

OUR FOREST



VOL. 61 NO. 3

forestsontario.ca

SUMMER 2021

Planting Partners

Team effort gets
2.8 million trees in the
ground across Ontario

PAGES 10-13

Fighting Invasive Plants

PAGES 14-15



We All Have a Part to Play

Forests Ontario transforms local support into global action

Dear readers,

Summer is a time to delight in the growth of what has been planted in earlier seasons. For Forests Ontario, that's now more than 37 million trees.

As the leading non-profit organization for the delivery of high quality, large scale tree planting across Canada, it would be an understatement to say that spring planting season is a busy time for us. However, through the hard work of our dedicated staff and partners over the past few months, we planted more than 2.8 million trees, including some of the first trees of the federal government's 2 Billion Trees Commitment. Now, we can marvel as the seedlings that have taken root grow into diverse, thriving forests.

However, at Forests Ontario we understand that you can't simply plant a tree and walk away. It is this very belief which sets us apart from other tree planting organizations. In order to ensure the maximum ecological restoration and biodiversity benefits of our greening efforts, we are committed to the ongoing monitoring of the seedlings we've planted. We do this through performing survival assessments one, two, and three years post-planting, as well as equipping landowners with the extension resources they need to manage their own forests. We track the health of every single tree we plant – this commitment to accountability is unmatched by any other tree planting organization in Canada.

Trees aren't the only things we've seen grow this season. Our network of over 7,000 landowners and more than 100 cross-country planting partners continues to expand, as do our collaborative tree planting partnerships with groups like the Highway of Heroes Tree Campaign, GrandTrees, WWF, and the Greenbelt Foundation. In fact, to guide our efforts in participating in the 2 Billion Trees Commitment, we have formed a Technical Task Team with representatives from the Forest Gene Conservation Association, nursery and planting partners, Indigenous organizations, Conservation Ontario, and the Ontario Woodlot Association. Our greatest strength lies in our partnerships.

Forests Ontario's reach is also growing, crossing both provincial and national borders as we head into the UN Decade on Ecosystem Restoration as a Restoration Implementation partner. The launch of the Decade on World Environment Day (June 5, 2021) saw the release of the Founding 50 Initiative – our 50 Million Tree Program and Grasslands Stewardship Initiative are the only two projects in Canada to make it on this list, and two of only three in North America.

We all have a part to play in ensuring healthy forests. With Forests Ontario's involvement in provincial, national, and global level initiatives, it's never been easier or more exciting for people to get involved. Whether you apply to our planting programs as a landowner, show your support through a donation, or simply amplify our voice, your



individual contribution has a worldwide impact.

As always, Forests Ontario extends heartfelt gratitude to our seed and cone collectors, tree nurseries, and planting partners; the safe and successful delivery of our programs relies upon the hard work of our 'boots on the ground.' And of course, a big thank you to our sponsors, donors, and members whose generosity is instrumental in increasing our impact.

We hope to count on your ongoing support as we continue to advocate for our forests.

All the best,

Rob Keen, RPF

CEO of Forests Ontario and Forest Recovery Canada

Contents

A Message from our CEO, Rob Keen	2
Prism Sweep (News in Brief)	4
Forest Giant Passes Baton to Budding Board Members	7
Martin Streit on Tree Marker Training Program	8
Planting Partners	10-13
Rooted in Partnership	10
The Highway of Heroes Tree Campaign	11
Spring Planting Season Proves a Green Success	12
Forest Physical	14-19
Promising Cross-border Collaboration on Invasive Species	14
The Struggle to Choke Dog-Strangling Vine	15
A Personal Wildlife Sanctuary	16
Defining Old Growth	18
Our Forest Summer Photo Contest	20
Stumped: Forest BINGO	22
Forests Ontario Crowns 2021 Ontario Envirothon Champions	23

OUR FOREST

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On the cover: Emma Jackson of the Rideau Valley Conservation Authority (RVCA) took this photograph of Brinkman Reforestation tree planters helping the RVCA reforest a farm in Toledo, Ontario in May 2021. See story p. 10.



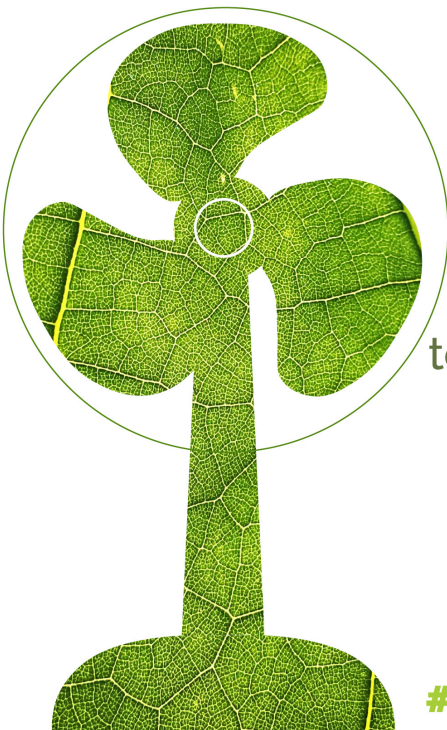
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Record Demand For Trees in Exeter

Conservation Authority praises Over-the-Counter program

Forests Ontario's Over-the-Counter (OTC) tree sales program is turning heads. Ian Jean, a Forestry and Land Stewardship Specialist at the Ausable Bayfield Conservation Authority (ABCA), which spreads southeast from the bottom of Georgian Bay, reported a surge in demand this spring for trees under the OTC. Having just completed its second year of delivery, the program is designed to support small-scale tree planting initiatives by providing funding to landowners to purchase and plant their own trees.

ABCA, who had been running their own version of OTC tree sales previously, is a current delivery partner of Forests Ontario's program. "OTC orders received at the end of last week exceeded OTC totals from the last three years here," Jean wrote in a note to the forestry division at Forests Ontario in February. "I think it's COVID – people are on their own properties, not down south, not running to hockey tournaments, etc. We did our own mail-out and media release in early January, which we do every year,

but we likely reached more people this year.

"It's good to have the Forests Ontario program for this captive audience. People notice the subsidy – it gets their attention. We'll have to work hard to keep up the momentum when things 'return to normal' along with all of life's other distractions."

For more information, visit forestsontario.ca. To be added to the 2022 OTC notification list, please email Hayley Murray at hmurray@forestsontario.ca.



Forests Ontario Thinks Globally

Organization joins UN worldwide partnership to build a sustainable future

BY COLLEEN MAHAFFIE

World Environment Day, June 5, marked the launch of the United Nations Decade on Ecosystem Restoration and the official announcement of Forests Ontario's participation as a Restoration Implementation partner. Forests Ontario is one of only a handful of such partners in North America.



