

2021/22 Annual Report

JUNE 2022



Forest Gene Conservation Association
275 County Road 44,
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K0G 1J0

ABOUT THE FOREST GENE CONSERVATION ASSOCIATION

The Forest Gene Conservation Association (FGCA) is a not-for-profit organization unique in its focus on gene conservation, the foundation of resilient forests. For 28 years we have contributed to and helped to improve the understanding of gene conservation, critical to create resilience under our changing climate.

Our Vision A genetically diverse, resilient forested landscape in Southern Ontario that supports healthy ecosystems, healthy people, and a healthy economy.

Our Mission To ensure that genetic diversity is recognized and protected as the foundation of a resilient forested landscape.

Our Goal To assist forest practitioners to conserve the genetic diversity of southern Ontario forests, by implementing 4 Strategies.

Species Conservation

- Implementing recovery programs for at risk woody plant species.

Seed Management Expertise

- Ensuring the supply and use of high-quality, locally adapted woody plant seed.

Climate Change Adaptation

- Providing strategic forest management advice and facilitating assisted migration.

Education & Advocacy

- Increasing awareness and expertise in forest genetic management principles and practices.



MESSAGE FROM THE PRESIDENT

The Forest Gene Conservation Association made an interesting strategic decision several years ago to not become a public facing organization. Our goal statement says that we will " Assist forest practitioners to conserve the genetic diversity of southern Ontario forests". So, while Education and Advocacy are central to our mission, the freedom to not spend a lot of energy competing for attention in the busy world of social media and never-ending news cycles is really starting to bear fruit.

From my view on the Board of Directors I can see that our networks are expanding nicely, that we are being referred to when we are not in the room and that our credibility continues to grow. The FGCA is being invited to speak to decision makers in industry and government both in the field and at the highest levels. We are being asked to present at the right forums and to the right people. The broad challenge of conserving genetic diversity of forests involves specialized knowledge in areas such as Tree Seed Management, Tree Species Recovery, and Climate Change Adaptation but the real challenge is, and has always been, Education. People don't even know what they don't know when it comes to genetic diversity but when the questions come up, and sooner or later they always will, the FGCA with excellent staff and programs is there to guide them.

Please enjoy this annual progress report of how the FGCA navigates the world and tries to make it a better place.

Gary Nielsen



MESSAGE FROM THE CEO

As a member-based organization, we function to support partner programs that have major impacts on the health and well-being of our forest ecosystems, our community and our economy. These partnerships allow us to extend our knowledge and impact beyond jurisdictional and temporal bounds and allows us to make greater strides in our mission and vision. This year we have been able to connect more broadly to programs in the urban forest and rural forests and even forests across traditional political boundaries. The impact that we have by supporting and enabling our partners and members far exceeds the impact of us operating independently. Large and small-scale programs, built on a foundation of forest gene conservation and genetic diversity, can have greater impacts on forest adaptation for an uncertain future.

Our network of partners, members, clients and supporters continues to grow with every meeting, presentation and workshop we host and participate in. We are listening carefully to the needs and concerns of Ontario's practitioners and working hard to give them the tools to act.

It is clear practitioners are listening and the demand for our work is on the rise- the market for source identified seed is growing, climate smart seed sourcing is in demand, more tree species are requiring recovery activities and people are asking how forests are going to be impacted by climate change. We have a long way to go- but that's what we are here for.

We hope you enjoy this year's annual report and see the promise of 2022/23.

Kerry McLaven, MFC, HBSc



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2021/2022 BOARD OF DIRECTORS

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Climate Change Trials

Ontario's Natural Selections

Seed Collection Area Network

Species Conservation

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2021/2022 Staff



From top left to bottom right: Briana, Heather (UTRCA partner John), Kristen, Kerry, Greg, Rosa, Becky, Madelaine, Corey and Meghan



Species Conservation

Each year the FGCA team delivers on programs that aim to capture and conserve the genetic material of woody plant species to support recovery efforts. To date, our work has focused on Butternut, a species facing unprecedented losses due to Butternut canker and land development. The impact of this work is significant due to the foresight of practitioners that paved the way.


