

S U M M E R 2 0 1 8

FIELD BOTANISTS  
OF ONTARIO  
*NEWSLETTER*

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Winter botany workshop ... 3

*Corallorhiza odontorhiza* news ... 4

Plants in astronomical  
numbers ... 7

A book review ... 10

2017 Goldie Award ... 11

In Memoriam:  
Dorothy Tiedje ... 12



# President's Message

Greetings field botanists. Our 2018 field season is now well underway. We have another strong field trip program this year with 18 trips offered throughout southern Ontario and a few in the north as well. And – four additional trips are planned for the AGM in Orillia on September 8-9. Over the past few years, the number of field trips that the FBO offers has been gradually increasing (13 in 2012 and 2013, 14 in 2014, 15 in 2015 and 2016, 17 in 2017, and 18 in 2018), which has been bolstered by membership desire for these educational opportunities and made possible by our growing and diverse base of field trip leaders. There are many talented botanists in this province and we are appreciative of their willingness to share their knowledge of Ontario flora and natural areas.

The FBO website moved to a different platform this year and has a new look. Our new address is <https://www.fieldbotanistsofontario.com/>. As usual, you can find news and event announcements on the website. We've also added many lichen photos and hope to add photos of other plant groups over time. We have made available for download on our website a new and excellent guide to vascular plant Species at Risk in Ontario prepared by James Leslie. James spent many years developing this guide and is now offering it free of charge. We are pleased to assist in the distribution of this guide and we anticipate adding other botanical resources to the website as appropriate. In addition to the website and our Facebook group page, we recently created an Instagram account for sharing photos from our field trips. If you have the Instagram app on your mobile device, you can follow us at [ontariofieldbotany](https://www.instagram.com/ontariofieldbotany/), or you can look us up on-line at <https://www.instagram.com/ontariofieldbotany/>.

Dan Westerhof

**On the cover:** Top: Dense *Wolffia* mat completely covering creek surface (Beachburg, Renfrew Co., ON, 8 August 2011). Photo: Dan Brunton. Bottom: Autumn Coralroot (*Corallorhiza odontorhiza*). Photo: Jessica Consiglio.

Sidebar artwork: Common Evening-primrose (*Oenothera biennis*).

Trip location maps generated using NatGeo Mapmaker software.

The suggested standard source for scientific and common names is the Database of Vascular Plants of Canada (VASCAN): (<http://data.canadensys.net/vascan/search>).

Field Botanists of Ontario website: [www.trentu.ca/fbo](http://www.trentu.ca/fbo)

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Annual memberships are \$20.00 for individuals and \$25.00 for families. Membership forms can be found on the FBO website above.

## Field Botanists of Ontario

(FBO) is a non-profit organization founded in 1984 for those interested in botany and conservation in Ontario.

### President

Dan Westerhof  
[dwesterhof@beaconemviro.com](mailto:dwesterhof@beaconemviro.com)

### Vice President

Troy McMullin  
[tmcmullin@mus-nature.ca](mailto:tmcmullin@mus-nature.ca)

### Treasurer

Larry Lebert  
[lebert.larry@gmail.com](mailto:lebert.larry@gmail.com)

### Past President

Mike McMurtry  
[michael.mcmurtry@sympatico.ca](mailto:michael.mcmurtry@sympatico.ca)

### Membership

Bill McIlveen  
13200 Nassagaweya-Esquesing  
Town Line  
Acton ON L7J 2L7  
[wmcilveen@sympatico.ca](mailto:wmcilveen@sympatico.ca)

### Field Trips

Natalie Dunn  
[ndunn03@gmail.com](mailto:ndunn03@gmail.com)

Sarah Mainguy  
[mainrod@sympatico.ca](mailto:mainrod@sympatico.ca)

### Newsletter Editor

Christopher Zoladeski  
1220 Nathaniel Cres.  
Burlington ON L7S 2A6  
[editor:fbo@gmail.com](mailto:editor:fbo@gmail.com)

### Associate Editor

Michael J. Oldham  
Natural Heritage Information Centre  
MNR PO Box 7000  
Peterborough ON K9L 1C8  
[michael.oldham@ontario.ca](mailto:michael.oldham@ontario.ca)

### Contributing Editor

Bill McIlveen  
[wmcilveen@sympatico.ca](mailto:wmcilveen@sympatico.ca)

### Website

Melinda Thompson  
[plantgirl2002@hotmail.com](mailto:plantgirl2002@hotmail.com)

### Directors

Jessica Consiglio  
Bill Crowley  
Jennifer Doubt  
Tristan Knight  
Mary-Anne Young



## Editor's Note

Plant geography prominently features in this issue of the Newsletter. However, first, Karen Stephenson reports on a very successful workshop that was held early in the year. It focused on the tricky identification of woody species in winter, when most of the usual and useful plant features are absent. This is a neat skill for a botanist to boast about.

Jessica Consiglio and Mike Oldham provide a detailed update on the status of populations of Autumn Coralroot in the province, including taxonomy, history of botanical searches, current distribution and population dynamics of this orchid.