AFR100 (African Forest Landscape Restoration Initiative), a partner with Forests Ontario in the UN Decade, reverses land degradation and poverty through forest landscape restoration. Photo by WeForest, Ethiopia, December 2019.

Led by the UN's Environment Programme and Food and Agriculture Organization, the UN Decade commits to the protection, conservation, and revitalization of ecosystems worldwide. The UN, through this decade (2021-2030), intends to accomplish 17 Sustainable Development Goals and move the world towards a more sustainable future.

As a Restoration Implementation partner, Forests Ontario will strengthen restoration capacities and lead restoration efforts through our 50 Million Tree Program and Grassland Stewardship Initiative.

We invite Forests Ontario's supporters to join the global movement to restore our ecosystems. Here's how you can take part in the UN Decade:

- Make a donation to Forests Ontario. Continuous support enables us to plan and expand our programs, reaching more Ontarians and planting more trees.
- Participate in one of our restoration programs as a landowner. If you have space to plant trees or restore a grassland habitat, reach out to us to see how we can work together.
- Become a Forests Ontario member/renew your membership. Your annual membership not only supports our restoration programs – it also entitles you to a discount to our annual conference and a subscription to *Our Forest* magazine!

Be the Seed that Grows Future Forests

Canada is home to nearly **10%** of the world's overall forest cover. It is critical that we take action to steward these forests and create vital new ones.

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Forest Giant Passes Baton to Budding Board Members

Steve Hounsell steps down as President; Malcolm Cockwell and Christine Leduc take over as President and Vice President

BY AUGUSTA LIPSCOMBE

Over his decade-long tenure as President of the Forests Ontario board, Steve Hounsell has overseen some incredible achievements, among them being the rooting of more than 30 million trees across the province and country. Asked about his proudest accomplishment, the ever-modest Hounsell simply replied that it's been working with and for an organization that cares as passionately as he does about the importance of forests and their values. "To restore forests across the landscape – that is a noble cause."

Hounsell, a biologist who spent his career with Ontario Power Generation, also boasts some impressive professional accolades, having developed and implemented the first biodiversity policy of its kind in the electricity industry. He's also the Chair of the Ontario Biodiversity Council, a founding director of the Canadian Business and Biodiversity Council, a Past President of Ontario Nature, a past director of the Algonquin to Adirondacks Collaborative, and a founding director of The Natural Step Canada. Truly, Hounsell has built a life around climate change adaptation, biodiversity conservation, and acting as a voice for those unable to speak for themselves.

In April 2021, Hounsell announced he was stepping down as President and Chair of Forests Ontario. He leaves the organization in the capable hands of his successor Malcolm Cockwell, Managing Director of Haliburton Forest. Forests Ontario also welcomes Christine Leduc, a Woodlands Operations Supervisor for EACOM Timmins, as Vice President. Hounsell will remain on the Board.

"I'm very pleased with Malcolm and Christine's new positions," said Hounsell. "It's positive and refreshing to work with youth with that depth of talent at such an early age. They're performing well beyond their years and offer a



Steve Hounsell

great mix of talent, experience, and perspectives."

When asked about the future direction of the organization, Hounsell spoke about maximizing the role of forests as nature-based solutions. A proponent of the positive effects of nature on mental wellbeing, Hounsell also sees the organization continuing to enhance the connection between people and nature. "When all the worries of the world are on your shoulders, you don't go downtown. You go for a walk in the woods." And thanks to Hounsell's dedication to speaking up for our forests and their values, there will be many new woods to walk in for decades to come.



Malcolm Cockwell



Christine Leduc

Cut it or Let it Grow?

Ontario Tree Marker Training Program has evolved since the 1950s

BY MARTIN STREIT

Tree marking involves the careful selection of trees for harvest or retention based on a forest operations prescription, with individual tree selections made according to tree size, vigour, quality, biodiversity concerns, and wildlife habitat value. It is primarily applied in the Great Lakes - St Lawrence (GLSL) and Carolinian Forest Regions of Ontario in partial harvest systems.

Prior to the introduction of operational tree marking in Ontario in the 1950s, loggers typically harvested tolerant hardwood and White Pine forests by high-grading, diameter limit, or clear-cutting. One of the earliest written documents on tree marking in Ontario is from 1951, *Timber Marking for Partial Cutting Operations*, published by the Ontario Department of Lands and Forests. Its first paragraph contains this strongly worded statement: “Any form of marking that is not intended to conserve, protect, and develop the forests in general should not be tolerated.”

Operational tree marking started in southern Ontario on the Agreement Forests (now Community Forests). By the 1970s, tree marking was common in tolerant hardwood and pine forests on Crown and Ministry of Natural Resources and Forestry (MNRF)-managed private lands south of the French River. Through the efforts of the forestry and science specialists at the MNRF, tree marking took hold throughout the rest of the GLSL Forest Region by the early 1990s.

Every year across the GLSL Forest Region, 70 per cent of the region’s forest harvest, or 20,000 to 30,000 hectares annually, are managed under either the Selection or Shelterwood Silvicultural Systems, with tree marking as a critical step.

The Ontario Tree Marker Training Program

Until the mid-1990s, the MNRF and the Algonquin Forestry Authority were the largest employers of tree markers. Under the leadership of Al Stewart, Regional Director, the province introduced the Ontario Tree Marker Training Program (OTMTP) in 1994 to bring consistency to the training of tree markers. A group of foresters, technicians, and biologists, whose combined experience in forest and wildlife management and tree marking totaled hundreds of years, developed and delivered the program. Their deep commitment to the program remains, and several of these “elders” continue as instructors.

Shortly after the program started, a new business relationship was established with the forest industry, resulting in the creation of Sustainable Forest Licenses (SFLs). This saw the transfer of most forestry responsibilities, including tree marking, to the industry. Because the MNRF retained the ultimate responsibility for sustainability of Crown forests, the OTMTP became a critical tool to continue training tree markers that would work on Crown lands.



Martin Streit, Forestry
Specialist at Forests Ontario

Right and below:
Ontario Tree
Marking Course
in Huntsville,
September 2019.



MNRF managed tree marker training until 2016. In that year, a collaborative of Forests Ontario and the Canadian Institute of Forestry assumed the continued development and delivery of the program on behalf of MNRF. After 27 years, demand for the program remains strong.

