OUR FOREST

FORESTS ONTARIO

forestsontario.ca

VOL. 63 NO. 3

SUMMER 2023

Get to know the new CEO, Jess Kaknevicius

PAGE 10

Forest Fires Frequently Asked Questions

PAGE 18

A Message from our CEO

Stepping up during extraordinary times

Welcome to the summer 2023 issue of *Our Forest* – which also stands as my first issue as CEO of Forests Ontario. I am excited to be rejoining an organization that I am truly passionate about and believe in its vision of healthy forests that sustain biodiversity, healthy people and a healthy economy through our restoration, stewardship, education and awareness work.

My few first months have been a wonderful opportunity for me to see our organization in action – meeting planting partners who supported us in planting over two million trees this season, seeing our valuable education programming at work, learning about our new partnerships and collaborations, and building a sense of belonging amongst our team. Forests Ontario plays a unique role in being able to bring awareness around the importance of healthy forests – from establishing new forests to managing and growing existing ones, to engaging the next generation who will contribute to the future health of these forests, and everything that goes into growing a healthy tree.

This past spring, discussions around the importance of forests reached an all-time high because of unprecedented forest fires throughout Canada that resulted in air-quality advisories being issued even in urban areas far from the actual fires. Everyone from politicians to influencers was talking about forest fires. In fact, by the end of September, the Canadian Interagency Forest Fire Centre reported that more than 185,000 square kilometres of forest and other land had burned since January 1 – exceeding the previous record of 75,596 square kilometres set in 1989, according to the National Forestry Database.

While fire is a natural part of the landscape and can benefit many ecosystems, the intensity and frequency of the wildfires we have seen in 2023 is far beyond normal. The impacts are devastating, but the fires also provide an important opportunity for us to think about why this is happening in the first place. There are numerous contributing factors, including climate change, lack of forest management, increased fires caused by human behaviour, invasive species, and forest health. As we move past this extraordinary wildfire season, we need to think about what we can do and what forest managers can do to better combat the effects of climate change, including taking a more active role in managing our forests while also working to restore the landscape through tree planting.

As CEO, it is important to me that we create a work environment where everyone can share their ideas, beliefs, and skills and that no one should have to change who they are when they come to work. This includes supporting our employees, delivering training for our team in creating open and inclusive workplaces, and finding new partnerships that broaden the diversity of the organizations and people we work with. This also includes increasing our organizational commitment to building an understanding of and respect for Indigenous Peoples' history and knowledge.

As an organization, it is important to build greater awareness around Indigenous histories as we continue to grow opportunities to bring Indigenous perspectives and knowledge into our programming and find new ways to partner. An important part of building respectful relationships is understanding the truth of Indigenous history and educating ourselves – not just one day a year but all throughout the year.

This past spring, I was honoured to have joined a site visit in Waterdown, Ontario being considered for a new Healing Place that would be created in collaboration between Forests Ontario, the Bruce Trail Conservancy, Plenty Canada, and Indigenous and non-Indigenous partners. This special place will act as an important location to learn about the history of Indigenous Peoples, their connection with the land, and the native species that provide immense cultural value to First Nations communities in the area.

To all our readers, donors, and corporate supporters – and to all the planting partners, nurseries, seed collectors, Indigenous partners, local community groups, and municipalities that help us plant millions of trees each year – I thank you and look forward to being on this journey with you and seeing what the coming months and years hold for us.

Thank you for the warm welcome.

Jess Kaknevicius
CEO, Forests Ontario and Forest Recovery Canada

P.S. If you would like to learn a little more about me, please check out my profile on page 10.

Contents

OUR FOREST
Vol. 63, No. 3, Summer 2023

EDITOR

Peter Kuitenbrouwer, RPF

CONTRIBUTORS

Andi Darell Alhakim
Amber Brant
Madeleine Bray
Matthew Brown
Joana Carreira
Elizabeth Celanowicz
Nick Courtney
Virginia deCarle
Val Deziel
Brittany Haines
Allison Hands
Emily Hart
Teri Hoang
Amy Howitt
Sandra Iacobelli
Jess Kaknevicius
Lisa Limarzi
Brooke McClelland
Mark McDermid
Aiden O'Brien
Sylvia Nelson
Kristen Sandvall
Kim Sellers

On the cover: Forests Ontario planting delivery agents with Conservation Halton underplanting a woodlot that had been impacted by a natural disturbance in Halton Region earlier this year. This 50 Million Tree Program forest restoration project will contribute to the forest's health, diversity and longevity. Photo: Allison Hands, Forests Ontario

Across the land we now call Canada, we live and work on the traditional, treaty and unceded territories that are part of Turtle Island, which is still home to many First Nations, Inuit and Métis Peoples. Forests Ontario's office is located in the City of Barrie, the traditional territory of the Anishinaabeg people, which include the Odawa, Ojibwe, and Pottawatomi Nations collectively known as the Three Fires Confederacy. We also acknowledge the Wendat Nation (Huron), who occupied these lands prior to the middle of the 17th century.

BECOME A MEMBER

Become a member of Forests Ontario for $50 a year, and receive **Our Forest** in your mailbox. To join, go to forestsontario.ca.

STAY IN TOUCH

We do more than just plant trees, we grow forests for greener and healthier communities.
Follow Forests Ontario on social media for the latest news and daily updates on all our programs.

@Forests.Ontario | @forests_ontario | @Forests_Ontario | Forests Ontario | Forests Ontario

Our Forest is published quarterly by Forests Ontario. Printed on Rolland Opaque paper, which contains 30 per cent post-consumer fibre, is EcoLogo, Process Chlorine Free certified and manufactured in Quebec by Rolland using biogas energy. Printed in Toronto with vegetable-based inks by Warren's Waterless Printing Inc. Warren's is carbonzero certified.

