



THE WOODLAND OBSERVER

JANUARY 2019

NIPISSING NATURALISTS CLUB



From the editor:

A New Year begins

Another New Year, my 5th as editor of *The Woodland Observer*. I thank all 2018 contributors. Your articles, book reviews and photographs are greatly welcomed.

First place photos in our 2018 photo contest are highlighted in this issue, so I thought it fitting to also use a cropped version of Eric Mattson's first place landscape photo for this page, that of a sunrise on Callander Bay, as a way of welcoming in the New Year. Congratulations to the other first place winners – Buddy Myles and Fred Pinto. (Second place winners will be featured in February's issue.)

“Emails to the Editor” is a new feature for a new year and is your opportunity to email me if you wish to add something of interest to an article you read in *The Woodland Observer*. It doesn't have to be a written article or comment. It can be a photograph, like Kaye Edmonds' photo of Mallards “basking” while the snow falls, a humorous twist on Paul Smylie's article on turtles basking in the sun. (December 2018 issue.) In this issue, Paul completes his article on turtles with one on turtle temperature.

Most of the articles in this issue - and the cover photo I took near my house - bring winter into play: Kaye's Mallards, Paul's turtles, Kevan Cowcill's thawing frogs, Chris Connors' book review on *Fraser's Penguins* and the three articles on the Christmas Bird Count – North Bay's, with a special section on the East Ferris count, and Burk's Falls in which members Gary, Connie and Rachel Sturge, and new member Stephen O'Donnell took part. All very fitting for a January issue.

THE WOODLAND OBSERVER

Winter is also featured in my light-hearted look at the Red Squirrel for **Squirrel Appreciation Day on January 21**. Yes, there really is such a day! I know most birders do not appreciate squirrels, find them to be backyard nuisances, and go to great lengths to try to deter them from getting at the feeders. But I am not too dismayed by squirrels going after food put out for the birds, and enjoy watching them go to great lengths to get at the seeds and suet. (I rarely get black or grey squirrels in my yard and must admit I am not as enamoured with them.) I think the Red Squirrels in my backyard are more intelligent than Steve Pitt's. Read my article and then take a look at Steve's photos and see for yourself. **Your photos of squirrels - grey, black or red - taken on January 21 could make a nice collage in February's issue, but only if you send me your photos.**



Renee Levesque

Speaking of nuisances, also featured in this issue is a photo collage of Luke Thomson's raptors used to deter and disperse nuisance birds – think pigeons. Luke spoke to us in November, the highlight being our meeting Caspian, the Gyr/Peregrine Falcon, and the young Red-tailed Hawk. Many people took pictures. Used in the collage are those photos by C&C Photography and Kaye Edmonds.

As always, the New Year starts off with our Annual General Meeting with its pot luck dinner and its silent auction. A fun time, so make sure you attend on **January 8 starting at 6:00 p.m. – not the usual time of 7:30.**

And so another year begins. May it be a good one for all.

Renee Levesque, editor
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Renee Levesque

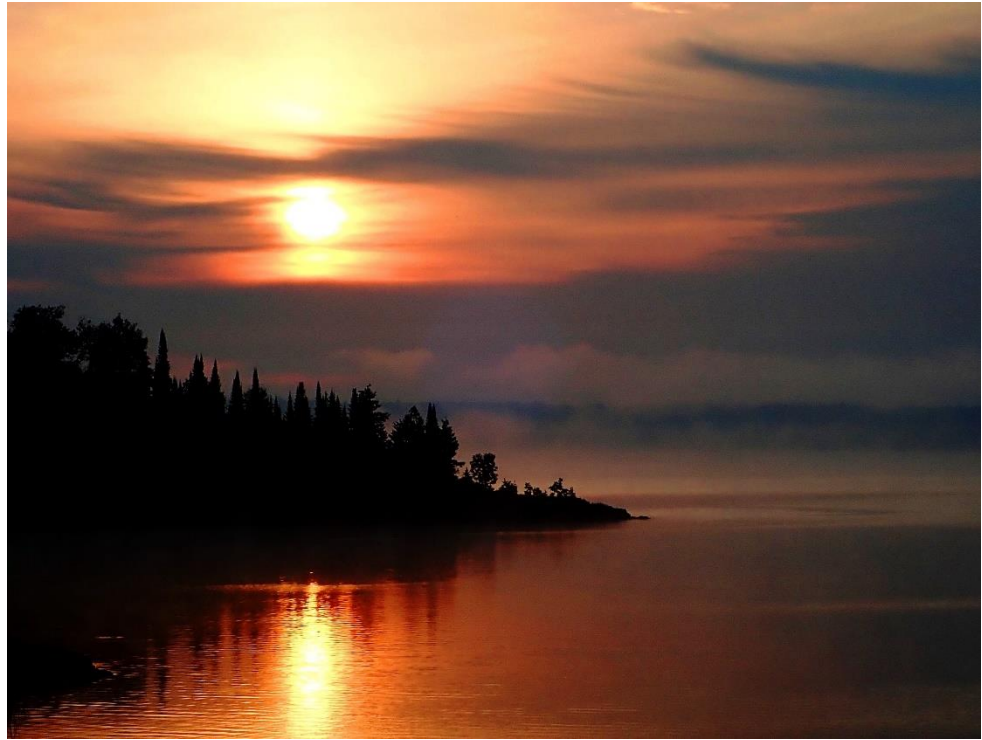
And the photo winners are...

First place Landscape:

Eric Mattson.

It is not often one gets an opportunity to see such a spectacular sunrise over a lake with the mist rising in the background. Thanks to the call of a Common Loon on Callander Bay, Eric got such a winning photo. *"This image was taken in early September 2018 when I was awakened by a loon calling from somewhere out in the mist. I never did get a shot of the loon, but the sunrise made up for it."*

Eric took his winning photo with an Olympus Tough TG-5.



First Place Fauna: Buddy Myles.

Buddy is a recent member of Nipissing Naturalists Club. He has been a birder for a few years now and takes some excellent photos of birds, some of which he posts on eBird. Buddy explains why he selected this winning photo of a Caspian Tern: *"I selected it mainly because of the challenge of trying to catch a bird in an action shot. The tern missed its lunch, but I liked how*

the photo turned out. I took it on a sunny summer Sunday from one of the docks at Cache Bay while watching the terns feed."