The MNRF Forest Operations and Silviculture Manual states that individuals must have a Level 1 or Level 2 Tree Marking Certificate to carry out tree marking and tree marking audits (respectively) in Crown forests. Many municipalities recognize the value of the training program and have incorporated the requirement for Tree Marking certificates into Municipal Forest Conservation By-laws and use the designation to support independent third-party forest certification. Course participants have included people from other provinces and the USA – it has become clear that there is no other comparable program in North America.

Course Details

The tree marking courses provide detailed training in the principles of tree marking as described in the Ontario Tree Marking Guide (2004). Three courses are offered, all of which provide a balance of lectures and hands-on learning delivered by experienced instructors. All courses include a testing component.

The five-day level one tree marking course is an intensive entry level course which covers silvics and silviculture systems for tolerant hardwoods (such as Sugar Maple) and conifers (such as White and Red Pine), identification and classification of tree defects, and a variety of wildlife and biodiversity values. Since 1994, over 1,600 students have completed the level one course. A student who wants a level one tree-marking certificate must also pass a field evaluation audit.

The three-day level two course trains advanced tree markers wishing to plan and implement tree marking audits.

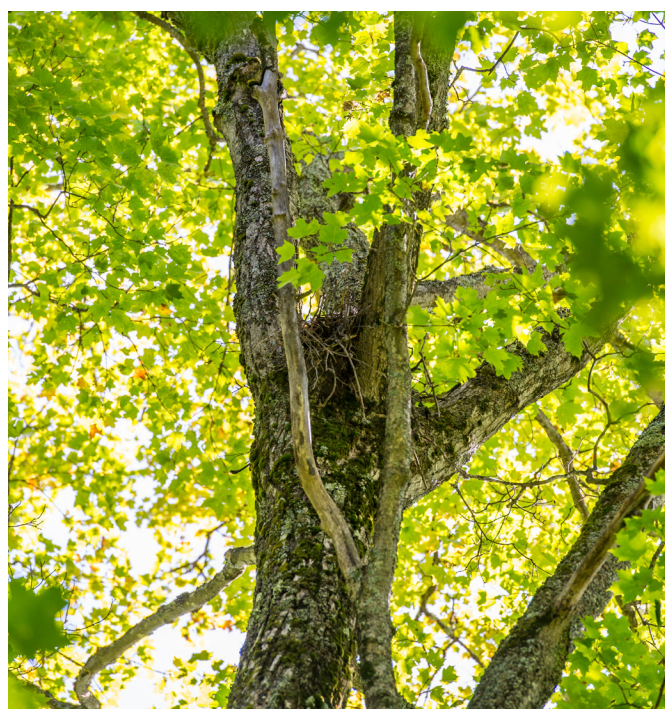
Finally, tree markers must take a two-day refresher course every five years to renew their certificate.

This fall's course offerings include:

- Level 1, Oct. 25-29 (Huntsville)
- Level 2, Oct. 5-7 (Chalk River)
- Refresher, Nov. 16-17 (Huntsville)

For more information, contact Kerry Spencer of the Canadian Institute of Forestry at (705) 744-1715 x 609.

Martin Streit, a forestry specialist at Forests Ontario, manages the OTMTP in partnership with the CIF.



Rooted in Partnership

Tree planting goes smoothly because every team member plays their part

BY RIDEAU VALLEY CONSERVATION AUTHORITY

The Rideau Valley Conservation Authority's (RVCA) tree planting program has many branches of support, but it is the sturdy trunk of Forests Ontario that holds it all together.

Forests Ontario, a not-for-profit, manages the 50 Million Tree Program (50 MTP), which provides two-thirds of RVCA's tree planting funding each year to help private landowners undertake large-scale afforestation projects for just pennies per tree.

Since 2008, Forests Ontario has helped RVCA plant 2.3 million trees covering 1,100 hectares of retired or fallow farm fields, rocky terrain, and otherwise marginal land. In total, the RVCA has planted 6.6 million trees since 1983.

For the RVCA, the partnership offers extreme efficiency. With Forests Ontario taking care of province-wide fundraising, lobbying, seed collecting, and nursery and seedling co-ordination, RVCA staff can keep doing what they do best: working alongside landowners to get trees in the ground.

This was not always the case. In the early 2000s, when provincial funding for tree planting had been all but razed to the ground, RVCA staff had to quote and source every project individually and then hope landowners would still be interested once given a price.

Now, thanks to Forests Ontario, staff can skip right to the good part.

"We focus on how we're going to plant the trees, not whether or not we can," said Dan Cooper, the RVCA's Director of Conservation Lands and Stewardship. "When we're worrying about big picture stuff, we're not planting trees. And Forests Ontario fills that gap for us."

The feeling is mutual, says Forests Ontario CEO Rob Keen.



Brinkman Reforestation worker plants trees on the farm of Tom Ronan in Toledo, ON, May 2021. Photo by Emma Jackson.

"One of the biggest challenges for us is reaching out to landowners, so we depend on folks like those at the RVCA who are out there in the community," Keen said. He noted the RVCA has consistently been one of Forests Ontario's largest tree planting partners since 2008. "RVCA has years and years of experience doing this and it's absolutely key to our program's success."



Farmer Plants Trees "to Help the Environment"

RVCA watershed landowner Tom Ronan owns a 200-acre farm in Toledo, south of Smiths Falls. In May, the RVCA planted 7,500 seedlings on his property, including 5,000 White Cedar, 2,000 White Pine, and 250 each of Red Maple and Red Oak. Funding came through the 50 MTP.

For the past 30 years, Ronan had mowed the fields with a bush hog, a job that took him two weeks each spring and used a significant amount of fuel and equipment.

"I decided to plant the trees to cut down on the work a little bit, and to help the environment with new trees," Ronan said. "The trees represent a new growth for the farm. It puts some of the scrub land back into use, which hopefully my grandchildren are going to see in the future."

The Highway of Heroes Tree Campaign

Beautifying the road that connects us all

BY MIKE HURLEY

In Canada, our roads and highways are more than just utilitarian. In a country as vast as ours, they are what keep our communities connected. They are what make the great Canadian road trip possible. They unite us in more ways than we think.

During the conflict in Afghanistan in the early 2000s, the Ministry of Transportation officially designated the section of Highway 401 that connects Trenton to Toronto as the Highway of Heroes. This 170 km stretch became part of the final trip home for all our fallen heroes. Whether a soldier came from Winnipeg or St. John's, each rode in a hearse along the 401 from the Royal Canadian Air Force base in Trenton to the Ontario coroner's office in Toronto. Performing this solemn function transformed the Highway of Heroes from a stretch of asphalt into a roadway that connected Canadians emotionally.

