



Vegetables harvested in early August. Photo by T. Jarvis

FEATURE

Growth and resilience straight from Springbank Farm.



Photo by T. Kohi

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Springbank Farm — A Community Hub

By Tamanna Kohi, *rare* Development and Communications Officer

The *rare* Springbank Farm is fast becoming a major community hub. It is comprised of

- 110 community garden plots,
- a dedicated space for education and demonstration gardens,
- a humble greenhouse,
- Food Bank Gardens,
- the *Savvas Chamberlain Family Pollinator Conservatory*,
- the Springbank Pavilion,
- a conceptual longhouse by Dr. Bill Woodworth,
- *Stone Clay and Fire: Making a Circle* conceived by artist Don Russell to act as a point of connection between Indigenous and settler populations,
- *Minjimendan*, a sustainable Indigenous food garden by Dr. Andrew Judge, and
- the *Butterfly Interpretive Loop*.

All these features come together to provide a space for those who like being outdoors, are interested in growing their

own fresh organic produce and enjoy a sense of community, while creating a bustling, diverse, multigenerational hub to share knowledge. Springbank Farm provides an accessible opportunity for people to connect to nature and the source of their food — while building a resilient community in the process.

The following articles demonstrate how Springbank Farm fulfils *rare*'s vision to build an environmental institute. Here, different knowledge systems come together and offer opportunities to improve our approaches. We achieve this by applying different lenses and by learning from and making space for Indigenous ways of living and interacting with the environment and each other in reciprocity.

This season, we celebrate everyone's progress in inspiring a revitalization of Indigenous food systems and land-based sustainability practices, providing vibrant, nutritious produce to the local community and educating the next generation of land stewards and ambassadors for nature.

Read on to learn more! ■■■

Minjimendan - A State of Remembering

By Mkomosé (Bearwalker) — Dr. Andrew Judge, Ph.D., Conestoga College Professor

In spring 2018, Minjimendan, the Indigenous Foods Garden in the Springbank Farm at *rare* was created to be an ongoing Indigenous knowledge project, founded and directed by Mkomosé (Bearwalker) — Andrew Judge, Ph.D., a professor at Conestoga College and recipient of the *rare* 2018 Ages Foundation Scholarship. An Irish-Anishinaabe scholar, his research interests include Indigenous cultural knowledge, traditional ecological knowledge, decolonization, Indigenous resurgence, Mayan and Anishinaabe cosmology, blended Indigenous and Western methodologies and the ways colonialism affects Indigenous peoples' connections to land and water. Andrew seeks to build better relationships with local Indigenous peoples and all people in south-western Ontario around sustainability and food sovereignty.

His spiralling terraced garden utilizes Indigenous knowledge frameworks in its design and philosophy to create an engaging environment that ignites all the senses and aims to inspire a revitalization of Indigenous food systems and land-based sustainability practices. Mkomosé plans to grow the Three Sisters — corn, beans and squash; Jerusalem artichokes; sunflowers; sage; sweetgrass; strawberries; raspberries; hazelnuts; Saskatoon berries and more. As the Springbank Farm cultivates life in the gardens, it also strengthens our connection to the land, allowing it to flourish in reciprocity. The Indigenous Food Gardens are a symbol of the resiliency of this connection.



Photo by A. Judge

Jii bmooseynah Nokomis gii b'mosed — I am walking in the footsteps of my grandmother. I choose to remember.

After my first successful harvest of food, I was hooked. I've dreamt of growing again for the past six years. Growing and harvesting food wasn't just about feeding others or myself — it became mostly about awakening the mysteries and wisdom of plants. But when you're writing a dissertation, it's a wee bit challenging to focus on other tasks, especially one as important as tending a garden. Nonetheless, the plants speak to me — and maybe they speak to you too. But are you listening? I choose to remember.

Usually the plants share messages that are integral to my work and, sometimes, they share powerful and clear messages that come in dreams. Other times, their directive is as subtle as a whisper. But each time, there is a deep and profound feeling inside of me that plants wield an immense power to which words could never do

justice. I choose to remember.

