

Field Botanists Of Ontario

Newsletter

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FIELD BOTANISTS OF ONTARIO NEWSLETTER

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The **deadline** for submissions for **Volume 10(4) - Winter 1997** is **November 31, 1997**.Cover Photo: Bog Clubmoss (*Lycopodium inundatum* L.)
by Ed Morris.

Standard source for Latin names of vascular plants:

Morton, J.K. and J.M Venn. 1990. A Checklist of the Flora of Ontario: Vascular Plants. University of Waterloo Biology Series Number 34. 218 pp.

Other sources used for Moss, Lichen, and Fungi.

Ireland, R.R. 1982. Moss Flora of the Maritime Provinces. National Museum of Canada Publications in Botany No. 12. Ottawa.

Vitt, D.H., J.E. Marsh, and R.B. Bovey. Mosses, Lichens, and Ferns of Northwest North America.

Audobon Society. 1981 The Audobon Society Field Guide to North American Mushrooms. Knopf, New York.

Field Trip Reports:

AGM Trip to the Fonthill Kame

July 12, 1997

It was my first FBO field trip, so I thought I should be on time. I pulled my car into the parking lot at the entrance to the St. John's Conservation Area and parked under the dappled shade of a Sassafras tree (*Sassafras albidum* (Nutt.) Nees). Once everyone had arrived, leader Jarmo Jalava gave us a rundown of the day's activities and a brief description of the Fonthill Kame. He also handed out a wonderful collection of ecological information on the area produced by the Natural Heritage Information Centre. Ilmar's desperate appeals for someone to write up the trip proved fruitless and so I hesitantly (the amateur botanist that I am) accepted the challenge.

We planned to visit two sites on the Kame, the Fonthill Sandhill Valleys and St. John's Conservation Area. The Fonthill Kame is a slightly stratified, large glacial sand and gravel deposit. The Kame is responsible for some of the unique microclimates in the area. It extends in a southwest-northeast direction for 6 kilometres from Fenwick to Fonthill, relief ranging from 40 to 75 metres. Needless to say hiking was moderately difficult at times. The Kame contains a wide variety of habitats ranging from high-quality Sugar Maple-Beech forests and drier Oak-Hickory forests. Springs in the valleys feed large Skunk Cabbage (*Symplocarpus foetidus* (L.) Nutt.) seepage zones.

We first visited the Fonthill Sandhill Valleys, a short car pool away from the Conservation Area. The entrance to the trail was located beside an amazing large sand bluff. A variety of species lined the path including:

Clematis virginiana L.**Virgin's-bower***Collinsonia canadensis* L.**Horsebalm***Cryptotaenia canadensis* (L.) DC.**Honewort***Polygonum virginianum* L.**Jumpseed***Polystichum acrostichoides* (Michx.) Schott**Christmas Fern***Scirpus atrovirens* Willd.**Black Bulrush**

Unfortunately many of these species were being crowded by invasive Garlic Mustard (*Alliaria petiolata* (M. Bieb.) Cavara and Grande).

The next portion of the trail was considerably more open; I admired the colourful floral display of Purple Flowering Raspberry (*Rubus odoratus* L.), and vibrant orange Michigan Lily (*Lilium michiganense* Farw.) We paused to examine a Butternut (*Juglans cinerea* L.) which was heavily diseased and dying from butternut canker (*Sirococcus lavignenti-juglandacearum*). Jarmo pointed out the flat topped bark ridges distinguishing it from Black Walnut (*Juglans nigra* L.).

We stopped to study two specimens of Avens, the white flowered Cut-leaved Avens (*Geum laciniatum* Murr.) and White Avens (*Geum canadense* Jacq.). The petals of the former are much shorter than sepals, whereas the latter has petals as long or longer than the sepals. We stumbled upon a Pignut Hickory (*Carya glabra* (Mill.) Sw.) and Jarmo took the opportunity to describe the differences between the Hickories. Bitternut (*Carya cordiformis* (Wangenh.) K.Koch) has orange stripes in the grooves of its smooth bark and typically 9 leaflets, Shagbark (*Carya ovata* (Miller) K.Koch) has loose shaggy bark and 5 leaflets, Pignut is in-between with rectangular, slightly loose strips of bark and 7 leaflets.

There were several steep climbs, so Jarmo would slow down to point out species on the steep hillsides to allow the group to catch up. One of these interesting species was Beech-drops (*Epifagus virginiana* (L.) Bart.). We discovered the dried stalks of this twig-like plant (which is parasitic on the roots of Beech trees) coincidentally under a Beech tree. On another sandy hillside we discovered the rare White Wood Aster (*Aster divaricatus* L.), but Jarmo was not sure as it can be easily confused with the Large-leaved Aster (*Aster macrophyllus* L.).

One of the high-lights was the wide variety of ferns we encountered through-out the day. In addition to Christmas Fern, we also saw:

Adiantum pedatum L.

Maidenhair Fern

Matteuccia struthiopteris (L.) Tod.

Ostrich Fern

Osmunda claytoniana L.

