



Frog. Photo by J. Dillon & J. Moser

FEATURE

Executive Director, Stephanie Sobek-Swant, introduces *raresites*.



Photo by D. Crowell

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Introducing *raresites* – protecting more land across Waterloo Region and Wellington, together

By Stephanie Sobek-Swant, Executive Director

It has always taken the whole community to ensure that *rare's* motto — intact in perpetuity — will also be a promise kept. During our Strategy and Planning process in late 2014 and early 2015, we conducted surveys, focus groups, expert interviews and a town hall meeting to explore community needs. It became apparent that one of the biggest issues faced by conservation in the Grand River watershed and adjacent areas is a lack of grassroots efforts to protect land; we are losing agricultural as well as natural areas at an unprecedented rate. For *rare*, the term “region” or “regional” is defined broadly to include Waterloo Region, Wellington County and adjacent communities with a focus on the Grand River watershed and its tributaries — the Speed, Eramosa, Conestogo and Nith Rivers, covering the area that is often thought of as “the hole in the doughnut” since it is not currently

under the jurisdiction of any other multi-property land trust. With its emphasis on science-based stewardship, conservation research and education, *rare* is prepared to fill this gap, stepping up to expand its role as a regional land trust — we are working hard behind the scenes to protect even more land by bringing together leaders and members from other conservation organizations and communities to create *raresites*, a community-driven approach to land securement in the Grand River watershed.

As a result of our leadership and the resulting unique program offerings, we have been chosen by The Gosling Foundation for major investment in “engagement organizing,” harnessing people power to effect change in the conservation mindset — or lack thereof — in a broader portion of the public.

Introducing *raresites*

continued from cover

Specifically, we are working towards a community-based land securement strategy taking advantage of technology for such things as mapping, but also for broad-based grassroots fundraising in support of local land securement. In a program called *Turn the Map Green*, everyone, the youngest children included, can symbolically adopt a square metre of sensitive lands for as little as \$2. At turnthemapgreen.ca the community is already helping to finish paying for the original *rare* lands. Not only will this tool allow the community to feel ownership and responsibility for conservation lands, but also for future land securement projects that are a result of the regional mapping and strategy development. Grassroots involvement

makes clear that everyone can participate — not just those who have the capacity for larger gifts. The *Turn the Map Green* effort can also be easily translated to growing as a land trust in this area, by connecting people and places across the map for more lands protected. We plan that by the end of 2017 we emerge with a solid land securement strategy that lays out options for larger, more connected, and new conservation lands under the *rare* umbrella. As an Ecogifts recipient, *rare* is able to receive land donations and can hold conservation easements on behalf of land owners. Please contact Stephanie Sobek-Swant, Executive Director, stephanie.sobek-swant@raresites.org, 519-650-9336 x113 to learn more about land trust options.

We are eager to hear from you about lands in Waterloo Region/Wellington that are of ecological significance and you would like to see preserved for future generations to enjoy — truly intact in perpetuity! ■■

We thank the Gosling Foundation for their generous gift of \$250,000 to support raresites, and all partners for their generous in-kind support of time and expertise, including the Region of Waterloo, Ministry of Natural Resources and Forestry, Six Nations Lands and Resources, Grand River Environmental Network, Waterloo Region Nature, Ontario Farmland Trust, Grand River Conservation Authority, Waterloo Stewardship Council, Premier Environmental Services Inc.



The completed Bauman Creek channel, awaiting erosion blankets and seeding with native plants. Photo by T. Woodcock

Expanding and improving habitat along Bauman Creek

By Tom Woodcock, Planning Ecologist

In 2016, *rare* undertook the restoration of Bauman Creek, a cold water stream on our property. These clean, cold waters represent an increasingly uncommon habitat in southern Ontario that is vanishing due to pollution and changing land use. The downstream portion of the stream, located on a part of the Grand River floodplain called Blair Flats, was historically diverted and channelized to increase the area of usable cropland, and a culvert was installed to allow farm equipment access.

When Blair Flats was retired from agriculture, the western portion became the site of a long-term ecological research project. The eastern area around Bauman Creek was allowed to naturalize, with ongoing invasive plant removal and native species plantings. At some point, the culvert shifted and the water slowed, then stopped flowing. As the stream habitat dried up, the inhabitants had nowhere to seek refuge from low water and high temperatures in the summer.