Given increasing pressures of invasive species, loss of habitat, and reduction in overall genetic diversity across Ontario we have recognized the need to expand to other species that are facing a similar fate in some areas of the province.

General Species at Risk


Our 2021/2022 Operating Plan built on the networks and initiatives created in 2020 to understand existing species at risk programs in Ontario and across Canada. This past year we worked to develop and implement a survey to align our efforts with existing woody plant species recovery efforts and to capture our member and partner interests in species of concern. This *Priority Species Recovery Survey* was released to obtain insight on how the FGCA can assist in the conservation and recovery of other woody plant species, with input from knowledgeable partners across Ontario. With this information, we will work to amplify existing recovery programs and initiatives and determine how the FGCA can help tackle other species of concern in the Great Lakes St Lawrence and Carolinian forests of Ontario

With the funding support of Project Learning Tree Canada, we were able to hire Rosa Ximena Tejada De La Cruz to help us deliver on the *Priority Species Recovery Survey*. Thanks to a well-developed outreach plan, the survey had a


Priority Species Recovery Survey Results



Participants included Conservation Authorities, ENGOs, municipalities, foresters, arborists consulting firms, federal and provincial government, national parks, ontario woodlot owners, etc.



Participants indicated these species should be the priority of recovery efforts in the Great Lakes St. Lawrence Forest- Butternut, American Beech, Hemlock and Black Ash



Participants indicated these species should be the priority of recovery efforts in the Carolinian Forest- American Chestnut, Flowering Dogwood and Cucumber Tree

very successful response rate of 26%, representing over 140 practitioners in the Great Lakes St. Lawrence and Carolinian forest ecozones.

Butternut Recovery

Butternut continues to be impacted significantly by Butternut canker (*Ophiognomonia clavigignenti-juglandacearum*) and land development which is putting healthy, putatively tolerant butternut and their habitats in jeopardy. Each year, the FGCA takes major strides in the recovery of this invaluable species at risk.



Figure 1 Newly grafted Butternut in the eastern Ontario grafting greenhouse

To address these challenges, we continue to archive healthy butternut within the natural range of the species to promote the production of potentially tolerant progeny for reintroduction.

In 2021/2022 we successfully produced over 550 grafts during our spring grafting program. In addition to new grafts, the team maintained over 800 grafts that were created in the previous two years until they are out planted in the archives. Due to changes within the FGCA team, the internal grafting management plan was added to guide staff and to incorporate new ideas to ensure timelines are met, pests are managed effectively and the tending, handling and storage of newly created grafts is done with utmost care.

Butternut Grafting & Archiving

Interesting Facts:

- Number insects monitored and managed for graft success: 6
- Grafts are inspected almost daily from the day they leave the cooler in the spring to the day they return to the cooler in the fall.
- The archives are visited frequently by native birds, chipmunks, squirrels, voles, dragonflies, groundhogs, porcupines, raccoons, praying mantis, coyotes, foxes, rabbits, bald faced hornets, ground wasps, turkeys, deer and honeybees.
- Vegetation management is a key aspect of our work in the orchards to reduce damage from mice, rabbits and voles.

Over 460 Butternut grafts were planted between our Eastern Ontario, Central Ontario and Southern Ontario orchards in spring 2021. Once planted, our local teams including staff and partners like Ferguson Tree Nursery, Somerville

Seedlings and Upper Thames River Conservation Authority (UTRCA) work to manage the orchards to promote optimal survival.

