

Field Botanists of Ontario

Newsletter

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Prostrate branch of Sand Cherry (*Prunus pumila* L.) following a crack in the limestone pavement at the Belanger Bay Alvar, West Manitoulin Island. Photo by Bill McIlveen.

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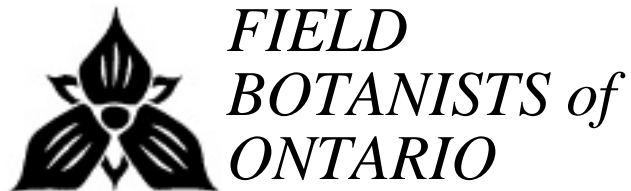
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FIELD BOTANISTS OF ONTARIO NEWSLETTER

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The FBO is a non-profit organization founded in 1984 for those interested in botany and conservation in the province of Ontario.

www.trentu.ca/fbo/

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The **deadline** for submissions for **Volume 16(1) - Spring 2003** is **March 12th, 2003**.

Standard source for scientific names of vascular plants:

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.

Illustration by Mary Celestino was reprinted (with permission) from:

Celestino, Mary. 2002. Wildflowers of the Canadian Erie Islands. Essex County Field Naturalists' Club, Windsor, ON.

Minutes From The Annual General Meeting.

Saturday, September 14, 2002.
New Sarum, Ontario.

The meeting was called to order by the President, Carole Ann Lacroix. Carole Ann gave a general address to the members in attendance. The agenda for the AGM was approved with no additions.

Treasurer's Report

George Bryant handed out copies of the report, (previously published in Newsletter Volume 15[1]) and presented a summary. The field trip activity was down between 2000 and 2001; however the revenues matched expenses. It was moved by George Bryant, seconded by Dorothy Tiedje that the Treasurer's Report be adopted. Motion Carried.

Auditor

Ilmar Talvila offered to act as auditor for this year. Bill Crowley motioned that Ilmar should be the auditor for 2002 and Wayne McShane seconded. The motion carried.

Membership Report

Bill McIlveen gave the membership report. Essentially membership remained the same between 2001 and 2002. A brief discussion was held on the possibility of extending memberships for multiple years but no motions were passed.

Field Trips

A few suggestions were made for future field trips by the membership as follows: plant photography, Rouge River, Oak Ridges Moraine, Thames River, Prince Edward County, and the possibility of a combined trip with the Society for Ecological Restoration (e.g., controlled burn).

Membership Discussion of the Field Botanist Organization

Carole Ann indicated that the constitution will be part of the next AGM agenda. She also called for the continued need for material for the newsletter.

Field Botanist Executive

The FBO executive positions were reviewed. Nicholas Hodges was acclaimed as Secretary and Mary Ann Johnson as field trip co-ordinator. Gord Michener motioned that the executive be approved and Carl Rothfels seconded. The motion was carried. A motion was passed to allow the executive to decide if Jeremy and Tyler should receive a thank-you for all of their hard work.

New Business

John Kierns motioned that a membership directory of all field botanist members be made available to the membership using a question on the renewal form to indicate whether you are willing to have your name made available. Dorothy Tiedje seconded the motion. The motion carried.¹

The meeting was adjourned.

Field Trip Reports:

Belanger Bay Alvar.

Leader: Ed Morris, May 25th, 2002.

On a chilly day that threatened rain, a group of approximately 15 FBO members hiked from Burnt Island to Belanger Bay near the west end of Manitoulin Island, led by Ed Morris of Ontario Parks. Belanger Bay is the heart of the recently created Queen Elizabeth the Queen Mother M'nidoo M'nising Provincial Park.¹ The property was purchased as a tract of over 6000 ha by the Nature Conservancy of Canada and leased to Ontario Parks of the Ontario Ministry of Natural Resources. The landscape in the park varies from Jack Pine-White Cedar-Balsam Fir woodland to spectacular expanses of alvar. The group in itself encompassed a considerable degree of biodiversity, including as it did a lichenologist, a wild flower photographer, Ed's "boss", an artist, the Editor of "Wildflower", and several naturopathy students.

The former road, now closed to [unauthorized] motor vehicles, is a fascinating environment in itself. Where sand had filled the many dimples in the dolomite, believed to have been formed under water by sand abrasion, Lyre-leaved Rock-cress (*Arabis lyrata* L.) and Early Blue Violet (*Viola adunca* J.E. Smith) were in bloom. Sand Cherry (*Prunus pumila* L.) also took advantage of these sand pockets, and its flowering process had begun, with the first flowers to open being those on the prostrate stems closest to the protection and reflected radiation of the dolomite. At the edges of the dolomite road were rosettes of the Great Lakes endemic Hill's Thistle (*Cirsium hillii* (Canby) Fern.), ranked as globally and provincially rare [G3 S3].

The fern-like foliage of Wild Columbine (*Aquilegia canadensis* L.) sprouted from sand-filled fissures in the dolomite, but most plants were still in bud. Also on the verge of flowering was Bastard Toad-flax (*Comandra umbellata* (L.) Nutt.). Like most members of the Sandalwood family, this plant is partially parasitic on the roots of other plants. Another family where hemiparasitism is common is the Snapdragon Family (Scrophulariaceae). Its representative, Indian Paintbrush or Painted Cup (*Castilleja coccinea* (L.) Spreng.), was beginning to show its orange-red "blooms", the colour of which is actually provided by floral leaves or bracts surrounding the relatively inconspicuous greenish-yellow



Golden Corydalis (*Corydalis aurea* Willd.). Photo by Keith Winterhalder.

¹ Around the office, we affectionately refer to the property as "Queen Mum".-Ed.

¹ See Notices (pg. 12) for an update of this motion.-Ed



Rosette of Hill's Thistle (*Cirsium hillii* (Canby) Fern.). Photo by Keith Winterhalder.



Belanger Bay Alvar expanse, dotted with glacial erratic boulders. Photo by Ed Morris.