Following an assessment of the problem, we undertook restoration efforts to expand and improve the habitat, reconnecting it to the Grand River. The farm lane and culvert were removed and a meandering channel created. The new channel has a series of pools and riffles, including deep sections to retain water during dry periods, and shallow sections with faster, turbulent currents. Substrate texture ranges between sand and gravel to large boulders, reflecting the unsorted glacial deposits that underlie Blair Flats. With returned flow, more than 400 m of habitable channel have been

restored. The developing wetland remains at a reduced size, fed by ground water and periodic flooding from the creek.

Although the construction is complete and the channel has been reconnected, there is still work to be done. The next step is creating a riparian buffer by planting native trees and shrubs along the banks, and collecting post-restoration fish and invertebrate data. An Earth Day Tree Planting event was held on April 22 to create the riparian buffer. We will also be seeking the help of volunteers during the year to help with invasive species control. ■■

We are grateful for the advice and support of the World Wildlife Fund, R&M Construction, Water's Edge Environmental Solutions Team, the Ontario Ministry of Natural Resources and Forestry, Trout Unlimited, and the Grand River Conservation Authority. Funding was supplied by the Loblaw Water Fund, the Great Lakes Guardian Community Fund and the Environmental Damages Fund.

raresites - A BIG PICTURE VISION

A desire to preserve nature drove the four founding fathers to create the Bruce Trail that eventually led to achieving protection of the Niagara Escarpment. Philip Gosling saw the big picture and was motivated to take time from his career to move from the vision they had to an actual trail on the ground. Since then, thousands of Ontarians have worked together to make the ecological corridor that exists there today a globally significant reality.

When Dr. Gosling became aware of *rare's* move to become a multi-property land trust, he again saw the big picture and stepped up through his foundation to provide the support for *raresites* to encompass the entire Upper Grand River watershed.

At a recent *rare* gathering, Dr. Gosling noted the potential, "*raresites* is a means by which we can all work together to ensure that the Upper Grand River ecosystem can return to health. I invite everyone to find their part in achieving a preserved landscape that will allow people and nature to flourish together forever. Despite the pressures of growth everywhere, there is so much left to preserve and so much left for each of us to do now while we can."



Bees. Photo by D. Crowell

An inside look at all the buzz

By Emily Leslie, Gill Ratcliffe Educator

Have you ever wondered what honey bees are up to inside of their hive? As a part of a complex social community, there are many roles and jobs that honeybees fulfil depending on their age. People often just associate honeybees with making honey and buzzing around from flower to flower, but they do so much more than that! From collecting pollen, to cleaning, taking care of their nursery and the elderly, and staking guard for their hive, a honeybee's life is definitely far from dull. Honeybees even come to democratic consensus within the hive as a community when faced with important decisions that affect the wellbeing of the colony.

These little creatures hold such fascinating lives, and most of us as humans do not have the opportunity to observe these happenings in our life time. As fascinating as they are, there can often be disconnect between honey bees as pollinators, as well as their native cousins the wild bees, and our own lives as humans. The truth is however, that we are completely connected to them all.

There has been a lot of buzz in the media about bees lately, and for a valid but worrying reason. Due to the increase in pesticide and insecticide use over the past decades, both native wild bee and domesticated honeybee populations

have faced a major decline. This poses a huge concern, not only for these species themselves and the ecosystem, but for human life as we know it since such a large portion of food crops rely on bee pollination. Without pollinators, many food crops that we love would be of threat of significantly decreased yield or collapse.

At *rare*, we are hoping to bridge the gap between people and pollinators. Through funding from Whole Kids Foundation and in partnership with Bee Cause, *rare* has obtained an observation bee hive. An observation hive is an indoor hive equipped with Plexiglas sides, much like a window, so you can see what the bees are doing right inside. Inside the structure are frames of honey comb, where one can observe the busy bees fulfilling their everyday jobs. Once installed at the *rare* ECO Centre, we will have a means to explore these little pollinators with a closer look through our *Every Child Outdoors* modules and summer camps. This exciting new addition will provide a wonderful learning opportunity to observe the fascinating lives of bees. Through this, we will be creating connections between young generations and the significance of bees, along with a deeper understanding of their roles and the importance of protecting pollinators. ■■

Photo by N. Dunham



SAVE THE DATE! 2017 WALK & RUN FOR *rare*

Grab your hiking boots and running shoes, the 2017 Walk & Run for *rare* is fast approaching! Join us on September 24 to help *Turn the Map Green*.