Interrupted Fern

Phegopteris hexagonoptera (Michx.) Fée

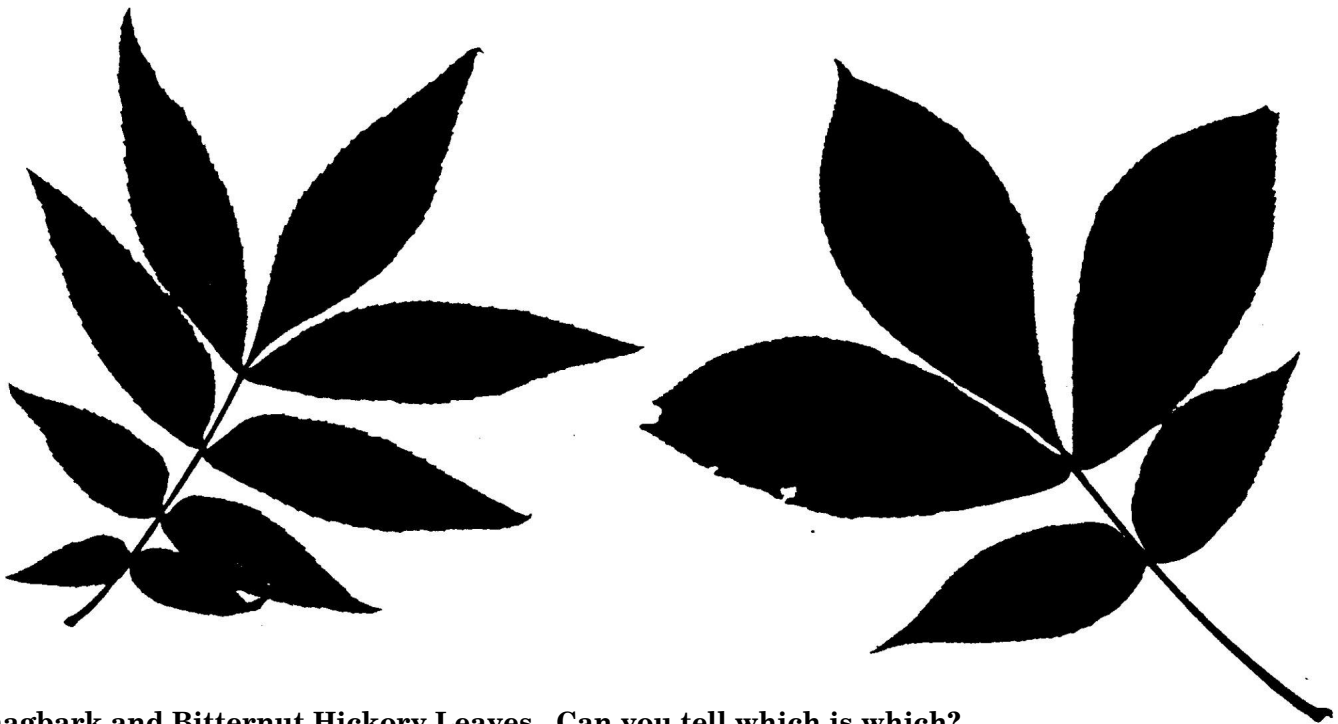
Broad Beech-fern

Thelypteris noveboracensis (L.)

New York Fern

The afternoon sun was becoming very hot making people anxious for lunch. Eventually we found our way out of the woods and took a brief lunch break.

We spent most of the afternoon in the St. John's Conservation Area. A tremendous wind-storm had felled many old growth trees in 1996. This left open clearings where we found an interesting variety of new vegetation emerging such as Tulip Trees (*Liriodendron tulipifera* L.), Boneset (*Eupatorium perfoliatum* L.), and a number of sedges. All day Jeremy and Jarmo were interested in finding sedges. At this point they were determined to find the rare Willdenow's Sedge (*Carex willdenowii* Schk. ex Willd.), but after a great search (and the decision not to trespass) they had to settle for a different sedge: *Carex virescens* Muhl. ex Willd. Meanwhile the rest of us found some lovely white flowered Shinleaf (*Pyrola elliptica* Nutt.), and the thornless Carrion-flower (*Smilax herbacea* L.). The afternoon went quickly and we soon found ourselves back at the parking lot.



Shagbark and Bitternut Hickory Leaves. Can you tell which is which?

We were a demanding group but Jarmo was a tireless leader. Even though it was late in the afternoon we coerced Jarmo into taking us to the Hamilton Naturalists Club Property so that we could see one of the few remaining Cucumber Trees (*Magnolia acuminata* (L.) L.) in Canada. But our trip didn't end there. Jarmo had previously discussed a fabulous Pin Oak (*Quercus palustris* Muenchh.) stand out in Rockway, and so the remaining members of our group convinced Jarmo to drive a fair distance to catch a glimpse of this majestic tree.

Both excursions to these large specimens of rare trees were well worth the time and Jarmo was a truly infallible leader. We owe him a great deal of thanks for a fabulous, information-packed field trip that won't soon be forgotten.

Michelle Purchase

A Trip to the Ojibway Prairie

On Saturday, May 24th at 10 am, leader Larry Lamb explained to the group of 11 eager naturalists that the advertised trip to the Walpole Island prairie had been rerouted to Ojibway Prairie, outside Windsor. A discussion of land use and Larry's experience on Walpole Island ensued.

Arriving sometime later at Ojibway Prairie, we started slowly walking the nature trails while Larry pointed out plant species. The prairie had been burned by Windsor Parks and Recreation Staff approximately two months earlier. The deliberate burn was to rejuvenate the uncommon prairie species by removing invasive competitors less tolerant of fire. The prairie eventually gives way to oak savanna, whose understory also benefits from occasional burns. It is believed that,

Plants Observed in the Ojibway Prairie Reserve, Windsor. May 24th.