Lakeside Daisy (*Hymenoxys herbacea* (Greene) Cusick). Photo by Bill McIlveen.

flowers. One of the easier *Carex* species to identify – the Scirpus-like or Rush-like Sedge (*Carex scirpoidea* Michaux ssp. *convoluta* (Kükenthal) Dunlop) - was common in the sand-filled fissures. This is one of the few local species of *Carex* that is dioecious, i.e. it has male and female flowers on separate plants. It is also of interest that this subspecies is endemic to the Lake Huron limestones and dolomites. Just off the trail, a single individual of Golden Corydalis (*Corydalis aurea* Willd.)

was in bloom.

In the woodland, the last few flowers of Trailing Arbutus (*Epigaea repens* L.) were fading, but Fringed Milkwort (*Polygala paucifolia* Willd.) and Barren Strawberry (*Waldsteinia fragarioides* (Michx.) Tratt.) added splashes of pink and yellow. The Bristle-leaved Sedge (*Carex eburnea* F.Boott) that formed a fine carpet under the white cedar was in flower. Other herbaceous species included Common Pipsissewa (*Chimaphila umbellata* (L.) W. Barton ssp. *cisatlantica* (S.F. Blake) Hultén), Bracken-fern (*Pteridium aquilinum* (L.) Kuhn), Bristly Club-moss (*Lycopodium annotinum* L.), and Running Club-moss (*Lycopodium clavatum* L.). The woods were dominated by Eastern White Cedar (*Thuja occidentalis* L.), Paper Birch (*Betula papyrifera* Marsh.), Jack Pine (*Pinus banksiana* Lam.), and Red Pine (*Pinus resinosa* Sol. ex Ait.). The shrubs included Shrubby Cinquefoil (*Potentilla fruticosa* L. ssp. *floribunda* (Pursh) Elkington), Common Juniper (*Juniperus communis* L.), Canada Soapberry (*Shepherdia canadensis* (L.) Nutt.), Ninebark (*Physocarpus opulifolius* (L.) Maxim), Bush Honeysuckle (*Diervilla lonicera* Mill.), and Fragrant Sumac (*Rhus aromatica* Ait.). Creeping Juniper (*Juniperus horizontalis* Moench) and Bearberry (*Arctostaphylos uva-ursi* (L.) Spreng.) often formed a ground cover at the forest edge and in clearings.

Just before reaching the open Belanger Bay alvar, we found large flowering patches of the Great Lakes endemic Dwarf Lake Iris (*Iris lacustris* Nutt.), which is ranked as globally and provincially rare [G3 G3].

The alvars proved to be as spectacular as we had been led to believe, and their exposed nature was brought home to us as the cold wind drove us into the shelter of a small tree-island to eat our lunch. Despite the late season, the "signature" species of the park, Lakeside Daisy (*Hymenoxys herbacea* (Greene) Cusick), also known as Manitoulin Gold or Stemless Rubberweed, was in full bloom. This species is ranked as very rare, both globally and provincially [G2 S2]. The plants were quite abundant, and formed an interesting pattern as they followed the fissures in the dolomite pavement. Also in the dolomite fissures (known as "clints" or "grykes" in the UK) was Early Saxifrage (*Saxifraga virginianensis* Michx.), Poverty Oat Grass (*Danthonia spicata* (L.) P. Beauv. ex Roemer & Schultes), and White Camas (*Zigadenus elegans* Pursh ssp. *glaucus* (Nutt.) Hultén). Looking much like the introduced Eurasian Field Mouse-ear Chickweed (*Cerastium arvense* L. ssp. *arvense*), but actually a native alvar subspecies, was *C. arvense* L. ssp. *strictum* (Haenke) Gaudin.

The dolomite fissures also presented an ideal habitat for three rock-loving ferns: Purple-stemmed Cliff-brake (*Pellaea atropurpurea* (L.) Link), Maidenhair Spleenwort (*Asplenium trichomanes* L.), and Oregon Cliff-fern (*Woodsia oregana* D.C. Eat. ssp. *cathcartiana* (Robins.) Windham). Inconspicuous against the rock and sand was greyish-green Rock Spikemoss (*Selaginella rupestris* (L.) Spring). Normally typical of granites and quartzites, this fern-ally is not uncommon on sandy dolomite pavements.

On parts of the alvar that had been covered with shallow water in the early spring, a miniature garden of herbaceous plants occurred on a mossy substrate, with tiny individuals of Thyme-leaved Sandwort (*Arenaria serpyllifolia* L.) and the wonderfully aromatic Low Calamint or Indian Tea (*Calamintha arkansana* (Nutt.) Shinnery). In still-flooded areas, Native Chives (*Allium schoenoprasum* L. var. *sibiricum* (L.) Hartm.), formed purple meadows, accompanied by Baltic Rush (*Juncus balticus* Willd.).

We were grateful for the presence of Peter Beckett when we encountered numerous mosses and lichens, many of them on the glacially-transported boulders and pebbles that dotted the limestone base. On the dolomite itself was Curly-leaved Screw Moss (*Tortella tortuosa* (Hedw.) Limpr.). Other mosses

included the disturbance-loving Beard Moss (*Barbula* sp.), Pohlia (*Pohlia* sp.) and a Mniium (*Plagiomnium* sp.), with its relatively broad leaves. The Hair Moss that we found was not a *Polytrichum*, but an *Atrichum*, with leaves that looked much less opaque than those of *Polytrichum*. In *Atrichum*, the characteristic upright green lamellae or “fins” on the leaf surface, looking like the pages of a book, are relatively sparse.