Registration opens in June.

Conservation heroes wanted! Interested in sponsoring the event? Want to donate products for prizes? Looking to get more involved and volunteer your time? We'd love to take you up! Contact Laura Klein, Gosling Engagement Coordinator at laura.klein@raresites.org or 519-650-9336 x126 for more information.



Photo by D. Coulson

Searching for species

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

Sometimes the hardest part of studying a species is finding it first. In fact, researchers from the University of Dalhousie recently estimated that there are more than 7 million species out there still waiting to be discovered. Discoveries often happen in remote environments such as the deep ocean or undisturbed jungle, or are the result of an exhaustive and rigorous search effort. In order to compile the most extensive list of our wild relatives, explorers and scientists must diversify their tactics across habitats, seasons, and even the methods themselves. Some birds, for example, are easily attracted to backyard feeders filled with sunflower seeds or suet, while others, such as owls, may respond to

an evening call on an owl prowl. Utilizing a variety of methods is therefore the best way to maximize your species count, which is one of the primary goals of a bioblitz.

A bioblitz is a survey of a given property within a set time frame, typically 24 hours. They usually cover a suite of taxa — from fungi to fur-bearers — and employ a myriad of techniques. Insects are one of the most diverse groups of species on the planet, and, so, not surprisingly the survey methods required to find and count them are also diverse. Nets can be used to capture large insects like dragonflies and butterflies while flying, or can be swept through tall grasses and meadows to collect species residing in those habitats. Pitfall traps focus on collecting ground crawling insects by submerging a cup into the soil. Typically, a cover is used to keep out larger vertebrates and to minimize the impact of rain. Malaise traps are used to collect flying insects, particularly flies, wasps, and relatives. They look similar to a tent with walls and a roof, and funnel insects flying into the walls toward a collection preservative. In aquatic

environments, flipping rocks and stirring sediment can aid in collecting insects and other species living in a riverbed. These are just a few approaches used at the *rare* reserve for insect surveys.

To learn more about the species that inhabit our wild spaces and to experience these survey techniques and more firsthand, **join us on July 15-16 for the *rare* Community BioBlitz**. This celebration of Canadian biodiversity is free to attend, includes 24-hours of guided surveys, public workshops and demonstrations, and a kid-friendly barbeque with live musical entertainment. ■■

*Registration for the *rare* Community BioBlitz is now open! Visit raresites.org for more information and register today!*

This initiative is made possible by the Community Fund for Canada's 150th, a collaboration between Cambridge & North Dumfries Community Foundation, the Government of Canada, and extraordinary leaders from coast to coast to coast.

REMEMBERING NICK

Nick began visiting *rare* as a Grade 9 student, waking up early on Saturday mornings to visit the banding station, watching and learning about birds. He later completed two co-op terms at *rare* taking on any tasks that came his way with a quiet confidence and an infectious easy-going spirit. His love for nature always evident, Nick was a sponge absorbing every opportunity to learn. He never shied away from hard or monotonous work, and did every task with a smile. What we'll remember most is his knack for catching butterflies. Even when it seemed impossible, Nick would succeed. It was as if it never crossed his mind it could not be done. He always persevered. Forever a part of *rare* — Nick you are missed.

Nicholas St. Pierre-Beke Photo by J. Quinn



Green Infrastructure at *rare*

By Tom Woodcock, Planning Ecologist

Human beings, individually or when collected into governments, corporations, or institutions, make decisions, and the results of these decisions are a balance of costs and benefits. However, while some reap the benefits, some related costs may be borne by others. This is particularly true when decisions are being made regarding issues of planning, resource use and land development — the environmental costs and benefits are often excluded from consideration. These benefits are provided by Green Infrastructure that makes up our life support system, such as forests, prairies, farm land and surface waters. We can all benefit from wise environmental management that accounts for this valuable infrastructure.

