

ACER NEWS

SPRING/SUMMER 2022



Celebrating 35 Years in the Community!



This year marks the 35th anniversary of the Association for Canadian Educational Resources (ACER) — for 35 years we have been working with schools and communities to help care for the environment. Since our start in 1987, ACER has focussed on trees and their crucial role in the health of our planet and our lives.

Celebrate with an Anniversary Donation

Please consider making a special anniversary gift to help make ACER's future even more productive than its past. Donate now, to ACER's 35 Years and Growing Anniversary Campaign. Clicking on the underlined words will take you directly to the donation site at Canada Helps. We've set the ambitious goal of \$35,000 – you can help us to achieve it.

[Click here to donate to ACER's 35 Years and Growing Anniversary Campaign!](#)

As Covid-related restrictions subside, we're returning with renewed vigour to work with communities to plant carbon-catching trees and help restore the green spaces that sustain our environment and cleanse our air. We're planning a real-time, actual get-together in the fall for our volunteers, staff, interns and supporters. Watch your email in September for details.



President's Message

As a high school science teacher and department head, I struggled to find Canadian educational resources for my students. Canadian science textbook authors faced so many obstacles—it was practically impossible to get province-wide schoolboard acceptance or enough potential sales to interest publishers. There were no texts that highlighted Canadian inventions that I felt my students should know about. For at least 25 years I worked several weekends a year with the Toronto and Region Conservation Authority and I was one of the co-founders of the Council of Outdoor Educators of Ontario (COEO). In these groups, I was able to share experiences and programs that worked with learners of all ages. I enjoyed taking students outside for ecology lessons and taking classes on hikes and camping weekends. At a COEO conference, famed Canadian geologist Walter Tovell, a fabulous educator and director of the Royal Ontario Museum, led a field trip to the Niagara Escarpment. He opened my eyes to the reading of the landscape with respect to glacial activity there at Violet Hill. WOW — I was so inspired! And I had my ACER epiphany. I founded ACER for my 50th birthday celebration, and convinced a few friends to help to bring outdoor education and Canadian educational resources to my students. That was in 1987. In 1991 we incorporated and became a registered charity, and I have spent my retirement as Founding President, happy to lead ACER as it grows, and proud of our work in schools and in the community. I share this pride with all our supporters, volunteers, staff, interns, and Board members.

Alice Casselman: Founding President (905) 601-7685 office@acer-acre.ca

Help Us Celebrate our 35th Year!

Make a Special 35th Anniversary Gift to ACER! A donation of \$35 (or any amount) will help ACER continue to drive and support science-based community climate action. Click here to donate today:

[Click here to donate to ACER's 35 Years and Growing Anniversary Campaign!](#)

Thanks to Nimesha Basnayaka!

On our 35th anniversary, we're sending a special message to Nimesha Basnayaka, who started out with ACER as a student intern in 2014 and remained as Project Manager until a year ago when she embarked on a career change. Nimesha was a key player in all aspects of ACER's growth — planning, fundraising, training volunteers, writing reports, and more in addition to planting and measuring many, many trees — over her seven years with us.

Thanks, Nimesha. We know that with your level of work and dedication, you'll do well in your new endeavours.



Last autumn we reported on treetrackers.ca, ACER's student-created web application for the monitoring of trees and their environmental impact. Since that time, the team has been testing Version 1 to make it more user-friendly and responsive on a variety of devices. When fully implemented, the app will let users identify trees, determine their exact locations, enter detailed information following scientific protocols, adding photographs where appropriate, and update their records periodically. A forester will test the app at several sites in coming weeks and, all going well, the improved Version 2 should be ready for launch this autumn. The student team members agree on the educational benefits they've realized: they've gained much technical knowledge and skill in web development and design, and they've experienced the power of collaborative work with a community of creative and passionate colleagues. They have created a potentially impactful, real-world application that can engage children and youth in scientific activity and influence adults in the reduction of their carbon footprint. TreeTrackers is hiring students for summer jobs — contact office@acer-acre.ca for info.



ACER PROFILE

Introducing Sadia Butt, ACER Project Coordinator

When she was born in Nairobi, Sadia Butt's grandfather hoped she would be named Snober. If he'd had his way, she would have shared the name with a tall, graceful pine that grows in the Himalayas. She shares this family fact as a preface to the journey that brought her to ACER. As a small child in Kenya, she played in her grandfather's garden where he planted fruit trees. Coming to Canada at age 7, she enjoyed weekends and holidays at a family farm north of Shelburne, Ontario, where she loved exploring and hiking in the woods on the property. "I have always played in nature and was very curious about how things work," she says.