The Highway of Heroes Tree Campaign connects our past and present generations with our descendants. By concentrating tree planting around this vital transportation corridor (the busiest in North America) and planting a tree for each of the two million Canadians that have served in the Canadian Armed Forces, we remind future generations of the sacrifices made by those that came before them. But perhaps most importantly, we also create a brighter future for Canadians due to the myriad of environmental benefits trees provide. Isn't the idea of a better tomorrow exactly



Pat Thomas, Princess Patricia's Canadian Light Infantry veteran, installs a trunk guard on a maple sapling at Downsview Park (Formerly CFB Downsview) on Earth Day Weekend, 2017. Photo courtesy Highway of Heroes.



Soldier from the 4th Canadian Division of the Canadian Army planting with a youth volunteer, Meadowvale Rd. and Highway 401 in Scarborough, May, 2018. Photo courtesy Highway of Heroes.

what motivates one to serve their country? We certainly think so.

Now, through a partnership between the Highway of Heroes Tree Campaign and Forests Ontario, this roadway once again becomes a powerful connector. It links us to hundreds of landowners who live along the corridor. These landowners will not only enjoy the benefits of increased forest cover on their land, but will also own part of what will be the world's largest living tribute.

The Highway of Heroes will forever keep us connected.

As you read this, we are three-quarters of the way to our tree planting goal, with about half a million trees left to plant. To learn more about the partnership between the Highway of Heroes Tree Campaign and Forests Ontario and to see if your property might qualify, please visit forestsontario.ca/en/program/highway-of-heroes.

Spring Planting Season Proves a Green Success

Over 2.8 million trees take root through Forests Ontario's 50 Million Tree Program

BY AUGUSTA LIPSCOMBE

The most wonderful time of the year has come and gone, leaving the province greener than ever! Spring tree planting season began as early as mid-April in southern Ontario, spanning into June in the north. Throughout, Forests Ontario worked with partners across the province to plant more than 2.8 million trees through our 50 Million Tree Program (50 MTP). Since 2008, we have planted 34 million trees across Ontario through the 50 MTP.

The program provides financial and technical assistance to landowners who wish to plant a minimum of 500 trees on their property – roughly an acre. Covering an average of 75 to 90 per cent of tree planting costs for eligible landowners, the 50 MTP is one of the best deals going for getting trees planted on your property. Some landowners may even qualify for the Managed Forest Tax Incentive Program (MFTIP); under MFTIP, landowners can save up to 75 per cent on their property taxes for eligible forested areas of their land.

Forests Ontario also offers an Over-The-Counter program for landowners and organizations who are unable to meet the minimum tree requirement of the 50 MTP.

Each year, Forests Ontario's planting partners work closely with local landowners to develop site plans and select native tree species that satisfy their vision. Tree planting can help flood protection, shade a house, create a windbreak, support pollinators, provide a habitat or a path for animals to travel between forested areas, boost local ecosystems, and more.

Our extensive cross-province network of 90 seed and cone collectors, nurseries, and planting partners help us to complete each planting season successfully and safely. Support from the Government of Canada, corporate sponsors, and donors ensures the long-term delivery of the program.

2.8 MILLION trees planted in 2021



Planting to Save the World

Landowners plant trees on their property for many reasons.

Brittany Ballagh, Project Manager of Planting and Stewardship for Toronto and Region Conservation Authority (TRCA), said tax breaks are a key driver in her watershed. "People want to qualify for the Managed Forest Tax Incentive Program," she said. Under this program landowners with four hectares or more of forest can see a 75 per cent tax reduction on eligible land.

On the other hand, for landowners in more rural watersheds, like those under the purview of Grand River (GRCA) and Rideau Valley (RVCA) Conservation Authorities, improving the productivity of farmland or transforming fallow agricultural land to forest are more common drivers. "Landowners with farms or property beside agricultural lands will plant trees to create windbreaks, reduce soil erosion, and improve water quality," said Meghan Clay, Forestry Specialist at GRCA.

Other common reasons for planting may include creating privacy, supporting recreation, or attracting wildlife.

However, one motivation appears to be consistent across landowners: planting trees today benefits future generations. "People want to save the world," said Ian Cochrane, Forestry Program Manager with RVCA. "With current concerns around climate change, people are looking at their land and doing an inventory of what they can give back."

Jon Curtis, Planting Habitat & Survival Assessor at Forests Ontario, examines a spruce seedling during a site visit with Kawartha Conservation Authority, May 2021.

Safety First, Trees Second

The Ontario government deemed tree planting an essential service in March 2020. And that is a good thing, because it's time sensitive business!

"Unfortunately, tree seedlings are quite perishable and need to be planted soon after coming from the nursery – careful timing and fine-tuned logistics are required," said RPF and Forests Ontario CEO Rob Keen.

To plant trees while keeping landowners and tree planters safe, Forests Ontario recommended planting protocols that included physical distancing, the use of personal protective equipment, and frequent sanitization of touch points. Partners then each developed their own recommendations and guidelines to protect staff health and safety during the spring planting push.

Last year, some partners, like GRCA, paused their spring tree planting operations due to health and safety concerns. However, this year, thanks to new protocols, GRCA embraced the planting season. "GRCA was really

excited to get trees planted this spring," said Clay. And they weren't the only eager ones: "Landowners were keen to get their trees; they wanted to see trees in the ground."

Other partners who went forward with spring planting in 2021 cited the experiences of the past year as extremely beneficial. Thanks to two planting seasons under their belt, adaptive management, and an ongoing commitment to the health and safety of staff and the public, Brittany Ballagh of TRCA, said tree planting went smoothly this spring – despite the pandemic.

And, of course, cooperation helps. Cochrane of RVCA said the health and safety procedures they have developed have been well-received. "Everyone in the sector, from nurseries to contractors, have been cooperative."

Forests Ontario extends a big thank you to all the partners and landowners whose efforts made the 2021 spring tree planting season successful and safe.

Greening the Rouge

Forests Ontario worked with Parks Canada and TRCA this spring to plant trees at Rouge National Urban Park - the largest urban park of its kind in North America.

Together, the partners planted an eight-kilometre-long windbreak along the park's trail network through the 50 MTP. With Parks Canada and TRCA, Forests Ontario will establish an additional 19 kilometres of windbreak over several years.

This planting supports Parks Canada's 10-year Management Plan for Rouge National Urban Park, which aims to create and restore 30 hectares of forest by 2022. Having planted 123,000 trees and shrubs across 28 hectares since 2015, Parks Canada is on track to well exceed this target.

