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THE NATURALIST

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 CONSERVATION THROUGH EDUCATION
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President's Message



Climbing food and fuel prices, war, a continuing pandemic, civil unrest, increased loss of species, climate change! So much to worry about! So many reasons to lose hope. But as a young lady on the CBC radio told us lately (sorry, I forget her name) to lose hope leads to inaction, to continue to hope may lead to action. So, it is my hope that in this upcoming election you will vote for Nature. Ontario Nature has provided us with questions to ask our local candidates to find out where they stand when it comes to Nature. [Vote for Nature - Ontario Nature](#) See the article from Maria Prisciak in this newsletter.

The DRFN executive is sorry to be losing Rayfield Pye in his role of Conservation. After enthusiastically serving in this position for more than 25 years Rayfield is stepping down. If you would like fill this executive position, please let us know.

Rayfield has also acted as Compiler of the Christmas Bird Count from 2001 until the present time, and has served as Chair of the Conservation Committee for many years. As well, he once operated the now unneeded Durham Rare Bird Line. He is a volunteer with the Oshawa and the Sunderland Butterfly Counts. He has also been an active volunteer with the Cranberry Marsh Raptor Watch. And until recently he was a Member of the Board of Thickson's Woods Land Trust. We will miss him greatly.

As you also know I am stepping down from my role as Co-President. After 3 times serving as President, adding up to many years, I feel it is about time to let someone else take over. Kristen Osborne has agreed to fill the position, but because she has a demanding full-time job, she requires assistance. If you would like to take on the job of Vice-President, please let us know.

I will be staying on in my role of Publicity, keeping the DRFN website up to date. And sending out my monthly reminder of upcoming Meetings and Outings!

- **Lois Gillette**

Upcoming Meetings

Meetings: last Monday of each month except June-August and December

Time: 7:30 p.m.

Place: Civic Rec Complex, Bobby Orr Room, 99 Thornton S., Oshawa.

Reminder: bring in your nature related arts and crafts, photography etc. to display at the May meeting

May 30 – In Person at Bobby Orr Room

AGM and Members Night

Speakers: Wioletta Walancik, Friends of Second Marsh – “Defrag the Marsh Project”

Member’s presentations

Quiz by Otto

September 26 – Bobby Orr Room - TBD

**October 31 – Colin Jones
“The Damsel Flies and Dragon Flies of Ontario”**

Newsletter

Submissions

Please submit your pictures and articles for the September newsletter no later than August 15, 2022.

Email all submissions to Nancy Muzik at

john_nancy_m@rogers.com

Future Outings

**Butterfly Garden Spring Clean-Up
Saturday, May 28, 10:00 a.m.**

The Rossland Road Butterfly Garden, established in 2004, is still growing strong and still in need of an annual spring clean-up by its sponsor, DRFN.

There's lots to do to get the Garden ready for summer - edging, spreading wood-chips, weeding, pulling grass, pruning, cutting dead stalks, planting a few annuals, cleaning up litter, etc. Please come and lend a hand to keep this garden thriving. The pollinators will love you! You might even see the largest, most beautiful butterfly milkweed *ever*, poking its welcome stems out of the soil.

Bring garden tools, gloves, drinking water and dress for the weather.

Park on side streets Glencairn or Ansley, then walk a short distance to the garden on Rossland Road just west of the Oshawa Creek. There are three gardens, so lots of space to ‘social distance’ if we still need to.

Note: Help is also needed over the summer – a couple of hours a week, or as often as you can come. Contact Dianne to arrange. A few members of Oshawa Garden Club helped last summer, which was much appreciated.

Questions: Dianne Pazaratz 905-433-7875 or dpazaratz@sympatico.ca.

Dianne Pazaratz

**Saturday, June 18 at 6:00 PM
Carden Alvar**

Leader: Don Docherty

The Carden Alvar is a dramatically different experience with Prairie Smoke, cattle and grassland birds. Weather permitting; we may see Bluebirds, Wrens, Loggerhead Shrikes, Upland Sandpiper, Wilson’s Snipe, a variety of Sparrows, and Nighthawks. With luck, a Bittern may pop up. If you stay a little longer you may hear Whip-poor-wills and see fireflies at the roadside.

