

# Field Botanists Of Ontario

Newsletter

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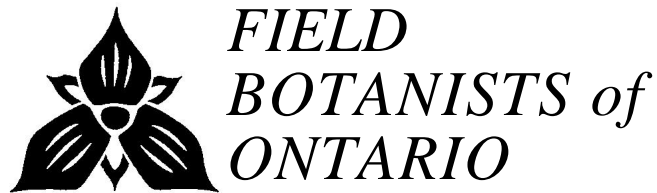
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## **FIELD BOTANISTS OF ONTARIO NEWSLETTER**

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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.*

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### 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.

## **President's Message:**

This past year has been busy for all members of the Board. We were able to organize a winter weed workshop in Guelph, 10 summer field trips, and finished the year off with our Annual General Meeting in Carden Township. In the upcoming year there will be several changes to the Board of the Field Botanists of Ontario. I am stepping down from the President's role and Carole Ann Lacroix, Vice President from 1995-1996, will take over as the new President of the Field Botanists of Ontario. I will be staying on the Board as the Past President, which was previously occupied by Bob Bowles. Dale Leadbeater is stepping down from the Vice President position, after being the key organizer of two very successful Annual General Meetings. Dirk Janas, a consultant with Ecological Services Group International in Guelph, will be stepping in as Vice President. Ken Ursic is also resigning from the Field Trips position after three years on the board, but we are fortunate to have Tyler Smith, from the

Royal Botanical Gardens, filling this position. On behalf of the FBO, I would like to extend a special thanks to Dale, Bob, and Ken for their tremendous efforts in organizing the AGM and our regular season field trips. Kellie Bonnici, a biology student at Trent University, will also be joining the Board; one of her tasks will be to establish a website for the FBO.

I would also like to thank Ilmar Talvila, Bill McIlveen, Ed Morris, Sarah Mainguy, and Mike Oldham for their continuing dedication to the FBO and their advice and assistance over the past few years. A big thank you is also extended to the many leaders who have contributed their expertise on our various trips and to all those individuals who have contributed articles to the newsletter.

I have enjoyed my four years on the board and would like to congratulate, and thank, Carole Ann as she steps into the role of President in the new millennium. 🌱

Madeline Austen

## Editorial:

### **Be prepared!**

I apologize if this issue of the FBO Newsletter arrives a bit late. My family and I endured some very anxious moments in early November when my sister's partner got lost in the woods near Temagami. He had been working one rainy afternoon on an archeological survey, and when he returned a short distance to the field site to retrieve a piece of equipment, he became disoriented. The thick bush of fir, spruce, and alders, and the dozens of moose-trails that looked like the 'real trail,' made things worse, as did the cloudy skies, the falling dark, and heavy snow squalls. During the period he was missing, 35 - 40 cm (14 - 16 inches) of wet snow fell. He was found about 40 hours later, and it was mainly his own stamina and clear headedness that saved him. He was suffering from hypothermia, and came close to losing a toe. He could easily have lost his life.

I hope I've impressed upon you that getting lost is something that can happen to anyone at almost any time. It also has very serious ramifications. I was appalled when my sister told me that, on the first night, her graduate student colleagues asked her if she wanted to go out to the pub to "help get her mind off things." It was that mentality that has provoked me to get up on my soap box and remind everyone of the hazards of working in the wilderness.

This *is* the *Field Botanists of Ontario Newsletter*; obviously a great many who read this will be spending time outdoors. Some will even be responsible for other field workers too. How prepared would you be if you got lost? How prepared would your workers be? Getting lost isn't your only worry. What if you badly sprained your ankle or broke your leg? Would anyone know where to look for you?

#### **Rule Number 1: Tell someone where you're going.**

If you're missing or lost, people will search for you, but only if you've told someone where you're going, for how long, and if they expect you to contact them when you return. No trip is too short or too trivial for this.

#### **Rule Number 2: Bring a map and compass.**

It is your responsibility that you or your workers have a **topographic map** (photocopy is fine) and each individual has their own **compass**. If you own a small GPS unit, know whether it is reliable in dense bush. A compass is a simpler, less expensive, but more reliable technology. Remember, no trip is too short or too trivial for you to bring these items. If you have them, you might be able to get yourself "unlost" fairly easily.

#### **Rule Number 3: Dress for the occasion.**

I once found myself slightly under-dressed when assisting with some aquatic effects monitoring work near Wawa, and now always make sure I **dress in layers**. Too much clothing is much better than too

little. Anyone who has been caught without **rain gear** can attest to the necessity of staying dry. If you spend a lot of time outdoors and exercise fairly vigorously (eg: hiking), consider getting rain gear that can 'breathe.' Otherwise, your clothing could get wet from the inside.

Whether in summer or winter, you should always bring a **hat**. In the summer, a hat is necessary to shield the sun and perhaps the rain too. In winter, a hat is necessary to keep in vital body heat and keep your head dry. A huge proportion of your body heat is lost through your head, which has no fat layer for insulation, and your body cannot restrict blood flow through that area.

#### **Rule Number 4: Bring some basic survival tools and materials.**

Making a fire is generally thought to be one of the first things that should be done if you find yourself lost in the wilderness. It will help keep you warm and may attract rescuers. I have found that the most widely available brand of water-proof matches are not worth buying as they are too weak; the heads break off when you try to strike them. Look for good **strike anywhere matches** or a **lighter**, and store them/it in a water-tight container. It may be useful to practice making a fire or two in the rain.

Drug stores sell **first-aid kits** small enough to fit in a pack without taking up too much space.