Popular Tree Program Returns to Durham

Youth excel in Tree Bee identification challenge

BY ALLISON HANDS

More than 50 budding tree enthusiasts gathered in Pickering in May to compete at the 2023 Durham Tree Bee. Comprised of students in grades four through six, teams displayed impressive tree identification skills and a robust knowledge of forest management concepts, with some schools bringing several teams.

Following the friendly testing, one team from St. Monica Catholic School was announced as the winner of this year's Durham Tree Bee competition. St. Bridget and a second St. Monica team tied for second place, and Good Shepherd tied with a third St. Monica team to round out the top three.

Forests Ontario would like to congratulate all participating students and teachers for their dedication to learning about their local trees and forests!

Thank you to Larry & Jan Noonan, Ontario Power Generation, Durham Catholic School Board, Altona Forest, Parks Canada, and Toronto & Region Conservation Authority, for making the 2023 Durham Tree Bee possible.

Inspired to brush up on your own tree identification skills? Check out the web-friendly Tree Bee app to learn how to identify common native and non-native trees! Visit **treebee.ca** to get started.

Tree Bee participants team up in Pickering, May 2023. Photo by Forests Ontario

Eco Jam Rocks Toronto!

Sold out show has helped plant thousands of trees

BY LISA LIMARZI

Hailed as one of the coolest industry events, ***Eco Jam*** brings together the musically talented across architecture, engineering, and construction sectors, for a benefit rock concert like no other. Hosted by Smith + Andersen each year during Earth Week, the event centres around the importance of sustainable design, construction, and practices – the "eco" in ***Eco Jam*** – and the integral role that healthy, thriving forests play in our communities.

Held at The Phoenix Concert Theatre in downtown Toronto this year, Eco Jam 2023 was the largest yet with a total of 15 bands from across the design and construction industry. Performing in front of a sold-out audience of more than 1,000, the event raised an incredible $50,000 for our national division, Forest Recovery Canada – more than any other year!

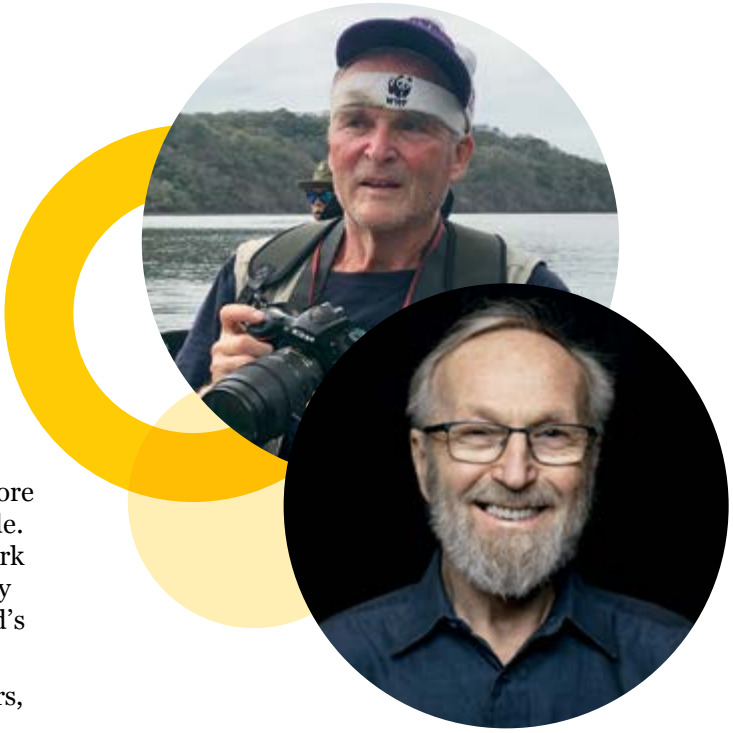
Since launching in 2013, ***Eco Jam*** has contributed to the creation of more than 47 acres of new thriving forests in Ontario and across Canada. Next year's event is already well underway with *Eco Jam 2024* scheduled for April 25 at The Phoenix. Stay tuned for more details to come!

Above left: Forests Ontario's Business Development Manager Lisa Limarzi attends Eco Jam 2023 in Toronto. Middle and right: Photos of Eco Jam 2023 courtesy of Smith + Andersen.

New Directors

Forests Ontario welcomes David Love and Dirk Brinkman to its board

BY JOANA CARREIRA



Forests Ontario is excited to welcome to its Board of Directors two new voices for our forests!

Affectionately known as "The Godfather of Good" for his more than 50 years of environmental stewardship and fundraising, **David Love** has a passion for nature and a wealth of knowledge and experience helping environmental organizations in reaching their full potential. Throughout his professional career, Love worked with more than 15 environmental organizations, including 23 years at World Wildlife Fund (WWF) Canada, and seven years with WWF-International.

Dirk Brinkman is co-founder of the Brinkman Group, which has planted more than 1.75 billion trees and restored more than 100,000 hectares of ecosystems in Canada and worldwide. Brinkman has a deep understanding of how natural systems work together to support and enrich communities across the country and beyond, and a passion for finding solutions to the world's most complex environmental challenges.

For more information about Forests Ontario's Board of Directors, please visit **forestsontario.ca**.

Bridging the Gap Aims to Better Understand Labour Shortages

Forestry sector sees a large portion of its workforce retire with no one to replace them

BY MATTHEW BROWN

High school students from Ottawa attend a Forestry Connects event in Renfrew County, 2019. Photo by Forests Ontario

Ontario's forestry sector continues to face a labour force and skill shortage that is preventing the sector from realizing its full economic potential. To address this issue, Forests Ontario and the Ontario Forest Industries Association (OFIA), with support from an advisory committee, collaborated on *Bridging the Gap Between Ontario's Youth & the Provincial Forest Sector*, an Employment Ontario research project funded in part by the Government of Canada and the Government of Ontario.