Over time, I've made friends with growers, seed savers, conservationists and edible landscape designers. I've carefully studied their work, and have so much more to learn. I'd like to take ownership for awakening the spiral at *Minjimendan*, but it does not belong to me. In reference to his life's work developing elaborate and complex calendars based on advanced Mayan mathematics, *Oxla'jun N'oj*, one of my greatest teachers, once said to me, "*Nada de esto es mío Andrés, nada de esto me pertenece, todo pertenece a los ancestros* — None of this is mine, Andrew. None of this belongs to me. It all belongs to the ancestors." This work was all gifted by the ancestors and to them it will all one day return. I choose to remember.

Even the name *Minjimendan* was derived through dialogue with another of my teachers, Randy Trudeau. Admittedly, I had a colonized perspective of the ways my ancestors harvested foods. I figured

they had beautifully cleared pathways leading to all the places of harvest; but I was wrong. My ancestors' way of life, *mino bimaadiziwin*, is sometimes translated to "the way of a good life." I've come to know this phrase differently. I now understand it to mean "following paths to places of harvest, to live with vitality." My ancestors did not carve elaborate paths to their harvest places — they lived in a constant state of remembering, in *Minjimendan*. I choose to remember.

My ancestors remembered certain landscape features, waterways and trees the same way we remember the streets that take us home. *Minjimendan* is an Indigenous research project that seeks to revitalize foods native to the region for the purpose of supporting the vitality of my community, but also to re-establish the intergenerational thinking that my ancestors are renowned for. *Minjimendan* is more than a place for native foods. It is a place to reawaken the wisdom of the ancestors, and I choose to remember. ■■

Serving Our Community by Feeding the Hungry

By Taryn Jarvis, rare Property, Facilities and Gardens Coordinator



Photo by T. Jarvis

One of the dedicated features of Springbank Farm at *rare* is the Food Bank Gardens program. In 2017 a growing number of volunteers grew and donated a record 5887 pounds of fresh organic produce to the Cambridge Self-Help Food Bank and the Food Bank of Waterloo Region. This good work provides rewarding gardening and communal experiences for dozens of groups and individuals in Waterloo Region and beyond.

The Food Bank Gardens at *rare* is not the only garden project at Springbank Farm. The space is a hub rooted in community providing vibrant, nutritious produce to everyone who books a plot or volunteers to help. Many of our past and present gardeners demonstrate that serving our community and volunteering are shared values and they contribute generously by donating their time and expertise.

In 2017, we welcomed Trinity Community Table (TCT) into our family of community gardeners. TCT is a non-profit organization relying on donations and the generosity of community members to achieve their goals. Every Monday, Wednesday and Friday throughout the year, TCT serves 175 hot, nutritious meals to people in need at the parish hall of Trinity Anglican Church in Galt.

"There is a significant need for food in our

community. We see displaced individuals, working poor, families with young children and seniors — all accessing our kitchen here in Galt. It is important and part of TCT's mission to provide a nourishing meal to anyone in need. Operating as a non-profit, a significant portion of our budget is allocated to purchasing produce and meat," remarks Shawna Bator, a TCT volunteer and Board Member. Giving thought to how TCT could bring the freshest food and all its benefits to their guests at a fraction of the cost spawned the idea of starting their own garden. Dedicating themselves to hard work taught lessons that resulted in TCT's first direct access to fresh, nutritious produce — building on the idea of local food security even for those most in need.

Shawna had the help of three community volunteers and a high school student completing her volunteer hours. The small team of compassionate gardeners grew an abundance of fresh produce and herbs. Shawna remarked, "From June until late September we were able to serve a fresh green salad and other garden ingredients at least twice a week accompanying our main course. Approximately 2,989 meals were served during this time with produce directly from our garden. It was truly amazing to watch our guests' joyful reaction to fresh nutrient-dense food — something they expressed they would never otherwise have access to." People who enjoy these meals have told Shawna that sometimes it is their only chance to get a regular meal. She continues, "I believe everything we have learned this last year will benefit us in growing and harvesting that much more for our guests at Trinity Community Table." ■■

For more information about Trinity Community Table and the ongoing volunteer opportunities at *rare*, please contact Shawna Bator at (519) 574-5496. For more information about the Springbank Community Gardens, contact Taryn Jarvis at taryn.jarvis@raresites.org or (519) 650-9336 x115.