The fruticose (upright) lichens included several “Reindeer Mosses”, more appropriately called Caribou Lichens. These were *Cladina rangiferina* (L.) Nyl., *Cladina mitis* (Sandst.) Hustich, and, less commonly, *Cladina alpestre* (Opiz) Brodo. The Trumpet Lichen (*Cladonia fimbriata* (L.) Th.Fr.), the Organ Pipe Lichen (*Cladonia crispata* (Ach.) Flot.), British Soldiers (*Cladonia cristatella* Tuck.), and the Powdered Funnel Lichen (*Cladonia cenotea* (Ach.) Flowtow) were also encountered. Foliose (horizontally flattened) lichens included the Sand-loving Iceland Lichen (*Cetraria arenaria* Kärnefelt), the Peppered Rock-tripe (*Umbilicaria deusta* (L.) Baumg.), Shield Lichens (*Parmelia* sp.), and Frost Lichens (*Physconia* sp.). Crustose lichens, forming paint-like patches on rocks, included Sunburst Lichens (*Xanthoria* sp.) on the dolomite and Rim Lichens (*Lecanora* sp.) and Wart Lichens (*Pertusaria* sp.) on the glaciofluvial remnants. Some of the pebbles showed a fascinating vertical zonation of crustose lichens.

As we continued on to the lakeshore, we were met with a spectacular expanse of Bird’s-eye Primrose (*Primula mistassinaca* Michx.) in full bloom. With lake levels low, it seems that this [apparently opportunistic] species had spread far beyond its usual limits.

Bill managed to raise his eyes from the treacherous clints and grykes long enough to record numerous birds, including Ovenbird, Black-and-White Warbler, Black-throated Green Warbler, and Broad-winged Hawk. There were White-tailed Deer tracks, as well as those of Raccoon and Fox. A Ring-necked Snake was seen by Dale Leadbeater. Bill also collected shells of the White-lipped Forest Snail (*Triodopsis albolabris*) and a Pill Snail (*Stenotrema* sp.), and noted many small Amber Snails (*Succinea* sp.) and a Brown-lipped Snail (*Cepaea nemoralis*). As for Lepidopterans, we saw a Hoary Elf (*Incisalia polia*) and an unidentified moth.

As we wended our weary (and ultimately wet) way back to Burnt Island, Zile Zichmanis pointed out a stunning little skeleton of a White Cedar. It was about 1.5 metres tall and tapered rapidly from a fat base. It seems that another, much larger, tree had toppled many years ago. The soil had been washed from the shallow roots, but some of the lower branches had survived. We marvelled at the resilience of life, and urged our flagging bodies to emulate our green role model. 🌲

Keith Winterhalder and Bill McIlveen

Spencer Gorge Wilderness Area.

Leader: Anthony Goodban, June 1st, 2002.

The day of the Spencer Gorge Wilderness Area field trip dawned sunny and breezy, which provided excellent conditions for walking the trails of the Niagara Escarpment within the Hamilton Region Conservation Authority lands. The purpose of the trip was to look at the dry oak woodland and savannah communities found along the perimeter of the escarpment rim, and to descend into Spencer Gorge itself and look at the rich forest flora of the gorge.

Our trip leader Anthony Goodban explained some of the land use management strategies that have been employed in the Spencer Gorge Wilderness Area over the last 10 years. In order to promote the growth and re-growth of the savannah plant species found along the rim of the escarpment, small-scale prescribed burns have been performed. The burns have removed the dense understory of Round-leaved Dogwood (*Cornus rugosa* Lam.) and Witch-hazel (*Hamamelis virginiana*



A visually intriguing, and likely very old stump of Eastern White Cedar (*Thuja occidentalis* L.). Photo by Bill McIlveen.

L.) shrubs allowing greater light penetration at the forest floor. Increased light at the forest floor and the burning itself, have facilitated the regrowth of typical herbaceous savannah species.

Conservative estimates suggest prairie and savannah communities once covered 3800 ha around the Hamilton area at the time of settlement circa 1790-1830. However, a more realistic figure is 5000 to 6000 ha. Today less than 1% of the original prairie remains. Tiny remnants now constitute a globally and provincially rare community type. Conservation and careful management of these remnants are vitally important to the continuation of these communities. Available historical information on the prairie and savannah communities dates as far back as the late 1700's in the form of land surveys and the diary of Lady John Graves Simcoe to name a few.

The group departed the from the Tew’s Falls parking lot and the first stop on the escarpment rim trail brought us to a lookout with a brilliant view of Tew’s Falls. The progression of the falls back-cutting movement up the valley was clearly visible from the exposed sedimentary rock formation adjacent to the falls. Bulblet Fern (*Cystopteris bulbifera* (L.) Bernh.) was growing on the rock face adjacent to the falls. From this vantage point one arm of the Y-shaped Spencer Gorge valley lay before us in panoramic splendour. Urban development is not visible from here and one might easily imagine themselves to be looking at an isolated gorge in the back country wilderness.

As we moved along the trail making our way toward Dundas Peak we encountered Yellow Pimpernel (*Taenidia integerrima* (L.) Drude), Wild Geranium (*Geranium*



Tews Falls. Photo by Bill Crowley.

maculatum L.) in flower, Black Snakeroot (*Sanicula marilandica* L.), Carrion-flower (*Smilax herbacea* L.) and Woodland Sunflower (*Helianthus divaricatus* L.). The contrast between the small-scale burn sites and the rest of the forested rim was marked. Where dense shrub growth has shaded out the smaller plant species in much of the forest, the burn sites were isolated open pockets with few shrubs and a greater diversity of low level plants such as Smooth Yellow False Foxglove (*Aureolaria flava* (L.) Farw.), Wild Coffee (*Triosteum aurantiacum* E. Bickn.), and White Lettuce (*Prenanthes alba* L.), to name a few prairie indicator species. Some especially notable species observed along the escarpment rim included provincially rare Sharp-leaved Goldenrod (*Solidago arguta* Ait.) and provincially rare Rue-anemone (*Anemonella thalictroides* (L.) Spach) in flower. Eventually we made it to Dundas Peak which affords great views of the Dundas Valley, particularly the western end of the valley where the escarpment is buried. Chinquapin Oak (*Quercus muehlenbergii* Engelm.) grows on the dry rocky ledges around Dundas Peak.

