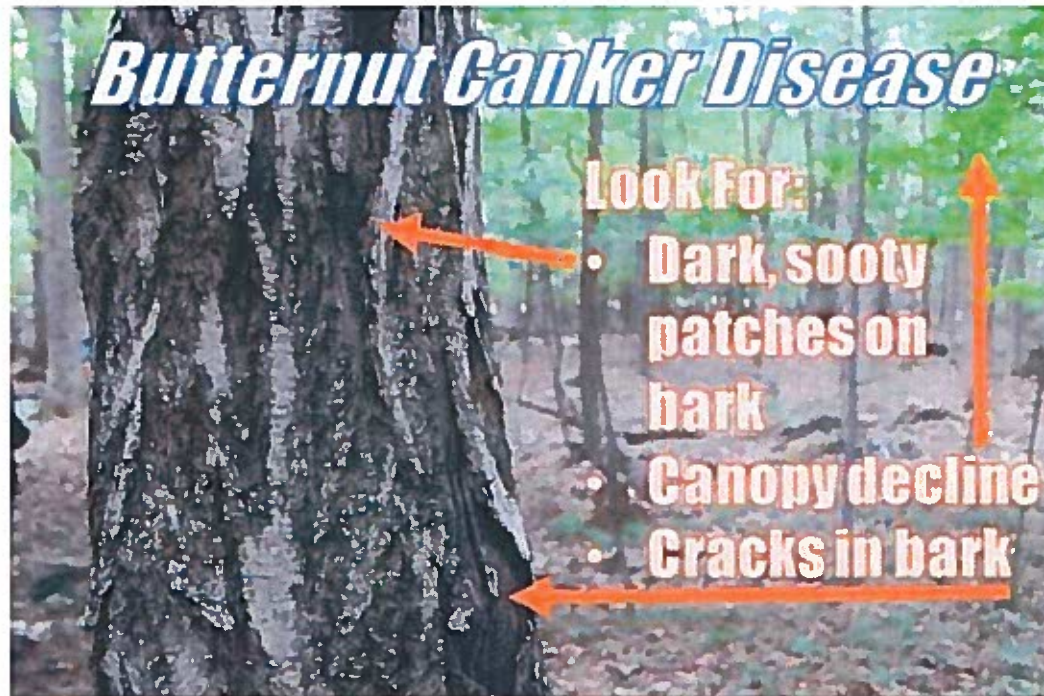
Gypsy Moth

Residential landowners can try to control, large scale landowners let the infestation collapse.



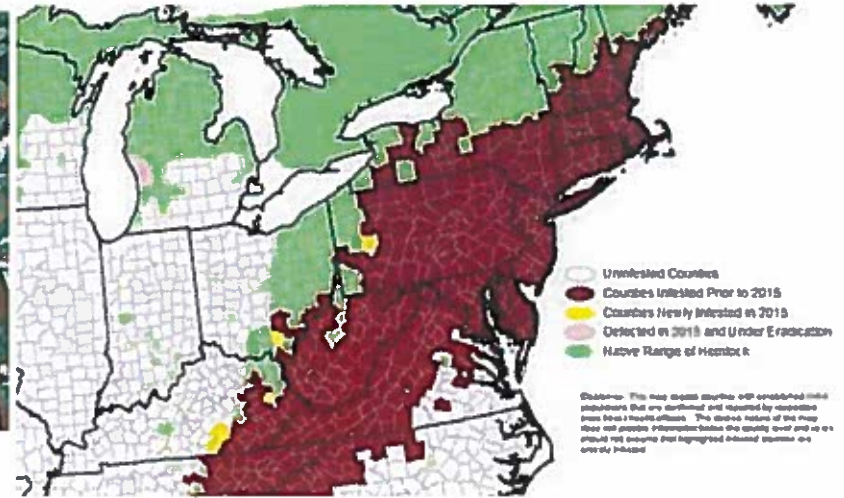
Butternut Canker

Butternut is now an endangered species



2 species we are watching for:

Hemlock woolly adelgid and oak wilt



Oak tree killed by oak wilt

Oak Wilt Detection Survey

Revision 2019-12-19

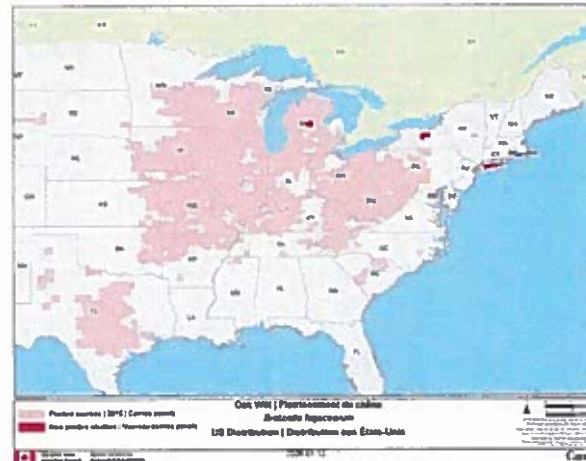


Figure 5. Map of Regulated US counties as of 2019.

