CRCA Facilitates Forest Kindergarten Program at Little Cataraqui Creek Conservation Area

Like many modern, enlightened educators, teacher Cheryl Fischer understands the important role that spending time in the natural environment can play in the development of young children.

With that in mind, she approached her employer, the Limestone District School Board with the idea of developing a Forest Kindergarten Week program for her Kindergarten class at Kingston’s Polson Park Public School.

After getting their approval, as well as accessing grant funds to pay for the cause, the two Kindergarten classes at the school spent a week with CRCA education staff, June 11 to 15, in the forests of the Little Cataraqui Creek Conservation Area exploring flora and fauna and bringing home valuable lessons that went far beyond fulfilling curriculum requirements.

“I attended some professional development for Kindergarten teachers at the board office earlier this school year and we were shown several videos and ideas coming from Forest Kindergartens in Europe – mainly Scotland. It was neat to see some of the outdoor experiential learning that is happening internationally. I think there is also a movement towards that for physical, emotional and just whole child well being and the importance of establishing more connections with the outdoor environment. And that’s a big interest of mine. When an experiential learning grant was forwarded to the teachers in our school in January, I already had this idea that Forest Kindergarten would be the coolest thing for that grant,” said Fischer.

“In June of last year, when I was given my assignment to do Kindergarten I was already exploring outdoor learning opportunities and how I could get my students outdoors more often. The Ontario Kindergarten curriculum is already very student guided – there are expectations for the kids to meet, but it’s supposed to be in an individually guided way. And Forest Kindergarten fit perfectly within this concept.

“We put out provocations for the students that are very open to their interests and passions. And we try to do that already in looking for outdoor provocations for them, just in terms of their problem-solving skills and asking questions. So much of the basic curriculum items can be covered in an outdoor environment. One of the biggest goals for teachers of all grades, not just Kindergarten, is to have the kids authentically problem solving. We’re trying to move away from textbook scenarios where they’re just hypothetically looking at situations. And they were totally into it. There were all these little provocations where they have to work things out and share ideas. It’s putting them into a real problem-solving situation that is very hands on and driven from them.”

At the same time as the grant application was submitted, Fischer contacted Stana Luxford-Oddie, senior conservation educator at the Cataraqui Region Conservation Authority, to see if there was a possibility for some close collaboration.

“When I told her (Stana) this idea of Forest Kindergarten and spending five days with her, she was very receptive, to the point where she already had the week of June 11 to 15 pencilled in even before we got approved for the grant. Her enthusiasm and her openness to the idea was key for sure,” she said, explaining that besides her, two early childhood educators and her fellow Kindergarten teacher Cassandra Ryan and CRCA education staff were also on site working with the students throughout the week.
CREATURE FEATURE:
West Virginia White Butterfly
(*Pieris virginiensis*)

A lovely little butterfly that was originally discovered in the United States in the woods of the Appalachian Mountains, the West Virginia White Butterfly is found throughout the Great Lakes region, including Ontario, and in great abundance in the eastern part of the U.S. from New England in the north to Alabama in the south.

It has only been spotted in about 50 sites in Ontario in total, mostly in southern and central Ontario, although examples have been seen as far north as Manitoulin and St. Joseph Islands. Scientists say it has never been all that common in Ontario, and that numbers are dwindling due to habitat degradation and fragmentation.

It loves to live, feed and breed in deciduous forests and thus may not be seen very often in built up urban areas or open plains. It is small, with only a three to four-centimetre wingspan, and its wings can appear translucent particularly on the underside of the hind wing, with the veins having a sort of grey-brown scaling. When it is in its caterpillar form, it is a yellow-green colour, with a green stripe along each side.

According to the Butterflies and Moths of North America website (www.butterfliesandmoths.org) at mating time the male West Virginia White butterflies patrol slowly to locate females. Eggs are then laid individually on the underside of leaves on host plants. The chrysalids hibernate on stems or on shed leaves and other plant detritus under the plant itself.

It’s primary food source is also the cause of it’s steady decline in certain regions, which is why it is considered to be a species of Special Concern, according to the Ontario government’s Species at Risk program. It feeds off a plant called toothwort or lathraea, which is a small plant that blooms in the spring. It is a part of the mustard family, which is where the exclusivity of the butterfly’s diet comes to bear.

Sometimes the butterfly will think it is laying its eggs on toothwort plants when it is in fact laying them on garlic mustard plants, a noxious invasive species that is pushing out the homegrown toothwort from many habitats in Ontario. Garlic mustard was introduced to North America by European settlers in the 1800s for food and medicinal purposes. It is toxic or unpalatable to many native herbivores, as well as to some native moths and butterflies — including, the West Virginia White.

Upon hatching, the larvae realize they cannot feed on the plant and essentially starve to death. Besides this, encroachment on habitat due to urbanization or logging is limiting the growth of the species, which is why it has been designated as being of special concern in peripheral limits of its range, including Ontario. In places where it has always been more abundant, wildlife and conservation officials are not as concerned, and it continues to be plentiful.

In Ontario it could reach the status of endangered or threatened if the combination of the spread of garlic mustard and deforestation of its habitat continues.

CRCA Facilitates Forest Kindergarten Program at Little Cataraqui Creek Conservation Area

“...and the kids talked a lot about the Conservation staff in our week following. They were integral in terms of their knowledge of the forest, the wildlife and the flora that exists out there. They also shared books and supplies and were a big part of our days.”

In a PowerPoint presentation created by Fischer that was sent to the school board and granting organization, she focused on five key learning experiences the students had while in the forest at Little Cataraqui Creek Conservation Area. They included: outdoor cooking and fire safety, construction, fine arts opportunities, motor development and imaginative play.