Photo by T. Kofi

Rooted Education

By Anastasia Lyons, rare Assistant Program Facilitator



Photo by E. Leslie

Our community's kids are the future and at *rare* that means they are the next generation of land stewards and ambassadors for nature, with a special role to play in mitigating climate change and working toward food security. That's why every Thursday in July and August, beginning in 2017 and continuing through the 2018 season, participants in *rare's* Every Child Outdoors (ECO) summer camp could be found engaged in a *Chain of Learning* with Springbank Gardens staff, all of whom are trained — and inspired — to make learning fun and to instil a sense of wonder at the beauty and abundance of nature.

Too often, the only part of the food industry that kids get to see is the grocery store. So while they learn about many different herbs and vegetables including swiss chard, romaine lettuce, basil, zucchini, sweet peppers, potatoes and several varieties of squash — and fruit, including blueberries, tomatoes and strawberries — they also come to understand the similarities and differences between our education garden with its organic, small scale production and the important farming industry that so much of the world relies on for its food. They also get the chance to ask questions about gardening, harvesting and growing their own food — while learning how conservation and agriculture can make great partners.

The goal of ECO is to aid in the growth and development of a child to be a responsible, conscientious adult capable of contributing to a resilient community and making our world a better place. But perhaps the best part for ECO campers — and the leaders — is harvesting the ingredients to make a salad and their very own salad dressings! ■■

From Stage Coach Inn to Environmental Institute

By Stephanie Sobek-Swant, Ph.D., *rare* Executive Director

Built in 1837 as one of the first stage coach stops in Upper Canada, Lamb's Inn is now *rare*'s administrative home. Named after its original builder, John Lamb, the building has served many purposes, including a hotel, a fine dining restaurant, a tavern, a café and a garden shop. In 1927 William Nicholson bought the building and renamed it Nicholson's Inn, running a well-regarded dining establishment. After his death in 1939, the inn gradually became a local drinking spot for a younger, less restrained crowd. Although this left the tavern with a reputation as a loud, rowdy establishment, it was also the place where a number of bands got their start, some with local origins. Many community members past a certain age and former Conestoga College students have fond memories of hours spent socializing, dancing and engaging in other shenanigans that until recently were still documented with waterproof pen on a graffiti wall in what used to be the backstage.

As *rare* has been moving into a bright future, becoming Canada's leading environmental institute and a land trust for the Grand River watershed, it seemed time to dust off the relics of this adventurous past and to make way for the new. And our efforts have made a difference, indeed!

The entire dilapidated rear of the building (a 1960s addition) was removed in early spring, which meant carefully peeling away layers upon layers of building materials that had been installed over the decades — always making sure not to damage the designated heritage sections of the building. Much was revealed throughout the process, including a stone summer kitchen with hand-hewn wood beams that likely dates back to the beginnings of the inn and will be preserved. The heritage front has also received a fresh coat of paint, window upgrades and other corrective measures to preserve the façade.

Accessibility features to the entrance and reception area will ensure the building is a hotspot for meeting, collaborating, working and, of course, celebrating! This includes an open concept kitchenette, work and lounge



Photo by T.Kohi

spaces where researchers, staff, artists and visitors can creatively collide in a fresh, contemporary and comfortable setting. Gone are the draughty cold days spent with space heaters and dim lights. The additional fresh co-working space will house research fellows, summer students and other associates.

Of course, our quest to make *rare* a top-notch employer that attracts talent and passion to Waterloo Region doesn't stop here. Preliminary designs have been drafted for a future phase that will see the back of the property developed with a new heritage-appropriate addition to house our institute. With advice from our Indigenous Research Fellow and Program Coordinator, Mackenzie Lespérance, and from other Indigenous advisors, this will include culturally appropriate spaces to host gatherings and an Elder-in-Residence. We are honoured to have the support of many of the original stewards of these lands in our efforts to reconcile with each other and the land, and I'm humbled to be invited to join this path of learning and reciprocal sharing.

Our institute is not just about science — it's about braiding many ways of knowing and being, including the arts and traditional Indigenous knowledge.

