

# The Peninsula Naturalist

Volume 236

Newsletter of the Peninsula Field Naturalists Club

May 2014

## President's Observations

We all anticipate the arrival of spring and the flora and fauna that soon follow the vernal equinox. After what seemed an extremely long winter, members of the Peninsula Field Naturalists can look forward to our wildflower tours and spring birding trips.

Another spring observation I look forward to occurred in early April for the eighth year in a row. There are some large deciduous trees close to my yard that have rows of holes drilled in the bark. The migrant responsible for the holes was spotted on April 11 this year. Based on the previous arrivals, it appears the longer winter did not delay the arrival of the male Yellow-bellied Sapsucker Jean and I have observed from our back yard since 2008.

I recently added another spot to my locations list for spring sightings. I was first introduced to the Lathrop Property after attending an Ontario Nature Regional meeting in Fonthill last year. On a return visit this spring, Jean and I were greeted by the calls of birds and the emergence of Hepatica through the leaf litter. The pinkish flowers were a welcomed sight and I look forward to visiting the nature preserve every year. If the snow and ice extend their stay in 2015, I'll just sit back with my coffee knowing that the sapsucker and Hepatica observations are really not that far away.

**Bob**

### Fall 2014 Speakers:

Sept.	Erin Britnell	Niagara Region Climate Action Plans
Oct.	John Black/Marcie Jacklin	Birding Peru
Nov.	Paul O'Hara	Marker Trees



*Hepatica (Ranunculaceae) by Jean Hampson*

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## NEW YEAR'S SNIPPETS

The January 2014 meeting of the Peninsula Field Naturalists marked the beginning of the year in which the PFN will celebrate its 60<sup>th</sup> year of existence. Anniversaries are often an appropriate time to introduce new activities, and so the "business" section of the meeting included a new event, the formal induction of the new Executive and Board members.

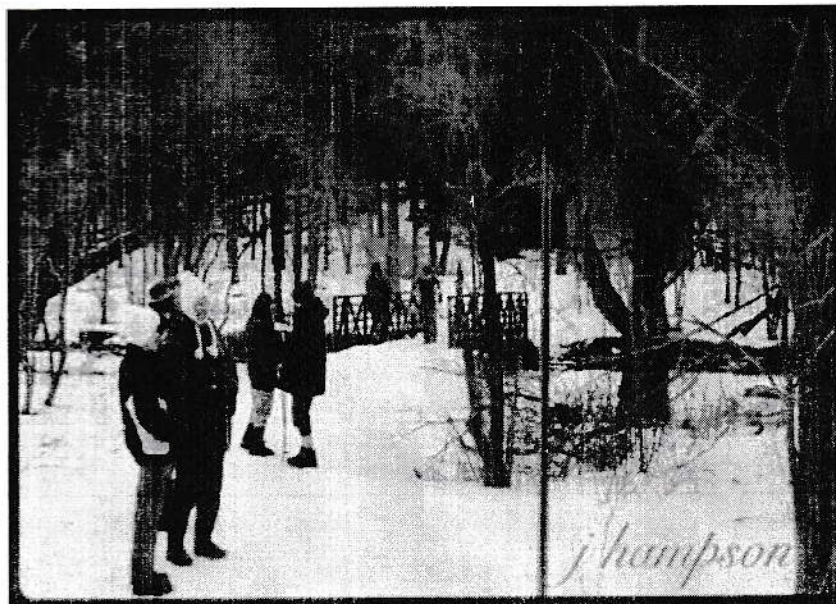
The program for the evening featured Rick Young presenting a photographic trip from Ontario to British Columbia. Rick has probably botanized his way through most of the scenic campgrounds from here to there, and his combination of photos of flowers and of notable campgrounds made the journey across western Canada a delightful evening excursion. Pictures of Fowler's Toads, melanistic Gartersnakes and spiders demonstrated that Rick's interests don't stop at floral photography. His pictures of the QueAppelle Valley, the Cypress Hills Provincial Park, and the Hoodoos in the Dinosaur Park area were enough to convince anyone that the prairie provinces are certainly not flat, nor are they boring. When Rick's photo of the buffalo rubbing-stone in Grasslands Provincial Park popped up, I remembered being at that very spot and also seeing the prairie-dog town in that Park. Personally, I think that Writing-On-Stone Provincial Park in Alberta sounds like a place that would be good for several days of camping and exploring – and likewise Riding Mountain Park in Manitoba – minus the mosquitoes, preferably.

