

S U M M E R 2 0 1 6

# FIELD BOTANISTS OF ONTARIO

## NEWSLETTER

VOLUME 28(2) ISBN: 1180-1417

Message from  
the President ... 2

Editor's Note ... 3

Cruising Killarney with  
Rothfels Sr. ... 3

Barr Property ... 5

Cramahe Twp prairie  
plants ... 6

Alderville Savanna ... 8

Lichen field guide review ... 12



# President's Message

The FBO held its Annual General Meeting (AGM) in Norfolk County this year, at the Backus Heritage Conservation Area, on September 10 and 11. Four field trips were organized for the occasion, and all were well attended. There was also a great turn-out for the banquet and evening program, which featured an excellent presentation on Ontario's flora by Mike Oldham of the Natural Heritage Information Centre (NHIC).

Dr. Jim Phipps was honoured with the Goldie Award at the AGM, which is given annually to an individual who has made a significant contribution to the advancement of field botany in Ontario. A presentation by Bill McIlveen highlighted Jim's many years of work in field botany and plant systematics, notably his significant advancements in the classification of *Crataegus*.

The FBO Student Award was also presented at the AGM this year to Holly Stover, a PhD student at Western University. The award is intended to recognize and encourage students pursuing research in field botany or closely related studies. The award provides a small financial incentive as well as exposure for the student's research – both at the AGM and in the newsletter. We believe we have found a worthy recipient of the Student Award this year and are pleased to support Holly's research and look forward to seeing the results of her work.

If you haven't checked out the FBO Facebook page yet, please consider joining our on-line community of botany enthusiasts. Members regularly share stories and photos of plants and related discoveries. It's a great forum to get help with plant identification, share your experiences in the field, and connect with other botanists. Just log into your Facebook account and do a search for "Field Botanists of Ontario".

Dan Westerhof

**On the cover:** Alderville Savanna sign; Photo Dan Westerhof. Rabbit Foot Clover (*Trifolium arvense*) at Alderville Savanna; Photo Richard Baxter.

Sidebar artwork: Common Pokeweed (*Phytolacca americana*).

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)

Join us on Facebook



Follow our Blog



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

Bill Draper  
[william.draper@sympatico.ca](mailto:william.draper@sympatico.ca)

### Secretary

Julia Marko Dunn  
[jmarkodunn@gmail.com](mailto:jmarkodunn@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  
[ndunn@nsenvironmental.com](mailto:ndunn@nsenvironmental.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

Bill Crowley  
Tristan Knight  
Mary-Anne Young  
Jennifer Doubt

## Editor's Note

At the time when many of us gathered at the 2016 AGM in southwestern Ontario's Backus Woods, this issue of the Newsletter was receiving final editorial touches to report, amongst others, on the events that accompanied our previous, 2015, gathering in Peterborough. Several very interesting trips were organized, mostly featuring the tallgrass prairie and savanna ecosystems of the Rice Lake Plains. In this area, these two types of vegetation reach their northeastern and final limit of distribution in North America. Although, admittedly, the diversity of species is much lower than, say, in the Ojibway Prairie, still - for the curious observer - many plants of high interest awaited our members. We are thus presenting three accounts of the trips, all successfully completed in somewhat challenging atmospheric conditions.

Earlier this year, Mr. Paul Rothfels (closely related to Carl Rothfels, formerly of the RBG Herbarium) participated in a BioBlitz in Killarney, a jewel among Ontario's provincial parks. The style of the report reflects the laid-back, easy-going nature of Paul the Father. Enjoy.

To top up the issue, Mike Oldham invites you to discover the wonderful world of lichens in a new book co-authored by our vice-president Troy McMullin. Mike finds this volume very useful for a beginner lichenologist, with beautiful photographs and gobbles of interesting details on species morphology and ecology.

All the best,

Chris Zoladeski

# Field Trip Reports

## Chikanishing Expeditions, Killarney Provincial Park

28-29 May, 2016

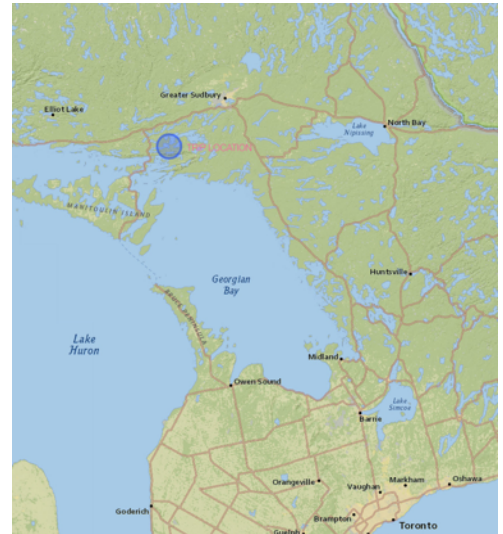
By Paul Rothfels

Four FBO members responded to the invitation by Ed Morris for "scientists, experienced naturalists, senior students, and recent graduates" to participate in a BioBlitz within Killarney Provincial Park. Approximately thirty people in total participated. It was decided that four separate groups consisting of a spread of expertise would explore separate areas and habitats for the day. As a result, the small FBO contingent was further split into two parties of two people. A huge burden was placed on our shoulders as the primary botanical contributors of the Blitz but, fortunately, Ed was knowledgeable in the local flora and kept us on the straight and narrow.



Rothfels, the man behind the mosquito net, resting on pink feldspar. Photo: P. Kilbourn.

Upon arrival, we located our accommodation. A newly renovated building, formerly a park staff house, was to be our home for two nights. This building was reconfigured as a lodge, available to the public for rent and capable of hosting a party of 16. To cut to the chase, the facility was unbelievable. Used to the Algonquin Wildlife Research Station as I was, I felt like I'd dropped into a 5-star resort. Enough said on that score.