We want to continue to break down barriers to make *rare* a more inclusive space and to dissolve the silos of research, conservation and education. We hope you join us and become part of this journey! ■■■

Please watch your email for an invitation to our Open House celebration once the first phase of the Lamb's Inn renovation is completed, with support through the Canada 150 Community Infrastructure Program/Programme d'infrastructure communautaire de Canada 150. We are also most thankful for the generous support of Enabling Accessibility Fund, Len Chaplinsky Farms Ltd., MHBC Planning Urban Design & Landscape Architecture, Martin Simmons Architects Inc., The City of Cambridge and Gateman-Milloy Inc.



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GATEMAN MILLOY

Learning about Ferns and Honouring a Local Naturalist:

The Craig Campbell Fern Walk

By Tom Woodcock, *rare* Planning Ecologist

Pteridophytes, more commonly known as ferns and their allies, such as clubmosses and horsetails, are features of landscapes around the world. Arguably the earliest group of vascular plants, which first developed specialized vessel structures to carry material such as water and nutrients, to be broadly successful, ferns evolved from earlier green plants and widely colonized the land. The earliest known ferns in the fossil record are 360 million years old, before any land animals existed and 200 million years before the appearance of flowering plants. Today there are more than 10,000 species of ferns worldwide.

Local naturalist and ecologist Craig Campbell has spent a lifetime studying natural history in the Region of Waterloo and across Ontario, and the lands known now as *rare* were important to his work. After volunteering with the Kitchener-Waterloo Field Naturalists, (now Waterloo Region Nature) he began a career that would see him become a nationally recognized expert on the flora and fauna of Ontario. His role in protection of natural history and biodiversity in the Region

includes assisting in the creation of what is now known as the Greenlands system, establishing natural heritage protection in the Official Plan. Craig's contributions have been recognized with such honours as the Ontario Nature W.W.H. Gunn Conservation Award (2013) and the Lieutenant Governor's Ontario Heritage Trust Lifetime Achievement Award (2016). He was also inducted into the Regional Hall of Fame in 2018 for his contributions to the study and protection of nature in the Region of Waterloo and beyond.

To honour Craig's abiding interest in conservation of Species at Risk, and the significance of ferns, *rare* is creating an educational Fern Walk, with signage at several stations that links to printed material and eventually to a digital app. Available this fall, the new walk will feature at least 12 of *rare*'s 37 species of ferns and horsetails. As a land trust organization, *rare* hopes not only to recognize *pteridophytes* with the new trail, but also to include organisms that are often neglected in restoration projects but play an important role in our ecosystems. ■■

MEET EASTERN COMMA ARTIST-IN-RESIDENCE KAHSENNIYO WILLIAMS



Photo provided by K. Williams

We are pleased to introduce Kahsenniyo Williams as our 2018 *Eastern Comma Writer-in-Residence*. Kahsenniyo will be living in North House throughout September and October, immersed in the natural landscape and biodiversity that *rare* offers. A spoken word artist from the Mohawk Nation Wolf Clan, Kahsenniyo began using her poetry as a tool for social change and community engagement in 2008. She draws on her lived experience to engage audiences, and aims to educate non-Indigenous peoples about the struggles, beauty and realities facing Indigenous peoples. Kahsenniyo's work also attempts to create moments of understanding, connection and healing for Indigenous peoples. It is through her passionate performances that Kahsenniyo demonstrates her love for her community and people. Welcome Kahsenniyo!

The Eastern Comma Artists-in-Residence is a joint initiative of the Musagetes Foundation and rare. Named after a butterfly found near water sources in the eastern half of North America, and sporting comma-like markings on the underside of its wings, this collaborative program showcases the connection between environment, sciences, Indigenous ways of knowing and being and the arts.

 **musagetes**



Craig Campbell (centre) and colleagues contemplate a patch of ferns. Photo by L. Lamb



Photo by L. Harnett

A Day in the Life of a *rare* Researcher

By Laura Klein, *rare* Gosling Engagement Coordinator



Photo by L. Klein

A day at *rare* for researcher Winnie (Hui Ling) Yang involves lots of peanuts, peanut butter and — if all goes well — a nap. Working on a Master of Science in Integrative Biology at the University of Guelph led Winnie to spend about two months living on the *rare* reserve. Her research explores how urban development influences wildlife, particularly the Eastern Grey Squirrel.