Then, there is this: can botany be a scientific discipline that deals with high numbers, more precisely: huge numbers? If the size of the universe is estimated to be in the range of several billion light years, this pales in comparison with population sizes achievable by our smallest vascular plant, Water-meal: shall we say over a hundred billion? - in just one Ontario creek? Dan Brunton's calculations will make your head spin. Next time you see the green Duckweed/Water-meal mat, imagine their numbers.

Coming down to earth, or to Bruce Peninsula, you will settle on the 1,380 species that Joe Johnson lists in his monograph on the vascular flora of this botanical hotspot and many a botanist's favourite. Mike Oldham provides his review of this valuable publication.

Lastly, it was FBO's pleasure to award the 2017 John Goldie Award to a distinguished lichenologist, Dr. Ernie Brodo, at our 2017 AGM. Bill McIlveen provides a synopsis of the recipient's achievements.

Enjoy the issue.

# Field Trip Reports

## Tree Twig and Pod Workshop

March 10, 2018

By Karen Stephenson

On Saturday, March 10 of this year, FBO hosted the Tree and Shrub Identification Winter Workshop in Guelph. It was informative and all those who attended went home with more knowledge than when they arrived. Seasonal temperatures and the sun made the outdoor segments enjoyable.

In the morning, the workshop was presented by Mary Anne Young. She is a landscape

- leaf scars (opposite, alternate)
- terminal buds and buds (shapes, colours and texture)
- twig colour, texture
- lenticels
- pith
- fruit

Along with her wealth of knowledge, Mary Anne brought plenty of twigs samples for everyone to have a turn identifying before we headed outdoors. Her teachings were clear and well-presented. In addition, the dichotomous key handout to the common deciduous trees of Ontario made identification an ease.

In the afternoon, long-time FBO member Bill McIlveen gave an interesting presentation and



What's that twig?, or workshop in progress. Photo: K. Stephenson.

architect, consulting arborist, and experienced field ecologist. Mary Anne explained the identifying features for winter trees and shrubs which included:

shared with us several fruits, cones and conifer needles to examine. Bill also shared his knowledge about conifers and of particular interest, serotinous cones. These cones are covered with a resin that must be melted for

the cone to open and release seeds. When fire moves through a forest, serotinous cones open and the seeds are distributed by winds and gravity.

Bill also spoke about the *Maclura pomifera*, commonly known as the Osage Orange. Currently, Osage Orange is not considered to be native to Ontario though it is native to North America in eastern Texas and Oklahoma. It has since become cultivated and naturalized in other part of the United States and Ontario. It is represented in the pre-glacial flora of Ontario flora among fossils found in Toronto.

Many thanks to our presenters for an excellent day! ✨

<sup>1</sup> Natural Heritage Information Centre, 300 Water Street, Peterborough, ON K9L 1C8

<sup>2</sup> Credit Valley Conservation, 1255 Old Derry Road, Mississauga, ON L5N 6R4

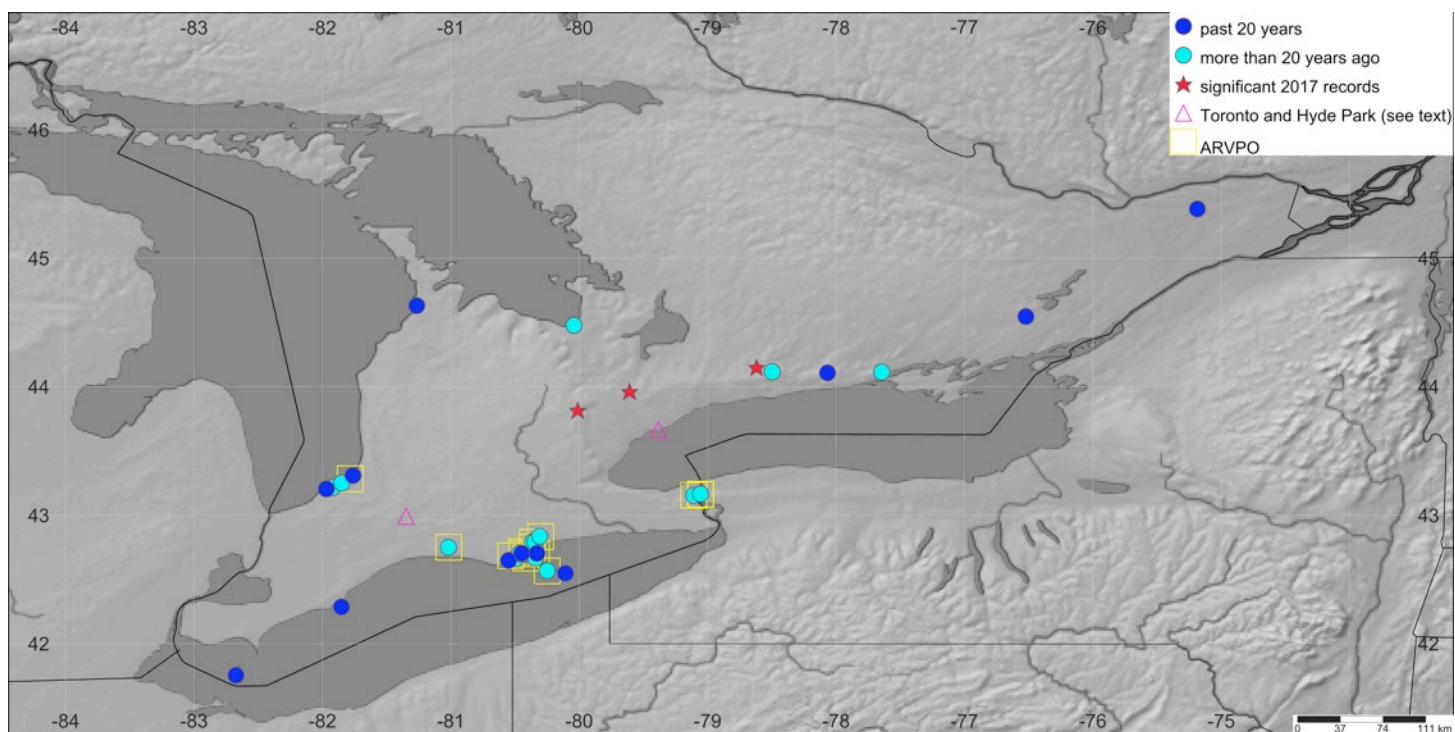
Until recently, Autumn Coralroot (*Corallorhiza odontorhiza* (Willd.) Nutt.) was considered a very rare orchid in the province, with its range confined to the Carolinian Zone. In the “Atlas of the Rare Vascular Plants of Ontario” (ARVPO), White *et al.* (1982) map the species from ten Ontario sites in four counties, all within the Carolinian Zone. Only three of the sites were verified by post-1964 specimens. Since 1982 more than a dozen new Ontario populations have been documented, including populations well north and east of the Carolinian Zone (Figure 1, below). 2017 seems to have been a banner year for the species in Ontario, with at least three significant new records, one of which was found on a Field Botanists of Ontario (FBO) fieldtrip!