Next, we met Ed Morris, a former FBO Newsletter editor, as some old-timers will recall; I'd also heard rumors that he was a retired MNR employee from about the same era, so I was expecting someone approaching a ripe old age - like me. Instead, we met a person in mid career who dispelled the rumor - Ecologist for Ontario Parks (Northeast Zone) - who put us all at ease with his pleasant welcome. Then we met Karen, Ed's other half, who in this opulent setting treated us to delicious meals prepared from scratch and packed lunches in hand-sewn bags she'd made from fabrics each of which highlighted a natural theme - mine was covered in mosquito images, for example.

So, down to work. Birding was a separate and significant component of the Blitz. It involved a 24-hour marathon to identify as many species as possible. The birders, mostly from Greater Sudbury, were experienced and keen.

Ed's intern recounted how he had switched from identifying birds by sight to doing so by song after he broke an ankle chasing down a sighting - that kind of keenness. The marathon tallied a disappointing species count of seventy-three, as I recall, but the event was salvaged by the sound and sighting of a Yellow-throated Vireo (*Vireo flavifrons*), which was north of its range. This caused great

rare? In our case, it was the latter.

The flora of Killarney is typically northern, if I can generalize and not merely list common plants. My impressions might be more useful: I'm partial to ferns and was very surprised to see the prevalence of Interrupted Fern (*Osmunda claytoniana*). It was everywhere and in full "flower". Almost weed status. Equally impressive were the stands of Oak Fern (*Gymnocarpium dryopteris*) and Northern Beech Fern (*Thelypteris phegopteris*). On the edge of Proulx's Wetland, Hoary Willow (*Salix candida*) was readily identified by its large and fuzzy catkins. Ed also pointed out Lake-bank Sedge (*Carex lacustris*), wet sedges being a specialty of his. Upland sedges were more problematic and there was some discussion as to whether one was Graceful Sedge (*Carex gracillima*) or Drooping Wood Sedge (*C. arcuata*). *Arctata* won out. Later that evening, Dave put an upland sedge under a dissecting scope the image of which was transmitted to a large screen for all to see - didn't I say 5-star resort? Leica brand, no less. Beside the specimen was a plastic ruler so we could measure carpellate scale length relative to perigynium, etc. This keying exercise was very rewarding and led to the identification of Peck's Sedge (*Carex peckii*).



Mountain Maple (upper left) vs. Striped Maple (lower right) Photo: P. Kilbourn.

excitement. The birding included some banding: a lovely spotted thrush was captured in a mist net and brought into the lodge for identification. Budding naturalists gathered round to participate, which led to a verdict of Swainson's Thrush (*Catharus ustulatus*). Since this bird was similar to the Hermit and Wood Thrushes, the exercise took some time and was an excellent learning experience for those involved. This collaboration reflected the tone of the weekend: it was as much a learning and sharing experience as a giving of pearls of wisdom by an expert, if not more so.

For those who know Killarney, it is a magnificent landscape highlighted by white quartzite hills. With great anticipation, we divided into four groups and set out for the day. I hung out with Ed, Dave (an avid Odonata and Lepidoptera enthusiast with excellent ID skills currently with Credit Valley Conservation), and Rachele, a student NHE (natural heritage educator) working for the Park. Ed led us on the Cranberry Bog Trail, which was walking distance from the lodge. Our task was to identify as many species as possible in a Park, which does annual inventory, so there was the important question of procedure. Do you count the common plants, which abound, or just the more uncommon or

Moving along (literally), we left the wetland in a relatively dry state (no soakers) to pick up the bog trail, cross a beaver dam, and climb onto pink feldspar, which proved to be a lovely lunch spot overlooking a beaver pond/lake. We had our feast among the Late Lowbush Blueberry (*Vaccinium angustifolium*), Pale Corydalis (*Capnoides sempervirens*, syn. *Corydalis sempervirens*) and



Interrupted Fern. Photo: P. Kilbourn.



Narrow-leaf Blue-eyed-grass (*Sisyrinchium angustifolium*).  
Photo: P. Kilbourn.

even a few Moccasin Flowers (*Cypripedium acaule*), during which we were entertained by what I hoped was a Blanding's Turtle (*Emydoidea blandingii*) but which everyone agreed was a Painted (*Chrysemys picta*). I'll have to wait to see my Blanding's.

The return trip was dedicated to distinguishing between Mountain (*Acer spicatum*) and Striped Maple (*A. pensylvanicum*). Ed pointed out specimens of the two plants growing side-by-side – a perfect contrast for identification. Later, I came across a shrub I was keen to identify. Pulling out my trusty "Shrubs of Ontario", I quickly zeroed in on Maple-leaved Viburnum (*Viburnum acerifolium*). Ed kindly pointed out that I was looking at Mountain Maple. Oops! Never too late to learn as they say, but why does it have to be so embarrassing? Nearing the Lodge, Ed snagged a Clearwing moth spp., collected by Dave for further identification. The moth brought back memories of my collecting days in the 1950s (the Clearwing was the one which got away). The final highlight (apart from the home-made lasagna and accompaniments like home-baked carrot cake) was the sharing of data at the end of the day. I enjoyed watching primarily younger folk, discussing and learning from each other's field notes and observations.

All in all a very interesting experience capped off with an evening drive in search of Black Bear (*Ursus americanus*), which we were warned were plentiful. Unfortunately, I had to settle for the photo of a large specimen that Karen had snapped outside the lodge kitchen at mid-day.

