

The

Orchid



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Know • Appreciate • Conserve Nature in All Its Forms



A copulation wheel of bluet damselflies. Photo submitted by Murray Palmer.

Inside:

Map of Drew Monkman's Nature Destinations in Peterborough County
A Thesis 70 Years in the Making: Bird Observations and Citizen Science
A Report on the Water Diversion at Trent University
Many Interesting Outings Reports
GreenUP Programs



White-spotted Sawyer beetle (*Monochamus scutellatus*), cottage, Eel's Lake, Haliburton Cty, July 21, 2011. Photo: Martin Parker

To learn more about beetles, think about attending the PFN's beetle workshop on June 9, which will be led by Paul Elliot. See Coming Events section for more details.



Martin Parker with a Waved Sphinx moth at PFN's mothing night. Basil Conlin gave an excellent lecture, showed us his extensive moth collection, and then we went outside to find moths. The moths were attracted to the light behind the sheet. The sheet made it easier to see the moths.



Spring Beauty. Photo: Ted Vale



Dutchman's Breeches. Photo: Ted Vale



Young fox on the TransCanada Trail near Hastings on May 2. Photo: Gale Koteles



Male musk turtle from Peterborough county in May. Photo: Basil Conlin

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Great Blue Heron during the Hog's Back Trail outing on May 6. Photo: Cathy Douglas



Violet Beetle. Photo: Martin Parker

Welcome new PFN members!

- Mark Raycroft
- Gabby Nichols
- Roxanne Beaver & Jamey Coughlin & juniors Oliver Coughlin & Gabrielle Coughlin
- Julie & Danial Brandsma & juniors Wade Brandsma & Isaac Brandsma
- junior Adrian Stephens
- Annette Nadeau & juniors Leland Nadeau-Katz & Alex Nadeau-Katz
- junior Emma Carr
- Michelle McNair
- Gina & Jim Stanley
- Sara Honey & Jim Semlitch
- Jim & Marsha Harvey
- Sandy Garvey
- Heidi St. Thomas
- Trevor Friesen
- Ken Lyon & Claire Phillips-Frost
- Mark Stabb
- junior Deyon Mallory



Carrion Beetle (*Nicrophorus* spp) with dead Red-bellied Snake, Carden Alvar, May 2012. Photo: Martin Parker



Abbott's Sphinx Moth at Trent on May 24. Photo: Basil Conlin

PFN Coming Events	
<p>Sunday, June 3 7 a.m. Meet at Tim Horton's at the Sobey's Plaza on Lansdowne Street West</p>	<p>Carden Plain Important Bird Area</p> <p>Join us for an all-day visit to the wonderful Carden Plain. This is an unusual alvar habitat that is home to an abundance of rare grassland bird species, butterflies and plants. Jerry Ball will be our guide to this globally rare habitat 65 km west of Peterborough. Loggerhead Shrike, Golden-winged Warbler, Osprey, Black Terns, Sedge Wren, Yellow Rail, Upland Sandpiper, Eastern Bluebird, Eastern Towhee and Brown Thrashers are all possibilities.</p> <p>Bring some lunch, water, a camera for the excellent photographic opportunities, and binoculars. Accessibility: easy. Some driving on a gravel road.</p>
<p>Saturday, June 9 9 a.m. to noon Camp Kawartha Environment Centre 2505 Pioneer Road</p>	<p>Return to the Planet of the Beetles</p> <p>If you missed last year's beetle workshop, fear not! Here is another chance to get to know what is possibly the most successful multi-cellular life form on the planet. Beetles are the most diverse group of multi-cellular organisms.</p> <p>Learn how to distinguish between beetles and other superficially similar insects and how to identify many of the most common families. After an introduction to this amazingly successful group of animals, we will use sweep nets, pond nets, pit fall traps and other techniques to check out the local beetle fauna. The session will be led by Paul Elliott. Accessibility: easy to moderate</p>
<p>Wednesday, June 13 7:30 p.m. Camp Kawartha Environment Centre 2505 Pioneer Road</p>	<p>PFN Monthly Meeting: Big Spenders - The Breeding Ecology of North Island Brown Kiwi</p> <p>Guest Speaker: Sarah Jamieson, Postdoctoral Fellow, Institute for Conservation Research at San Diego Zoo Global (current Rabies Research Biologist, MNRF)</p> <p>Kiwi are shy, nocturnal, flightless birds that are endemic to New Zealand. They are treasured by the Māori people and have become the national icon of New Zealand. Sadly, all five species of Kiwi are at risk of extinction. Adult and juvenile predation by introduced mammals is the leading cause of population decline; however, further hampering the recovery of Kiwi is their low hatching success and even lower recruitment rates. Unfortunately, very little is known about their breeding ecology. Sarah spent 3 years in the field working to help fill that knowledge gap. In her presentation she will describe what it is like to be a kiwi biologist and review some of her research findings.</p>
<p>Saturday July 7 Meet at Country Style at Hwy 7 and Old Keene Road (east end of city) @ 1 p.m.</p>	<p>Butterflies Along the Lang-Hastings Trail</p> <p>This afternoon outing is an introduction to butterfly watching along a section of the Lang-Hastings Trail. The focus will be on learning how to distinguish between the different species present in early July. This outing will be led by Jerry Ball and Martin Parker. Bring binoculars and a camera.</p>

PFN Coming Events

<p>Sunday July 15 Meet at Country Style at Hwy 7 and Old Keene Road (east end of city) @ 9 a.m.</p>	<p>Butterflies of the Sandy Lake Area</p> <p>The diverse habitats along Sandy Lake Road, off County Road 46 north of Havelock, support the greatest diversity of butterflies in the region. Butterfly enthusiasts from across the province visit this area to observe the variety of species present, including five species of hairstreaks. This outing will introduce you to this area and its butterfly diversity.</p> <p>The leader for this outing is Jerry Ball, one of the leading butterfly experts in the province, and a popular PFN leader. He will be assisted by other butterfly enthusiasts.</p> <p>Brink binoculars, camera, and a packed lunch with drinks.</p>
<p>Sundays in Sept. & Oct. from 8 to 11am</p>	<p>Wildlife Walks: Each Sunday morning in September and October, the PFN will lead a morning outing to one or more natural areas in the region. Full details will be in the next issue of The Orchid.</p>
<p>Wednesday, September 12 7:30 p.m. Camp Kawartha Environment Centre 2505 Pioneer Road</p>	<p>Monthly Meeting: The Native Brook Trout Population Within Harper Creek and Byersville Creek</p> <p>Guest Speaker: Scott Blair, M.Sc Candidate at Trent University in Environmental and Life Sciences</p> <p>Scott was first introduced to the Harper Creek brook trout population by Kim Zippel and Don McLeod during spawning surveys in the fall of 2016. He could not fathom that these trout were reproducing in what is merely a road side ditch. Ever since then, he has been fascinated with this population of fish. This fascination quickly turned into a research opportunity.</p> <p>Scott will be presenting to us some of the preliminary findings of the habitat use and movement of brook trout within the creek, along with some of the reasons as to how these trout are surviving in this urban environment.</p>
<p>Saturday, September 15 Meet at Tim Horton's in Sobey's Plaza, Lansdowne Street West at 7 a.m.</p>	<p>Shorebirds and Monarchs</p> <p>This annual outing to Presqu'ile Provincial Park is to view the gathering of migrating shorebirds as they are making their migration from their Arctic breeding grounds to their wintering areas, primarily in the southern hemisphere. In the fall, the birds linger longer than in the spring. We will be visiting the viewing locations in the southern end of the beach to view the shorebirds and other fall migrants.</p> <p>The fall migrations of Monarch butterflies will be commencing at this time of the year and arrangements are being made with Park Staff to conduct a demonstration on Monarch banding for the participants of this outing. Time will be spent looking for some of the other species of fall butterflies.</p> <p>The leaders for this outing are Martin Parker and Matthew Tobey. There will be an early departure for this outing in order to increase the opportunities of seeing shorebirds prior to them being disturbed by falcons and people. The outing will return to Peterborough in the midafternoon. Bring a packed lunch, binoculars, camera, and telescope (if you have one).</p>

