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FIELD BOTANISTS OF ONTARIO NEWSLETTER

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President's Message

Each summer for the past five years, I have had the privilege of travelling to Ontario's far north to participate for a couple of weeks with teams studying and documenting the plants, vegetation communities and other wildlife. This work is aimed at providing information that can support wise land-use planning. Under the Far North Act, passed in 2010, Ontario has set the stage for a partnership with First Nation communities to work together to develop community-based land-use plans. These plans are increasingly urgent due to the financial pressure to access the mineral resources of the north.

This summer our team was based in Nibinamik, a small community about 500 air miles north of Thunder Bay, on the Winisk River system. From there, we flew daily by helicopter to sites that had been previously identified as having outstanding or representative natural heritage qualities. Our team included employees of the Ministry of Natural Resources and two young men from Nibinamik. Some of the study sites were within the boreal forest zone and a few were in the Hudson Bay Lowlands. Our sites included mixed forests on moraines, rocky exposures, river banks and especially wetlands such as open and treed bogs and fens, marshes and swamps. The wetlands displayed dramatic patterns visible from the air as intricate networks, ribs, and riparian margins. The breadth and variety of this northern landscape made a strong impression on me as did the self-sufficient and welcoming people we met.

This issue of the Newsletter includes a tribute to our friend and colleague, Jane Bowles, who passed away this summer. Jane was a professor at Western University, Director of the Sherwood Fox Arboretum and an accomplished field botanist. She led several trips for our organization and was a friend and mentor to many. In 2012, I attended a trip to the Delaware First Nation lands near the Thames River, co-led by Jane and a community member. Her extensive knowledge of the flora, her sense of humour in the face of a thunder and lightning storm and the mutual respect she shared with the Delaware people; these are qualities that we all recognized in Jane. She will be missed.

At the time of writing this note, we have just returned from our Annual General Meeting in Cambridge, ably organized by Dan Westerhof. The program included two days of field trips, a banquet, guest speaker presentation and business meeting. In his presentation, Prof. Brendon Larson explored the thought-provoking subject of "Field Botany in the Anthropocene". We may never think of vegetation communities and invasive species in the same way again, considering the context of an environment constantly changing and influenced by humans. It was great to have the opportunity to meet with all of those who could attend.

Mike McMurtry

On the cover: Jane Bowles at Rondeau, May 2008 - Photographing a Musk Turtle on Walpole Island, May 2008 - Photographing Canada Wild-rye (*Elymus canadensis*) at The Great Sand Dunes, Saskatchewan, August 2011.
Back cover: Jane (centre, with camera) and members of the COSEWIC Vascular Plants Subcommittee examining a dead Star-nosed Mole, near Quebec City, August 2012 (Photo: Mireille Delisle-Oldham) - Jane collecting a hawthorn (*Crataegus*) specimen for the UWO Herbarium, Cypress Hills Provincial Park, Saskatchewan, August 2011 - Jane on the north shore of Lake Superior, September 2008. (All photos by Michael J. Oldham, except where indicated)

Sidebar artwork: New England Aster (*Symphyotrichum*, or *Aster*, *novae-angliae*).

The standard source for scientific names and authorities of vascular plants is:

Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray and M.J. Oldham. 1998. Ontario Plant List. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 123, 550 pp. + appendices.

Membership forms can be found on the FBO website:
www.trentu.ca/fbo
Annual memberships are $20.00 for individuals and $25.00 for families.

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

Editor's Note

As you notice, this is a different, extended issue of the Newsletter.

There are times when fate strikes very near. Jane Bowles, to whose memory most of this edition is dedicated, was as close to the FBO as you can get. Mike Oldham's moving and detailed personal piece about Jane highlights her accomplishments, from professional and scientific to her volunteer work at the many organizations she was associated with. The impressive list of her publications, in a table several pages long, is a testimony to her extensive work on many aspects of botany, and not only. It may as well serve as a source of information on various natural areas and their plant checklists, on endangered species management, and many practical aspects and issues of field botany.

She will be sorely missed by all of us.

Field Trip Reports

A Day of Botanizing at the rare Charitable Research Reserve, Cambridge, Ontario

16 June, 2012

By Brian Miller

The location of this trip was ***rare* Charitable Research Reserve** (formerly known as the Cruickston Charitable Research Reserve), a 900+ acre portion of land that protects culturally and naturally significant features within Cambridge along the Grand and Speed Rivers. It is the goal of this charitable organization "to preserve the land for future generations by focusing on research, education, conservation, and ecological restoration". For those wanting to know more about ***rare***, there is a wealth of information on its website: www.raresites.org

