

# Sarracenia

Newsletter of the Wildflower Society of Newfoundland and Labrador

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Photo: Dianne Noseworthy

Nico Power examining dwarf mistletoe (see related articles on pages 3 & 10). The next day, when his friends came to visit, he could not wait to show them his “microscopic flowers”, and the whole group was awed at what they could see with the magnifying glass.

## Editor's Column

As readers may know, from the previous issue of this newsletter - after 13 years as editor of the **Sarracenia** (2008-2021), during which time he managed to produce 29 excellent issues, in 8 volumes, **Howard Clase** has decided to step down from his exalted post, to enjoy some very well-earned rest.

In a major moment of weakness, I offered to take over the reins, and continue on. Mind you, I did not make this offer *entirely* in the dark, since, years ago, I edited the **Osprey** (the newsletter of the, then, Newfoundland Natural History Society [now NatureNL]) on two separate occasions (1973-1974 and 1978-1980).

For this, my first issue of the **Sarracenia**, the "look and feel" of the product will not seem radically different from before. Nonetheless, all editors like to "put their stamp" on what they edit, so "down the road" we shall see what develops. Much will depend on what manner of contributions I am able to attract. No newsletter can thrive without "content".

With regard to this "content", I hope to gradually broaden its scope. Some small sense of this may be detected in this issue? All feedback will be gratefully appreciated.

John Maunder: Editor

Please send all contributions to the newsletter to:  
[jem@nl.rogers.com](mailto:jem@nl.rogers.com)

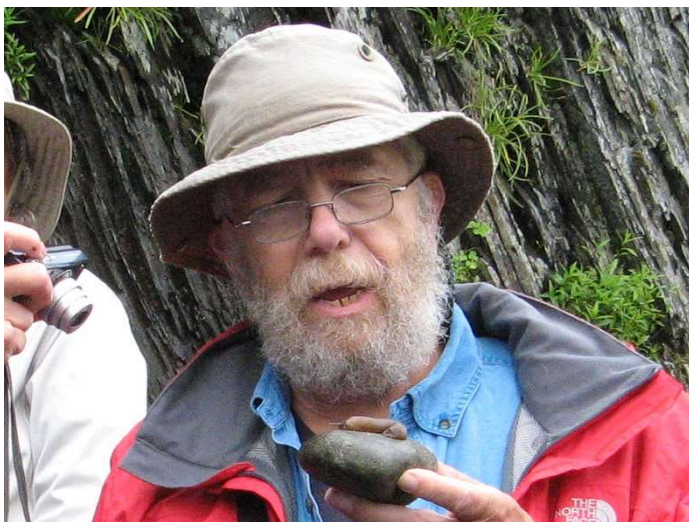


Photo: Susan Maunder

John examining a "brown" Black Slug (*Arion ater*) on a WFS field trip to Salmon Cove, Conception Bay, July 24, 2016.

## The Executive

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<https://www.wildflowersocietynl.ca/>

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## Featured Links

**Nova Scotia Wild Flora Society** <http://nswildflora.ca/>  
Our sister group "next door". Of particular interest is their archive of PowerPoint and Zoom presentations available at: <http://nswildflora.ca/programme/videos-of-presentations/> and also at: <http://nswildflora.ca/programme/videos-of-presentations/powerpoints-of-presentations/> [click the *titles* to launch]. [Note that a number of our members are also members of the NSWFS, and vice-versa.]

**The Digital Flora of Newfoundland and Labrador** <https://www.digitalnaturalhistory.com/flora.htm> (This website is presently undergoing a complete upgrade!)

**Flora of Newfoundland and Labrador** by Susan and Bill Meades <https://newfoundland-labradorflora.ca/>. Includes the most authoritative checklist of the Province's vascular plants <https://newfoundland-labradorflora.ca/checklist/>

**"Limestone Barrens ... Ours to Protect"** <https://limestonebarrens.ca/> A Newfoundland website that is a multi-layered goldmine of information. Includes many excellent links, particularly on the pages <https://limestonebarrens.ca/Resources.htm> and <https://limestonebarrens.ca/EarlyStudies.htm>

## Eastern Dwarf Mistletoe

Andrus Voitk, Maria Voitk, and Nico Power

For years, every spring, the two senior authors used to visit a patch of Eastern Dwarf Mistletoe *Arceuthobium pusillum* located in a stand of Black Spruce *Picea mariana* less than a 30-minute walk from their front door, in Humber Village.