The economy is a subsystem of the environment. All benefit generated by economic activity is ultimately derived from the use of resources or energy taken from the environment. This is the same environment we depend on to absorb and process waste products. It is naïve to think that the economic benefits that we all enjoy are divorced from this reality, and even more so that removal and fragmentation of Green Infrastructure does not affect its function. The report *Estimating Ecosystem Services in Southern Ontario*, published by the Ontario Ministry of Natural Resources (2009), estimates the annual dollar value

of services provided by forests, meadows and wetlands. It is important to note that these services are not extras for society; if the Green Infrastructure is lost or damaged the cost difference must be paid, either through construction of Gray Infrastructure to perform those functions (i.e., water treatment plants, reservoirs), or through paying for damage (i.e., property repairs, increased health care costs). That is, if the technology to do so exists in the first place.

As an urban reserve, *rare* has extensive and varied habitats that provide services that benefit the community. Wetlands such as those at *rare* help filter pollutants from the water, and provide storage that buffers against both flooding and drought; prairies and forests store carbon and help mitigate climate issues; and trails provide opportunities for passive recreation and well-documented health benefits of interacting with nature. Research and conservation at *rare* also provides information on how these systems can best be conserved, and how to best manage ecological services for society, wildlife and the world at large.

Green Infrastructure at *rare* provides an estimated annual benefit to society of more than \$10,000 per acre, for a total exceeding \$9.5 million. As populations continue to



A forested wetland provides a variety of societal benefits as Green Infrastructure, most notably storage of water and flood mitigation, regulation of water supply, improvement of water quality, and aesthetic recreational opportunities. Function and cost of these systems in situ are not readily duplicated by Grey Infrastructure Photo by L. Cymbaly

grow in Waterloo Region, it is paramount that the benefits this ecologically valuable landscape provides continues to be protected. Invasive species, pollution and deforestation are all real threats. You can help ensure that these 900+ acres and the more than \$9.5 million benefit to society are protected for our well-being and the well-being of future generations by *Turning the Map Green*. Symbolically adopt a square metre of environmentally significant land for as little as \$2 by filling out the donation form below or visiting turnthemapgreen.ca.

Help *rare* protect Green Infrastructure and invest in our community. You won't find a better return on investment for generations to come in any other opportunity! ■■



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



Yes – I value Green Infrastructure!

Donor Name _____

Mailing Address with City and Postal Code _____

Telephone _____ email _____

Yes, I would like to receive email updates from *rare*.

I'll join *rare's* Bedrock Club! I would like *rare* to receive my pre-authorized monthly donation of \$ _____, to be automatically withdrawn on the 15th of every month through:

- My chequing account ("Void" cheque enclosed)
- Credit Card

I am enclosing a one-time gift of:

- \$250 \$100 \$50 \$20 or \$ _____

Payment Information :

Please send cheques payable to

rare Charitable Research Reserve

1679 Blair Road

Cambridge, ON N3H 4R8

OR

Please provide credit card information VISA M/C A/E

Name as it appears on the card _____

Card No. _____

Expires _____ Signature _____

You may also donate securely online through raresites.org/donate

Name to appear on Founding Donors list, to be displayed permanently at *rare* upon completion of the capital campaign:

Thank you for *Turning the Map Green*

NWSS17 TMG

A SPECIAL *rare* TO ME

“Having spent nearly four years working at *rare*, with most of that time living on the property, *rare* is a lot of things to me. It started out as a job; a really fun one working in the gardens alongside a great group of people. Over time it has evolved into a place where I have built strong relationships, strengthened my already strong ties to nature, and so many times been a place to find peace within what can be a hectic world around us. It became the largest classroom I have ever entered at just over 900 acres, continually teaching me new things in the gardens, forests, wetlands, and especially the office. I have been able to see the fruits of my labour help the charity do the good we set out to every day, so *rare* will always be the reminder that there is more to life than just helping yourself. To me, *rare* has been home, and I will miss it greatly.”