Habit	Common Name	Species/ Item	Family	Stage
Grass	Oat Grass, Poverty	<i>Danthonia spicata</i> (L.) P. Beauv. ex Roemer & Schultes	Graminae	Spring shoots
Grass	Cordgrass	<i>Spartina pectinata</i> Link	Graminae	Spring shoots
Herb	Blue-eyed Grass	<i>Sisyrinchium montanum</i> E. Greene	Iridaceae	In flower
Grass	Wood Rush	<i>Luzula multiflora</i> (Retz.) Lej.	Juncaceae	In flower
Herb	Colic-root	<i>Aletris farinosa</i> L.	Liliaceae	Spring shoots
Herb	Stargrass, Yellow	<i>Hypoxis hirsuta</i> (L.) Cov.	Liliaceae	In flower
Herb	Merry Bells	<i>Uvularia sessilifolia</i> L.	Liliaceae	In flower
Shrub	Hazel, American	<i>Corylus americana</i> Walter	Betulaceae	Spring shoots
Herb	Gromwell	<i>Lithospermum</i> sp.	Boraginaceae	Spring shoots
Herb	Pinweed	<i>Lechea</i> sp.	Cistaceae	Spring shoots
Herb	Aster, Smooth	<i>Aster laevis</i> L.	Compositae	Spring shoots
Herb	Aster, Flat-topped White	<i>Aster umbellatus</i> Miller	Compositae	Spring shoots
Herb	Thistle, Field	<i>Cirsium discolor</i> (Muhl. ex Willd.) Spreng.	Compositae	Spring shoots
Herb	Tickseed, Tall	<i>Coreopsis tripteris</i> L.	Compositae	Spring shoots
Herb	Sunflower, Giant	<i>Helianthus giganteus</i> L.	Compositae	Spring shoots
Herb	Hawkweed, Canada	<i>Hieracium canadense</i> Michx.	Compositae	Spring shoots
Herb	Dwarf-dandelion, Orange	<i>Krigia biflora</i> (Walter) S.F. Blake	Compositae	Spring shoots
Herb	Blazing Star	<i>Liatris spicata</i> (L.) Willd.	Compositae	Spring shoots
Herb	Lettuce, White	<i>Prenanthes alba</i> L.	Compositae	Spring shoots
Herb	Lettuce, Tall White	<i>Prenanthes altissima</i> L.	Compositae	Spring shoots
Herb	Rattlesnake-root	<i>Prenanthes racemosa</i> Michx.	Compositae	Spring shoots
Herb	Ragwort, Golden	<i>Senecio obovatus</i> Muhl. ex Willd.	Compositae	In flower
Herb	Silverrod	<i>Solidago bicolor</i> L.	Compositae	Spring shoots
Herb	Goldenrod, Rigid	<i>Solidago rigida</i> L.	Compositae	Spring shoots
Herb	Dandelion	<i>Taraxicum officinale</i> G. Weber	Compositae	In flower
Shrub	Dogwood, Gray	<i>Cornus foemina</i> Miller ssp <i>racemosa</i> (Lam.) J.S. Wilson	Cornaceae	Spring shoots
Tree	Oak, Pin	<i>Quercus palustris</i> Muenchh.	Fagaceae	Spring shoots
Tree	Oak, Black	<i>Quercus velutina</i> Lam.	Fagaceae	Spring shoots
Herb	Geranium, Wild	<i>Geranium maculatum</i> L.	Geraniaceae	In flower
Herb	Bergamot, Wild	<i>Monarda fistulosa</i> L.	Labiatae	Spring shoots
Vine	Groundnut	<i>Apios americana</i> Medikus	Leguminosae	Spring shoots
Herb	Indigo, Wild	<i>Baptisia tinctoria</i> (L.) Vent.	Leguminosae	Spring shoots
Herb	Tick-trefoil, Showy	<i>Desmodium canadense</i> (L.) DC.	Leguminosae	Spring shoots
Herb	Seedbox	<i>Ludwigia alternifolia</i> L.	Onagraceae	Old seed stem
Herb	Agromony, Small-flowered	<i>Agrimonia parviflora</i> Aiton	Rosaceae	Spring shoots
Herb	Strawberry, Wild	<i>Fragaria virginiana</i> Miller	Rosaceae	In flower
Herb	Cinquefoil, Common	<i>Potentilla simplex</i> Michx.	Rosaceae	Spring shoots
Herb	Toadflax, Bastard	<i>Comandra umbellata</i> (L.) Nutt.	Santalaceae	Spring shoots
Herb	Foxglove, False	<i>Aureolaria flava</i> (L.) Farw.	Scrophulariaceae	Spring shoots
Herb	Culver's Root	<i>Veronicastrum virginicum</i> (L.) Farw.	Scrophulariaceae	Spring shoots
Herb	Cowbane	<i>Oxypolis rigidior</i> (L.) Raf.	Umbelliferae	Spring shoots
Herb	Snakeroot, Black	<i>Sanicula odorata</i> (Raf.) Pryer & Phillippe	Umbelliferae	Spring shoots
Herb	Golden Alexanders	<i>Zizia aurea</i> (L.) Koch	Umbelliferae	Early flowers
Herb	Violet, Marsh	<i>Viola cucullata</i> Aiton	Violaceae	In flower
Herb	Violet, Arrow-leaved	<i>Viola sagittata</i> Aiton	Violaceae	In flower

Plants Observed in the Spring Garden Prairie, Windsor. May 24th.

Habit	Common Name	Species/ Item	Family	Stage
Fern	Fern, Sensitive	<i>Onoclea sensibilis</i> L.	Dryopteridaceae	New fronds
Fern	Fern, Cinnamon	<i>Osmunda cinnamomea</i> L.	Osmundaceae	New fronds
Fern	Fern, Interrupted	<i>Osmunda claytoniana</i> L.	Osmundaceae	New fronds
Fern	Fern, Royal	<i>Osmunda regalis</i> L.	Osmundaceae	New fronds
Herb	Spiderwort	<i>Tradescantia ohioensis</i> Raf.	Commelinaceae	New stem
Herb	Blue-eyed Grass	<i>Sisyrinchium montanum</i> E. Greene	Iridaceae	In flower
Herb	Colic-root	<i>Aletris farinosa</i> L.	Liliaceae	Rosette
Herb	Puccoon	<i>Buglossoides arvensis</i> (L.) I.M. Johnston	Boraginaceae	In flower
Herb	Frostweed	<i>Helianthemum canadense</i> (L.) Michx.	Cistaceae	--
Herb	Tickseed, Tall	<i>Coreopsis tripteris</i> L.	Compositae	--
Herb	Ragwort, Golden	<i>Senecio obovatus</i> Muhl. ex Willd.	Compositae	In flower
Tree	Sassafrass	<i>Sassafrass albidum</i> (Nutt.) Nees	Lauraceae	In flower
Herb	Lupine, Wild Blue	<i>Lupinus perennis</i> L.	Leguminosae	7 stems
Shrub	June-berry, Low	<i>Amelanchier spicata</i> (Lam.) Koch or <i>A. stolonifera</i> Wieg.	Rosaceae	Early fruit
Shrub	Chokeberry	<i>Aronia melanocarpa</i> (Michx.) Elliott	Rosaceae	In flower
Tree	Hawthorn, Cockspur	<i>Crataegus crus-galli</i> L.	Rosaceae	In flower
Tree	Crabapple, American	<i>Malus coronaria</i> (L.) Miller	Rosaceae	In flower

at Ojibway Prairie, of all the factors maintaining the prairie habitat - drought, grazing, fire, and native settlement - fire would have predominated.