Natural factors like late-season frosts, significant wind events, poor soil conditions etc. can have an impact on graft survival and overall graft health. In addition to weather and soil, competing flora and fauna can have an impact on graft health and can often be managed by our local teams. Examples include competing vegetation management, rodent management, walnut shoot moth removals and monitoring, Spongy moth (*Lymantria dispar*) treatments, and many other competing factors. By managing these factors and others, we can maintain graft health and reproductive capacity.

Butternut seed orchards are managed to promote optimal growing conditions, graft health and the production of female flowers, male flowers and eventually seed.



Figure 3 Butternut grafts being planted in a FGCA seed orchard, spring 2021

This year's program was successful, and included the following achievements:

- 10 new recovery trees have been identified and assessed for future scion collection
- Over 3,000 Butternut seeds were collected late August from FGCA orchards. Seed has been sown between

Somerville Seedlings and Ferguson Tree Nursery for recovery plantings

- Butternut grafts were obtained from the Ontario Forest Research Institute (OFRI) in Sault Ste. Marie, from which 46 grafts will be used to augment our orchards as needed.
- FGCA's Butternut database is now accessed by all staff and training on data input is ongoing.

As part of FGCA's long term strategy for Butternut recovery, understanding the ideal habitat conditions of the species has been at the top of our list. Continuing work initiated in 2020 and 2021, the FGCA and Rideau Valley Conservation Authority (RVCA) conducted assessments on a small sample of sites in eastern Ontario (10 sites) to obtain an understanding about suitable habitats that promote butternut regeneration and potentially support canker tolerant individuals. This project was conducted with support from the Ministry of Environment and Climate Change Canada (ECCC).

This work would not have been possible without the RVCA's strong network of landowners that are passionate about Butternut recovery and conservation.

Although sampling was limited, some anecdotal observations and recommendations were made:

- Lower canopy closure appears to relate to a reduced number of regenerating Butternut.
- A larger number of seed trees does not necessarily correspond to increased numbers of regenerating seedlings.
- Number of regenerated seedlings did not appear to correlate to any other factors like soils, ground vegetation, etc. at this small sample size.

- Management recommendations included strategically reducing canopy closure around Butternut seed trees where canopy closure is greater than 50%.
- In general, and in absence of site inspections, practitioners should assume Butternut seedlings/saplings are present.
- Sites should be resampled for at least 5 years to monitor survival of new regeneration and seed crops. Additional sites should be added to this study from across the Butternut range.



Figure 4 FGCA Team and Rose Fleguel (RVCA) testing the Butternut Habitat Assessment Protocol

The FGCA was a successful recipient of the Species at Risk Stewardship Program (SARSP) funding provided by the Ministry of Environment Conservation and Parks (MECP) in November. This funding is supporting the development of a

6th, and likely final, Butternut archive in southern Ontario in 2022.

Ash Conservation

In 2020, Black Ash was listed as a species at risk due the continued threat to the species resulting from Emerald Ash Borer (EAB). This species presents a unique case for recovery, as populations differ across Ontario with southwestern Ontario challenged to find any healthy remnant populations and with eastern and central Ontario with significant remaining healthy populations.

The FGCA has engaged in numerous discussions with Sustainable Forest License (SFL) holder partners, municipal representatives as well as members of the Committee on the Status of Species at Risk in Ontario (COSSARO) regarding the listing and its implications on forest management. We have also connected with others at the Canadian Forest Service conducting research on remnant individuals in southwestern Ontario.

With the minister's order to delay the protection of Black Ash in 2021 for the next two years, the FGCA can work to better understand the potential role in supporting Black Ash gene conservation and potential recovery that considers economic, social and cultural impacts.

Seed Management Expertise

Tree seed is a critical component to creating resilient forests for our future. Often, tree seed and the work to obtain tree seed, is undervalued. The FGCA not only works to help improve partner capacity to procure and deploy seed that has the highest possible genetic and phenotypic quality, we also are working to train individuals

who are making the assessment of quality with every hectolitre collected.