—Dan Radoslav, former *rare* Gardens & Property Maintenance Coordinator

WELCOME PROPERTY, FACILITIES & GARDENS COORDINATOR, TARYN

We are excited to welcome a new addition to the *rare* family. After an internship at Springbank Community Gardens last summer, Taryn Jarvis joins us as *rare*'s new Property, Facilities & Gardens Coordinator.

Always having an interest in the natural world, Taryn graduated from the Renewable Resource Technician program at Sault College in 1997 and has worked on a variety of wildlife research projects across Canada and in the USA. She is passionate about the environment and the gardens at *rare*.

Taryn Jarvis. Photo by E. Kastner



Photo by T. Jarvis

The Seed Library Garden – a community partnership

By Taryn Jarvis, Property, Facilities & Gardens Coordinator

A new garden area is in the works at the Springbank Community Gardens. In partnership with the Preston Idea Exchange's new Seed Library, *rare* will be growing plants with the purpose of seed production and local seed distribution. The seeds grown in this new garden bed will be donated to the Seed Library at the Preston Idea Exchange.

“The Seed Library is a free program that is open to all, with the goal of increasing awareness of and supporting sustainable food and gardening practices while building community. Through seed saving and sharing, we hope to celebrate biodiversity, nurture locally adapted plant varieties, encourage time spent in nature, as well as foster community connections and a culture of sharing,” reports the Preston Idea Exchange.

Seed Libraries are collections of seeds that can be “borrowed” by library goers and gardeners who in turn grow the seeds in order to produce their own food or flowers. The gardener also lets a plant mature in

order to produce seed, and then donates some of those seeds back to the library for others to enjoy.

Saving and sharing seeds is an important community practice for a number of reasons. Saving the seeds from your garden-favourites will ensure your ability to continue growing that special or sentimental plant. Sharing seeds supports local food security and helps reconnect people with their food source. Continually collecting seeds from the strongest, healthiest and most prolific plants in your garden will improve your seed stock year after year and the seeds will become well adapted to your local climate.

Seeds from the Seed Library, and the seeds you collect from your home garden may not cost a thing, but they could be considered priceless. For more information about the Seed Library Garden at *rare* or to volunteer in the Springbank Community Gardens, please contact Taryn Jarvis, Property, Facilities & Gardens Coordinator, taryn.jarvis@reresites.org 519-650-9336 x115. ■■



rare wins Bridge-Builder Award

Together with the Cambridge Self-Help Food Bank, *rare* was recognized for our Food Bank Garden partnership. The United Way of Cambridge and North Dumfries gifted us with the Bridge-Builder Award, awarded to a partnership that builds bridges between community services, decision-makers, and organizations in order to better serve the community. Last fall, *rare*'s Springbank Food Bank Gardens harvested and donated over 6,700 pounds of fresh, organic produce to those in our community that need it most.

Landscape and identity – *rare* to me, International Ambassador Jane Urquhart

By Joy Roberts, Community Volunteer

When internationally acclaimed, award-winning author and Officer of the Order of Canada Jane Urquhart was asked to write about 50 objects as a way of celebrating Canada's 150th birthday, she admitted to some trepidation. *A Number of Things*, published in 2016, is the result and, in true Urquhart-fashion, she articulates the challenges thoughtfully and elaborates on her approach poetically. It's a beautiful read and a most unusual avenue into the complex history of these lands.

Jane Urquhart has been an International Ambassador for *rare* almost as long as there has been a *rare*. Since those early days, her eloquence about landscapes and the role they play in our identity has made her a powerful spokesperson for the importance of conservation and of having some landscapes that don't change. She supports the *rare* motto — intact in perpetuity — because, as she says, we have to do what we can to “protect at least the opportunity to experience a natural landscape” and to ensure it remains for others as well.

Just recently returned from the remote eastern end of Cuba, she admits to amazement at being able to experience a landscape still relatively untouched by capitalism, a long expanse of beach with a tropical forested landscape behind it, “probably as Columbus would have experienced it. How ‘*rare*’ is that?” she laughs.

