Issue #93 - Spring 2025
Newsletter of the Canadian Chestnut Council

http://www.canadianchestnutcouncil.ca

Council Mission - to help restore the American Chestnut to the areas of Canada it once occupied.

Current Priorities

1) Breeding resistance
2) Breaking Isolation / Establishing Gene Pool Nodes
3) DNA Analysis
4) Survey of existing Chestnuts in the wild

Front Piece - American Chestnut leaves (Photo: John F. Foster)

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Chair's Comments for 36th AGM of the Canadian Chestnut Council held Sunday Oct 27, 2024
Respectfully submitted By Ron Casier, Chair of CCC

The thirty sixth year for the Canadian Chestnut Council has seen progress continue to be made in our goals to restore native blight resistant American Chestnuts to their ecological, cultural, and economic roles in Canada.

Dr. Dragan Galic with various partner groups and our tremendous volunteers have successfully completed another year of germinating seeds, grafting trees, and getting them in the ground this autumn. Inoculations of the F2 generation has continued and measurements were taken. Dragan has determined the best F2 cross selections for breeding, followed by hand pollinations, and harvesting of

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the F3 nuts. Breaking isolation of select chestnuts continues as does the establishment of Seed Gene Conservation Colonies. An additional F3 Generation orchard has been established in our breeding program for resistance and work on large nut production for commercial purposes continues. Dragan will provide more details in his presentation.

Dr. Brian Husband's Lab and Doctorate Candidate Sophia Stoltz continued their analysis of the genetic uniqueness and environmental characteristics of the Northwestern population of American Chestnut in Ontario and provided DNA analysis for submitted specimens for genetic testing. The ten-year resurvey of the native American Chestnut in Southern Ontario was not carried out this year as anticipated but will be a priority for this coming year. Sophia will provide additional information in her presentation "Modelling the Restoration Potential of Ontario's American Chestnut". Our social media presence on Facebook and Instagram continues the promotion of the American Chestnut and the work of the CCC. The renewal and relaunch of our new website has finally been accomplished with e-payments and other membership capabilities. The CCC was recognized by the Catfish Creek Conservation Authority for our outstanding contributions to the Catfish Creek watershed and continuing outreach to the community.

Despite the scientific error in the Darling 58 GMO tree, we continue our cooperation with the Canadian Biotechnology Alliance Network in opposition to the renewed promotion of GMO chestnut: Darlings 58/54 and Dar Win by the Syracuse University of New York.

Two new threats to the restoration of the American Chestnut were recognized and investigated. American Chestnut's vulnerability to Oak Wilt Disease was identified and is now included in the Invasive Species Centre's data base and acknowledged by the CFIA in its prevention programs. The spread of Asian Chestnut Gall Wasps in Ontario has been added to the MNR monitoring protocols.

Through the dedication and efforts of the Council, the new Constitution and By-laws for the CCC were presented at this AGM for ratification by the memberships which formalize our structure and operation.

At this time, I wish to acknowledge the work, dedication, and support to the CCC by retiring director Chuck Beach. In his ten years as director, Chuck has been a major contributor to the operation of the council, having taken on the roles of secretary and newsletter editor and formalizing the AGMs. Chuck also spearheaded the creation of our new website and has diligently and with much effort accomplished the task with its launch. His mentorship and counsel will be missed on Council.

Vice Chair Christine Vey is stepping out of that position but remaining as director. I wish to thank her for her work and council as vice chair in supporting the board.

On a sad note: John Hill, a quintessential American Chestnut enthusiast, and supporter of the Canadian Chestnut Council passed this past year. John served over 21 years as a director, was an ambassador for the council and the species and cared for the research plots at Onondaga Farms. His talent with creating Chestnut wood articles was amazing and is definitely absent this year at the AGM. The

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Council has spear headed a Memorial Fund through the Brant Community Foundation to honour John's contribution to the community and council.