"The forestry sector is faced with labour shortages across a variety of roles, and these are expected to increase over the next five to 10 years," says Ian Dunn, President & CEO, OFIA. "We are seeing gaps and misconceptions that prevent some youth from considering a career in the industry, which is why the Bridging the Gap research is so important."

You can read all three *Bridging the Gap* reports and learn more on our website: **forestsontario.ca/en/resource/bridging-the-gap**.

Member Spotlight

Lacey Rose, Renfrew County Forester

BY BROOKE MCCLELLAND

Visits as a child to her family's cabin began Lacey Rose's lifelong appreciation for the wilderness and the outdoors. Growing up in a remote environment in Labrador, Rose spent most of her time outside. Forestry found her by accident, thanks to her biology professor at the College of the North Atlantic, in Labrador City. This discovery led her to complete a Bachelor of Science in Forestry at the University of New Brunswick before she made her way to the Ottawa Valley in 2006.

> "I like to try to **pass on the gift given to me** by my biology professor to pursue this career by talking to kids about forestry now."

Along with her passion for forestry, Rose also advocates bringing more women into the forestry sector as co-founder of Women in Wood, a networking group established in 2015 for women who work in, with, and for the woods. The group now includes over 3,000 women. "It inspires me every day, to see how women are supporting and encouraging each other," Rose says.

Becoming a member of Forests Ontario was a natural fit. "Forests Ontario is a great organization to support! I was impressed with the education and outreach programs, and the ways the organization enabled people to see forestry in a positive light," exclaimed Rose, with the charity's Annual Conference one of her favourite forestry events of the year.

Rose's involvement with Forests Ontario extends beyond her membership and includes participation in various education programs. "I think Forestry in the Classroom and Forestry Connects are the most influential programs Forests Ontario has. There is no better way to shape the understanding and perspective of the future – it will lead to a better public perception of what we do in forestry. I like to try to pass on the gift given to me by my biology professor to pursue this career by talking to kids about forestry now," she says.

Being a forester herself, Rose is no stranger to the benefits of trees. "Trees can solve many of the problems we're facing in a changing climate. They reduce surface temperature, protect soils from erosion, store carbon, clean the air…the list goes on." Rose also advocates for better public understanding of sustainable forest management. For example, she enjoys taking schools and the public on tours through the Renfrew County Forest, which is actively managed each year and provides wood to local mills as well as members of the community, and beyond, to create wood products needed for daily life. How quickly healthy forests regenerate after harvesting, and how much effort is put into protecting forest values like bird's nests and water features, are some of her favourite facts to share.

Forests Ontario would like to thank Lacey Rose and all our members for their valued support. Your contribution continues to make our urban and rural communities healthier through the creation, preservation and maintenance of new forests and grasslands.

Forests Ontario highlights our members in each issue of Our Forest magazine. If you are a Forests Ontario member and would like to share your story in our magazine, please contact ***bmcclelland@forestsontario.ca****.*

Lacey Rose visits a Red Pine log landing operation at Renfrew County Forest, Spring 2023. Photo courtesy of Lacey Rose

2.5 Million Trees Planted this Spring!

2023 marks another successful planting season.

Thank you to the nurseries, seed and cone collectors, and our many planting partners whose expertise, hard work and collaboration enabled Forests Ontario to complete another successful planting season. Together, we are growing healthy, thriving forests that will benefit communities for generations to come.


T JOB
VER

Getting to Know the New CEO

There and back again: following the adventures of Forests Ontario CEO Jess Kaknevicius

BY MATTHEW BROWN

Q&A WITH THE CEO

Q: Why are healthy forests important to you?

A: Healthy forests provide so many benefits – places to play and explore, homes for animals, jobs for communities, and important areas for Indigenous communities to use the forest in their traditional ways. Forests also provide one of the most important climate solutions.

Q: What is your favourite tree and why?

A: I love yellow birch. Not only is it beautiful, but it thrives from disturbance and can grow and adapt to its environment. It also has a lot of historical uses and its twigs smell like winterleaf when you rub them.

Q: What do you most want our readers to know about you?

A: That I am passionate about our organization and our partners and all the people that are working in our forests. I feel that this special community is what makes us unique.

In May, Forests Ontario welcomed Jess Kaknevicius back to the organization as our new CEO after Rob Keen stepped down following a successful 21-year stint at the helm. Jess previously spent nearly nine years with Forests Ontario in a range of management and director roles between 2009 and 2018, focused mostly on supporting our education and awareness programs. She then left to join the Sustainable Forestry Initiative (SFI), where she became Vice-President of Education, leading SFI's education and workforce development programming in Canada and the United States for over five years.

Now that Jess is back and settling into her new role as CEO, we thought this would be a good time to get to know her.

Jess lives in Toronto with her husband, son and pug, and even though she views one of her biggest passions as getting out in nature, it wasn't always that way.

"I don't think I knew I was really an outdoorsy person until my adulthood. I spent time outdoors growing up as I had a dog and would wander around in the local conservation area with him," Jess says. "I didn't camp then – we had a cottage just north of Barrie and would spend a lot of time there in the summer, where I also likely grew a connection to the outdoors. In fact, my first-time camping was when I went tree planting in northern Ontario for a summer." Having grown up with a dog and a love of animals, Jess originally wanted to become a veterinarian, and started out in Zoology and Conservation Biology at the University of Toronto (U of T) but added forestry courses to broaden her educational horizons.