Recently, John Maunder notified us about a talk on dwarf mistletoe that was presented to the Nova Scotia Wild Flora Society by retired forester Bob Guscott <https://youtu.be/uwPnlPIS9Ns>. That presentation was a welcome opportunity for us to learn more about this fascinating parasitic plant.

Indeed, Bob's talk was a real pleasure - reflecting expertise obviously gained from spending time with the species in its habitat, over many years.

Although our sorties into the woods have tapered off lately, we were newly fired up, and just *had* to go and check out the plants again.

In hopes of becoming conduits for transferring some of Bob's enthusiasm, we invited our young neighbour Nico to come along and pick a posy of the first "wildflowers" of the year for his mother. Nico agreed, immediately bringing down the average age of the group from 81 to 57.

This now significantly younger group moved much faster than "the ancient duo", and in no time was among the spruce.

The senior authors *tried* to point out to Nico the witches' brooms (Fig. 1), and large upward-curving branches, that signalled places where he might look for mistletoe. However, we found that eight-year-olds have the distinct advantage of not sinking through the soft snow of spring with every step. So, he was, by then, far up ahead.

When told, "We're here," he protested that there were no flowers. However, as soon as we showed him the mistletoe on the spruce branches, he saw them all over.



Photo: Andrus Voitk

**Fig. 1.** Witches' broom on black spruce, likely caused by dwarf mistletoe. Mites and some rust fungi can also promote similar growths.

Nico quickly learned to use a magnifying glass, and even a loupe. Better still, he was familiar with the concept of females (Fig. 2) and males (Figs. 3 and 4), sparing the oldsters awkward explanations of subjects long forgotten.

"I thought they'd be bigger," he said on the way home with a nice "bouquet" for his mother. Excited over his discoveries, he told his parents all about the trip, and showed them the flowers. He then sat down to examine them in detail (cover photo). In order to earn co-authorship, he wrote up a full report (Fig. 5).

Thank you, John, for faithfully sending us notices of interesting material and information over the years, and also many thanks to Bob Guscott. If either of you has ever wondered whether your efforts are worth it, here is your answer ...

You sent folks eight, and eighty, out into the woods, and all were moved to write up reports.

[More images on the following page.]



Photo: Andrus Voitk



Photo: Andrus Voitk

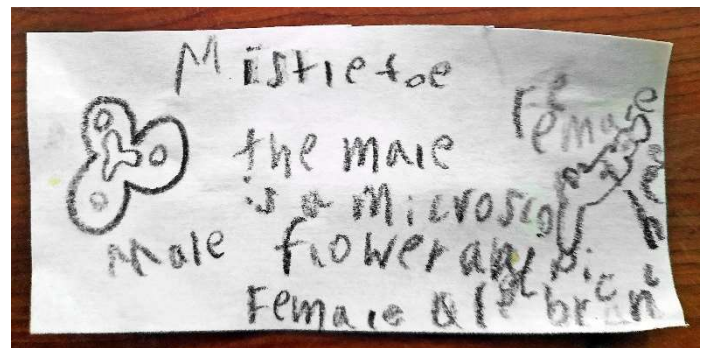
**Fig. 2.** Female Eastern Dwarf Mistletoe flowers, just opening. The plant is our smallest "bush", growing as a parasite on black spruce, and less often, on other conifers including white spruce and larch. In time it kills its host, making it easy to find by looking for stands of dead conifers. Sexes grow on separate trees. We have not photographed them at the end of the summer, when they are plump with seed, and ready to discharge.

**Fig. 4.** Male Eastern Dwarf Mistletoe flowers. Three or four petals opened up, in a more flower-like blossom, exposing the pollen.