A typical field day for Winnie starts at 5:00 a.m., leaving the comfort of Resource House — the renovated 1840s farmstead on the reserve that gives researchers a place to stay while their work is underway. Before sunrise, Winnie opens the traps for squirrels, anticipating their peak activity. The traps need to be in working order, set up with lure, and other critters evicted to be ready the instant targeted squirrels start foraging. Who can resist shelled peanuts and peanut butter as bait for breakfast? The traps are left for three to four hours, which usually buys Winnie some time to take care of her own breakfast, filling the Resource House kitchen with the mouth-watering smell of fried bacon — and sometimes there is even enough time to catch up on much-needed sleep.

By 9:00 a.m. any squirrels that are caught in a trap will be brought back to the research tent at Resource House to be observed. Behavioural trials are a major component of the research to see how the animals respond to certain cues. Trials include observing each squirrel while playing predator sounds imitating, for example, a red-tailed hawk, and presenting a mirror to see how each squirrel reacts to seeing itself. These behavioural trials help Winnie understand how urbanization influences squirrel behaviour and, possibly, personality. All squirrels are tagged and microchipped for identification, then released back into the wild in the early afternoon.

Winnie's goal is to understand better how humans are affecting and potentially modifying species. Since squirrels are ubiquitous in both urban and rural settings, they can give us much insight into the effects of urban development. "Urbanization is inevitable, but I hope my work can lead towards better conservation in cities. Squirrels have to re-write their history and as a species they are a good model for other wildlife." Winnie notes that the squirrels residing on the *rare* reserve are considered the 'natural population' in comparison to the urban population at the University of Guelph. She wants her research to help improve urban wildlife's coexistence with humans. "How humans affect the wildlife around us is much more complex than just taking away their natural habitats. Animals living in cities have to face many challenges that may force them to adopt a new lifestyle, altered behavioural patterns, or even influence their biology."

*"To me **rare** is an institute devoted to research, education and conservation to preserve the beauty of nature for many generations to come."*

The excellent 8 km trail system at *rare*, open to users from dawn till dusk, not only invites visitors to take a stroll, but also gives researchers the opportunity to interact with visitors who are often keenly interested in the work and ask many questions. Everything *rare* does is driven by research, and this knowledge is used to educate the next generation of land stewards. Researchers like Winnie come to *rare* knowing that their long-term research sites create a living laboratory that will remain intact and accessible to asking new questions — forever! ■■



Photo by W. Yang

Species Spotlight: Bank Swallows (*Riparia riparia*)

Photo by H. Bagg

By Owen Lucas, *rare* Ecological Monitoring Assistant



Bank Swallow. Photo by D. Gascoigne

Bank swallows are breeding migrants, found across the southern half of Canada. They can be distinguished from other swallows by their brown upperparts and white underparts, and a dark band across the breast. They can also be distinguished in flight from other swallows by their quick, erratic wing beats and almost constant buzzy, chattering vocalizations.

In the last four decades, 98% of the Canadian population of bank swallows has been lost, resulting in its classification as a threatened species both federally and provincially. Numerous factors have contributed to this decline, including:

1. the widespread use of insecticides, which cause significant declines in insect populations, the primary food source of bank swallows;
2. the loss of breeding and foraging habitat; and
3. the destruction of nesting habitat.

Many of these factors also cause declines in populations of other aerial insectivores.

Bank swallows nest by burrowing into vertical facing banks, both naturally occurring and human-made. The number of naturally occurring banks has been threatened by human development, and the bank swallow has adapted to nest in aggregate pits and construction sites, which can threaten breeding success since these sites are often temporary in nature.

Despite the risk of disturbance and nest destruction, aggregate pits do provide important nesting habitat. This is especially the case at *rare* where there are many neighbouring aggregate and construction sites — and, therefore, opportunities to

work in partnership to discover ways to optimize nesting success. Executive Director, Dr. Stephanie Sobek-Swant, toured the CRH Canada Group (formerly Dufferin Holcim) pit which abuts *rare*'s South Field with Kevin Mitchell, Director of Property, Planning & Approvals for CRH. He has offered financial support and the expertise of the company's biologists and their primary ecologist. As Sobek-Swant says, "It's a great first step in building a relationship, which one day may result in a retired pit that could become part of *rare*, or move under joint stewardship as a research and restoration site. There is a beautiful lake and white oak forest on the pit property, which would be an amazing conservation asset in this region."