More specifically, some of the activities engaged in were a fun mud kitchen where the kids explored a stream and streambed, making mud cakes and pies, or small boats to send down the steam, as well as seeing unique wildlife in the stream. Fine motor skills were employed for things like tying knots, using tweezers to explore bugs, while climbing, hanging, balancing and building helped with gross motor skills.

Students used their writing skills to talk about their experiences in their journals, they made clay sculptures, watercolour paintings, leaf and bark rubbings and more as they focused on arts, while also using twine and rope to help build shelters, swings and hammocks. There was an opportunity to do some outdoor cooking, where the kids learned about fire safety, capped off by some yummy treats including hot dogs, bannock and marshmallows. “At the end of the school year we asked what they liked about Kindergarten and a huge number said they liked the Forest Kindergarten Week. The parents were all very grateful and receptive to the experience. They didn’t have to pay anything because of the grant. So, it was like having your kids at a camp with no cost. I am sure they would have willingly paid, but they didn’t have to this time,” Fischer said.

“And the kids never once expressed a desire to go home. A lot of them fell asleep on the bus ride back to Polson Park because they were worn out. We didn’t have any complaints or hesitation to be there. As teachers we were also thrilled in the change in dynamics amongst the kids. In the classroom and in our normal routines there are things that are repeated all the time and there are little cliques and groups that form with the same kids all doing the arts and crafts, as an example.

“But in the forest, it was a really neat mixture of classmates. Those who wouldn’t always associate or help one another in the routine of the class did that in the new setting of the forest. And the positive energy just blew us away. We had way fewer conflicts, and way fewer mediation issues among the kids. That may be because they had so much space and so much freedom or so much stimulation that they didn’t have time to get into any of their little squabbles.”

Fischer said it was proof of the significant and eminently positive impact that spending quality time in nature can have on children. “There’s a therapeutic piece to it all that has been documented by all kinds of researchers. I think the fresh air and exercise is good for our bodies, but I also think the space and the sunlight is good for our mental well being as well as for our physical side. There’s too many kids who are disconnected from that. And the response from the kids was amazing, because there are many of them who are not connected. They see the three little pigs and the big bad wolf or read about little turtles that sleep in beds and think that’s how it is,” she said.

“And we’re trying to give them an environmental awareness and mindset where it’s important to recycle. Well, why do I need to recycle? What’s the motivation to do that if you don’t have the connection to nature. They need a frame of reference about the importance of green space and the environment. If you don’t get them outside, why are they going to want to protect the greenspace if they don’t have an appreciation for it.”

For more information about education programs offered by the Cataraqui Region Conservation Authority visit https://crca.ca/education.
Taking the Mystery Out of Low Water Level Warnings

For the second summer over the past three, the Cataraqui Region Conservation Authority has issued low water level warnings to the residents living within the Cataraqui Region. Although not nearly as profoundly serious as the summer of 2016 conditions, there was enough empirical and anecdotal evidence from throughout the watershed to bring the Cataraqui Region Low Water Response Team together (which includes CRCA staff, water managers, major water users, public health, agriculture, school boards, marina operators, golf courses, government agencies and dam operators) and issue a low water level advisory in early July.

After deliberation the team would decide whether to declare a Level I (minor), Level II (moderate) or Level III (severe) low water scenario, which is issued to the public and the media by the CRCA Communications team, and via its various social media accounts.

But what goes on in that room, and what triggers the meeting of the Low Water Response Team in the first place? Holly Evans, CRCA Watershed Planning Co-ordinator explained the process that can lead to the issuance of a warning.

“What happens is the Surface Water Monitoring Centre, which is a division of the Ministry of Natural Resources and Forestry (MNRF), looks at particular stream flows and precipitation gauges in our region. When certain thresholds are met, they release a notice identifying a potential Level I, II or III low water condition. It’s the Low Water Response Team’s job to determine whether the Surface Water Monitoring Centre’s notice is relevant in this region. And the way we confirm or deny that is convening a Low Water Response Team meeting where we all present our observations. At the CRCA we look at our stream flows, rainfall and the levels at our dams. We further consider groundwater conditions and any ecological impacts we’ve seen,” she explained.

“Then we bring in other area water managers and stakeholders to the meeting and find out what they are seeing. And they can include Energy Ottawa, the local dam operators from the MNRF and the Ministry of the Environment Conservation and Parks who say what they are seeing on their lakes and whether or not they are getting lots of calls about wells and that sort of thing. And then we all decide, based on the data and local observations, whether or not we should declare a low water level situation.”

So, the first tweak comes from a Ministry staffer monitoring a small selection of gauges in the region, who asks for the numbers they are seeing to be confirmed in more detail from the CRCA and its partners. Those raw numbers are then combined with the more anecdotal evidence presented by water managers from municipalities who are hearing from residents about wells drying out, low stream flows, lower lake levels.

According to the MNRF, there are thresholds for the three levels of low water conditions for both precipitation and streamflow. Average precipitation is compared against long-term averages for one, three and 18-month intervals. For stream flows, monthly averages are compared to the low water levels that are expected during August. Depending on how much lower than normal the stream flow and/or precipitation amounts are determines the severity of the Low Water Level with Level III being the most severe and indicates a failure of the water supply to meet demand.

While Evans said she is very much in favour of all forms of water conservation, especially for our inland lakes, streams and wells during times of low water, the best we can do to mitigate climate extremes such as low water and flooding is to protect the overall health of the watershed itself.

“The unique perspective from the conservation authority that you’re not going to get from the other agencies is the watershed perspective. As climate continues to change, our watersheds need to be as resilient as they can be, and resilience comes from a healthy watershed. A healthy watershed comes from preserving the natural function and form of that watershed,” she explained.