Seed Strategy and Transfer

The demand for source identified seed is on the rise, the Ontario Tree Seed Transfer Policy (OTSTP) is becoming more commonly known and understood by forest practitioners, the federal *2 Billion Trees Program* has been launched and municipalities are beginning to request native and source identified material for their restoration needs.

The FGCA continues to actively participate in important conversations pertaining to tree seed procurement, seed transfer and ensuring the collection of high quality genetically appropriate seed. The FGCA has been very active in connecting with like-minded organizations to discuss the role of genetic installations for improved seed collection efficacy and for climate change adaptation. This work is based on FGCA's foundational understanding of former provincial tree improvement programming and research that has surfaced from the Canadian Forest Service.

Some of our successes in this work include but are not limited to:

- Assisting Carolinian Canada Coalition in the development of a seed strategy that keeps tree seed sourcing, gene conservation and climate change in mind.
- Working with Kayanase to support capacity building initiatives including hiring a seed coordinator and developing seed collection programs.
- Maintaining regular communications with the National Tree Seed Centre (NTSC) regarding the Organization for Economic Co-operation and

Development (OECD) forms for seed collection- especially for research collections and cross-border seed sourcing.

- Developing US partnerships for seed collection and future orchard development through support of United States Department of Agriculture (USDA) partners.
- Supporting member SFL holders in seed acquisition and collection.
- Discussions with the Ministry of Northern Development, Mines Natural Resources and Forestry (MNDMNR), Superior Woods Tree Improvement Association (SWTIA) and Northeast Seed Management Association (NeSMA) regarding a long-term forest genetic resource management strategy for the province.
- Reviewing historical provincial genetic installation documentation and GIS files.
- Hosting regular SFL holder meetings to discuss matters pertaining to seed collection, seed banking, climate change, etc.
- Supporting partners like Forests Ontario with seed transfer guidance to support the *50 Million Tree Program*.

In 2021 and 2022 the FGCA signed an exciting agreement with the Petawawa Research Forest (PRF) to support their Adaptive Silviculture for Climate Change (ASCC) project through seed procurement. In an effort to connect with nurseries and growers in the US to support the initiative the FGCA has contacted 47 nurseries across 13 states. This initiative involves seed collection to support: the restoration project, a common garden trial and small collections for the NTSC.

Ontario's Natural Selections

Ontario's Natural Selections

FGCA's *Ontario's Natural Selections* trademark continues to exist through the training and certification of seed collectors. Our Certified Seed Collector (CSC) course gains interest from individuals and organizations across Ontario and Canada and has garnered some interested in the US.

The CSC course was delivered in a hybrid format with virtual and in-person components. This format allowed to successfully train over 75 individuals including interest groups, environmental not for profit organizations, indigenous-led businesses, land trusts, woodlot owners, forestry and arboriculture professionals, college students and many others. The courses are supported by individual registration fees and group fees from organizations looking for group registration like the Algonquin College Skills Advance Ontario, ReForest London, and others. In addition to our general interest groups, other organizations and institutions have expressed interest in non-traditional delivery models of the course. These activities will be pursued in 2022 and 2023.

In-person portions of the workshop were delivered at the following locations:

- Fanshawe Conservation Area, London
- Kayanase, Ohsweken
- Ganaraska Forest Centre, Campbellcroft
- Niagara Parks Botanical Gardens & School of Horticulture, Niagara
- Petawawa Research Forest, Chalk River

In addition to the courses, the *Seeds of Ontario Trees & Shrubs* field manual is sought after by many organizations including government employees, new practitioners and students of all ages, over 150 copies have been sold in

2021/2022. Funding has been promised to support manual updates in 2022/23 including those that reference the new Ontario Tree Seed Transfer Policy.