*Corallorhiza* is a genus comprised of eleven species which are characteristically small, leafless, mycoheterotrophic (saprophytic) orchids borne from branching coralloid rhizomes. Nine of the ten species recognized in the most recent monograph (Freudenstein 1997) are restricted to North and Central America, except for the circumboreal Early Coralroot (*C. trifida*). Freudenstein described an additional species, Bentley’s Coralroot (*C. bentleyi*), from West Virginia in 1999. In Ontario, the genus is represented by four

# Botanical roots

## *Autumn Coralroot (Corallorhiza odontorhiza), an update on its distribution in Ontario*

By Michael J. Oldham<sup>1</sup> and Jessica Consiglio<sup>2</sup>





species: Spotted Coralroot (*C. maculata*), Autumn Coralroot, Striped Coralroot (*C. striata*) and Early Coralroot.

Autumn Coralroot is widely distributed in eastern North America, ranging south into Mexico and Central America. It reaches the northern limits of its range in southern Ontario, southern Quebec, New England, and northern Michigan (2011 Alger County record, A. A. Reznicek pers. comm.). Two varieties are recognized by Freudenstein (1997), var. *odontorhiza* with closed (cleistogamous) flowers and var. *pringlei* with showy, open flowers. Both varieties occur in Ontario and have been studied by Paul M. Catling (1983) and J. Ross Brown (1984); var. *odontorhiza* is the more common variety in Ontario and elsewhere.

The first population north of the Carolinian Zone in Ontario was reported by Chamberlain (1979) from the Baxter Creek Headwaters, Peterborough County. No specimen documentation is known for this report but it is from the Ganaraska Forest, an area with abundant suitable habitat, and the report is very plausible. Johnson (2016; DAO) reported that var. *pringlei* was found in 1987 in a pine plantation at Sauble Beach, Bruce County. This population increased substantially, reaching 1,200 plus plants, then decreased gradually “until several years ago the area was mostly clearcut, and only three small r e m n a n t s remained” (Johnson 2016).

Brownell *et al.* (1994) reported a population of twenty-eight Autumn Coralroot (var. *odontorhiza*) in a mature White Pine-Sugar Maple forest near Trenton, Northumberland County. Brownell and Blaney (1996) reported a population in the Northumberland County Forest. In 1997 during an FBO fieldtrip, Jeremy Lundholm found a small

population (var. *odontorhiza*) in Wasaga Beach Provincial Park, Simcoe County, in a “dry, sandy, open *Quercus rubra* [Red Oak] – *Pinus strobus* [White Pine] forest on low dunes; at edge of opening, with *Pteridium* [Bracken] and scattered *Toxicodendron rydbergii* [Poison Ivy] (Ursic 1997; Anton A. Reznicek 10585 at MICH). In 2003 a population of 33 plants of var. *pringlei* was discovered in Frontenac Provincial Park, Frontenac County, by Maureen Sly and Tom Marsh (NHIC files). In 2004, 32 plants were found on Pelee

Island in a partially open forest canopy of Red Cedar (*Juniperus virginiana*), Common Hackberry (*Celtis occidentalis*), and Sugar Maple (*Acer saccharum*) by P. Allen Woodliffe and Deb Jacobs (NHIC files).