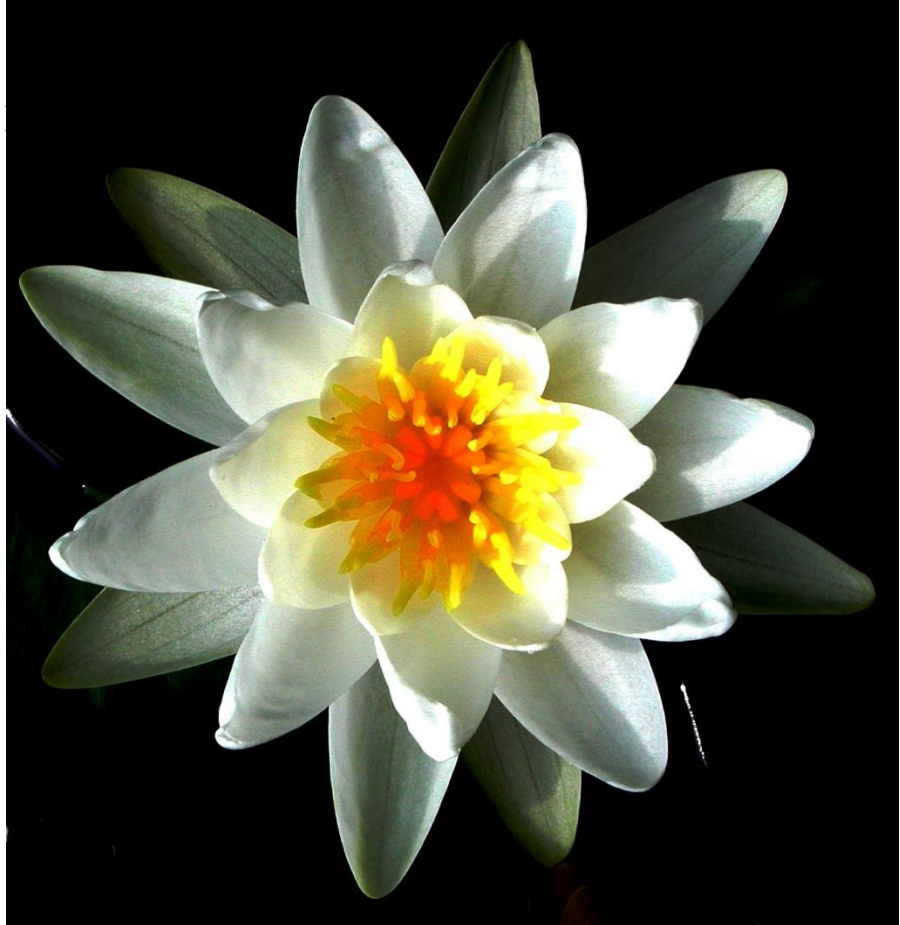
Buddy took his photo with a Nikon camera and zoom lens.



First Place Flora: Eric Matson.

We all love looking at water lilies while canoeing or kayaking, although getting a good photo of one can be difficult. But despite the challenge, Eric managed to get a great close-up photo of this beautiful flower. He reports, *"It was taken in the summer of 2018 while kayaking the Mattawa River. The stark contrast between the dark water and the white petals was a natural draw. However, I did not realize that taking a macro-scale photograph from a kayak would be so challenging!"*

Eric took his photo with a Nikon D7000 camera, using a Nikon AF-S VR Micro105 mm lens.



First Place People Enjoying Nature: Fred Pinto:

Winter activities can result in some good photos, perhaps because the starkness of nature in winter contrasts nicely with people happily enjoying what nature has to offer as in Fred's photo. *"This photo was taken during the Club's dog sledding event in February 2018. It was a bright and beautiful winter's day. The vivid colours of the winter coats and helmets contrasted nicely with the white of the snow."* And the presence of dogs always adds a heart-warming element.

Fred took his photo with a Pentax KD90 camera.



*Editor's Note:
February's issue will feature second place winners, Oriana Pokorny, Rick Tripp and Laura Turcotte.*



Pine Grosbeak, Grant McKercher

North Bay Christmas Bird Count

By Lori Anderson, compiler, and Renee Levesque

There are two major birding events in a year, one being the Great Canadian Birdathon that takes place over a 24-hour period in May, and the other, the Christmas Bird Count (CBC) that takes place on a single day between December 14 and January 5.

The Christmas Bird Count, started in 1900, is North America's longest-running citizen science project. It is one of the world's largest wildlife surveys and the data collected is used daily by conservation biologists and naturalists to assess population trends, distribution of birds and health of bird populations to help determine conservation actions. It involves thousands of hardy volunteers, some of whom have to face less than ideal weather conditions – snow, rain, freezing temperatures and cold winds. Try scoping a partially frozen lake for ducks, standing still for a good half hour when there is a north wind coming off the lake, snow is falling and temperatures are well below freezing and you will see just how hardy – or obsessed - birders can be!

The Christmas Bird Count now takes place in some countries in Central and South America, as well as in South Africa.



John Levesque

North Bay's Christmas Bird Count, its 40th, took place this year on December 15, and what a day it was weather-wise – mild, mostly clear and no wind. The open water on Trout Lake was as calm as some of us have ever seen it at this time of the year. A good year to be stuck for over two hours with a dead battery, as a couple of us were.

There were 16 enthusiastic field observers (some seen at the tally party above) who spent the day travelling on foot and by vehicle on designated and established routes in North Bay, East Ferris and Callander within a 24-km (15-mile) diameter circle. These 16 thorough and dedicated field observers collectively spent 107 hours covering 542 km by car and 22 km on foot.

There were 22 feeder watchers within the count circle, increased from last year's 16, thanks to publicity in the Nugget as a result of PJ Wilson's interview with Dick Tafel and to the great promotion Sarah Wheelan did on our website and Facebook, with photos supplied by Bird Wing members. The feeder watchers this year had to work hard for their birds because many birds were away from feeders a large part of the day, enjoying the spring-like weather. And work hard they did, watching for a combined total of 50.25 hours.

Below is a summary of what was seen and what wasn't.

Most Abundant Birds Observed: Black-capped Chickadees (672) were everywhere; woodpeckers (76) and nuthatches (44), White-breasted pictured at right, were seen frequently; many Mallards (327) as usual; and grosbeaks were well counted, with 41 Pine and 50 Evening Grosbeaks. Last year we saw no Evening



Grant McKercher

THE WOODLAND OBSERVER

Grosbeaks and only 24 Pine Grosbeaks, so this year's numbers are up significantly.

Specialty Birds Observed: One Red-necked Grebe – scoped in a small remaining area of open water on Trout Lake; one Snowy Owl – prominently displayed atop the steeple of the Pro-Cathedral (two seen last year); one Red-bellied Woodpecker – playing among the trees in Champlain Park (same number as last year); one Carolina Wren – wintering comfortably near a downtown feeder; two Brown Creepers – creeping from tree to tree (only one last year, but four in 2016); one American Robin – celebrating the early arrival of spring, although one was also seen last year and most recent years; two Northern Cardinals – dressed for Christmas as you can see in the photo at right (one more than last year); three Canada Jays – same number as last year, but this year proud to be listed as Canadian once more; six Bohemian Waxwings – enjoying softer fruit (none last year, but 201 in 2016); three White-throated Sparrows – remaining in the north, despite what the field guides tell them (only one last year); three Common Grackles – also reluctant to leave the north (none last year, but six in 2014); and two White-winged Crossbills – searching for cones. (Last time we had White-winged Crossbills was in 2012 when 11 were seen.)



Kaye Edmonds

Despite the poor seed and cone crop, there were 72 Common Redpolls spotted, compared to only one last year. In the last 10 years, the high count was in 2014 when 436 redpolls were seen.

High Count: Tied by Bald Eagle with last year's record of 17.