Figure 5 Kristen delivering the in-field portion of Certified Seed Collector Course with Kayanase in Ohsweken



Figure 6 White pine cones cut in half to show CSCs the importance of a cut test to assess seed quality and maturity



Figure 7 CSC course attendees getting their hands dirty picking spruce cones at Pineneedle Farms

We continue to experience the effects of the closure of the Ontario Tree Seed Plant, as private companies and not for profit organizations develop capacity to collect, handle, process, test and store tree seed. At every point in this process, seed quality can be impacted and as such, the FGCA has begun the development of a Seed Quality Guidelines that will ensure that quality seed, collected by certified seed collectors, is handled, processed and stored with care to preserve quality. The FGCA, through support of the Forestry Futures Trust, has developed an outline and has conducted initial interviews with seed processing and storage facilities to ensure all aspects of seed handling are covered. Potential users of this guide are eager to see the results of the project in 2022/23.



Figure 9 CSC course attendees at Kayanase using cone cutter made by FGCA member Brian Swaile



Figure 8 A cut test of a Butternut seed, checking for insect damage and seed development

White Pine Seed Orchards

The FGCA and local partners continue to monitor and maintain the Cayuga, Glencairn, Scugog, Westmeath and Taylor Lake seed orchards in south and central Ontario. This work is predominantly supported by the Forestry Futures Trust with some investment by organizations like Forests Ontario, Somerville Seedlings and in-kind support of local members and volunteers who have an interest in the Ontario orchards.

These orchards have been designed for the purpose of seed collection to support crown reforestation efforts. Seed collected to date has been utilized in central and southern Ontario.

Work conducted within the orchards focus on maintaining graft health and site access for cone collection. This past year there was no collectable crops, however the FGCA delivered on the following activities:

- Mowed to control competing vegetation
- Cone forecasting (2021 and 2022)
- Inventory updates and mapping
- Site cleanup (post wind and storm events)
- Gate and access repairs
- Obtained management quotes and recommendations

In addition to the operational work conducted in the orchards, staff are regularly improving internal expertise on orchard management, orchard creation, activities to augment cone crops and other practices commonly used in orchard management across Canada.

Climate Change Adaptation

For forest practitioners who tackle complex problems everyday, climate change offers a

complexity beyond any manual or guide can provide us. Fortunately, there are excellent researchers at the international, national and provincial level working to help us understand the potential changes our climate is facing and how our forests may respond to those changes. The FGCA works to empower practitioners and organizations with this knowledge, to help build local programs, projects and initiatives that recognize the symptoms of climate change and develop plans and tools which will allow us to respond

Climate Change Adaptation Strategies

Thanks to the support of the Forestry Futures Trust, we continue to assist crown forest managers in climate change adaptation initiatives. This work continued in 2022 with Westwind Forest Stewardship Inc. and the French-Severn Forest. A climate-ready Seed Production Area (SPA) and Assisted Migration Trial comprised of over 2,800 seedlings was established using two southern Ontario seed sources and plans are underway to add a third seed source from the United States.

In addition to the SPA, the FGCA developed a Tableau package for Westwind which included a basic climate change vulnerability assessment which was based on electronic Forest Resource Inventory (eFRI) data to determine the French-Severn Forests' areas of greatest vulnerability under climate change. With COVID restrictions behind us, plans are underway to conduct a site visit with Westwind managers and foresters to discuss this data and how it may or may not impact forest management planning and silvicultural treatments.

Early in 2020, Forests Ontario engaged the FGCA to complete an analysis of EcoDistricts in Ontario representing a diversity of planting sites and conditions within the *50 Million Tree Program*.

The results of the analysis were summarized in the report *Creating Resilient Forests in Ontario* which included takeaways that would help support program development, program guidelines and communications for nursery and planting partners. Elements of the analysis were presented at the 2021 Forest Health Review.

The FGCA continues to garner interest in projects like assisted migration trials, seed sourcing support and other climate-conscious forestry projects. Conservation Halton has been a large supporter of the FGCA over the years and expressed interest in an exploratory climate change analysis that would support the development of a SPA that will support Conservation Halton's tree planting initiatives in the future. Climate Change analysis was completed and presented in a Tableau product for Conservation Halton's staff to interact with readily.