Urquhart's perceptive understanding of landscape and humans as “both part of a natural system,” is vividly portrayed in her 2010 novel, *Sanctuary Line* (McClelland and Stewart), where she draws parallels between the migratory life of both monarch butterflies and the Mexican labourers in Ontario, something she noticed as a young person growing up near the lake, east of Toronto. “We actually thought the trees were turning orange in the late summer and it was breathtaking to discover that they were actually covered in Monarchs getting ready to leave for Mexico.” The scene allows Urquhart to weave a narrative from the complex threads of identity, history and place



Jane by the lake. Photo provided by J. Urquhart

— and to bring into relief the issues that make nature and society far from idyllic.

Perhaps the most fraught relationship involving lands and peoples takes our conversation back to *A Number of Things*. The first object Urquhart chooses to write about is a legging, an object taken from a Beothuk child's burial site, discovered in 1827 and currently in the collection of the Rooms museum in St. John's. Although details are not known, Western contact appears to be responsible for the extinction of these hunter-gatherer Indigenous people. Urquhart writes with heartbreaking poignancy about the mother who would have wrapped her dead child in her own ochre-painted, beaver-skin legging to send it on its journey to the spirit world. ■■

Learn more about Jane Urquhart, OC, at raresites.org/our-rare-leadership.



Photo by J. Quinn

Traditional Ecological Knowledge: Language is power

By Tamanna Kohi, Engagement Organizer

How do you see the world around you?

Based on your values, interests and social, economic and political realities, you have

a unique way of interpreting the world we live in.

The values and concepts you subscribe to also indirectly shape how you relate to the environment. Have you ever been looking for more of a connection? Perhaps you need to explore your language: the basis of your “world view.”

Traditional Ecological Knowledge (TEK) is part of an Indigenous world view that reflects a reciprocal way of living as a part of the environment. Individualistic thinking and the use of the word *I* or *me* is replaced with Indigenous words and knowledge that directly relates you to all living things and the biophysical environment.

Next time you go for a walk along the trails, be aware that you are walking among all your relations to nature. Be sure to extend your gratitude. Your awareness of your relationship to nature through your language is one of the first steps to recognizing and valuing TEK as a complex, valid knowledge system.

Understanding your use of language and your world view is an incredible step towards cross-cultural cooperation with Indigenous Peoples. Respecting all world views that are different from your own creates an ethical space to learn more about TEK and a guide towards reconciliation for generations to come.

Thank you to all my relations! ■■



Marked mottled duskywing. Photo by J. Linton



Gard and Jessica at *rare*. Photo by J. Quinn

QUESTION

How did the study of a common butterfly at *rare* help with research methods for an endangered butterfly species?

ANSWER For several years we have been studying mottled duskywings (*Erynnis martialis*), a skipper butterfly species categorized as “endangered” in Canada. In Ontario, this species now occurs in only a handful of localities. A number of people and organizations are interested in increasing the population of this species, but we are uncertain exactly how to achieve that goal. If we could safely mark adults, we would learn more about their longevity, movements and behaviour. But how can we mark them without harming them?

Most butterflies can be marked as they are gently held between one’s thumb and index finger. Large butterflies (swallowtails, monarchs, etc.) are easy to hold; they may lose a few wing scales, but they are usually released unharmed. Handling small, delicate butterflies in this way often damages their wings and breaks off legs. Some butterflies fly long distances once they are released with no guarantee of returning. This is problematic in subsequent surveys because missing individuals either could have died or they could have left the study area. A successful marking technique must not affect the behaviour of the butterflies.

We decided to try out several marking methods on Juvenal’s duskywings (*E. juvenalis*), a species closely related to the mottled duskywing. This species is detected every year at *rare* during the long-term

butterfly monitoring program, and is considered common within its southern Ontario range.

While still in the net, we maneuvered a butterfly into a vial without touching it. The vial then was submerged in ice in a cooler to chill the butterfly. Several studies have demonstrated that chilling butterflies then allowing them to warm up without disturbance, eliminates any risks from handling. We were able to mark the skippers without grasping them and with minimal chilling. After just five minutes on ice, we could gently shake the chilled butterfly onto the palm of our hand, then quickly, while it was still immobile, apply dots of paint in an individually unique pattern to its forewings. After being returned to where it had been caught, it would resume activity within a few minutes, unharmed. Moreover, their behaviour is unaffected as well — one male engaged in a territorial chase with another male just three minutes after being marked!