Getting someone's attention can tire out your voice in a hurry. Save your voice by carrying a **whistle**. Also, a **small mirror** can be used to signal aircraft during sunny weather.

If you must stay out overnight, you may have to build some sort of shelter, or may have to collect dry pieces of wood for your fire. Light-weight **folding saws or hatchets** (make sure it's sharp) are useful items to carry with you, particularly in dense woods where a hatchet can be used like a machete.

Remember it's important to stay dry. If your **emergency blanket** is water-proof, it may be useful to use it as a ground sheet. In a pinch, conifer boughs can be used under the ground sheet as a mattress.



There are books on wilderness survival you may wish to consult. The above is only the minimum equipment that you should bring. But after you've added all these items to your pack, ask yourself how many of them you intended to bring anyway. The extra weight of the additional items, and perhaps the sacrifice of one or two small field guides, is only a small burden compared to the potential anxiety you could cause in your loved ones if you were to get lost, or worse yet, never make it out of the woods. See you back at the main camp.▲

Ed Morris

## Field Trip Reports:

### Minesing Swamp

Leaders: Andrea Bradford and Bob Bowles.  
July 11<sup>th</sup>, 1999.

It's a question whether FBO members were quite ready for an outing in which rubber boots sank half a metre into the muck and did not come out again; where pant legs and socks soaked up a litre or more of black soupy swamp water. But none of us let our leader down. Civil engineer Andrea Bradford, working on her doctorate, has been over 200 times into the Minesing Swamp. This time, 30 of us followed her 2 km into the south-east corner of this 7000 hectare tract.

During rest periods Andrea made clear to us the connection between the botany we pursue and the hydrology she has studied exhaustively here. The water, its sources, seeps, annual fluctuations, underground flow, chemical composition, and pH are all factors in creating the number of microhabitats in the tract, with their greater or lesser species diversity. Of concern too are human alterations to habitat outside the Swamp causing alterations within. Over recent decades, such things as clearing of forests for farmland and improvements to drainage ditches have caused both increased water flow into the Swamp and increased sedimentation. The result has been deterioration of the bottomland in the accumulating areas to the north.

Andrea's work has in part been to make local governments aware that the interrelationship between their jurisdictions and the Swamp is a complex one. When a new subdivision is planned, a simple water buffer is a hopeless attempt at environmental protection.

Co-leading with Andrea was Bob Bowles, who had set his sights, and therefore ours, on orchids. The interests of our two leaders meshed wonderfully. As we set off, we met a group of flowering Grass Pinks (*Calopogon tuberosus* (L.) B.S.P.) in a tiny shaded meadow. Then we moved down a level, as Andrea pointed out, to a second of three former shorelines created by ancient post-glacial lakes. Here in a deciduous - Balsam Fir - Cedar swamp land we encountered the Showy Lady's Slipper (*Cypripedium reginae* Walter), the faded flowers nearly over. Here too we found the Northern Green Orchid (*Platanthera hyperborea* (L.) Lindl.), which we would later find in other habitats.

Lunch was in a Cedar swamp hummocked with Sphagnum. Here we spotted one, then several White Adder's-mouths (*Malaxis monophyllos* (L.) Sw. ssp. *brachypoda* (A.Gray) A.&D. Löve). These diminutive plants probably caused more stir among members than the bold orchids to follow. Beneath us, said Andrea, were two or three metres of peat overlying a stratum of marl. The peat itself contained chunks of wood, suggesting a complex alternation of fen, peat land, and forest over the tract's 4000 year history.

Further in was a Tamarack swamp, a stand of taller if skinny trees supported by firmer ground. But

the walking was sloshy here too, as the ground presented an almost impermeable layer to the rainwater collected on it. Here we saw single specimens of the delicate Smaller Purple-fringed Orchid (*Platanthera psycodes* (L.) Lindl.).

Finally, the Tamaracks gave way to an enormous open fen, less than a hectare of which we explored. Andrea termed this a graminoid - low-shrub fen, spotted with small Tamaracks and forested "islands." Here the scattered specimens of the Prairie White-fringed Orchid (*Platanthera leucophaea* (Nutt.) Lindl.) stood majestically, perhaps 30-40 plants over a wide area. It is ranked S2 in Ontario and is vulnerable in Canada.



**Left:** Smaller Purple-fringed Orchid (*Platanthera psycodes* (L.) Lindl.) - photo by Ed Morris. **Right:** Prairie White-fringed Orchid (*Platanthera leucophaea* (Nutt.) Lindl.) - photo by Alan Procter

In spite of Bob's extended instructions, we failed to find the sought-after hybrid between *P. leucophaea* and *P. psycodes*, reputed to be midway between them in size and having pale pink flowers. But Bob was consoled with two notable butterfly sightings: a Baltimore Checkerspot (*Euphydryas phaeton*) and a rare Bog Copper (*Lycaena epixanthe*).

At 2:30 p.m., seasoned swamp-walkers now, we undertook the trek back the way we had come in. At one point we stopped for a Chimney Crayfish, well north of its putative range according to the irrepressible Dale Leadbeater. Later we stopped for six specimens of Swamp Valerian (*Valeriana sitchensis* Bong. ssp. *uliginosa* (Torr. & A.Gray) F.Mey.). With pedicels intact but corollas gone, these plants were tall spindly things...not much to look at. But ranked S2 in Ontario, their presence sent a charge through the more experienced botanists among us.