Members of the group photographed plants; watched birds, insects, and amphibians. We even discovered a meadow crayfish chimney!

After lunch at the nature centre, we walked a small portion of another trail, identifying trees and shrubs. Then, on to the Spring Garden Prairie for another hike and to look for some uncommon plants.

Few flowers were in bloom due to the cool, wet spring. Plants were identified by other characteristics, and I admit being totally overwhelmed by the descriptions of so many prairie species. Luckily, Bill McIlveen was also taking notes, and the plant list which accompanies this article is his contribution.

The wealth of information provided by prairie specialist Larry Lamb, comrades in the group, glorious weather, and the thrill of making my way through Newcomb's Wildflower Guide to a proper identification, made my day and my first FBO field trip, truly inspirational.

Carol Brotman

Menzel Nature Reserve

The Menzel Nature Reserve, in the Napanee Plains north of Deseronto, is an area astonishing in its diversity of habitats. More than six hundred acres of wild terrain here has been bought by the Nature Conservancy of Canada, in order to safeguard special ecosystems in this part of Ontario.

On June 21st, 1997, seven field botanists, under the leadership of Todd Norris, made an all-day expedition through part of the Nature Reserve. In the course of the day, we visited five distinctly different habitats: a long-abandoned upland pasture with interesting alvar components, a wetland mixed forest, and magnificent little cedar swamp, a low-shrub fen, and dry upland hardwood forests.

On the open uplands, a pleasant summer breeze was tossing the wildflowers. Plant life here followed the pattern of cracks and crevices in the grey limestone bedrock; colourful with clumps of Yellow Hawkweed (*Hieracium pilosella* L.) and Narrow-leaved Vervain (*Verbena simplex* Lehm.). We found the native Forget-Me-Not (*Myosotis verna* Nutt.) in flower here, and Mother-of-Thyme (*Salvia verticillata* L.). Early Saxifrage (*Saxifraga virginensis* Michx.) had gone to seed, and also well past flowering were a few plants of the provincially rare Carolina Whitlow-grass (*Draba reptans* (Lam.) Fern.). A special reward for me was to learn the identity of the brown moss *Tortula ruralis* (Hedw.) Gaertn., Meyer & Schreb. that was growing in the alvar patches of the habitat.

We followed an ancient cart track over the fields and down through a forested wetland, where we waded happily along, well over our boot-tops in the water. The more knowledgeable members were identifying the sedges and grasses along the water-flooded lane. Here an ever-present frustration needs to be pointed out. The no-plucking-plants-while-on-field-trips rule, a necessary safeguarding of rare plants and of FBO reputation, means that the hapless beginner has small hope of grasping the minute identifying characters of the sedges and grasses we encounter on field trips. This is a pity. Often there is expert help present, but not the means to take advantage of it!¹

¹ At their discretion, trip leaders and executive representatives are permitted to pick or even collect plant specimens for examination by the group. However, research permits are required in Provincial Parks and Canadian Wildlife Service lands. In any case, a conscious botanist will get down on hands and knees, lens in hand, rather than damage a living plant by plucking it. -Ed

Our route here was lined with wetland ferns and shrubs including:

Onoclea sensibilis L.
Sensitive Fern

Osmunda cinnamomea L.
Cinnamon Fern

O. regalis L.
Royal Fern

Thelypteris palustris (Salisb.) Schott
Marsh Fern

Betula pumila L.
Dwarf Birch

Cornus stolonifera Michx.
Red Osier Dogwood

Ilex verticillata (L.) A. Gray
Eastern Holly; Winterberry

Salix amygdaloides Andersson
Peach-leaved Willow

S. candida Fleugge ex Willd.
Hoary Willow

S. discolor Muhl.
Pussy Willow

S. petiolaris Smith
Meadow Willow

On the shore of Mud Lake we ate lunch. Then, single file, we followed Todd into a wonderful old cedar swamp, leaping from hummock to tree root, at times wading through black swamp water, while identifications were indicated along the line from botanist to botanist, or lost in the depths of the swamp as gaps developed in the chain of communication. This was my favourite of the habitats visited this day, although a listing of the plants we encountered revealed no surprises. A cedar swamp is a cedar swamp: dim spooky light, delicious aromatic smells, and an exclusive plant community - a special place always.

Next came the low shrub fen. A shrub fen is not a people-friendly habitat. After recently heavy rains, the water in the fen was up to my knees. We sloshed, thrashed, and fought our way through dense shrubbery, almost solid with Leatherleaf (*Chamaedaphne calyculata* (L.) Moench), but with a scattering of small Tamaracks (*Larix laricina* (Duroi) K.Koch). Struggling to keep my footing, and to keep up to my long-legged companions, I abandoned all effort to keep track of the flora here. I did manage to observe a few species however - here a wisp of Cranberry (*Vaccinium oxycoccus* L.), there a spray of Bog Rosemary (*Andromeda polifolia* L. ssp. *glaucophylla* (Link) Hultén) and of course several species of sedge ranging from the abundant, fen-defining, *Carex lasiocarpa* Ehrh. to the regionally rare *Carex chordorrhiza* Ehrh. ex L.f.

Our final foray of the day was into a dry upland hardwood wood lot, where we were shown a splendid stand of Cork Elm (alias Rock Elm; *Ulmus thomasii* Sarg.). Earlier in the season, this wood had put on a

splendid display of spring wildflowers. We saw evidence that the following had all flowered here this spring.

Hepatica americana (DC.) Ker Gawler
Hepatica

Mitella diphylla L.
Miterwort

Phlox divaricata L.
Wild Blue Phlox

Trillium grandiflorum (Michx.) Salisb.
White Trillium

Uvularia grandiflora Smith
Bellwort

Viola canadensis L.
Canada Violet

Waldsteinia fragarioides (Michx.) Tratt.
Barren Strawberry

My thought as we wound up the day's expedition was how indebted we are to the Nature Conservancy of Canada, whose mission is to preserve wild habitats like these from almost certain loss. Our thanks also to Todd Norris for giving up his day to introduce us to the plants and ecosystems of this nature reserve.