PFN Junior Field Naturalists (ages 5-12)

Junior naturalist families are reminded to check the website for event listings and email pfnjuniors@gmail.com if you're not on the members distribution list for event announcements. Bookings can be made online at <https://peterboroughnature.org/junior/>

Saturday, June 2
10 to 11:30 a.m.
Ecology Park

Earthworms: Identification and Ecology (a hands-on event for kids and adults)

Did you know Peterborough has several species of earthworm, and that they're all introduced from Europe or Asia? Worms can help farming, composting, and are good fishing bait. But worms are also hurting many of our native plants and animals, by eating the leafy-soil layer of forest floors. Join us to learn about Peterborough earthworms' ecology; summon earthworms from the soil with a mustardy concoction; and identify the species of earthworms at Ecology Park.

This hands-on event is kid- and adult-friendly. It is a joint activity between the PFN Junior Naturalists and the Ecology Park BioBlitz. Junior Naturalists and their families are welcome to come early or stay late to join non-earthworm activities at the blitz. And blitzers are welcome to join us and learn how to identify earthworms with nothing more than mustard powder and a magnifying glass.

Event leaders are Colin Cassin (earthworm biologist) and Jay Fitzsimmons (entomologist). If you wish, bring a magnifying glass for identifying worms, hand sanitizer for cleaning wormy hands, water bottles, personal snacks, and hat/sun protection.

We look forward to worming it up with you! Please register your family using the booking feature at the link below so that we know how many people to expect, and who to contact if there are any updates.

<https://peterboroughnature.org/events/earthworms-id-and-ecology/>

Other Events of Interest

Seasons on the Moraine

Explore nature as the seasons unfold on the Oak Ridges Moraine. Walk our neighbouring Ballyduff Trails (next to Fleetwood Creek Conservation Area) with expert naturalists. Rediscover the natural world and enjoy a great meal at the farm. Seasons on the Moraine are not-for-profit events sponsored by South Pond Farms. They are held in collaboration with our neighbours on lands protected by the Kawartha Land Trust. They are led by local experts drawn largely from the Kawartha and the Peterborough Field Naturalists.

Tickets are \$30 per event and include a meal. South Pond Farms is located at 1020 Gray Road, Pontypool ON L0A 1K0. For more information, please visit

<http://southpondfarms.ca/seasons-on-the-moraine/>
or contact South Pond Farms at 705-277-1649 or connect@southpondfarms.ca



Other Events of Interest

Seasons on the Moraine continued:

Jun. 17: Damsels & Dragons...and Butterflies, Too - noon-4:30pm

Jun. 24: Headwaters – Lively Beginnings – 9:30am-1:30pm

Jul. 15: Prairie, Woods & Wetlands - 9:30am-1:30pm

Aug. 19: Seeing the Forest for the Trees - 9:30am-1:30pm

Sep. 16: Fall Flowers & Other Finery - 9:30am-1:00pm

Sep. 7-10 or

Sep 24-28 or

Sep. 30-Oct 5 or

Oct. 9-12

Queen's University
Biological Station

2018 Fabulous Fall Fungi Workshops

Now in its 9th year, Fabulous Fall Fungi is a popular series of multi-day, hands-on workshops situated in a beautiful country setting where participants learn about fungal identification, ecology and natural history. Typically, 150-200+ species are identified per session. Suitable for all levels. Max 12 people per session. Meals & accommodation included. Early registration is advised. Visit qubs.ca/events for further details.

Call for a Delegate to the 2018 Ontario Nature Youth Summit



Ontario Nature is hosting its 9th annual Youth Summit for Biodiversity and Environmental Leadership to bring together students aged 14 – 19 years from across the province for a weekend of nature exploration, environmental learning and fun outdoor activities.

For the past three years, the Peterborough Field Naturalists has sponsored a high school student for the Ontario Nature Youth Summit. The PFN plans to sponsor another for 2018. Participants meet a growing network of young environmental leaders with the opportunity to collaborate with like-minded thinkers.

We are looking for someone in high school, preferably grade 10 or 11, with a strong interest in the environment and protecting our natural heritage. If you know a student who would enjoy an opportunity to attend the Youth Summit, which is being held at YMCA Geneva Park in Orillia (weekend date in September TBA) please contact Ted Vale (tedandmarion@sympatico.ca or 705-741-3641) or any other board member. For more information, please visit:

www.ontarionature.org/connect/nature_guardians/youth_summit.php

We will be contacting environment clubs at local high schools asking if they would help us to identify a candidate.

Volunteer Corner: Buckhorn Fine Art Festival (Aug. 17-19)

The Peterborough Field Naturalists will once again have a booth set up at this year's Buckhorn Fine Art Festival. We need volunteers for various "shifts" at our booth during the event, which runs from 7:00 p.m. on Friday, Aug. 17 through to 5:00 p.m. on Sunday, Aug. 19. This year's festival will feature a special exhibit entitled "The Lives of Birds", as well a wide variety of art from local artists. **BONUS:** Volunteers get free admission to this popular event (normal entrance fee: \$8.00 per person). Parking is also free. Contact Rene Gareau at (705) 741-4560 or rene.gareau@sympatico.ca



President's Message

Protected Places Declaration

Along with a number of other groups, Ontario Nature has undertaken a campaign urging the governments of Ontario and Canada to meet their commitment to protect at least 17% of our lands and inland waters and 10% of our coastal and marine areas by 2020.

Currently, Ontario has reached only 10% of the 17% of its commitment. Most of these protected places are in Northern Ontario. As part of this campaign, Ontario Nature is identifying places in southern Ontario to suggest to the government to designate as protected places. The PFN has proposed two sites for inclusion: Harper Park and Jackson Park.

To participate in this campaign, you are asked to sign a declaration of support. At PFN's May meeting, a large number of members signed the declaration. If you missed this opportunity and wish to participate, you can learn more and sign the declaration at Ontario Nature's website:
ontarionature.org/campaigns/protected-places/



Ontario Nature - Lake Ontario North Spring Regional Meeting

Submitted by Lesley Hale

The Ontario Nature - Lake Ontario North spring regional meeting was held on May 6 at the Goodwood Community Centre and was hosted by the Oak Ridges Trails Association. Following are some items of interest that came up at the meeting.