Thanks to Ontario Parks for the hospitality and Ed and Karen for hosting this. A very rewarding experience was had by all. ✨

## Tallgrass prairie in the rain

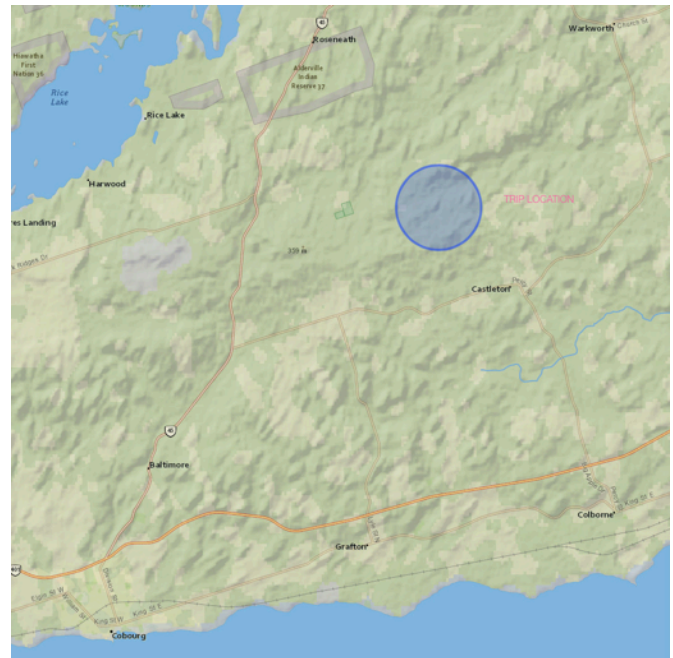
12 September, 2015

By Chris Zoladeski

**T**here were no ticks, certainly no mosquitoes and poison ivy was past its prime. But there was rain.

Todd Farrell of the Nature Conservancy of Canada (NCC), our trip leader, arrived early to do some stewardship work and meet us at the parking area. About a dozen participants addicted to similar pursuits trickled in, car after car, emerged from the vehicles and immediately busied themselves with their anti-rain gear.

Thus pre-soaked, we gathered around Todd who described the location and the itinerary. We were about to explore the varied habitats of the Rice Lake Plains, on the eastern fringes of the Oak Ridges Moraine. The 31-acre Barr property,



owned by the NCC, was the main site we would explore, but there were also two additional locations to see.

Parts of the surrounding area used to be human-impacted, as there was – just into the Russ Creek Road – a public school (since removed) as well as a cemetery (still here). In general, most of the area was open when the settlers lived here, but has now grown back with trees, primarily Scots Pine (*Pinus sylvestris*), which spread from nearby

plantations. Open and still disturbed roadsides continue to have a cover of Spotted Knapweed (*Centaurea stoebe*) and Awnless (Smooth) Brome (*Bromus inermis*). The major oaks on the property are Black Oak (*Quercus velutina*), Red Oak (*Q. rubra*), and some White Oak (*Q. alba*), in addition to several other common coniferous and deciduous species. Live specimens of the provincially and federally endangered Butternut (*Juglans cinerea*) are also present at a few spots. Todd explained that the highly invasive European Swallow-wort, or Dog-strangling Vine (*Cynanchum rossicum*) is becoming a problem, however, thankfully, Garlic Mustard (*Alliaria petiolata*) is not yet.

After trekking on a narrow access road for a distance, we entered the property via a burn break in the woods. There, we could see the difference in vegetation between the burned and the unburned side. The former had an open understory dominated by Bracken Fern (*Pteridium aquilinum*) and Grey Dogwood (*Cornus foemina*) under the White Pine (*Pinus strobus*) trees; the latter had a closed understory of shrubs, mostly Roundleaf Dogwood (*Cornus rugosa*), ferns, Scouring-rush (*Equisetum hyemale*) and tree saplings within a young forest of Trembling Aspen (*Populus tremuloides*) and White Pine (*Pinus strobus*).

Along the trail we spotted several species, progressively more indicative of open habitats: Lopseed (*Phryma leptostachya*), Large Tick-trefoil (*Hylodesmum*, formerly *Desmodium glutinosum*), Bare-stemmed Tick-trefoil (*Desmodium nudiflorum*), and Sweet Fern (*Comptonia peregrina*) with its citronella-smelling leaves. New Jersey Tea (*Ceanothus americanus*) was taking advantage of the open spaces created by the burn. The plants entertained the participants when their ripe fruits would explode when touched, thus releasing seeds.

At the back of the property, Todd led us to the tallgrass prairie portions, where Slender Blazing Star (*Liatris cylindracea*) grows in high numbers. This area used to be covered by Scots Pine but now, thanks to the burns, it has thriving populations of Big Bluestem (*Andropogon gerardii*), Wild Bergamot (*Monarda fistulosa*), Sky-blue Aster (*Symphotrichum oolentangiense*, formerly known by its descriptive and gorgeous name *Aster azureus*), Prairie Buttercup (*Ranunculus rhomboideus*) now at the end of its life cycle, Tall Cinquefoil (*Drymocallis*, or *Potentilla, arguta*), and of course masses of *Liatris*.

We then arrived at an open, elevated area, where restoration is ongoing. This explained the preponderance of weedy species, such as Greater Knapweed, in addition to the native Indian Grass (*Sorghastrum nutans*), Sand Dropseed (*Sporobolus cryptandrus*), Wormwood (*Artemisia campestris*) and the *Liatris*. We loitered about the spot and the group dispersed, with findings including a few rare species, such as Grooved Yellow Flax (*Linum sulcatum*) and Large-pod Pinweed (*Lechea intermedia*) growing amongst White Heath Aster (*Symphotrichum ericoides*) and Grey-stemmed Goldenrod (*Solidago nemoralis*).

As we were going back, Todd led us to the most open habitat of all: a small sand pit, with very sparse cover of Sand Dropseed and

Wormwood. After a quick lunch, we walked to nearby old Russ Cemetery, where tallgrass prairie still persists along the edges, being mostly represented by Big Bluestem.

The last location was the Red Cloud Savanna, a property just recently purchased by NCC. Several of the now familiar species greeted us there, led by hundreds of Slender Blazing Star. Most of the tallgrass prairie species grew in large openings amongst Oak and Pine woodlands, on diverse topography of valleys and hills. So, we saw Fragrant Sumac (*Rhus aromatica*), Grooved Yellow Flax, Tall Cinquefoil, Big Bluestem, and Butterfly Weed (*Asclepias tuberosa*). Openings on the steep slopes provided habitat for Little Bluestem (*Schizachyrium scoparium*) and Sky-blue Aster.