Sheila C. Thomson
(with a few suggestions from Don Cuddy)

The FBO Tackles Killarney

Walter and I, when travelling on Highway 69, have often passed the road leading to Killarney. Originally, our excuse for not making the turn was that there was 60 km of gravel road between us and the park gate. There was also the difficulty that Killarney was renowned as a canoeist's park and we had no canoe. When we saw the announcement of the field trip scheduled for August 23rd and 24th, which included both hiking and canoeing, it seemed that the perfect opportunity to visit the park had come at last. We were a little disconcerted, when we turned off the highway, to find that the road was still gravel! However, it turned out that they were merely fixing the first 15 kilometres (in the middle of the season, of course) and the remaining 52 kilometres to the village was acceptably paved. The village itself has a quaint olde-worlde air, although the price of accommodation is definitely late twentieth century. Camp sites in the park are in great demand and there are often line-ups since this has been a popular tourist area for a long time.

The first day's expedition started on an old logging road a few kilometres northeast of the park entrance. The mature maple, beech and hemlock stand contained typical boreal species such as Bluebead Lily (*Clintonia borealis* (Aiton) Raf.) and Bunchberry (*Cornus canadensis* L.); in fruit at this time of the year, of course. Our leader, Will Kershaw, pointed out a well developed stand of Indian Cucumber Root (*Medeolavirginiana* L.), so called because it tastes of cucumber - if you have the courage to try it! There were many fern species along the



Peter Beckett grins before swimming out to collect *Sphagnum* from a floating bog mat in Wagon Road Lake. Although the pH of the lake was 5.4, minnows and plants were abundant. Photo by Walter Crowe.

way and an amazing assemblage of Club-mosses (*Lycopodium* sp.) for a small area. Bog Clubmoss (*Lycopodium inundatum* L.) is also to be found in boggy areas in the park.

Lycopodium annotinum L.

Stiff Clubmoss

L. clavatum L.

Running Pine

L. complanatum L.

Northern Ground Cedar

L. dendroideum Michx.

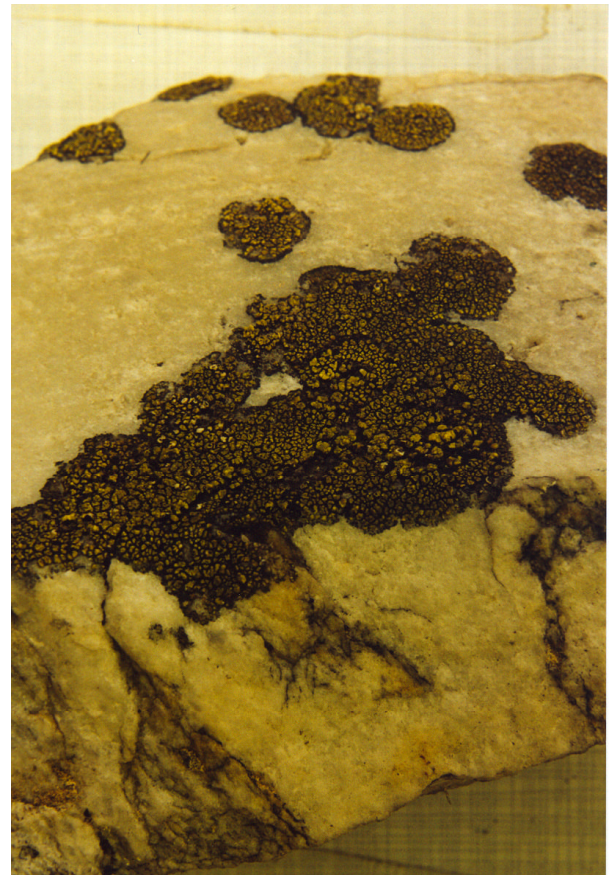
Ground Pine

L. lucidulum Michx.

Shining Clubmoss

Woodland Horsetail (*Equisetum sylvaticum* L.) was unusually prolific and many interesting species, including Swamp Dewberry (*Rubus hispida* L.), were found in an open swampy section. Two magnificent specimens of *Amanita virosa* Beer - the Destroying Angel - were spotted on a wooded slope. There was so much to see that it took an hour to cover the first kilometre of a six kilometre hike.

By lunchtime, we had started to climb over the orthoquartzite ridges which are so characteristic of this park. We clambered through a rocky cleft and came out on to a high ridge of the La Cloche Mountains with fabulous views of the rugged terrain towards Manitoulin Island and Georgian Bay. These are the remains of mountains raised up 2.5 billion years ago.



Map Lichen (*Rhizocarpon geographicum* (L.) DC.) on a white quartzite rock. Photo by Ed Morris

Originally, they would have towered 2 kilometres above our heads but time has brought them low and exposed the almost white orthoquartzite which was originally sedimentary but has been metamorphosed by pressure and volcanic activity into the crystalline rock we see today. Vegetation snakes through the moist crevices, and the rock between shines like remnant snow drifts in spring. Even at these elevations, small perched bogs occur containing typical species such as Leatherleaf (*Chamaedaphne calyculata* (L.) Moench) and Sweet Gale (*Myrica gale* L.). There was a huge variety of lichens on the exposed rocks, great yellow maps of Map Lichen (*Rhizocarpon geographicum* (L.) DC. glowing among the prevalent greys. At the very top of the ridge we found Black Chokeberry (*Aronia melanocarpa* (Michx.) Elliott) in fruit. White Pine clung precariously to crevices on forbidding ridges. One sample, cored at lunchtime by Maureen Kershaw, gave an age of about 100 years. The whole area was logged (and some of it was mined) until it became a park in 1964 when the Spanish Lumber Company exchanged its license for timber rights elsewhere. Logging would have been fairly selective and, thanks to the lobbying started by artists in 1931, including A.Y. Jackson, it stopped before clear cutting set in. The area is prone to fire, too, which also limits the age of the trees.