Other Club Highlights

North American Native Plant Society (NANPS): The North American Plant Society is looking for locations to host plant sales. There has been a huge interest from the public due to the interest in pollinators. There is some concern about inadequate labeling of "native" plants or "pollinator" plants at chain stores and large nurseries as in most cases these plants are sources from distant nurseries and have no local genotypes. The society wants to educate the public on the importance of genotypes and marking seed sources of plants. They are working on making this a standard practice. NANPS has a list of certified nurseries that source their seeds locally. For the list and other useful native plant information visit
<http://nanps.org/commercial-growers/>

Ontario Bioblitz Program

Bioblitzes are becoming more common across the province. A BioBlitz brings together taxonomic experts, citizen scientists and the general public to inventory all species (plants, animals, fungi and more) in a particular area over a 24-hour period. The Ontario BioBlitz program is led by a partnership of some of the province's leading conservation, education and research organizations. The collective goal is to connect scientists with the public, promote citizen science, and to work together to increase awareness of Ontario's biodiversity and encourage local surveys of familiar and little-known organisms. Visit
<https://www.ontariobioblitz.ca>

Nature Network

Stay informed with Nature Network News. This monthly electronic newsletter features informative articles about conservation issues throughout Ontario and a listing of events hosted by Nature Network member groups. Visit <https://ontarionature.org/about/nature-network/>

Protected Places Declaration

Ontario Nature is reaching out to invite our members to endorse the Protected Places Declaration. The declaration urges our governments to protect at least 17% of land and inland water by 2020, in accordance

with a target set under the UN Convention on Biological Diversity. It is a key element of a collaborative protected areas campaign and will help Ontario Nature to build and demonstrate strong public support for achieving this goal in Ontario. Visit <https://ontarionature.org/campaigns/protected-places/>

Youth Summit for Biodiversity

The 2017 Youth Summit for Biodiversity was a record year for support from the Nature Network with 39 groups, including our own, sponsoring 53 youth to attend. This year marks the ninth annual summit, which will be held September 21 to 23 at Geneva Park in Orillia, and our club is currently looking for high school student candidates to sponsor. More information can be found on the Ontario Nature website <https://ontarionature.org/events/youth-summit/>

The Kawarthas, Naturally Connected

Submitted by Dylan Radcliffe

This month the Peterborough Field Naturalists joined the steering committee for “The Kawarthas, Naturally Connected” project. This collaboration has been working for the past several years to create a complete natural heritage system map for Peterborough County and the City of Kawartha Lakes. In the past year, the agreed upon preferred scenario was selected and we moved into the implementation phase. While we are determining the next steps towards implementation, I would encourage you all to go explore the natural heritage system map at www.kawarthasnaturally.ca. This is an exciting new chapter in the collaborative, and I’m excited to work with the steering committee and club members alike to carry out this amazing new conservation initiative. Stay tuned for updates and ways to get involved.

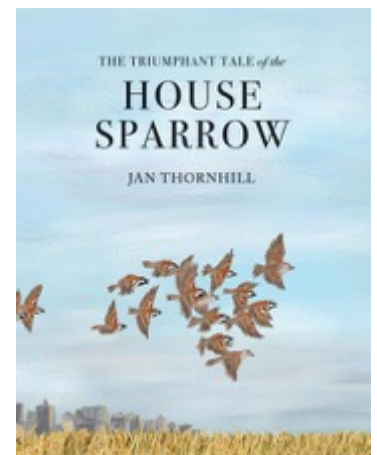


Roslyn Moore, Dan Marinigh, and Dylan Radcliffe at the first steering committee meeting.



Left: Long-billed Dowitcher sighted off Bensford Road by Scott Gibson. This is a significant sighting for Peterborough County and one of this spring’s birding highlights. According to the eBird database, this is the first record ever for Peterborough County. The photo was a record shot, digiscoped from around 100 m using a phone. Photo: Donald A. Sutherland.

Right: Jan Thornhill, who spoke passionately about mushrooms as guest speaker at a PFN meeting a few years ago, has written another fabulous children’s book entitled, “The Triumphant Tail of the House Sparrow.” Last year she won the TD Canadian Children’s award for her book “The Tragic Tale of the Great Auk.”



Water Diversion from the Trent University Wetland Complex and Wildlife Sanctuary

Submitted by Debbie Jenkins

With the expansion of Pioneer Road, there have been many alterations to the landscape which influence the hydrology, hydrogeology, and the natural environment overall. There are a number of very significant issues. One issue, which is reported on here, is the diversion of water from the extensive wetland complex south of Pioneer Road. In April alone, it is estimated that over 6 million liters of water were diverted from the wetlands (outlined in dark blue in **Figure 1**). This has significant implications for water levels, connectivity, habitat integrity, and wildlife. This issue needs to be addressed immediately.

So what happened?

Originally, four culverts channeled water south below Pioneer Road, thus

maintaining important surface water and wildlife connectivity between northern parts of the watershed and the wetland complex and Wildlife Sanctuary in the south. However, it appears that two culverts (orange dots, **Figure 1**) were not replaced last year. Both culverts were situated up-gradient of the Twin Pad Arena Site (red outline, **Figure 1**). As justification, Trent University administration referred to this statement by the City of Peterborough: "Previously existing culverts at locations 1 & 2 as shown in the EIS [Environmental Impact Study Pioneer Road, July 14, 2017] were found to be full of sediment and/or collapsed thereby previously eliminating the connectivity at these locations."

However, the Environmental Impact Study (which was completed months after road construction and tree clearing had already begun), indicates that the upstream side of water crossings 1 & 2 (orange dots, **Figure 1**) were altered by the construction of a new baseball field (see **Figure 2** below) and the clearing of trees. The most western culvert 1 was buried in sediment, while culvert 2 remained visible and maintained some southward flow. The EIS concedes that water crossing at culvert 2 may have supported "a small number and type of fishes".



Figure 1: Wetlands (in dark blue), the Twin Pad Arena Site (red), and the location of 4 culverts along Pioneer Road which previously maintained north to south water flow (orange and green dots). Two culverts (1 & 2, orange dots) were not replaced. Culvert 2 - previously carried water south from the Archaeology Centre Wetland to the wetland complex within the Wildlife Sanctuary. Light blue outlines the study block for the Arena development (mostly Wildlife Sanctuary).