Lastly, I wish to give a heart felt thank you to all the membership for your continued support of the work of the Canadian Chestnut Council in preserving and restoring the American Chestnut in Canada. To the directors of the council for your continued and tireless work and effort in the operation of the council, I thank you. Thank you to the extraordinary volunteers that have participated in the various work bees on behalf of the Canadian Chestnut Council this past season. Without you and your generous sharing of time and energy we could not get the necessary work accomplished.

John Hill Award Fund

Dear Friends and Colleagues;

Have you ever met someone, who inspired you to be the best version of yourself, someone who challenged the way you think, and who gave 100 % all the time? We have, and it changed us.

The John Hill Award Fund has been created as a memorial to a man who made an impact on all the lives he touched. His dedication to agriculture and the environment was instrumental in helping to create a property that boasted a symbiotic balance between farming and the natural world around it.

His dedication and work ethic will be remembered as being attributes that set him apart from others. Always willing to lend a hand to a neighbour, help a cow during birthing anytime day or night, or support a project with his own learned knowledge in various trades. He gained immeasurable pride in his accomplishments and was known to often fall asleep at the dinner table (much to his own children's amusement). He taught himself how to do most things before it could be Googled.

"Farmer John" grew up on a farm in Branchton, ON. He attended Branchton Public School until his father passed away suddenly. John took over managing the farm. He proudly helped build a dairy herd which surpassed milking records for its time. After that, he moved to Onondaga Farms where he helped create a property that boasted a balance between agriculture and the environment. As the Farm Manager, John was instrumental in building an internationally recognized herd of Purebred Polled Hereford Cattle. Years later, that farm was transferred to The Tim Horton Children's Foundation to provide an opportunity for underprivileged youth to attend camp; John continued his legacy and inspired countless children to try new things, while introducing them to farm life, conservation, and many other life skills.

One of John's great sources of pride was his work with the Canadian Chestnut Council. Beginning in 2002, John helped to plant thousands of Endangered American Chestnut trees. This plot at the Tim Horton Onondaga Farms was the beginning of another part of his legacy. These trees were planted by him and many volunteers as a vision to inspire anyone who visited to think further than today and tomorrow. This plot was a reminder that sometimes great things require patience. The blight that affected these trees wasn't going anywhere…but with perseverance and hard work there was a chance to restore this legendary tree back to the forest and John gave all he had to support this initiative. Over 20,000 trees were planted at Tim Horton Onondaga Farms over 20 years with John's leadership and the Canadian Chestnut Council.

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John was the quintessential American Chestnut enthusiast and served on the board of the Canadian Chestnut Council for over 21 years. More than a director, John planted, managed and maintained the main Chestnut research plots at Onondaga Farms. He was an ambassador for the species and the Council with his educational outreach to the various organizations and events in the Brant region. He utilized his skills to salvage chestnut wood and produce wonderful wooden crafts and chests to promote and fund-raise for the benefit of the species and Council. John was unselfish in his contributions and a faithful navigator for the Council, keeping it focused on its mission to restore the American Chestnut.

John knew the value of hard work. His day finished when the work was done; not when the sun went down. The legacy he has left is one that will surpass his passing.

Our world needs inspiration for youth to want to go the extra mile. Not everyone is fortunate to have someone who pushes them to be the best version of themselves.

To honour John, the Canadian Chestnut Council has established a memorial award fund with the Brant Community Foundation. We ask for your support in helping create an Award in John's name.

This award is to be given annually to a graduating grade 8 student at Glen Morris Public School, who shows passion for agriculture and/or the environment. It serves as a reminder that hard work does get noticed. Through this award, it is our hope to inspire the recipient to strive for a future in either or both two fields and in doing so, create their own legacy.

Here is how you can make a donation:

Donate online at www.brantcommunityfoundation.com. Click on the "Donate Now" button at the top of the page. A drop-down menu under the Fund section lets you choose the "John Hill Award Fund".

A charitable receipt will be issued for all donations.

For further information, contact the Brant Community Foundation at 519-756-2499.