The group returned to the Tew's Falls parking lot from Dundas Peak for a bite of lunch under a shade tree. Engaging conversations took place on the topics of the history of prairie-savannah communities and urban front yard, Sunday morning prescribed burns, complete with flames rising over the neighbour's fence!

Continuing our hike in the afternoon, the group wound it's way along the escarpment rim towards Webster's Falls,



Pointed-leaved Tick-Trefoil (*Desmodium glutinosum* (Muhl. ex Willd.) Alph. Wood.). Illustration by Mary Celestino.

encountering the provincially rare Downy Foxglove (*Aureolaria virginica* (L.) Pennell) a mere two metres from the trail. It is curious to find a plant known to occur in only a handful of locations in the whole of Ontario growing alongside a high traffic foot path in the Golden Horseshoe. Other species noted on our way to Webster's Falls included Wild Coffee, Smooth Rose (*Rosa blanda* Ait.), Zig-zag Goldenrod (*Solidago flexicaulis* L.) and Spreading Dogbane (*Apocynum androsaemifolium* L.). Pale Touch-me-not (*Impatiens pallida* Nutt.) was growing in abundance under the shade of some cedar trees at the top of Webster's Falls. Many of the Pale Touch-me-not plants were growing out of teaspoon size depressions in the pock marked rock around the top of the staircase leading down to the gorge.

A steep descent into the gorge brought us to a trail that winds along the edge of Spencer Creek over rocky terrain and along steep valley walls. Large slab boulders along this section of trail hosted species such as Running Strawberry (*Euonymus obovata* Nutt.), Selkirk's Violet (*Viola selkirkii* Pursh ex Goldie), and Rock Polypody (*Polypodium virginianum* L.). Other ferns noted in the lush gorge included Marginal Wood Fern (*Dryopteris marginalis* (L.) A. Gray), Walking Fern (*Camptosorus rhizophyllus* (L.) Link), Bulblet Fern (*Cystopteris bulbifera* (L.) Bernh.) and Rattlesnake Fern (*Botrychium virginianum* (L.) Swartz). The group then turned around and returned to the Tew's Falls parking lot via a steep climb up the Webster's Falls staircase. ♣

Nick Hodges

**Species List For Afternoon Hike - Trail From Tew's Falls Parking Lot
To Webster's Falls And Into The Gorge.**

Above Webster's Falls:

<i>Apocynum androsaemifolium</i> L. ssp. <i>androsaemifolium</i>	Spreading Dogbane
<i>Aureolaria flava</i> (L.) Farw.	Smooth Yellow False Foxglove
<i>Carex rosea</i> Schk. ex Willd.	Stellate Sedge
<i>Carex sparganioides</i> Muhl. ex Willd.	Burreed Sedge
<i>Desmodium glutinosum</i> (Muhl. ex Willd.) Alph. Wood	Pointed-leaved Tick-trefoil
<i>Hamamelis virginiana</i> L.	Witch Hazel
<i>Hydrophyllum virginianum</i> L.	Virginia Waterleaf
<i>Impatiens pallida</i> Nutt.	Pale Touch-me-not
<i>Lespedeza hirta</i> (L.) Hornem.	Hairy Bush-clover
<i>Linaria vulgaris</i> Miller	Yellow Toadflax
<i>Ornithogallum nutans</i> L.	Drooping Star-of-Bethlehem
<i>Poa nemoralis</i> L.	Wood Blue Grass
<i>Prenathes alba</i> L.	White Lettuce
<i>Rosa blanda</i> Aiton	Smooth Rose
<i>Smilax herbacea</i> L.	Herbaceous Carrion Flower
<i>Solidago flexicaulis</i> L.	Zig-zag Goldenrod
<i>Triosteum aurantiacum</i> E. Bickn.	Horse Gentian

Below Webster's Falls:

<i>Acer spicatum</i> Lam.	Mountain Maple
<i>Actaea pachypoda</i> Elliot	Doll's-eyes
<i>Arisaema triphyllum</i> (L.) Schott spp. <i>triphyllum</i>	Jack in the Pulpit (very large!)
<i>Asarum canadense</i> L.	Wild Ginger
<i>Barbarea vulgaris</i> R.Br.	Yellow Rocket
<i>Botrychium virginianum</i> (L.) Swartz	Rattlesnake Fern
<i>Camptosorus rhizophyllus</i> (L.) Link	Walking Fern
<i>Carex plantaginea</i> Lam.	Plantain-leaved Sedge
<i>Carex platyphylla</i> J. Carey	Broad-leaved Sedge
<i>Caulophyllum thalictroides</i> (L.) Michx.	Blue Cohosh
<i>Cornus alternifolia</i> L.f.	Alternate-leaved Dogwood
<i>Cystopteris bulbifera</i> (L.) Bernh.	Bulblet Bladder Fern
<i>Dryopteris marginalis</i> (L.) A. Gray	Marginal Wood Fern
<i>Euonymus obovata</i> Nutt.	Running Strawberry-bush
<i>Gallium malugo</i> L.	Smooth Bedstraw
<i>Osmorhiza claytonii</i> (Michx.) C.B. Clarke	Wooly Sweet-cicely
<i>Pilea pumila</i> (L.) A. Gray	Dwarf Clearweed
<i>Poa alsodes</i> A. Gray	Woodland Poa
<i>Polypodium virginianum</i> L.	Rock Polypody
<i>Ranunculus abortivus</i> L.	Kidney-leaved Buttercup
<i>Rubus odoratus</i> L.	Purple Flowering Raspberry
<i>Tiarella cordifolia</i> L.	False Mitrewort
<i>Tussilago farfara</i> L.	Coltsfoot
<i>Viola canadensis</i> L.	Canada Violet
<i>Viola selkirkii</i> Pursh ex Goldie	Selkirk's Violet

Yarmouth Natural Heritage Area.