Very likely what we experienced this day will not be



repeated in the near future. With her dissertation complete, Andrea will remove her rain gauges and stand pipes, and her permission to cross the private land we walked will lapse. FBO members have her to thank for a rare and memorable outing. 🍷

Alan Procter

## Biological Recovery of the Sudbury Region.

Leaders: Ed Morris and Bill McIlveen.  
August 7<sup>th</sup>, 1999

I remember the first time I drove Highway #69 from Sault Ste. Marie to Toronto in 1974. For miles around Sudbury, not a tree, shrub, or blade of grass was standing. The rock outcrops were stained and blackened. It was a devastated landscape. Now, twenty-five years later, I was curious to see how conditions had improved.

The history of the Sudbury region is one of intensive resource exploitation and industrial development: logging (1872-1920's), the railroad (1880's - present) and mining and smelting (1886 - present). Land clearance and forest fire stripped poor soils of their protective vegetation and greatly increased erosion. However, the most destructive effect is ascribed to smelter emissions. There was widespread deposition of copper and nickel particulates. Concomitant emissions of sulphur dioxide led to the acidification of soil and water, enhancing the dissolution of these metals, yielding soils toxic to plants.

Roast beds were the first, crude smelting operations. Large areas were cleared, crushed ore was piled on cordwood and slowly burned for several months. We visited the Coniston Roast Bed (closed 1918) in the late afternoon. Although roast beds were closed by 1929, the barren open area was still clearly visible. The only vegetation were clumps of Foxtail Barley (*Hordeum jubatum* L.), Flexuous Hairgrass (*Deschampsia flexuosa* (L.) Trin.), and depauperate Lamb's-Quarters (*Chenopodium album* L.) growing along the perimeter and in small patches within the roast bed. The ground was littered with chunks of ore, containing nickel and copper, staining the 'soil' green. Drainage from the site was discoloured and malodorous.

In the morning, we parked off the Highway #17 bypass and hiked in to see Daisy Lake. Ed and Bill spoke eloquently of the rehabilitation and restoration of the Sudbury region, which was preceded by three significant events: completion of the International Nickel Company's (INCO) superstack, effectively diluting emissions (1972); recession and modernization in the mining industry (1970's and early 1980's); and the formation of the Sudbury Region's Vegetation Enhancement Technical Advisory Committee (VETAC) (Lautenbach *et al.* 1995).



Coniston Roast Bed. Photo by Ed Morris (1999).

Keith Winterhalder, a founding member of VETAC, conducted a number of field trials and established that applying heavy doses of fine dolomitic limestone to the land would raise the pH sufficiently (>5) that heavy metals in the soils precipitate. The insoluble forms of these metals are not phytotoxic. A few months after liming, a grass-legume seed mix was applied. The seed mixture contained:

*Agrostis gigantea* Roth.

**Red-top**

*Festuca rubra* L.

**Red Fescue**

*Lotus corniculatus* L.

**Bird's-foot Trefoil**

*Phleum pratense* L.

**Timothy**

*Poa compressa* L.

**Canada Bluegrass**

*Poa pratensis* L.

**Kentucky Bluegrass**

*Trifolium hybridum* L. ssp. *elegans* (Savi) Asch. & Graebn.

**Alsike Clover**

Trees and shrubs were planted 1-2 years later; Jack Pine (*Pinus banksiana* Lamb.), Red Pine (*Pinus resinosa* Sol. ex Aiton), and White Pine (*Pinus strobus* L.).

The Daisy Lake watershed site was chosen as the focal point of the trip because of its proximity to the Coniston smelter. It was limed twice: once with coarsely ground limestone, and the wetlands within the watershed were limed a second time with finely ground limestone. The coarser fragments were still evident almost everywhere we walked.

Willows and birches are the first woody colonizers in rehabilitated areas. We noted that the prominent White Birches (*Betula papyrifera* Marsh.) were multiple branched giving them a shrub-like appearance (coppiced); birch growth is relatively slow where the early-winter stress of alternate freezing and thawing forms needle ice, heaving the soil and exposing the trees' roots. Insect defoliation is a common occurrence in these young communities. Red Maples were the most severely





Recovering landscape near Daisy Lake (Baby Lake and Alice Lake appear in photo). Photo by Jim Lane.

affected this season, but spruces, pines, aspens, birches, and oaks are also attacked by cyclical population booms of Spruce Budworm, sawyer (or long-horned) beetles, sawflies, Forest Tent Caterpillar, and Gypsy Moth. Some birch leaves were already turning yellow at the margins, indicative of nutrient deficiency. While eating lunch, overlooking Daisy Lake, Ed spotted a new addition for his plant list, Rock Spike-moss (*Selaginella rupestris* (L.) Spring).

I was very impressed by the knowledge and commitment of our leaders. Ed and Bill have extensive knowledge of the habitat and a world-view sensitive to the social history of the region. I hope more members will participate if future field trips are planned for this area. 🌲

Carol Brotman



Volunteer, metal-tolerant graminoids of Sudbury's industrial barrens. Left to right: Tufted Hair-grass (*Deschampsia cespitosa* (L.) P.Beauv.), Rough Hair-grass (*Agrostis scabra* Willd.), Red-top (*Agrostis gigantea* Roth), and Pointed Broom Sedge (*Carex scoparia* Schkuhr ex Willd.). Photo by Ed Morris.

### Postscript

The Daisy Lake watershed is being used as a land reclamation laboratory. A particular focus of the research here is the effects of watershed liming on long term water quality in the tributaries which feed the lake. FBO member Peter Beckett is one of the principal investigators. The lessons learned here may influence future reclamation programmes in Canada, Northern Europe, and Russia.