“Every bit counts. Wild areas next to streams, lakes and tiny little wetlands that may not be identified as provincially significant are important. Taking care of the runoff that comes from your roof by allowing it to soak into the ground is important. Planting trees and shrubs along waterways to help runoff in times of flooding and increasing forest cover in general so that when the water does fall, it soaks in nice and slow. Basically, the goal is to keep it as natural as possible. If you think of any natural system like your immune system, it makes sense. If you’re strong and exercising and eating your veggies, getting lots of sleep at night, when a big flu bug comes around, you’re more likely to be able to fight it off. If you’re not doing those things, when you catch that bug it’s going to be worse. It’s the same for watersheds.”

For more information on low water levels and flood scenarios, visit https://crca.ca/watershed-management/watershed-information.
Five Tips to prepare your water-wise garden for winter

BY MEGHAN HARRIS AND TAETUM ROSEBERRY, Summer Students, Utilities Kingston

Gardeners can save water, time and money by building a water-wise garden that ‘makes every rain drop count’ and can prevent run-off pollution and flooding. In this article, Utilities Kingston offers tips to prepare your water-wise garden for winter.

1. Prune perennials and cut back those that need it

Pruning (trimming) your water-wise perennials in the fall will help stimulate new growth, while encouraging them to re-bloom in the spring and summer. To prune, snip growth back to the node (where leaves branch off from the stem). Pruning spent blooms will help decrease fungal issues that some plants are prone to. Pruning your plants at the end of their cycle, as opposed to doing it in the spring, will allow for less maintenance the following year.

Cutting a perennial back, which is when the stem is cut near the crown, allows for new growth at the base of the plant the following spring. This technique is important from a sanitary standpoint. If your plants are impacted by bugs or disease, one of the best options is to cut it back. As the plant goes dormant in colder conditions, it has the best chance of regenerating new foliage.

2. Split and plant new perennials in the fall

If you missed out on splitting your water-wise perennials in the spring, fall is the perfect time to do so. The weather is enjoyable for working outdoors, but the cool temperature is also preferred by your plants. Add organic compost to the new spot for your split perennial and around your water-wise garden. This will replenish the nutrients in the soil that gets depleted throughout the summer. With this renewed fertile soil, it will make for an easier transition and allow split perennials to drain properly and get the airflow they need.

3. Aerate your lawn

Contrary to popular belief, it is more beneficial to aerate your lawn in the fall. This is due to cooler temperature and a decrease in weed production. Aerating allows for proper air flow and moisture levels to penetrate into your lawn. Aerating is especially important where there is high foot traffic, which can compact your lawn, or if the soil has a high clay content. Clay allows little to no drainage, therefore higher airflow can be very beneficial.

4. Winterize your rain barrel

Rain barrels minimize treated water use and decrease runoff pollution. Winterizing your rain barrel is important to prevent cracking.

To winterize your rain barrel, first drain any remaining water, using the spout. You can use this water on your water-wise perennials, infiltrate it into your lawn, or water your trees and shrubs.

Next, turn your rain barrel upside down, either indoors for better storage, or outdoors in a dry area. Lastly, and importantly, reattach the downspout to direct at least two metres away from your foundation.

Learn more about Utilities Kingston’s rain barrel program, as well as how to winterize rain barrels, at https://UtilitiesKingston.com/Water/Conservation/RainBarrel

5. Cover your shrubs for the winter

Covering your shrubs can prevent winter burn, frost damage and other weather-related effects, which can result in deterioration, loss of foliage and plant discolouration. Use hardware cloth and burlap to cover your shrubs from top to trunk. This will insulate your shrub and help maintain its integrity. This process is especially important for young shrubs, as they are less developed and need help to retain their own water.

These five tips for encouraging growth in your water-wise lawn and garden, along with our online resources, will provide you with the tools to promote and maintain a beautiful, hardy water-wise garden for years to come. p count’ and that can prevent run-off pollution and flooding. In this article, Utilities Kingston offers tips to prepare your water-wise garden for winter.

References


ABOUT UTILITIES KINGSTON:

Utilities Kingston operates multiple utilities through a single service structure, allowing it to deliver cost savings and customer service excellence. The company is unique in Ontario, combining water, wastewater, gas and electrical services, and broadband fibre optics in one company. Trusted by customers to deliver reliable utilities for more than 150 years, employees are proud to provide personal, responsive services.

Connect with Utilities Kingston – all your utility needs under one roof.

Twitter: @UtilitiesKngstn

YouTube: UtilitiesKingston

Facebook: @UtilitiesKingston

www.UtilitiesKingston.com

Did you know that Utilities Kingston maintains an award-winning Water Conservation Garden at 1211 John Counter Boulevard? Tour the garden to see a variety of plants and landscaping techniques you can use in your own garden. This space provides inspiration so you can create a beautiful, low-maintenance outdoor space that relies more on what nature provides, and less on treated water. Learn more at https://UtilitiesKingston.com/ConservationGarden
with nature. Cost is $20 per person. Registration is required – register online at www.crca.ca/online-services

THE REAL BAT MAN
Sunday, October 28 (1:00 p.m.)
REGISTRATION REQUIRED
For ages 7 and up
Bat expert Matt Saunders is back by popular demand. Matt will introduce you to the fascinating world of bats. Seating is limited, so be sure to come early. Matt’s one-hour presentation is suitable for ages seven and up. Bat house construction follows – kits will be available to purchase for $20 after the talk. You can stay and assemble your bat house with us (please bring a hammer) or take it home to build. Cost is $2 per person plus the regular gate fee. Registration is required – register online at www.crca.ca/online-services.

MUSHROOMS 101
Sunday, October 21 (1:00 p.m.)
REGISTRATION REQUIRED
Join local chef and forager Ruthie Cummings to learn about local mushrooms. The 90-minute course will feature an introduction to mushroom types and structures, safety, a short identification walk in the Conservation Area, spore printing and mushroom pizza. She will also discuss why it is important not to forage on protected lands and use them as a resource guide. Cost is $2 per person plus the regular gate fee. Registration is required – register online at www.crca.ca/online-services.