Todd explained that a management strategy will be developed and, amongst other approaches, it will involve removal of exotic trees and shrubs and, potentially, burning of the slopes to thin out the coniferous trees.

By that afternoon time, the rain had long been gone although the skies remained overcast. We thanked Todd for a very enjoyable day during which many members of the FBO had a chance to observe the numerous prairie species and the management approaches used to retain them as the jewels of the local flora at this easternmost outpost of the tallgrass prairie biome. ✨

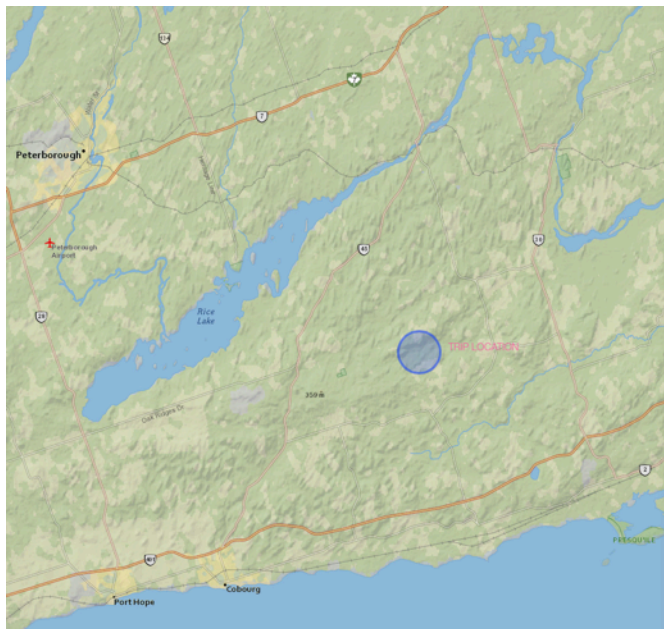
## *Prairie Reconnaissance on the Rice Lake Plains*

9 August, 2015

By Pat Deacon

**O**n August 9<sup>th</sup> 2015, a group of FBO members made the trip to the far eastern reach of the Oak Ridges Moraine for another 'Mystery Tour' led by Steve Varga. The 11 hectare property, situated among the rolling hills of Cramahe Township in Northumberland County, had recently been acquired by the Nature Conservancy of Canada (NCC). Fulsome botanical surveys had not yet been conducted, which brought an element of surprise as to what might be found.

Many prairie enthusiasts are familiar with the famed Red Cloud Cemetery which is just down the road. The cemetery was established by Quaker pioneers in the 1850s and is situated within tallgrass prairie. Since the last burial in 1940, the well-meaning planting of 500 or so Red Pine (*Pinus resinosa*) in 1969, and at the realization of the significance of the site in the early 1990s, the Red Cloud prairie is now actively managed and warm season grasses thrive among the scattered headstones. A stroll through the site conjures up thoughts of what the pre-settlement landscape might have looked like. Given the plight of tallgrass prairie in Ontario over the past 200-or-so years



of settlement and agricultural practice, one can appreciate walking over a small remnant of prairie sod that may never have seen a plough.

As with many remnant tallgrass prairie remnants, the NCC-owned site has been deprived of fire and is by no means in pristine condition. Linear hedgerows which border old field meadows remind us of the site's recent agricultural past, perhaps as livestock pasture or the production of forage crops. Other marks on the landscape include the routing of a hydro corridor through the site and rutted trails resulting from occasional ATV traffic. Then, there are the non-native and invasive Scots Pine (*Pinus sylvestris*), Spotted Knapweed (*Centaurea stoebe*) and Dog-strangling Vine (*Cynanchum rossicum*). But – under closer examination – the slopes, field edges, roadsides, and persistent forest openings begin to reveal the tallgrass prairie heritage which dots the landscape throughout the Rice Lake Plains. A quick search on the online Natural Heritage Information Centre application before arriving had indicated a single tracked species of vascular flora: Long-stalked Panic Grass (*Dichanthelium perlongum*) recorded in the vicinity in 1993. The site contains several areas of dry tallgrass prairie, the preferred habitat for this grass; however it didn't turn up that day. Steve made mention of a proposed Area of Natural and Scientific Interest (ANSI) designation for a portion of the Salt Creek watershed, which contains these prairie and Black Oak (*Quercus velutina*) savannah remnants. Other notable tallgrass prairie sites in the Lower Trent area include the Alderville Black Oak Savannah, Goodrich-Loomis Conservation Area and Peter's Woods Provincial Park among others.

Our day began with an examination of the roadside flora, ditch botany. The yellows of goldenrods including Early Goldenrod

(*Solidago juncea*) and Grey Goldenrod (*S. nemoralis*) were complemented by the blues and whites of Smooth Aster (*Symphotrichum laeve*), Sky-blue Aster (*S. oolentangiense*), Heath Aster (*S. ericoides*) and Arrow-leaved Aster (*S. urophyllum*). The leery eyes of neighbours across the road peered curiously down their driveway at the group of people so amused by the ditch. At the roadside, branches of a canopy of Black Oak, Red Oak (*Quercus rubra*) and White Pine (*Pinus strobus*) were periodically interspersed with Scots Pine and Trembling Aspen (*Populus tremuloides*).