After obtaining permission from the Ministry of Natural Resources and Forestry, we tested our marking technique at a known population of endangered mottled duskywings. It worked perfectly, thanks to our preliminary studies at *rare*. ■■

By Gard Otis, University of Guelph and Jessica Linton, Natural Resource Solutions, Inc., Waterloo

ASK A RESEARCHER

You’ve asked, and we’ve answered!

On a hike in the Thompson Tract at *rare* early last May, you may have seen butterflies with yellow, red or blue dots on their wings. Researchers Gard Otis (University of Guelph) and Jessica Linton (Natural Resource Solutions Inc., Waterloo) explain why.

If you ever see something on the property that leaves you wondering, don’t hesitate to get in touch with us. We welcome your calls and emails to 519-650-9336 or rare@raresites.org.

Check out a full report of Gard and Jessica’s studies published in the *News of the Lepidopterists’ Society* (2016, vol. 58, pp. 182-185). You can also see a full list of publications of research conducted at *rare* at raresites.org, under *Research*.



An uncommon reddish-blond male eastern coyote was spotted early March. Photo by D. Thomas

Nature notes

By Ross Dickson & Bill Wilson, Community Volunteers

Three seasons in one: An extended warm autumn, episodes of freezing rain rather than snow, and an extended February thaw. Several animal sightings were unexpected.

A TAWNY EMPEROR butterfly November 1 and EASTERN GARTER SNAKES until November 18 were relatively late. John MacDonald saw the latest SANDHILL CRANES November 6.

Jason Bracey and Todd Hagedorn reported seven raptor species including EASTERN SCREECH-OWL and GREAT HORNED OWL as well as five woodpecker species at *rare* during the Hamilton Fall Bird Count November 6. They found a LONG-EARED OWL and 225 SNOW BUNTINGS at the Christmas Bird Count December 18. A screech-owl approached participants on the Owl Prowl February 2.

A NORTHERN SHRIKE patrolled the Grand Allée-South Lane area from October 30 until at least February 1, the last sighting by Julia Smit.

Bill Wilson watched the Grand and Speed rivers confluence most mornings. Nine waterfowl species November 26, including NORTHERN PINTAIL, was a seasonal high count. GREEN-WINGED TEAL and GADWALL remained to December 9. An AMERICAN COOT December 20 was late. TRUMPETER SWAN numbers peaked at 18 December 9 with mid-January reports by Gerrit Kamminga and Emily Leslie. A MOURNING DOVE flock exceeded 100 February 11. A male BELTED KINGFISHER overwintered successfully.

Jason Bracey, Jim Burrell, David Gascoigne and Fraser Gibson were team leaders of *rare*'s first Christmas Bird Count for Kids January 7. Highlights included SNOW

GOOSE (20), HOUSE FINCH (15) and everyone's favorite BLACK-CAPPED CHICKADEE (70).

From mid-December to late February up to five EASTERN BLUEBIRDS roosted in a tree cavity on South Lane monitored by Bill Read. One had a cutworm in its bill December 27; more insects are available during cold weather than we might expect. Sharon McIntyre saw perhaps the same bluebirds on the Linear Trail near Preston High School, feeding on sumac seed heads February 7. Six bluebirds photographed by Don Thomas February 10 stayed to February 11.

Bill Read watched 90 AMERICAN ROBINS in two flocks near the Hogsback January 27; large numbers overwintered in southern Ontario. At least 610 AMERICAN CROWS flew over *rare* February 25.

The February thaw enticed some species to arrive early at the rivers confluence: REDWINGED-BLACKBIRD February 23; AMERICAN WIGEON and GADWALL February 25; KILLDEER and RED-BREADED MERGANSER February 27; ten TRUMPETER SWANS March 1. TUNDRA SWAN flocks exceeded 600 February 25 – March 1, arrived typically before 9:00 a.m.; the biggest V-formation was about 130. A GREAT BLUE HERON seen by Don Thomas in mid-February was very early. Bill Read noted the first TURKEY VULTURE over *rare* February 27.

rare staffers found an active MILK SNAKE on record-breaking warm February 22. Ross Dickson heard a single SPRING PEEPER in the Hogsback February 23 with air temperature at 12 C.