Birds Observed for the First Time:

There were no new birds seen on Count Day that had not been seen in previous years. The two significant birds seen were the Red-necked Grebe, seen on Trout Lake by Dick Tafel and Renee Levesque, and the Carolina Wren seen in the Pinewood area by Lori Anderson and Ken Gowing.



Renee Levesque

Although the Red-necked Grebe was absent from the Christmas Bird Count in the last 10 years, it was seen once before, in 1994, by Dick Tafel and Cal Osborne. They saw it that year on December 18, also on Trout Lake. Most of the lake was open that year, so no wonder they also saw 21 Common Mergansers, one Hooded Merganser and one scoter.

The Carolina Wren (pictured above) was seen twice before, one in 2008, probably the one that was at the Chowns' feeders that winter, and one in 2012, probably the one that was at Kaye Edmonds' feeder that winter. Nice to have it back this year. (One was seen this past November on Besserer Road, so perhaps there are at least two of these wrens in North Bay this winter or else the one on Besserer flew into the downtown area.)

It could be we do not have any new birds this year because we were so good at finding all resident birds during our previous 39 counts!

Misses or Poorly Represented: All gulls – too much ice; most waterfowl – followed the gulls; hawks – only one, but because a positive identification of the type of hawk could not be made, it was recorded as a hawk sp; Ruffed Grouse –surprisingly none, although Renee was positive she saw one until Dick pointed out it hadn't moved in the half hour they were watching it – turned out it was a piece of wood, albeit one that looked like a grouse and that doesn't count; Northern



Renee Levesque

Shrike – none; Blue Jays –7 less than last year; kinglets – none - last year one Golden-crowned was seen; European Starlings – 26 less than last year; American Tree Sparrow – none compared to 16 last year; Snow Bunting –none and also none last year, but 24 in 2016; Purple Finch – none and only 2 last year; Pine Siskin (at left) – only one, 16 less than last year;

THE WOODLAND OBSERVER

American Goldfinch – only one – 212 less than last year!

Count Week species: Peregrine Falcon, Barred Owl and Dark-eyed Junco. (Count Week species - three days prior and three days after Count Day - are recorded, but are not part of the official count data, and only those species that were not seen during Count Day are recorded.)

Shirley McKercher saw a Peregrine Falcon at Northgate Mall chasing pigeons. Coincidentally, the same situation presented itself last year when Shirley saw a Peregrine Falcon the day after the count while she was at Twiggs downtown. And Fred Pinto saw it on top of the Pro-Cathedral last year the day before the count. It must not like to be considered part of Count Day for some reason, maybe to keep us on our toes and not get too complacent. And this year it allowed the Snowy Owl to take its place atop the steeple cross.

The Barred Owl was seen by an observer who happened to run into Sarah Wheelan and Rachael Sturge on the Kate Pace Trail and showed them a cell phone photo she took of the owl the day before the count, in the same general area where Grant McKercher saw one on Count Day last year.

It is not often the Dark-eyed Junco (photo at right) gets left off the Count Day list – 19 last year - but it did not make an appearance this year. However, the morning after the count, there was one in Renee's yard that stayed there almost the entire morning. Like the falcon, it decided for whatever reason that it wanted no part of the actual Count Day.



Renee Levesque

Totals: 32 species, plus one hawk sp., for a total count of 33, and 2,009 individuals. These numbers are about average for our area. Last year, there were 35 species, with 2,450 individuals. The lowest number of species seen in the last 10 years was 27 in 2009 and 2013; and the highest in the last 10 years was 37 in 2015. For a complete list of the North Bay CBC birds seen, the spread sheet covering the period from 2009 to present is posted on our website at: <https://docs.google.com/spreadsheets/d/1iwUWA0vLfBX4Qmk5pc13PSBx1zABIPN4QdzDLQsOVk4/edit#gid=989390459>.)

Factors affecting the numbers: The early winter weather and very cold conditions by mid-November, resulting in lakes freezing earlier than usual, caused some birds to head south sooner than they might normally have, and the poor seed and cone crop this winter resulted in some, finches in particular, heading south and east in search of food.

THE WOODLAND OBSERVER

Despite the lack of sightings and low numbers of some species, the data collected is of importance whether there were no, few or lots of species. Sure, it may be more fun if there are many birds and different species seen, but it is the count that is important, the count that is useful to researchers studying bird populations. Sometimes we forget that no species is as scientifically important as many, so, as difficult as it may be, never think you are not contributing if you see few birds. The more participants we have, the better the data, and that is why feeder watchers are important. If you want to get out in the field and become a field surveyor, you should make your wish known in early to mid-November so you can be included in a route.

As last year, the evening was capped off with a fun-filled tally and pot luck gathering at Grant and Shirley McKercher's. Lots of delicious food and a 40th anniversary cake from Connie and Gary Sturge as seen in the photo of the field observers. And after eating and before the tally began, we presented Lori with a Tim Horton's gift certificate for all her hard work and then sang, as we did last year, Renee's bird version of the *Twelve Days of Christmas* - and fortunately for Marc Buchanan, not all 12 verses as we did last year, but just the first five.

This year, the bird count in East Ferris is highlighted thanks to a report by Gary Sturge, one of the four field surveyors in East Ferris.

Mayor of East Ferris welcomes the CBC

By Gary Sturge

Virtually all East Ferris roads, major trails and other bird locations are covered during the Christmas Bird Count (CBC), including, most importantly, the East Ferris landfill site. This site attracts numerous species, including large numbers of Bald Eagles and Common Ravens at this time of the year. The North Bay landfill site is not within the count circle and because the East Ferris site is, it is a significant sighting spot for the CBC.

In preparation for the count, the East Ferris council was contacted to secure permission for the bird counters to access the landfill site. An enthusiastic and positive response was received and so it was that at 8:30 on a foggy morning on December 15 that Mayor Pauline Rochefort joined Connie and me to observe and count the birds present. (Photo at right.)



Courtesy of Gary Sturge



Gary Sturge

The landfill personnel had done much appreciated work, clearing a road through the snow and levelling the pile of waste material. In spite of the fog emanating from the snow, 12 Bald Eagles, numerous Common Ravens and European Starlings were counted. After some photos and good wishes for success, the mayor departed and the counters continued surveying the birds elsewhere in East Ferris.

It is gratifying to report that the results of the day were somewhat surprising. Despite the early onset of snow and cold this year and the poor seed and cone crop in the northeast, the number of species seen was almost half the total species seen this year within North Bay's count circle.

The East Ferris results from the four field surveyors, Connie and me, as well as Dick Tafel and Renee Levesque who have a route that takes in Trout Lake in East Ferris are: one Red-necked Grebe; 13 Bald Eagles, 12 at the landfill site (one seen above); 3 Rock Pigeons; 3 Mourning Doves; 8 Hairy Woodpeckers; one Downy Woodpecker; one Pileated Woodpecker; 16 Blue Jays; 90 Common Ravens; 7 American Crows; 147 Black-capped Chickadees; one Red-breasted Nuthatch; 3 White-breasted Nuthatches; one Brown Creeper; 52 European Starlings; one Common Grackle; and 14 Pine Grosbeaks.