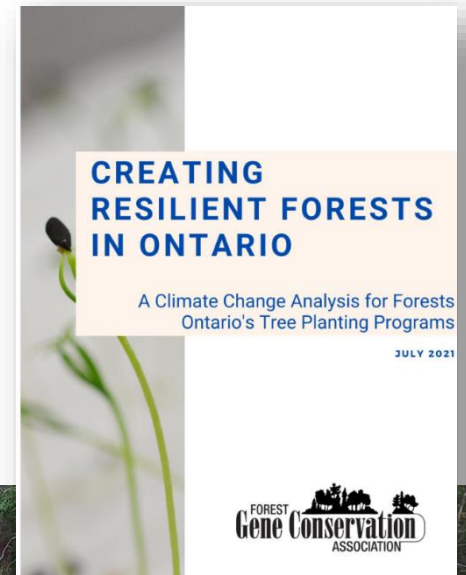


Figure 10 Corey and Madelaine planting the French-Severn Forest Seed Production Area, Fall 2021

Assisted Migration

In 2020, the FGCA undertook an exciting project to create 4 SPAs with the assistance of JD Irving's Cyc Design program. Stock was grown using clonal open-pollinated seed collected from the Cayuga white pine seed orchard in southern Ontario. Due to COVID-19, only two sites were planted in the first year, the remaining two sites (Glencairn and Westmeath) were planted in spring 2021. This was a large project and involved FGCA staff, local practitioners, contractors, volunteers and even FGCA family members for its ultimate success.

After completing monitoring of the 2020 sites, some refill was required and was completed in the spring 2021 as well. These SPAs were continually monitored and tended as necessary to reduce competing vegetation from newly established seedlings.

To answer the many questions of our partners and members about the value of assisted migration, the FGCA and its host partners continue to maintain and monitor the assisted migration trials established between 2010 and 2016. This year, the Salford Bur oak assisted migration trial was monitored and measured. A small, collectable crop was detected and was collected for potential use and stored at Kayanase for spring sowing.

The Climate Change Trial committee continues to discuss the long-term planning objectives for the trials. This work will be continued as we strategize with host partners to understand their operational capacities to maintain these sites.

Education & Advocacy

Our work to support practitioners often happens organically. This is thanks to our incredible partners who invite us to present and take part of initiatives right across Ontario. By sharing our work and our partners work, we obtain greater insights from participants on the challenges practitioners face in capacity and yield a better understanding of how we can support and augment their programs.

Membership

As a membership-based organization, the FGCA maintained a membership of 57 in 2021/2022. Members represent a diversity of organizations and expertise including provincial and federal government, research, forestry professionals, Conservation Authorities, indigenous individuals and indigenous-led organizations, Sustainable Forest License holders, environmental non-governmental organizations, tree and seedling nurseries, municipalities, seed collectors, etc.

We have been working on broadening our membership network by developing a membership strategy. Thanks to the Fleming College placement program, we were able to access student Samantha Cunningham for 2 weeks to help strategize around membership including membership evaluation and exploring member offerings.

The FGCA membership helps support our participation in important conversations related to Ontario biodiversity initiatives, important government consultations on species at risk and at-risk species, federal and provincial tree planting and seed related initiatives along with many more activities. We work to bring the expertise and perspectives of our members that help to realize our mission and vision.

In 2021/2022 we engaged with our membership through our Annual General Meeting, through Facebook, LinkedIn, in emails and meetings. We also work to facilitate greater knowledge transfer between members through business and program transactions.

Events and Displays

The FGCA has attended over 30 events between April 1, 2021 and March 31, 2022. Including those that connect with urban and rural foresters, arborists and land managers. We have also connected with local and regional woodlot owners through our partnership with the Ontario Woodlot Association (OWA).