As you can see from Jim Lane's excellent photo, the landscape around Daisy Lake is very rugged. These hills are the remains of ancient mountain ranges. Directly opposite from us was a large cliff face, where we heard young raptors calling to one another. We were not lucky enough to get a good look at them, but Peregrine Falcons were reintroduced from Edmonton in 1990 at Laurentian University. Subsequent introductions have occurred in Killarney Provincial Park. Falcons were confirmed to be breeding in this area in previous seasons, and it is very likely that it was their calls we heard. 🌲

Ed Morris

### Literature Cited

Lautenbach, W.E., J. Miller, P.J. Beckett, J.J. Negusanti, and K. Winterhalder. 1995. Municipal Land Restoration Program: The Regreening Process. *In* J.M. Gunn (ed.) Restoration and Recovery of an Industrial Region: Progress in Restoring the Smelter-Damaged Landscape near Sudbury, Canada. Springer-Verlag, New York. pp. 109-122.



## White Bear Wetland and Forest, Temagami.

Leader: Will Kershaw  
July 17-18<sup>th</sup>.

This overnight, wilderness canoe trip did not attract a huge crowd. Most of the participants were Sudburnians, although two Torontonians (Steve Smith and Paula Davies) made the trek north as well. We met at the inactive OMNR air-base adjacent to Finlayson Point Provincial Park, then car-pooled across town to the Northland Paradise Lodge, where we parked our vehicles and launched our canoes. Our first chore was to stake out a campsite and set up our tents. Getting to the campsite was quite a trek, about 6.5 km by canoe. However, it was a nice sunny day with only a slight breeze, and it took surprisingly little time to reach our destination. We set up our tents and broke for lunch, then jumped into our canoes and headed north through Cassel's Lake to our first botanical destination: the White Bear Wetland. The water of Cassel's Lake was fairly clear and we noticed several old stumps well below the current water level. We would learn later that the lake level had been raised in the 1920's when a dam was constructed at the outlet of Rabbit Lake. Not all canoes moved at the same speed, especially when easily distracted field botanists are doing the paddling. My father and I occasionally found ourselves stopped along the lee side of an island, waiting for others to catch up.<sup>1</sup> We used the time to peer into the water, each of us looking for different types of aquatic biota. Aquatic macrophytes were sparse in this apparently oligotrophic lake, but my father (an aquatic zoologist) noted that there were very few molluscs here as well.

Eventually we landed and hiked a few hundred metres into the wetland. My father was troubled by a sore foot, and elected to keep looking for molluscs from his canoe. The White Bear wetland is a smallish fen that was surveyed by Will Kershaw and Bill Crins (1994) after being contacted by the land-owner. It lies in a depression resembling a post-glacial kettle lake. It consists of a treed fen, a floating low-shrub fen, and open water.

There were a number of interesting plants in the fen. Beginning in the upland, our Torontonians were pleased to see Fly Honeysuckle (*Lonicera canadensis* Bartram) instead of feral ornamental species. As we entered the treed fen which was well populated with White Cedar of various ages, some were quite large, we encountered a number of mosses. One of the more easily recognized mosses was Stairstep Moss (*Hylocomium splendens* (Hedw.) Schimp. in B.S.G.). Through the mossy hummocks protruded single leaves of Palmate-leaf Sweet-colt'sfoot (*Petasites frigidus* (L.) Fr.). Also present in this community were several Small Northern Bog Orchis (*Platanthera obtusata* (Banks ex Pursh) Lindl.), one of eight regionally rare orchids which inhabit the fen (Kershaw and Crins 1994).

Soon after, we entered the low-shrub portion of the fen: it was like walking on a large waterbed. Patches of yellow were attributed to Horned Bladderwort (*Utricularia cornuta* Michx.) and some Yellow-eyed Grass (*Xyris montana* Ries). Other common fen species included:

*Aster nemoralis* Ait.

**Bog Aster**

*Menyanthes trifoliata* L.

**Buckbean; Bogbean**

*Sarracenia purpurea*

**Pitcher-plant**

*Scirpus hudsonianus* (Michx.) Fern.

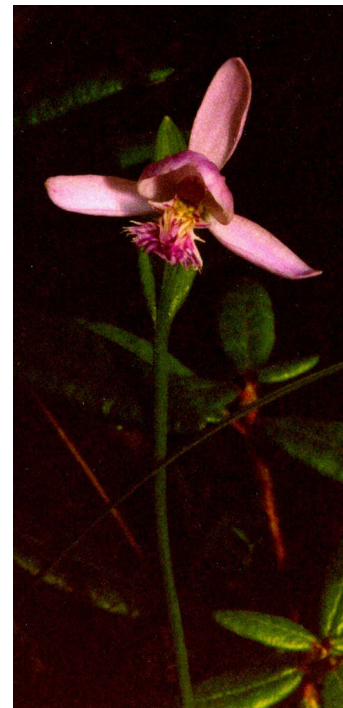
**Northern Club-rush**

*Solidago uliginosa* Nutt.

**Bog Goldenrod**

We were able to add two notable species to the list: Spatulate-leaved Sundew (*Drosera intermedia* Hayne) and Bog Clubmoss (*Lycopodiella inundata* (L.) Holub). We also saw the Round-leaved Sundew (*Drosera rotundifolia* L.) reported by Kershaw and Crins (1994).

