



# turtle tracks

Friends of Misery Bay  
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## In this issue...

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## Updates from the Chair for Friends of Misery Bay

***"Every day at Misery Bay Provincial Park is a good day. And if you get to share that day with a partner, friends, children, grandchildren or any visitor to our park, it becomes an even better day!"***

Hi Fellow Friends: You have all heard me use that phrase or a similar one many times before – it comes from deep within me. So, a warm welcome to our *Turtle Tracks* newsletter and my **Chair Update** for the Friends of Misery Bay (FOMB).

First off though: A big hug and thanks to Marcel Bénéteau, our newsletter editor. Finding articles, writing articles and chasing down people like myself to get them in on time is a big challenge. I never have any difficulty in writing this article – the hard part for me is keeping it reasonably short (the same difficulty I have when speaking to people – ask my wife Rose).



The picture below shows the view from Our Friends Shelter west onto Misery Bay beach, taken on June 10. Note the waterline: it is now 105 ft. from the base of the shelter; if you recall, a mere 2 years ago, the waves were lapping right up against it. The Lake Huron water level has dropped a measured two and a half feet in less than two years! Makes you wonder – where did all that water go?



The good news is that we are getting our Coastal Trail back, albeit, it is now a rocky one and not the sand covered trail we had before. And more good news – our flat limestone shelves along the coast are coming back. We can once again hike right along them to the waters edge, a special feature of Misery Bay Provincial Park. I have also spoken with two different couples who have hiked across the bay to the west side – one with boots, the other with rolled up pants. This is certainly not recommended and we suggest that you wait for the water level to drop a bit more.



Talking about hiking trails gets me real charged up about our trails and the improvements we are continuously making to them, thanks to our trails master, Megan Bonenfant, and our intrepid group of volunteers. Last year we replaced all the sign posts at each intersection on the east side of the park. These sign posts were valued at \$250 each and were all sponsored by interested parties. The acknowledgement plaques are on most of them and the rest will be installed shortly. We also replaced all the plastic directional arrows with colour-coded wooden blocks (red and yellow).

***Being at Misery Bay Provincial Park for me is about anticipation and is always very rewarding. It continues this year- so follow along with me:***

**Visitors Centre:** Ontario Parks has lifted all Covid restrictions and our Centre will be back to what it was two full years ago. Weekend staffing started on May 20 and, starting June 27 we will go to 7 days a week. Our Gift Centre will be open with limited items available.

**Summer Staff:** Along with our awesomely loyal FOMB volunteers who look after the Centre on weekends, we have a super group of three young women who will be staffing our Centre on weekdays. We are extremely pleased to have Rachel Auckland of Gore Bay back with us again this year (congrats to Rachel who is getting married this summer). Sharing duties with Rachel is Cheyenne Barnes, also from Gore Bay; Cheyenne is in the zoology program at Laurentian University and is interested in all things nature. Last but not least is Charlene Wagar (Charly) who is

This year we will be replacing all the intersection posts (6) on the west side, along with wooden block directional arrows painted blue.

**These new posts are now available for sponsorship by interested parties.**

Also this season, we are hoping to replace the boardwalk on the Coastal Alvar Trail (connects to Mac's Bay trail). It has badly deteriorated and is very slippery. We are awaiting go ahead from Ontario Parks and they are awaiting the required Environmental Assessment before we can commence work on that. We will keep you posted on work days so you can volunteer if you wish.

staying in Silverwater. Charly is in the Justice Studies program at the University of Guelph-Humber.

**Guided Hikes:** Rachel, Charly and Cheyenne will be leading twice weekly guided hikes from our Center again on the east side and will be planning at least two guided hikes on the west side this summer. We will notify you by email, on our Facebook page and signs will be posted at Centre. Just a reminder: some of these hikes will have limited numbers and a perk of our membership is that members get first choice. You will be able to sign up by email.