Presentations have been delivered at the following events:

- Ontario Woodlot Association's Annual Meeting
- International Union for Conservation of Nature (IUCN) Global Youth Summit Panel on Climate Change and the Future

of Green Jobs, moderated by the Sustainable Forestry Initiative.

- Ontario Professional Foresters Association- panel moderation
- Forests Ontario's Annual Conference and Forest Health Review
- Ontario Biodiversity Summit (FGCA presentation)
- Kawartha OWA Chapter Butternut tour
- Kemptville Woodlot Association Annual Meeting
- Certified Seed Collector Courses (London, Ganaraska, Niagara and Kananaskis (Ohsweken)
- Northern Hardwood Conference
- 2 Billion Tree Program Regional Round Table (hosted by FO)
- Kawartha Land Trust board of trustees
- Forests Ontario staff Creating Resilient Forests

Due to the virtual nature of many conferences, workshops and webinars, staff have taken part in events regarding forest health and forest genetics including but not limited to:

- Northern Hardwood Conference
- Evoltree Conserving genomic diversity for climate resilience in a changing world webinar
- Forest Nursery Technology Seminar
- Forest Nursery Technology Seminar series hosted by Western Forestry and Conservation Association
- Consultation workshop on Toronto Requirement for Regionally Sourced Native Plants
- Nature of Oaks and Oak Regeneration in Michigan
- Forest Pest Management Forum
- ISTA/ISSS Seed Longevity and Conservation Webinar

- Adapting reforestation and restoration to climate change: genetic considerations CIF e-lecture
- ArcGIS Field Apps webinar
- OPS Tableau user group meetings

Website and Social Media

The FGCA has the greatest traction with our target audience on Facebook and through our staff's personal social media accounts. The work on social media, drives our audience to our website. Weekly posts on Facebook are well received, our followers especially enjoy content about Butternut recovery.

The FGCA team has been working hard to document the work we are doing through pictures and videos. By displaying a diversity of content on Facebook, we can gauge the interest of our audience of over 600.



Figure 11 Some of the FGCA's most popular content on Facebook

Forest Genetic Resource Management Shortcourses

For years, the FGCA has been advocating for the importance of forest gene conservation. This year, through the support of Forestry Futures Trust, we endeavored to compile a series of resources and presentations to help make board, staff and partners more comfortable with the fundamentals of gene conservation. In 2021 we delivered a trial genetics quiz through Google Forms to a small sample of FGCA membership- this quiz helped to gauge understanding of basic forest genetics amongst those working in this area. Board and staff have received more rigorous training through presentations and through internal discussions while developing and implementing programs.

The quiz results, along with inquiries we receive while delivering presentations at conferences and webinars, has helped us to develop virtual modules through Learn Dash which will be launched in 2022!

The FGCA continues to deepen our knowledge of forest gene conservation, historical tree improvement programs and the impact of climate change on forest genetic resource management both in the area of the undertaking and in southern Ontario. We obtain this knowledge by participating in conferences and workshops in the United States, Europe and across Canada. We also look to improve our knowledge of modern and traditional practices through our board members, researchers and strong partnerships with the NeSMA and the SWTIA, Forestry Futures Trust and the Ontario MNMNR.

Forest genetic resource management expertise stretches across all program areas, from species at risk recovery, to seed sourcing and seed quality to climate change adaptation.

Administration & Human Resources

The FGCA prides itself on maintaining programs that enable real action and enhanced capacity, as such we have been working hard to create efficiencies internally in our administrative processes.

We have endured another year of COVID-19 with no work-related COVID incidences. The pandemic has led to minor increases in administrative and health and safety costs however it has been worth it to keep our staff and their families safe.



Figure 12 Kristen, Kerry and Madelaine smiling after planting 2,800 white pine seedlings near Harris Lake (missing from picture- Corey)

In 2021 we became a fully remote office with all staff equipped with the materials they need to deliver on programs from their home offices.