Several new populations were discovered in 2017, including new records for Peel and York Regions, and the City of Kawartha Lakes. On 14 September 2017, John Vandenberg found this orchid on the McKim - Garsonnin Conservation Easement with Kawartha Land Trust in southeastern City of Kawartha Lakes. He and Anne Barbour returned to the site on 19 September 2017 and found about 100 plants of var. *pringlei* in a deciduous forest under hawthorn (*Crataegus*), with Red Maple (*Acer rubrum*), ash (*Fraxinus*) and elm (*Ulmus*) saplings, and Dog Strangling Vine (*Vincetoxicum rossicum*). Documenting specimens were collected for the Natural Heritage Information Centre

herbarium (NHIC; Figure 2, this page) and the Royal Ontario Museum herbarium (TRT).

Jessica Consiglio and Jose Maloles found a population of approximately 25 stems of var. *odontorhiza* on 20 September 2017 in Forks of the Credit Provincial Park, a first record for the Regional Municipality of Peel (Figure 3, newsletter cover page). This



population was discovered growing in a dry-fresh sugar maple - hardwood forest along the Credit River valley slope, with associated species including: Sugar Maple (*Acer saccharum*), White Ash (*Fraxinus americana*), Ironwood (*Ostrya virginiana*) and Woods Bluegrass (*Poa nemoralis*). Due to evidence of old fence lines, as well as an abundance of Ironwood, it is probable that the site was historically pastured and experienced further disturbance from the death of mature White Ash. On 27 August 2017, Reuven Martin found a population of var. *pringlei* in Happy Valley Forest, York Regional Municipality, growing beneath a canopy of Sugar Maple (*Acer saccharum*) on a gentle slope during an FBO trip (documented by P.W. Deacon, photos on iNaturalist).

A specimen labelled from East Toronto and collected by W. Scott is in the Royal Ontario Museum herbarium (TRT) and the species is mentioned by Scott in "Natural History of the Toronto Region" (Faull 1913) presumably based on this record. However, W. Scott also collected *Corallorhiza odontorhiza* at St. Davids, Niagara Region (also in TRT), and the two specimens are very similar. Whiting and Catling (1986) did not accept or map the Toronto specimen, suspecting a label error. The record was also not included in White *et al.* (1982). A York Region dot does appear in Case (1987), presumably based on this record.

No specimen has been located to substantiate a literature report from Hyde Park Junction, Middlesex County, by Dearness (1905), but Dearness was an excellent botanist and there is no reason to doubt the report, which is included in Figure 1 (purple triangle).

A population was recently found in the LaRose Forest, Prescott and Russell United Counties, in eastern Ontario near Ottawa (Paul M. Catling personal communication to Anne Barbour). This site is plotted on Figure 1, though no other details are known.

Although Autumn Coralroot is a small and inconspicuous orchid which is undoubtedly overlooked, these new records suggest the species is expanding in the province, as it is elsewhere in its range, e.g. in Michigan (Voss and Reznicek 2012), Indiana (Homoya 1993), Illinois (Sheviak 1974), and the Chicago region (Wilhelm and Rericha 2017).

Autumn Coralroot is an excellent species for Ontario field botanists to target. It is easily identified in the fall, when few other plants are in bloom. *Corallorhiza odontorhiza* seems to do particularly well in wet years (like 2017); in dry years, however, it can be quite rare or apparently absent from some sites (Donald A. Sutherland, pers. comm.). It is perhaps our latest blooming native orchid species (though the very rare Oval Ladies'-tresses, *Spiranthes ovalis*, is also a late bloomer), sometimes blooming into November. Mature pine plantations, where several of the new populations were found, are a habitat seldom frequented by the field botanist, but checking habitats like this from September to November could result in new discoveries

of Autumn Coralroot. Document your finds with specimens (where a sufficient number of plants occur) or close-up photos. The NHIC Rare Species of Ontario iNaturalist project is an excellent way of submitting records of provincially significant species (see <http://inaturalist.ca/projects/nhic-rare-species-of-ontario>). \*✱

#### Acknowledgements

Tony Reznicek provided information on the Wasaga Beach population and helpful comments on a previous draft. Anne Barbour provided information on the City of Kawartha Lakes population, and Steve Varga provided information on Toronto area and Oak Ridges Moraine populations.