**Markets:** FOMB is making a major effort at increasing our membership. One of our methods is to be at the Kagawong Farmers' Market every Wednesday. Rachel and Cheyenne started there on June 15 and you will see our staff there every Wednesday

(this week was off to a great start). They will have membership forms available, promo items for sale, including our new baseball style caps with our logo. If you would like to join them as a volunteer to promote FOMB and MBPP please email us at [friendsofmiserybay@gmail.com](mailto:friendsofmiserybay@gmail.com)

**Volunteers:** FOMB would not exist of course without our volunteers. They staff our Centre on weekends for 3

hour shifts, meet and greet thousands of visitors and share information with them. You can join us and we will train you. The only requirement being that you like people. We would love to have you join us. Email us at [friendsofmiserybay@gmail.com](mailto:friendsofmiserybay@gmail.com)

**Membership:** We would love to have you join our team of volunteers- and we need you. Membership gets you working at our Visitor Centre and offers the following:

- preference to our guided hikes
- entry into a draw for one of three FOMB t-shirts
  - a free FOMB sticker
  - voting privileges at our AGM
- access to joining our board and becoming directly involved in helping
  - run Misery Bay Provincial Park
  - our *Turtle Tracks* newsletter (twice yearly)

*But forget all the perks- for \$20/year you get to be involved with one of the most beautiful and special places in Ontario. MBPP has the highest protection rating in the Ontario parks system, classed as a Nature Reserve Park because it hosts and protects a huge variety of special and endangered flora and fauna. It allows only hiking as an activity (leave nothing behind but your footprints and take nothing but memories and pictures). Our Ontario Parks system is most impressive and, to me, being part of that system is a huge intangible bonus for all of our members. Nuff said!*

For more information on Friends of Misery Bay and our activities- please check out our website at [www.friendsofmisery.ca](http://www.friendsofmisery.ca). It is kept up to date by our webmaster- Dave Clark and has info on joining our membership, upcoming activities/ projects etc.. Our social media platforms FB and Instagram are updated on an almost daily basis by our social media hosts Jane Hohenadel and Dagmar Werkmeister along with our summer staff. These will keep you informed on all of our activities.

Our Annual General Meeting is coming up on June 25, 2022 at 10:00 a.m. at our Visitor Centre. Watch your email box for info on that. Please join us- it is open to everyone and is our first in person members meeting in 2 years.

Cheers

John Diebolt

A Friend of Misery Bay

*\*\* if you have any thoughts/suggestions please email us at [friendsofmiserybay@gmail.ca](mailto:friendsofmiserybay@gmail.ca)*



# Land that Floods – Vernal Pools

by Will Kershaw, Ontario Parks, Sudbury



Blue-flag Iris (*Iris versicolor*) at edge of vernal pool, Misery Bay Inland Alvar Trail

If you've walked the trails in Misery Bay Provincial Park as snow melts in the spring or in the fall when it rains for several days you've seen water pool in places on the bedrock that you know will be much reduced or completely dry in August. An example of a small pool that forms in the spring and fall each year occurs where the Friends of Misery Bay maintain the short boardwalk just east of Our Friends Shelter, on the open bedrock at the edge of the forest on your way to the beach.

When water can't seep into cracks in the bedrock fast enough it accumulates at the surface and flows across the land and will form small pools in depressions in the bedrock. In this way, pools form every year throughout the park. Many plants and animals rely on these

seasonally flooded pools as a source of water and for food in the spring and early summer months. Water slowly evaporates from these pools over the summer; most of these pools dry up by early August.

We call these small pools on the bedrock 'vernal' meaning spring, or 'ephemeral' meaning temporary pools. Larger vernal pools have specific ecological functions each spring and summer that are different from the small pools that dry up quickly.

Larger vernal pools are important for seldom seen amphibians like Spotted and Blue-spotted Salamanders and Wood Frogs. These small amphibians are mostly nocturnal.