At this point, we began to encounter the orchids which inhabit the low-shrub fen. The most noticeable were Grass Pink (*Calopogon tuberosus* (L.) B.S.P.) and Dragon's-Mouth (*Arthusa bulbosa* L.). Kershaw and Crins (1994) also list Rose Pogonia (*Pogonia ophioglossoides* (L.) Juss.), which I photographed on a previous visit.



Rose Pogonia (*Pogonia ophioglossoides* (L.) Juss.).  
Photo by Ed Morris.

<sup>1</sup> Sometimes it was we who had to catch-up.

By now we had moved to the opposite side of the shrub fen, and were re-entering the treed fen. It didn't take Will very long to locate perhaps the most significant plant: the Showy (or Queen's) Lady's-slipper (*Cypripedium reginae* Walter) which, when discovered, was a new record for Site Region 4E (Hall and Kershaw 1993). Not far from these tall and robust orchids were a few specimens of the elegant Rattlesnake Fern (*Botrychium virginianum* (L.) Sw.).

We slowly made our way around the entire perimeter of the pond, at the centre of the wetland, pausing to look at White Beaked-rush (*Rhynchospora alba* (L.) M.Vahl) and Thin-leaved Cotton-grass (*Eriophorum viridi-carinatum* (Engelm.) Fern.). As we re-crossed the treed fen, we located an ATV trail that had obviously been used recently and frequently. Thankfully, the ATVs had avoided of the shrub fen, and may have attempted to minimize damage to the treed fen as well.

Soon we were back on a cleared lot next to our canoe landing, eating raspberries and reapplying sunscreen. Back at the campsite, Dad brought out the quarry of snail shells he had found and gave us a description of their preferred habitat, etc.

*Bulimnea megasoma* (Say)

**Showy Pond Snail**

*Helisoma trivolvis* (Say)

**Larger Eastern Ramshorn**

*Helisoma anceps* (Menke)

**Two-ridged Ramshorn**

*Helisoma companulatum* (Say)

**Bell-mouthed Ramshorn**

*Lymnaea stagnalis jugularis* (Say)

**Great Pond Snail**

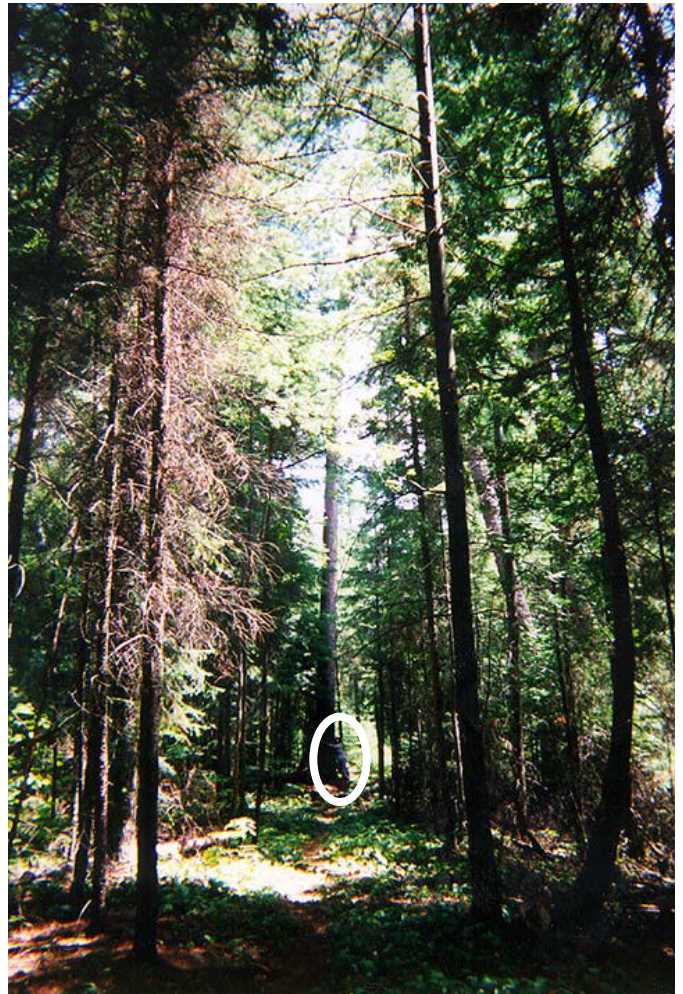
*Physella gyrina* Say

**Tadpole Snail**

Despite a very windy evening, the following morning's air was calm and remained so for the rest of the day. We headed over to a small bay where Will attempted to locate a Black Ash (*Fraxinus nigra* Marsh.) grove that had been reported to him. The bay was choked with logs, well protected from wind. Here we found some interesting aquatics, including Mare's-tail (*Hippuris vulgaris* L.), Wapato (*Sagittaria cuneata* E.Sheld.), Common Bladderwort (*Utricularia vulgaris* L.) and Horned Bladderwort (*Utricularia cornuta* Michx.), both of which were in bloom.

After much searching, Will emerged from the woods and announced he had found the lichen Lungwort (*Lobaria pulmonaria* (L.) Hoffm.) growing on the Black Ash, as had been reported to him. He also presented to me a moonwort specimen (*Botrychium* sp.) to be identified and added to the Laurentian University Herbarium. Once upon a time, I would have identified it as *B. lunaria* (L.) Sw., but this group has been recently revised by Wagner and Wagner (1990), and I am now more cautious. The specimen, at SLU, still awaits mounting, identification, and confirmation.