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## The changing distribution and extraordinary abundance of *Wolffia* in Ontario

By Dan Brunton

**W**ater-meal (*Wolffia*, Lemnaceae) represents a small group of aquatic plants species, almost always considered to be regionally uncommon wherever they are found in Ontario (Dore 1957, Soper 1962, Oldham 2017) - at least away from the western Lake Ontario area. *Wolffia borealis* (Engelm.) Land. (*W. punctata* Griseb.) and *W. columbiana* H. Kirsten (*W. arrhiza* auct., non (L.) Horkel (Figure 1) form dense, swirling, typically intermixed patches or thick mats (Figure 2, newsletter cover page) on the still surface of nutrient-rich, calcareous or circumneutral water bodies (Dore 1957, Crow & Hellquist 2000). Small Duckweed (*Lemna trisulca* L.) and Large Duckweed (*Spirodela polyrhiza* (L.) Schleid.) are almost always intermixed in these floating mats, with non-native invasives Frogs-bit (*Hydrocharis morsus-ranae* L.) and Eurasian Water-milfoil (*Myriophyllum spicatum* L.) often present in mats of less pristine (especially riverine) sites. These populations are so massive and dense that despite *Wolffia* being the smallest flowering plant in the world (Crow and Hellquist 2000), distinctively luminescent-turquoise mass

populations can reliably be detected on late season (August - November) satellite imagery.

The size of some Ontario populations is staggering. The abundance of *Wolffia* along the Gananoque River in Leeds & Grenville County exemplifies this. A 10.8 km section of the river was examined in 2016 during field studies of Mosquito-fern [*Azolla cristata* Kaulf. (*A. caroliniana* auct., non Willd.)] found in the dense *Wolffia* mats there (Brunton and Bickerton 2018). Based on an average length of an individual *Wolffia* plant (1.5 mm long), the minimum density of plants in a typical square metre (1,000,000 mm<sup>2</sup>) of those mats would be 444,444/ m<sup>2</sup> assuming each plant occupied an average 2.25 mm<sup>2</sup> and the mat was only one plant deep. But the plants are elongated, not round, and these mats typically were between 1 to 5 cm thick, so even this huge number is actually very conservative. In addition, a count from a typical *Azolla* plant sized photographic sample (3.5 cm across) was made and it determined 1,138 *Wolffia* plants to be present in this 12.25 cm<sup>2</sup> area. That extrapolates to 928,980 plants/ m<sup>2</sup>. Again, this conservatively assumes only a single layer of *Wolffia* plants were present.

So between 450,000 and 950,000 *Wolffia* plants/ m<sup>2</sup> were calculated to occur in this section of the Gananoque River. Satellite

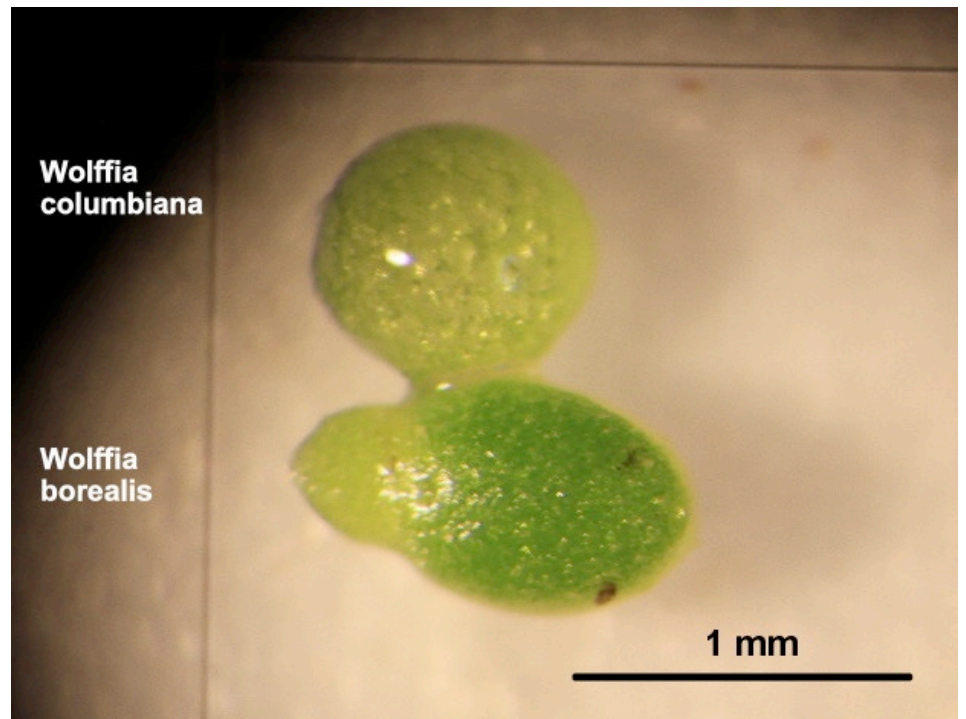


Figure 1. Fresh (live) Ontario native *Wolffia* species (Galway & Cavendish Township, Peterborough Co., ON, 31 July 2011). Photo: D. Brunton.

imagery determined that approximately 140,500 m<sup>2</sup> of *Wolffia* mat exists along this 10.8 km section of the river (the mats extending on average out from shore 5 m and the calculation including two large