"A lot of unique opportunities kept presenting themselves in forestry, so I just kept following that path. The Faculty of Forestry was so small and intimate, I got really engaged in the program and it just felt like home. I had the opportunity to travel across Europe and Canada to learn about sustainable forest management and innovation in the sector," Jess says.

After her undergrad, she took a year off to travel, then went on to get her Masters of Forest Conservation from U of T, which is what first led her on the path to Forests Ontario.

"I had just graduated from my Masters program and was wondering what to do next - while I spent some time auditing for Rainforest Alliance on the side, I saw that the Ontario Forestry Association [the predecessor of Forests Ontario] was having their annual conference and I volunteered," Jess recalls. "I guess they liked my work ethic, so they hired me on in education shortly after that. I quickly grew a passion for education that has shaped my career."

Jess became instrumental in the delivery of education and awareness programs like the Ontario Envirothon, the creation and implementation of Forestry Connects, launching Forestry in the Classroom, leading the Annual Conference for eight years, and supporting the development of the It Takes A Forest (ITAF) initiative. In fact, it was through the creation of ITAF that she grew a strong passion for the sustainability of the forest sector and was given the opportunity to work on an all-female, Independent Forest Audit crew.

At the Sustainable Forestry Initiative, she learned a lot about leadership, and honed her own leadership style while overseeing a diverse, unique team. "I really felt like I was able to lead in an authentic way – in my own way. I also learned a lot about taking on responsibilities and making decisions including overseeing governance, supporting with fundraising, managing large government grants, and developing strategies," Jess says.
"I feel very confident in stepping into the role of CEO now. I am extremely passionate about what Forests Ontario stands for and the community that it brings together, so naturally it is something I am proud to be a part of."

As CEO, Jess is excited to bring her passion for diversity, equity, and inclusion to the organization. That includes supporting and inspiring diversity within the organization and its programs and having more Indigenous perspectives being integrated into programming and training. Jess' background in education will also help inform her outlook as CEO and bring about increased opportunities for collaboration amongst our programs and networks.

"I think that I can take complex topics and make them more relatable. As amazing as the work we are doing is, sometimes we can get stuck in our own little bubbles talking to the same people," Jess adds. "I really think we need to step outside of our comfort zone and start to have key conversations about sustainability and forests with new audiences we have never reached before."

Above: Jess with Forests Ontario staff at the 2016 North American Envirothon in Peterborough, Ontario. Below: Jess with a Sitka Spruce in Haida Gwaii, British Columbia, in 2008 where she worked for the Ministry of Forests and Range as a summer intern. Left: Jess with son, Joshua.

Fit for a King

Thriving "Royal Oak" trees in the Beaver Valley trace their roots to the grandmother of King Charles III

BY PETER KUITENBROUWER

A springtime royal visit to Canada on the eve of World War II; a friendship cemented in the British pubs of Devon; a river valley in Ontario threatened with development – all of this adds up to a heartwarming story that links reforestation in Canada to the recent coronation of King Charles III. And the real heroes of this story are a few acorns tossed from a train.

In 1939, King George VI and his wife, Queen Elizabeth, paid a Royal visit to Canada. It was the eve of war. Britain saw the need to shore up support in its former colony. Two brothers traveled down from the Beaver Valley to Orangeville to see the Royal train pass through. A door opened and out stepped Her Royal Highness Queen Elizabeth. She handed several English Oak acorns to one of the brothers, Herman McConnell.

"Herman went home to his farm in the Beaver Valley and planted the acorns," recalls Rob Leverty, who owns a neighbouring farm in the area.

The English Oaks flourished and began to produce acorns of their own. McConnell planted the new acorns around his home in the valley and gave some to Leverty who later planted them in 1985. Locals often call the trees "Royal Oaks" in honour of their provenance.

> Locals often call the trees **"Royal Oaks"** in honour of their provenance.

But as the oaks grew in the valley – a 50-kilometre stretch of craggy limestone cliffs, forests, pastures and fields that connect the Georgian Bay to Flesherton – the provincial government in the 1980s appeared set to approve development of a condominium and hotel project, despite the Niagara Escarpment Act. McConnell, Leverty and others rose up. They saved the valley.

Above: King George VI and Queen Elizabeth on platform of Royal Train-Royal Tour 1939. Photo: Wikimedia Commons. Right: Robert Leverty on his farm in the Beaver Valley with an oak tree he planted in 1985. Photo courtesy of Robert Leverty

Above: Herman McConnell at his home in Beaver Valley, Ontario. As a young man in 1939, McConnell received acorns from a visiting Queen Elizabeth and planted them on his farm. Photo courtesy of Rob Leverty. Left: In a 1998 letter, Prince Charles thanked Rob Leverty for the acorns grown in Canada. Photo by Peter Kuitenbrouwer

Spared from development, the oak trees continued to grow. Then one day, Leverty welcomed a visitor from England. Leverty had studied at Exeter University in Devon; the visitor was his best friend from school, Tom Shebbeare, who now worked at the Prince's Trust. Leverty showed Shebbeare his oak tree descended from the acorns gifted by the Queen. Shebbeare took a handful of the acorns back across the Atlantic and gave them to his boss, then Prince Charles, as a 50th birthday present.

Awhile later, Leverty received a letter from Buckingham Palace. "I was delighted to receive your marvellous gift of acorns for my birthday," wrote the man now crowned as King Charles III. "They were among the most unusual, but most treasured of my presents – they carry with them some very special history."

Leverty, now president of the Niagara Escarpment Foundation, salutes McConnell, the man who took the acorns from the train. "Herman is an environmental hero who would be deeply concerned now about the threats to the wildlife corridors of the Beaver Valley," Leverty said. "He realized the critical importance of the environment."