### PFN MAPLE SYRUP WALK (by Bob)

On Saturday March 8, 18 members of the Peninsula Field Naturalists met at the Roland Road entrance to Short Hills Provincial Park for the annual Maple Syrup Walk. The piles of snow in the parking area and the overcast sky did not deter the group from hiking along the woodland trails.

We observed 11 bird species which included 4 Eastern Bluebirds and a pair of White-breasted Nuthatches flitting in the trees along the stream as the group walked towards the Swayze Falls viewing platform. While admiring the frozen waterfall, a roosting Sharp-shinned Hawk was spotted across the gorge by a sharp-eyed member of our group. Heading back to the parking area along the Paleozoic Path, the group came across yet to be identified slender insects on the snow as we walked past the large English Oak.

The hour stroll through the Provincial Park was followed by a pancake lunch at White Meadows Farm.



## LICHENS: ORGANISM OR ECOSYSTEM?

The presentation by Roman Olszewski at the February 2014 meeting of the PFN was an eye-opener for those of us who think of lichens as 'Moss growing on the north side of trees'; lichens are not true mosses. Roman stated that a lichen is a partnership between a fungus and an algae. He considers the combination as an 'ecosystem' rather than an 'organism', because the lichen is made up of two different kinds of living species.

The relationship of a fungus and an algae that creates a lichen is called 'symbiosis', from the Latin 'sym' meaning 'together' and 'biosis' meaning 'life' – so 'living together'. The fungi and algae collaborate partly because of nutrition.

The algae may be called 'green algae' or 'blue-green algae' – both kinds have chlorophyll, meaning they can use sunlight to produce sugars, just as trees and other green plants do. So the algae provides sugar (= carbohydrate for energy) to the fungus, while the fungus protects the algae and provides minerals which the fungus traps from the rock, wood, or soil that it grows on.

The partnership of fungus and algae – i.e. a lichen – is useful to people because these ecosystems can live for extremely long times. Their age can be determined and thus can be used to date the rocks or wood that they live on.

The construction of a lichen is complex. The basic framework is the fungus, which has several layers, with the algae being contained within the middle layer. The lower layer of the fungus may be attached to its substrate (rock, wood, whatever) with root-like structures called 'rhizines'. The non-sexual part of the fungus is called the 'thallus'.

The fungal part of a lichen ecosystem behaves much like other ordinary fungi, particularly in its reproduction, which may be sexual or asexual. The sexual reproduction is by spore-forming, and the shape, size, and number of cells in the spore is involved in determining the name of the fungus.

The naming of a lichen ecosystem is partly by using the same characteristics as for 'ordinary' fungi - that is, the shape of the fungus, the colour, and even the substrate that the fungus grows on. Most people know that structures such as mushrooms and puffballs are the spore-cases of fungi that are reproducing by spores.

If a lichen ecosystem contains green algae or blue-green algae, the fungus that contains the algae may be a different colour than the fungus alone would be. So the lichen may look somewhat like a bunch of leaves, it may look like a grey or black crust or bits of rock, or it may even look like vertical grey sticks with small red tops (where the red part is a bundle of spores). Some lichens also appear to be different colours when they are wet than when they are dried up between periods of rain.

Some lichens will only grow in relatively clean unpolluted air, which makes them a good indicator of the air quality where they grow. One of Roman's local finds was one of the lichens that prefers clean air, suggesting that Niagara's air is relatively unpolluted.

Amateur lichenologists are rare and the organisms they study require patience and dedication to understand and categorize. To identify lichens, Roman said that some species can be identified by the colour that the lichen turns when exposed to certain chemicals. However, much of the identification process also requires a good microscope to see the structure of the layers of the fungal component, a camera for retaining a colour picture of the lichen, and a steady hand to cut cross-sections of the thallus to see the structure of the layers, and the shape, etc. of the spores.