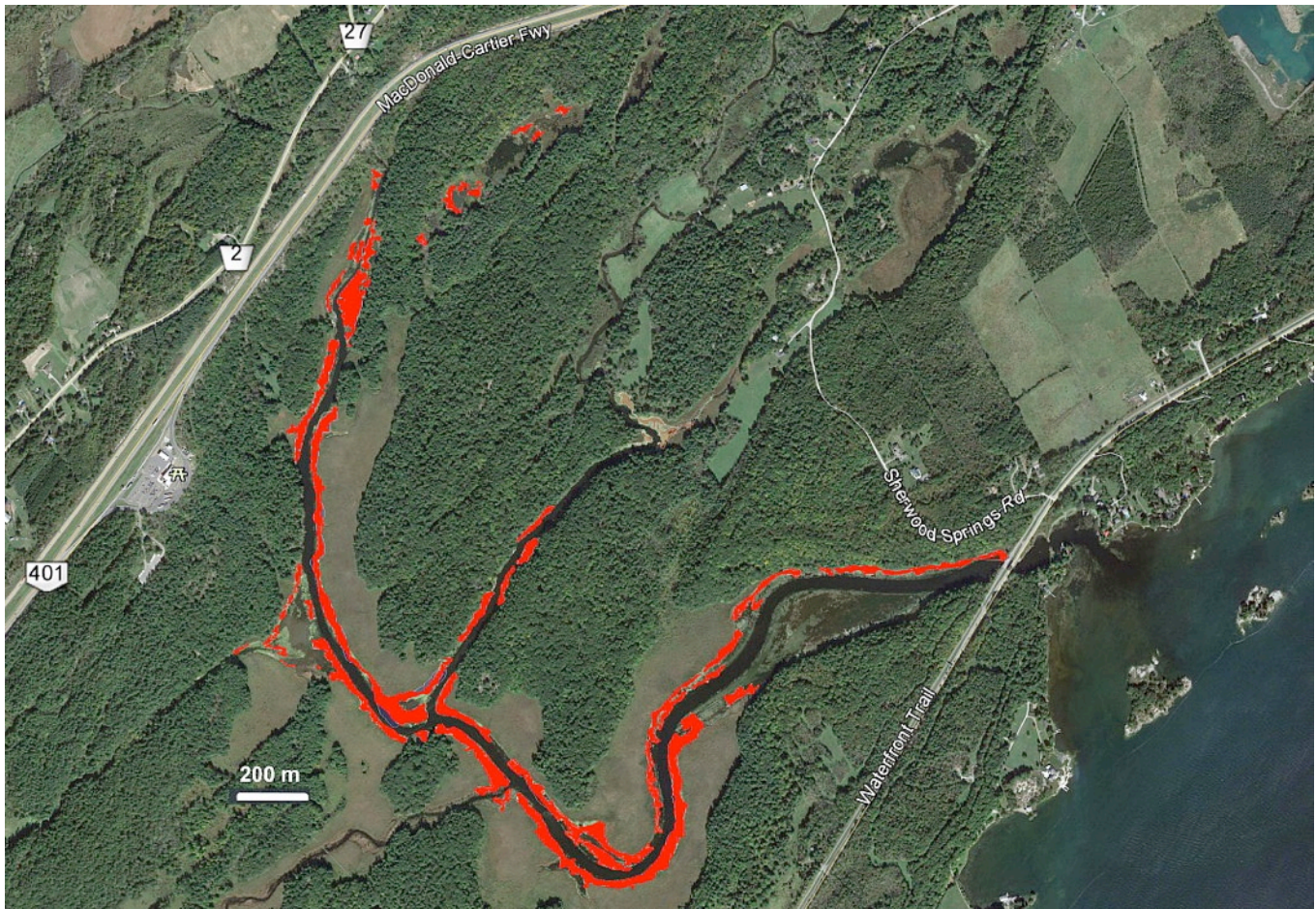


Figure 3. *Wolffia* mats (red shading) along Jones Creek, Brockville, Leeds & Grenville County, ON (GoogleEarth image 25 September 2015). Photo: D. Brunton.

areas that covered entire portions of the river surface). Even by these crude and conservative determinations then, between 66 to 141 billion *Wolffia* plants are believed to occur along the lower Gananoque River. A similarly dense occurrence approximately 30 km eastward along Jones Creek near Brockville, Leeds & Grenville County (Figure 3), is believed to support over 130 billion *Wolffia* plants (pers. obs.).

Figure 4 illustrates the traditional range of *Wolffia* in Ontario. Water-meal populations are increasingly being found beyond their traditional limit along the southern edge of the Canadian Shield (Soper 1962). These new reports suggest a recent and on-going range expansion. This expansion area is also noted on Figure 4, largely based on the findings of Ontario field botanists (see Acknowledgements). A third species, Brazilian Water-meal (*Wolffia brasiliensis* Weddell), has recently been reported north of its traditional range in Ontario (Thomson 2005) and elsewhere (Voss & Reznicek 2012). Landolt (2000) illustrates its natural range as extending southward across the eastern United States from southern New York. *Wolffia brasiliensis* is either a recent introduction into southern Ontario and adjacent northern New

York (Weldy et al. 2018) or is an even more rapidly naturally advancing species than our two previously established *Wolffia* species.