Leader: David Bradley, September 15th, 2002.

The morning drizzle was somehow ineffectual at damping the spirits of the motley crew gathering in the Sparta parking lot for the Sunday morning Yarmouth Natural Heritage Area expedition. Trust botanists to be cheerful at 8 on a Sunday morning. And here I thought early mornings were why I got out of birding!

I was excited to have survived the night in the tent (that was quite the storm!), and celebrated by pattering around in the wet looking for weeds as the group continued to grow. We found a couple of scruffy Giant Blue Hyssops (*Agastache foeniculum* (Pursh) Kuntze), smelling surprisingly licoricy among the more-typical parking lot weeds, and they added to my satisfaction at not being the last to arrive (that honour was reserved, this time, for our leader!).

David – of the OMNR south-central region – more than compensated for his few extra minutes of sleep by leading us through a merciless barrage of rare and interesting plants. We got our first taste of what was to come as soon as we stepped out of the cars, having left the Sparta *rendez-vous* for the hike site. David handed us his species list for the hike route (472 species) and we moved into the Yarmouth Natural Heritage Area. Lush vegetation overhung the path. Giant Ragweeds (*Ambrosia trifida* L. – so unlike their little cousins, the Common Ragweed – *A. artemisiifolia* L.) stood like sentinels beside the drooping inflorescences of the Riverbank Wild Rye (*Elymus riparius* Wieg.) and the tall Sunflowers (*Helianthus giganteus* L. and *H. strumosus* L.).

Above us was a Black Maple (*Acer saccharum* Marsh. ssp. *nigrum* (Michx. f.) Desmarais) which, David explained, was a clearly distinct taxon in southern Ontario with its drooping wilted-looking hairy leaves with shallow sinuses and blunt lobes. In areas of Eastern Ontario, however, it and the

common Sugar Maple (*Acer saccharum* Marsh. ssp. *saccharum*) intergrade, complicating the division of these two taxa. Unlike the Sugar Maple, the Black Maple can tolerate oxygen-poor conditions for its roots and thus does well in floodplain areas, like the Catfish Creek floodplain we were walking through.

The floodplain brought David to the main theme of our trip: the relationship between topography and abiotic conditions, and the resulting plant communities. David has been working for the last 8 years on the southern Ecological Land Classification (ELC) system, a system that attempts to describe and classify ecological community types in Ontario. So while many of us saw individual plants of particular species, David was able to see the community, and to understand the forces influencing it. The Giant Ragweed, Riverbank Wild Rye and Black Maple were common components of southern Ontario floodplain communities, as were the giant American Sycamore trees (*Platanus occidentalis* L.) which towered beside the path, and the Walnuts (*Juglans nigra* L.) and Cottonwoods (*Populus deltoides* Bartram ex Marsh.) among them.

A few short steps brought us to our first real rarity – a large population of Crooked-stem Aster (*Aster prenanthoides* Muhl.) unabashedly clamouring over a wet seepage slope beside the path. This aster is distinctive and beautiful (despite my aversion to asters) with its winged petioles, big auricles and blue-violet flowers. It is quite habitat specific, preferring moist seepages, and is confined in Canada to Elgin County with the exception of a few populations just over the boundary in neighboring counties. It was blooming profusely when we were there, as if trying to counter David's assertion of its rarity and vulnerability.

The rarities kept coming, rarities like Shaggy False



Rough-leaved Sunflower (*Helianthus strumosus* L.). Photo by Dirk Janas.

Gromwell (*Onosmodium molle* Michx. ssp. *hispidissimum* (Mack.) B.Boivin) with its sinister dried stalks and steel-hard little nutlets, constricted at one end, but otherwise quite similar to the American Gromwell (*Lithospermum latifolium* Michx.). Harbinger-of-spring (*Erigeron bulbosa* (Michx.) Nutt.), back into hiding for the summer, was not visible, so we had to trust David's assurances that it was around, and similarly believe in the Green Dragon (*Arisaema dracontium* (L.) Schott), seven of which were growing in from the path, just out of sight.

The Blue Ash (*Fraxinus quadrangulata* Michx.), however, were much more visible. Or at least much more accessible; I was deep into the stand before I had the faintest idea that I was surrounded by a tree species I had never seen before. I probably never would have noticed, had not David bent down a twig and outlined the key features. Blue Ash, a rare southern floodplain species, has corky ridges on the twigs, giving them a square look and feel. You need to find living twigs, however, as the ridges fall off when the twig dies. The leaves are evenly serrate and green beneath, unlike White Ash (*Fraxinus americana* L.) with its glaucous lower leaf surfaces, and Green Ash (*Fraxinus pennsylvanica* Marsh. var. *subintegerrima* (Vahl) Fern.) which lacks papillae on its leaves. Another feature of the Blue Ash is that it keeps its lower branches longer than its relatives, giving it a shrubbier look.

The older members of the group soon had to help the young ones up a huge sand ridge, as David pointed out the effect this topographical feature had on the vegetation communities – on the cooler northern slope was Hemlock (*Tsuga canadensis* (L.) Carrière), Bearded Shorthusk (*Brachyelytrum erectum* (Schreb.) P.Beauv.) and Rose Twisted-stalk (*Streptopus roseus* Michx.), whereas the warmer sunlight south-facing slope had Red Oaks (*Quercus rubra* L.), Christmas Fern (*Polystichum acrostichoides* (Michx.) Schott), and Short-styled Snakeroot (*Sanicula canadensis* L. var. *canadensis*). The difference between the two communities was striking once he pointed it out. We straddled a peculiar netherworld as we trekked up the ridge.