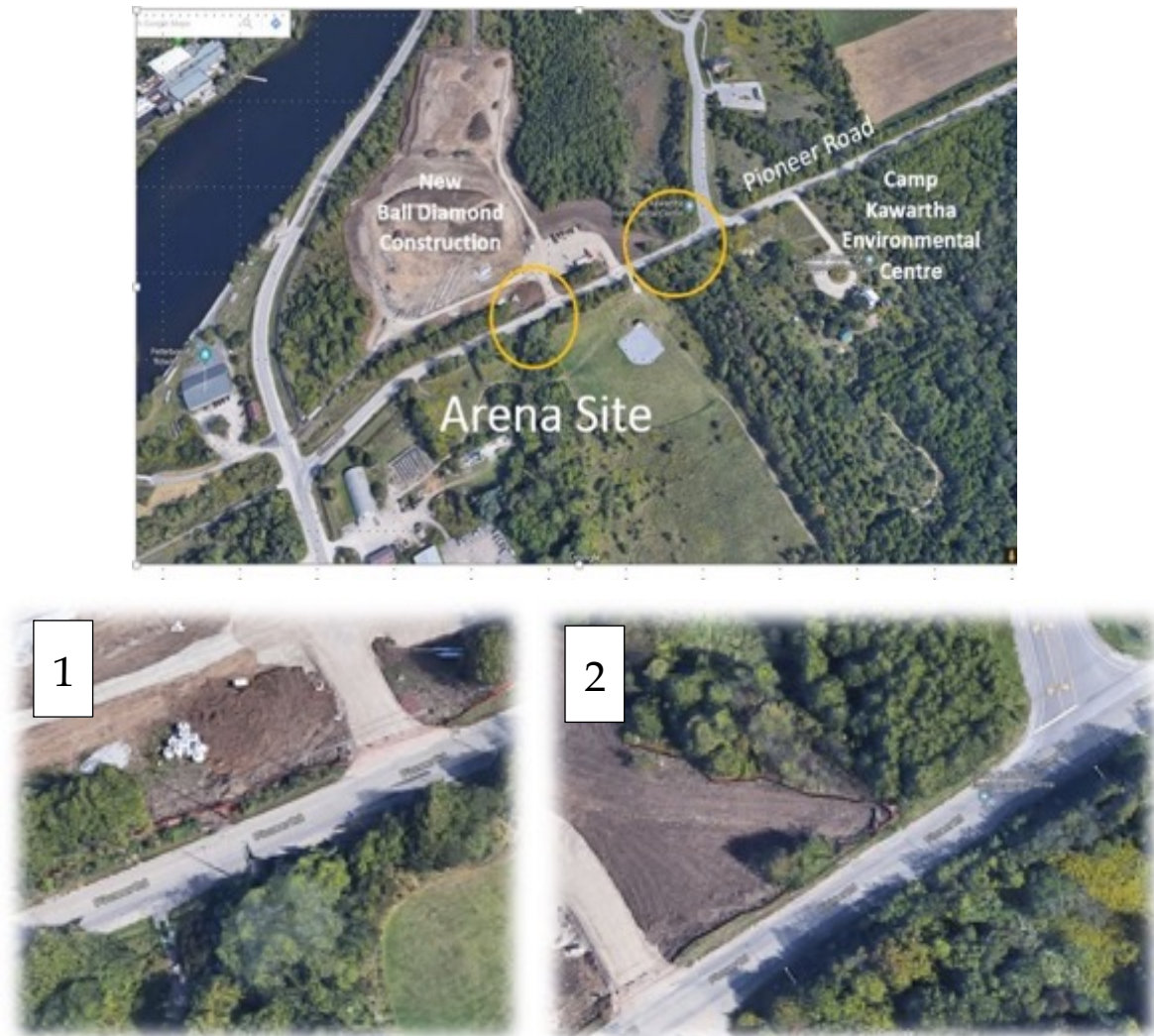


Figure 2: The large picture above (from Google Maps), illustrates the location of the Ball Diamond Construction Site and the site of previous water crossings (culverts 1 & 2). The smaller pictures above (1 & 2) zoom in to these sites, illustrating the alterations that occurred upstream of culvert 1 and culvert 2, due to the ball diamond construction. However, the images do not show the tree cutting and construction work that also occurred on Pioneer Road prior to the wetland and culvert evaluations for the Pioneer Road EIS.

Site degradation before the environmental assessment and the site plan approval is problematic. The prior degradation appears to have contributed to decisions and justifications not to replace culverts (thus not maintaining surface water and wildlife connectivity). As a result, the Archaeology Centre Wetland no longer drains south into the wetland complex at culvert 2. Instead, the Archaeology Wetland is now isolated from other wetlands and simply drains through a culvert into a ditch on the north side of Pioneer Road (Figure 3). In the ditch, water flows west through straw bales towards the Otonabee River/Trent Canal (Figure 4) – diverted from the wetlands.



Figure 3: Water draining from the Archaeology Wetland

Debbie Jenkins, a Trent University PhD candidate, has been monitoring this runoff (Figure 3) by measuring and recording the flow of water from the Archaeology Centre Wetland culvert using a bucket, graduated measuring containers, and a timer. Based on four monitoring events and three measurements per event, Debbie Jenkins estimated that approximately 6.2 million liters drained into the ditch in April of 2018. As of May 8, 2018, water was still flowing.

By diverting this water, the ecological function and biodiversity in an extensive downgradient area (including Silver Maple wetlands within the Wildlife Sanctuary - Figure 5) are compromised and degraded. This contravenes the intent of our municipal and provincial legislation.

Provincial policy and legislation provides protection for biodiversity, natural areas, wetlands, connectivity, surface water and ground water features, and the ecological function of our wetlands. Here are just a few examples:

Example 1:

Section 2.2.1 of the Provincial Policy Statement (2014) states: "Planning authorities shall protect, improve or restore the quality and quantity of water by... maintaining linkages and related functions among ground water features, hydrological functions, natural heritage features and areas, and surface water features including shoreline areas". This policy is echoed in Section 2.4.13.1 of the City of Peterborough's Official Plan (consolidated December 31, 2017).

Yet - the water from surface water systems/wetlands north of Pioneer Road are being diverted such that ecologically important habitats are degraded, surface water connectivity and wildlife connectivity are lost, and associated surface water ecosystems, including important and likely provincially significant wetlands are destroyed.

Example 2:

Section 2.1 of the Provincial Policy Statement (2014) states, "Natural features and areas shall be protected for the long term." Section 2.1.2 states, "The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features are areas, surface water features and ground water features.

Yet - the system of natural areas and features at Trent University, including the rich diversity of life that occurs there, are being impacted directly and indirectly by developments and site alterations executed by the City and Trent University. Some of these alterations and degradations occurred in advance of Environmental Impact Studies, but also in advance of Site Plan Approvals. For example, degradation of the wetlands and the Wildlife Sanctuary proximal to and within the Arena site, occurred in advance of the Arena Site Plan Approval (November 2017), due to construction of a new ball diamond, tree clearing, redirection of surface water flow, and expansion of Pioneer Road. This appears to contradict Section 3.10.1 - which recognizes that the natural state of land including storm water drainage should not be altered prior to an approved plan for development.



Figure 4: Water collecting in ditch on north side of Pioneer Road and draining to the west.



Figure 5: Silver Maple wetland in the Wildlife Sanctuary

PFN Award Winners at 2018 Peterborough Regional Science Fair

Submitted by Martin Parker

The Peterborough Field Naturalists sponsors four special awards at the Peterborough Regional Science Fair every year. Two awards are presented in both the Elementary Level and Junior Level categories at the Science Fair for the best two projects focusing on nature/wildlife/environment.

This year's winners were:

Elementary Level (Grades 4 to 6)

Nicola Haxton for her project "How snakes eat prey bigger than their head."

Nicholas Kirkpatrick for his project "Growing fungi in self-contained ecosystems."

Junior Level (Grades 7 and 8)

Reid Merrin and Kovar Yu for their project "Salinity: How it affects terrestrial organisms"

Marley Smith for her project "Plants on low oxygen and drip water test"

Responses:

In a thank you to the PFN, Marley Smith wrote, "Thank you so much for the award you have given me. I will read "The Mammals of Peterborough County" and use the money wisely. For my project I made a test to see how plants grow with CO₂ and created a drip water irrigation system to demonstrate water conservation."

Reid Merrin wrote, "I would like to thank you for choosing my partner and I for the Peterborough Field Naturalists award. It means so much to us and we really appreciate it. Hopefully we will be able to participate in the Science Fair next year."

The PFN awards at the Peterborough Regional Science Fair is cash award of \$25 for each of the four projects and one copy of the PFN publication 'The Mammals of Peterborough County' for each participant of the four selected projects. Funding is from the annual grant for the PFN Legacy Fund.