## CLIMATE CHANGE

Do you have vampires lurking in your house? Brian Montgomery, our speaker on Oct. 28/13, suggested that you do but haven't thought of them as such. The vampires he meant are the electrical gadgets in your home (night-lights, microwave ovens, illuminated alarm-clocks – any gadget that sucks electricity to power a small dome-light or to keep a fridge or freezer continuously cold). Those 'vampire' appliances use electricity, driving up the cost of your electric bill without you really noticing it!

From previously working in the City of Hamilton Planning Department, and currently in the Public Health Unit, Brian knows a lot about Hamilton and its air-borne health problems. His current job is the improvement of air quality. Although Hamilton had a reputation for bad air quality (thanks to the heavy industry – read 'steel mills'), the city is improving its air and also becoming a champion of climate change. Globally the industrial sector is the largest producer of noxious air-borne gasses, including carbon dioxide, methane, nitrous oxide, nitrogen trifluoride, hydrocarbons, sulfur hexafluorides, etc. (Think Beijing!) But other materials also foul the air; eg. road dust – which is a large part of bad air in Niagara.

Both Hamilton and Niagara have targets for improving their air quality. Hamilton plans to reduce air contamination by 80% by 2050, and Brian stated that Niagara has a target of reduction by 10-15% by 2030. Niagara started developing an air-quality improvement program later than Hamilton. Both municipalities use a milestone-planning system, which takes into account the risks, an inventory of the current state of affairs, and future plans with checkpoints to determine 'How are we doing?' as activities progress.

As Brian sees it, the impacts of climate change include: Hotter weather (increased temperatures with warmer winters; less snow; increased flooding; longer growing seasons); Effects on flora and fauna (increased disease and insect effects on trees, threats to fish; declines of wetlands; increased invasive species; changes of local flora and fauna); Water issues (less ground-water recharge; more run-off to streams; flooding; increase of water-borne diseases; problem of electricity generation with lower water levels; increase of blue-green algae); Health-related issues (increase in heat-related illness; increased water-borne diseases; increased vector-borne diseases; risk of injuries; increased mental stress of impacts (worry!)); Economy issues (damage to roads, bridges, homes, businesses; power outages, floods, ice storms; increased emergency management cost; increased health care cost; increased insurance premiums; terrorism); Agricultural issues (wind effects; longer warmer growing seasons; increased freeze-thaw cycles; shorter ice-wine season; increased irrigation need; increase of crop pests & diseases).

Brian commented that successful cities are those which recognize that there is a synergy between climate change and economic growth. Cities that respond to the challenges of climate change are those which combine mitigation strategies with adaptation to deal with issues like greenhouse gasses. Examples are: encouraging green roofs (which can make use of rainwater); permeable pavement (which absorbs rain); better insulation of homes; expanding tree canopy (cooling and air-freshening); implementing schedules to reduce peak demand of electricity. He showed photos of some of Hamilton's innovative 'Action' items, including: solar panels mounted on sides of buildings; a water-collector on the roof of McMaster University which provides all their grey-water; use of rain barrels and composting bins; a produce garden at Hamilton City Hall, (the vegetables go to the city Food Bank); a cargo-bike delivery system. He admitted that some Hamilton residents object to some of the city's activities, such as tree-planting where residents don't want trees.

The City of Hamilton adopted an Air Quality and Climate Change Strategic Plan in 2006, which addresses climate change in the areas of vehicle fleets; reducing energy usage; energy co-generation; waste reduction; lowering water usage; building retro-fits; and introducing an anti-idling by-law. These actions have resulted in the City's greenhouse-gas emissions decreasing by 16%. In the next six years, they expect to achieve a 20%

emissions reduction. Brian suggested that action to reduce emissions in transportation could include using public transit (including GO), promoting bicycling, and car-sharing (ie. several persons each use the same car at different times of the day). Another interesting idea was that community members could share power tools, instead of each home having their own. He noted that the Green Energy Act had reduced greenhouse-gas emissions by moving Ontario away from coal as a fuel, but stated we also need better Energy Pricing, and better Building Codes.