The group met on a warm Saturday morning in June at the Lamb's Inn, ***rare's*** administrative office along Blair Road. Here we met our trip leader for the day, Brett Woodman, a Terrestrial and Wetland Biologist with Natural Resource Solutions Inc. (NRSI). Brett had familiarity with the ***rare*** property from the Ecological Land Classification (ELC) surveys NRSI had completed of the ***rare*** property in 2011. Prior to this work, several vegetation studies that vary in scope had been conducted on the property between 1976 and 2001. Informal observations of vascular flora outside of these studies also contribute greatly to ***rare's*** working list of vascular plant species. Beyond observing the plant species that make up the unique natural features of the property, a mission for the day's FBO outing was to find vascular plant species that had not been documented during these past studies. Of the many high quality plant communities within the ***rare*** property, we focused on just a few due to our limited time: Indian Woods (south of Blair Road/George Street) and the River Trail that leads to the meadow alvars and forested limestone cliffs adjacent to the Grand River (north of Blair Road/George Street).

Patch of *Thelypteris noveboracensis* in Indian Woods. Photo: B. Miller.

We began on the trail that started at Whistlebare Road and leads into Indian Woods. The trail was quite weedy with abundant Common Buckthorn (*Rhamnus cathartica*). However, a few uncommon and rare trees and shrubs

Peter Kelly beside a Sugar Maple in Indian Woods that germinated in 1874. Photo: B. Miller.

were observed occasionally. Of note were Hackberry (*Celtis occidentalis*), American Hazelnut (*Corylus americana*) and Northern Pin Oak (*Quercus ellipsoidalis*). Walking along we encountered a foxglove-like plant with moderately large pale yellow flowers.

After some confusion it was recognized as Yellow Foxglove (*Digitalis lutea*), an apparent garden escapee. Farther on, Sweet-cicely (*Osmorhiza* sp.) was observed and, as the hedgerow merged into Indian Woods, we were greeted by a few enormous Eastern Cottonwood (*Populus deltoides*). Peter Kelly (formerly the Research Director at ***rare***) explained that these cottonwood trees had been planted in approximately 1899 by the Eugene Langdon Wilks estate. Eugene Wilks was the youngest son of Matthew Wilks, an early land owner of the ***rare*** property.

INDIAN WOODS

We headed off the trail into Indian Woods, a remnant Sugar Maple–Beech–Oak forest with old growth characteristics. Peter gave a brief overview of this significant patch of woods and the trees within. Tree coring on many of the older trees within Indian Woods had been conducted by ***rare*** staff and separately by Nigel Edward Wilson Selig (2009) as part of his Master's thesis at the University of Waterloo. Peter explained that many individuals are in the 150–200 year old range with the oldest at ~ 240 years old.

As seen in the above photo, an abundance of two weedy ground species, Garlic Mustard (*Alliaria petiolata*) and Herb Robert (*Geranium robertianum*), was noticeable immediately inside the woods off the trail. However, as we traversed our way through the woods, the ground flora soon became less weedy and more characteristic of rich woodland. We encountered mesic and moist sections of woods and species characteristic of both moisture regimes were present. The fern flora was interesting with two regionally uncommon species observed: Interrupted Fern (*Osmunda claytoniana*) and dense patches laden with the delicate lime green fronds of New York Fern (*Thelypteris noveboracensis*). Eleven species of woodland sedges (*Carex* spp.) were observed. Three of these species are potentially new records for the property (*Carex deweyana*, *C. laxiculmis* and *C. pedunculata*). Of three species of woodland grasses seen, Rough-leaved Rice Grass (*Oryzopsis asperifolia*) was the most abundant, forming numerous tussocks throughout the drier sections of woods. Hairy Woodrush (*Luzula acuminata*) was an interesting species that attracted much attention from the group due to its relative rarity. Another highlight for many was seeing Squaw-root (*Conopholis americana*), a root parasite of oak trees in the Orobanchaceae.

The following is a list of additional species of interest that we encountered on our meander through Indian Woods.

FERNS & FERN ALLIES

Athyrium filix-femina (Lady Fern)
Cystopteris tenuis (Fragile Fern)
Dryopteris cristata (Crested Wood Fern)
Dryopteris marginalis (Marginal Wood Fern)
Equisetum scirpoides (Dwarf Scouring Rush)
Lycopodium annotinum (Stiff Clubmoss)
Polystichum acrostichoides (Christmas Fern)
Pteridium aquilinum (Bracken Fern)

FORBS

Allium tricoccum (Wild Leek)
Amphicarpaea bracteata (Hog Peanut)
Anemone quinquefolia (Wood Anemone)
Apocynum cannabinum (Indian Hemp)
Asarum canadense (Wild Ginger)
Galium circaezans (Wild Licorice)
Geranium maculatum (Wild Geranium)
Medeola virginiana (Indian Cucumber-root)
Polygala paucifolia (Gaywings)
Podophyllum peltatum (May Apple)
Smilax herbacea (Herbaceous Greenbrier)
Solidago caesia (Bluestem Goldenrod)
Symplocarpus foetidus (Skunk Cabbage)
Thalictrum dioicum (Early Meadow-rue)