Those who wish to drive as a group can meet at the Northview Library parking lot at 5:00 PM. (Alternately meet Don Docherty at Wylie and McNamee Roads at the Carden Alvar at 6:00 PM.) (Consider driving up earlier and have a picnic at the lift locks at 5:00 PM.)

Difficulty: Light walking.

Be prepared with water, sun screen and insect repellent.

Saturday, July 09 at 10:00 PM
Butterflies at Durham East Cross Conservation Area

Leader: Maria Prisciak

Our annual butterfly outing will be held at the Durham East Cross Conservation area. It is not as busy as Heber Downs and has great butterflies. There are several habitats to explore within a short walking distance.

Difficulty: There may be a small hill or two but trail conditions should be dry/well drained sand.

Bring appropriate clothing and footwear based on the weather forecast.
Bring water and insect repellent (just in case).

Directions: North on Durham 57 to Devitts Rd. East to the parking lot at 4560 Devitts Road.

Saturday, August 14 at 10:00 AM
Presqu'île Provincial Park - Marsh Boardwalk

Leader: Kristen Osborne

This time we will visit the Marsh Boardwalk where Kristen will highlight some amazing plants and creatures that call the marsh home. Afterwards some may want to look for late summer wildflowers, scope shorebirds feeding on the beach or have a pleasant walk in Jobe's Woods.

Meet Kristen at 10:00 AM at the Marsh Boardwalk.

There is an admission charge to enter the park. There is a reduced rate for seniors. Consider booking your day pass up to 5 days earlier at the Ontario Parks website to ensure access.

Check the weather forecast and dress accordingly.
Bring water, lunch, sun screen and insect protection.
A spotting scope may be helpful although a few should be available.

Difficulty: Extensive easy walking. Potential calorie overload due to ice cream at the park store.

Past Outings

Presqu'île Provincial Park – March 20

We had a grey, cool day for the outing but no rain to report. We started at the lighthouse where there was so much water, small boardwalks were set up to get from the parking lot to the visitor's centre area. The Friends of Presqu'île set-up a barbeque and a racoon snoozed in a nearby tree waiting with hopes of juicy leftovers. Unfortunately, the big ball of fur wasn't very photogenic. Another interesting find in the area was a massive White Pine beam from a sunken vessel that winter storms had lifted up from the bottom of the lake and thrown on the shore.

We walked the cottage road in search of an Oregon Junco but were unable to locate it. We were serenaded by singing House Finches and Mourning Doves.

Most ducks were seen from the Calf Pasture. There were lots of ducks at a distance but a spotting scope was required to get a good view. The favorite water birds seen were Pied-billed Grebe, Hooded Merganser and Canvasback.



Submitted by Anne Hide



Submitted by Anne Hide

After the outing, those who drove back by Huff Road might have seen two Bluebirds. (They were still there on May 19 as was a Bobolink. It's a short but interesting road to drive.)

While searching for the Oregon Junco, we heard about a Snowy Owl at Cobourg Harbour. Those who stopped there on the way home may have seen it with the assistance of Carolyn Van Goch.

Park Sightings:

- | | |
|------------------------|-------------------|
| Canada Goose | Mute Swan |
| Mallard | Canvasback |
| Redhead | Ring-necked Duck |
| Long-tailed Duck | Bufflehead |
| Common Goldeneye | Hooded Merganser |
| Red-breasted Merganser | Pied-billed Grebe |
| Herring Gull | |
| Blue Jay | |
| Red-breasted Nuthatch | |
| American Robin | |
| American Tree Sparrow | |
| Brown-headed Cowbird | |