Today, in honour of McConnell's efforts, his name graces a 103-hectare Beaver Valley property: The Herman McConnell Memorial Forest. As for the English "Royal Oak" trees that McConnell planted on his farm just one year after the birth of King Charles, they continue to thrive as living testimonials to a shared commitment to a sustainable environment on both sides of the Atlantic Ocean.


Interested in planting trees on your property?
Trees provide a natural windbreak, improve soil and water quality, and support healthy communities.
Forests Ontario's 50 Million Tree Program makes tree planting on your property easy and affordable!
FORESTS ONTARIO
Find out more at
forestsontario.ca/50MTP

Forests Ontario rolls out Take Root program in Guelph

Aims to make tree planting more accessible

BY MATTHEW BROWN

In April, Forests Ontario partnered with the City of Guelph and Trees for Guelph to roll out Take Root, a program providing residents of the city with access to no-cost, native trees for their homes and neighbourhoods, making tree planting more accessible for residents.

Forests Ontario's Take Root program is a community-powered initiative that educates residents on the importance of a healthy urban tree canopy, how to choose the best tree for their property, and proper tree planting and care techniques. As part of the municipality's One Canopy Strategy, the City of Guelph plans to distribute 2,000 trees in 2023.

"We think the Take Root program is a very tangible way to promote and provide livable, green communities in and around Guelph," Gene Matthews, General Manager, Parks, City of Guelph, says. "We need to plant more trees in Guelph, and Take Root is a way to engage our community and make that happen."

While many municipalities recognize the need to increase their urban forest cover, there are often limited planting opportunities on city-owned lands due to competing priorities such as sports and recreation. The Take Root program provides the opportunity to engage residents, homeowners, neighbourhoods and community groups to plant on their properties and contribute towards enhancing urban canopy cover.

Above: Happy residents of Guelph leaving the Take Root event with their new trees. Right: Chelsea Gray and Ethan Yolleck, Natural Areas Stewardship Technicians, City of Guelph, at the Take Root launch in Guelph on May 13. Photos by Forests Ontario

The Take Root program was designed to help municipalities like the City of Guelph:

- **Engage** local communities and provide them with the resources needed to properly plant and care for their urban forest cover.
- **Empower** local communities to act by providing training and knowledge in becoming stewards of the urban forest for the long-term.
- **Enable** local communities to participate in urban planting events and contribute to increasing a healthy urban forest cover in their neighbourhoods.
- **Provide** an equitable program where everyone has an opportunity to a low- or no-cost native tree or shrub.
- **Enhance** environmental co-benefits through activities that will help create healthy, resilient forests as well as improve the physical and mental well-being of residents and their communities.

To learn more about Forests Ontario's Take Root program, please visit **treestakeroot.ca**.

Forest Health Showcase 2023

Appetite of Spruce Budworm increases while other defoliators wane

BY TERI HOANG

At this past February's Forest Health Showcase co-hosted by Forests Ontario, Natural Resources Canada and the Ontario Ministry of Natural Resources and Forestry, the importance of identifying and managing tree defoliators was front and centre. The Spruce Budworm caused major defoliation damage to forests in Ontario last year, Dan Rowlinson, Forest Health Field Coordinator in the Provincial Forest Health Monitoring Program of Ontario's Ministry of Natural Resources and Forestry, told participants in the virtual event, noting the impact was mainly in the northeast.

Spruce Budworm is one of the most damaging native insects affecting Balsam Fir and White Spruce in Ontario, Rowlinson noted. Outbreaks occur every 30 to 40 years and can last several decades resulting in widespread Balsam Fir and spruce mortality – the larvae only eat partial needles and then move on to other needles, with damage appearing in May.

For the fourth consecutive year in Ontario, the area of moderate to severe Spruce Budworm defoliation increased, jumping from 1,302,537 ha in 2021, to 2,029,039 ha in 2022. Most of this defoliation was in the northeast region, with small areas in the southern region of the province. Rowlinson brought better news about the Spongy Moth (formerly known as LDD or Gypsy Moth), an invasive defoliator discovered in Ontario in 1963. Spongy Moth outbreaks are cyclical, typically occurring every seven to 10 years. In Ontario, major outbreaks peaked in 1985, 1991, 2002, and 2008. The most recent outbreak, which peaked in 2021, was the most widespread recorded in the province. Spongy Moth prefers hosts such as oak, birch, and aspen, and occasionally softwoods, such as Eastern White Pine and Colorado Blue Spruce. In 2022, defoliation was recorded on all preferred host tree species.

Left: Jack Pine budworm, larva stage.
Photo: Steven Katovich, Wikimedia Commons

Middle: Spongy Moth, larva stage.
Photo: Katie Mc, iNaturalist

Right: Spruce Budworm, larva stage.
Photo: Jerald E. Dewey, Wikimedia Commons

Spongy Moths are most destructive in their larval stage – little caterpillars that strip away foliage. Repeated defoliation stresses trees and can lead to mortality, especially in urban or drought-stricken areas, and can weaken tree regeneration due to impacted seed production and root sprouting. The most current surveys reflect good news as moderate to severe Spongy Moth defoliation decreased dramatically in 2022 versus 2021 (22,427 ha from 1,779,744). This decrease indicates a population collapse in northeastern Ontario and parts of southern Ontario.

The Jack Pine Budworm is native to North America. Jack Pine is the preferred host, but other conifers such as Eastern White Pine, Red Pine and Scots Pine can also be attacked. Outbreaks occur in Ontario about every eight to 10 years. The budworm larvae (caterpillars) cause widespread defoliation, growth loss, top kill, and tree mortality. The majority of feeding (defoliation) happens in late June and early July. For the third year in a row, Jack Pine Budworm defoliation had decreased in Ontario where it dropped to 130,674 ha in 2022 from 346,266 ha in 2021. Moderate to severe Jack Pine Budworm defoliation was recorded in all seven districts in the northwest region in 2022, with a small area of new infestation.