Spotted Salamander (*Ambystoma maculatum*)



Blue-Spotted Salamander (*Ambystoma laterale*)

Adults of these salamander species and the Wood Frog live most of the year in the surrounding forest burrowed in the soil or leaf litter, the terrestrial part of their necessary seasonal habitat.



Wood Frog (*Rana sylvatica*)

In the spring, adults of these amphibians migrate from the adjacent forest to find vernal pools to breed and lay eggs. Their eggs develop in the still water and larvae 'metamorphose' or transform to leave the pool as adults before the pool dries up. Because these pools dry out, they harbour fewer predators of amphibians that spend the early stages of life in a vernal pool. Larger predators like the Green Frog and American Bullfrog tadpoles and fish cannot survive in vernal pools because they dry up or become depleted of oxygen each summer.



Fairy Shrimp (*Branchinecta lindahli*)

Fairy Shrimp, a kind of freshwater crustacean are found in some vernal pools. They are abundant and are food for the developing salamanders and



Wood Frog. Adult Fairy Shrimp lay their eggs before the pool dries up. The eggs are very hardy and are able to survive as the water in the vernal pool dries up. The eggs overwinter in a dry state to hatch and begin the cycle again once the pool receives water the next spring.

I've also seen small seeps from some vernal pools in the spring that have shallow flow into the shore of Misery Bay. The water in these seeps contains a variety of life forms. The overflowing seeps from one vernal pool that is less than 20 metres (60 feet) from the east shore of Misery Bay carry some contents from the pool into the bay. The seeping water may be darker than the bay water as it contains nutrients

and small to microscopic life. Runoff from a vernal pool enriches the shoreline. Shorebirds like migrating Lesser Yellow Legs, Killdeer, gulls and fish in the bay feed in these enriched shoreline areas. We also know that turtles visit vernal pools to feed on insects and invertebrates like Fairy Shrimp and salamanders in vernal pools before they dry up in the summer.

Adult amphibians return to the same pool in the spring, year after year to mate and lay eggs – vernal pools are very important aquatic habitat and vital to certain species.

What an amazing diversity of life exists in these small vernal pools.



Some vernal pools retain moisture throughout the summer, supporting mosses, sedges and even orchids like Hooded Ladies'-tresses (*Spiranthes romanzoffiana*).

# Meat Eating Plants of Misery Bay

By Marcel Bénéteau

Carnivorous plants make up a fascinating subset of Misery Bay's vast and diverse flora. Evolution has provided them with special tricks that enable them to thrive in environments that lack the nutrients most plants need to grow. We all know that plants produce the energy they need through photosynthesis. Apart from sunlight, water and carbon dioxide, certain nutrients from the soil are necessary for this process. Wetlands such as bogs, swamps and some shorelines are deficient in some of these nutrients, particularly nitrogen. Sundews, Pitcher Plants and Bladderworts have evolved to acquire nitrogen through eating animals – especially insects – which they capture in various ways. Bladderworts were featured in an earlier issue of Turtle Tracks (Spring 2017), so this issue will focus on Sundews and Pitcher Plants.



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There are over 150 species of Sundews throughout the world, and three of them can be found in Misery Bay Provincial Park. Sundews are considered a "flypaper" type of carnivorous plant. One side of their leaves are covered by flexible, glandular hairs that are tipped with a sticky drop of liquid to attract and entrap insects such as ants and mosquitoes. These little beads of "dew" are what give the plants their name. Once stuck, the victim's struggles cause more and more hairs to close in and wrap the leaf in around it. The plant then releases enzymes that digest the unlucky visitor and allows the plant to absorb the nutrients.