SHRUBS & WOODY VINES

Euonymus obovata (Running Strawberry Bush)
Hamamelis virginiana (Witch-hazel)
Lindera benzoin (Spicebush)
Menispermum canadense (Moonseed)
Smilax hispida (Bristly Greenbrier)

GRAMINOIDS

Brachyelytrum erectum (Bearded Shorthusk)
Carex albursina (White Bear Sedge)
Carex arctata (Sedge)
Carex deweyana (Short-scale Sedge)
Carex gracillima (Graceful Sedge)
Carex intumescens (Bladder Sedge)
Carex laxiculmis (Spreading Sedge)
Carex pedunculata (Longstalk Sedge)
Carex pensylvanica (Pennsylvania Sedge)
Carex plantaginea (Plantain-leaved Sedge)
Carex rosea (Curly-styled Wood Sedge)
Carex sparganioides (Burreed Sedge)
Poa nemoralis (Bluegrass)
Schizachne purpurascens (Purple Oat Grass)

RIVER TRAIL – CLIFFS AND ALVARS

After lunch, we made our way to the George Street parking area at the easterly trailhead of the Grand Trunk Trail. We followed this trail for approximately 0.5 km until we met up with the River Trail. Plants of note along the Grand Trunk Trail were Black Maple (*Acer saccharum* ssp. *nigrum*), a heavily cankered Butternut (*Juglans cinerea*), Prickly Ash (*Zanthoxylum americanum*) and Wild Crab (*Malus coronaria*—our only native apple tree). There was some discussion amongst the group about whether the *Malus coronaria* we were observing were pure specimens or possible hybrids with a Domestic Apple (*M. domestica*). A study in the Canadian Journal of Botany by Paul Kron and Brian Husband (September 1, 2009) sheds light on this issue, suggesting there is a high potential for gene flow from the Domestic Apple into native populations of *M. coronaria*.

Small limestone outcrop draped in *Asarum canadense*, *Thalictrum dioicum* and *Schizachne purpurascens*. *Oryzopsis racemosa* at the bottom right. Photo: B. Miller.

We headed off the Grand Trunk Trail onto the River Trail that brought us through an area of young deciduous forest. Here we saw four new woodland graminoids that were not seen at Indian Woods. These included Bottle-brush Grass (*Elymus hystrix*) and three sedges (*Carex hirtifolia*, *C. hitchcockiana* and *C. woodii*). *Carex woodii* is a provincially uncommon species that is apparently a new species record for the property. Another species observed in this area (Small Forget-me-not, *Myosotis laxa*) is also a possible new species record for the ***rare*** property.

We soon came to an opening that appeared to simply be a meadow until our trip leader informed us it was alvar habitat due to the thin soils over shallow limestone bedrock with the addition of some characteristic plant species. We did not do a lot of exploring in this habitat because time was becoming limited; however, immediately off-trail we observed several species characteristic of dry habitats that could include alvars. Daisy Fleabane (*Erigeron strigosus*), Wild Bergamot (M*onarda fistulosa*), Hairy Beardtongue (*Penstemon hirsutus*), Clammy Ground-cherry (*Physalis heterophylla*) and Early Goldenrod (*Solidago juncea*).

After the alvar area we entered a deciduous forest and soon came across a small outcropping of limestone within the forest. Several rich forest species were present on and around the outcrop. Wild Ginger (*Asarum canadense*), Early Meadowrue (*Thalictrum dioicum*) and Purple Oat Grass (*Schizachne purpurascens*) were most abundant and seemed to drape over the rocks. Other calciphilic species such as Wild Columbine (*Aquilegia canadensis*), Maidenhair Spleenwort (*Asplenium trichomanes*) and Bulblet Fern (*Cystopteris bulbifera*) were present on the rocks and in crevices. At the base of the rocks was a very interesting wide-leaved forest grass named Black-fruit Mountain Rice (*Oryzopsis racemosa*). As it turns out, this grass is considered to be provincially uncommon and is a potential new record for the ***rare*** property.

A short distance from the small outcrop we encountered the tall and distinctive limestone outcrops that paralleled the Grand River for some distance. Walking along the limestone walls and overlooking the river below, we observed two new spring wildflowers that had not been seen earlier in the day: Sharp-lobed Hepatica (*Anemone acutiloba*) and Cutleaf Toothwort (*Cardamine concatenata*). A woodland sedge in past-prime condition was examined and tentatively identified to be Peck's Sedge (*Carex peckii*). An uncommon plant community was present at the base of these cliffs where mature Hackberry was abundant, as was Pale Jewel-weed (*Impatiens pallida*) in the ground layer. Another unique and uncommon species of this community was Bladdernut (*Staphylea trifolia*).