The top of the ridge was home to several surviving American Chestnuts (*Castanea dentata* (Marsh.) Borkh.), some of the younger examples of which had yet to contact the blight that has nearly wiped out this formerly common species. The stumps of other individuals were also visible, individuals who weren't so lucky. We settled down among this macabre scene, looking out over the floodplain on one side and the northern slope on the other, for our lunch break. It wasn't much of a break, however, as David promptly snatched up a couple acorns and was soon waxing eloquent on the subtleties of oak identification. In Red Oak, the common rocky-ground species, the scales fit tightly around the lip of the cup on the acorn, whereas Black Oak (*Quercus velutina* Lam.), a dry sand savannah species, has loose scales on the top of its cup. Furthermore, the buds on Red Oak are ovoid, glabrous, and chestnut coloured, but Black Oak buds are longer, prismatic in cross-section, and have scattered hairs.

Suitably refreshed, and surviving the descent back down the ridge, we were in fine shape for a few more identification challenges, including three species of Smilax growing within reach of each other. The Bristly Greenbrier (*Smilax hispida* Muhl. ex Torr.) with its prickly upright woody stem, was distinctive. And there were lots of common Carrion Flowers (*Smilax herbacea* L.), with their smooth thin stems and smaller leaves. Mixed in, however, was *Smilax lasioneura* Hook. (Hairy-nerved Carrion Flower), which closely resembles *S. herbacea*, but has hairs on the underside of its leaves. Soon the group was spread out over the floodplain, flipping over *Smilax* leaves and muttering to ourselves. Quite the picture!

A similar situation faced us with *Sanicula* – instead of one species, we were faced with the prospect of four: *Sanicula*

marilandica L. (Black Snakeroot); *S. odorata* (Raf.) Pryer & Phillippe (Clustered Snakeroot); *S. trifoliata* E.Bickn. (Large-fruited Snakeroot); and *S. canadensis* L. var. *canadensis* (Short-styled Snakeroot). Fortunately, super-David was able to sort them out, pointing out the two short-styled species – *S. trifoliata* with its long beak-like sepals on its foot-ball shaped fruits and *S. canadensis* var. *canadensis* with its blunt chubby fruit – from among the long-styled *S. marilandica* and *S. odorata*.

Being true naturalists, we allowed ourselves to be occasionally distracted from the plants by the sawfly larvae that oozed white slime, by the *Aeshna* sp. (big dragonfly) that flew tantalizingly close, and by the Solitary Sandpiper that winged its way around the corner of the creek, its white eye-ring and head-bobbing making it look comically manic as it squeaked out its alarm at our presence. A truly fitting distraction to round out an incredible day.

The species mentioned in this report are only a small proportion of the species seen and discussed on this outing. A great thanks to David Bradley for taking the time to lead on us on a very interesting and highly informative hike. Thanks also to David Bradley and Marc Johnson for looking over this report and offering valuable comments. ♣

Carl Rothfels

Features:

Protracted Flowering of Clammy Locust at Speyside, Ontario.

W.D. McIlveen

INTRODUCTION

Flowering Clammy Locust (*Robinia viscosa* Vent ex Vauq.) was first noted on June 2nd, 1991 near Speyside, Ontario. Speyside is located between Milton and Acton on the edge of the Niagara Escarpment. Shortly thereafter, two additional populations were found a short distance further east. Descriptions of each of these as they appeared on October 24th, 2002 are included in Table 1.

Clammy locust had not previously been documented for Halton (Riley 1989). It is seldom encountered in Ontario where it has a ranking of SE2 (very rare exotic) (Newmaster *et al.* 1999). The global ranking is G3 (rare to uncommon). The species is not native to Ontario, but is native to parts of southeastern United States (Alabama to Pennsylvania) although it is fairly hardy with respect to temperature

requirements (Gleason 1958). It spreads by seeds and by root suckering (Elias 1980). The latter character, together with a tolerance for a wide range of soil conditions and an ability to fix nitrogen from the air, makes it desirable as a plant cover to stabilize soil on difficult sites. The same characteristics also cause it to be somewhat weedy if not properly controlled.

How the species came to the locations noted for Halton is unknown, but considering its natural range, it is highly probable that it was introduced. The specific locations offer no clear explanation of their origin. While there is rural residence in close proximity to Site 1, the specific location on the road allowance does not suggest any relationship to that residence (i.e. possible use in a landscape planting). The other sites are well removed from any residential property. Although they are all located along the same roadside, the sites are adjacent to properties that have different owners further suggesting that the plants did not originate from the actions of one person having an interest in establishing this species. It is hypothesized that the plants at Sites 2 and 3 originated from seeds from the tree at Site 1 (where the tree nearly overhangs pavement). The seeds may have been transported by traffic including snow ploughs, however, there are no seedling plants near Site 1. Had dissemination by vehicular traffic been involved, it would seem probable that other plants would have become established much closer to Site 1 than at the nearest population that is 1.6 km away from Site 2. Seeds can be stored for over 10 years (Dirr & Heuser 1987) therefore it is not critical that the seeds had to reach their final destination in a short time interval after their production. Proliferation at Site 2 is undoubtedly related to root sucker formation, and the plants at Site 3 are close enough together to have come from one single plant by this means. In view of the size of the plant at Site 1, it would appear to be the oldest of the three populations; however, it shows no evidence of spreading by root suckers. The origin of the Halton stands must however remain unexplained.

LATE FLOWERING IN 2002

An interesting phenomenon was observed among these plants in 2002. Flowering of the plants was observed at Sites 1 and 2 but not at Site 3 on August 30th, 2002. This seemed unusually late compared to the normal date of flowering of the species (A specimen with a flower cluster had been collected when the species was first observed on June 2nd, 1991). Flowering dates in its native range is May to June. On closer inspection, the group of three stems at Site 1 had at least 16



Figure 1: Appearance of shoot of Clammy Locust tree at Speyside, August 30th, 2002. Pods from earlier flowering are present below and to left of flower cluster.



Figure 2: Pods of Clammy Locust at Speyside, August 30th, 2002.