Although a close-up of the leaves may look like something out of "Little Shop of Horrors" (see photo above), our plants here in the park are tiny and can easily be missed (and damaged) by someone tramping through the soggy environments where they grow. Round-leaved Sundew (*Drosera rotundifolia*) hugs the ground in a reddish little rosette, and individual leaves are rarely more than half a centimeter across. Several overlapping rosettes can form quite a dense carpet; Fig. 1 shows the remains of a number of unfortunate visitors who landed on this treacherous welcome mat. The plant sends up a wire-like stalk with up to a dozen delicate little white five-



petaled flowers that bloom in succession as the stalk straightens out (Fig. 2 & 3).



**Fig. 1** Round-leaved Sundew leaves



**Fig. 2** Round-leaved Sundew blooming

Round-leaved Sundew is fairly common in wet sunny areas where sphagnum moss grows in Misery Bay and the adjacent Mac's Bay Conservation Area. The next species is restricted to largely inaccessible areas on the west side of Misery Bay: Greater or English Sundew (*Drosera Anglia*) has larger, more elongated and erect leaves



**Fig. 3** Flowers with unopened buds

sometimes described as "spatulate" in form (Fig. 4). The flowers are very similar to those of Round-leaved.



**Fig. 4** Greater or English Sundew leaves

Linear- or Narrow-leaved Sundew (*Drosera linearis*) also grows in fens and bogs, but can also be found along the shoreline in places where cold water seeps out of the ground and trickles over a stony beach. The plants often grow in dense clumps. The





**Fig. 5** Linear-leaved Sundew on beach



**Fig. 7** Linear-leaved Sundew, close-up of flower



**Fig. 6** Close up of leaf with prey

leaves are erect, and as the name indicates, long and narrow (Fig. 5). The leaf curls in along itself lengthwise when it captures its prey, like one of those blow-out New Year's Eve party favours (Fig. 6).

Narrow-leaved Sundew also has the showiest flowers of the group, although you will have to get down pretty close to appreciate their delicate beauty. Fig. 7

shows the orange anthers alternating with the pink-tipped double pistils in the centre of the petals.

The other well-know carnivore at Misery Bay operates on a different, more "passive" principle: death by drowning. Purple Pitcher Plant (*Sarracenia purpurea*) is the only species of Pitcher Plant that occurs in Canada and it is quite easy to find in the park. It prefers open, sunny areas along wet shorelines and the edges of swamps and fens (Fig. 8, next page). The name refers to the highly modified leaves that are shaped like narrow urns, or pitchers. These receptacles readily fill up with rain water. Their insides are lined with stiff downward-pointing spines that ensure that any creature that climbs (or falls) in will not be able to climb back out (Fig. 9). Heat stress, starvation and exhaustion do the rest. The plant's enzymes then digest the remains and absorb nutrients – nitrogen, once again, being the main pay-off.

Although invertebrates such as insects, spiders and slugs are their main food sources, recent studies have shown that small vertebrates such as young salamanders make up a significant portion



of the Pitcher Plant diet. On the other hand, a number of micro-organisms manage to thrive in this enclosed habitat, along with the larvae of some species of midges and mosquitoes that feed on them.



**Fig. 8** Pitcher plant in typical habitat



**Fig. 9** Pitchers – note downward pointing spines

In the spring, the plants send up long slender stalks, each with a single flower up to two inches (5 cm) across. The stems droop so that the flower faces down. The bottom of the flower (now on top) is made



**Fig.10** Drooping flowers



**Fig. 11** Protective shield

up of hard, leathery sepals that protect the plant from heat and the elements (Fig. 10).

The pistil and ovary underneath are like those in a typical flower, but the stigma expands into a large shield that covers the pistil and the pollen-producing anthers (Fig. 11). Pollinators attracted to the sweet-smelling nectar must squeeze in through narrow openings between the sepals and the shield and have ample opportunity to pick up and/or drop off pollen as they make their way in and out.



These structures persist all summer and into the fall; few people actually ever see this amazing flower's petals, which bloom only for a week or two in late spring. These dark red blooms are quite showy and are one of the most amazing wetland sights (Fig. 11).