Sunday's trip was led by Dr. Bob Morris - a freshwater ecologist and Dr. Peter Beckett - plant ecologist, bryologist and lichen-authority. After a not too strenuous paddle across George Lake, past the rounded cliffs so reminiscent of Group of Seven paintings, we made a short portage into Freeland Lake. Many of the lakes in the park are very deep, dilute, and naturally acid (also influenced by the fallout from Sudbury's nickel smelters) and, therefore, have very little vegetation. Freeland Lake, however, is small, quite shallow and it is fed by several small

streams which move nutrients through the water. The result is much more aquatic vegetation and, in the shallows, the development of floating bog mats. The Yellow Water-lilies (*Nuphar variagata* Durand) were in fruit, but the White Water-lilies (*Nymphaea odorata* Dryander ex Aiton) were still in full bloom, interspersed with extensive patches of Purple Bladderwort (*Utricularia purpurea* Walter), also in bloom. After lunch, we hiked over the ridge to the smaller Wagon Road Lake. The highlight of the day was Peter Beckett stripping off and diving into the water to raid a floating bog mat. He returned with handfuls of dripping *Sphagnum* and other bryophyte treasures. The second day was particularly good for bryophytes and we have certainly added a number of species to the list for the park which was produced by Denise Thompson and Will Kershaw earlier this year.

Hepatics Recorded from Killarney Park (August 23/24, 1997).

Barbilophozia barbata (Schreb.) Loeske
Bazzania trilobata (L.) S.Gray
Cephalozia lunilifolia (Dum.) Dum.
Cephaloziella hampeana (Nees) Schiffn.
Cladopodiella fluitans (Nees) Buch
Geocalyx graveolens (Schrad.) Nees
Lepidozia reptans (L.) Dum.
Lophocolea heterophylla (Schrad.) Dum.
Lophozia sudetica (Nees ex Hüb.) Grolle
Lophozia ventricosa (Dicks.)Dum.
Mylia anomala (L.) S.Gray
Ptilidium ciliare (L.) Hampe
Ptilidium pulcherrimum (G. Web.) Vainio
Scapania irrigua (Nees) Nees
Scapania nemorea (L.) Grolle



Floating Bogs of Wagon Road Lake, Killarney Provincial Park. Photo by Bob Morris.

Tentative List of Mosses Collected by J. Crowe from Killarney Provincial Park (Aug. 23/24, 1997).

Aulacomnium androgynum (Hedw.) Schwaegr.
Dicranum montanum Hedw.
Dicranum polysetum Sw.
Dicranum scoparium Hedw.
Leucobryum glaucum (Hedw.) Angstr. in Fries
Plagiothecium laetum Schimp. in B.S.G.
Pohlia nutans (Hedw.) Lindb.
Pohlia wahlenbergii (Web. & Mohr) Andrews
Polytrichum commune Hedw.
Polytrichum piliferum Hedw.
Sphagnum capillifolium (Ehrh.) Hedw.
Sphagnum russowii Warnst.
Tetraphis pellucida Hedw.

This was an excellent weekend in a beautiful area which is botanically and geologically extremely interesting. It was made all the better by pleasant company, unbelievably perfect weather and superb organization by Ed Morris¹. Killarney more than lived up to everything we had ever heard about it. Botanically, it would be well worth visiting in other seasons. Oh, we forgot! The best fish and chips in Ontario can be found at Mr. Perch on the quay in Killarney village!

Joan Crowe

Some Notes on the Discovery of Curly Grass (*Schizaea pusilla* Pursh) in Bruce County, Ontario.

by William G. Stewart

"Among the belongings of recently deceased FBO member, Bill Stewart (see FBO Newsletter 10(2):11, Summer 1997), was a draft manuscript dealing with the fern *Schizaea pusilla*, Curly Grass, in Ontario. This manuscript was discovered by Bill's widow, Eileen Stewart, who passed it along to me. The article by Bill was prepared in response to an article by Joan Crowe which previously appeared in the FBO Newsletter (8(3):9, Fall 1995). Since the manuscript was almost certainly intended for submission to the FBO Newsletter, I have filled in a bit of missing information and made a few very small modifications, and passed the article on to FBO Newsletter editor, Ed Morris. The manuscript was in excellent shape when I received it and appeared virtually complete. It is a very well written and researched article (typical of Bill's work) and I think makes a significant contribution to the debate about Curly Grass in Ontario. Bill's article is particularly important since it provides information which only he could provide, based on communications he had with Clarence Hand, also now deceased."

M.J. Oldham
 September 13th, 1997

¹ I cannot take all the credit, as the trip leaders were truly well prepared for the outing. I must mention that Ken Ursic was responsible for much of the organization. Note that specimens collected by Joan are now at Laurentian University Herbarium bryophyte collection, and that we obtained permission to collect prior to the trip. -Ed

The article entitled "The Curious Case of Curly Grass" in the Field Botanists of Ontario Newsletter (Crowe 1995) has prompted me to put on record the results of several conversations on that subject which I was fortunate to have had with bryologist Clarence Hand of Chatham, Ontario, before his death in 1974.

The discovery of Curly Grass (*Schizaea pusilla* Pursh) by Eugene Moxley at Sauble Beach, in Bruce County, Ontario has caused much stir in the botanical community, since that taxon is an Atlantic coastal species and had not been reported inland.

Clarence H. Hand was born in Norwich, in Norfolk County (now Haldimand-Norfolk Regional Municipality), Ontario on October 19th, 1894. He attended Queen's University in Kingston in 1926 and taught in high schools in Manitoba and Ontario. For the latter part of his life he resided in Chatham, Ontario where he taught at the local high school. Clarence Hand was an excellent all-round naturalist who became interested in bryophytes in the 1930's. He was responsible for the early bryological studies of Kent County, including Rondeau Provincial Park. The Hand family maintained a cottage at Meaford in Grey County, Ontario where they passed the summer season. From there he collected bryophytes in Bruce and Grey Counties and became acquainted with his colleague and close friend, Eugene Moxley. The bryophyte collections of Clarence Hand are in the National Herbarium at Ottawa (CAN). Clarence Hand died on January 5th, 1974 at age 79.