Continuing on the trail, we made our way back to the Grand Trunk Trail and to our cars to conclude the trip. The group was thankful to the great leadership for a great day of botanizing. In all, we observed nine vascular plant species that are believed to be new records for the ***rare*** property based on the working plant list for the property, which includes approximately 650 vascular plant species. These new records included five woodland sedges (*Carex deweyana, C. laxiculmis* and *C.* cf. *peckii, C. pedunculata* and *C. woodii*), two woodland grasses (*Oryzopsis racemosa* and *Poa nemoralis*) and two forbs (*Apocynum cannabinum* and *Myosotis laxa*). The most significant of the new records were *Carex laxiculmis, C. woodii* and *Oryzopsis racemosa*. These three species are provincially uncommon (S4 rank) and are considered regionally significant in the Region of Waterloo.

The extent of the ***rare*** property that we covered that day was quite small. Many plant communities were not visited due simply to time and so other new species records could be waiting to be discovered. ✸

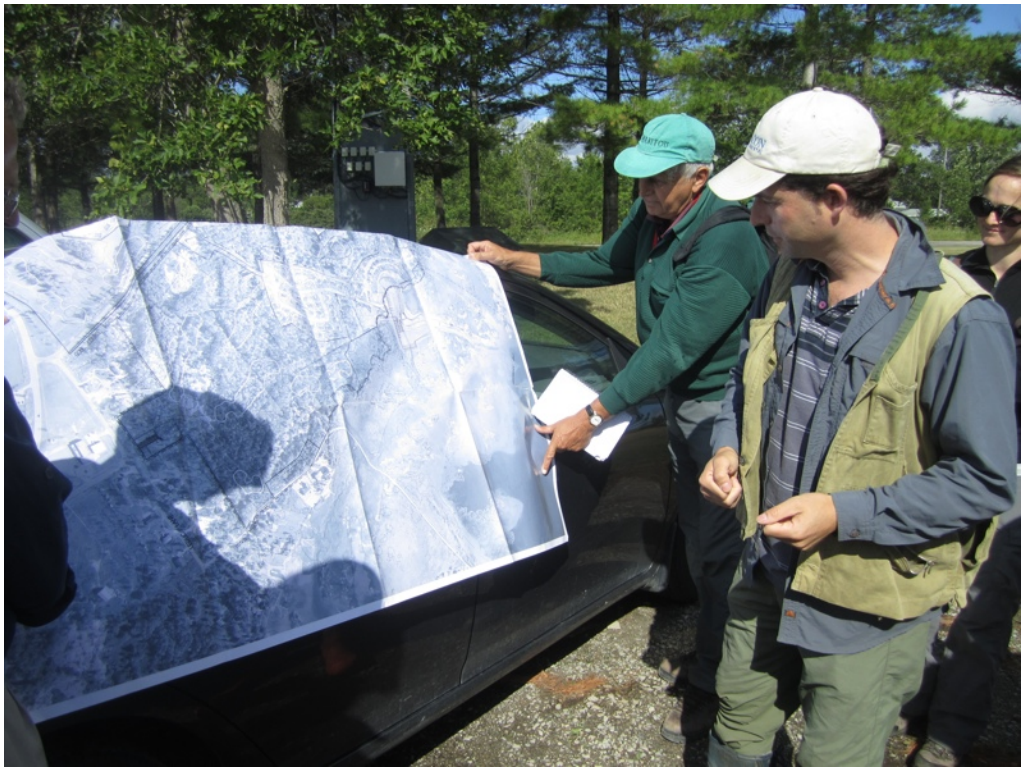
The Land Between Meets Georgian Bay

28 July 2013

By Mike McMurtry

Fourteen participants joined trip leader Dirk Janas at the Baxter Community Centre just north of where the Severn River flows into Georgian Bay. From here we explored on foot the Georgian Bay coastline in the vicinity of the contact line between the limestone bedrock of southern Ontario and the northern Canadian Shield. One would expect high species diversity in an area with such a confluence of boundaries and this area did not disappoint. The habitat mosaic included different types of coastal wetlands (meadow marsh, shallow-water marsh, shrubby and treed swamp), rock barrens dominated by Red Cedar and various oak species, and pine-oak-maple woodlands. This area has been included as part of a UNESCO World Biosphere Reserve, in large part thanks to a comprehensive study by Jarmo Jalava, Wendy Cooper and John Riley (Jalava et al. 2005). We had access to properties owned by the Georgian Bay Land Trust and another private landowner. This site on Georgian Bay has been in the public eye and controversial because of a large development, involving residences, a marina and a golf course, that has undergone environmental studies, planning review and is now underway.