Sadia's initial university studies were in psychology and biology, and eventually she became a teacher in kindergarten and the elementary grades. Struck by her students' vast enthusiasm for learning and powers of observation, she developed her philosophy of teaching. "If you can expose students to the natural world rather than cartoon versions of nature, then their brains absorb the complexities involved," she says. "For example, watching a branch moving in the wind or a bird building a nest roots them in abstract physical concepts, so that later, when when they are formally taught science, they have real-world experiences." She strove to give her students the best learning experiences she could, including detailed information and images in her classroom and outdoor activities every day, learning about plants, animals and the natural world. Later, she organized a school Gardening Club and pioneered a classroom no-waste/recycling program.

On one of many summer road trips to Western Canada, Sadia became interested in the role of forests in the landscape and fell in love with the idea of working in the outdoors when she saw a forester's cabin in the mountains of BC. Sadia's career focus switched to forestry. Leaving her teaching job, she returned to university, studying more sciences for her master's degree in Forest Conservation at the Faculty of Forestry at the University of Toronto, where she subsequently completed her doctorate, awarded in 2021. Along the way, she worked with Environment Canada, the City of Mississauga, and the Town of Oakville. Early in the process of reinventing herself as a forester — inevitably — she met ACER founder Alice Casselman. Their meeting in 2005 marks the beginning of Sadia's relationship with ACER and her volunteer activity, teaching teachers and students to measure and identify trees, developing and writing program materials and presentations. She is proud of her participation in ACER's

tree plots project using Environment Canada and Smithsonian Institution protocols to monitor tree growth.

Now, as ACER's Project Coordinator (Healthy Community Initiatives Program) Sadia is optimistic that today's students, as well as adults, can be connected to nature through citizen science programs like ACER's Planting for Change program and TreeTrackers, and enhancing their experience through technology and social media. She is confident that we all can come to understand the importance of healthy ecosystems, and especially trees, in our daily lives.

ASK SADIA: If you have questions about ACER programs or activities, you can reach her at office@acer-acre.ca.

SALUTE TO THE MAPLE

By Elizabeth MacLean



ACER'S signature leaf is the maple, a tree emblematic of Canada for the past 300 years— far longer ago than its official recognition in 1996 as our country's national arboreal symbol. There are at least 130 species of maple, most native to Asia and almost all to the northern hemisphere, with about a dozen native to Canada.

Species range widely; some grow tall as 45 m; others are bush-like. Most are deciduous, displaying autumn colour; a few in Europe and Asia are evergreen. While maple leaves have many distinctive shapes, all species display opposite leaf and branch arrangement. The paired fruits of the maple are called samaras, familiarly known as maple keys or helicopters due to their circling motion as they fall.

They've fascinated scientists and engineers and their structure has been studied by aircraft designers. Spinning keeps them aloft and riding the air currents that can take them far out from under their parent tree, where they would need to compete for the sunlight and nutrients necessary for germination. When they finally touch down, it's the heavier, pointed seed end

that hits the ground, slipping in between grasses and plants.

A large mature sugar maple may produce tens of thousands of seeds yearly. Some of the seeds that germinate, take root, and replenish the forests may ultimately produce a strong, densely textured wood used to make such items as fine furniture, baseball bats, violin and cello backs, bowling pins, drumsticks, and high-quality paper. Their brilliant fall colours draw tourism revenue. Their springtime sap is liquid gold: the maple syrup industry adds a half-billion dollars annually to the economy of Quebec.

Indigenous peoples consumed sap as a tonic, heating it with hot rocks in birchbark bowls, and also used it as an eyewash; they pounded the cambium bark into a flour for bread, and made a tea with the inner bark to provide relief from coughs and cramps.

In the 1700s, French settlers learned to make maple sugar, a product known to the court of Louis XIV, and around 1810 began to tap trees and make syrup. By the 1930s the introduction of canning and storage improvements ensured syrup's preservation and enabled its distribution and sale to a wide population far from its origin.

Small wonder that we cherish the maple as our national tree. Its leaf appeared as a cultural symbol in the 1700s; by the 1830s, the maple was deemed by Jacques Viger, Montreal's first mayor, "the king of our forest...the symbol of the Canadian people." In the 19th century, the leaf appeared in military badges, provincial coats of arms, coinage and publications. Worn by Canadian soldiers since the Boer War, it has been sported by Olympic athletes since 1904 and Toronto's hockey team for nearly a century.

A stylized leaf of 11 equilateral triangles (10 for provinces + 1 for territories) was designed for the 1967 Centennial of Confederation. In the early 1960s, the ruling Liberal party made an election promise to replace the Red Ensign with a new Canadian flag, and after a design competition and six months of impassioned debate in the House of Commons in 1964, the current Canadian maple leaf flag was raised for the first time on February 15, 1965.