That totals 17 species and 362 individuals. A Red-necked Grebe spotted on Trout Lake off Centennial Crescent was the first seen during a Christmas Bird Count since 1994 and enabled us to add yet another species to our CBC count; the number of Bald Eagles seen at the landfill site was significant and enabled us to tie the record number of Bald Eagles seen during a CBC; and the number of Common Ravens and European Starlings seen at the landfill site greatly added to the overall CBC individual numbers.

Burk's Falls Christmas Bird Count

By Martin Parker, compiler

The 42nd Burk's Falls CBC was held on Wednesday, December 19. The count is in the eastern section of the District of Parry Sound and includes the villages of Burk's Falls, Magnetawan and the southern edge of Sundridge. The 19 field participants and 3 feeder watchers observed a total of 36 species and 2,364 individuals. The ten-year average is 34.5 species. So a good count this year for Burk's Falls!



Common Redpoll, Stephen O'Donnell

Highlights: 2 Song Sparrows - at a feeder south of Sundridge - first time ever on count; 50 Wild Turkeys - a new high (previous was 19 in 2016); 11 Bald Eagles - a new high (previous was 7 on two different counts); 352 Rock Pigeons - a new high; 2 Barred Owls - ties record high; 1 Red-bellied Woodpecker - second time on count (first seen on last year's count); 49 White-breasted Nuthatches - new high (previous was 40 in 2012); and 40 Downy Woodpeckers – new high.

Winter Finches: Low numbers this year as a result of the low cone crop, but observers still managed to see 57 Pine Grosbeaks; 1 Red Crossbill (photo below); 20 Common Redpolls (photo above); 1 Pine Siskin; and 26 American Goldfinch. However, we did count 93 Evening Grosbeaks, the highest since 2009 and absent during the previous two years.



Red Crossbill, Stephen O'Donnell

Lows: 109 Blue Jays - decade average is 318

Other Results: 2 Trumpeter Swans; 2 Mallards; 3 Common Goldeneye; 4 Ruffed Grouse; 1 Rough-legged Hawk; 33 Mourning Doves; 67 Hairy Woodpeckers; 6 Pileated Woodpeckers; 3 Canada Jays; 7 American Crows; 208 Common Ravens; 1026 Black-capped Chickadees; 88 Red-breasted Nuthatches; 4 Brown Creepers; 7 Golden-crowned Kinglets; 69 European Starlings; 3 American Tree Sparrows; 2 White-throated Sparrows; 8 Dark-eyed Juncos; and 1 Common Grackle.

Turtle temperature matters in many ways

Text, paintings of Midland Painted Turtles and Snapping Turtles, and the photo of a Snapping Turtle by Paul Smylie

Editor's Note: This is part 2 of Paul's article on turtles. Part 1, on why turtles bask, appeared in the December 2018 issue.

The association of turtles with temperature doesn't end at basking. Activity levels, hibernation and even the sex of a turtle are inextricably linked to temperature.

Soon after Labour Day, when the sidewalks are rolled up for the season, the ponds in our area start to cool. Midland Painted Turtles stop actively foraging once the temperature drops to about 15 degrees Celsius. By then, much of what a turtle feeds on is starting to get a little scarce anyway.



Like many other species that experience below freezing temperatures for a good chunk of the calendar year, turtles in these parts go into hibernation. To do this, they typically burrow into the mud in water that is one to two metres deep. They don't want to go too deep because conditions may become too anoxic (lacking oxygen) during the winter, but they need to be deep enough to allow for variation in depth in case, for example, a beaver dam breaks and the water level drops in the pond.

THE WOODLAND OBSERVER

A few years back, some family members and I were wandering around a pond at the back of our family farm in Callander. I spent many days of my childhood wandering around what was once quite a large pond, looking for all manner of slithery and creepy things. Now, as we walked around it, the pond had been drastically lowered – and it just didn't seem natural because the pond had been of relatively stable size and depth for close to 50 years. Most unfortunately, we came across one medium-sized and four very large Snapping Turtles. All had succumbed to some sort of trauma. None of the animals was dismembered and there were no bullet holes that I could see. My thought was that someone or something blew the beaver dam while these animals were hibernating. If this were the case, it exposed the turtles to freezing temperatures and they froze to death as the water level declined. The largest turtles had a shell length of 14 to 15 inches (36 to 38 cm), indicating that these were very old turtles, maybe in the 50 to 60 year range, if not older.



When a pond is covered in ice, there is not much chance of the oxygen levels going anywhere but down. Luckily, as water cools, it can dissolve more oxygen. Still, conditions can become anoxic on the bottom of a pond in winter because metabolic processes in a pond don't completely come to a halt.

Like us, turtles have lungs and that is how they acquire the majority of their oxygen. Fortunately, like amphibians, they can exchange gases across the more vascularized parts of their

THE WOODLAND OBSERVER

skin. If you've handled a turtle recently, you can't but wonder what part of the body this might be. After all, turtles are rather dry and scaly. Well, they do have one rather highly vascularized part of their body, one that you probably didn't have a real close look at – their cloaca or 'butt'. That's right, turtles breathe through their butts!! Now, I'm willing to bet if there is anything that you will remember from reading this article, it's that turtles can breathe with their butts!

As the sun's rays strike a more vertical angle in the spring and the pond ice starts to recede, the butt-breathing is put aside for the more efficient lungs to obtain oxygen. But even at those low temperatures, typically averaging 6 degrees Celsius during hibernation, turtles have had to use respiration pathways that are akin to a sprinter running the 100 metre dash. They essentially use an anaerobic pathway of metabolism which leads to lactic acid build-up in their tissues. Interestingly, to combat the toxicity of the acid, the shell will decalcify and buffer the acid, similar to how lakes in a limestone basin are able to buffer the effects of acid rain without the pH decreasing. (Another function of basking, especially in very early spring, is to help eliminate the muscles of lactic acid so the turtles can get down to their swampy activities.)

Curiously, turtles don't have gender specific chromosomes that will determine whether an individual will be male or female. As in many reptiles, including most turtle species, crocodilians and lizards, some teleost (ray-finned) fish, and even some birds, sex is determined by the temperature at which the eggs are incubated. This is called Temperature-Dependent Sex Determination (TSD). This phenomenon occurs in Midland Painted Turtles.



In Ontario, at incubation temperatures above 28 degrees Celsius and below 20 degrees Celsius, female turtles are hatched, while eggs incubated between 20 and 28 degrees Celsius produce only male turtles. In more Southern climates, there is only a high temperature cut-off (28 degrees), above which all females are produced, and below which all males are hatched. The reason there is a second lower temperature trigger in the North, below which females are produced, is because nests in Northern Ontario rarely reach a consistent temperature of 28 degrees. Using the strategy of only the high temperature cut-off in the North could potentially result in mostly males being produced. This Northern adaptation prevents an all-male population, good for obvious reasons. The molecular pathways that lead to the production of either males or females as a result of incubation temperature have yet to be fully elucidated.