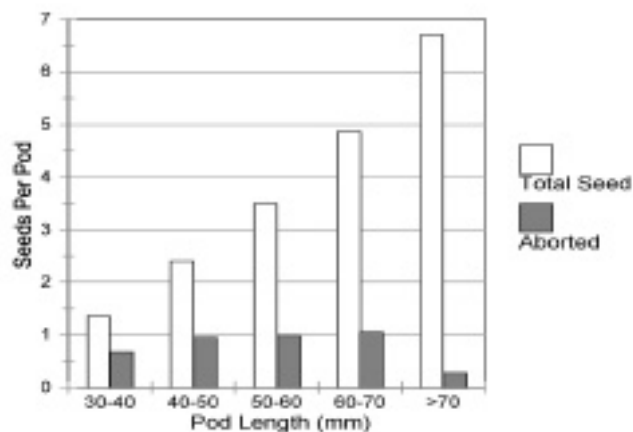


Figure 3: Relationship between pod length and numbers of seeds per pod.

clusters of late blooms (Figure 1). In addition to the open flowers at this time, there were young but complete pods (Figure 2) present on the trees. The late flowers tended towards being whitish or a washed-out pink colour.

On October 24th, 2002, the plants at all three sites were examined. Pods were present on the plants at Sites 1 and 3 but not at Site 2. From this, it was concluded that none of the late flowers produced at Site 2 resulted in the formation of pods. Because no late flowers were produced at Site 3, the pods present there must have originated from flowering at the normal date (although this flowering was not specifically documented). The origin of pods at Site 1 is less clear although the early flowering had certainly produced pods by August 30th as noted in Figure 2.

Also on October 24th, 2002, there was an apparent difference in size between the pods at Sites 1 and 3, therefore, samples of the pods from each location were collected for further examination. A photograph taken at the time of late

flowering (August 30th) at Site 1 was used as a reference in an attempt to specifically obtain those twigs that bore the late flowers. Only a few pods seemed to have formed from the late-forming flowers. At least three pods still had fresh tissues (reddish blush on green-brown tissue and soft greenish seeds compared with dried brown appearance of mature pods that were starting to crack open) at the time of collection in late October.

The pod length was measured and the seeds were extracted and counted in each pod. Seeds were scored as aborted if they were small, flattened or shriveled in comparison to the plump healthy seeds. The results are summarized in Table 2. There was a clear difference between Sites 1 and 2 for a many of the parameters considered. The parameters for the pods believed to have originated from late flowers were generally intermediate between the other two sites but closer to those originating from the normal flowers at Site 1. The average pod length from late flowers was calculated from only three pods that were available at Site 1, therefore considerable caution should be exercised when making comparisons. Pod length averaged nearly 60 mm at Site 3 in comparison to the mean of just over 43 mm at Site 1. Larger pods contain more seeds (Figure 3) so that the number of seeds per pod at Site 3 was more than twice that at Site 1. The proportion of aborted seeds was lower in the large pods (Figure 3). Slightly less than 50% of the seed at Site 1 were scored as aborted while less than 15% had aborted at Site 3. The late-flowering pods contained soft greenish seeds of normal size. It is doubtful that they would remain viable as they were likely several weeks away from reaching full maturity. They had not dried by October 24th by which time at least one frost event had occurred and temperatures were more or less seasonally cool.

Late flowering occurs in many plant species, but the abundance of late flower clusters on these locusts seemed particularly unusual. Unless the species is known to produce flowers on an ongoing basis, late flowering typically involves only one or two twigs or sprays. Pruning of terminal shoots will regularly cause the formation of side shoots that also flower when they reach a suitable size. This can be seen frequently in

Table 1. Summary of Clammy Locust Conditions at Speyside, 2002.

Parameter	Site 1	Site 2	Site 3
Location	South side of Sideroad 15, 0.5 km east of Speyside	South side of Sideroad 15, 2.1 km east of Speyside	South side of Sideroad 15, 2.8 km east of Speyside
UTM (NAD 83)	17 583066 4826141	17 584022 4827318	17 584508 4827807
Situation	On edge of stream at culvert less than 3 meters from pavement	Verge at jog in road, controlled somewhat by grass mowing or hand cutting, to within 2 m of pavement	In uncultivated corner of field near rural road intersection
Form	Small tree with 3 main living stems to about 6 m, stem diameters 4.97, 6.20 and 5.94 cm, also 2 smaller old dead stems	Four shrubs to about 2 m plus 100-200 stems arising singly or in small groups, most likely as root suckers	Three semi-discrete shrubs consisting of 1, 2 and 3 stems to about 3 meters, plant with 2 stems had short larger dead stump
Fruiting	Pods present	No pods	Pods present
Root suckers	Not evident	Numerous	Not evident

Parameter	Site 1	Site 1	Site 3
Origin	Normal flowers	Late flowers	Normal flowers
Condition	Dried brown, cracking open	Green, reddish bristles, soft seeds	Dried brown, cracking open
Number of pods examined	39	3	34
Mean pod length (mm)	43.3	47.4	59.9
Seeds per pod	2.05	2.33	4.62
% aborted seeds	0.4875	0.4286	0.1465

plants such as Chicory (*Cichorium intybus* L.) or Blueweed (*Echium vulgare* L.). In the present situation, pruning was not an apparent factor, although a number of stems at Site 2 had swellings in the stems typical of those caused by some boring insects. The tissues beyond the swellings were generally similar to the equivalent tissues on unaffected shoots, but the swelling surely must have presented some degree of stress for the plants. The relationship between the stem swellings and flowering could not be established as there were no pods formed at Site 2. The only noticeable health problem was the presence of leaf miner, but this was not considered significant enough to have serious health implication for the plants. As noted in Table 1, there were a few old dead stems but these were not likely related to the late flowering.