Photo: Andrus Voitk

**Fig. 3.** Male flowers in different stages of maturity, from unopened bud (left), to open petals (middle), to spent flowers with no more pollen (right).

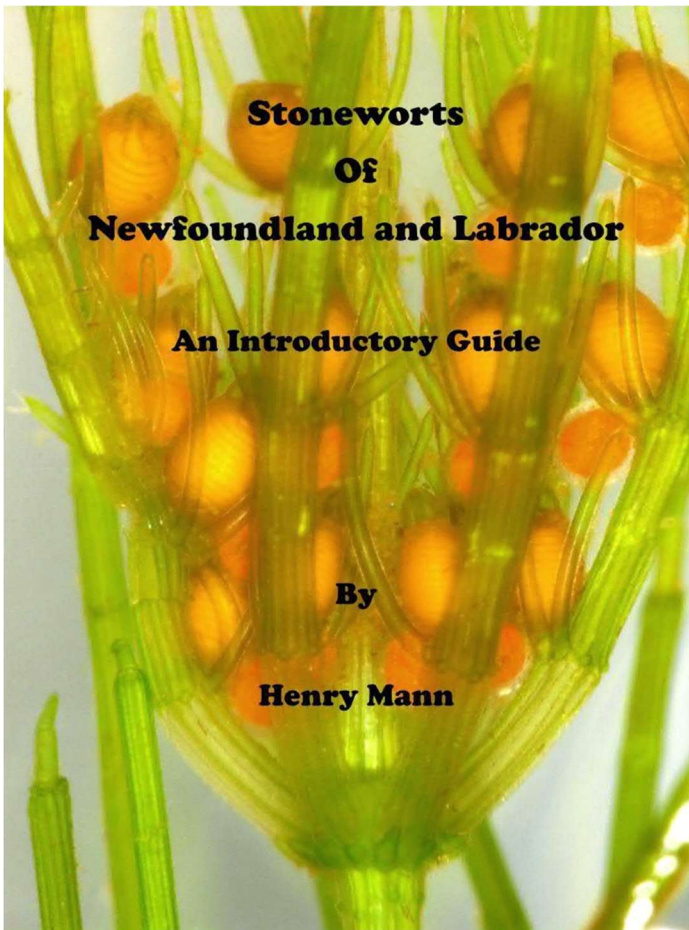


**Fig. 5.** Nico's Power's report of his discovery.

Some additional images from the "Digital Flora ..." - taken at Steady Brook Falls, in July:  
[https://digitalnaturalhistory.com/flora\\_loranthaceae\\_index.htm](https://digitalnaturalhistory.com/flora_loranthaceae_index.htm) [Editor]

**Book Review: Stoneworts of Newfoundland and Labrador:  
An Introductory Guide - by Henry Mann (2022)**

Reviewed by John Maunder



*"Stoneworts, also known as charophytes, are submerged aquatics which superficially appear to be small versions of some vascular plants such as the horsetails, but which are really unique members of the green algae (Chlorophyta) in the Family Characeae. Their apparent "stems", "roots", and "leaves" are not equivalent to these structures in the mosses or in the vascular plants. They are an ancient group with a fossil record going back in excess of 400 million years before the first land plants appeared. Long before the dinosaurs, they flourished in shallow fresh and brackish waters. No modern forms are truly marine."*

- Henry Mann

Henry Mann has recently released a real gem of an "e-publication" on the stoneworts (= charophytes) of Newfoundland and Labrador.

While, as he points out, they are not "vascular plants", stoneworts are commonly found in our ponds, growing intermingled with other pond vegetation. Thus, they have been observed quite often on our WFS field trips.

The publication at hand is quite substantial (216 pp.), and is profusely illustrated with precise line drawings and stunningly beautiful colour photographs - mostly extreme close-ups or photo-micrographs.

While scientific to a fault, the text is nevertheless very accessible to general readers, with all the "big words" being nicely explained in the generous glossary which begins on page 185.

For those of us used to using "plant keys" to help in plant identifications, the keys included in this publication are clear and precise.