Venturing into the site, we were immediately greeted by swaths of Cylindrical Blazingstar (*Liatris cylindracea*) along the crest of a dry south-facing slope. Among the thousands of purple blooms, a handful of individuals stuck out with white blooms. Another interesting species, Grooved Yellow Flax (*Linum sulcatum*) grows among the Blazingstar. Were it not for the bright yellow flowers, the narrow leaves of this plant could easily be overlooked. There are 10 taxa (nine species, one with two varieties) of flax known from Ontario with all six of the native taxa ranked provincially as S3 (vulnerable) or higher (i.e., of greater conservation concern). Other prairie associates included robust clumps of Big Bluestem (*Andropogon gerardii*), Hairy Penstemon (*Penstemon hirsutus*), Hoary Vervain (*Verbena stricta*) and Tall Cinquefoil (*Drymocallis arguta*). (To this day, Tall Cinquefoil is a sore spot for me. A few years back I propagated a dozen-or-so plants from collected seed for



A Butterfly Milkweed (*Asclepias tuberosa*) bearing seed pods alongside Cylindrical Blazingstar (*Liatris cylindracea*) Photo: P. Deacon.

a prairie garden I created at the University of Waterloo. The planted plugs (showcased with hand-written labels no less) were 'weeded' from the garden by undergrads taking a plant identification course. At least I can find humour in the irony of it.) Butterfly Milkweed (*Asclepias tuberosa*) could be found on the slope; some individuals in late bloom with others bearing seed pods.

Descending the slope into a low-lying area, the vegetation composition shifted to clonal patches of Red Raspberry (*Rubus idaeus*), abundant Common Milkweed (*Asclepias syriaca*) and non-native cool season grasses. A number of stems of Early Figwort (*Scrophularia lanceolata*) towered above the groundcover. This



Headstones among Big Bluestem (*Andropogon gerardii*) at Red Cloud Cemetery. Photo: P. Deacon.

resident of open county and edge habitats appears similar to Carpenter's Square Figwort (*S. marilandica*) which prefers floodplain forests and thickets (Michigan Flora Online 2011).

Clambering up the opposite side of the valley, a population of the uncommon Prairie Buttercup (*Ranunculus rhomboideus*) was spotted growing on gravelly substrates. Although not in flower, the rhomboid leaves of this early-blooming species are quite distinctive. A lunch break under the shade of a Black Oak offered a view of the valley we had just traversed. A few stems of Pipsissewa (*Chimaphila umbellata*, otherwise known as Prince's Pine) were spotted growing among the pines as well as the parasitic Pinesap (*Monotropa hypopitys*). One of our most interesting finds for the day was a small patch of Intermediate Pinweed (*Lechea intermedia*), alongside a few stems of Hoary Frostweed (*Crocotnemum bicknellii*); these two local rarities were growing within a small sandy opening. A Great Spangled Fritillary (*Speyeria cybele*) seemed interested in our group and added to a butterfly list of Monarch (*Danaus plexippus*), Dun Skipper (*Euphyes vestris*) and European Skipper (*Thymelicus lineola*) on the day.

Continuing through the property our group moved into an area of old field, dominated by three common forage grasses: Orchard Grass (*Dactylis glomerata*), Smooth Brome (*Bromus inermis*) and Timothy (*Phleum pratense*). Alongside the cool season grasses were notable amounts of Canada Goldenrod (*Solidago canadensis*), Western Poison Ivy (*Toxicodendron rydbergii*) and, as it turned out, angry ground-nesting wasps! A brief pass through this area (with a couple of stings along the way) yielded little in the way of notable prairie flora, with a few clumps of New Jersey Tea (*Ceanothus americanus*)

and a small patch of Bastard Toadflax (*Comandra umbellata*) at a sandy clearing near the forest edge.

As we meandered throughout some of the more treed portions of the site that afternoon, we encountered a small area of slope dominated by Little Bluestem (*Schizachyrium scoparium*) as well as a sizable prairie remnant dominated by Big Bluestem, which gave us our first look at Indian Grass (*Sorghastrum nutans*) for the day. A few withered stems of Wood Lily (*Lilium philadelphicum*) were spotted in and amongst the towering grasses.

As a recent acquisition, the question arises of how this area could be managed. A crew with chainsaws and a chipper could do a number on the Scots Pine to open canopies and encourage the seedbank to flush out a long-subdued groundcover. Public outreach or educational efforts may be beneficial to locals unaware of the significance of the habitats in their backyard. Speaking with one of the neighbours who approached our group at the end of the trip, she was quite convinced that they had no prairie or rare species on their property (as the turkey-foot of Big Bluestem bobs in the wind over her shoulder and Cylindrical Blazingstar lines the roadside embankment). As an uninhabited site full of hills and valleys, the area remains attractive to ATV riders. Some portions of the site offer a decent cover of graminoids or leaf litter and may respond well to a prescribed burn. Botanizing a prairie remnant following a burn can yield some very interesting finds of plants long senescent beneath a closed canopy.

In any case, under the ownership of the NCC, the site is in good hands and adds another piece to a patchwork of protected prairie remnants within the Rice Lake Plains. Our thanks to Steve for leading yet another excellent trip. ✨

#### References

- Michigan Flora Online. 2011. A. A. Reznicek, E. G. Voss, & B. S. Walters. February 2011. University of Michigan. <http://michiganflora.net/home.aspx>.
- Natural Heritage Information Centre. 2015. Natural Heritage Area Map Application. <http://www.ontario.ca/page/make-natural-heritage-area-map>.

## In the Alderville Black Oak Savanna

13 September, 2015

By Richard Baxter

On September 13, 2015, six or so plucky FBO members gathered for a visit at the Alderville Black Oak Savanna site. This was one of four field trips offered during the 2015 Annual General Meeting weekend held in Peterborough. Weather was a bit cool and rainy on the day, but we soldiered on into the savanna. The trip leaders were Rick Beaver (former Natural Heritage Coordinator) and Janine McLeod (Natural Heritage Coordinator at the time of the visit – Janine indicated she would also





be retiring shortly after the day of our field trip). Though it was a little late in the season, there were still some species with a decent amount of blooming going on, mainly members of the aster family; most of the other plant groups had gone to seed.

The Alderville Black Oak Savanna is under the jurisdiction of the Alderville First Nation. It is the largest remnant patch of prairie and savanna habitat on the Rice Lake Plains, which is the easternmost point of naturally occurring prairie vegetation in Ontario, and the north-easternmost in North America. The Rice Lake Plains was also one of the largest patches of prairie/savanna habitat in all of Ontario prior to European settlement. For in depth background on the Rice Lake Plains see the two Canadian Field-Naturalist articles authored by Paul Catling and others, listed at the end of this trip account.