GreenUP Programs

Sustainable Urban Neighbourhoods

Sustainable Urban Neighbourhoods (SUN) is a community-based program that enables community members to share their interests and priorities for neighbourhood enhancement projects within selected Peterborough neighbourhoods. SUN guides residents in setting priorities and participating in action plans to address neighbourhood improvements in green infrastructure, climate change mitigation, rainwater management, flood prevention, greening spaces, and improving health and well-being.

The first stage of SUN includes community outreach to establish connections within neighbourhoods via churches, schools, and local events. GreenUP will seek to understand the priorities within two selected neighbourhoods. These priorities will be used to develop action plans that address needs in each area.

The second stage of outreach will focus on areas that can be enhanced with green infrastructure projects. Through the SUN project we will also implement five types of green infrastructure plantings, depending on resident priorities and needs. These five plantings include pollinator gardens, food gardens, rain gardens,



urban trees, and naturalization and diversification. The SUN timeline will involve planting according to community needs in 2018.

The two Peterborough neighbourhoods that have been selected to participate in SUN are the Curtis Creek neighbourhood located in North, East City, in Ashburnham Ward, and the Kawartha Heights neighbourhood, in Monaghan Ward.

Peterborough residents are encouraged to visit www.greenup.on.ca/program/sun/ to complete a short survey and share their perspectives about needs and opportunities in their neighbourhood. Residents living both inside and outside the selected neighbourhoods are encouraged to contribute. For more information, visit: www.greenup.on.ca/program/sun/

Water Wise Landscape Recognition Program

In the summer months, demands on water from activities such as watering lawns and gardens can significantly increase outdoor water consumption. Water is a precious resource that is important to protect. One way to curb water use is to rethink the way we landscape our front yards to create water wise landscapes that reduce water demands.

GreenUP, with support from Peterborough Utilities Group, would like to recognize the efforts of citizens in the City of Peterborough who are taking water wise steps on their residential properties to conserve water through alternative landscaping methods in their front yards. Do you have, or know of a front yard in the City of Peterborough that appears to be Water Wise? If so, it may be eligible for recognition!



Some signs that a front yard may be Water Wise:

- Lack of a lawn, opting for the use of native/ drought tolerant plants instead
- Use of captured rain water (For example, watering with rain captured in a rain barrel)
- Use of ground cover/ mulch
- Use of efficient watering methods, if watering is required (For example, use of drip hoses)
- A tree or two (or more)
- Natural pest control measures (no use of pesticides)
- Other unique measures

Water Wise landscaping methods work to conserve and protect our water and helps to reduce outdoor water use, restore the natural hydrological cycle, protect our drinking water, and more! Nominate a garden today by filling out an online nomination form!

For more information, visit: www.greenup.on.ca/program/water-wise-neighbour-landscape-recognition-program

Earth Adventures Summer Camp

Children who attend Earth Adventures will learn new skills and make new friends at our week-long camp. GreenUP Ecology Park is located within the City of Peterborough; our 5-acre park provides children with an outdoor experience and a deeper knowledge of place. Campers will be immersed in



nature-awareness as they navigate their way around our urban ecology, both independently and cooperatively.

Your child's week with us will include a variety of hands-on activities, including (but not limited to) plant identification, stream studies, beekeeping, gardening, wildlife tracking, bird language, and insect counts.

For more information, visit: www.greenup.on.ca/program/ecology-park-earth-adventures-summer-camp

Structured and Unstructured Citizen Science: Seventy Years of Bird Observations Near Peterborough

Submitted by McLean Smith, Trent University, May 2018

Citizen science is the use of non-professionals to gather data for a scientific purpose. Citizen science offers researchers a potential wealth of information, but such data may be prone to biases or inaccuracies. Few studies have examined the correspondence between citizens' observations and those from formal wildlife surveys. This was the goal of my Honours thesis at Trent University.

I evaluated the relationship between protocol-driven surveys and unstructured citizen science, based on seven decades of observations from the Peterborough Field Naturalists. I focused on seven bird species known to have increased in abundance in the vicinity of Peterborough: Canada Goose, Northern Cardinal, House Finch, Purple Finch, Red-bellied Woodpecker, Wild Turkey, and American Robin. I predicted that the unstructured observations would show over-reporting when a species was new to the area, followed by a decline in reports as the species became common and more mundane.

I compiled reports of these seven local species published in *The Orchid* from 1948 to 2016. I compared the relative abundance and the number of reported sightings in *The Orchid* to the relative abundances from Christmas Bird Counts (CBC) and Breeding Bird Surveys (BBS).

I found that, in nearly all cases, reports in *The Orchid* predated the detection of the species in the CBC or BBS by 6 to 33 years. As predicted, the number of reported sightings in *The Orchid* declined as a species became more common, resulting in a loose negative relationship with relative abundance in the CBC, particularly for the Northern Cardinal. In years when CBC abundance was low, reports in *The Orchid* could be frequent or infrequent; in years when CBC abundance was high, reports in *The Orchid* tended to be infrequent. The number of reports in *The Orchid* showed no relationship with the abundance in the BBS. This is likely an effect of the later launch of the BBS (not until 1966), after many of these species had already become established.

My analysis indicates that unstructured citizen science is a useful predictor of the appearance of novel bird species. Such observations, nevertheless, may be an inconsistent metric for tracking the abundance of a species, once established.

I'd like to thank Martin Parker for suggesting this study and Professor Jim Schaefer for supervising it.

Outing Report: Night of Salamanders

Submitted by Basil Conlin

On April 25, a group of about 20 keen PFN members gathered at the Kawartha Land Trusts Ingleton-Wells property for the 4th annual Night of Salamanders. This popular walk was jointly led by Martin Parker, Evan Thomas, and Sue Paradisis (our local vernal pool expert).

The Night of Salamanders has become a spring staple for many members of the Peterborough Naturalist community for a number of reasons. The annual migration of salamanders from their overwintering sites to their breeding pools inspires awe in almost every person who encounters it. Many people who perhaps

have never seen these cryptic amphibians (which typically spend the day under cover or in deep underground burrows) are shocked to suddenly encounter a half dozen or more making their way across roads or spawning in vernal pools. Vernal pools are temporary wetlands (usually in wooded areas) that are fed by spring melt-water. These provide critical fish-free habitat for tadpoles.

Salamanders also require mature hardwood forests with a closed canopy and deep leaf litter layer, all of which the Ingleton-Wells property has plenty of. Three species of salamander were spotted in and around the vernal pools: blue-spotted, eastern red-backed, and four-toed salamanders. Four-toed salamanders are a particularly uncommon species in most of Ontario, but the KLT property provides critical habitat connection to several populations located throughout the region. They were first recorded on the property in 2017 at last year's Night of Salamanders. Wood frogs were also seen and heard, as well as many fairy shrimp. A pair of red shouldered hawk had also returned to nest.

After the formal walk, a few keen naturalists and myself decided to drive up Birchview Road (near Camp Kawartha) to see if we could spot any salamanders making their way across the road. The weather was warm, humid, and rainy - the perfect weather for a migration! We were not disappointed. Within minutes we encountered several large adult yellow spotted salamanders, blue-spotted salamanders, eastern newts, northern leopard frogs, and spring peepers making their way across the road to their ponds. We helped several across, and even got to share this spectacular phenomenon with a passing driver. He even promised to slow down for amphibians! There is hope! Our salamander species total for the day was five - or six if we include the lead-backed phase of the red back salamander. Not a bad night!