Eugene Augustus Moxley was born in 1874 and resided at Owen Sound, Ontario where he held a responsible position at a local factory. He was a keen and enthusiastic amateur bryologist who, in the words of Howard Crum "was a diligent and intelligent amateur an excellent collector and a good bryologist who was able to name his collections well at a time when North American mosses were poorly understood" (Crum 1966). Moxley contributed greatly to the knowledge of the mosses of Bruce and Grey Counties and published his findings in two catalogues, one in 1928 and a revised list in 1932. Moxley published many articles in "The Bryologist" describing his botanical forays in the vicinity of Owen Sound, all of which make fascinating reading (see The Bryologist index Volumes 1-60). The bryophyte collections of Eugene Moxley are at the University of Toronto (TRT), with some duplicates at CAN. Eugene Moxley died on June 6th, 1961 at age 87.

In 1927, the death of the vice-president at the place of Moxley's employment precipitated a management reshuffle which necessitated his removal to Toronto about 1931. The greater distance involved did not dampen his enthusiasm for the mosses of the Bruce, for he periodically arranged to meet with Clarence Hand for a few days of botanizing in his old familiar haunts. It was also during his stay at Toronto that he published his revised and expanded list of the "Moss flora of north Grey County and part of the Bruce Peninsula" (Moxley 1932). During his stay at Toronto, Moxley made many forays to the surrounding areas which culminated in an article entitled "Mosses of the Toronto region of Ontario" (Moxley 1940).

Eugene Moxley and Clarence Hand were both members of the Sullivant Moss Society, whose publication, *The Bryologist*, periodically published a complete membership list. If they had not before been aware of their mutual interest in bryophytes, they would surely have become acquainted through the Society. Since Hand and his family summered at Meaford, only about 28 km (17 miles) from Moxley's home in Owen Sound, it was inevitably convenient that they should make one another acquaintance without delay. Indeed, this was the case and on July 31, 1937 the two met in Owen Sound for several days botanizing in the area. Many other field trips ensued during which much of Bruce and Grey counties was botanized. Ferns, orchids and bryophytes seemed to be of primary mutual interest.

When the Sullivant Moss Society planned a three day foray for its members to the Bruce Peninsula in 1938, Clarence Hand and Eugene Moxley were chosen as hosts to lead the Society field trips. This foray, which met at Buchan Manor in Owen Sound was a huge success. An account of the proceedings was duly published in *The Bryologist* by the prominent bryologist, Henry Conard in 1938.

Since I became actively interested in bryology only in 1968, I never had the privilege of the acquaintance of Eugene Moxley. I did however meet Clarence Hand on several occasions while I was presenting a program on bryology to various local naturalist clubs. As a result of these meetings, Clarence and I developed a lasting friendship, shared specimens and participating in field trips together. Clarence had a keen interest in ferns and during our many discussions on the subject it was inevitable that the subject of the Moxley *Schizaea* record would surface.

Clarence Hand recalled that Eugene Moxley had told him of a collecting trip he had made to Sauble Beach in July of 1928, and upon his return home, while examining the days collections a curious plant was found in the mixture of mosses which he subsequently identified as *Schizaea pusilla* Pursh or Curly Grass. Realizing the importance of his discovery, the three specimens were mounted for display and placed in his fern collection. Upon showing his discovery to fellow botanists, Moxley's pride and elation soon turned to disappointment and despair for instead of being met with acceptance he was confronted with disbelief. The

locality and even the origin of the specimens was questioned, not only by amateurs but by professionals as well. In a desperate effort to substantiate his find, Moxley made many more visits to the area where his memory dictated that the collections had been made but with no success in finding more *Schizaea*. One can scarcely imagine the anguish and frustration that Moxley experienced in his futile efforts to rediscover this plant which Cody and Britton (1989) describe as "so insignificant that only the keenest observers can find its grass-like fronds which are hidden among other vegetation".

Eventually, Moxley became frustrated at this implied challenge to his integrity and flatly refused to discuss the subject of *Schizaea*. The folder containing



**Curly Grass (*Schizaea pusilla* Pursh)
specimen from the New Jersey pine barrens.
Photo by Ed Morris.**

the specimens was removed from his collection and placed in the attic of his home where it was deliberately left upon his removal to Toronto, three years later. But fate would again intervene. Upon the discovery of the abandoned specimens in the attic in Owen Sound, the new owner rightfully forwarded them to Moxley in Toronto who for reasons unknown presented the folder containing *Schizaea*, along with some other ferns to another collector, Mr. Hubert H. Brown. Realizing that Moxley had not reported the significance of his discovery in the literature and without involving Moxley in the reporting of *Schizaea*, Brown noted this discovery of *Schizaea* in the *American Fern Journal* (Brown 1935). The herbarium of H. H. Brown, numbering some 7,000 to 8,000 sheets and including the Moxley *Schizaea* is now deposited in the herbarium of the University of Toronto (TRT) (Boivin 1980).

Epilogue

Several hypotheses have been offered to explain Moxley's possession of *Schizaea*. Moxley never visited the east coast of Canada. However, it has been suggested that the plants may have been received by him mixed with a shipment of specimens from eastern Canada. Indeed, Moxley did assist a Quebec bryologist, Brother Marie Anselm of La Tuque, Quebec in identifying specimens and in preparing a list of collections for publication which appeared in *The Bryologist* in 1938 under Moxley's name. But this work appeared after Moxley had moved to Toronto, a full ten

years after his report of *Schizaea*. Brown (1935) mentions the somewhat parallel case of another small fern, *Cheilanthes siliquosa* Moxon, a plant of primarily western distribution but which has been also found in Gaspé and southern Quebec. In 1883 a specimen was reported near Durham, in Grey County, a site which is only approximately 40 km (25 miles) from the site of *Schizaea*. This collection was made by Dr. Henry M. Ami, a paleontologist and keen botanist who worked for the Geological Survey of Canada. The authenticity of this specimen has also been questioned; and much search has been made to rediscover this fern which has not been found in Ontario before or since.