Before we headed outside, a short talk was provided in the interpretive centre that highlighted the characteristic native plants of the Black Oak (*Quercus velutina*) dominated savanna and presented some of the many issues that have to be dealt with in managing the property. Some of the major undesirable plant species [Spotted Knapweed (*Centaurea stoebe* ssp. *micranthos*, syn. *C. maculosa*) and White Sweet-clover (*Melilotus albus*) stand out] and the various management practices that are employed to maintain and restore the prairie and savanna species and habitats were discussed.

When we first left the interpretive centre we could see that some of the Alderville Savanna's grounds on the site were directly adjacent to lands under different ownership to the east, separated only by a mowed path (this mowed path is visible on Google Earth, running south from the east side of the interpretive centre). This land did not receive the same management practices and, though the plant form composition (i.e., mix of grasses and forbs) was pretty similar on both sides of the mowed path, the change in species composition

was apparent to the eye from a distance due to the differences in colour from the native prairie-dominated vegetation and the vegetation with a higher proportion of non-native species.

Rick pointed out a small medicinal garden located at the back of the interpretive centre, with four specific plants whose locations were based on the major wind directions (East, North, South, and West). The species in the garden were Eastern White Cedar (*Thuja occidentalis*) – south wind; Northern Sweet Grass (*Anthoxanthum hirtum*) – north wind; Tobacco (*Nicotiana* sp.) – east wind; and



Bicknell's Frostweed) Photo: R. Baxter.

White Sage (*Artemisia ludoviciana*) – west wind. All of these species could be used in burnt offering mixtures. Tobacco would often be used as an offering on its own and simply laid down, accompanying a thanks or a request. Rick indicated that there are still some remnant patches of offering tobacco present near Lake Erie. Other themed

gardens were also present around the interpretive centre in various stages of completion (e.g. pollinator garden, vegetable garden, etc.).

The main method of management on the site is using periodic controlled burns, however, chemical and other physical control methods are also used. It was indicated in the presentation that usually no more than 25% of the property is burned in a given year. Rick indicated that, historically, the First Nations peoples of the area would have burned land on a much larger scale than is currently used, with burns of several square miles. Obviously that is no longer a possibility with so much of the Rice Lake Plains being under private ownership and used for agriculture. We were told that burning keeps woody species like Staghorn Sumac (*Rhus typhina*) in check but does not remove them, thus the need for repeated treatments. In addition, some species targeted for removal (Spotted Knapweed, in particular) seem to respond well to burning, and so require the additional control methods (i.e., combinations of mowing and chemical applications).

Rick and Janine told us about a seed collection machine that had been set up using an ATV equipped with brushes. When collecting seed the brush height is set depending on the targeted species – and, off you go on the ATV... Some patches of the property are in such good shape in terms of species composition that seeds can be collected without much worry about getting invasives in the mix. Rick and Janine let us know that, with the exception of Wild Lupine (*Lupinus perennis*), all of the species used for restoration activities on site were sourced on the property.

Habitats present on site included patches of open prairie and Black Oak dominated savanna in the northern section of the property, and more continuous deciduous forest in the south of the property. Moving into the open prairie area immediately south of the interpretive centre, we began the serious botanizing and found abundant Sky-blue Aster (*Symphotrichum oolentangiense*) and White Heath Aster (*S. ericoides* var. *ericoides*) - Janine indicated that Sky-blue and Heath Aster can hybridize, though I was unable to find reference to a named hybrid of these two species. Also present were Round-headed Bush Clover (*Lespedeza capitata*) and Wild

Bergamot (*Monarda fistulosa* var. *fistulosa*). The two major undesirable species, White Sweet-clover and Spotted Knapweed, were much more prominent on the east side of the mowed path, indicated above as not being part of the Alderville Black Oak Savanna property. To date, Dog-strangling Vine (*Cynanchum rossicum*) has not been a major problem on site, though it is present in the general Rice Lake Plains area, with several mapped records in the lands surrounding the Alderville site. Other species encountered included Common Ragweed (*Ambrosia artemisiifolia* var. *elatior*), Smooth Brome (*Bromus inermis*), Common Milkweed (*Asclepias syriaca*), Butterfly Milkweed (*Asclepias tuberosa* ssp. *interior*), Alfalfa (*Medicago sativa* ssp. *sativa*), Gray Goldenrod (*Solidago nemoralis* ssp. *nemoralis*), Ribgrass (*Plantago lanceolata*) and occasional Prairie Buttercup (*Ranunculus rhomboideus*), which was not particularly conspicuous due to the lack of flowers at the time of the visit and this species' low physical profile.



Showy Tick Trefoil Photo: R. Baxter.

The major grasses that dominated the open prairie areas were Indian Grass (*Sorghastrum nutans*) and Big Bluestem (*Andropogon gerardii*), both growing to about 5 or 6 feet tall, with Little Bluestem (*Schizachyrium scoparium* var. *scoparium*) also present. Viper's Bugloss (*Echium vulgare*), Butter-and-eggs (*Linaria vulgaris*), Hoary Vervain (*Verbena stricta*), Common Evening Primrose (*Oenothera biennis*), Woodland Sunflower (*Helianthus divaricatus*), Thinleaf Sunflower (*Helianthus decapetalus*), Western Poison Ivy (*Toxicodendron rydbergii*), Cow Vetch (*Vicia cracca*) and

Wild Carrot (*Daucus carota*) were other species present.