Nesting structures at *rare*. Photo by D. Gascoigne

The nesting structure built in 2017 has not proved to be enough of a draw to make a significant difference. Researchers and *rare* staff continue to look for improvements in these high-risk areas to find out how to make these artificial structures attractive, permanent and low-maintenance in order to be competitive with unintended nesting sites in undesired locations. Once successful, the design could be replicated and widely implemented to keep swallows in preserved areas and away from more perilous industry sites. A win-win for everyone involved! In the meantime, researchers ask the public to report all sightings in any locations to databases such as eBird or the Natural Heritage Information Centre to track where they are found. They also ask that everyone consider supporting *rare*'s effort to *Turn the Map Green* (turnthemapgreen.ca) so that their habitat is protected and monitored.

To report a sighting, visit ontario.ca/page/natural-heritage-information-centre. ■■

ABOCA: A LIFE PROJECT IN TUSCANY

When asked about her photography work for Aboca in Italy, *rare* International Ambassador, Geneviève Caron, immediately responded with all the ways in which she and her husband, Ljubodrag Andric (a fellow photographer on the shoot) share values with the company, mentioning respect for the environment, organic approach to farming, use of plants to heal ailments, emphasis on family-owned and -managed business practices, cutting-edge scientific research and respect for traditional knowledge, all leading to "an incredible mix of innovation and tradition."

Caron: I love how humble, accessible and inspiring the owners are. Even from our earliest meetings, they were always convivial and forthright. And their vision is so compelling. If you visit their corporate website, you will see that the first thing they talk about is the intuition of founder Valentino Mercati who "studied in depth the ancient traditions tying man to medicinal herbs, discovering an unimaginable world, where everything had already been said and used. He realized he had to make this enormous heritage available to all, blending the results of a history of thousands of years with the potentials offered by new scientific and technological discoveries."

*It reminded me of *rare*!*



Father and daughter in a chamomile field. Photo by G. Caron

A Global Biodiversity Challenge

By Jenna Quinn, *rare* Program Scientist — Research Priorities, Partnerships & Monitoring



From April 27–30, 2018, *rare* led the charge as Waterloo Region competed in the first ever international City Nature Challenge that saw nature-lovers in almost 70 cities around the world competing to see who could make the most observations of nature, find the most species and engage the most people. Worldwide, nearly 450,000 nature observations were logged to the free app, iNaturalist — displaying the amazing power of citizen science.

Starting in 2016 with the first-ever Citizen Science Day, the Natural History Museum of Los Angeles County and the California Academy of Sciences in San Francisco dreamed up the City Nature Challenge as a fun way to capitalize on their friendly rivalry. In 2017 the challenge went national and in 2018, it went global! Waterloo Region was one of just two Canadian cities, Vancouver was the other, in the challenge this year, joining such places as New York, Tokyo, London and Kuala Lumpur.

The multi-city, global event called on current and aspiring citizen scientists, nature fans and people of all ages and science backgrounds to observe and submit pictures of wild plants, animals and fungi to iNaturalist. This emphasis on studying and documenting nature is not a new concept for *rare* volunteers who are familiar with three years of BioBlitz events that documented species on the property, nor for those who support *rare*'s unique method of conservation, one that doesn't just put fences around sensitive lands but rather engages whole communities to support conservation values. To support nature, especially in an urban area, we must first document and learn about it. The *rare Chain*

of Learning has always encouraged scientists, knowledge holders, students, land managers and the community to work together — not only to learn more about local nature but also to understand how it contributes to a more sustainable city for us and for the other species living here. With this knowledge, researchers at *rare* are able to focus conservation and restoration efforts in the locations where they can have the biggest impact, and can compare trends in species presence and abundance with other locations in Waterloo Region and around the world.