"If for nothing else than the images", everyone should get this highly informative book.

Great job, Henry! You have outdone yourself!

**Download the e-publication:**

<https://www2.grenfell.mun.ca/herbarium/download/Stoneworts%20of%20Newfoundland%20and%20Labrador%20-%20Henry%20Mann%20-%202021%20Compressed.pdf> [63 Mb compressed version - maybe a 1.5 minute download]

or

<https://www2.grenfell.mun.ca/herbarium/download/Stoneworts%20of%20Newfoundland%20and%20Labrador%20-%20Henry%20Mann%20-%202021.pdf> [287 Mb high resolution version - maybe a 7 minute download]

## Plant Galls of Newfoundland and Labrador – “A Passing”

Henry Mann

In 2011, an article appeared in **The Osprey** that began a series that was intended to study and document the plant galls of Newfoundland and Labrador, via descriptions and photographs. The series ultimately ran through seven articles.

Two main factors led to the premature demise of this project.

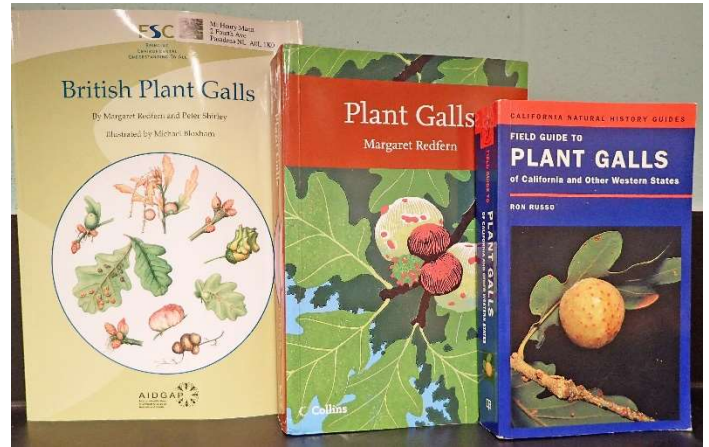
Firstly, as happens to all of us eventually, aging and retirement meant that “spreading oneself thinly” was no longer an option, and that logic dictated that concentrating on only a few major priorities would be necessary if even these lesser goals were ever to be accomplished.

Secondly, **The Osprey** ceased publication when Nature NL decided to go entirely with a modernised blog-like website within which lengthy and detailed nature articles were no longer included.

[Back issues of **The Osprey** are still available from the Memorial University Library Digital Archives web pages - see the links presented in the "**A List of Plant Gall Articles**" section, appended later, below - Editor].

Searching for, studying and photographing plant galls can be a fascinating pastime and much can be learned even at the "naturalist level" without any specialized in-depth background. All galls have some sort of causal agent, or agents, often insects or other invertebrates, fungi, or sometimes even bacteria and viruses. Some are well known in the literature, many are not. Most have not yet been documented for our province, but even this fact adds to our provincial knowledge.

The study of plant galls is a perfect example of where two or more individuals, with different interests, can cooperate - with a botanically-oriented naturalist identifying the botanical component and an insect/invertebrate-oriented individual identifying the causal component or components.



All photos: Henry Mann

**Fig. 1.** There are many useful guide books available, although none of them are specific to Newfoundland and Labrador.

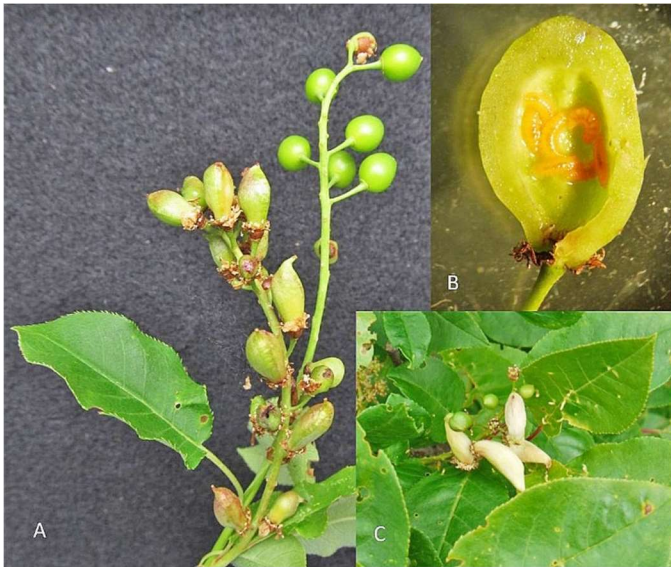
It may not always be necessary, or even possible, to precisely *identify* the causal organism(s) (e.g., gall wasps, midges, aphids, mites, fungi, etc.) while photographically and descriptively documenting what can be observed about the interrelationships involved, and, at the same time, recording the gall's occurrence and locality.