Niagara Region has its own Plan for mitigating the effects of climate change, which can be found on the Internet at: [www.niagararegion.ca/government/planning/pdf/climatech](http://www.niagararegion.ca/government/planning/pdf/climatech). In this document titled "Adapting to Climate Change: Challenges for Niagara", the Region advises that the average temperatures in Niagara by 2050 will be 3 to 4 degrees hotter than current temperatures. That degree of average temperature rise would be enough to essentially cancel the ice-wine industry completely. The Region's Plan is lengthy, but well worth the time to read and digest.

The Region's plan has five milestones: 1 – create a greenhouse gas emissions inventory and forecast; 2 – set an emissions reduction target; 3 – develop an action plan; 4 – carry out the action plan; 5 – monitor progress and report results. At present, the Region is at "milestone 4 – carry out the plan", and is welcoming any persons or agencies that wish to be involved in implementing the plan. The Region's contact person to get involved is Erin Britnell, who can be reached by email at Niagara Region. Just google: Climate Change – Niagara Region, Ontario. What are we waiting for?

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## IDENTIFICATION, BIOLOGY AND CONSERVATION OF TURTLES

Patrick Moldowan has a thing about turtles which dates from his boyhood in Hamilton and on through his receiving a degree in biology from Guelph University. Now employed at Algonquin Park, his interest in turtles is now his career. His presentation on November 25 was informative, amusing, and occasionally disturbing – the latter because of the general public's attitude toward these fascinating creatures.

To begin, Patrick listed the 8 species of native turtles in Ontario; namely: Painted Turtle; Blanding's Turtle; Wood Turtle; Spotted Turtle; Stinkpot (Eastern Musk) Turtle; Snapping Turtle; Eastern Spiny Softshell Turtle; and Northern Map Turtle.

The Ontario Ministry of Natural Resources categorizes levels of concern, from least to most serious, as: special concern; threatened; endangered; extirpated; extinct. By the OMNR's standards, only the Painted Turtle seems to be out of danger. The Snapping Turtle and Northern Map Turtle are classed as 'special concern'; the Blandings Turtle, Stinkpot Turtle and Spiny Softshell Turtle are classed as 'threatened'; and the Spotted Turtle and Wood Turtle are classed as 'endangered'.

.Patrick described turtles as an unusual reptile, as the body is encased in a bony outer covering, the top surface called the carapace being made up of numerous plates called 'scutes' and the underside being the plastron. While this provides protection for the animal, it also restricts mobility somewhat, which the turtles compensate for by having extendible necks and limbs. The various species are distinctive by the shapes and colours of their shells, and by their habitats to some extent. The size and numbers of eggs laid by female turtles varies with the species – for example, Painted Turtles usually produce about 7 eggs, whereas Snapping Turtles commonly lay about 30 eggs.

Most turtle species are fairly long-lived. Patrick suggested Painted Turtles live up to about 40 years, and Snapping Turtles can be over 100 years and still producing eggs at that age. Their longevity may relate to their yearly life-cycle; Painted Turtles are dormant for 7-8 months of the year, and Spotted Turtles have a 10-month dormancy.

While some turtle species are primarily aquatic, e.g. the Eastern Spiny Softshell Turtle which has its feet modified into essentially flippers with claws, other species such as the Wood Turtles are mainly terrestrial in the Boreal forest, with feet adapted for walking. Snapping Turtles will travel overland as much as 18 km. The Wood Turtle in its terrestrial habitat is the only species adapted to swallowing its food on land – most other species can only swallow while in water.

To survive winter, Patrick explained, most turtles go dormant and essentially hibernate in the mud underwater. Young Painted Turtles can supercool their bodies to minus 11C to survive winter, and most hibernating turtles reduce their metabolism to a low level.

Identifying turtles by sight is possible, as each species has some distinctive markings. Probably our most common species, The Painted Turtle has red stripes along the shell and yellow spots on the head; the Spotted Turtle has yellow spots, one on each scute on the carapace (back); Blandings Turtle has large numbers of spots on the carapace and a bright yellow neck; the Northern Map Turtle has markings on the carapace that resemble the lines of a road-map; the Stinkpot Turtle has two light stripes on the side of the head; and the Snapping Turtle has a large head and long tail which is saw-toothed along the upper side.