- | | |
|-------------------------|------------------------|
| Mourning Dove | Ring-billed Gull |
| Red-bellied Woodpecker | Downy Woodpecker |
| Common Raven | Black-capped Chickadee |
| White-breasted Nuthatch | European Starling |
| House Finch | American Goldfinch |
| Song Sparrow | Red-winged Blackbird |
| Common Grackle | Northern Cardinal |

Thickson's Woods Walk and Garbage Clean-up – April 23



Submitted by John Muzik

We had a windy day that is never good for finding birds. The best spots were sheltered areas when the wind was less of an issue. Attendees were split into two groups to give everyone a chance to see migrants

Common sounds in woods were Ruby-crowned and Golden-crowned Kinglets. There were also small numbers of Yellow-Rumped Warblers present.

Coniferous trees at southwest end of the meadow had some hidden surprises. We found Chipping Sparrow, Eastern Towhee and Hermit Thrush on the ground in search of food.

Everyone was prepared to pick-up garbage in and round the woods. Thankfully, there wasn't much to do. Windblown garbage was a bit of a challenge to pry from shrubbery and the only large accumulation seemed to be the area east of the entrance to Amazon.

Thanks to everyone for helping to keep the Thickson's Woods area clear of debris All we need now is a solution to invasive species.

Checklist:

- | | | |
|----------------------------|------------------------|-------------------------|
| Rock Pigeon (Feral Pigeon) | Mourning Dove | Ring-billed Gull |
| Great Blue Heron | Downy Woodpecker | Northern Flicker |
| Common Raven | Black-capped Chickadee | Ruby-crowned Kinglet |
| Golden-crowned Kinglet | Red-breasted Nuthatch | White-breasted Nuthatch |
| Carolina Wren | European Starling | Hermit Thrush |
| American Robin | Chipping Sparrow | Dark-eyed Junco |

Savannah Sparrow
Red-winged Blackbird
Yellow-rumped Warbler

Song Sparrow
Brown-headed Cowbird
Northern Cardinal

Eastern Towhee
Common Grackle



Submitted by Kristen Osborne



Submitted by John Muzik

Don Docherty

Heber Downs Wild Flower and Nature Walk – May 14



The wood at the south end of Heber Down Conservation Area has a succession of spring wildflowers so it's impossible to see all the different species on one visit. When we went, on May 14, the early flowers such as spring beauty, hepatica, red Trillium, blue cohosh and Dutchman's-breeches were over and wild ginger, early meadow-rue and trout lily were fading. But white Trillium, bellwort and toothwort were still flowering. We saw purple, yellow and long-spurred violets, jack-in-the-pulpit, may-apple and baneberry. Both red and white baneberry occur in the wood but we could not differentiate at the flowering stage.

Submitted by Brian Reid

Other plants of note were wild leek (which does not flower until later when the leaves have shriveled); the climbing version of poison ivy; ostrich (fiddlehead) fern; Leatherwood, a shrub which has yellow flowers in April; Canada Moonseed, a climber which flowers in June or July.

Wilfred Bradnock



Jack-in-the-pulpit and Large-flowered Bellwort by John Muzik



Broadleaf Toothwort with Mustard White Butterfly and Catbird by Maria Prisciak

Ontario Nature Report

The provincial election is less than two weeks away, with Ontarians set to go to the polls June 2.

The next government has a major role to play in protection of our environment. Ontario is home to one-fifth of the world's fresh water, has the world's third largest wetland, 3,600 plant species, 70 Important Bird Areas, 240-plus species at risk and approximately 300 species of breeding birds.

A vote for nature is:

- A vote for a livable planet for our children and grandchildren.
- A vote for the programs, laws, and policies that protect our well-being and quality of life.
- A vote to put long term interests ahead of unsustainable, short-term profiteering.
- Your chance to be heard.

The next provincial government will make a generational difference – for better or for worse.

Be an informed voter. See where the major parties stand on environmental issues, find out more about your local candidate, advocate for nature, and vote.

Please join Ontario Nature in sending a clear message to the major parties that we want biodiversity and climate leaders in Queen's Park.