Nonetheless, what a wonderful nature hobby such an activity can become - providing almost endless opportunity for more advanced study, should an individual be so inclined.

Sometimes a straightforward two-species interaction occurs. Or, sometimes a whole host of different species interact and the story entails determining “who does what?”.

In many cases galls still contain insect larvae, and can be held indoors, in a jar, long enough to allow adult flies to emerge. These adults can then be photographed and studied, and perhaps identified.

Anyone can create their own mini “hatchery” on a spare shelf or window ledge. What more could a naturalist ask for?



**Figure 2:** Chokecherries host a number of stem, leaf and fruit galls in addition to these two examples. **A.** Normal green fruits [roundish] and galled fruits [non-rounded]. **B.** Sliced open gall with orange larvae of the Chokecherry Fruit Gall Midge. **C.** Another type of chokecherry fruit gall produced by a fungus (*Taphrina*).



**Figure 4:** **A.** The upper surface of a Red Maple leaf with colourful Maple Eyespot Galls. **B.** Lower surface of leaf with a larva of the Maple Eyespot Gall Midge.



**Figure 3:** Red Raspberry Stem Gall. **A.** Newly formed gall in September. **B.** Gall as seen in winter. **C.** Sliced open winter gall with larvae chambers. **D.** & **E.** Two adult fly species which “hatched out” of a winter gall indoors in a jar.



**Figure 5:** Many gall types occur on goldenrods in addition to this stem gall. **A.** Stem spindle gall on Brenda's “Canada” Goldenrod. **B.** Sliced open gall with insect larvae. **C.** At least two distinctive fly larvae occur in this gall.



**Figure 6:** Many different types of galls occur on members of the Willow Family (Salicaceae). **A.** Leaf gall on Balsam Poplar. **B.** Petiole gall on Trembling Aspen. **C.** Galls on a willow leaf.



**Figure 7:** **A.** Bracken Fern leaf cluster gall. **B.** Close-up of a gall. **C.** Single larva that inhabits the gall.

**A List of Plant Gall Articles published in The Osprey by Henry Mann** [Article titles compacted - Editor]

[Links to all back issues of the Osprey are [here](https://collections.mun.ca/digital/collection/osprey): <https://collections.mun.ca/digital/collection/osprey>.

The links retrieve full issues. The Firefox browser may issue a "get-aroundable" security warning because the links are HTTP, not HTTPS ... But, e.g., the Chrome browser does not bother to! - Editor]

Mann, Henry and Wade Bowers. 2011. Plant Galls of NL: Introduction. The Osprey 42(1): 8-11. <http://lib-lespaul.library.mun.ca/PDFs/osprey/V42-01-2011.pdf>

Mann, Henry. 2011. Plant Galls of NL 2: Root Nodules. The Osprey 42(4): 29-31. <http://lib-lespaul.library.mun.ca/PDFs/osprey/V42-04-2011.pdf>

Mann, Henry. 2012. Plant Galls of NL 3: The Big Bud Gall of Beaked Hazelnut (*Corylus cornuta* Marshall). The Osprey 43(3):20-21. <http://lib-lespaul.library.mun.ca/PDFs/osprey/V43-03-2012.pdf>