Despite the late spring weather, hundreds of participants searched their Waterloo Region backyards, local parks, and nature reserves looking for the sights and sounds of nature. More than 2,500 observations were made of over 430 species. Highlights included the elusive Elktote, a vulnerable species of freshwater mussel; the Short-eared Owl; the Eastern Ribbonsnake; and the Kentucky Coffeetree, all species-at-risk in Canada. Of course, no Canadian challenge would be complete without a sighting of our national animal — the Beaver! A full report with photos can be found online on inaturalist.org.

The San Francisco Bay Area took a sweeping victory with more than 40,000 observations of nearly 3,000 species, but of course the knowledge learned about urban biodiversity around the world is the real prize. ■■



Join in on the fun for the 9th Annual **Walk & Run for *rare***. This 5K fun-run supports our *Turn the Map Green* campaign, to the protection of the more than 3,700 species that call *rare* home.

September 30, 2018, 9:00 a.m. - 12:00 p.m.

Riverbluffs Park, Cambridge

REGISTER TODAY

@reresites.org



Indigo Bunting spotted on May 25. Photo by M. Weissmann

Nature Notes

By Ross Dickson & Bill Wilson, Community Volunteers

This year may well be considered the Year of the Tern within the river corridor of *rare*. On May 8, Bill Wilson observed a FORSTER'S TERN foraging — hovering and diving — in the baylet of the Speed on the northern boundary of *rare*. Reported infrequently in Waterloo Region, this sighting was Wilson's first in *rare*'s waterscape. A report of COMMON TERN by Tom Miller, June 16, was the first of many sightings of this species at the Confluence. Brian Johnson and Bill Wilson estimated ten in flight upstream of the Confluence while two perched on cobbles in the baylet; Wilson counted eight on July 20. Two were present almost daily July 11 to 29 loafing on cobbles or aerial foraging about the Confluence.

The annually occurring CASPIAN TERN, present between the second week of April to the third week of September, was also present in large numbers; 19 were observed by Ross Dickson on August 5. Did the unprecedented ice jam of last winter, which extended well beyond the Confluence upstream to the Doon Golf Course, contribute to the increase in tern activity observed this spring and summer? In early July a large algal mat extended across much of the Grand in the vicinity of the baylet, pock-marked with boulders then lines of cobbles as water levels reached a normal summer low. The scouring of the river's substrate this past winter by the extensive ice build-up along the river appeared to have "rearranged" a considerable area of the river's substrate. The advantage to gulls and terns would be the addition of roosting and loafing surfaces in the river.

Tundra Swan migration past the Confluence peaked on March 1. Entries in Bill Wilson's notebook showed 36 flocks totalling about 1370 swans.

On May 11, Land Management staffers Alissa Fraser and Kelsey Hewitt saw a NORTHERN RED-BELLIED SNAKE along the Thompson Tract trail.

Mike Weissmann photographed an INDIGO BUNTING on May 25.

Owen Lucas, Ecological Monitoring Assistant at *rare*, documented two new dragonfly species on the property — DUSKY CLUBTAIL on May 30 and CHALK-FRONTED CORPORAL on June 7.

On July 7, above the Confluence, Bill Wilson scoped a hen COMMON MERGANSER perched on a boulder with a brood of three flightless young under her body. It is the third known breeding record for Waterloo Region according to Jim Burrell of Waterloo Region Nature.

All Ontario turtle species are imperilled. MIDLAND PAINTED TURTLE, newly designated by COSEWIC in April 2018 as a species of Special Concern, was photographed by Bill Wilson on July 7.

Teams of butterfly watchers led by Jenna Quinn and Owen Lucas found 37 butterfly species during the Annual Butterfly Count on July 14.

Summer ECO Campers were delighted to see a WHITE-TAILED DEER fawn on July 25, an excellent opportunity to learn about why young deer have spots. ■■

HAVE SOME *rare* FINDS OF YOUR OWN?:

#rareMoment



Do you have a memorable nature sighting you wish to share? Tweet or Instagram using the hashtag #rareMoment or submit to rare@raresites.org with the subject line: *rare* Moment



Chalk-Fronted Corporal Dragonfly captured on June 7. Photo by O. Lucas



Common Merganser with her young on July 7. Photo by B. Wilson



Painted Turtles sunbathing on July 7. Photo by B. Wilson

rare's Global Effect

By Tamanna Kohi, *rare* Development and Communications Officer

The United Nation's Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and mobilize for the peace and prosperity of the planet — by 2030. The 17 Goals and targets, set in 2015, require bold and transformative steps that have the power to change the planet — but only if multilateral development banks, governments, the private sector and civil society organizations work together.