Maria Prisciak

Reducing Greenhouse Gas Emissions Through a Hydrogen Economy

. By Otto Peter

As we are all aware, because of climate change caused by fossil fuel use, many nations of the world have signed on to reduce CO₂ emissions to net zero by 2050. Many experts say that in order to accomplish this we must switch to an economy where we get most of our energy from renewal sources such as hydroelectric, solar and wind power. However, there are a number of problems with such an approach. Much of the renewal power generation is not a steady source; no wind or sun interrupts the production of power. Electricity is difficult to store after it is produced. One of the ways this is done is by installing huge storage batteries to supply the power in an uninterrupted way. Given the huge demand for power it is highly unlikely that there could ever be enough battery storage available even in the distant future to provide enough power to satisfy demand.

Also, when you look at replacing all fossil fuel-burning transportation vehicles, it appears very unlikely that battery-powered electric vehicles will be the solution. There will be problems with power distribution infrastructure. I can't even imagine that it will be possible to produce enough batteries to satisfy demand.

This, where a lot of experts believe that Hydrogen as a compressed gas or as a chilled liquid, could be a good way to provide Greenhouse gas free power. Hydrogen can be used in internal combustion engines much like propane or natural gas except it does not produce any emissions other than water and heat when burned. It can also be used to generate electricity directly in fuel cells that can power vehicles, buildings or at industries with no emissions. It can also be used to power airplanes by combustion in turbine engines again with no harmful emissions.

How do we get the hydrogen? Although it is the most common element in the universe, there is no naturally-occurring source of free elemental hydrogen. All of the ways that are currently used to produce hydrogen require high amounts of energy. These various processes produce a very colourful variety of Hydrogen.

1. **Green hydrogen** is hydrogen produced by splitting water by electrolysis. This produces only hydrogen and oxygen. We can use the hydrogen and vent the oxygen to the atmosphere with no negative impact. This process to make green hydrogen is powered by renewable energy sources, such as wind or solar without CO₂ as a by-product. (**Pink hydrogen** is the name used to describe hydrogen produced by using nuclear energy which some consider to also be free of greenhouse gases.)
2. **Grey hydrogen** is the oldest and most widely used process. Steam Methane Reforming (SMR) or Autothermal Reforming (ATR) are used to split natural gas or other fossil fuels into Hydrogen and CO₂. It takes a large amount of energy and the CO₂ is not being captured and is released into the atmosphere. This gray hydrogen is used widely by all kinds of industries.
3. **Blue hydrogen** is a similar process to grey hydrogen where SMR and ATR are used to split natural gas into Hydrogen and CO₂. But the CO₂ is captured and then stored. This process is being touted by the fossil fuel industry as being environmentally preferred because the CO₂ is not released. However independent studies have shown that the energy needed to split off the hydrogen and the CO₂ released from these processes does not reduce the CO₂ emissions in any meaningful way. In fact, much of the CO₂ is injected into oil fields to increase oil production which then releases the stored CO₂ back into the environment. Blue hydrogen is being enthusiastically promoted by natural gas producers as the simplest and cheapest answer to decarbonizing our economies. But recent studies have shown that its overall greenhouse gas emissions footprint is worse than natural gas. So, is this just the latest in a long series of diversions and deceptions from the fossil fuel industry? I believe the term for this type of deception process is called green washing.

Yes, there are some problems associated with electrolysis using electricity because of the need for rare earth compounds which need to be solved. Transportation and storage of the highly compressed or very cold liquid hydrogen will take some new efforts which could easily be overcome. Hydrogen can be produced on site at solar or wind farms. It could even be turned back into electricity on site when needed to provide uninterrupted power in remote areas. Ontario currently can often produce more power than it can use and has to sell the extra amount on the open market for very low prices. In fact, Ontario has had to pay other jurisdictions to take the power at times. Why not use the extra power to produce hydrogen which can then be used to produce power when needed instead of burning natural gas which seems to be the way some governments are going?