(Note: A good identification source is: A Field Guide to Reptiles and Amphibians, by Roger Conant – Peterson Field Guide Series).

In Ontario, Patrick stated, temperature determines where we might see turtles, because of them needing warmth for incubating the embryos in the eggs. He suggested that climate change might allow them to go further north, but roads and other human activity could limit them. Also, they are subject to injuries, although the loss of a limb is often not fatal; hits from boat propellers or highway hits happen, and sometimes males are injured when battling for territory. Some turtles get diseases that damages their shell, and Snapping Turtles are preyed by leeches.

A serious issue for Snapping Turtles is related to 'carrying capacity'. Basically, the species is long-lived, and may continue laying eggs at 100 yrs +. However, being a long-lived animal also means that the species does not come back rapidly after a sharp drop in numbers. Road-kill mortality, deaths from pollution, and predation of egg clutches by raccoons can all decrease the population, which will require a long time to replenish.

A related concern is that the Ontario Government allows anglers with fishing licenses to catch Snapping Turtles at two turtles/day. The Ontario Anglers and Hunters Association, with over 100,000 members, agree with the Government on this practice. Although Gord Miller, the Ontario Environmental Commissioner, has made unfavourable reports about the turtle catch in his annual Reports since 2010, the Government has done nothing to reduce the kill of Snapping Turtles. OMNR's reports claimed that the kill was 13 turtles by 4 anglers in 2012.

Other issues affecting turtles adversely include illegal poaching of Snapping Turtles; boating and highway mortalities; competition with alien turtle species such as 'slider turtles' which are an exotic species; and infectious diseases which might be coming from other amphibians. A serious human attitudinal problem is that a significant number of motorists will deliberately hit turtles crossing roads; this has been verified by a survey at the Long Point Spit.

On the brighter side, Patrick noted that more places where turtles cross roads are being signed with warning signs, and a facility for rehab of injured turtles has been established in Peterborough – if you can arrange to get the injured turtle to the facility. The contact information is:

Kawartha Turtle Trauma Centre, Peterborough – 705-741-5000

Another similar site is: Toronto Wildlife Centre – 416- 631-0662

## CONNECTING PEOPLE AND BIRDS

Mike Burrell is Mr. IBA when it comes to the bird life in Ontario - which is curious considering that his original post-grad subject was Boreal Silviculture. However, at age 15, he became hooked on birding while learning about the sport at Long Point Bird Observatory. He has also been eBirding for 5 years and credits eBird as his favorite tool for finding and recording data about birds. His talk on March 24 combined his zest for eBird with his enthusiasm for the Important Bird Areas (IBA) program in Ontario and globally.

The IBA program is an international conservation initiative, coordinated by Birdlife International, with a mandate to conserve birds, their habitats and global bird biodiversity. Its partners operate in over 100 countries and territories worldwide, with programs on every continent.

In our country, Bird Studies Canada and Nature Canada are the cooperators with Birdlife International. Between them, these agencies deliver the IBA program, which aims to identify, monitor, and conserve a network of sites that provide essential habitat for significant bird populations. Volunteer caretakers work alongside ornithologists and conservation scientists to help protect birds and critical ecosystems. Besides the IBA program, Bird Studies Canada supports Project Feederwatch, the Christmas Bird Count, and regional breeding bird atlases, with over 20,000 volunteers each year.

An Important Bird Area is a discrete area recognized as globally important for conservation of bird populations. Worldwide there are about 12,000 IBAs. These sites are small enough to be entirely conserved, and differ in their character, habitat or ornithological importance from the surrounding habitat. Internationally-agreed criteria for identifying IBAs mean that a site must meet at least one of the following ratings:

A1 - Globally threatened species - the bird species at the site is listed as Critically Endangered, Endangered or Vulnerable. Generally, this is irrespective of population size;

A2 - Restricted-range species - in a number of sites, these bird species are present in significant numbers in at least one site or preferably more;

A3 - Biome-restricted species - a bird species is one member of a group of many species of all kinds, which are found together consistently in many distinct locations;

A4 - Congregations - this rating applies mainly to 'waterbird' species, and may imply flyway populations, gatherings in wetlands, or important 'bottleneck' sites for temporary use by migratory species.