Our next destination was the White Bear Forest, a relatively easily accessed old growth stand. Not long after landing, we met Doug Adams, proprietor of the Northland Paradise Lodge. He was anxious to lead us through. Within minutes we began encountering large White and Red Pines. The forest was surprisingly open, with an abundance of forest-floor species: very different from those Red Pine plantations of Simcoe County. Rattlesnake Ferns were fairly common, as was Shining Clubmoss (*Huperzia lucidula* (Michx.) Trevis.). A trail system has been established through the forest, improving the access for ecotourists. The trees were tall, but not especially huge at the butt. Nonetheless, it was a impressively long way up before one would meet the first branches: 13 m (40 feet) for many individuals.



A tall pine towers (trunk in centre of photo) above the smaller spruce and Balsam Fir. The person 'hugging' the tree is circled. Photo by Paula Davies.

From a section cut-out of a tree that had fallen over the trail, it was clearly evident that the tree was hundreds of years old, as the rings were closely spaced. We soon encountered another tree that had survived several fires; the scars left on its trunk are described as 'church doors.'

A series of small lakes crosses the White Bear Forest. Around one of these, we encountered Kalm's



*Lobelia (Lobelia kalmii L.)*, a bit of a surprise to me, since I've, so far, only encountered it in coastal locations such as Prequile Provincial Park, Sandbanks Provincial Park, and Carter Bay (Manitoulin Island).

Kershaw, W.L. and W.J. Crins. 1994. White Bear Wetland, Temagami District. Reconnaissance Life Sciences Notes. Ontario Ministry of Natural Resources, 12 pp.

Wagner, W.H. Jr. and F.S. Wagner. 1990. Moonworts (*Botrychium* subg. *Botrychium*) of the Upper Great Lakes Region, U.S.A. and Canada, with descriptions of two new species. *Contributions from the University of Michigan Herbarium*, 17:313-325.



Will and Doug inspect the "Church Doors" scar on an old Red Pine. This tree has survived a number of fires. Photo by Paula Davies.

Back at the landing, we all thanked Will for bringing us to Temagami. No doubt we only scratched the surface of the treasures it has to offer. We also thanked Doug again for allowing us to park at his lodge. I would recommend to anyone wishing to visit the White Bear Forest to contact Doug or Marg Adams [(705) 569-3791], as their Lodge provides a convenient location to launch (and rent) a canoe. It is fairly easy to access the forest by canoe; it is not necessary to pass through large areas of open water to reach the access. By supporting businesses like Doug and Marg's, you demonstrate to the local community that conservation of old-growth tracts has economic benefits. 🌲

Ed Morris

**Literature Cited:**

Hall, M. and W.L. Kershaw. 1993. Provisional Plant Checklist (1.3). Southern Boreal Forest, Site Region 4E, Ontario Ministry of Natural Resources, 36 pp.

**Feature:**

**Range Extention for Shining Ladies' Tresses (*Spiranthes lucida* (Eaton) Ames): Dufferin County.**

by Alan Procter

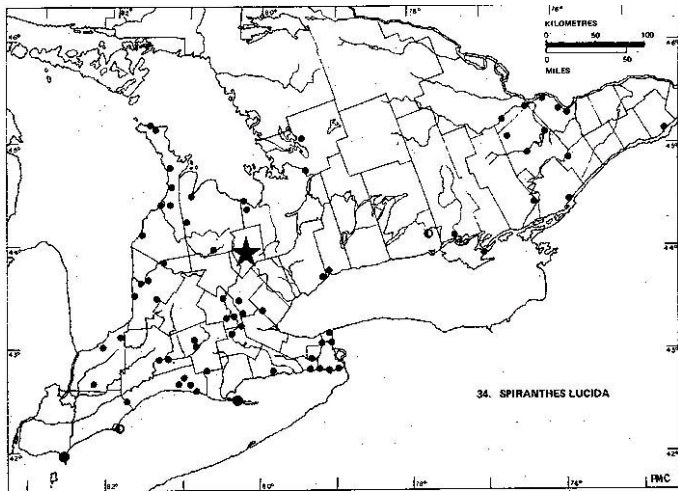
Shining Ladies' Tresses (*Spiranthes lucida* (Eaton) Ames), according to the distribution map in Whiting and Catling (1986), has been recorded in counties adjoining Dufferin County - three sites in Grey, and two each in Simcoe and Wellington. To these records may be added a site in Dufferin itself - nine plants observed in an one-metre strip beside the Bruce Trail in mid-county, some 200 metres west of River Road. The soil here is a glacial end-moraine, disturbed and compacted in 1909 for a large earthen dam across the Pine River. A spring-fed rivulet moistens the site.



Shining Ladies' Tresses (*Spiranthes lucida* (Eaton) Ames). Photos by Alan Procter.



*S. lucida* is ranked S4 in Newmaster *et al.* (1998). Whiting and Catling describe its occurrence as "infrequent to rare" anywhere north of the Niagara Region's Lake Erie shoreline.



Distribution of Shining Ladies' Tresses in Ontario. Adapted from Whiting and Catling (1986) (•). The new station is indicated by ★.

#### Literature Cited:

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.

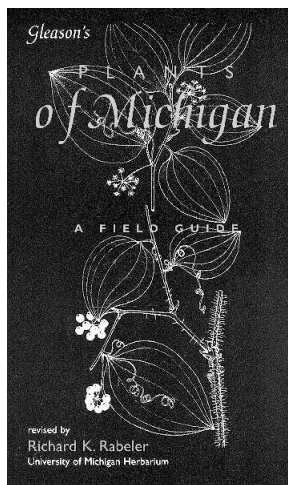
Whiting, R.E. and P.M. Catling. 1986. Orchids of Ontario. CannaColl Foundation, Ottawa, Ontario. 169 p.