Why is this? Climate change? Increased populations of certain waterfowl species? Transportation by human activity? All of the above? It is not clear but our understanding of the range and abundance of *Wolffia* certainly has changed in Ontario. To document the rate and extent of this change and to determine the potential regional significance of such populations, new *Wolffia* occurrences need to be documented. Although securing *Wolffia* voucher specimens has traditionally been an unsatisfactory and demanding process (Dore 1957), the need to do so has never been greater. Documentation of a simpler but still effective technique is being reported elsewhere. In the interim, Ontario field botanists are encouraged to at least preserve a digital photo of any extralimital occurrences. \*

#### Acknowledgments

Thanks to field botanists David White, Dale Leadbeater, George Bryant, Wasyl Bakowski, Michael Oldham, Bill Draper and James Goltz for sharing





# The Vascular Plants of the Bruce Peninsula Ontario



**Joe Johnson**

## *Book review: “The Vascular Plants of the Bruce Peninsula, Ontario” (by Joe Johnson; 2016)*

*Michael J. Oldham*

**W**hat is Ontario’s most-loved destination for field botanists, wildflower enthusiasts and photographers? If you asked a dozen FBO members, you would probably get several answers but chances are that the Bruce Peninsula would be at or near the top of the list. “The Bruce” now has its second flora, 76 years after P. V. Krotkov’s (1940) “Botanical Explorations in the Bruce Peninsula, Ontario”, which contains a briefly annotated list of the peninsula’s vascular plant species. There have been several checklists of Bruce Peninsula vascular plants, first in 1969 by the Federation of Ontario Naturalists (now Ontario Nature), with an addendum in 1978, then several editions of “A Checklist of Vascular Plants for Bruce and Grey Counties, Ontario”

produced by the Bruce-Grey Plant Committee starting in 1995. These are useful checklists but Joe Johnson’s 298 page flora provides a wealth of authoritative information above and beyond what can be included in a checklist.

The Bruce is scenically spectacular, with the Niagara Escarpment forming its backbone, and still has many intact natural areas including Bruce Peninsula National Park. The peninsula has a rich mix of terrestrial, wetland, and aquatic habitats such as mature forests, cliffs, alvars, dunes, and shoreline fens, resulting in a diverse flora with many unusual and rare species.

Ferns and orchids are favorite groups for the field botanist and photographer and The Bruce is rich in both. A remarkable two-thirds (51 of 76) of the province’s 76 native fern species and almost three-quarters (45 of 62) of its orchid species occur on in the area. It is also a great place to see some of Ontario’s most spectacular and rarest plants such as globally rare Great Lakes endemics, like Lakeside Daisy or Stemless Rubberweed (*Tetranneuris herbacea*), Dwarf Lake Iris (*Iris lacustris*), Houghton’s Goldenrod (*Solidago houghtonii*), and Pitcher’s Thistle (*Cirsium pitcheri*).

Joe Johnson lived in Wiarton on the Bruce Peninsula from 1971 until 2016 when he retired to his family home in Nova Scotia. During those 45 years he almost certainly walked more of the peninsula than anyone else and definitely knows its flora more intimately than anyone ever has or probably ever will. Joe is a careful observer and the vast majority of the information in his flora is based on first-hand knowledge, which makes it an especially useful publication. In “The Vascular Plants of the Bruce Peninsula, Ontario” you will find detailed information on the habitat, distribution, and status of almost all of the 1,380 species accepted as occurring in the wild on the peninsula; by comparison, Krotkov (1940) listed 858 species.

This book will be a benchmark against which future changes to the flora will be measured. Joe’s flora identifies which plant species are rare and of special interest on the peninsula and hopefully will help focus conservation efforts and benefit the plants he loved in the decades to come. Changes are coming quickly and it is hard to predict what the flora of The Bruce may look like twenty, fifty, or a hundred years from now, but with Joe Johnson’s flora we now have an accurate picture of the status of vascular plants on the peninsula to the year 2016. Anyone interested in the flora of the Bruce Peninsula or the flora of Ontario should have this book. \*

For another review of this book see <https://quod.lib.umich.edu/cgi/p/pod/dod-idx/review-of-the-vascular-plants-of-the-bruce-peninsula-ontario.pdf?c=mbot;idno=0497763.0056.108;format=pdf>

Joe Johnson’s Bruce Peninsula flora can be purchased from the author at [joejohnson.book@gmail.com](mailto:joejohnson.book@gmail.com) for \$28 CDN, plus postage; see also [vascularplantsofthebrucepeninsula.wordpress.com](http://vascularplantsofthebrucepeninsula.wordpress.com) for stores carrying it.



## *John Goldie Award - 2017*

*W.D. McIlveen*

The 11th John Goldie Award was given to Dr. Irwin (Ernie Brodo) on September 19, 2017, at the FBO AGM held at Ottawa, in recognition of his contribution to field botany in Ontario. For anyone at all familiar with lichens, the name Ernie Brodo is synonymous with lichens in Ontario as well as much those further afield. Like all of the previous Goldie Award winners, Ernie is another highly-deserving recipient.