In Canada, British Columbia was the first Province to begin designating IBAs and Ontario was the last. The total of IBAs in Canada is about 600, with about 70 in Ontario. Most of the Canadian IBAs are important because of being migratory sites, and are often coastal habitats or wetland interior sites. Many of the Ontario sites are coastal, frequently in the Hudson Bay/James Bay area or in locations around the Great Lakes.

Closer to home, the Niagara River area is considered a Globally Significant area for waterbirds, and the Twelve-Mile Creek area at Fonthill is an IBA for Hooded Warbler. In a discussion with Mike after his presentation to the PFN, he agreed that several locations along the Niagara River should have informational signs that would promote the IBAs that exist at various points along the river. A cooperative arrangement with the Niagara Parks Commission could be made to have such signs in place at appropriate sites, which would increase the public's knowledge of the importance of the river for migratory and resident water-birds. Funding of the price for the signs would be an issue to be dealt with, possibly by sponsors.

In B.C., 'Caretakers' are active in monitoring the IBAs, doing habitat restoration, and installing signage explaining the IBAs' importance. Similar activity by Caretakers may eventually take place in Ontario, but the Ontario IBA program is still at an early stage. Mike Burrell is an enthusiastic promoter of using eBird to encourage fellow birders to use this tool in promoting the development and public awareness and recognition of the IBA program. Among other uses, eBird can be effective in tracking migrations of many bird species.

## PENINSULA FIELD NATURALISTS UPCOMING OUTINGS

### **Excursion to Rock Point Provincial Park**

Saturday, May 31, 2014, 8:30 am to mid-afternoon.

Saddle up with Rick Young at the Shopper's Drug Mart Plaza in Fonthill to carpool, and bring lunch. Rock Point PP has been known to have Ruddy Turnstones and Redheaded Woodpeckers, and some nice geological features. As with Long Point, ticks are a possibility, so dress appropriately.

Binoculars and/or spotting scopes are useful.

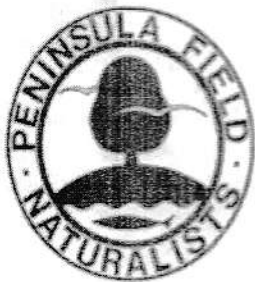
Rick Young [905-734-6226](tel:905-734-6226)

## PENINSULA FIELD NATURALISTS - ANNUAL SUMMER PICNIC/BBQ

**SATURDAY, JUNE 7, 10:30 AM (RAIN DATE : JUNE 8)**

**Home of DON & SUE MINCHIN  
2288 ROBBINS RD  
(West off 11th Street, Louth)**

**DIRECTIONS:** From St. Catharines, take 4th Avenue past the new Hospital westward, to 11th St. Louth. Turn left (south) onto 11th Street, cross over King St. (Reg.81), up a small hill and look for Robbins Ave. on the right. Take Robbins Ave. to the end. Alternately, take King St. (Reg. 81) to 11th. Street Louth.



### **The Peninsula Field Naturalists Club**

A non-profit organization started in 1954 with the objectives to preserve wildlife and protect its habitat, to promote public interest in and a knowledge of the natural history of the area, and to promote, encourage and cooperate with organizations and individuals having similar interests and objectives. Affiliated with Ontario Nature and Nature Canada .

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### **The Peninsula Naturalist**

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The Editor welcomes written articles or artwork on any natural history topic. Please submit typed reports on paper or by email to: [jmpotter068@gmail.com](mailto:jmpotter068@gmail.com) Colour photos (jpg) accompanying articles are welcome. All pieces of artwork will be accepted. New ideas and constructive criticism are welcome. Please send submissions by email to e-address above, or by snail-mail to the Club's postal address.

**Editor:** John Potter

**Assistant:** Mary Potter

**Deadlines for submissions 2014:  
February 14; April 18; October 13**