Yes, it will be interesting to see what happens in the near future as we grapple with ways to reduce green-house gas emissions. Hopefully Canada and Ontario will investigate a hydrogen economy as part of the solution as many other countries are currently doing.

Member Pictures - Spring



Rose-breasted Grosbeak and Cardinal by Brian Reid

And you do the Hokey pokey ---
— you put your one wing in
--- you put your one leg up
- and that's what it's all aboutJohn McFeeters





Raven marauding a Turkey Vulture at Second Marsh and Eastern Towhee at our feeder by John Muzik



Red Fox and caught in a storm at Thickson Woods by Maria Prisciak

Nature FYI

Antler Growth

By John McFeeters

Each of the five species of male deer (*one exception) native to North America (Moose, Elk, Caribou, White-tailed Deer and Mule deer) grow and shed their antlers annually. The shedding of antlers usually takes place as early as the beginning of December and can be as late as March. Following the rut (breeding season) antlers serve no purpose whatsoever. Because these fallen antlers provide welcome mineral supplements for mice, squirrels, chipmunks and porcupines, it is a rarity to find a shed beyond snowmelt in the Spring that does not show evidence of being gnawed.

Once the antlers have been shed, the circular wounds left behind on the antler growth platforms (pedicles) become covered with a protective scab-like skin. Several weeks later as Spring progresses, it is from these pedicles that the new antler in the form of a bud will emerge. The eventual size that the new antlers attain depends upon the deer's age, genetic makeup, nutrients available, and the lack of injury and disease during the main months of antler growth. The greatest growth takes place in July.

During the entire time that the new antler is growing it is covered in a hairy skin called velvet. This velvet can be likened in appearance and feel to the new stem of a Staghorn Sumac. Velvet is the only self generating skin found among mammals. Nourishment for antler growth in the form of blood flows through the capillary rich velvet to the exterior of the growing antler and also up through the core of the pedicle to the yet to be calcified

living bone cells. The growing antler is cartilage-like, sensitive to touch, warm, full of blood capillaries and susceptible to injury. During this stage the growing antler's make-up is 80% protein.

By mid to late August antler growth will cease due to the rise in the male sex hormone testosterone. This rise results in the stoppage of blood supply to the now fully grown antler. Following this blood flow stoppage, the mineralization (calcification) or hardening of the antler from being cartilage-like into hard bone will take place.



The living bone on being calcified is now dead bone with a mineral composition primarily of Calcium and Phosphorus. Due to the lack of blood flow to the now grown and fully calcified antlers the velvet dries and peels off or is rubbed off by the deer. The new antlers now composed entirely of dead bone will remain attached to the living bone of the skull's pedicles up until they too, like their predecessors, are shed. This shedding will take place when special cells deteriorate the bone material at the transition zone of the new antler and the pedicles. This deterioration of the bone cells is set in motion by the decreased production of testosterone following the rutting season. There is absolutely no need for antlers after the rut.

INTERESTING FACT

*The Caribou (reindeer) is the only member of the deer family where both the male and the female grow antlers. The males shed their antlers in November and no later than early December. The females retain their antlers until June. This means that all of Santa's antlered reindeer are females, even Rudolph. Who would have guessed such a revelation? Perhaps this is why Santa never gets lost. His team would have no problem asking for directions when necessary. HO, HO, HO.

In Memoriam

Betty Pegg - *20-Jul-1923 - 14-May-2022*

Betty was a strong supporter of the Thicksen's Woods Heritage Foundation/Land Trust. She was among those who stood in front of the bulldozers to stop the logging. Betty and her husband Edge led field trips in the area, and their home near Greenwood was a frequent meeting place for naturalists from afar and for outings of our club. Betty provided us with many illustrated talks over the years; sharing her fine photos. As well, she supplied many articles for our newsletters and was a regular participant on Christmas Bird Counts in Oshawa and in Pickering. View the obituary at <https://www.arbormemorial.ca/mceachnie/obituaries/betty-florence-eileen-pegg/85898>