The FGCA has employed several internal policies

that help keep our staff safe, help staff understand their contributions and the value of their contributions to the organization. Additionally, we have implemented policies and practices that respect diversity and inclusion, workplace safety and mental health wellness within and outside of our organization. Not only that, but we also continue to respond to the needs of our staff including flexible work schedules, especially in the past year.

With Gratitude

We are the organization we are today because of the passionate individuals who paved the way. This year we want to thank two individuals who have moved on from the FGCA to new and exciting ventures.

Rose Fleguel

Rose's long and storied history with Butternut began in the early 90's when she worked with the Ministry of Natural Resources' Fast-Growing Forest (FGF) team including Barb Boysen, Cathy Nielsen and many others. As the FGCA formed, Rose's work continued with both the FGCA and the RVCA, who through Rose, worked collaboratively to build strong Butternut recovery efforts in eastern Ontario. With Rose's commitment to Butternut, and her strong connection to private landowners in eastern Ontario, she helped build the strong foundation of our work. Butternut recovery was built from then on, the combined passion of Rose, Barb and many individuals generated revenue to do this important work. Rose, words are not enough to explain how thankful we are for your passion for this cause and your efforts to build the program we are so proud of today. Thank you.



Figure 13 Rose Fleguel grafting Butternut in 2018

Sylvia Greifenhaagen

The FGCA would like to thank our research partner Sylvia who retired in 2021 from the Ontario Forest Research Institute (OFRI) in Sault Ste. Marie. As a strong partner of the FGCA, with the Ministry of Natural Resources at the time, Sylvia contributed substantially to the Butternut recovery efforts of the FGCA. Her work at OFRI included completing Butternut grafting, performing inoculation trials and providing support for DNA testing for Butternut hybridity. Sylvia, your contributions to the FGCA Butternut Recovery Program are substantial and we cannot thank you enough for your support, expertise and passion for the cause.

Acknowledgements

In addition to our new and renewed members, we would like to thank the following organizations for their help in making 2021/2022 successful:

- Forestry Futures Trust
- Ministry of Environment Conservation and Parks
- Environment and Climate Change Canada
- Rouge National Urban Park
- Forests Ontario
- Somerville Seedlings Inc.
- Ferguson Tree Nursery
- Upper Thames River Conservation Authority
- Kayanase
- ReForest London
- Algonquin College
- Fleming College
- Project Learning Tree Canada
- Conservation Halton
- Natural Resources Canada
- Petawawa Research Forest
- National Tree Seed Centre
- Ontario Forest Research Institute
- Pineneedle Farms
- Ground Covers Unlimited
- Westwind Forest Stewardship Inc.
- Grand River Conservation Authority



Figure 14 Somerville and FGCA at Kayanase discussing seed processing and pricing

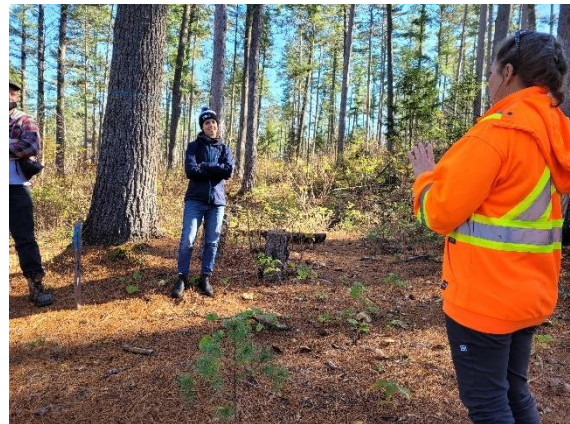


Figure 15 Liz Cobb discussing Canada's oldest forest monitoring plot during the Petawawa CSC



Figure 16 Kristen, Becky and Briana beside white pine cones on drying racks at Ferguson Tree Nursery



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