FOREST THERAPY WALK SERIES – 3 WALKS IN 3 WEEKS
Thursday October 4, 11 and 18 (12:30 p.m. to 3:00 p.m.) REGISTRATION REQUIRED
Join Forest Therapy Guide Stana Luxford Oddie for a fall immersion Forest Therapy walk series and learn the practice of Shinrin-yoku (forest bathing). Re-ignite your relationship with the amazing, healing landscape of our beautiful world and give yourself permission to take time out of your busy schedule to immerse yourself over three weeks. Cost is $60 per person. Registration is required – register online at www.crca.ca/online-services

LITTLE CATARAQUI CREEK CONSERVATION AREA (KINGSTON)
Conservation Area open during daylight hours. Outdoor Centre open 9 AM to 4 PM. Gate Fee: $3.00 for children 12 and under, $5.50 for adults, maximum fee $14 per car. We accept cash, tap enabled debit cards and tap and chip credit cards at the gate.

FOREST THERAPY WALK
Thursday September 20 (9:30 a.m. to 12:00 p.m.) REGISTRATION REQUIRED
Join Forest Therapy Guide Stana Luxford Oddie and experience this healing and connective practice. A forest therapy walk is a slow and mindful practice that can combine walking, sitting, standing or lying down. Everything is an invitation, so participants can do what feels most comfortable to them. De-stress, slow down, heal and connect with nature. Cost is $20 per person. Registration is required – register online at www.crca.ca/online-services

FALL COLOURS WEEKEND
Saturday, October 6 to Monday October 8 (9:00 a.m. to 4:00 p.m.)
Enjoy the fall foliage at Little Cataraqui Creek Conservation Area. Bird watch or go for a hike and enjoy the beautiful fall colours - CRCA staff will be on hand to suggest routes and provide maps. Come into the Outdoor Centre and purchase a snack and cup of hot cider or just sit and enjoy the colourful view from the West Hall.

MIGRATORY & UPLAND GAME BIRD IDENTIFICATION
Sunday, November 18 (1:00 p.m.)
REGISTRATION REQUIRED
Join Bruce Stratton, retired Ministry of Natural Resources Conservation Officer and teacher to learn all about game birds in Ontario. Learn how to ID migratory ducks and their calls, dive into the biology of the ruffed grouse, spruce grouse, pheasant and learn about the reintroduction of the wild turkey in Ontario. This presentation is geared towards older children and adults.
FOREST THERAPY WALK
Thursday December 6 (12:30 p.m. to 3:00 p.m.) REGISTRATION REQUIRED
Join Forest Therapy Guide Stana Luxford Oddie and experience this healing and connective practice. A forest therapy walk is a slow and mindful practice that can combine walking, sitting, standing or lying down. Everything is an invitation, so participants can do what feels most comfortable to them. De-stress, slow down, heal and connect with nature. Cost is $20 per person. Registration is required – register online at www.crca.ca/online-services.

OUTDOOR HOLIDAY PARTY FOR THE ANIMALS
Sunday, December 9 (1:00 p.m.)
Take a break from the hustle of this busy season with some time outdoors. Bring your family out and join us for an outdoor celebration. We will feed the birds, play some games and have a great old time. We will also leave a nature present for our animal friends.

MAC JOHNSON WILDLIFE AREA (BROCKVILLE)
FALL FESTIVAL
Saturday, October 13 (10:00 a.m. to 2:00 p.m.)
Admission is $5 per car. The Friends of Mac Johnson Wildlife Area are hosting their annual fall celebration with activities for the whole family. Enjoy the fall colours on a hike along our trails and compete in our fall leaves scavenger hunt. The Mush Larose dog sledders are back with their dog carts! Races start at 11:00 am. The CRCA will be providing kayaks and canoes free of charge so you can paddle and watch the waterfowl on the pond. Youth and kids can build a bird house or paint a rock monster. The Friends will host a BBQ at the Nature Centre, payable by donations, and accompanied by live music. After lunch, you can make popcorn and toast marshmallows at the fire pit near the pond. NEW this year! Fall tree sale during the Festival. (Check Facebook in October for details).

LEMOINE POINT CONSERVATION AREA (KINGSTON)
TD TREE DAYS EVENT
Saturday, October 13 (9:00 to Noon)
Help plant 450 trees at Lemoine Point Conservation Area and the TD Tree Days Event. Join TD employees, CRCA staff and the Friends of Lemoine Point at 9 a.m. at the Front Road parking lot (south entrance). Bring your shovel, gloves and proper footwear. For further information and to register visit www.tdtreedays.com/events/912

FRIENDS OF LEMOINE POINT AGM
Wednesday, November 14 (7:30 p.m.)
Join the Friends of Lemoine Point at their Annual General Meeting at the Ongwanada Centre in Kingston on Wednesday November 14 at 7:30 p.m. The night will include their business meeting and a special presentation.

CATARAQUI TRAIL
Fundraising Dinner at the Opinicon Resort
Friday, October 12 (5:30 PM cocktails, 6:30 PM dinner)
Come join us for a great evening at the iconic Opinicon Resort in beautiful Chaffey’s Lock to support the Cataraqui Trail. Come wander the grounds and the main building of the Opinicon and join us for an amazing dinner prepared on premises by the renowned culinary team at the resort. There will also be many items donated by local businesses and artisans to browse and bid on as part of the silent auction which will be displayed on the second floor of the spectacually renovated main building. Tickets are $80 and available online at www.crca.ca/tickets.