MAPLE MOVIES

Lots of Youtube videos feature maples— how to identify and grow them, history, and of course, maple syrup.

Here's a selection:

Flight of a Falling Maple Seed (Injae Lee, Haecheon Choi, Seoul National University)

Maple Copters (University of Kansas, Kansas Wildlife and Parks)

Growing Japanese Maple Trees from Seed— Part I: Stratification (Growing the Home Garden)

The History of Maple Products (Erdable du Québec)

Maple Syrup Production (Ontario Maple Syrup Producers' Association)

GROW YOUR OWN MAPLE

There are a number of procedures to try — you can start your tree from either a cutting or a seed.

Planting from cuttings

The **cutting** process is easy, if you have access to a healthy young tree in mid-summer to mid-autumn. Take a few 10-cm cuttings from branch tips, and remove the leaves from the lower half of each. Scrape the bark on the lower stem and roll it in powdered rooting hormone. Fill a small pot with moist rooting medium (e.g., sand, peat moss, vermiculite), and insert the cutting.

Set it in a place where it will receive some sunlight during the day. Keep the soil moist. After eight weeks, roots will have developed. Watch for new leaves. Transplanting to a larger pot should be done when the plant has established a good network of new roots. Place the pot in an area that is protected from direct sunlight and harsh rain or wind.

After 10 days, you can transplant the maple to its forever location.

Planting from seed

Red and silver maples will be dropping their seeds in the next month or so, so collect a handful. You can try planting some directly into the soil, or start in pots to transplant into the ground.

Sugar maples produce their seeds in late summer, and the most reliable method for their germination is **stratification**, a process that mimics the freezing and thawing of the seed over winter. Gather your seeds and lay them in a flat container filled with moist composted soil. Cover lightly with soil, moisten it and cover the container. Place it in the refrigerator for up to 3 months, checking occasionally to make sure the soil is moist and watch for root development. When your seeds have developed roots, pot them in a moist medium, and place pots where they will receive some sunlight every day. Keep the soil moist, and in the spring, you can transplant your seedlings into the ground. Or, if you don't have the fridge space, try planting a few directly into the ground under a light covering of soil, and let the natural process take place outdoors. Look for tiny maples in the spring.

Maple Memories...

I planted a key in a pot once when I was a kid. It sprouted on Canada Day! After it reached 30 cm or so, I transplanted the seedling into the yard. It was really fast-growing, and before long, it became the towering bane of the garden, shading my mum's mum's flowers and vegetables. My dad resisted many urges to fell it, because he knew how proud I was of my tree.

EM

THANK YOU!

ACER thanks our associates, who contribute funds, materials, expertise, and time to help us reach our goal of greener communities and clean air: TD Friends of the Environment Foundation, Arbor Day Foundation, Canada Summer Jobs, Community Foundation of Mississauga, Toronto and Region Conservation Authority, Anne Massicotte (Translator), Heritage Mississauga, City of Mississauga Foresters, City of Brampton, People Against Litter, Blooming Boulevards, and Community Living Mississauga.

VIRTUAL ANNUAL GENERAL MEETING

SUNDAY, JUNE 26, 2022

2:00 p.m. - 3:30 p.m.

This free event will feature reports on current ACER programs, reflections on ACER's 35 years and plans for the future, and the election of the 2022 Board of Directors.

All are welcome! To find out more details or to RSVP, click here:

[ACER 2022 AGM Details and RSVP.](#)

Please note that voting on ACER matters will be limited to members who have paid their annual ACER membership fee.

ACTIVITIES UPDATE

- Planting of trees and shrubs in Mississauga area to increase tree canopy.
 - Measuring of trees planted by City of Mississauga in high-population-density areas.
 - Planting of perennials raised from seed collected by Blooming Boulevards volunteers in Canada Healthy Communities Initiative in Mississauga.
 - Presentation: "How Trees Help You Reach Net Zero" at Colleges and Institutions Canada virtual event June 1 (English) and June 2 (French).
 - All-day workshop led by Dr. Sadia Butt in tree ID and tree measuring for Spruce Lab/Miziwe Biik Indigenous students with an overview of ACER programs at Humber Arboretum.
 - Annual General Meeting on June 26 with reflections on ACER's 35 years as an environmental organization.
 - Tree Measuring and Mulching Events open to the general public. Watch the ACER website for coming events.
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SUMMER JOBS

Canada Summer Jobs is funding 36 positions with ACER for high school and university students. To learn about them and how to apply, contact the Project Coordinator at acer-acre91@gmail.com.

[Click Here to Donate Today!](#)