Forests Ontario in 2019 expanded the types of plantings offered through the 50 MTP; the windbreak planting at Rouge National Urban Park this spring demonstrates the versatility of the updated criteria. Today, the 50 MTP supports four main types of plantings:

- **Riparian** buffers involve planting along the edge of waterbodies and are useful for stabilizing shorelines and improving water quality.
- **Windbreaks**, the strategic planting of trees in rows, can reduce soil erosion and snowdrift, enhance productivity of farmland, and create habitat corridors for wildlife.
- **Restoration** planting helps rehabilitate native forests impacted by climate change, wildfire, weather, pests, or invasive species.
- **Afforestation**, or the creation of new forest on land that has had no previous tree cover.



From left: Forests Ontario CEO Rob Keen, MP for Markham-Stouffville Helena Jacek, CEO of the Toronto and Region Conservation Authority John MacKenzie, and Parks Canada's Field Unit Superintendent for Rouge National Urban Park Omar McDadi, June 2021.

It is never too early to think about planting for next spring! Apply now to be added to the waitlist for the 2022 planting season by visiting our website. For more information about any of Forests Ontario's tree planting programs, contact Hayley Murray (Forestry Operations Coordinator) at 416-646-1193 ext. 222.

Promising Cross-border Collaboration on Invasive Species

Researchers suggest we work together to succeed against new plant menaces

BY NICOLE BALDWIN

Stiltgrass, photo via iNaturalist user mefisher.

Climate change and invasive species: two phrases that strike fear into the heart of all environmentally conscious individuals. When these two threats to our ecosystems combine, the results can be devastating.

Invasive plant species introduced to a local ecosystem can out-compete native species if they are better adapted to the new climate. However, according to Dr. Bethany Bradley of the Department of Environmental Conservation at the University of Massachusetts Amherst, “We have the potential to win against those species that are on the way.” For forests, she cites future problems as kudzu (a vine native to East Asia), mile-a-minute vine, and stiltgrass.

Dr. Bradley and her spatial ecology lab study the effects of climate change on the spread of invasive plant species. Using modelling, Dr. Bradley and her colleagues can predict which invasives are likely to move into regions under different climate change scenarios. “The biggest challenge that we are experiencing with climate change and invasives is that managers are already stretched thin,” says Dr. Bradley. “However, the opportunity is that the species are not here yet and success against invasives happens at the prevention phase.”

In the United States, the Northeast Regional Invasive Species and Climate Change (RISCC) network has formed to address these up-and-coming threats. “The models show that there can be hundreds of invasive plant species of concern in a given area,” says Dr. Bradley. The RISCC network comes together to predict which invasives are likely to have the greatest impact, developing proactive regulatory recommendations to address those species first. “Current regulation of invasive species is often very reactive, only focussing on species that are already established and spreading,” she says. “Established invasives are everywhere; we have an opportunity to win against species that are not here yet.” Some Canadian agencies attended the last RISCC meeting in March 2021, including Parks Canada and the New Brunswick Invasive Species Council. A cross-border collaboration has the potential to be a proactive tool to slow the spread of invasive plants.

Dr. Bradley offered the following advice to landowners interested in controlling the increasing spread of invasives given the changing climate: “Be aware of invasive species. Research whether a species is invasive before putting it into

your landscape.” Many invasive plant species are introduced deliberately as ornamentals. With a lag in regulatory processes, many of them are still available for purchase. Often referred to as “sleeper species,” these plants are present on the landscape but are not yet spreading. However, with a warmer climate coming, these species could potentially run rampant with no native equivalent to compete with them.

For information on the Northeast RISCC network, please visit riscnetwork.org. For Ontario-specific resources on invasive plants, visit: ontarioinvasiveplants.ca and invasivespeciescentre.ca.



Top: Dr. Bethany Bradley. Middle: Kudzu, photo via iNaturalist user mefisher. Right: Mile-a-minute vine, photo via iNaturalist user Richard Fuller



The Struggle to Choke Dog-Strangling Vine

Caterpillar raised in Ontario lab holds promise as tool to control invasive weed

Dear Silvie



Forests Ontario's experts, known collectively as "Silvie" (short for silviculture), answer your forestry questions. Send questions to info@forestsontario.ca, or c/o Forests Ontario, 144 Front St. West, Toronto, Ont. M5J 2L7

Dear Silvie,

I started to notice a patch of vines growing in my forest's understory a couple years ago. The small patch has grown so much it is alarming. A friend suggested it was Dog-Strangling Vine. How do I know for sure and what should I do if it is?

– PERPLEXED IN PRINCE EDWARD COUNTY

DEAR PERPLEXED IN PRINCE EDWARD COUNTY,

There is an ongoing battle between landowners and the infamous invasive species Dog-Strangling Vine (DSV). Invasive plants risk throwing an entire ecosystem off its natural trajectory; as a result, we must take their menacing actions seriously.

What is Dog-Strangling Vine?

DSV appeared in Ontario gardens in the mid-1800s. It grows in open sunny areas, but also thrives on partially shaded sites. This ferocious vine distinctly grows in dense patches that can 'strangle' plants and small trees (not dogs). One plant produces thousands of seeds that the wind can carry to a new site, and it can also grow from root fragments left in the soil, making it challenging for landowners to control.

Identifying Dog-Strangling Vine

DSV can grow one to two metres in height with leaves between five to ten centimeters in length. The oval leaves come to a point at the tip and each leaf pair sits opposite of the other along the stem. These perennial plant leaves are green, with a shiny gloss in the early summer that fades to yellow in late summer. From late May to mid-July, it has flowers with five pink- or maroon-coloured petals about five

to nine millimeters in length. The plant's bean-shaped pods grow in pairs; they start forming in July and split open by late summer to release white fluffy seeds.

Treating Dog-Strangling Vine

The best defense for landowners, farmers, and community members to reduce labour, cost, and environmental destruction associated with DSV is early detection. If it is new, or in a small area, manually and mechanically removing the entire plant, including the roots, may work to control this harmful weed. Frequently mowing DSV can help reduce seed production and population overtime. If the DSV is on inaccessible terrain, or has already formed a large dense patch, call a forestry professional.

The good news is that researchers are exploring a new weapon to help combat DSV – a moth from Ukraine. Since 2013, Ontario has had trial releases of the moth's caterpillars. It only eats the DSV leaves, posing no threat to native plants. Over the past few years, forestry researchers in Dr. Sandy Smith's lab at the University of Toronto have bred and studied these moths in their caterpillar stage. With promising results so far, long-term research is ongoing to better understand the moth and the role it can play in combating DSV in Ontario.