Many of you have likely been fascinated to find a Loonie-sized turtle hatchling in early spring. Since turtles typically lay their eggs from early June through to July in this latitude, it begs the question of why such a small turtle is roaming around soon after the cloak of winter has been tossed into the closet and the nesting season has not yet begun. It would imply that the small

THE WOODLAND OBSERVER

turtle you have found was from an egg that was laid the previous year and has just come out of the nest now.

Turtle eggs typically take about two and a half months to incubate, depending on the temperature. If it is a cold spring and nesting happens later than usual, then the young may not have a chance to emerge from the nest while it is still warm enough to get a grip on life. Another strategy is to while away the winter in the nest, even if it has already extricated itself from its calcified confines.

Turtles dig their nests with their hind legs, and unless one of the parents was a Great Dane, that hole will not be very deep. Suffice it to say, the nest will be well above the winter frost line, meaning that the turtlings will have to tolerate temperatures well below freezing before they make their grand debut in the spring.

One study suggests the Painted Turtle young can survive temperatures as low as minus 9 degrees Celsius. The standard thinking for some time now is that the hatchlings produce antifreeze to prevent the formation of ice crystals in their tissues. Ice crystals are damaging and lethal to the organism. It was thought that glucose, glycerol and amino acids are produced as cryoprotectants, found to increase when Painted Turtle hatchlings are kept at freezing temperatures. However, it is unclear whether these chemicals that act as an antifreeze are increased in the tissues as an adaptation to prevent ice damage, or are a result of metabolic functions at temperatures below zero. Although this research has been on-going since at least the 1980s, there still doesn't appear to be a definitive answer on how the hatchlings resist freezing while they overwinter in the nest.



With the colder than normal temperatures we had this past fall, it is safe to say that our shelled friends hunkered down early in the mud at the bottom of one of the ponds in Laurier Woods. Come spring, they will once again be up basking on the logs, something that delights us all and, as you know from the basking behaviour described in my article in December's issue, is important for the health of turtle populations. The installation of the logs may just help sustain Painted Turtles in one of their prime habitats, Laurier Woods.

Squirrelly behaviour

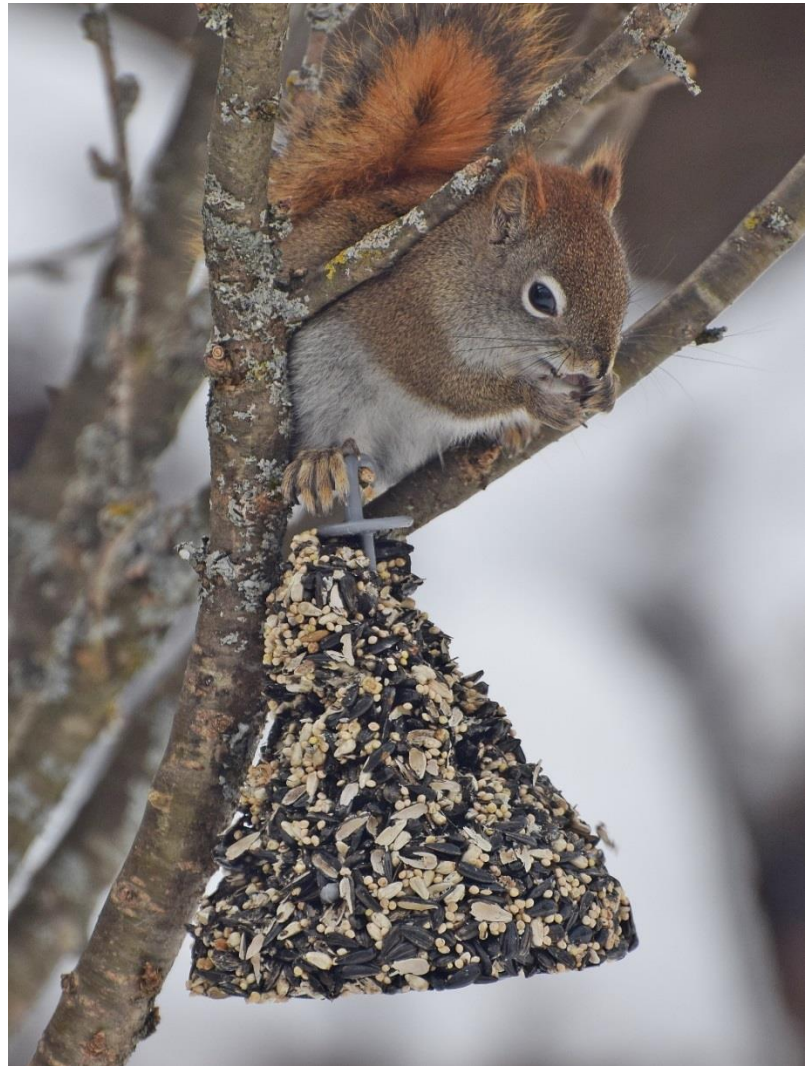
By Renee Levesque; photos by Renee Levesque and Steve Pitt

*Editor's Note: We have a day for almost everything under the sun, including a day in which we can appreciate squirrels, even some of us who attempt to prevent squirrels from raiding our bird feeders. According to my Nature Canada calendar, **January 21 is Squirrel Appreciation Day.***

Over the years, I have watched the Red Squirrels in my yard attempt to get seed from the bird feeders and have been amused by their antics, impressed by their ability to figure out ways and means to get the seed and dismayed, but not upset, when they finally succeed.

But I was not prepared for the lengths to which a squirrel would go to get seeds from the seed bells that I got last Christmas for my backyard birds. At first I thought it would be a matter of minutes before the squirrels got to the first one I hung by its hook low in our Pea Tree. But much to my surprise, none of the three squirrels that inhabit my yard seemed the least interested and so the bell was left for the woodpeckers and all the other winter birds – for about three weeks, that is.

Then one day, I saw a squirrel sitting in the tree eating the bell seeds. (photo above) I thought that would be the end of the bell, that the squirrel would have it eaten in no time, especially when eventually the other two squirrels also came to savour it. But no, they seemed to share it nicely with the birds and although the bell did not last as long as it did before the squirrels discovered it, it still stayed on the tree for a good period of time until little was left of it and it fell to the ground.