**Fig. 11** Flowers in full bloom

An extremely rare yellow form of Purple Pitcher Plant sometimes occurs in certain areas of eastern North America (*Sarracenia purpurea* f. *heterophylla*). On Manitoulin, it has been found in some of the south shore bays. Although none have been found at Misery Bay, they are worth looking for, as very little is known about the conditions that produce this variation. The plants lack all traces of red pigmentation in both the flowers and the leaves (Fig. 12 & 13).



**Fig. 12** Purple Pitcher plants, f. *heterophylla*



**Fig. 13** Close-up of flower

Carnivorous plants are part of what makes exploring Misery Bay such a rewarding experience. To many people, these creatures are the stuff of science fiction and old jungle movies, or at least exotic, tropical locales – not something you expect to encounter on a pleasant walk along the shores of Lake Huron!

**References:**

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<https://www.sciencealert.com/grisly-discovery-in-canada-reveals-pitcher-plants-aren-t-just-luring-in-insects>

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# A Great Collaborative Project

By John Diebolt



Brenda Koziol standing beside one of our awesome displays in the Visitor Centre.

The interactive digital displays housed in the Misery Visitor Centre are a special bonus attraction for our visitors. The touch screen displaying the park hotspots, the various monitors showing drone footage and interviews with naturalists and all the other electronic displays at the Centre provide our over 7,000-plus yearly visitors a tantalizing micro-tour of our park in a very short time, giving them the information on the highlights they want to visit. For others, it provides a complete tour of the park without even having to set foot in it (great for rainy days and people with mobility issues).

For our staff and volunteers who run the Centre, these displays provide the answer to almost any questions asked – such as *what trail should I take, how far is this feature, where is the beach, where are the alvars, what are erratics, etc. etc.* (please note that the displays will not answer that most frequently asked question: *where are the washrooms?*)

The involvement of Science North was key to the production of these displays. This came about because of a chance encounter with Franco Mariotti, former staff scientist and biologist at Science North and special

friend of Misery Bay. While looking for a company that could help us design displays for our Center, we discovered that not only did Science North have a very unique and different approach to displays about nature – as is evidenced in their award winning facility in Sudbury – but that they also had a branch that helped small organizations like ours design and implement displays that fit the mandate of what we were trying to do. *Thank you Franco!*

A joint team of Science North, Ontario Parks and the Friends of Misery Bay was struck and the journey started. A key figure in this whole process was Brenda Koziol. It was a bit of a rocky and rough journey at first – a mix of different ideas, thoughts, opinions etc. But throughout it

all, Brenda was the steadying influence that brought us all back to the realities of what we were trying to achieve on a limited budget. The project had to be financially possible and had to fit into many parameters. Brenda kept us on track numerous times.

Without people like Brenda, Will Kershaw, Ryan Gardner, Gaynor Orford, France Mariotti, Don Wilkes and many others too numerous to mention, our exhibits would not have happened. And of course – with course with a cost of over \$150,000 – a big thanks goes out to Mary Nelder, who wrote the grant application that helped fund the project, along with donations from The Smith Family Foundation, LaFarge and many other donors.

\*\*as a further note – a Brenda Koziol and her husband Mike are now helping/advising the Wagg's Woods Trail Team in Mindemoya with interpretive signage for that marvelous trail. I just know she will keep us focused on what matters and we will have great interpretive panels on flora, fauna, geology etc. A big thanks Brenda and Mike!

**Don't Forget!**

## **Annual General Meeting**

**June 25, 2022 at 10:00 a.m.**

We are holding the old style of AGM - **in person at our Visitor Centre.**

Our guest speaker is **Will Kershaw** of Ontario Parks: *The importance of wild places*, highlighting Misery Bay and Queen Mum Provincial Parks.

Refreshments and a light lunch will be served. Everyone invited – you don't have to be a member to attend our AGM.

Looking forward to seeing your smiling faces again!