In summary, the Clammy Locusts at Speyside offers two mysteries for which we have no concrete explanation. One is how the plants became established in Halton in the first place. The other is an unusually late or double period of flowering that was capable of producing a small number of pods with seeds. The populations will be monitored in future years to determine whether the protracted flowering in 2002 was a one-of-a-kind or whether it occurs on a more frequent basis. 🌱

LITERATURE CITED

- Dirr, M.A. and M.W. Heuser.** 1987. The reference manual of woody plant propagation. Varsity Press, Athens, Georgia.
- Elias, T.** 1980. The complete trees of North America. Field guide and natural history. Van Nostrand Reinhold Co.
- Gleason, H.A.** 1958. The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada. 3 Vols.. New York Botanical Garden.
- Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. Murray, and M.J. Oldham.** 1998. Ontario Plant List. Forest Research Information Paper No. 123. Ontario Forest Research Institute, Sault Ste. Marie, Canada.
- Riley, J.L.** 1989. Distribution and status of the vascular plants of Central Region, Ontario Ministry of Natural Resources. OFER SR8902, Parks and Recreation Areas Section, Ontario Ministry of Natural Resources, Richmond Hill, Ontario. 110 pp.

Letters:

A correction: *Tagetes minuta* (Asteraceae) should be deleted from the known spontaneous flora of Canada.

James S. Pringle

Upon reexamination of specimens that I had previously identified as *Tagetes minuta* L. (Pringle 1986, 1988, and in Goodban 1995 and Kartesz 1999), I have concluded that in all cases they actually represent *Artemisia biennis* Willd. var. *biennis*. Therefore, reports based on my collections numbered 2538, 2553, and 2564 should be considered erroneous. I know of no other reports of *T. minuta* occurring as an adventive species in Canada to date.

I am grateful to Carl Rothfels for calling my attention to the similarity between correctly identified *A. biennis* and the specimens cited above before these incorrect reports proliferated further. 🌱

LITERATURE CITED

- Goodban, A.G.** 1995. The Vascular Plant Flora of the Regional Municipality of Hamilton-Wentworth, Ontario. Ancaster: Hamilton Region Conservation Authority.
- Kartesz, J.T., and C.A. Meacham.** 1999. Synthesis of the North American Flora, Version 1.0. Chapel Hill: North Carolina Botanical Garden. Compact disc.
- Pringle, J.S.** 1986. *Tagetes minuta* (Asteraceae), an addition to the adventive flora of Canada. *Plant Press* (Mississauga) 4:41-42.
- Pringle, J.S.** 1988 ["1986"]. Additional populations of *Eleusine indica* and *Tagetes minuta* in the Hamilton area. *Plant Press* (Mississauga) 4:109.

Notices:

Annual General Meeting Update.

This past years AGM held in St. Thomas proved to be quite successful, with over 45 participants. Thank you to all the field trip leaders for your knowledgeable contributions and efforts.

For 2003 the Annual General Meeting will be scheduled for the weekend of September 13th and 14th. We will be holding the event in the Durham Region to explore the Oak Ridges Moraine. Please feel free to contact me for any suggests and input regarding past and future AGMs. ▲

Dirk Janas
(905) 737-6094



Prior to the 2002 Annual General Meeting, the FBO policy was to keep its membership lists confidential; however, at the AGM, those present voted that a list of members should be available for all members. In response to this request, the Executive has decided that distribution of such a list with member information should be made available only with permission of the individual members. ▲

W.D. McIlveen



In the Next Issue.

I have already received two submissions that will appear in the next issue (Spring 2003) issue of the newsletter. These include two fall trips: Larry Gaitskell's account of the Newport Forest field trip, and Joan Crowe's account of the Bruce Landforms trip. However, additional submissions will be needed. Please dust-off those works-in-progress and send them to the editor before March 12th, 2003.

Ed Morris



Index to Volumes 1-12 of the FBO Newsletter is Nearly Complete.

Over the past few years, Jim Lane and Carol Brotman have been compiling indices to the first 12 volumes of the FBO newsletter: a mammoth task! They have just completed the indices to both the the scientific names and common names, and are currently working on a general index based on subject. As such, we anticipate that - by year's end - we can offer a complete set of Volumes 1-12 of the FBO Newsletter with Jim and Carol's indices, or copies of their indices for those who already have a complete set of newsletters.

Ed Morris



Life Science Inventory of Halton Seeks Records.

A comprehensive Natural Area Inventory for Halton will be getting underway on February 1, 2003. The project will address the physical and biological features of as many sites as possible. Any records of plants (or any other type of organism for that matter) that people have seen in their past visits here or may see in Halton over the next two field seasons would be most welcome. For more details about the organization of the project, stakeholder groups, or how to contribute information, please contact Bill McIlveen.



Semple, J.C., S.B. Heard, and L. Brouillet. 2002. Cultivated and Native Asters of Ontario (Compositae: Astereae). University of Waterloo Biology Series, No. 41. 134 pp.

The latest monograph has been released from the University of Waterloo Biology Series. Various classifications of all of Ontario's native, naturalized, and cultivated asters are discussed, and a revised scheme is presented based on previously published studies on morphology, cytology, and DNA analyses. The monograph includes several new features not found in Semple's previous monographs, including both black-and-white and colour photographs, new tables and keys, and even a Guide to Nomenclatural Changes on the inside back-cover.



A review copy has been provided to the FBO. Anyone interested in reviewing this monograph for the FBO Newsletter should contact the editor in writing. Members who are 'owing' book reviews will not be eligible.

The monograph may be ordered from the U.W. Biology Series, Dept. of Biology, University of Waterloo, Waterloo, ON. N2L 3G1 CANADA. The price is \$28.00 plus \$10 s/h (Canada and USA). Canadian buyers must also add 7% GST to total. Please specify if you prefer perfect or spiral binding. Cheques should be made payable to "University of Waterloo-Biology Series."

www.science.uwaterloo.ca/biology/jcsemp/uvwbioser.htm