The weather looked threatening when we set out but, mercifully, the rain held off until we got back to our vehicles in late afternoon. We first made our way along a local road and through small rock barrens and thicket swamps towards the shoreline. The wetlands are part of the provincially significant Potato Island Wetland. Potato Island is just off-shore from the area we were exploring and was visible to us once we got closer to the water. The semi-open rock barrens contained Lance-leaved Aster (*Symphyotrichum lanceolatum*), Northern Commandra (*Commandra umbellata*), Marginal Shield Fern (*Dryopteris marginalis*), both Woodland and Virginia Strawberries (*Fragaria vesca* and *F.*



Getting the lay of the land: Dirk Janas (R) and Peter Beckett (L). Photo: M. McMurtry.

virginiana), Early Goldenrod (*Solidago juncea*), Downy Arrowwood (*Viburnum rafinesquianum*), Ninebark (*Physocarpus opulifolius*), Poison Ivy (*Rhus rydbergii*), Common Juniper (*Juniperus communis*) and Low Sweet Blueberry (*Vaccinium angustifolium*). Common grasses were Slender Wheat Grass (*Elymus trachycaulus*), Poverty Grass (*Danthonia spicata*) and the non-native Timothy (*Phleum pratense*). In wetter swales, Narrow-leaved Meadow-sweet (*Spiraea alba*), Winterberry (*Ilex verticillata*) and Glaucous Honeysuckle (*Lonicera dioica*) were found. Bromelike Sedge (*Carex bromoides*), a sedge with southern affinities (Jalava et al. 2005), was pointed out by Dirk in this area. Red Ash (*Fraxinus pennsylvanica*), a species characteristic of southern Great Lakes' shorelines was common but many of these were experiencing die-back, perhaps due to dry conditions. We saw three species of oak including White Oak, Bur Oak and Red Oak (*Quercus alba*, *Q. macrocarpa* and *Q. rubra*, respectively).

Carex tuckermanii. Photo: M. McMurtry.

We moved into a more continuous swampy area with high species diversity, where we saw the regionally rare Sweetflag (*Acorus americanus*). Also here were Small-fruited Bulrush (*Scirpus microcarpus*), Hemlock Water-parsnip (*Sium suave*), Discoid Beggar-ticks (*Bidens discoidea*), Marsh Fern (*Thelypteris palustris*), Bulb-bearing Water-hemlock (*Cicuta bulbifera*), Great Water Dock (*Rumex orbiculatus*), Spikerush (perhaps *E. erythropoda* - tall with red bases, but needed mature achenes to identify positively), Canada Blue-joint (*Calamagrostis canadensis*), Common Water-plantain (*Alisma triviale*), Wool-grass (*Scirpus cyperinus*) and Tuckerman's Sedge (*Carex tuckermanii*). Several of these plants we noticed were extremely large compared to a typical size, so we surmised that the growing conditions must have been optimum. Shrubs in the wetland included Shining Willow (*Salix lucida*), Black Huckleberry (*Gaylussacia baccata*), Pussy Willow (*Salix discolor*) and Smooth Rose (*Rosa blanda*).

We passed through more rock barrens where we added Pale Corydalis (*Corydalis sempervirens*), Trembling Aspen (*Populus tremuloides*) and a goldenrod we didn't resolve beyond Hairy Goldenrod (*Solidago hispida*) or Gray Goldenrod (*S. nemoralis*). Both of these species have hairy stems and leaves, but *S. nemoralis* usually has a more terminal, pyramidal inflorescence than *S. hispida*, which has a wand-shaped upright inflorescence (Semple et al. 1999). When *S. nemoralis* is wand-shaped, it is usually arched. Crinkled Hairgrass (*Deschampsia flexuosa*) was common, as was Early Saxifrage (*Saxifraga virginiensis*). Only the distinctive basal rosettes of Early Saxifrage remained at this time of year. We saw an Eastern Gartersnake and human-made piles of woody debris intended to act as hibernacula to mitigate impacts from the nearby housing development on this and other reptile species known from the area.

As we got within about 50 m of the coast, we started to see species representative of coastal meadow marsh. For example, Four-flowered Loosestrife (*Lysimachia quadriflora*) was abundant in this area, along with Tall Cord Grass (*Spartina pectinata*), Switchgrass (*Panicum virgatum*), Marsh Bellflower (*Campanula aparinoides*) and Small-flowered Agalinis (*Agalinis paupercula*). The *Agalinis*, Dirk pointed out, has a very pleasant and powerful fragrance. Kalm's St. John's-wort (*Hypericum kalmianum*) was in full flower. Some areas were dominated by other graminoids, such as Wire Sedge (*Carex lasiocarpa*), Water Bog-rush (*Cladium mariscoides*), Reed Canary Grass (*Phalaris arundinacea*) and Tussock Sedge (*Carex stricta*), also known as the "Ankle-breaker Sedge" based on Dirk's experience. The non-native Deptford Pink (*Dianthus armeria*), Bull Thistle (*Cirsium vulgare*), Purple Loosestrife (*Lythrum salicaria*), Glossy Buckthorn (*Rhamnus frangula*) and Spotted Knapweed (*Centaurea maculosa*), showed us that this plant community had been somewhat disturbed by human activities. I've noticed that Spotted Knapweed and Glossy Buckthorn are also now quite common on the Penetanguishene Peninsula of Georgian Bay. Slender Willow (*Salix petiolaris*) and Silky Dogwood (*Cornus ammomum* ssp. *obliqua*) were the most common shrubs here. On an exposed rock, Silky Dogwood

The trip leader in rock barren. Photo: M. McMurtry.

was growing prostrate along the rock, rather than vertically, a growth form that may be caused by the forces of winds, ice and snow. Most of us hadn't seen this before, but later I read in *Shrubs of Ontario* (Soper and Heimburger 1982) that this shrub is known to be both upright or spreading.