In regard to the habitat conditions which prevailed at the site of the discovery of *Schizaea* at Sauble Beach, Ontario, Brown (1935) cites a friend who was familiar with the New Jersey pine barrens and who assured him that the habitat there could be duplicated at Sauble Beach which he also knew very well. Brown also notes that the stations for *Schizaea* in Bruce County and in Nova Scotia were equidistant from the pine barrens of New Jersey, although the latter two are coastal while the Bruce County station is inland. Gleason (1968) mentions four main areas for *Schizaea* including the Bruce County site.

It is an interesting fact, well known to botanists that many Atlantic Coastal Plain species such as Virginia Meadow Beauty (*Rhexia virginica* L.) whose main centre of distribution is south and east of the Great Lakes also occur in Muskoka. The suggested route of migration for these has been westward through the Finger Lakes district of New York state and northward into Canada, following the path of retreating glaciation. Whether this is the case with *Cheilanthes* and *Schizaea* is a matter of conjecture.

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The Bryologist:

- Vol. XXX (1927) p. 8. E.A. Moxley reports "having extra duties after the death of our vice-president here at the factory".

- Vol. XXXV (1932) pp. 61-70. The moss flora of north Grey County and part of the Bruce Peninsula, by E.A. Moxley.
- Vol. XL (1937) pp. 89-90. Bryological notes from Owen Sound and the Bruce Peninsula, by E.A. Moxley (first meeting with Clarence Hand).
- Vol. XLI (1938) pp. 132-137. Mosses from La Tuque, Quebec, by E.A. Moxley.
- Vol. XLI (1938) p. 139. The foray of 1938, by H.S. Conard.
- Vol. XLIII (1940) p. Mosses of the Toronto region of Ontario, by E.A. Moxley (notice of a mimeographed list published by "The Moss Club" of Toronto).
- Vol. LXIV (1961) p. 399. Notice of the death of Eugene Moxley on June 6, 1961.
- Vol. LXXVII (1974) p. 106. Obituary of Clarence Hand.

Notices:

Correct Authorship for the Scientific Name of Lakeside Daisy, *Hymenoxys herbacea*.

by Michael J. Oldham

In the last issue of the Field Botanists of Ontario Newsletter (10(2):4, Summer 1997) I wrote a footnote to Richard Aaron's field trip report on "Spring Plant Reproductive Biology on the Bruce Peninsula" which mentioned the fact that the combination *Hymenoxys herbacea* was published twice in 1991 by two different authors, and that I wasn't sure which author citation was correct. Arthur Cronquist published the combination *Hymenoxys herbacea* (Greene) Cronq. on page 864 of the Second Edition of the "Manual of Vascular Plants of Northeastern United States and Adjacent Canada" (Gleason and Cronquist 1991). In the same year, Allison Cusick published the combination *Hymenoxys herbacea* (Greene) Cusick in an article in *Rhodora* (Cusick 1991). The first name used for this plant was *Tetranurisherbacea* Greene. Prior to 1991, Lakeside Daisy was most commonly known by the scientific name *Hymenoxys acaulis* (Pursh) Parker var. *glabra* (A. Gray) Parker, however Cusick (1991) has provided justification for considering it a distinct species.

Through correspondence with Allison Cusick I have been able to determine that the name *Hymenoxys herbacea* (Greene) Cusick has priority (by about six months) over the name *Hymenoxys herbacea* (Greene) Cronquist. Cusick has a letter from Cronquist who, upon reading Cusick's article in *Rhodora*, explained that he was making the same combination in his manual and that the printing was too far along to change it.

Literature Cited

- Cusick, A.W. 1991. *Hymenoxys herbacea* (Asteraceae): an endemic species of the Great Lakes region. *Rhodora* 92(875):238-241.
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Flora of North America Volume 3 Now in Print.

The third volume of the **Flora of North America North of Mexico** is available from the Oxford University Press, New York [QK 110.F55; ISBN 0 19-511246-6 (v3)]. The cost may depend on how you obtain it. The list price is \$85.00 U.S., but book shops often mark up to cover shipping etc. As in other volumes of this series there is no single author. Volume three has fifty seven contributors including our own James Pringle of the Royal Botanical Gardens, Hamilton. The first volume was a general introduction covering many aspects of Botany, the second dealt with the Pteridophytes and Gymnosperms. This volume is the beginning of the Magnoliopsida (Dicotyledons), starting with most primitive family, the Magnoliaceae and proceeding as far as the Casuarinaceae (the order of families is the same as in the 1991 edition of the Manual of Vascular Plants by Gleason & Cronquist). This includes a number of families which are well represented in Ontario, especially the Ranunculaceae. It also covers many of the deciduous tree families - plane, elm, walnut, beech and birch - so much of the information is useful in Ontario. Distribution maps accompany each species description. The large number of authors makes for some inconsistency in the descriptions and, particularly, in the provision of English names; opinions obviously differ about the value of "common" names! However, this book is an invaluable standard reference for all students of Botany. Unfortunately, if the current rate of producing one volume every four years continues, I calculate I shall be 169 before the last volume appears! Too bad that is the one which deals with the bryophytes! On the other hand, if they all come out at the same time I shall probably go bankrupt!

Joan Crowe

Reviewer Needed for Plants of the Kingston Region: 1996.

We have been requested to review "Plants of the Kingston Region: 1996" by Crowder, Topping and Topping. As yet, no brave soul has volunteered to do this. Persons willing to review the piece should *ideally* be familiar with the Kingston Region, yet have not been involved either directly or indirectly with this publication. Those interested should contact Ed Morris for your copy. Additional copies can be obtained from:

Adèle Crowder
Department of Biology
Queen's University
Kingston, Ontario
K7L 3N6

The cost is \$14 per copy (postage included); payable to "The Fowler Herbarium."

Revised Checklist of New York State Plants

The checklist for New York State Plants has been revised. Those interested in this publication should enquire to:

New York State Museum Publication Sales,
Attention: Dianne Siegfried,
New York State Museum,
Albany, NY 12230.
USA



Nodding Ladies-tresses (*Spiranthes cernua* (L.) Rich.). Photo by Ed Morris.