Clockwise from top left: Eastern Newt, Spotted Salamander, Blue-Spotted Salamander, and Four-Toed Salamander. Photos: Basil Conlin



Outing Report: A Walk on the Oak Ridges Moraine

Submitted by Lynn Smith

Fifteen people met at the Cavan carpark on a brisk, sunny morning on Sunday, April 29. As we waited for all to arrive, 17 species were recorded to start our day. Notables included a Common Loon flying over, Wood Duck and Eastern Meadowlark.

Our second stop was a wetland area. Northern Waterthrush, Belted Kingfisher, Swamp Sparrow, Red-winged Blackbirds were all singing. Two Virginia Rail called while hidden amongst the cattails and a Ruffed Grouse drummed in the background. Perhaps we couldn't call it a cacophony of song, but the spring migration was obviously well underway. Other notables included a great view of a Ruby-crowned Kinglet and a very vocal Brown Creeper. Twenty-one species were recorded at this location.

Next, we took a walk along a rail trail that led to the abandoned Dranoel train station and gravel pit. Four species of sparrows (Chipping, Field, White-throated and Song) were all seen. Yellow-bellied Sapsuckers were particularly loud and cheeky as were the Downy and Hairy woodpeckers. We all enjoyed a good view of the Eastern Towhee.

A cool wind picked up as we travelled on to our next stops, all on Oak Ridges Moraine. The vistas were beautiful as we overlooked Fleetwood watershed. Notables included Savannah Sparrow, American Kestrel, Tree Swallow, Brown Thrasher.

On we went to a pond and marsh area where four species of swallows (Tree, Barn, Cliff and Bank) were all circling and flying at great speed! We have Matthew Tobey and his keen eyesight to thank for differentiating the swallows. A Common Raven, followed closely by an American Crow, gave us an opportunity to note the differences in size and shape between these two as they flew by. Notables included Hooded Merganser, Wood Duck, and Great Blue Heron.

Our final stop looked over large tracts of fields. A pair of Eastern Bluebirds had claimed a nestbox on the fenceline as home while further down the road a pair of House Sparrows had claimed one. Savannah and Chipping Sparrows were singing as were Eastern Meadowlarks.

In total, 61 species were identified. It was a good day!



Photo: Cathy Douglas

Outing Report: A Walk on the Hog's Back Trail

Submitted by Scott McKinlay

A total of 22 eager birders joined Scott McKinlay on Sunday morning, May 6, for visits to the Cavan Swamp, neighbouring fields, and the south end of Pigeon Lake. The outing culminated in a hike along the Omemee esker, otherwise known as the "Hog's Back".

Our first "ooh-ah" bird of the day was a pair of bluebirds spotted by beginner birder Nicole Kichko who was visiting from Port Hope. The Bluebird's bright colours were rivaled by those of a Baltimore Oriole, some Rose-breasted Grosbeaks, and Meadowlarks.



Broad-winged Hawk with snake. Photo: Cathy Douglas

We were treated to 64 bird species in all, including a wealth of warblers that were working their way along the Hog's Back. The showy Cape Mays, Parulas, and Blackburnians were among the crowd favorites, although, the Palms, and countless Yellow-rumps and Black-and-whites kept us busy as well.

One highlight on the esker included a Broad-winged Hawk carrying a snake. When some people complained that they hadn't seen it, the hawk circled back directly overhead, providing a great view for all. Alas, we were not able to identify the snake.



Female Yellow-bellied Sapsucker.
Photo: Cathy Douglas

We didn't see a live turkey, but the remains of one were left for our perusal, presumably by a coyote based on a nearby scat.

A Northern Goshawk flew across the Cavan Swamp. The identification process was a bit tricky. It went something like this: "It's a red-tailed hawk, no a harrier, no an accipiter, but it's so big... wait a minute. That's a goshawk."

Other spring migrants included five species of sparrows, some Brown Thrashers, Yellow-bellied Sapsuckers (including a black-capped female), Blue-headed vireos, a Phoebe, Osprey, Greater Yellowlegs, and others.

Several frogs were calling including leopards, spring peepers, and a couple of wood frogs that weren't yet ready to call it quits for the season.

Bloodroot was on display and the first of the trilliums were just starting to bloom. The trip went a little longer than planned, but no one seemed to be complaining as long as the birds kept coming.

Outing Report: Wildflowers in an Old Growth Forest

Submitted by Sue Paradisis

On May 13, twenty-four of us were treated to a rain and bug-free, sunny day for a walk in Mark S. Burnham Provincial Park. I was happy to have my daughter join us, given it was Mother's Day. Quite a few of those attending mentioned that they were pleased with the 1:00 start time so we will have to do that again. About half the group were potential new members and seemed keen to participate again.



Dryad's Saddle.
Photo: Sue Paradisis

Brian Wales was very helpful identifying birds, some high in the canopy requiring a knowledgeable ear. At least fourteen species were heard and or seen. We also found two Garter snakes and good specimens of Dryad's Saddle fungus. Everyone got to hear the Gray Tree frog and American Toad trilling.

The stars of the day, however, were the flowers and the forest. We were able to identify thirteen species blooming - most notably the Red Trillium, White Trillium, Jack-in-the-pulpit, Trout Lily, Spring Beauty and Bellwort.



The "Big Four" spring ephemerals: Trillium, Trout Lily, Jack-in-the-Pulpit, and Bellwort/Uvularia.
Photo: Sue Paradisis

While strolling through the forest, we looked at characteristics of Burnham and the trees that indicate it is an old growth forest. Lots of decaying logs were either standing or on the ground, providing homes for mammals, birds, insects, and amphibians. Tall, straight trunks of maples and beech were devoid of branches until the high canopy where the tops were thick and twisty. Down in the hemlock grove valley, people were amazed at the width and height of my favorite: a huge old yellow birch.

On a day like that and in a place like that, it was easy to see and feel the magic of the forest.

From the Archives - The Status of the Long-eared Owl in the Peterborough Area, by R.D. McRae

Submitted by Martin Parker, taken from The Orchid, September 1977, Volume 22, Number 7

Until recently, the Long-eared Owl was believed to be an extremely rare breeding bird and migrant in this area with its occurrence based on only two records. The first record for this area was a nest found by K. Mayall in the Cavan Swamp in June 1962 (Sadler, 1973). Our second record came on May 6, 1972 when D. McRae and J. Mewett found one in a cedar hedge in the middle of Peterborough being harassed by a Common Crow.

Recently, the Long-eared Owl has been recorded each fall and once in spring as the following records will illustrate. On March 2, 1975 four birds were flushed from a Red Pine plantation on Highway 28 beside Trent University by G. Carpentier and A. Rubaszek. The birds were searched for the next day by several without success.

The real surprise came on October 21, 1975 when G. Carpentier and D. McRae entered a Red Pine plantation two miles west of Mt. Pleasant just after dusk and discovered it to be full of Long-eared Owls. At least 25 birds were present and probably many more. The birds were found the next evening by F. Helliner but were not located afterwards.

The latest fall record is of a bird which was caught and killed in a muskrat trap in the Industrial Mall area on December 7, 1975. No Long-eared Owls were found in the spring of 1976 but the fall produced several more records in the area, the first of which was of two birds seen by D. McRae at the Mt. Pleasant location mentioned earlier. Between September 30 and October 3, 1976 three birds were hit by cars on Highway 7 west of the bypass constituting our most recent records.