We stopped for lunch on a rocky shoulder overlooking the bay between us and Potato Island. At the coast it was obvious that the water level of the lake was very low relative to historical levels. Dirk explained how this is becoming an issue for coastal land owners, some of whom are losing boat access to the lake. Navigation in Georgian Bay is challenging as lake levels can be well below the chart datum of the Canadian Hydrographic Service. A newspaper article (Ha and Baic 2013) attributes this to three factors: 1) dredging of the St. Clair River between Lake Huron and Lake St. Clair, 2) climate warming, which is resulting in higher levels of evaporation relative to precipitation going into the lake, and 3) isostatic rebound, meaning that the land is still rebounding upwards following the release of the great weight of glacial ice sheets after the last glaciation in North America.

In the meadow marsh near our lunch stop, we saw Stiff Yellow Flax (*Linum medium* var. *medium*) growing with Kalm's Lobelia (*Lobelia kalmii*), Wire Sedge (*Carex lasiocarpa*), Common Three-square (*Scirpus pungens*) and Water Bog-rush (*Cladium mariscoides*). Stiff Yellow Flax is a provincially rare plant endemic to Great Lakes' coasts. Fragrant White Water Lily (*Nymphaea odorata*), Canada St. John's-wort (*Hypericum canadense*), Tall Cord Grass and Variegated Horsetail (*Equisetum variegatum*) were present in the adjacent shallow-water marsh, as well as both Hardstem and Softstem Bulrush (*Schoenoplectus acutus* and *S. tabernaemontani*, respectively).

We found a Map Turtle shell in our wanderings along the stony shoreline. There were scattered cedars here as well, most of which corresponded to what we know as Eastern Red Cedar (*Juniperus virginiana*). This species has leaves of two types: needle leaves and scale leaves. Other smaller shrubs we saw had exclusively needle leaves, similar to Common Juniper, but the leaves were shorter (less than 1 cm) and had a greyish cast. These shrubs were about 0.5 m in height and upright, unlike the native Common Juniper. Our best guess is that they were an escaped cultivar of *J. communis*.

We walked over to a marina that is being dredged and blasted deeper to allow boat access from the new residential development to the channel where the Severn River enters Georgian Bay. Absorbent dams prevent most of the silt reaching the lake during the operation. Then a boardwalk took us from the coast to a new building constructed as a sales centre for the housing development. A previous owner with a house near the coast had apparently sold their property as boat and pedestrian access to the lake became more difficult.

Lured by the promise of still more plants to see, we continued on into a Red Maple (*Acer rubrum*)/Red Ash swamp community. A few additional species were found there, including Bristle-leaved Sedge (*Carex eburnea*), Slippery Elm (*Ulmus rubra*), Enchanter's Nightshade (*Circaea lutetiana*), Hop Sedge (*Carex lupulina*), Hog Peanut (*Amphicarpaea bracteata*), Bracken Fern (*Pteridium aquilinum*), Partridgeberry (*Mitchella repens*), Large-leaved Aster (*Aster macrophyllus*) and Riverbank Grape (*Vitis riparia*). Hop Sedge resembles Retrorse Sedge (*Carex retrorsa*) but has slightly longer, thicker and strongly ascending perigynia (Voss 1972).

Dirk also led us past some abandoned buildings remaining from a previous owner, to an open water marsh with a stand of Large-fruited Bur-reed (*Sparganium eurycarpum*), Greater Bladderwort with floats distributed among the leaf segments, probably (*Utricularia vulgaris*), and Pickerelweed (*Pontederia cordata*). Bur-reed leaves superficially look like the leaves of a cattail, but has a distinctive keel on the leaf. We also found Pipewort (*Eriocaulon aquaticum*) in an early stage of growth (mostly basal leaves) and Tufted Loosestrife (*Lysimachia thyrsiflora*). Our way back to the community centre led us past many newly-constructed houses and a golf course, in sharp contrast to the natural area we had just seen along the coast. It is hoped that the developer and new residents will have regard for the biodiversity of this outstanding natural area as the building project is completed. The road leading to the houses included an underpass for reptiles and amphibian to reduce road mortalities. A walking trail is planned to follow the coast, which will improve pedestrian access and perhaps concentrate impacts to a confined area.