Moving into what would be considered the Black Oak savanna, we came across some Rabbit Foot Clover (*Trifolium arvense*), an attractive non-native *Trifolium* that personally I think I have only seen once or twice in Ontario. Starved Panic Grass (*Dichanthelium depauperatum*) and Long-stalked Panic Grass (*D. perlongum*) were also present. We found a small patch of Bearberry (*Arctostaphylos uva-ursi*), and Rick informed us that the native Mississauga Ojibway name for this species was *minagunj* which translates to "berry with spikes". A very appropriate name as the small bright red berries had neat little single spikes off their bottom ends. Rick indicated that the leaves of Bearberry were used in First Nations smoking mixes.

We also found Staghorn Sumac, Candle Anemone (*Anemone cylindrica*), Smooth Rose (*Rosa blanda*), Bicknell's Frostweed (*Crocanthemum bicknellii*, synonym *Helianthemum bicknellii*), Trembling Aspen (*Populus tremuloides*), and White Arrowleaf Aster (*Symphytotrichum urophyllum*). A Monarch Butterfly (*Danaus plexippus*) was observed sitting on an aster, taking a break in the poor weather. Other species we found included Thicket Serviceberry (*Amelanchier spicata*, synonym *A. stolonifera*), Showy Tick-trefoil (*Desmodium canadense*) with its sticky seed pods, Bracken Fern (*Pteridium aquilinum* var. *latiusculum*), Grey Dogwood (*Cornus racemosa*), and native range Red Pine (*Pinus resinosa*).

We were told of a unique spider species that had been found on the property, the Black Purseweb Spider (*Sphodros niger*, family Atypidae), which is the only Ontario representative of the tarantula infraorder Mygalomorphae. We were not lucky enough to see a live example on our trip, but a quick Google search will show you a very cool looking eight-legged animal.

Someone's sharp eyes picked out an individual Sand/Racemed Milkwort (*Polygala polygama*), which was another species that was not very obvious on the day as it was a small plant and not in flower. And, of course, we found various ages of the species the site is named for, Black Oak. We were told that by about 5-6 years of age Black Oak can withstand burning. We found some Sand Cherry (*Prunus pumila*) which, according to Catherine Parr Traill, as reported by Catling *et al.* (1992), fed "pidgeons", likely Passenger Pigeons (*Ectopistes migratorius*). Other species noted included Parlin's Pussytoes (*Antennaria parlinii* ssp. *fallax*, synonym *A. plantaginifolia*), Prairie Willow (*Salix humilis* var. *humilis*), Star-flowered False Solomon's Seal (*Maianthemum stellatum*), Canada Bluegrass (*Poa compressa*), Field Thistle (*Cirsium discolor*), Fringed Brome (*Bromus ciliatus*), Kalm's Brome (*B. kalmii*) and Prairie Cinquefoil (*Drymocallis arguta*, synonym *Potentilla arguta*).

Moving in to the south of the property, the habitat transitioned to more of a closed canopy deciduous forest with many familiar forest species (but still having some prairie and savanna species mixed in). Species encountered included False Solomon's Seal (*Maianthemum racemosum* ssp. *racemosum*), White Oak (*Quercus alba*), Downy Arrowwood (*Viburnum rafinesquianum*), Pointed-leaf Tick-trefoil (*Desmodium glutinosum*), Wood Lily (*Lilium philadelphicum*), Early Lowbush Blueberry (*Vaccinium angustifolium*), Black Cherry (*Prunus serotina* var. *serotina*), Beaked Hazel (*Corylus cornuta* var. *cornuta*), Alternate-leaved Dogwood (*Cornus alternifolia*), Red Maple (*Acer rubrum*), Choke Cherry (*Prunus virginiana* var. *virginiana*), Smooth Carrion Flower (*Smilax herbacea*), Red Raspberry (*Rubus idaeus* ssp. *strigosus*), Large-leaf Wood Aster (*Eurybia macrophylla*), American Beech (*Fagus grandifolia*), Snakeroot (*Sanicula* sp.), Atlantic Goldenrod (*Solidago arguta* ssp. *arguta*) - basal leaves only observed, Wild Columbine (*Aquilegia canadensis*), and Slender Wheat Grass (*Elymus trachycaulus* ssp. *trachycaulus*).

Leaving the forested area we headed back up through the property to the interpretive centre to finish up our day.

Thanks very much to Rick Beaver and Janine McLeod for leading the trip, and to Daphne Paszterko (current Natural Heritage Coordinator) for some post trip verification and fact checking. ✨

## References

- Alderville Black Oak Savanna Website. <http://www.aldervillesavanna.ca/index.html>
- Bradley, D. J. 2013. Southern Ontario Vascular Plant Species List. Ontario Ministry of Natural Resources Science and Information Branch, Southern Science and information.
- Catling, P. M. 2008. The extent and floristic composition of the Rice Lake Plains based on remnants. *Canadian Field-Naturalist* 122(1): 1-20.
- Catling, P. M., V. R. Catling, and S. M. McKay-Kuja. 1992. The extent and floristic composition of the Rice Lake Plains based on historical records. *Canadian Field-Naturalist* 106: 73-86.
- Haines, A., E. Farnsworth (Illustrations), G. Morrison (Illustrations). 2011. *Flora Novae Angliae: A Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England*. Yale University Press.
- Semple, J. C., G. S. Ringius and J. J. Zhang. 1999. The goldenrods of Ontario: *Solidago* L. and *Euthamia* Nutt. 3rd Edition.
- Semple, J. C., S. B. Heard and L. Brouillet. 2002. Cultivated and native asters of Ontario.
- Voss, E. G., and A. A. Reznicek. 2012. *Field Manual of Michigan Flora*. The University of Michigan Press.

# Botanical roots

*“Common Lichens of Northeastern North America: A Field Guide”*  
by Troy McMullin and Frances Anderson  
2014; Volume 112, *Memoirs of The New York Botanical Garden, Bronx, NY*. 180 pages.