An uncommon reddish blond male EASTERN COYOTE was submissive when charged by a second coyote (of a pair), then swam across the Speed River March 8. The eastern coyote is a hybrid: mostly coyote, with variable amounts of gray wolf, eastern wolf and domestic dog genes in its DNA. ■■

NATURE SIGHTINGS:

#rareMoment

“Although my time at *rare* has recently come to an end, an abundance of wonderful memories remain. It just so happens that a good deal of these memories involve encounters with wildlife that inhabit the reserve. Going down memory lane of my four years at *rare*, I present my most memorable wildlife sightings:

1) Eastern coyote (*Canis latrans*): After helping with some monitoring work, I was crossing Hogsback Field and managed to flush out two adult coyotes from amongst the soybeans. As they were merely 20 feet away, it was most unexpected (September 2016).

2) Eastern screech owl (*Megascops asio*): While staffing one of *rare*'s Owl Prowl events we managed to spark the interest of an adult eastern screech owl, who spent over 20 minutes vocalizing its tremolo call while perched directly above us (May 2013).”

–Gerrit Kamminga, former *rare* Lead Educator & Program Facilitator

Do you have a memorable nature sighting you wish to share? Share it on social media using #rareMoment or submit it to rare@raresites.org with the subject line: *rare* Moment



Eastern bluebirds were seen from mid-December to late February Photo by D. Thomas

HAVE SOME *rare* FINDS OF YOUR OWN?

Contact *rare* Nature notes by emailing rare@raresites.org with “Nature notes” in the subject line.



Photo by D. Crowell

Top five reasons to visit *rare* trails in the spring

By Emily Leslie, Gill Ratcliffe Educator

Winter often seems like it will never end, which makes the first signs of spring ever so exciting. As the days get longer and the temperatures get warmer, being outside becomes much more appealing. Spring is the perfect time to connect back with nature and with 8 km of trails that wind through a number of different habitats, *rare* is a great place to explore in the spring. Here are some reasons to get outside at *rare*! ■■

*Trails are open to the public from dawn until dusk, seven days a week — and best of all, they are free of charge! Check out raresites.org/trails for more information. Come explore the natural beauty our region has to offer at *rare*!*

Osprey. Photo by G. Zeng



NUMBER ONE: BIRDS, BIRDS, BIRDS!

Your bird guide book has been sitting on the shelf and the binoculars in their case, and the bird calls are becoming abundant! Each spring season a number of birds use *rare* as a migratory stopover or breeding ground. This is the perfect time of year to dust off your old bird guide and binoculars and see what birds you can find!

NUMBER TWO: SPRING EPHEMERALS

Every day new plants are emerging from the soil all over the forest floor. From trout lily, to trilliums, to spring beauties, there are so many plants to explore in the spring. Bring along a field guide as you hike the trails and become familiar with the many plants that call *rare* their home.

NUMBER THREE: EACH DAY IS DIFFERENT!

Spring is all about change, and each day the trails look a little bit different. Leaves are coming out on the trees, flowers are blossoming, and animals are busy again as the weather gets warmer — it's a new experience every time on the trail.

NUMBER FOUR: THE RETURN OF THE OSPREY

Keep your eyes out for the large fish hunting bird of prey, sitting on one of two nest towers located at *rare*. Each spring as they return from their long migratory journey, these raptors begin to get their nest ready for the arrival of their young. How many chicks will there be this year?

NUMBER FIVE: IT'S GOOD FOR YOU!

After a long, dark and cold winter, nothing feels better than the fresh spring air and the warm sun on your face. Not only this, but studies have shown that being in nature provides positive effects not only on your physical health, but your mental health too. It's good for you — science says so!

Leadership

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Objects found on the property go back more than 10,500 years and the *rare* Charitable Research Reserve acknowledges the Chonnonton people ("people of the deer") on whose traditional territory we live and work, and we offer respect to our Haudenosaunee, Anishinaabe, and Métis neighbours as we strengthen our relationships with them.



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Photo by N. Lightfoot



FEATURE

Executive Director, Stephanie Sobek-Swant, introduces *rare*sites.

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