DIY SUSTAINABLE HOLIDAY DECORATING
Sunday, November 25 (1:00 p.m.) REGISTRATION REQUIRED
Bring the beauty of nature into your home this holiday season. Join Joli from Bella Fiore Farm and create a swag or centerpiece for your table or an outdoor arrangement for your entrance using sustainably sourced garden grown materials. Please bring your own bowl, urn, vase, platter, tray, or anything suitable to hold your greenery. Some greenery and decorative items will be provided but it is encouraged that you bring dried flowers, branches, pinecones, berries etc. to supplement your creation. Registration is required and enrollment is limited. Cost is $25 per person (includes the gate fee) or $20 for Annual Pass Holders. Register online at www.crca.ca/online-services.

LANTERN HIKE
Saturday, December 1 (6:30 p.m.) REGISTRATION REQUIRED
Join us under the stars as we explore the trails of Little Cataraqui Creek Conservation Area. Afterwards warm up with a hot drink by the fireplace back at the Outdoor Centre. Cost is $2 per person plus the regular gate fee. Registration is required- register online at www.crca.ca/online-services.

#HikeCRCA Challenge
Dust off your hiking boots and take part in the #HikeCRCA Challenge. Hike the designated “Challenge Trail” at each of our Conservation Areas and on the Cataraqui Trail, take a photo with all of the challenge signs, post your photos on social media, then fill out the Challenge Entry Form for a chance to win some awesome prizes. The Challenge takes place from Sept. 1 to Oct. 31. NEW for 2018 – the family challenge! Visit www.crca.ca/hikecrca for challenge rules and a list of Conservation Areas and designated trails. Good luck! Thank you to our prize sponsors: Atmosphere Kingston, Trailhead Kingston, Go Green Baby, the County of Frontenac, County of Lennox & Addington.
Climate Change Taking A Toll on Our Fine Froggy Friends

BY MATT ELLERBECK, Frog Conservationist

The Cataraqui Region Conservation Authority lands are home to several frog species. These include the Spring Peeper (Pseudacris crucifer), the Leopard Frog (Lithobates pipiens), the Green frog (Rana clamitans), and the Gray Tree Frog (Hyla versicolor).

The inclusion of these frogs means the area is extremely fortunate as many frog species are now in serious decline. Around 30 per cent of all the world’s frog species are threatened with extinction. This includes several that are found here in Ontario.

The Great Lakes/St. Lawrence River population (east and north of Toronto) of the Western Chorus Frog (Pseudacris triseriata) is listed as Threatened under the federal Species at Risk Act. The Fowler’s Toad (Anaxyrus fowleri) is even more at risk, being listed as Endangered. Worse still, the diminutive Northern Cricket Frog (Acris crepitans) is considered extinct from Ontario.

More of Ontario’s frogs could also be in sharp decline too, as many species have not yet been properly assessed.

Habitat destruction is largely responsible for the loss of frogs. Areas that were once suitable for these animals to live have now been destroyed. The areas that remain are often degraded by hazardous chemicals like oils, gasoline, and pesticides.

Habitats are often isolated and cut off from one another by the roads and highways that now run through them. Countless numbers of frogs are killed on roads and highways every year after being hit by vehicles. A 2006 study from Carleton University in Ottawa, suggested heavy traffic in their environment was a larger threat to frog populations than habitat loss.

Sadly, many of the frogs that are migrating to breeding and egg-laying sites must cross over roads to reach such areas. Therefore, many of the mature members of the breeding population are killed. Removing members of the breeding populations greatly limits reproductive output, and this makes it incredibly hard for frog numbers to rebound.

Being hit and killed by vehicles is not the only threat that roads create for frogs. Chemical run-off from vehicles contaminate roadside ditches and pools. These sites are often utilized by frogs for breeding and birthing.

Climate change is among the most serious threats that frog populations face. Detrimental changes in climate such as increased temperatures, changing humidity levels, desertification, and droughts wreak havoc on frogs. These animals are generally adapted to moist and cooler habitats and may require very specific conditions to thrive, therefore, changes to these conditions due to climate change can be life threatening to frogs.

Frogs also live a ‘double-life’ being associated with both aquatic and terrestrial habitats. Alterations to these optimal conditions result in frog species dwindling. Changes in climate can also affect the forming and availability of critical habitat features such as vernal pools (that are utilized for breeding and birthing/egg-laying sites). Certain frog species have small natural ranges, and within these ranges show fidelity to over-wintering sites. Thus, these types have limited opportunities for dispersal if their habitats are degraded due to climate changes.

Disease is another issue plaguing frogs. Chytridiomycosis is an often-fatal infectious skin disease that seriously affects frogs. The condition is caused by the chytrid fungus - Batrachochytrium dendrobatidis or Bd. It has been responsible for mass declines in frog populations. Devastatingly, Bd has been found on all of the continents where frogs occur. It may be responsible for the greatest disease-caused loss of biodiversity in recorded history (Skerratt et al. 2007).

Chytridiomycosis has been linked to dramatic population declines or even extinctions of frog species in western North America, Central America, South America, eastern Australia, East Africa and in parts of the Caribbean. The fungus is capable of causing sporadic deaths in some frog populations and 100 per cent mortality in others. Sadly, no effective measure is known for control of the disease in wild populations. Ranavirus is another ailment that is impacting frogs negatively. The pathogen causes severe hemorrhages of the internal organs.

Frogs are often taken in huge numbers, directly from the wild. They are taken for use as fishing bait, for the pet trade, for use as dissections, and for food markets. This accounts for millions and millions of frogs being captured from their natural habitats annually. All of these ultimately lead to the death of the frogs. In 2009, researchers at the National University of Singapore called for more regulation and monitoring in the global frog meat market in order to avoid species being “eaten to extinction.”