A review

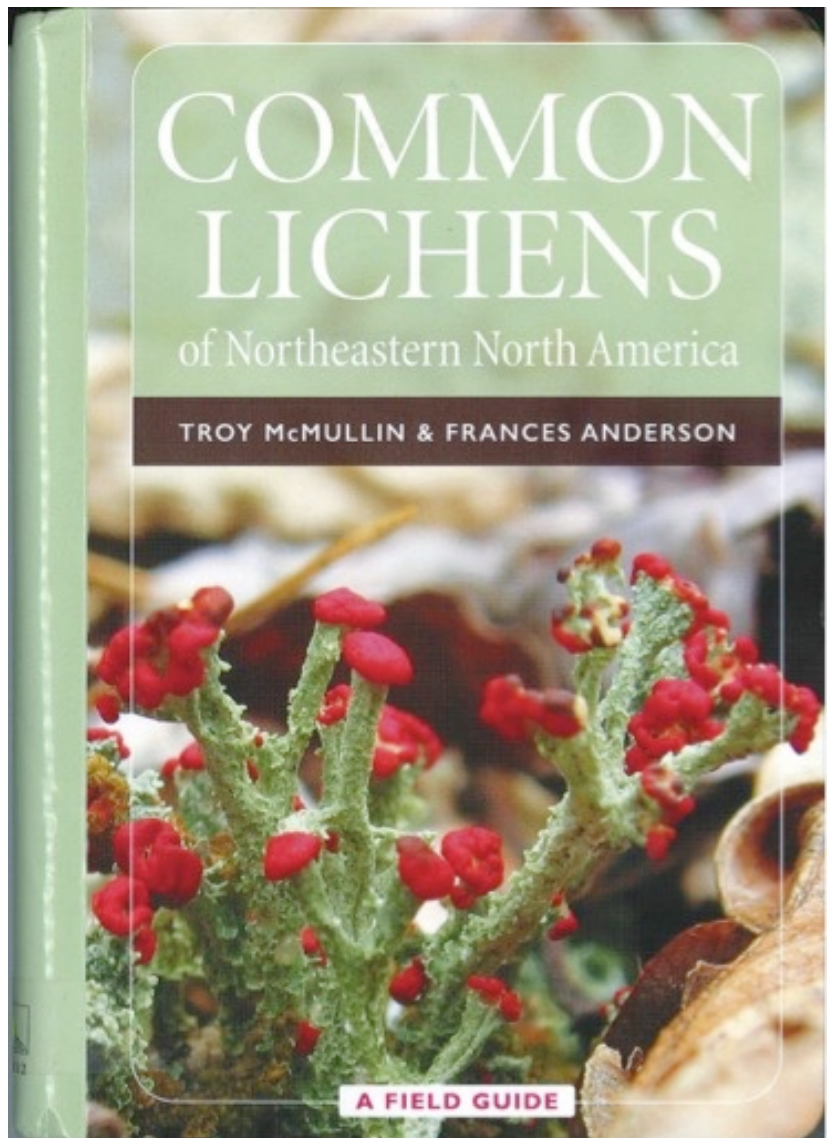
Michael J. Oldham  
Ontario Natural Heritage Information Centre, Peterborough

One of the things I like about most Field Botanists of Ontario (FBO) members is their diverse interests in natural history and on every FBO field trip, as well as looking at plants, we invariably observe and discuss birds, butterflies, and other aspects of the natural world ... including lichens. No observant naturalist (and what naturalist isn't observant?) has not admired the beauty and diversity of lichens, but how many of us can name even some of the more common ones? FBO member, Troy McMullin's, new book will do just that – help us to name some of the more common and conspicuous lichens occurring in southern Ontario and elsewhere in northeastern North America.

“**Common Lichens of Northeastern North America**” starts with a short and straight-forward “About Lichens” section covering what lichens are (a union of two distinct organisms, a fungus and an alga or cyanobacterium), why they are important, how they reproduce, how they are named, how to collect them and other interesting topics. Following that is a section on “How to Use This Book” which introduces the format of the individual species accounts. The book is very well laid-out and easy to use and to begin the process of identifying a lichen we need to answer three basic questions about it. What is it growing on (tree, soil, or rock)? What is its growth form (*foliose* [leafy], *fruticose* [branching and tree-like or dangling and thread-like], or *crustose* [low growing and tightly attached to the substrate])? What is the main colour of the upper surface (grey, yellow, slate, or red)? After answering these questions we are ready to delve into the main part of the book, the individual species accounts.

The 138 species covered in detail in the book are divided into three colour-coded sections: Tree Lichens, Soil Lichens, and Rock Lichens. Within each section are attractive and well laid-out species accounts, each of which includes a colour photograph, a drawing showing details that will aid in identification, and a symbol showing the growth form. The species accounts also tell us the scientific and common name, the origins of these names, where the lichen is found (habitat and substrate), its size, shape, colour, reproductive structures, and distinctive features. A Notes section covers interesting aspects of the species and sometimes discusses other species with which it might be confused. Rare and at-risk species are indicated using one or more exclamation points, although it is not indicated where these rarity designations came from. A section on Further Reading, a Glossary, and an Index conclude the book.

The colour photos and drawings are excellent and these alone can often get one to the right species or close to it and then reviewing the identification features in the species accounts can help clinch the ID. As a beginner's guide to lichens and lichen identification this book is excellent and will introduce the neophyte to the fascinating world of



lichens. To delve further, one will need to go to more comprehensive guides such as the excellent and beautifully illustrated “Lichens of North America” by Irwin Brodo, Steve Sharnoff and Sylvia Sharnoff (worth the price for the stunning colour photos alone). A selection of more advanced guides is found in the Further Reading section.

The main author, Troy McMullin, who conducted an excellent lichen identification workshop for the FBO in February 2016, was formerly a researcher at the Biodiversity Institute of Ontario, University of Guelph, and is now a Research Scientist at the Canadian Museum of Nature, replacing now-retired lichenologist Irwin Brodo.

For information on ordering “**Common Lichens of Northeastern North America**” see <http://us8.campaign-archive1.com/?u=775b44cb5a817c9bd893346bc&id=2f08786395&c=c806bc54d4>