Yours, Silvie

Right: Dog-Strangling Vine leaves and seed pods. Below: Dog-Strangling Vine takes over open and wooded areas, which prevents regeneration of native species. Photos from Ontario's Invading Species Awareness Program.



A Personal Wildlife Sanctuary

A couple's paradise in Caledon attracts everything from deer to ducks

BY PETER KUITENBROUWER



Fred and Melodie Belusa manage their 45-acre forest in Caledon under the Managed Forest Tax Incentive Program. Photos by Peter Kuitenbrouwer.

A dark sky threatens rain, but Fred and Melodie Belusa aren't worried. Practically dressed in hiking boots and windbreakers, the couple head up a trail that winds west from their house. The Belusas own 45 acres of forest in the Albion Hills of Caledon, about 60 km north of Toronto.

We pass a shelter where their tractor, wood splitter, and new wood chipper rest. Beside us rise Sugar Maples, beech, ash, and birch trees. Soon, we walk by stands of towering, straight Red Pines, planted in 1945.

Melodie leaves the path and picks her way through tangled piles of vines which the couple previously pulled off young maples. She stoops and points.

There sits a bird about the size of a duck, almost perfectly camouflaged in the tall, dead grass. A few days ago, the bird flew off her nest at the Belusas' arrival, revealing four eggs; today she remains on her nest, resolute. Melodie snaps a photo. She later identifies the bird: it is an American Woodcock.

"I guess I've always been a naturalist, almost from birth," Fred says later, drinking tea in an open-air alcove of their home. In the winter, this alcove stores 14 cords of firewood that they cut and split themselves. Outside the overhang, rain falls in sheets on the pond that spreads below their house.

Fred was born in Kaliningrad, then East Prussia and now part of Russia. When he was four-years-old he stomped on an insect. His mother asked, "Don't you think that bug deserved to live, too?" Since then, he's defended the natural world. He came to Canada in the

1950s and made a career in the air conditioning industry. In 1972 he bought a forest here, close to the Bruce Trail and Niagara Escarpment.

In 2000, Fred wrote the first forest management plan for his property to enroll this forest in Ontario's Managed Forest Tax Incentive Program (MFTIP). Landowners who enroll in the MFTIP can qualify for a 75 per cent reduction in property tax on eligible land.

"Encountering the abundant birds and wildlife, watching them feed, breed, and tend to their young is a joy to behold year-round," Fred wrote in that first plan.

Wildlife appreciation is a pillar of the MFTIP. Photos of birds and mammals fill the Belusas' photo albums and grace their Christmas cards. As part of their forest management plan, the Belusas worked with the Toronto Region Conservation Authority (TRCA) to plant riparian shrubs and trees around their pond and installed habitat boxes for birds, Wood Ducks, owls, and bats.

"We've got these funny critters that live under our pond," says Melodie. "We've seen Green Herons and Blue Herons. We planted perennials to attract butterflies. The deer will come and eat our hosta."

Melodie is a convert to the wonders of the great outdoors.

"Our first date was ballroom dancing, and now we are on wood splitters and chippers and chainsaws," she says with a laugh. "The first gift I got was a lawn mower colour-coordinated to my jogging outfit. I should have known then and there."

The couple has learned forest management over the years. Paul Aird, then Dean of Forestry at the University of Toronto, walked the property to approve the forest plan nearly two decades ago now.

“He said, ‘How many stick trees [i.e. dead standing trees] do you have?’” Fred recalls. “I said proudly, ‘They don’t last very long around here. I cut them down for firewood.’ That’s when I got my wrist slapped.”

Forest plans typically encourage landowners to preserve dead trees that do not pose a hazard to forest users, as these ‘stick trees’ are home to over fifty species of birds and mammals. These days, dead trees get to remain in the Belusa forest.

Loggers have thinned the pine plantations over the years. However, the couple is more enthusiastic about planting trees than felling them. They are in talks with TRCA to plant more trees here.

Both Fred and Melodie enjoy their work in the forest. Recently, they cut poplar saplings that competed with a new conifer plantation. The Belusas also control buckthorn, an invasive species. The work keeps the couple healthy.

“People say, ‘You keep buying machinery,’” Fred says. “And I say, ‘How much did you spend on your health club membership?’”

To learn more about the MFTIP, visit our website at forestsontario.ca/en/program/managed-forest-tax-incentive-program



Wildlife Watch

Caledon area landowners Fred and Melodie Belusa have witnessed an impressive diversity of wildlife in their forest over the past 40 years. How many of these have you seen this year? Tally it up and let us know. Email your answers to info@forestsontario.ca

- White-tailed Deer. “By the end of May, the fawns are usually frolicking in the back yard,” says Melodie.
- Tree Frogs, Spring Peepers, and Bull Frogs. “They start up their orchestra mid-April and are deafening.”
- Chipmunks, who have figured out how to open the top of the pail where Fred and Melodie store the peanuts.
- Red, Grey, and Black Squirrels. “They enjoy the peanuts in the shell we provide, but they spend too much time in our bird feeder.”
- The couple once counted 43 wild turkeys in one flock, some courting and mating.
- Turkey Vultures, with “a face only a mother could love.”
- Raccoons, an owl, an opossum, a mole, rabbits, foxes, coyotes, porcupines, muskrats, otters, and Snapping Turtles.
- Birds include Green and Blue Herons, Wood Ducks, Mallards, mergansers, Blue Jays, Red-Winged Blackbirds, chickadees, nuthatches, Mourning Doves, cardinals, swallows, Rose-Breasted Grosbeaks, hawks, Canada Geese, and Downy, Red-Bellied, and Pileated Woodpeckers.

From top left, counterclockwise: Northern Cardinal, White-tailed Deer, Wood Ducks, photos by Melodie Belusa. American Woodcock; photo by Peter Kuitenbrouwer.



Defining Old Growth

A look at logging in the Catchacoma Forest

BY NATALIE HEYBLUM

Our Forest magazine selected this article from several submitted by graduates of the Master of Forest Conservation program at the University of Toronto

The term “old growth” has become a rallying cry for nature lovers who seek to protect such forests for reasons ranging from spiritual to recreational, but what exactly is an old growth forest? The answer is not always straightforward.

For example, a forest considered old in Ontario may be considered young in British Columbia. You may be able to see how confusion can arise.

One Ontario group, Ancient Forest Exploration and Research (AFER), defines old growth forests as those that contain old trees, dead wood, exceptionally low human disturbance, high tree density, multiple vegetation layers, high diversity in the herbaceous layer, lots of lichen and fungus, openings in the forest canopy and undisturbed soil layers. They labelled the Catchacoma forest, a Crown forest in Northern Peterborough County, as the “largest old growth hemlock forest in Canada,” and requested a halt on scheduled harvest operations.