The serious amphibian diseases ranaviruses and chytrid fungus (Batrachochytrium dendrobatidis – Bd) are also being spread throughout populations and to previously healthy animals via these trades. When infected animals are captured from the wild and then shipped and sold in other locations they bring the diseases with them. The fishing bait trade is particularly harmful in this regard.

A massive number of frogs are being lost each year through the combination of the many threats mentioned above. This unnatural decline in frog populations cannot rebound on its own. This is why the conservation of frogs is required. Without assistance, many species simply cannot survive the many hazards we have created for them.

To learn how you can help visit: www.saveallfrogs.com
Bulk Tree and Shrub Orders

The Cataracaui Region Conservation Authority’s forestry program is now offering bulk native tree and shrub sales to lake associations and shoreline property owners. Increasing tree and shrub cover near lakes provides erosion control, habitat and runoff control. Trees are a wonderful addition to lakeside properties; however, they are slower growing and of course taller than shrubs. Shrubs are a good option to fill in and can be trimmed as needed.

Orders for next year must be completed no later than the end of September. Minimum orders are in bundles of 50.

If you, your lake association or a group of your neighbours are interested in making a purchase, please contact Holly Evans at hevans@crca.ca before September 30, 2018.

Knowing the conditions of where you would like to plant will dictate which species will thrive. There are two main considerations: soil type and soil moisture. The tables above will help you make good choices for planting. Most of the soil around lakes in the Cataracaui Region is sandy loam; however, there are some places with other types. Check our soils overview map at https://tinyurl.com/yacnh53d know for sure.

Plants usually arrive at the Little Cataracaui Creek Conservation Area in late April or early May. The exact date depends on the weather (e.g. must wait for the ground to thaw before the trees and shrubs can be harvested at the nursery). Our cold storage helps to preserve the seedlings, but they should be picked up within two weeks of their arrival to minimize stress. Anyone who has purchased plants will be contacted as soon as we know their delivery date.

The seedlings are bare-root stock meaning that they are not stored in soil and need to be planted as soon as possible. Following pick-up, the plants should either be planted immediately or be stored in a cool basement, ensuring that the roots are moist for no more than 48 hours prior to planting.

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**Good Planting Choices for Loam, Sandy Loam and Silty Loam Soils**

<table>
<thead>
<tr>
<th>Tree Species</th>
<th>Moisture Requirement</th>
<th>Shrub Species</th>
<th>Moisture Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid poplar</td>
<td>Dry</td>
<td>Gray dogwood</td>
<td>Dry to wet</td>
</tr>
<tr>
<td>Sugar maple, White pine, Red pine, White oak, Bur Oak, Bitternut Hickory, Shagbark Hickory</td>
<td>Dry to Well Drained</td>
<td>Nannyberry</td>
<td>Well-drained to moist</td>
</tr>
<tr>
<td>White birch, Red oak</td>
<td>Well-drained</td>
<td>Highbush cranberry, Black elderberry</td>
<td>Moist</td>
</tr>
<tr>
<td>White cedar, Eastern larch, White spruce, Red maple, Silver maple</td>
<td>Moist</td>
<td>Red-osier dogwood</td>
<td>Moist to wet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Buttonbush</td>
<td>Wet</td>
</tr>
</tbody>
</table>

**Good Planting Choices for Clay and Clay Loam**

<table>
<thead>
<tr>
<th>Tree Species</th>
<th>Moisture Requirement</th>
<th>Shrub Species</th>
<th>Moisture Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar maple, Red pine</td>
<td>Well-drained</td>
<td>Gray Dogwood</td>
<td>Dry to wet</td>
</tr>
<tr>
<td>Red maple, White cedar</td>
<td>Moist</td>
<td>Nannyberry</td>
<td>Well-drained to moist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Highbush cranberry, Black elderberry</td>
<td>Well-drained to wet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Red-osier dogwood</td>
<td>Moist to wet</td>
</tr>
</tbody>
</table>
CRCA Offers Education Programs for All Ages

Elementary and secondary school teachers are encouraged to give their students the opportunity to learn in an outdoor “classroom” and connect with nature. The Cataraqui Region Conservation Authority offers Ontario Curriculum-enriched outdoor and environmental education programs for all ages at Little Cataraqui Creek Conservation Area in Kingston and Mac Johnson Wildlife Area in Brockville. We offer a variety of programs to suit the season. For information about all the nature education programs offered by the Cataraqui Region Conservation Authority, visit https://crca.ca/education.

The CRCA also offers Nature Programs for Early Learners and Home Learners in seasonal blocks that allow children and their caregivers to experience the changes and beauty of the natural world in all seasons.

The Early Learner program is based out of Little Cataraqui Creek Conservation Area in Kingston for preschool children ages 2 to 5 years old and their caregivers. The program fosters a strong connection to nature by using our head, heart and hands. Participants will have the opportunity to experience the seasonal changes and connect with the land at a pace that feels right to them.

Our Home Learner programs take place at Little Cataraqui Creek Conservation Area in Kingston and Mac Johnson Wildlife Area in Brockville. The programs allow children a chance to make friends and feel at home in the beautiful forest, field and wetlands spaces of these Conservation Areas.

For further information or to register for our Nature Programs please visit www.crca.ca/education.

#HikeCRCA Challenge Returns

It was such a roaring success with area residents and visitors that the Cataraqui Region Conservation Authority has decided to bring back the popular #HikeCRCA Challenge.

This is an opportunity for individuals, groups, or families to spend some quality time together in nature, exploring the various trails at CRCA-owned conservation areas, and possibly win some great prizes. The #HikeCRCA Challenge runs from 8 a.m. Sept. 1, 2018 to 8 p.m. on Oct. 31, 2018 and features a simple, three-step process.