Sincerely, on behalf of the Canadian Chestnut Council

Ron Casier

Chair, Canadian Chestnut Council

Update on GMO American Chestnuts
By Ron Casier

As recently reported in the MIT Technology Review: Biotechnology and Health, the Syracuse University of New York (SUNY)– environmental science and forestry dept (ESF) is still pursuing registration of Darling 54 despite their labelling mix up and mixed results with Darling 58.

The American Chestnut Foundation (TACF) has withdrawn their support of the U.S government

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approval of the SUNY GMO trees. SUNY has signed an exclusive commercial agreement with a biotech upstart: American Castanea for next generation biotech tree called DarWin. This private equity firm's intention is to accelerate the production and distribution of the GMO trees and make money doing it. This did not sit well with TACF, which wanted to make the tree freely available and is concerned with the commercial licensing for the Darling 54 and DarWin trees.

American Castanea potentially could make millions in profit from the sale of the tree. SUNY ESF and American Castanea continue to seek approval of their GMO trees for release. The U.S. Nature Conservancy supports GMO efforts to restore tree but it also supports the traditional cross breeding programs. TACF has withdrawn their support of the U.S government approval of the SUNY GMO tree because of the mix up.

The American Chestnut Cooperator's Foundation (ACCF), another American Chestnut organization, continues its cross breeding. This is the same approach as the Canadian Chestnut Council in trying to cross breed a blight resistant tree utilizing the native tolerance to the blight. Unlike the CCC which is constrained by the Endangered Species Act, the ACCF is able to freely distribute seed and seedlings.

Opposition to the Darling 54 and DarWin release continues through Global Justice Ecology Project (GJEP) and the Canadian Biotechnology Action Network (CBAN), Canadian Chestnut Council (CCC) and The American Chestnut Foundation (TACF).

American Chestnut Conservation Year in Review RBG 2024

By Sarah Richer and Jack Robinson
-- 2024 Species at Risk Team--

"Royal Botanical Gardens RBG American Chestnut CCC Blogpost –
American Chestnut Dating Service 2025-01-28"

With the new year now in full swing, it is easy to swiftly move on from the previous year while wondering "what's next?", but at moments like this it's important to reflect on the highs and lows of the previous year to make the next one as incredible as possible. In 2024, Royal Botanical Gardens had another successful year of American Chestnut conservation full of memorable highlights. From expanding on the opening stages of a new seed orchard to the testing of novel management practices, there is a lot of information to share about our growing understanding of the chestnuts on our properties.

American Chestnuts are not self-fertile, meaning they need another American Chestnut tree to cross-pollinate with to produce viable pure American Chestnut seed. A problem that occurs across the American Chestnut's range as well as here at RBG is that all the American Chestnuts that remain on

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the landscape after humans caused a blight to sweep across the continent are now too far apart to fertilize each other. This means the species is considered functionally extinct - destined for annihilation once the current specimens reach the end of their lifespan. RBG currently has only approximately 12 known American Chestnuts across our properties, though only three are mature enough to produce seed, only two of those three are healthy, and the seeds produced are generally not fertile. Occasionally a tree can produce a handful of accidentally self-fertilized viable nuts – the trick is getting to them before mold, insects, or squirrels destroy them. An added concern is whether or not a seedling grown from a self-fertilized nut is capable of producing viable nuts in future. RBG Visitor Diane Edelsward generously donated a pool leaf net we were able to use to attempt nut collection under one of our fruiting trees; we found none this year, we hope next year will be different.

Churchill Park chestnut - checking net for fertilized nuts (Photo: Sara Richer - RBG)

Planting chestnuts at Longwood (Photo: Sara Richer - RBG)

Directed by Species at Risk Ecologist Sarah Richer, RBG's Longwood seed orchard is a project that aims to reduce the geographic range between the individuals comprising RBG's dwindling American Chestnut population by planting viable clones of RBG's trees in a single area of suitable habitat. In 2022, we collected over 50 cuttings from four of our wild trees and delivered them to Dr. Dragan Galic for propagation at the University of Guelph's Simcoe Research Station. He was able to make 11 grafts from three of those trees, planted in 2023. Another 64 cuttings and two seeds from six other trees were collected at the end of 2023 and early spring 2024. The 11 individuals already planted at the seed orchard were quickly almost quintupled when Dragan informed us that he successfully turned our delivered propagation material into 39 grafts and 2 seedlings. This began a period of planning, planting and protecting spanning August 13th to October 10th.