## Review:

### Gleason's Plants of Michigan.

Rabeler, Richard K., 1998. Gleason's Plants of Michigan. Oakleaf Press, Ann Arbor, Michigan. 398 pp. Paperback.

This field guide-sized paperback is a revision and expansion of the original by H.A. Gleason, first published in 1918. In this new edition, Rabeler has written new keys, expanded the number of taxa and added much information. The book is, in effect, a portable set of keys based on fairly simple field characters. It is designed to be used with only a hand lens and a ruler. Descriptions of families are provided, but genus and species descriptions must be gleaned



through the keys. One obvious problem is immediately apparent. That is, who will the users of this book be? The keys contain an ample amount of botanical terminology and at first lead only to Latin names for families, genera or species (common names appear later in keys to family members). One amateur naturalist who is quite knowledgeable in botany but mostly uses common names looked the book over for this review and felt it was not a book she would like to use. Yet, the book is not intended for the serious botanist and contains little on the more difficult groups such as the Cyperaceae.

However, for more experienced botanists it does have the advantage of being smaller and lighter than Gleason and Cronquist (1991) and more portable than Voss (1972, 1985, 1996). The book is appropriate for people who are beginning the investment of time required to master the necessary terminology. A very good introduction is given explaining how these words are used and what's more, the glossary at the end not only gives an explanation, it also refers to a figure where the term is presented visually. Since there really is no way to master terminology other than to use it, surely this book provides about the quickest and most painless way to learn it. Once beyond the learning stages, people can then apply what they've learned here to other texts, as opposed to the results of mastering the identification system used in Newcombe (1977) which is not used elsewhere.

When compared to field guides such as Newcombe (1977) or Peterson (1968), which also contain only the most common species (albeit for a larger range), this one stands out by informing users that something has been omitted and by giving references where they may find further information. Indeed, one of the nicest features of this book are the frequent little notes given in boxes about particular entries.

On the down side, there are some glitches and typos in the keys, including some irritating places where the same decision is required more than once. Still, one professor at a Michigan university reported to me that he used Gleason's Plants of Michigan this past summer as a course text and that the students and the book got on fairly well.

On the whole, this book should be useful in Ontario. It contains most species from all the necessary habitat areas: boreal, Carolinian, prairie and northern forest. It would be an excellent student text or a very good tool for the amateur botanist who wants to get deeper into the field. Still, serious botanists may still prefer to carry Gleason and Cronquist (1991) even if it means a little more weight. ♣

Judith Jones

#### Literature Cited

Cronquist, A., and H.A. Gleason. 1991. Manual of Vascular Plants of the Northeastern United States and Adjacent Canada (2 ed.). New York Botanical Gardens, Bronx, N.Y. 910 pp.

Newcombe, L. 1977. Newcombe's Wildflower Guide. Little, Brown and Co., Boston. 490 pp.



Peterson, R.T., and M. McKenny. 1968. A Field Guide to Wildflowers of Northeastern and Northcentral North America, Houghton Mifflin, Boston. 420 pp.

Voss, E.G. 1972. Michigan Flora. Part I Gymnosperms and Monocots. Bull. Cranbrook Institute of Science 55 and University of Michigan Herbarium. 488 pp.

Voss, E.G. 1985. Michigan Flora. Part II Dicots (Saururaceae-Cornaceae). Bull. Cranbrook Institute of Science 59 and University of Michigan Herbarium. 724 pp.

Voss, E.G. 1996. Michigan Flora. Part III Dicots (Pyrolaceae-Compositae). Bull. Cranbrook Institute of Science 61 and University of Michigan Herbarium. 622 pp.

## Announcements:

### New England Wild Flower Society Seed Catalogue.

Every January the New England Wild Flower Society publishes a catalogue of wildflower seed. Because of the interest across the country in gardening with native plants, we receive many requests for the catalogue and subsequently the seed.

Requests for the 2000 Seed and Book Catalogue must be received by March 1, and seed sales end on March 15. Seed requests are filled in the order received, but some seeds are in limited supply. Order early for best selection.

To obtain the 2000 Seed and Book Catalogue, please send \$2.50 (US\$) to Seeds, New England Wild Flower Society, Garden in the Woods, 180 Hemenway Road, Framingham, MA 01701.

*I occasionally receive native plant and seed catalogues from other companies/organizations as well. So far, only the above organization has specifically requested that a publication notice of their catalogue be printed. Anyone interested in other native seed/plant suppliers can write to me at the address given on page 2.*

*Please note that announcements and publication notices published in the FBO newsletter should not be regarded as endorsements.*

*Ed Morris*

### Answers to Botanical Time Wasters.

It's been too long since a botanical quiz or puzzle was included in the FBO Newsletter. This issue's 'quiz' (see next page) is meant to either educate or entertain, depending on your level of experience.

The seeds of many plants are often quite distinct. Sometimes they are the most useful features to examine when making an identification (eg: Cyperaceae). Other times, the diversity in seed properties within a taxonomic group are under-documented. A familiarity with seeds and fruits can greatly increase your ability to make accurate field identifications. Seed identification manuals do exist, but finding one 'in print' may be a considerable challenge.