First, hike the designated ‘challenge trail’ at each of our conservation areas and at least one ‘designated section’ of the CRCA-owned Cataraqui Trail and find the special challenge sign with the #HikeCRCA logo. To find the challenge trails and designated section of the trail visit the website at the end of this article.

The second step is to take a ‘selfie’ with each of the challenges signs and post it to social media – Facebook, Twitter or Instagram – and make sure that the hashtag #HikeCRCA and the location are included in the post.

Finally, once you have hiked the designated challenge trails at each of our eight conservation areas, and the designated portion of the trail on the Cataraqui Trail, fill out the challenge form to enter our grand prize draw. All eligible entries as of the closing of the contest will be put into a random draw for the prizes.

A special twist to this year’s challenge is a Family-Friendly Challenge where a family only has to visit four out of the nine locations. They will be able to enter a draw for a special family challenge prize. Besides that, and the regular grand prize, there will also be draws for four CRCA annual passes, which gives users free entry to both Little Cataraqui Creek Conservation Area and Gould Lake Conservation Area.

Research has indicated that spending time in nature not only strengthens human immune response and reduces stress, but also makes us more creative, mindful, and content in our lives. The beauty of Forest Therapy is that it connects humans and nature, so that both benefit from a renewed relationship.

In 2017, the Cataraqui Region Conservation Authority pioneered the creation of Forest Therapy Walks in Ontario, and they have become a resounding success and a program that helps us expand our mandate of educating the public as to the benefits of spending quality time in nature.

A Forest Therapy Walk is all about getting ourselves out of our busy thinking minds and into experiencing the forest with our senses. It is a slow and mindful experience that combines walking, sitting, standing or laying down. Everything is an invitation, so participants are invited to do what feels most comfortable to them.

Everyone can benefit from Forest Therapy Walks such as people recovering from illness, youth, active military, veterans, people recovering from loss, students, professionals, parents, people looking to better their mental health, first responders and seniors. Anyone who is looking to de-stress, slow down, heal and connect with nature.

Since the introduction of Forest Therapy Walks more than a year ago, hundreds of area residents have had the opportunity to understand and experience the positive, life-affirming effects spending time in nature through this immersive and focused program can have on all aspects of one’s health.

The public sessions tend to fill up quickly, but individuals or groups looking to participate in a Forest Therapy Walk can contact CRCA staff and book a private session, during any season, based on staff availability.

Visit our What’s Happening Pages 6 & 7 to find out about our 3 Walks in 3 Weeks program.

For more information, or to book a session, visit www.crca.ca/foresttherapy.

Book a Private Forest Therapy Walk Today

Atmosphere Kingston, Trailhead Kingston, County of Frontenac, Go Green Baby, and the County of Lennox & Addington. For more information, including full contest rules, visit www.crca.ca/hikecrca.
Our guests enjoy bidding on exciting items before and during dinner. These might include tickets to events, coupons for dinner, hair styling, spa experiences, lessons, gift baskets, bottles of wine, etc. A tax receipt will be issued as appropriate.

2. Advertise your business in the Forever Green program. The program outlines the evening’s activities and recognizes all donors. All our guests read it and will note your support.

3. Sponsor a specific part of the evening. A select group of sponsors will have the opportunity to play a role in the evening and receive exceptional recognition.

4. Join us at the Forever Green dinner on November 3, 2018. Tickets will soon be available! Make your reservation early, as this is a very popular event. Even better, gather together a group of friends or family and have an entire table of fun.

BECOME A PARTNER IN OUTDOOR EDUCATION:

Our successful annual Partners in Outdoor Education mailing will soon be sent out. This mailing asks individuals and corporations to sponsor students to attend Outdoor Education programs at the Little Cataraqui Creek Conservation Area and Mac Johnson Wildlife Area. It is only by exposure to nature that we learn to care for it, so we believe in these programs and so do our supporters who have been continuing to make generous donations for many years for these innovative and wonderful programs. We thank each one who has donated so generously, and we hope to have similar success this year. If you receive a Partners in Education appeal letter, please give generously. If you would like to donate and are not currently on our mailing list, please contact us directly at catconservationfoundation@gmail.com.

LAND ACQUISITION FUND

Another key mandate of the Cataraqui Conservation Foundation is to assist the CRCA with acquiring land. Even with land donations, there are still costs that must be covered, such as legal, survey and appraisal expenses. If you would like more information about donating land, or donating for land acquisition, please email us at catconservationfoundation@gmail.com.

IN MEMORY:

The Foundation has beautiful memorial cards that are available at CRCA as well as at most funeral homes. Donations made through these memorial cards will directly benefit conservation and outdoor education programs. Tax receipts will be written for donations through these cards. As well, the Foundation is part of the Eastern Ontario Leave a Legacy Group. This partnership allows the Foundation to be part of a larger group of organizations that foster estate planning and donations to charitable organizations through wills and trusts. For more information, please see our website at www.cataraquiconservationfoundation.org.

BOARD CHANGES:

The Board would like to acknowledge the retirement of Julie Soini, Scott Stoness and Michael Bell from the board. Julie and Scott were committed supporters of our fundraising events. Michael Bell has been a long-standing member and significant contributor to the Board. His expertise, direction and passion will be greatly missed. We extend our deepest thanks for their time and commitment to the Board and the initiatives that the CCF supports.

We would like to welcome our new board members: Joshua Cadman, Susan Gow and Pamela Leclerc.

Joshua Cadman has been working to support the development and implementation of health care policies and programs in the region since 2015. As a Project Manager, he works with the Kingston Health Sciences Centre supporting a variety of IT and Clinical projects. Prior to this work, Joshua moved to Kingston in 2014 to pursue a Master of Public Administration degree from Queen’s University. It was during that first year in the city that he, and his now wife, fell in love with Kingston and the beautiful landscapes and waterways throughout the area. He understands the importance of both conservation and community involvement and wants to use his time on the board to help preserve the beauty of the area, while raising awareness and use of these important public spaces.