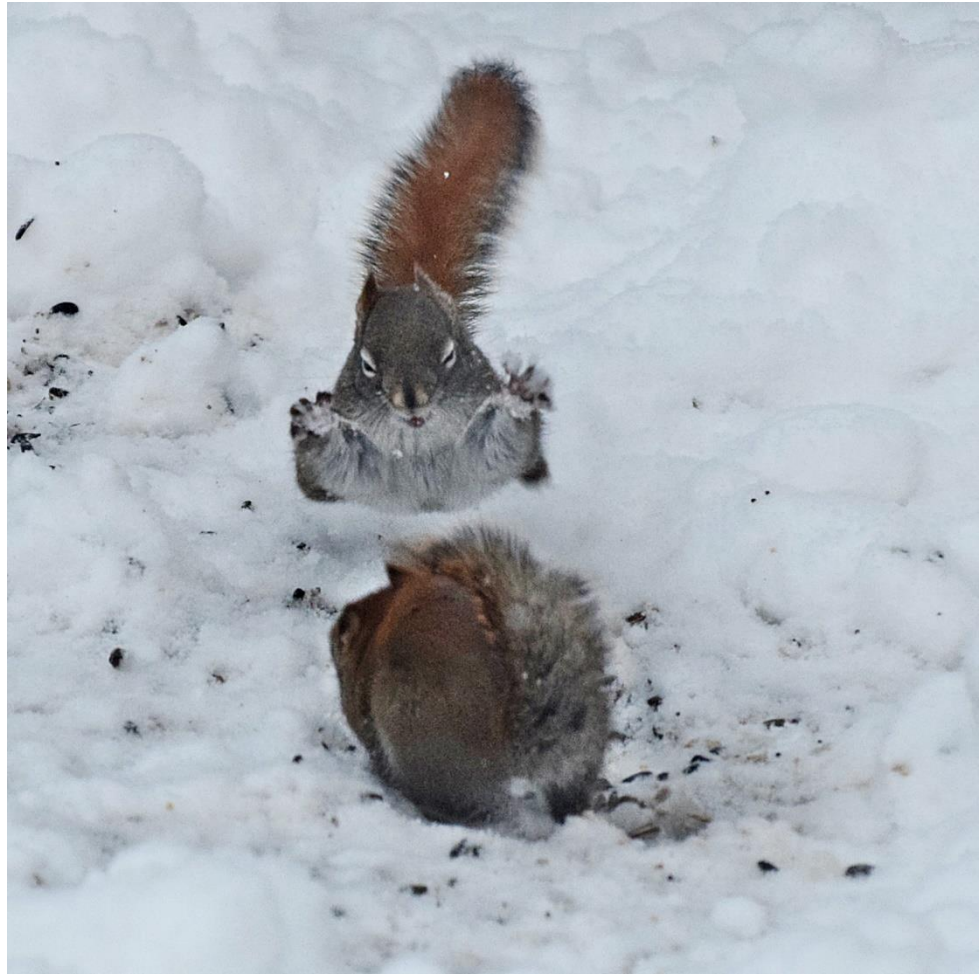


THE WOODLAND OBSERVER

The squirrels seemed to prefer eating what was left of the bell on the ground, perhaps because they did not have to perform acrobatic feats to get at it from the tree. And from there, an idea must have taken hold in the mind of one of the squirrels, something along the lines of: *If I eat the seeds from one side of the bell, it will become imbalanced and fall more quickly from the tree.* And so for a couple of weeks this became the norm, especially with the dominant squirrel who kept the other two squirrels at bay, sometimes aggressively as you can see in the photo at right.

This went on for a while, but it wasn't the end of the squirrel's thinking evolution. One morning, I looked out to see the bell was no longer where it had fallen late in

the day before. I thought perhaps an animal had come in the night and taken it. But I soon found out who the culprit was – the squirrel itself! The next time a bell fell, I watched the squirrel push the bell with its nose towards its nearby hole. (photo below)



it had to take multiple rests before it finally succeeded in pushing the bell into its burrow.

But then when the snow began to thaw and freeze and a hard-crust surface formed, the squirrel figured out that instead of pushing the bell and resting every

THE WOODLAND OBSERVER

few seconds, it could just nudge it down an icy incline towards the hole, saving itself much energy. I was quite impressed.

It eventually came to pass that waiting for the bell to fall from the tree took too long and so the squirrel put on its thinking cap once again and came up with another plan: *If I chew through the hook that is used to hang the bell from the tree, it will fall that much sooner.* And so that's what it did on at least three occasions. I think it stopped doing this when it discovered a whole bell was far too heavy to nudge to its burrow even with an icy incline. And maybe all these bells, a good dozen in total, were beginning to clutter up its passageways! For whatever reason, it stopped chewing through the hook and stopped taking the bells to its burrow.

I wasn't the only one to enjoy a squirrel's attempt to get at food put out for the birds. Steve Pitt reported last winter that a squirrel in his yard *"was determined to make off with the remnants of a suet ball. First he tried just making a run for it. When that didn't work, he climbed high on the pole to get a little more momentum. You can see how well that worked!"* (Steve's photos below.)



THE WOODLAND OBSERVER

Book Review

Fraser's Penguins, Warning Signs from Antarctica
(Canadian title)

Fraser's Penguins, A Journey to the Future in Antarctica
(U.S. title)

By Fen Montaigne

St. Martin's Griffin; Reprint edition (Jan. 3 2012)

320 pages, paperback edition

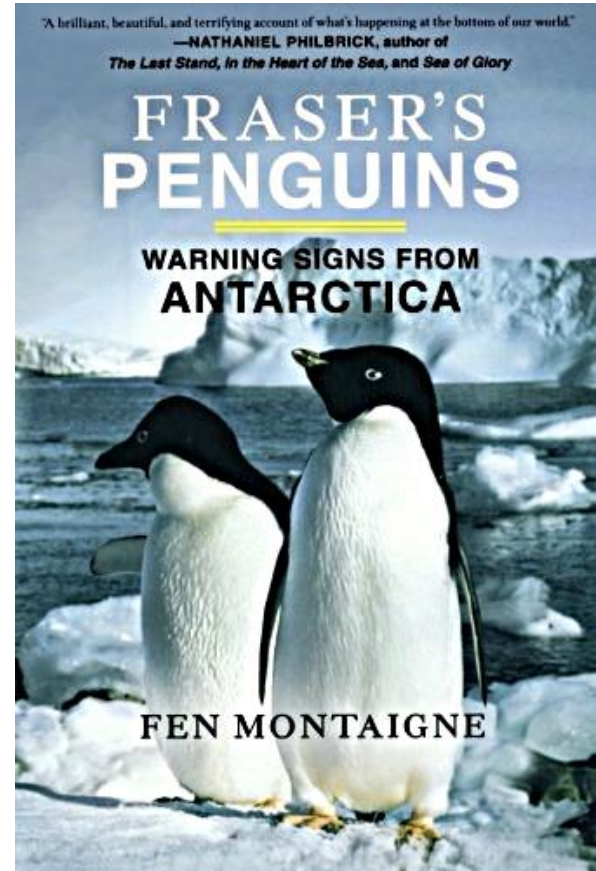
By Chris Connors

This is a book that manages to blend penguin biology, Antarctica ecology, history, paleontology, and scientific research by teams of dedicated and perhaps eccentric people into a wonderful tale that keeps you turning the pages.