When we examine the records presented above, a common denominator stands out, that is Red Pine Plantations between 20 and 30 feet in height. All records involving 2 or more birds can be related to these pine plantations, leading me to believe that these plantations are used regularly as rest stops during migration. I suspect that the Long-eared Owl will be reported with greater regularity now that we know where to look for this secretive, handsome owl.

Editorial Note: Birders are invited to visit Red Pine plantations in the region this fall to look for concentrations of this owl.

Orchid submissions are encouraged!

The submission deadline for the next issue is **Friday, August 24.**

Send submissions to Kathryn Sheridan via email: orchid@peterboroughnature.org
or post mail to: PFN, PO Box 1532, Peterborough ON K9J 7H7



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Basil Conlin's moth sheet used in this year's Trent Bioblitz



Bobolink at the site of the proposed industrial park at Trent. Photo: Basil Conlin



The Orchid Diary



A summary of noteworthy observations by PFN members and others in the Peterborough region.

Information is compiled from eBird, Drew Monkman's Sightings web page,

the ptbosightings Yahoo group, and individual submissions.

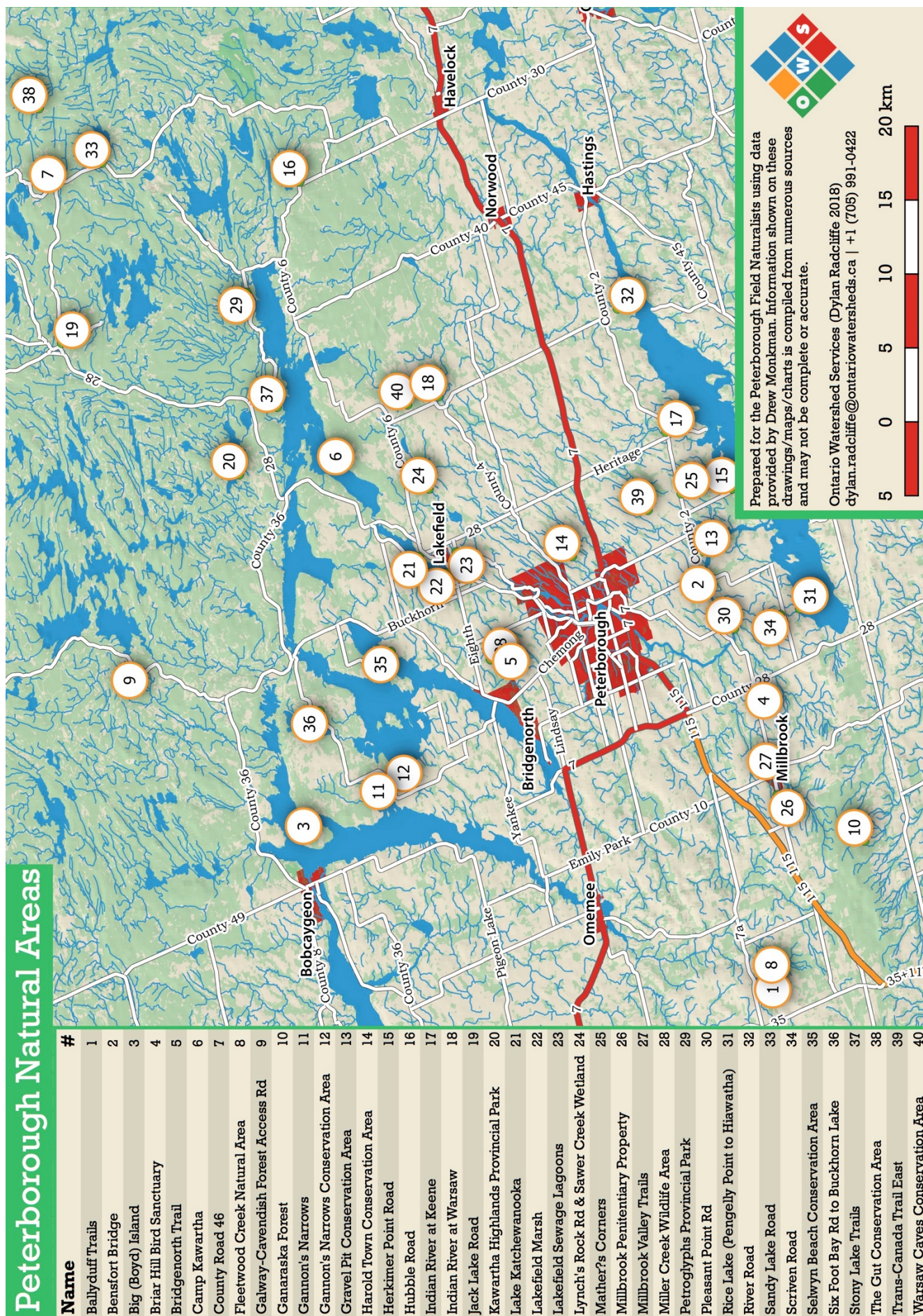
Please submit your interesting observations to Martin Parker at mparker19@cogeco.ca or phone 745-4750.

Weather	After a cool April, warm temperatures arrived. American Toad started calling, spring flowers started blooming and the waves of birds arrived.
April 26	A flock of Cackling Geese was found by Daniel Williams on a meltwater pond on Second Line east of Bailieboro. It was seen by various other birders until May 1 with numbers ranging from 1 to 10 individual geese. A late migrating Redhead was found on Stoney Lake by Christopher Wagner. A late migrating Red-breasted Merganser was on Rice Lake off Pengelley Point by Matthew Tobey, Sean Smith and Martin Parker.
April 27	Dave Milsom spotted 2 Red-breasted Mergansers on Little Lake. Scott Gibson found a Long-billed Dowitcher in a meltwater pond with other shorebirds along the Bensfort Road. It was located by many others and observed during the day. It was not present the next day. This is the first documented sighting in the county. See photo elsewhere in this issues of 'The Orchid' Matthew Tobey had FOY (first of year) Common Yellowthroat along trail between Technology Drive and Keene Road.
April 28	Steve Paul found a flock of 20 Red-breasted Mergansers on Rice Lake off Hiawatha Line.
April 29	There were multiple reports of late migrating Northern Pintails through the southern half of the county by multiple observers from meltwater pond east of Bailieboro, and Mather's Corners. The mid-April snow storm filled the meltwater ponds resulting in waterbirds being found. A late-departing Rough-legged Hawk was spotted along Bensfort Road by Tim Haan. FOY Bonaparte's Gull was at the Lakefield Lagoon by Gary Heuvel.
May 1	On a small meltwater pond on the Second Line east of Bailieboro, Iain Rayner and Scott Gibson found a Greater White-fronted Goose . Seen the next day by Scott McKinlay.
May 2	A Eurasian Widgeon was located in the Lakefield Marsh by Kathryn Sheridan and observed until May 3 by many other observers. This is the third confirmed sighting in Peterborough County according to eBird. The first Great Egret of the season was an individual spotted by Scott Gibson in the northern section of the City. Luke Berg had a Northern Goshawk in Petroglyphs Provincial Park.
May 11	A Red-headed Woodpecker was found by Tim Haan in the Harold Town C.A.
May 10	A Ring-necked Pheasant was spotted by Derek Anderson on the Lindsay Highway. A Northern Goshawk was found near Breasley by Chris Risley.
May 12	An early Willow Flycatcher was seen at Fleming College campus by Matthew Tobey.
May 13	Another Red-headed Woodpecker was found by Matthew Tobey along the rail line near the airport. A Common Tern (FOY) was found by Dave Milsom on the canal south of Trent U.
May 14	Basil Conlin found a male Red-necked Phalarope on the Lakefield Lagoon, which was seen by many other observers until May 17. A Blue-gray Gnatcatcher was found by Cathy Douglas along Mervin Line.
May 15	Chris Risley found a flock of 17 Lesser Scaup on the Lakefield Lagoon. Seen by many other observers until May 27, although numbers dropped to 2 individuals. An early Yellow-bellied Flycatcher was spotted by Matthew Tobey in his yard in the southwestern part of the City. Another individual was in the yard of Luke Berg in the area of Parkhill Road and George Street.