This account only lists a few of the plants in the Potato Island area. Readers who are interested in finding out more about the biodiversity of this area could refer to Jalava et al. (2005). On behalf of those taking part in our outing I thank Dirk for sharing his knowledge of the plants and ecology of this area and his insights into the land-use planning issues that are emerging.

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IN MEMORIAM

Jane Margaret Bowles, 1952-2013

Botany and conservation in Ontario lost a friend and champion when Jane Bowles passed away from an aggressive cancer on 27 July 2013. Jane had a long association with the Field Botanists of Ontario and was the first editor of the FBO Newsletter from 1989 to 1994. She was a popular leader of and frequent participant on FBO field trips for over 20 years.

Jane Bowles was born in Kenya in 1952 to British parents and spent her early life in Kenya and Great Britain. She completed an Honours B.Sc. in Botany in 1976 at the University of Aberdeen, Scotland, and moved to London, Ontario, in that year to pursue a Ph. D. at the University of Western Ontario (UWO). Jane's Ph. D. thesis topic was "The effects of human disturbance on the sand dunes of Pinery Provincial Park, Ontario" and was completed in 1980 under the supervision of Dr. Anwar Maun. Jane was associated with UWO for more than 30 years and since 2003 was Curator of the UWO Herbarium and Director of the Sherwood Fox Arboretum. She was also an adjunct professor in the Departments of Geography and Biology and taught a range of courses in both departments. Jane influenced many young biologists through her teaching, in particular the popular Desert Ecology field course which she taught with Dr. Paul Hanford for many years. The southwestern North American deserts were one of Jane's favourite regions and habitats and she made many trips to the area.

In addition to her duties at UWO, Jane was a freelance ecologist and worked on a wide variety of botany and conservation projects for many different agencies. Jane loved fieldwork and conducted life science inventories for the Ontario Ministry of Natural Resources and local conservation authorities and municipalities including studies of well-known southwestern Ontario natural areas such as the Medway River Valley, Turkey Point Marshes, Saratoga

Swamp, Maitland River Valley, Skunk's Misery, St. Williams Crown Forest, and the Sydenham River Valley. She was also a lead researcher for several large natural area inventories including the Kent- Elgin Natural Areas Survey, City of London Subwatershed Study, and Oxford County Terrestrial Ecosystem Study. For 20 years Jane has made annual trips to Long Point to monitor the effects deer reduction on vegetation. Jane is one of the authors of the widely used Southern Ontario Ecological Land Classification and worked closely with several First Nations, most notably Walpole Island First Nation where she prepared their Ecosystem Recovery Strategy.

Jane prepared federal and provincial status reports and recovery plans for several of Ontario's at risk plant species including Wood Poppy, Skinner's Agalinis, Goat's-rue, Dense Blazing Star, Showy Goldenrod, White Prairie Gentian, Bent Spike-rush, and Pink Milkwort. She was a member of both the provincial Committee on the Status of Species at Risk in Ontario and the federal Vascular Plants Species Specialist Committee of the Committee on the Status of Endangered Wildlife in Canada.

For the past 33 years Jane Bowles was married to UWO biology professor Dr. André Lachance. Jane and André collaborated on a variety of mycological studies and travelled to many parts of the world together in search of yeasts, André's specialty. Jane was involved in the description of more than 30 species of yeasts new to science.

Jane lived her life in as ecologically responsible a manner as possible. She drove a hybrid car, bought almost all of her food locally, and reduced, reused, and recycled extensively. Jane was a tireless worker on behalf of conservation. She volunteered her time to a wide variety of advisory committees including Tallgrass Ontario, Middlesex County Forest Advisory Committee, Minister's Advisory Panel for Ontario Endangered Species Act, Long Point Region Conservation Authority Forest Management Technical Advisory Committee, Carolinian Canada's Science Advisory Committee, and City of London Environmental and Ecological Planning Advisory Committee. Most recently, Jane became heavily involved with the Thames Talbot Land Trust and was a founding member of the Board of Directors and Chair of the Property Management Committee. Jane's contributions to conservation have not gone unnoticed. In 2010 the Urban League of London presented her the Green Umbrella Award in recognition of community citizenship and in May 2013 Carolinian Canada presented Jane with a Lifetime Achievement Award for her dedication to the protection of nature in the Carolinian Zone.

Although best known as a top-notch field botanist, ecologist and conservationist, Jane had a wide variety of skills and interests. She was an accomplished photographer and artist and her sketches graced many of the early issues of the FBO Newsletter. Her photographs won awards at several photography competitions. Jane was innovative and resourceful and always coming up with devices and techniques to improve her efficiency in the field. One of her inventions, the collecting scroll (or Bowles scroll as it is known to many users) was described in a 1986 issue of The Plant Press and is widely used by Ontario field botanists. Jane was an astute observer of nature and was interested in many areas of natural history. At various times she studied and collected groups as diverse as bryophytes, terrestrial snails, and Unionid molluscs (freshwater clams).