The process started by creating guards against damage from mammal browsing. This involved constructing spacious, 4-foot-tall deer browse protection cages equipped with removeable doors we added to allow for easier management of any invasive plants that might sprout up within them in

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future. We extend our gratitude to RBG's Arboretum horticultural staff who generously provided us with materials for browse protectors from their own spare stockpiles. Since rabbits and small rodents could hop through the deer browse cages, we also crafted rabbit-browse guards from galvanized chicken wire and rodent guards from plastic tree guards. We then dug 41 new holes, and each spot was uploaded to our GIS database so that tree placement was arranged in a way that maximizes the genetic diversity of their future seeds. After each sapling was assigned a hole, an exclosure with two T-bars, rodent and rabbit guards, and a tag number, trees were carefully planted across three days of work.

Volunteers making browse cages at Longwood (Photo: Sarah Richer)

Mulching with browse protection before and after (Photos: Sarah Richer)

Once the saplings were in the ground, volunteers were invited to assist us with mulching around each sapling to help the soil to retain moisture while suppressing competing weeds. We removed staples and tape from loads of cardboard retrieved from our recycling bins, ripped it into laptop-sized chunks, soaked each piece, and placed two layers of these soaked pre-cut pieces around each planting. Then, a total of three yards of shredded bark pine mulch were distributed amongst the 41 saplings atop the wetted cardboard. Each tree was given 3 L of water, both when planted and weekly for four weeks afterwards to reduce the chance of transplant shock and help the roots get established. Once the trees were in the ground and watered, frequent visits were completed October through December to monitor the condition of the trees and their browse protection as well as control the spread of invasives. Not all of these grafts will make it to adulthood, but in about 15 years the survivors will be able to cross pollinate and start producing fertilized nuts that can then be planted back into RBG's natural lands.

New larger chestnut mudpack (Photo: Sarah Richer)

The seed orchard absorbed much of our chestnut monitoring time in 2024, but it wasn't the only thing we accomplished. Early in the year, one of our two-stemmed wild trees became infected with blight after it was wounded by a falling tree. Both stems had wounds, but only one showed signs of infection, so in early July we implemented a management strategy called "mud packing" to guard the developing suckers of the already infected stem. This practice involved packing

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thick layers of site-sourced mud atop the wound to mimic the conditions below the soil surface where the blight is unable to enter the tree, a technique used to help heal blight lesions in sites south of the border but we are unsure whether it has yet been implemented in Canada. The mud pack was removed from the tree in October with no new signs of blight appearing. We plan to continue the mud packing where necessary to help stave off further blight lesion development where found.

Asian chestnut gall wasp - gall opened (Photos: Sarah Richer)

We've also had to start inspecting our young Chestnuts for signs of the invasive Asian Chestnut Gall Wasp – an invader brought in from the landscaping and horticultural industry that is poised to wallop our remaining Chestnuts. Unfortunately, non-native chestnuts planted across the landscape will also host and produce more of these destructive pests, placing further pressure on our endangered American Chestnuts and the conservationists struggling to protect them. We inspect our plantings in the spring for the wasp's tell-tale galls warping young leaves and buds; any galls found are removed using sterile tools and promptly destroyed by fire or boiling, a cathartic exercise in invasive species management.