It is Fen Montaigne's account of the work of Bill Fraser, scientist and penguin researcher, but it is also based on the author's first-hand knowledge of the Antarctica. He blends his personal narrative with the work of Fraser into a moving portrait of a vast continent most of us will never see. His personal recollections of the scenery make you wish you could see it for yourself. *"I stood a few dozen feet from the beaches and gazed at the sea—frigid, remarkably clear, its surface broken by scores of icebergs—stretching before me. To my left, the peninsular mountain range—sheer black rock faces and vast fields of ice streaming to the Southern Ocean—dominated the eastern horizon. To my right, the great white dome of the Marr Ice Piedmont sloped gradually to the west."*

Like many people who go to Antarctica, Montaigne *"felt incapable of grasping the scale and beauty of the place; to take it all in with a single glance, capture it in a photograph, or render it faithfully in words."* Yet over the course of the book, he manages to transport us there, to feel the stark beauty, to hear the raucous cries of the penguins and to smell the rank swamps of guano, with trickles of red waste flowing out of the nesting areas.

The book bounces back and forth between the historical Antarctica and today's Antarctica to weave past lessons learned into current and future lessons. We hear tales and read journal entries of explorers like Cook, Shackleton and Palmer, a seal hunter who in five years from 1819 wiped out half a million fur seals on the South Shetland Island, a population that still hasn't recovered. We also hear of a Polynesian named Ui-te-Rangiora who in 650 AD claimed to have found a frozen ocean, thereby beating the more well-known names to the area by more than a thousand years.



THE WOODLAND OBSERVER



Muench Workshops Antarctica Expeditions

When Fraser skied to Palmer Station in 1975 before the heavy ice had broken up, he described the leopard seals that tracked his movements under the ice, their sounds, the panoramic views of the saw-toothed line of the peninsular range extending south to the horizon, the snow-covered islands just offshore, the sense of isolation and beauty that leaves viewers at a loss for words.

Then again despite this beauty, some of the experiences of long-term living over the winter at the station made even the young Fraser say, *“I hope never to see this *expletive* place again”*. The words of Apsley-Cherry Garrard, one of the young Englishmen who with two other men from Scott’s expedition completed a 19-day trip in winter darkness with temperatures of -77 degrees Fahrenheit (- 60.6 degrees Celsius) and hurricane-force winds are fitting: *“Polar exploration is at once the cleanest and most isolated way of having a bad time.”*

Fraser and his team, along with other equally dedicated teams, have assembled one of the most detailed portraits of a warming world and how the changes in seabird life—most notably the Adélie penguin—are reacting to their changing environment. The changes are rapid. The northwestern Antarctic Peninsula has heated up faster than almost any other place on earth, with winter temperatures rising by about 5 degrees Celsius in the past six decades, and annual temperatures increasing by about 3 degrees Celsius since 1951 – five times the global average.

The main feature of the book is the Adélie Penguins. You come to admire them as much as any human explorer. They’re one of the toughest, most resilient and pugnacious penguins, fighting against huge environmental odds and travelling long distances over ice and rocks to return to

THE WOODLAND OBSERVER

their nest even when they've received mortal injuries from Leopard Seals that would have killed another bird in short order.

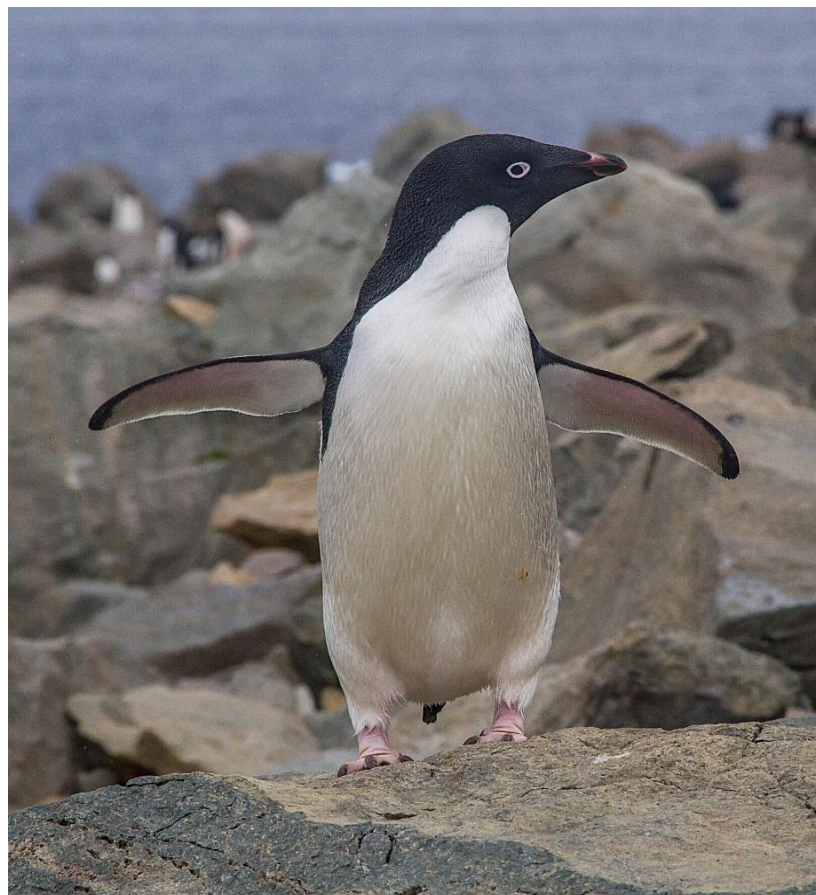
At the beginning of the book, Montaigne watches an Adélie Penguin chick make its way out into the ocean until it is a tiny dot and he loses sight of it. *"I wondered how this solitary, untutored, seven-pound seabird would learn to feed itself and survive. My fears were not unfounded, for in the northwestern Antarctic Peninsula this was precisely the problem: The Adélie chicks were going to sea, but they weren't coming back."*

Despite large declines in penguin colonies on the peninsula, Adélies are not going extinct in the near future. There are still 2.5 million pairs of them and new colonies are still being found. For some colonies, ice loss even aids them, depending upon geographic location, and some of the oldest colonies are still doing well. They go back millennia and are consulted as proxies for climate records, similar to the way ice cores, sediment samples and trees rings are consulted.

See: <https://eos.org/articles/penguin-poop-keeps-a-record-of-antarctic-glaciation>.

Fraser considers the Adélie Penguins the canaries in the coalmine. As colony after colony disappears due to many interacting factors (warming, loss of ice, which then brings fishing pressure, and increased predation by Brown Skuas—which are also heading for trouble) he considers what it will be like for the rest of the world – at least Adélie penguins live in an environment in which man has scarcely impinged so have a better chance as the Antarctic warms. *"But that's not the case for the rest of the planet, where we have already taken species in some ecosystems to the verge of extinction."*

"There is no question that the earth is warming and that the poles are very sensitive barometers of that warming...To me this is foretelling the future across major parts of the planet. What we're looking at here is an entire ecosystem that is changing, and it's not changing in hundreds of years...It's changing in thirty to fifty years—it's changed so quickly that it has encompassed the research lives of a few people who have spent a lifetime here...I do think that here we're looking at the future of large parts of the globe in terms of how ecosystems are going to change. So all those places we cherish are going to change. Some may change in positive ways. But I think the majority of them will be catastrophic changes unless we do something."