On a personal note, I have had the pleasure of serving with Jane on several committees and spending many enjoyable days in the field together exploring natural areas in Ontario and elsewhere. Jane was always positive, cheerful, hard-working, and fun to be with. She had a great sense of humour and usually a twinkle in her eye and smile on her face. Jane Bowles made many significant and lasting contributions to botany and conservation and she will be greatly missed by those who knew her.

Michael J. Oldham

Jane M. Bowles Publications

Compiled by Michael J. Oldham

Below is a list of 147 reports and other publications authored or co-authored by Jane Bowles. The list is undoubtedly incomplete since Jane worked on a wide variety of projects for many different agencies. Copies of many of these documents are on file at the Ontario Natural Heritage Information Centre. The following individuals helped with compiling the list: Muriel Andreae, Phil Beard, Michael Bradstreet, Bill Draper, Michelle Kanter, Jarmo Jalava, André Lachance, Sandra Mackin, Jon McCracken, Bill McIlveen, Cathy Quinlan, Sonia Schnobb, Karen Timm, and Tara Tchir.

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Book Review: The Reindeer Botanist: Alf Erling Porsild, 1901-1977 by Wendy Dathan. 2012, University of Calgary Press. 726 pp.

Wendy Dathan presents the life of Alf Erling Porsild, an intrepid botanical explorer who travelled extensively through remote regions of Canada's Arctic, often by foot, dogsled, canoe or schooner. The subject of the book is an important figure in Canadian botany, and was Chief Botanist of the National Herbarium of Canada for many years and made many important plant discoveries. His collections included about 80 taxa that were new to science. During his tenure at the National Herbarium, from 1936 to 1967, the numbered collections grew from 120 000 to just over 430 000 specimens (Soper and Cody 1978).

Erling Porsild had an unusual upbringing and training in botany. He grew up in Greenland where his father was director of the Danish Biological Station on Disko Island. Erling and his brother Robert were actively engaged in biological collecting and observation from an early age. They received from their father the equivalent of 5 cents for each plant they found, with a bonus of 50 cents for rarities and $1.50 for plants new to the island flora. Erling became known for his sharp botanical eye. Both he and his brother were employed by the Canadian government through the influence of M.O. Malte, who was Chief Botanist of the National Herbarium and a friend of the Porsild family. Their assignment was to study the potential for introducing domesticated reindeer from Alaska to the area of the Arctic east of the mouth of the Mackenzie River to be managed as a food source for northern people. This controversial initiative was not very successful, though the outcome probably had more to do with a lack of involvement of Aboriginal people than with the botanical support. It was unusual that Erling was hired as botanist with the Canadian government even though he had no university degree. However, his background in Greenland and his extraordinary initiative and self-discipline more than made up for any possible shortcoming in his formal education. Eventually, Porsild received his Ph.D. from the University of Copenhagen in 1955 on the basis of his publication, The Vascular Plants of the Western Canadian Arctic Archipelago. By this time he was 54 years old and Chief Botanist of the National Herbarium.

One of the aspects of this book that I find interesting is how it weaves together the stories of key figures in field botany and northern exploration from the 19th century up until the 1970s. These people include James Richardson (of the Franklin expedition), John and James Macoun, V. Stephansson, M.L. Fernald, H.M. Raup, W.J. Cody, J.H. Soper, G.W. Argus and others. An engaging section in the book deals with the now famous exchange between Porsild and Farley Mowat over Mowat's book, People of the Deer. Their writings display not only their differences of opinion on the historical events recounted in Mowat's book, but also two ways of looking at the world. Mowat is the passionate story teller while Porsild the careful scientist concerned with getting the facts right. Despite their differences, both men clearly share a profound love of the northern landscape and its people.

Porsild is best-known for his work in documenting the flora of northern Canada and he contributed many excellent publications. Vascular Plants of Continental Northwest Territories, Canada was co-authored with W.J. Cody (1980) and published just after Porsild's death. Though the nomenclature has changed for some species, this volume is still very useful in identifying plants from northern Canada, including the Hudson Bay lowlands in Ontario. The taxonomic keys, succinct species accounts, wonderful line drawings and distribution maps are a model of clarity.

While most of Porsild's work concerned the Arctic, he did do some botanizing and collecting in the Ottawa area. He published a paper on a relict flora on sand dunes in the Ottawa Valley (Porsild 1941) and on the presence of Red Spruce, Picea rubens, in the lower Gatineau Valley (Heimburger and Porsild 1938). FBO members may be interested in looking these up.

The book is a long one - it can be read in its entirety or it can be studied by using the appendix to identify a topic of interest and following that thread. It will be of interest to those wanting to know more about the development of field botany in Canada and in the history of exploration of Canada's North.

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