Hicks, Barry and Henry Mann. 2013. Plant Galls of NL 4: The Insects within Black Knapweed Galls. The Osprey 44(3): 13-17. <http://lib-lespaul.library.mun.ca/PDFs/osprey/V44-03-2013.pdf>

Mann, Henry. 2014. Plant Galls of NL 5: *Exobasidium* Galls of Black Huckleberry (*Gaylussacia baccata*). The Osprey 45(1): 14-15. <http://lib-lespaul.library.mun.ca/PDFs/osprey/V45-01-2014.pdf>

Mann, Henry. 2014. Plant Galls of NL 6: Galls of Purple Chokeberry (*Aronia prunifolia* [Marshall] (*sic*) Rehder). The Osprey 45(3): 21-22. <http://lib-lespaul.library.mun.ca/PDFs/osprey/TheOspreyvol45no03Summer2014.pdf>

Mann, Henry. 2015. Plant Galls of NL 7: The Strawberry Leaf Petiole Gall. The Osprey 46(2): 19-20. <http://lib-lespaul.library.mun.ca/PDFs/osprey/TheOspreyvol46no02Spring2015.pdf>

.....  
 A [link](https://www.britishplantgallsociety.org/publications.html) to the **British Plant Gall Society**, and their journal **Cecidology** - Who knew? [Editor] <https://www.britishplantgallsociety.org/publications.html>



## Ecoregions: "The Eastern Hyperoceanic Barrens"

Glenda Quinn



Photo: Glenda Quinn

"St. Shott's Barrens"

We drove past miles and miles of what looked like sub-arctic tundra, to reach Cape Race.

Fall presented herself in a different way on this terrain, where there are no trees. Heaths and mosses were wearing the colors of autumn. You could pretend that you were driving through a desert. As far as the eye could see the landscape was totally flat.

On the winding, [still *mostly*] dirt road to the lighthouse we passed the Mistaken Point Reserve area where, on the flat sloping surfaces of the rocks along the coast, fossils of some of the oldest complex life forms found anywhere on Earth can be seen. Known to scientists as members of the loosely-called "*Ediacara(n) fauna*", these ancient organisms lived in Precambrian times, 580 to 560 million years ago, when all animal life was found in the sea. [Note: public access to the "Fossil Protection Zone", immediately along this coast, is by guided tour *only*! See: <https://www.gov.nl.ca/ecc/natural-areas/wer/r-mpe/> - Editor]

Historians theorize that the cape derived its name from the Portuguese, "Capo Raso" (flat or barren cape). One hundred and eight years ago, on April 15, 1912, the doomed RMS Titanic - when it was sinking, 409 nautical miles east of this ragged and hazardous shore - sent an SOS signal to Cape Race.

On the edge of the "Eastern Hyperoceanic Barrens", Cape Race, is a spectacular and memorable place to visit in any season.



Photo: Glenda Quinn

Cape Race Lighthouse

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See this useful "**Eastern Hyperoceanic Barrens**" webpage: <https://www.gov.nl.ca/ecc/files/natural-areas-pdf-island-7-eastern-hyper-oceanic-barrens.pdf> [The Editor]

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### **Take a Kid along when you go "Walking in Nature"!**

John Maunder

Why don't we have young people in our Society? Most likely because, by and large, young people in *most* areas of our Province, are not actively exposed to nature or encouraged to learn about their natural surroundings! In this regard, "bombing along" on ATV's, dirt bikes, and/or snowmobiles does not count!

This issue's cover story demonstrates "other possibilities". All young Nico needed was for someone to take him along on a nature walk, and to "show him stuff"! His encounter with dwarf mistletoe was a huge revelation. And, his new-found enthusiasm seems to have been contagious, as demonstrated by the following quote, repeated from the cover photo caption: "The next day, when his friends came to visit, he could not wait to show them his "microscopic flowers", and the whole group was awed at what they could see with the magnifying glass."

Andrus Voitk (Nico's new mentor) tells me that Nico's *next* foray into nature will be to try to find the flowers of the early-blooming Beaked Hazelnut (*Corylus cornuta*).

So. Take a kid along when you go "walking in Nature"! The future is up to us.