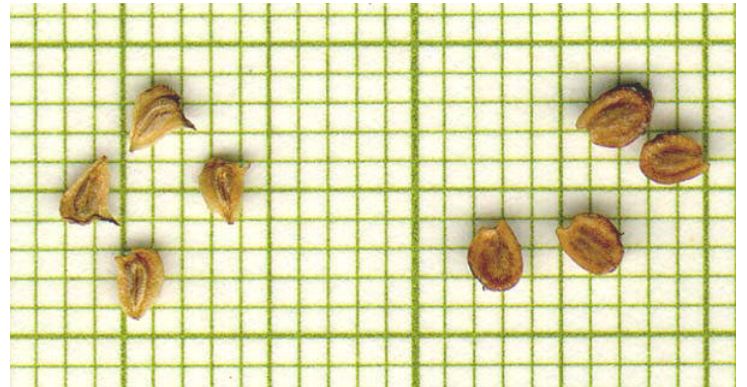
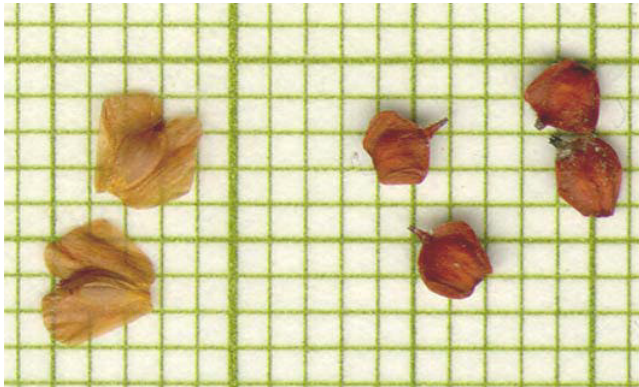
If you ever find yourself unable to identify a plant in the field, and are nervous about collecting a specimen for any reason, consider collecting a seed or two. It may be sufficient to make an identification.

Here are the identities of the seeds and fruits on the following page.

1. Betulaceae  
**Left:** Green Alder (*Alnus viridis* (Villars) D.C ssp. *crispa* (Aiton) Turrill)  
**Right:** Speckled Alder (*Alnus incana* (L.) Moench ssp. *rugosa* (Du Roi) Clausen)
2. Alismataceae  
**Left:** Arrow-head (*Sagittaria latifolia* Willd.)  
**Right:** Water-plantain (*Alisma plantago-aquatica* L.)
3. Fagaceae  
American Beech (*Fagus grandifolia* Ehrh.)
4. Rosaceae  
White Avens (*Geum canadense* Jacq.)
5. Cactaceae  
Prickly-pear Cactus (*Opuntia humifusa* (Raf.) Raf.) (collected from University of Guelph Arboretum specimen).
6. Aceraceae  
Mountain Maple (*Acer spicatum* Lam.)
7. Guttiferae  
Kalm's St. John's-wort (*Hypericum kalmianum* L.)
8. Asteraceae  
Nodding Beggar-ticks (*Bidens cernua* L.)  
See the drawing on cover of this issue.
9. Asteraceae  
Cocklebur (*Xanthium strumarium* L.)

# Botanical Time Wasters

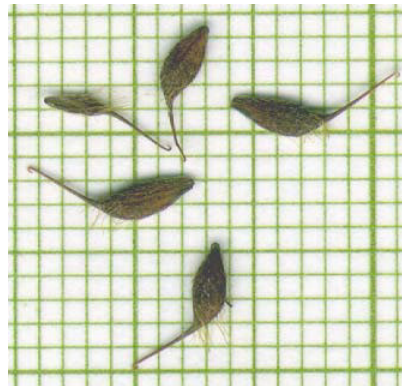
Do you know these seeds and fruits? Can you recognize the Family? Genus? Species? Answers on page 11.



All seeds/fruits are photographed on a 1x1 mm grid. Photos by Ed Morris.

1. These are members of the same genus.

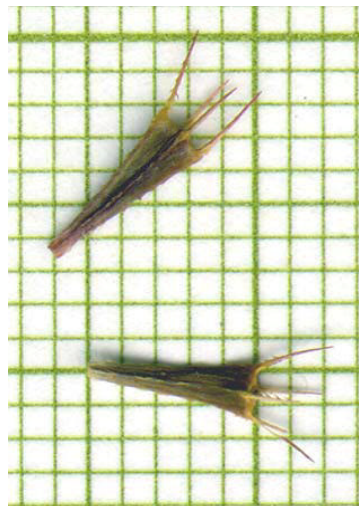
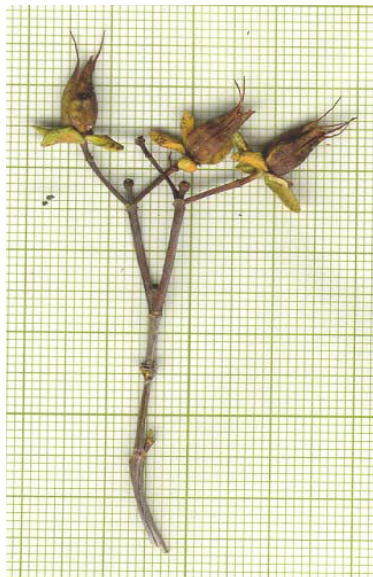
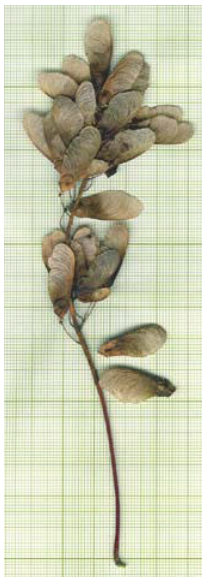
2. These are members of the same family.



3.

4.

5.



6.

7.

8.

9.