To learn more and view the recorded Forest Health Showcase session, please visit the Events page of Forests Ontario's website at **forestsontario.ca**.

Bees, butterflies and hummingbirds are just a few of the species that depend on pollen and nectar to survive. Grassland plants provide nutrient sources, along with habitat, shelter and nesting opportunities, especially for species at risk.

Now *that's* food for thought.

Learn how grasslands can benefit your community.

Donate today at
GRASSLANDSONTARIO.CA

Grasslands ONTARIO

Forest Fires Frequently Asked Questions

We turn to Forests Ontario's Director of Restoration Programs, Val Deziel, for answers

BY MATTHEW BROWN

With wildfire season still under way, Canada has reached an unprecedented milestone with 10 million hectares of land burned by wildfires as of mid-July, according to Natural Resources Canada. That figure far surpasses the previous record of 7.6 million hectares burned in 1989 – and the current tally is sure to rise, as there are still hundreds of fires burning, particularly in Western Canada, according to the Canadian Interagency Forest Fire Centre (CIFFC).

The result of these fires has been an endless stream of front-page news, air-quality advisories posted in cities across North America, and questions about what causes wildfires and what we can do to ensure we don't keep hitting record-breaking numbers for years to come.

We turn to Forests Ontario's Director of Restoration Programs, Val Deziel, to answer some of the most frequently asked questions about forest fires:

Q: What causes forest fires?

A: Wildfires are sometimes caused by people who leave campfires unattended, burn debris or dispose of lit cigarettes or matches carelessly, or set fires deliberately, while the remaining fires are started by lightning strikes. According to Natural Resources Canada, while just over half of wildfires are started by humans, 67 per cent of the land burned by wildfires is caused by lightning. This is because fires caused by lightning often occur in more remote areas and can be more difficult to suppress.

It's also important to make the distinction between wildfires, prescribed burns, and cultural burns.

Prescribed burns are deliberately set by forest managers to enhance the health of an ecosystem. Regular, managed prescribed burns can reduce the amount of ground fuels, which means that if a wildfire did occur, it *could* be less intense and easier to control.

Prescribed burns are also used to clear forest areas to prepare for planting, remove undesirable plants that compete with wanted species for resources, remove undergrowth and allow sunlight to reach the forest floor to encourage the growth of selected species, control insect pests and diseases, and create ashes that make nutrients more readily available to the ecosystem.

According to Dr. Amy Cardinal Christianson, an Indigenous fire research scientist with the Canadian Forest Service, cultural burns use fire on the landscape to achieve certain cultural objectives, such as sustaining diverse animal life and plants that serve as medicines or food. For example, certain berries tend to fruit prolifically following a fire. Cultural fires are typically low-intensity, small-scale burns that are community driven and practiced by Indigenous fire-keepers around the globe.

Q: Are all forest fires bad?

A: Many plants and animals are well adapted to and benefit from fire, and some even depend on fire. For example, Jack Pine cones are serotinous, which means that the seed release happens only in response to an environmental trigger, and will only open and distribute seeds under extreme heat. However, those benefits are outweighed by the sheer magnitude of fires we have seen this year.

Q: Why are the wildfires so much worse this year?

A: When the weather is dry and hot, it is easier for wildfires to start and harder to control their spread. Climate change is certainly a contributing factor. Just recently, it was announced that June 2023 was the hottest June on record, according to NASA's global temperature analysis. Beyond the warming trend we have continued to see throughout the world, other factors include lack of forest management, increased fires caused by human behaviour, and issues relating to invasive species.

Q: What can we do to stop wildfires from continuing to happen at this rate in the future?

A: First and foremost, we can't let misinformation or even the sense that we can't make a difference stop us from seriously working on climate mitigation and resilience. As individuals, there are small things we can do to reduce our impact on the changing climate like changing how we travel, what we eat, how we power our homes, and how we commute. (You can see a simple list of such things at **un.org/en/actnow/ten-actions**.) Collectively, we can also join environmental organizations and community groups and vote for candidates on a municipal, provincial and national level who we feel shares our goals for a healthy planet.

There is also much to do when it comes to forest management, including promoting the active stewardship and proper management of forests, planting climate-appropriate species of trees (be sure to check out Kristen Sandvall's wonderful article on this topic on pg. 22), educating the public about preventing forest fires, and working with Indigenous partners to learn about the longstanding relationships they have with the land and use and management of fire.

You can also increase your own knowledge about fires, their behaviours, and their impact on ecosystems.

Top left: Forests Ontario's Val Deziel at the site of a prescribed burn in Baltimore, Ontario, 2022. Photo by Chelsea Marcantonio

Top Right: Firefighters managing a prescribed burn in Baltimore, Ontario prairie, 2022. Photo by Chelsea Marcantonio

Right: Forest fire in Saskatchewan. Photo by Landon Parenteau on Unsplash

Forests Ontario has plenty of great resources such as *Hot Stuff!* in the Education and Awareness section of our website. The more we learn, the more action we can take.

Finally, restoration – the actual planting of new trees – is also critical. Through our extensive partnerships and our diverse planting programs, Forests Ontario and Forest Recovery Canada are working each day to increase forest cover, restore forests impacted by natural occurrences, and improve forest conditions in Ontario and across Canada. You can support these efforts at **forestsontario.ca**.