	Another Blue-gray Gnatcatcher was on the Trent Rotary Trail by Matthew Tobey. A Clay-colored Sparrow was on the Trent Rotary Trail by Donald Sutherland. An Orchard Oriole was found at Beavermead Park by Iain Rayner and Mike Burrell
May 16	A male Greater Scaup was located at the Lakefield Lagoon by Dave Milsom and others. Still present on May 27. Another Orchard Oriole was spotted by Iain Rayner and Mike Burrell in Beavermead Park. Jerry Ball had a Moose on the Galway-Cavendish Forest Access Road. Along Charlie Allen Road, Trent Lake, Jerry Ball found 7 butterfly species including Olympia Marble, Mustard White, Spring Azure, & Juvenile's Duskywing .
Orchard Oriole	Other Orchard Oriole observations after May 15 include: Lakefield Lagoon by Bill Crins & others (May 16) & Sand Road between Asphodel Line 7 & 4 by Donald Sutherland (May 21), Herkimer Point by Dave Milsom & Brian Wales (May 25), Island View Drive by Bill Crins & Cathy Douglas (May 27).
Clay-coloured Sparrow	Since the initial observation on May 15, other individuals were located at Lakefield Water Tower area by Kathryn Sheridan (May 17), Crawford Road area by Colin Jones on May 21, the 8 th Line of Douro by Mike Burrell (May 21), and Ennis Road area by Iain Rayner (May 21).
May 17	Along Devil's 4 Mile Road off Cty Rd 46 north of Havelock, Jerry Ball found Canadian Tiger Swallowtail and further north on Sandy Lake Road had Chryxus Arctic, Hoary Elfin, Brown Elfin & Gray Hairstreak . He found a total of 10 species of butterflies. The same day on Fire Road 83 off County Road 46, he found 1 Blanding's Turtle and a Red Fox kit on Devil's 4 Mile Road.
May 20	A late Redhead was on the Lakefield Lagoon by Iain Rayner. Iain Rayner had a flock of 20 White-winged Scoters on Pigeon Lake off Sandy Point.
May 21	Two female Wilson's Phalaropes were found by Dave Milsom in the meltwater pond east of Baileboro. Jerry Ball had a Scarlet Tanager and West Virginia White (butterfly) on Tye's Mt. Road near Flynn's Corners. He had a Gray Comma (butterfly) along Charlie Allen Road. He had 10 species of butterflies. Annamarie Beckel located 4 Whimbrels at Lakefield Marsh.
May 22	Matthew Tobey heard a Whimbrel passing over the S.W. part of the city
May 23	Jerry Ball had first sightings of the year of the following butterflies along Sandy Lake Road: Columbine Duskywing, Dreamy Duskywing, & Common Roadside Skipper . An Orange-crowned Warbler was found by Donald Sutherland along the Trent Rotary Trail.
May 24	Along the Lang-Hastings Trail between Cameron Line and Cty Road 31, Jerry Ball had FOY Silvery Blue & Red Admiral (butterfly) and both Willow & Alder Flycatchers . He also had a Red-headed Woodpecker on Duncan Line. Iain Rayner had 4 Long-tailed Ducks migrating over at the northern end of Pigeon Lake.

Map of Nature Destinations in the Kawarthas

Dylan Radcliffe has kindly created a map of some of the nature destinations from Drew Monkman's recent Orchid articles. The map on the next page includes destinations north of Peterborough (refer to Jan/Feb 2018 Orchid) and south of Peterborough (refer to March 2018 Orchid). If you wish, you can keep a copy in your car for when you're driving around on a lovely day with the idea of finding a nice place to stop and check out what's going on in nature. Back issues of The Orchid can be downloaded at <https://peterboroughnature.org/the-orchid/>





PETERBOROUGH FIELD NATURALISTS

www.peterboroughnature.org

membership application form

Memberships may be obtained by mailing completed form and cheque to
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PO Box 1532, Peterborough, ON K9J 7H7

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Please make cheques payable to *Peterborough Field Naturalists*

1. Single Adult \$25 ☐ 2. Single Student \$15 ☐ 3. Single Child* (age 5-12) \$10 ☐

4. Family (couple or family with children*) \$30 ☐

*Please give the name(s) and age(s) of the children you wish to be enrolled in the PFN Junior Naturalists

Name	Age*	Name	Age*

MAIN INTERESTS

<input type="radio"/> Birds	<input type="radio"/> Butterflies/insects	<input type="radio"/> Botany (Wildflowers/trees/shrubs)
<input type="radio"/> Astronomy	<input type="radio"/> Aquatic Life	<input type="radio"/> Geology <input type="radio"/> Field Trips
<input type="radio"/> Hiking	<input type="radio"/> Conservation	<input type="radio"/> Other (specify)

I (name _____) am knowledgeable in the following areas _____ and would be prepared to

☐ lead an outdoor session ☐ give a presentation ☐ prepare an article for The Orchid

I am interested in the following:

☐ Joining the PFN Executive ☐ Sitting on research or conservation committees ☐ Working on field projects
☐ Helping with refreshments at meetings ☐ Please have a member of the executive call me

AGE GROUP

This information helps us to understand the needs of our members. If a family membership, please check for each adult

<input type="radio"/> Under 20	<input type="radio"/> 20-29	<input type="radio"/> 30-39	<input type="radio"/> 40-49	<input type="radio"/> 50-59	<input type="radio"/> 60-69	<input type="radio"/> 70-79	<input type="radio"/> 80< over
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DONATIONS

Membership fees cover the general operating costs of the club while other sources of revenue are needed to fund special projects such as ecological restoration. You can assist the club by making a donation to help further our work in such areas. The PFN is a registered charity and issues receipts for income tax purposes. All donations are gratefully received and any member of the executive will be happy to speak to you concerning the use of such funds.

LIABILITY WAIVER

In consideration of the Peterborough Field Naturalists (PFN) accepting this application, I hereby for myself, my heirs, executors, administrators and assigns forever release and discharge the PFN, their officers, directors, servants and agents from any liability whatsoever arising from my participation in PFN activities, whether by reason of negligence of the PFN or its representatives, or otherwise. I affirm that I am in good health, capable of performing the exercise required for field trips or other activities in which I participate, and accept as my personal risk the hazards of such participation. As a member of the PFN and/or as a parent/guardian of a member under 18 years of age, I have read and understood the above, and accept its term on behalf of all of my underage children.

Signature: _____