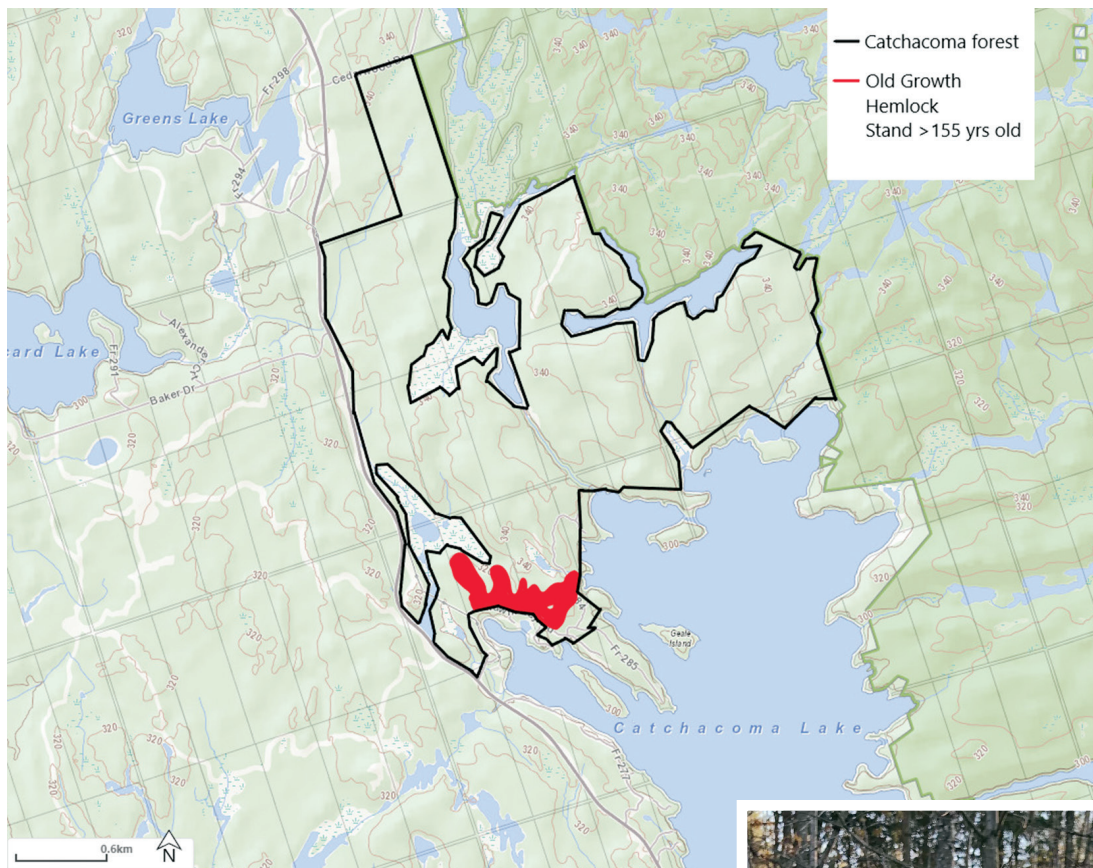
Ontario-based Bancroft Minden Forest Company (BMFC), holder of the Sustainable Forest License to manage Crown land forest operations in the Catchacoma, adheres to another definition of old growth, provided in the Ministry of Natural Resource’s Landscape Guide. The guide states, “The old growth period is a condition of dynamic forest ecosystems that tends to include complex forest stand structure, relatively large dead standing trees (snags), accumulations of downed woody material, up-turned stumps, root and soil mounds, accelerating tree mortality, and ecosystem functions that may operate at different rates or intensities compared with earlier stages of forest development.”

Under the Landscape Guide, a hemlock is considered to be old growth at 155 years; AFER recognizes old growth at 140 years. AFER claims that forests are old growth if undisturbed by humans; the guide states old growth forests are possible with forest management.

I analyzed this debate as my capstone project to obtain a Master of Forest Conservation from the University of Toronto. After looking at the AFER claims and the BMFC response, I did my own analysis. I visited the forest, read



Old tree stump in Catchacoma Forest is evidence of earlier logging. Photo by Natalie Heyblum.



Catchacoma Forest (outlined in black) north of Peterborough. Red indicates old-growth stand of hemlock. Map courtesy Bancroft-Minden Forest Company.

notes written by a previous Registered Professional Forester, and interviewed the forester responsible for the Crown unit in the 1980s. I also analyzed a Forest Resource Inventory (FRI) map of the forest created using the Landscape Guide definition.

Based upon my analysis of the FRI data, I found that the forest contains many tree species, including 19 hectares of old growth hemlock. Logging has occurred through most of the forest, and there are larger patches of hemlock in the northern Minden side of the management unit. These observations are all consistent with statements made by BMFC.

In examining all the evidence, I conclude that the Catchacoma forest does not contain Canada's largest old growth hemlock forest, and that the future of the Catchacoma is secure.

Backed by stringent regulations and rooted in sustainability, Ontario's approach to forest management ensures the long-term health of the province's future forests. Requirements include the development and approval of Forest Management Plans before any activities can take place on Crown land; the renewal of all harvested land by seeding, natural regeneration, or tree planting; and frequent monitoring and publicly accessible reporting.

This being said, action is required to preserve the health of the Catchacoma forest. I recommend protecting the 19 hectares of old growth hemlock by halting logging and recreation in this section. In the remainder of the forest, I recommend that harvest operations maintain a mixed wood composition with a significant component of hemlock. This will create a forest that is more resilient to disturbance. In the face of climate change, diversity is stability.



Natalie Heyblom, an RPF in training, works for the Bancroft Minden Forest Company

Our Forest Photo Contest Winners



First Place

Tree Swallow perched in Carden Alvar Provincial Park. Photographed by Mike Riley, April 2021.

 @gonewildmike

Second Place

White-tailed deer spotted in East Don Parkland. Photographed by Jacqueline Weber, March 2021.