New chestnut seedling beside Bulls Pt tree (Photo: Sarah Richer)

Volunteer arborist collecting cuttings (Photos: Sarah Richer)

Two new American Chestnut trees were discovered on RBG property in 2024. The first was a young adult found while tracking turtles in the area, less than 500 m from the mud packed tree. This tree also had a small wound from a fallen tree against its base, so it was mud packed for a shorter period. The second newly found tree was the first naturally occurring seedling ever found on RBG property, directly below one of our largest adult trees dying from blight infection. No cuttings could be collected from the two newly found trees, though we collected a total 16 cuttings from five other trees

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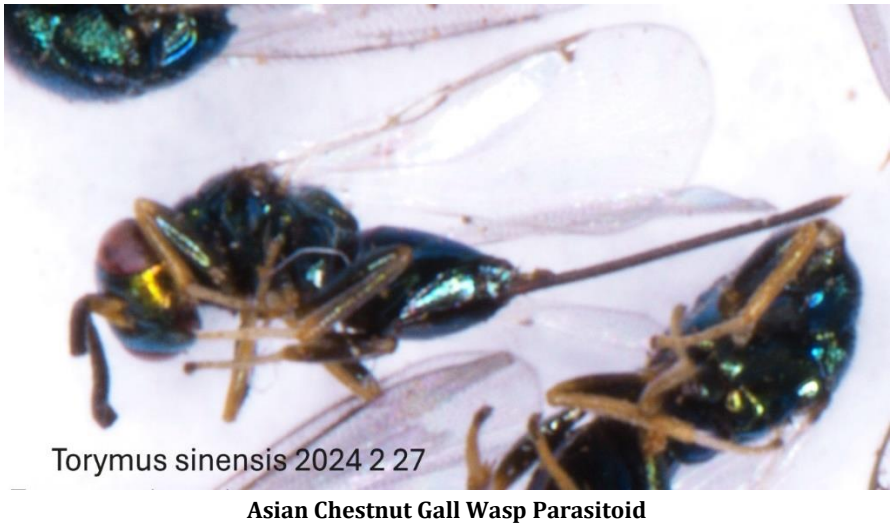
that were delivered to Dr. Dragan Galic for propagation December 2024. A volunteer arborist generously donated their Saturday to collecting cuttings from branches otherwise out of reach.

All in all, it was a fun and exciting year of new discoveries and accomplishments for American Chestnut conservation at RBG with some new progress made and the foundations laid for hopefully even more success in the coming years. RBG would like to thank the entirety of its Natural Lands Staff for their efforts, especially 2024's SAR Intern Jack Robinson, and stellar RBG volunteers Joshua Goodman-Caines, John Hall, Chad Hills, Joyce Killin, Peter Morley, Fiona Morrison, Ross and Margaret Plant, and Danny Stone. We could not have done this without the talents of Dr. Dragan Galic of the University of Guelph, and the members and board of the Canadian Chestnut Council. Thanks for an amazing 2024, here's to an even better 2025!

Biocontrol for the Asian Chestnut Gall Wasp
By Ron Casier

The invasive species **Asian Chestnut Gall Wasp** (ACGW) - *Dryocosmus kuriphilus*, first entered Ontario on the Niagara Peninsula in 2012 and has steadily spread across southern Ontario. The severity of damage being caused by this invasive to all species of chestnut became apparent in 2023 in Ontario.



Asian Chestnut Gall Wasp Parasitoid
(Photo: David Dutkiewicz, Invasive Species Centre)[2]

Michigan chestnut growers suffering from the same invasive had received approval for the release of the parasitoid wasp *Torymus sinensis* five years earlier in 2018. To get approval for such a release in Ontario would take at least 10 years. The CCC approached the Forest Disease and Pest Unit of the MNR to investigate the ACGW at Central Elgin Research Plot due to its severe infection. Gall specimens were collected twice last year.

In the course of their labs research, they were able to hatch out a large population of the parasitoid wasp *Torymus sinensis*. This is great news for the chestnuts in Ontario in that the parasitoid wasp has spread into our region despite the relatively small number of in the southwestern counties. We anticipate a reduction of new galls in the research plot. The MNR is planning on continuing its investigation into ACGW and how far *Torymus sinensis* has spread by sampling additional sites.