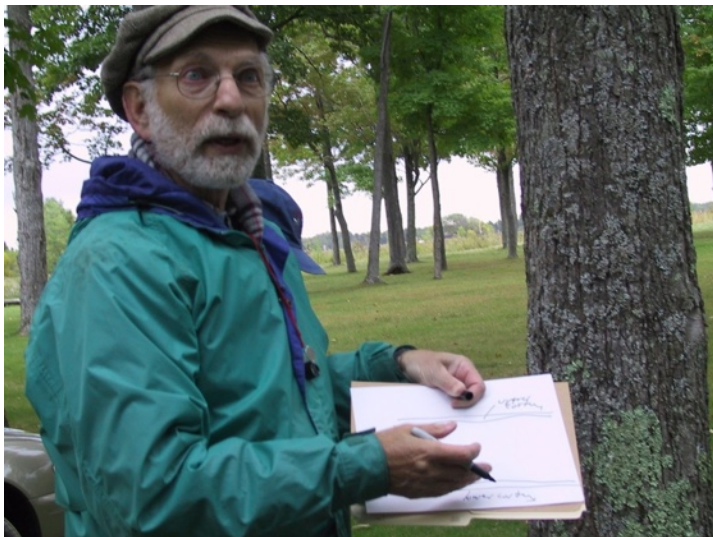
Ernie's career started with a formal education at City College of New York where he received an undergraduate degree in biology in 1957. Moving a little farther west, he completed his Masters degree from Cornell University in Ithaca, N.Y., in 1959. He then moved to Michigan State University for his Ph.D. that was granted in 1965 though his field work was studies on lichen flora back on Long Island.



After a short period as an assistant professor at Chatham College in Pittsburgh, he took the position of Curator of Lichens at the National Museum of Natural Sciences of Canada in Ottawa in 1965. At the Museum, he served as Chief of the Botany Division (1981–1989), as a Research Scientist (1989–2000) until he retired; and



FBO President Dan Westerhof congratulates the recipient. Photo: B. McIlveen.



Dr. Irwin Brodo leading an FBO trip to Gatineau in 2000. Photo: B. McIlveen.

then as Emeritus/Research Associate from 2000 to the present. During his tenure at the Museum, the number of lichen specimens in the collection increased from 18,000 to 124,000.

Ernie's work has covered most of North America from coast to coast as well as Europe and Australia. His research work at the Museum included taxonomic revisions to the genera *Cocotrema*

(1973), *Alectoria* (1977), *Lecanora* (1984), *Amygdalaria* (1987), *Ochrolechia* (1990), *Cladonia* and *Haematomma* (2008). He has described, usually with colleagues, over 50 species or subspecies and two genera: *Bryoria* (1977) and *Nodobryoria* (1995). He will most likely be remembered best as the co-author of the beautiful *Lichens of North America* 2001, a thin field guide of only 795 pages! He followed that with a set of keys to the species in 2015. More locally, he was the author of the *Lichens of the Ottawa Region* (1988).

Ernie has strongly supported various professional organizations and served as the president of the Canadian Parks and Wilderness Society, the American Bryological and Lichenological Society, Canadian Botanical Association, the Ottawa Field-Naturalists, and the International Association for Lichenology. His work has been variously recognized by different organizations. These include the Acharius medal for life long contributions to lichenology from the International Association for Lichenology, the Mary Elliot Award for service to the Canadian Botanical Association, and the George Lawson Medal for his contributions to Canadian botany. He has been honoured by having several species and the genus *Brodoa* named after him. These awards are certainly prestigious and substantiate the reasons for FBO's decision to award Dr. Brodo with the Goldie Award. As well, Ernie has led at least two field trips for FBO in 2000 and 2009.

### Remembering Dorothy Tiedje 1929-2018

Members of the FBO will be saddened to learn of the passing of Dorothy Tiedje on March 26, 2018. Dorothy was a member of FBO since its inception in 1984. She led at least five field trips for FBO including visits to Walpole Island, Ausable River, Samia Howard Watson Trail, and twice to Port Franks including the Karner Blue Sanctuary as well as to Pinery Provincial Park. Together with her late husband John (both pictured), she prepared a number of editions of the vascular flora of Lambton County. She was a very active member of Lambton Wildlife Incorporated and was responsible for the production of a *Guide to the Natural Areas of Lambton County* among other things.

John and Dorothy donated the Tiedje Woods in Hungry Hollow in the Ausable River Valley to the Thames Talbot Land Trust in 2009. In 2014, Dorothy was awarded the John Goldie Award by FBO. Among other awards, she was recognized for her work by Lambton Wildlife Inc. More recently, in 2017, she was given the W.E. Saunders Award for her outstanding contributions to botany in the province by Ontario Nature. While she will definitely be greatly missed by many people, her contributions, particularly in the Lambton County area, made us all richer.

Additional information about Dorothy's contributions and activities can be found in the following resources.

<http://mckenzieblundy.com/tribute/details/6719/Dorothy-Tiedje/obituary.html>

<http://fieldbotanistsofontario.blogspot.ca/2014/11/goldie-award-winner-2014-dorothy-tiedje.html>

W. D. McIlveen 2014. 2014 John Goldie Award. Field Botanists of Ontario Newsletter Volume 26 (24) 10-11.