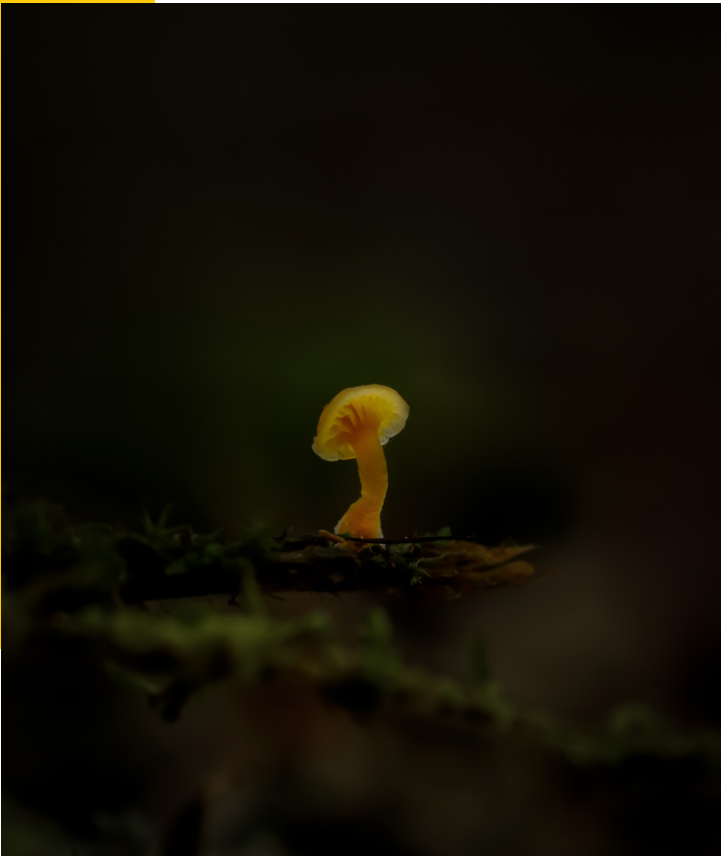
 @jacqueline.e.weber



Third Place

Tiny chanterelle mushroom growing in the Algonquin Highlands. Photographed by Chris Nguyen, April 2021.

 @x.ngyn



Sign up for our TreeLine newsletter at www.forestsontario.ca to receive updates on future contests.

Stumped: Forest BINGO

BY ALLISON HANDS & MADELEINE BRAY

How to Play

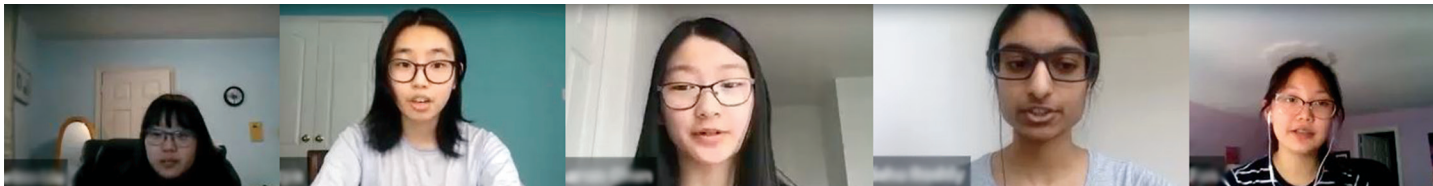
With more than 80 native tree species in Ontario, it's no surprise that tree leaves come in all sorts of shapes, sizes, and arrangements! Each species has its own unique set of characteristics that distinguishes it from the rest.

Many common features found on leaves across Ontario are included in the LEAFO card below. Bring along a copy

when you head out for your next walk and see if you can fill out a line, the borders, or even make an X! Most leaves will have multiple characteristics listed on the card, but try to get a unique leaf for each spot.

Remember to leave living leaves on their trees, and good luck!

 Alternate leaves	 Asymmetrical Base	 Coniferous	 Cordate (Heart Shaped)	 Curved/Twisted Needles
 Deciduous	 Deltoid (Triangle Shaped)	 Double Compound	 Lobed	 Narrow
 Needles	 Palmately Compound	Free Space!	 Opposite Leaves	 Oval
 Not Lobed	 Pinnately Compound	 Oak	 Rough Edges	 Scales
 Smooth Edges	 Maple	 Symmetrical Base	 Wedge	 White Pine



Nature-Based Solutions to Climate Change & Green Infrastructure / Urban Design

By: Catherine, Luckya, Risha, Sharon, & Vanessa

Screenshot of University of Toronto Schools Team C's presentation. Teams presented virtually due to COVID-19 pandemic.

Forests Ontario Crowns 2021 Ontario Envirothon Champions

University of Toronto Schools takes first place in province-wide competition

BY AUGUSTA LIPSCOMBE

University of Toronto Schools has continued its winning streak, grabbing top honours at the 2021 Ontario Envirothon, a unique environmental-themed academic competition. The school's Team C, the new Ontario Envirothon champions, beat out 95 other high school students on 19 teams, and won a cash prize of \$250 per team member in recognition of outstanding environmental knowledge and participation.

Second place team Lakefield College School and third place University of Toronto Schools (Team B) earned \$200 and \$150 per student, respectively. The prize money came from the charitable foundation Maple Leaves Forever.

"Maple Leaves Forever has been a proud sponsor of the Ontario Envirothon for six years," said Deb Pella Keen, Executive Director. "The knowledge and skills fostered through this program complement our foundation's vision of sustainability. We are happy to be involved in the development, and celebration, of the province's budding environmental champions."

The Ontario Envirothon is designed to immerse students in hands-on learning and discovery. "Envirothon offers the next generation of environmental leaders a chance to explore education and career paths in the natural sciences," explains Rob Keen, Registered Professional Forester and CEO of Forests Ontario. "Despite the challenges of COVID-19

and virtual learning, the 2021 Envirothon was incredibly successful in providing opportunities for students to learn from leaders in the environmental sector, helping shape our planet's future stewards."

The program challenges students to develop their problem-solving, teamwork, and communication skills while displaying their environmental knowledge. This year, due to the pandemic, Forests Ontario engaged participants through virtual activities via the iNaturalist platform. Teams competed in five bi-weekly challenges on soils, forestry, wildlife, aquatics, and this year's theme: nature-based solutions. Judges selected the provincial finalists based on a weighted draw which considered the quality and frequency of their completed challenges.

University of Toronto Schools will advance to represent Ontario at the 2021 NCF-Envirothon Competition, to be held virtually by Nebraska from July 25-28, 2021.

Forests Ontario extends many thanks to generous program sponsors Maple Leaves Forever, Enbridge Gas, Regional Municipality of York, Fleming College, Algonquin Forestry Authority, and Grain Farmers of Ontario.

Forests Ontario also wishes to recognize the teachers, program leaders, and volunteers who made the 2021 Ontario Envirothon a success.

Donate Today!

When you support our tree planting, education, and awareness initiatives, you're making a vital contribution to greening Ontario's forests.

The time is now to improve our natural environment and leave a healthier world for future generations.



Donation Information

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Donations are eligible for a charitable tax receipt.

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