Susan’s love of wildlife and the outdoors developed as a child. After university she married a wildlife biologist. They camped across Canada and canoe tripped in Ontario. They also lived on a National Wildlife Area for 10 years interacting with governments and the public. Over 35 years later, the outlook of conservation and habitat survival has become vital. She said being a member of the Cataraqui Conservation Foundation board gives her the chance to help fill this wish to conserve the fragile lands in this area.

Pamela Leclerc has always been fascinated by the diverse splendor offered by nature. The desire to spend time outdoors and preserve the history of Ontario led to a career in archaeology. Although no longer working as an archaeologist, she hopes to continue to preserve pieces of Ontario through her work with the Cataraqui Conservation Foundation. She believes that sustainability is achievable by educating individuals about the beauty that is available locally, and by providing opportunities to create happy memories. Pamela moved to Kingston in 2014 with her husband. Reminiscent of her childhood home, Sudbury ON, Kingston fulfills her desire to explore endless waterways and forests. She currently works for the Ministry of Health and Long-Term Care.

The Cataraqui Conservation Foundation is looking for new Board members. Do you have time to develop new programs and projects to raise money to support conservation education? This is an exciting opportunity where you can make a real difference.

The Cataraqui Conservation Foundation, founded in 1965, is a registered charity with the purpose of supporting the activities of the Cataraqui Region Conservation Authority. If you use the CRCA properties, you are the sort of person who would make an ideal Foundation Board member. For further information please contact: Carol Murphy, President at carolmurphyccf@gmail.com
Gananoque Water Treatment Plant Unveils Mural

A partnership between the Town of Gananoque, the Cataraqui Region Conservation Authority and Ontario’s Ministry of the Environment and Climate Change has led to a colourful and informative new addition to the already beautiful waterfront in downtown Gananoque.

Earlier in the summer, a special ceremony was held to officially unveil a new mural on the water-facing side of the J.W. King Water Treatment Plant – a mural that helps bring awareness to the importance of source water protection.

Besides the wonderful beach, walking path, amphitheatre, marina and splash pad, it is also home to the intake point for the water that is used by the residents of Gananoque. The idea for the mural, which in a fun way points out areas of the community that could be potential risks to drinking water, was the brainchild of Town staff members Brenda Guy, manager of community development, and supervisor of public works, Sherri Ogilvie.

They were joined by Gananoque Mayor Erika Demchuk and students from the Environment Club at St. Joseph Catholic Elementary School for the opening and learned about how the project began with source water protection funding provided by the Province of Ontario.

“Source water protection is about making sure our water supply is clean within the Town. We thought about it and the Province gave us this money, but we wanted to do something different and not just create a brochure that people might take home, look at it once and then throw it in the recycling or on a pile of other flyers,” said Guy.

“We decided to think outside the box. We though of a mural. So, our friends at the Cataraqui Region Conservation Authority, who had been helping us to implement the funding program, thought it was a great idea and supported us wholeheartedly. We went to the Province and said we would like to use some of the money and create something fun on the side of the water treatment plant, which is at the beach and beside the splash pads. It is an interactive tool that people can come see and learn about source water protection.”

The students from St. Joseph’s chose the name of the main character who, like Waldo in the Where’s Waldo puzzles, is hidden at different locations on the mural map – those locations being places where there is a potential risk to the water, such as a farm or factory. The character was cleverly dubbed Dripster the Hipster.

Local artist Pam Staples helped with the design of the mural which was erected by Kingston’s Jet Signs, as a series of digitally created panels that fit seamlessly together to form one big image.

Guy also read out a statement from Cataraqui Source Protection Committee chairperson John Williamson to those in attendance. The Committee assists the CRCA and municipalities with source water protection activities.

“I am very pleased to see the Town of Gananoque promote the protection of the source of the town’s drinking water by creating this beautiful mural. Since the drinking water disaster at Walkerton in 2000 that killed seven people and sickened thousands more, many of whom are still suffering the effects, the Province, conservation authorities and municipalities have worked in partnership to protect sources of municipal drinking water. This is an excellent example of the public education and awareness effect of this program,” he said.

Ogilvie then read a statement from Holly Evans, watershed planning coordinator for the CRCA.

“I extend my congratulations to the Town of Gananoque on behalf of the CRCA for undertaking this worthwhile education and outreach program promoting source water protection for thousands of residents and visitors. Gananoque, like many towns in Ontario, has plentiful and clean sources of drinking water. However, we must all become informed and act to protect these water sources,” she said.

“Keeping drinking water sources clean is far better than trying to clean up pollution after it happens. The CRCA and the Cataraqui Source Protection Committee look forward to our continued collaboration with the Town of Gananoque as we strive towards effectiveness in source water protection.”

Mayor Demchuk thanked all those involved in creating the mural on behalf of town council and staff, saying there was “not much better a place to have it than down here by the water.”

“Our intake valve is right out there in the St. Lawrence River, so we have to protect that as well. And the mural is so interactive. When Ms. Guy came to council and said, ‘I have this really good idea that I got permission to do and put a mural on the water treatment plant,’ I thought it was wonderful. And it was the students who came up with the idea for Dripster the Hipster, which is great. It just all came together and seemed like the right thing to do,” she said.

“It’s important that we protect our water. We have to protect it for you and for your children and for everybody coming down the road. It’s important that our water is protected for generations to come. And what better way to make that happen but to put this mural on the water treatment plant, right by the waterfront where so many people can see it.”

For more information on the Cataraqui Source Protection Committee, visit http://cleanwatercataraqui.ca.

For more information on the Town of Gananoque, visit https://www.gananoque.ca.