A Forest Love Story

Couple gets trees planted and qualifies for the Managed Forest Tax Incentive Program

BY PETER KUITENBROUWER

James Rosin grew up in Thunder Bay, on a property that had a quarter-mile driveway and 10 hectares of forest. His father, who emigrated from Italy, taught James as a boy to pick edible mushrooms in the woods. “I would walk all the time in the forest and collect mushrooms. There were a lot of delicious mushrooms in the fall,” Rosin says. These are happy memories - “Every tree has a different smell.”

Later, living in southern Ontario, Rosin met Jennifer Borland. “When we first met, we would go walking in the Dufferin County Forest,” which is north of Toronto, Rosin says. The couple got married, and Jennifer joined Fleming College in Peterborough as a professor of massage. Seeking a home near the college, the pair bought a 46-acre farm in Campbellford, about 200 kilometres east of Toronto. Most of their property is farm fields, but the couple missed the forest so they decided to plant one. “My wife loves White Pines,” Rosin says. “She has always dreamed of having White Pines encapsulating the house.”

The couple applied to Forests Ontario’s 50 Million Tree Program to help make their new forested landscape a reality. And there is another advantage: Once a landowner has four hectares of eligible forest, their property can be enrolled in Ontario’s Managed Forest Tax Incentive Program (MFTIP). This program reduces tax by 75 per cent on the forested portion of a property.

Forests Ontario connected the couple with a Planting Delivery Agent (PDA) in their area. In May, the PDA came to their farm with his tractor and planted 4,500 White Pine, 2,500 Norway Spruce, 500 Black Walnut, and 500 Red Oak trees. The planting partner, who is also a Managed Forest Plan Approver, has since written a Forest Management Plan for the couple, and enrolled their property in the MFTIP.

Rosin has been a foster parent and spent his career working in foster care with high needs children. He finds solace in the forest and is excited with the opportunity to grow his own woods. “The goal is to continue planting more acreage until we maximize it,” Rosin says, and the tax reduction was an important incentive. “As you get older and retire, you start to be concerned about the taxes even more because you realize that you are going to be on a fixed income.”

But for Rosin, it always comes back to the glory of the woods. “It’s so nice when you are away from the pollution. We have nice walking trails to walk between trees,” he says. “It’s hard to explain. You realize how wonderful it is to just be in the forest.”

To learn more about Forests Ontario’s 50 Million Tree Program, or the Managed Forest Tax Incentive Program, please visit **forestsontario.ca**.

Opposite page: James Rosin and Jennifer Borland-Rosin at their farm near Campbellford. Photo courtesy of James Rosin

ASK AN EXPERT

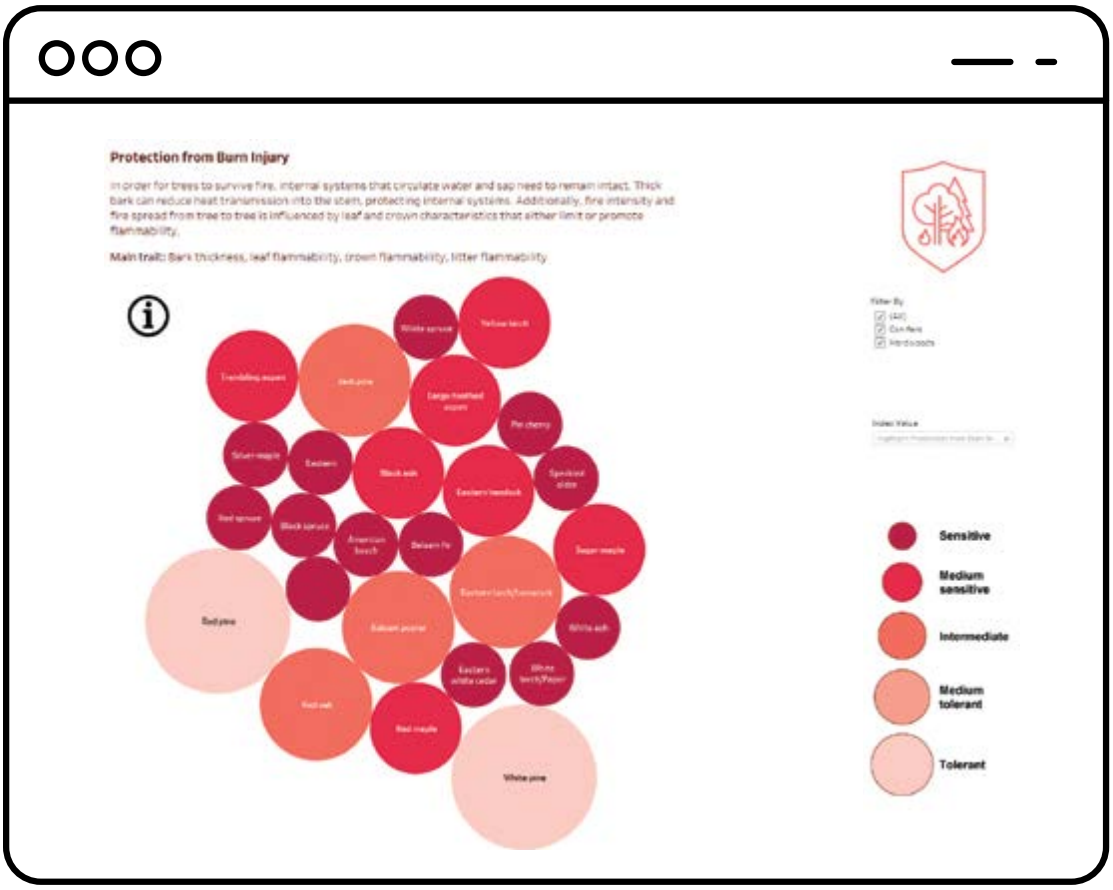
Do you have a question about wildlife, forest restoration, grasslands, or tree ID?