This is particularly true as climate change wreaks havoc around the world — places with high deforestation and other disturbances of the natural environment are often harder hit. And it's not just far-flung places that are in decline. One of the most comprehensive reports on trends in Canadian wildlife populations was released in late 2017 and the results are shocking to many who think of Canada's vast 'wilderness' areas as a refuge for wildlife. After all, a quarter of the Earth's wetlands, 8,500 rivers and more than 2 million freshwater lakes are in Canada. But, the report shows, during the past four decades, human activity — whether industrial

development, farming, forestry or the expansion of urban areas — as well as climate change, pollution and overfishing have helped shrink the populations of 451 species, representing half of the 903 monitored species in the country.

The kind of work going on at civil society organizations like *rare* is now being shown to have the best chance of success at changing these trends; namely, we take an ecosystem-based approach that protects multiple species, while doing important research to begin understanding what is really going on within the natural world. We also work to understand the interconnectedness of all relationships with land and people in small "islands" of protected space — all that is left to us on an increasingly developed planet — and we use our knowledge to educate the next generation of conservationists who will be responsible land stewards.

This approach not only benefits our immediate community but also puts *rare* in a unique position to help with some of the United Nations SDGs:

SDG 11: SUSTAINABLE CITIES AND COMMUNITIES

Efforts to protect lands through conservation are strengthened by *rare* — by providing inclusive and accessible green spaces to the public, we are working to build a more resilient community in

Waterloo Region/Wellington.

SDG 13: CLIMATE ACTION

The *rare* reserve offers natural flood prevention, a place for biodiversity to flourish, carbon sink wetlands and educational programs to help create active and engaged communities of concern. Our *Chain of Learning* and our emphasis on traditional Indigenous knowledge provides a model for use around the world and the peer reviewed papers coming out of our research program contribute to the base of knowledge worldwide.

SDG 15: LIFE ON LAND

We protect, restore and promote dynamic ecosystems so they can thrive, while preventing land degradation and biodiversity loss on 24 different habitat types. At *rare*, we work to bring communities together to encourage mindfulness to engage in a reciprocal relationship with the land.

Working towards the United Nation's SDGs align with *rare*'s vision to offer the community, including local Indigenous Peoples, the international community and future generations, a diverse network of connected landscapes, protected intact in perpetuity, which has the power to change the course of climate change — as long as we continue to work together in our local and global communities. ■■

To send in a donation, fill in form and cut here.



I want to support building a resilient community at *rare*!

I've enclosed my donation in the amount of:

- ☐ \$200
☐ \$100
☐ \$50
☐ \$25
☐ Other \$ _____



Photo by T. Kohi

- ☐ I'll help *rare* plan ahead by joining the **Bedrock Club** with a monthly donation of: \$ _____ to be automatically withdrawn on the 15th of every month. (void cheque attached)

Donor Contact Information

Name _____ Telephone _____

Mailing Address with City and Postal Code _____

Email _____ ☐ Yes, I would like to receive email updates from *rare*

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OR

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The *rare* Charitable Research Reserve acknowledges and offers gratitude to all the original stewards of the land in which *rare* resides, within the Haldimand Tract, spanning six miles on either side of the Grand River from source to mouth.

We would like to honour and respect the sovereignty of both First Nations in our area; the Onkwehon:we Peoples of Six Nations of the Grand River and the Anishinaabe Peoples of Mississauga of the New Credit. Nia:weh and Miigwech to these Nations who share their lands with us. We'd also like to acknowledge the Neutral people which we have archeological evidence for dating back 10,500 years.

Lastly, we acknowledge those Indigenous peoples who live, work and learn in the urban landscape around us such as the Métis, Inuit and other status and non-status First Nations People.

As a community it is crucial that we honour and uphold our role as treaty people by caring for the land and all of its inhabitants including the plants, the animals, the water, the fire, each other and our ancestors. Please keep the land and its inhabitants in your minds and hearts as you enjoy your time with us at *rare*.



Review Fall 2018

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