(N.B. - *Torymus sinensis* - **Oriental Chestnut Gall Parasitoid** - Family *Torymidae*)

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Asian Chestnut Gall (Photo: Ron Casier, CCC)[1]

Asian Chestnut Gall Wasp (Photo: MSU Extension)[3]

Photo References

1 - Casier, Ron. 2025. **Asian Chestnut Gall photo**. Canadian Chestnut Council Central Elgin Test Plot, Elgin County, ON. Used with permission of Ron Casier.

2 - Dutkiewicz, David. 2024. **Torymus sinensis photo 2024-02-27**. Entomology Technician with the Invasive Species Centre, Sault Ste. Marie, ON.

3 - Lizotte, Erin. 2022. **MSU research sheds light on Asian chestnut gall wasp in Michigan - Photo 5410749**. Michigan State University Extension, East Lansing, Michigan, USA. https://www.canr.msu.edu/news/msu-research-sheds-light-on-asian-chestnut-gall-wasp-in-michigan - Accessed 20250630Mon.

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2025 Crop of Trees
By Neil Dunning

On February 22, 2025, an enthusiastic team of CCC Board members and friends planted our 2025 crop of American Chestnut trees. Each seed planted was labelled to show its parentage. These trees will be planted out this September inbreaking isolation projects and gene nodes in selected southern Ontario locations.

Tony Jovan and Grieg Garland Planting Nuts
(Photo: Neil Dunning)

Making Nut Labels
(Photo: Neil Dunning)

Planting Nuts in the Bin
(Photo: Neil Dunning)

Bin with planted Nuts
(Photo: Neil Dunning)

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The Planting Crew
Left to right: Ron Casier, Tony Jovan, Gord Chinnick, Amara Johnston, John Alexander, Greig Garland, Chuck Beach, Serina Tourangeau, Dragan Galic, Ken MacGillivery. (Photo: Neil Dunning)

Updates 2025
By Dragan Galic

This year's grafts of about 150 to be repotted soon (from eight different genotypes of native chestnut).

This year's chestnut seeding session was done on Saturday, 22 February and 10 board members helped. We seeded about 2600 chestnuts of those 385 nuts of F3 generation, 296 large nuts genotypes and 1919 nuts of native origin. Currently we have about 150 taken grafts of eight different genotypes of native origin.

American Chestnut seeding grafts
(Photo: Dragan Galic)

American Chestnut saplings
(Photo: Dragan Galic)

About the Canadian Chestnut Council

Updated Canadian Chestnut Council Website

The Canadian Chestnut Council is testing a new website. Please have a look at: www.canadianchestnutcouncil.ca We invite you to have a look and explore.

Annual Meeting of the Canadian Chestnut Council

The annual meeting of the Canadian Chestnut Council is coming up. The meeting will take place both in person and virtually. Please mark your calendars.
Date: Sunday, **Oct. 19th**, 2025
Time: 1:00pm. **In person reception begins at noon**.
Location: Tim Hortons Foundation Camp – Onondaga Farms Eco- Centre 264 Glen Morris Rd E, Brant, ON N0E 1N0

Annual Membership Fees

Membership fees for the Canadian Chestnut Council are due as of the Annual Meeting in October. Only members in good standing have the ability to vote at the annual meeting, be apprised of events and receive the quarterly newsletter.

2024/2025 Membership Fees – effective October 2023 - $35.00

By Mail: make cheque payable to "Canadian Chestnut Council" and send to
Secretary, Canadian Chestnut Council
c/o Jeff Leader,18 Forbes St., Glen Morris, Ontario, N0B 1W0
or bring it to the next meeting or special event.

By Internet: Please **send your e-transfer to** ccc.membership17@gmail.com.

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Newsletter Editor's Note:

When one looks at the list of archived CCC Newsletters, there are several missing editions. If you have one of those in your records or even digitally, could you please let me know? I would like to see CCC's collection of Newsletters complete and filled out. Perhaps we could get in touch with former Board members and members.

http://www.canadianchestnutcouncil.ca