Send us your question with "Ask An Expert" as the subject line, and it may be answered in an upcoming issue of Our Forest magazine. Please write to info@forestsontario.ca.

Ability to Cope

As climate changes, some trees in Canada are more resilient than others

BY KRISTEN SANDVALL



The Forest Gene Conservation Association collaborated with the Forest Change program led by Dr. Isabelle Aubin and Dr. Laura Boisvert-Marsh, research scientists with the Canadian Forest Service - Natural Resources Canada, to develop a data visualization tool and a website on tree sensitivity to stresses such as fire. Graphic courtesy of the FGCA.

With the changing climate, our forests are likely to experience unprecedented changes in growing conditions, with more frequent, intense and longer lasting fire and drought events. Not all species will respond in the same way to these changes. These stressors could result in declining forest health, increased mortality, and changes in forest composition, and the extent of the impacts is difficult to predict.

Forest practitioners face the unique task of understanding these potential impacts and implementing adaptation actions to ensure the future resiliency of our forests. Climate-based vulnerability assessments are being used as tools to anticipate impacts on forest ecosystems, to develop adaptation strategies, and support management decisions.

Projected changes in climatic conditions over the next century vary widely across Canada, and so does the capacity of tree species to cope. What is the sensitivity of Canada's tree species to climate change? To examine this in more detail, the Forest Gene Conservation Association (FGCA) collaborated as part of a research project within the Forest Change program led by Dr. Isabelle Aubin and Dr. Laura Boisvert-Marsh, research scientists with the Canadian Forest Service - Natural Resources Canada, to develop a data visualization tool and a website.

The comparative series of sensitivity indices and ability to adapt were developed, through a trait-based approach, to better understand how tree species respond to climate stress and what can be done to mitigate impacts. These indices rank a tree species sensitivity to drought, to shifts in climatically suitable habitat and to increased intensity and frequency of fire. When faced with a stressor, a species can either tolerate its effects, avoid stressor-induced damage, or re-establish after the disturbance. The ability to utilize these strategies influences whether species exhibit tolerance or sensitivity when faced with these stressors. For each strategy, a sensitivity index was developed that ranks the relative ability of the most common tree species in Ontario and eastern Canada to cope with these climate stressors.

The FGCA was happy to collaborate with the Canadian Forest Service / Natural Resources Canada to bring this important work to practitioners and forest managers. For more information about the data visualization tool and the research which supported the creation of it, please visit **fgca.net**.

Kristen Sandvall is the Seed and Climate Change Program Coordinator with the Forest Gene Conservation Association.

PARTS OF A TREE

CROWN

The crown of a tree is composed of branches, twigs, and leaves. The branches and twigs hold the leaves up allowing them to receive sunlight which is vital to food production. In addition, branches and twigs also support the flowers and fruit of a tree.

FLOWERS

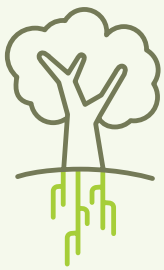
Tree flowers produce fruit, which encase seeds. Within each seed lies the beginning of a new tree. Tree seeds are dispersed by wind, wildlife, and water

TRUNK

The trunk is the main stem of a tree and has two primary functions: to support the crown of branches, twigs, and leaves and to transport food and water throughout the tree. Cutting through the outer bark would expose many different layers. The outer bark of a trunk protects the inside of a tree from injury as well as acts as an insulator against cold and heat. The phloem is soft and serves to distribute the food produced in leaves to every living cell in a tree. The xylem or sapwood distributes water up the trunk to the leaves, where food is manufactured. The cambium is the thin growing layer found between the xylem and the phloem. The heartwood is the accumulation of older wood which no longer carries sap.

LEAVES

Leaves manufacture food for trees. Food is produced through the process of photosynthesis, which means “putting together with light”. Powered by sunlight, the green substance in leaves called chlorophyll uses carbon dioxide and water to produce carbohydrates. Also through the process, oxygen is released through tiny pores called stomata and water is released through the process of transpiration. In a way, trees act like giant air conditioners, cooling the air with water vapour and expelling oxygen, which we need to breathe. Leaves come in many different shapes and sizes and are attached to the twig in different patterns. For example, some leaves like the maple, are attached opposite one another. Others, like the oak, are arranged alternately on the twig. Observing shapes and arrangement of leaves is helpful in identifying trees.



ROOTS

Roots are the network found underground that helps to anchor the tree. In addition, roots help in absorbing water and nutrients from the soil which trees use to manufacture food and grow. Usually roots extend as far underground as the crown of the tree spreads overhead.

Donate Today!

Your monthly donation of just $15.00 will help grow healthy forests in our communities. Become a monthly donor today and join us in being the voice for our forests.

Donation Information

I would like to support Forests Ontario with a **monthly** donation of:

☐ $50.00 ☐ $25.00 ☐ $15.00 ☐ Other: .....

Name: .....
Address: .....
Postal Code: .....

I would like to support Forests Ontario with a **one-time** donation of:

☐ $200.00 ☐ $100.00 ☐ $75.00 ☐ Other: .....

Email: .....
City: ..... Province: .....
Phone: .....

☐ I would like to receive email updates from Forests Ontario.

Method of Payment

☐ Cheque Enclosed ☐ Mastercard ☐ VISA

Credit Card No: ..... Exp: .....
Signature: ..... CVV: .....

Donations are eligible for a charitable tax receipt.
To make a donation online, please visit: forestsontario.ca or call us at 416-646-1193.

FORESTS ONTARIO

Please return this portion with your payment to:

Forests Ontario
15 Maple Ave, Unit #103
Barrie, On, L4N 2N6