Franco Mariotti

The ancient art of falconry

Luke Thomson, Thomson Bird Control, spoke to Nipissing Naturalists Club in November about his falconry service, a service that can be used to disperse or deter nuisance birds. Luke brought with him two of his raptors, an adult male Gyr/Peregrine Falcon named Caspian, and a young Red-tailed Hawk that Luke is in the process of training. Seeing both these raptors up close proved to be an exciting part of the presentation. Many members took photos with their cameras and cell phones as Luke brought his raptors around to meet us. At right and below is a collage of a few of these photos taken by C&C Photography and Kaye Edmonds.



Emails to the editor

Frogs thawing and mallards basking

Kevan Cowcill read with interest Paul Smylie's article on frogs, "A frog he would a-wooing go" in the October 2018 issue. Kevan sent me the following information on the freezing and thawing of a Wood Frog that he learned from attending a lecture by Dr. Ken Storey, world famous cryobiologist.

(<https://carleton.ca/biology/people/ken-storey/>)

Firstly, how does a Wood Frog thaw out from being frozen and not lose its skin, eyes and limbs? When your frozen turkey thaws, it thaws from the outside to the inside. If that were the case with the Wood Frog, its skin, eyes and limbs would thaw first, but its heart would still be frozen, meaning no life-giving fluids could circulate to the skin, eyes and limbs, resulting in these parts rotting away.

Secondly, when the Wood Frog wants to produce the glycoproteins (sugars) that keep it from freezing to death, it does not produce them until it actually begins to freeze. At that point, at the very last minute, the liver kicks into overdrive and floods the frog with protective sugars. Sometimes when the temperature drops too quickly, the frog won't have produced enough sugars to survive and it will freeze to death. So, why does the frog wait until the last minute? Doesn't it make more sense for it to produce the sugars ahead of time, the way bears and other mammals fatten up for the winter over the course of a few months?

The answer to this second question is related to the first question.



Jason King, Ontario Nature

THE WOODLAND OBSERVER

Because the frog waits until the last minute, the sugar concentration doesn't spread evenly through the body before it freezes solid. The interior of the body (liver, heart) has the highest sugar concentration, the exterior the lowest. This means the interior of the body has a lower freezing point than the exterior. In other words, the more sugar in the solution, the lower the freezing point.

For example, the interior with the high sugar concentration won't freeze till about minus 6 to minus 8 degrees Celsius. The exterior with the less sugar will freeze at minus 1 to minus 3. As temperatures drop, the exterior freezes first, then the interior, as is normal. Once the exterior freezes, this means no more sugars reach it, so the remaining sugars that are still being produced by the liver and the pumping heart are concentrating internally instead of going all through the frog.

And that is the reason the frog thaws from the inside out, not the outside in like your frozen turkey. When the temperature rises, say from minus 15 to minus 7, that is warm enough for the interior (heart, liver) to thaw out while the exterior won't thaw out until the temperature rises to minus 3 or so. Thus, when it is finally warm enough for the exterior to thaw, the interior has already thawed and the heart is already working and pumping fluids to all the exterior parts as they thaw.

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And there was a photo email response to Paul Smylie's article on turtles, "Sittin' in the morning sun..." about basking turtles that appeared in the December 2018 issue. Kaye Edmonds' photo below lets us know that Mallards also like to "bask" on the logs in Laurier Woods, although not necessarily in the morning sun!



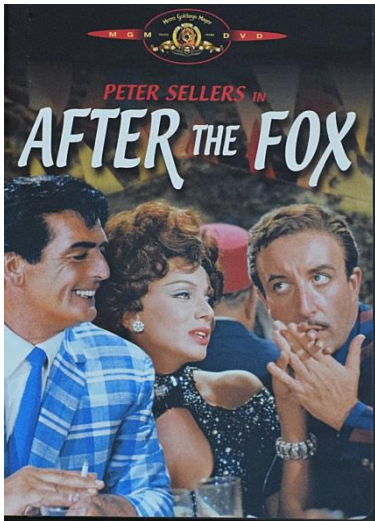
AGM, pot luck and silent auction

Photos by Kaye Edmonds and Renee Levesque

The New Year starts off for Nipissing Naturalists Club with our **Annual General Meeting**, held this year on **January 8 at our new Club location, 175 Lakeshore Drive starting at 6:00 p.m.** As always, there will be a potluck dinner prior to the meeting and a silent auction after the meeting.



For the pot luck, please bring a prepared dish or food of your choice. Somehow it all works out as potlucks tend to and we are not faced with just desserts or just rolls. Also bring your own plate, utensils and cup.



For the auction, you can donate whatever you wish. It does not have to be nature-related. It can be anything - well within reason and appropriate – like the Blu-ray DVD of Peter Sellers in *After the Fox*; Dan Needles’ entertaining book of rural life, *True Confessions From the Ninth Concession*; Kaye Edmond’s handmade tic-tac-toe; and a door draft. (Three of these items are pictured on this page.)

Donations are to be brought to the meeting room the night of the AGM. Volunteers somehow manage to get the donations displayed for all to see, so you can bid on your favourite item or items to help raise money for the Club.

The AGM is always a fun time and it is good to hear what we have done during the year. As time passes, we often forget the many things we did, the outings we had and the events in which we took part..



THE WOODLAND OBSERVER



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Bird Wing

Dick Tafel, Chairman: rtafel@sympatico.ca. 705-472-7907

Gary Sturge, Treasurer; Renee Levesque, Bird Wing Scribe.

Monthly Bird Wing and Bird Bash reports are sent to members by email and posted on Nipissing Naturalists Club's website: <https://www.nipnats.com/bird-wing/bird-wing-meetings-outings/>, and <https://www.nipnats.com/bird-wing/bird-bash-reports/>.

The Woodland Observer is published electronically September to June and sent to members by email and posted in date order on Nipissing Naturalists Club's website: <https://www.nipnats.com/newsletters/>.

Editor: Renee Levesque: rlevesque1948@gmail.com.

Contributors this issue: Lori Anderson, Chris Connors, Kevan Cowcill, Kaye Edmonds, Christine Giroux, Renee Levesque, John Levesque, Franco Mariotti, Eric Matson, Grant McKercher, Buddy Myles, Stephen O'Donnell, Martin Parker, Fred Pinto, Steve Pitt, Paul Smylie and Gary Sturge. Thanks to Ontario Nature for the use of the photograph of the Wood Frog by Jason King, and thanks to Muench Workshops Antarctica Expedition for the photo taken in the Antarctica.

Membership Fees

Annual Nipissing Naturalists Club membership fees are: single \$20.00; family \$30.00. There is an **additional annual \$5.00 membership fee for Bird Wing** which meets the fourth Tuesday of every month in the auditorium of the North Bay Public Library from 6:30 to 9:00 p.m. **This membership fee is paid directly to Bird Wing.**

Please note: While the library is undergoing renovations this year, Bird Wing meetings from November through to April, with the exception of January, will be held at Laporte's Nursery, 1054 Lakeshore Drive, North Bay. January's meeting will take place in the Board Room of North Bay Police Service on Princess Street.



Nipissing Naturalists Club is affiliated with Ontario Nature: <http://www.ontarionature.org/>.