

Field Botanists Of Ontario

Newsletter

Spring 2002
Volume 15(1)

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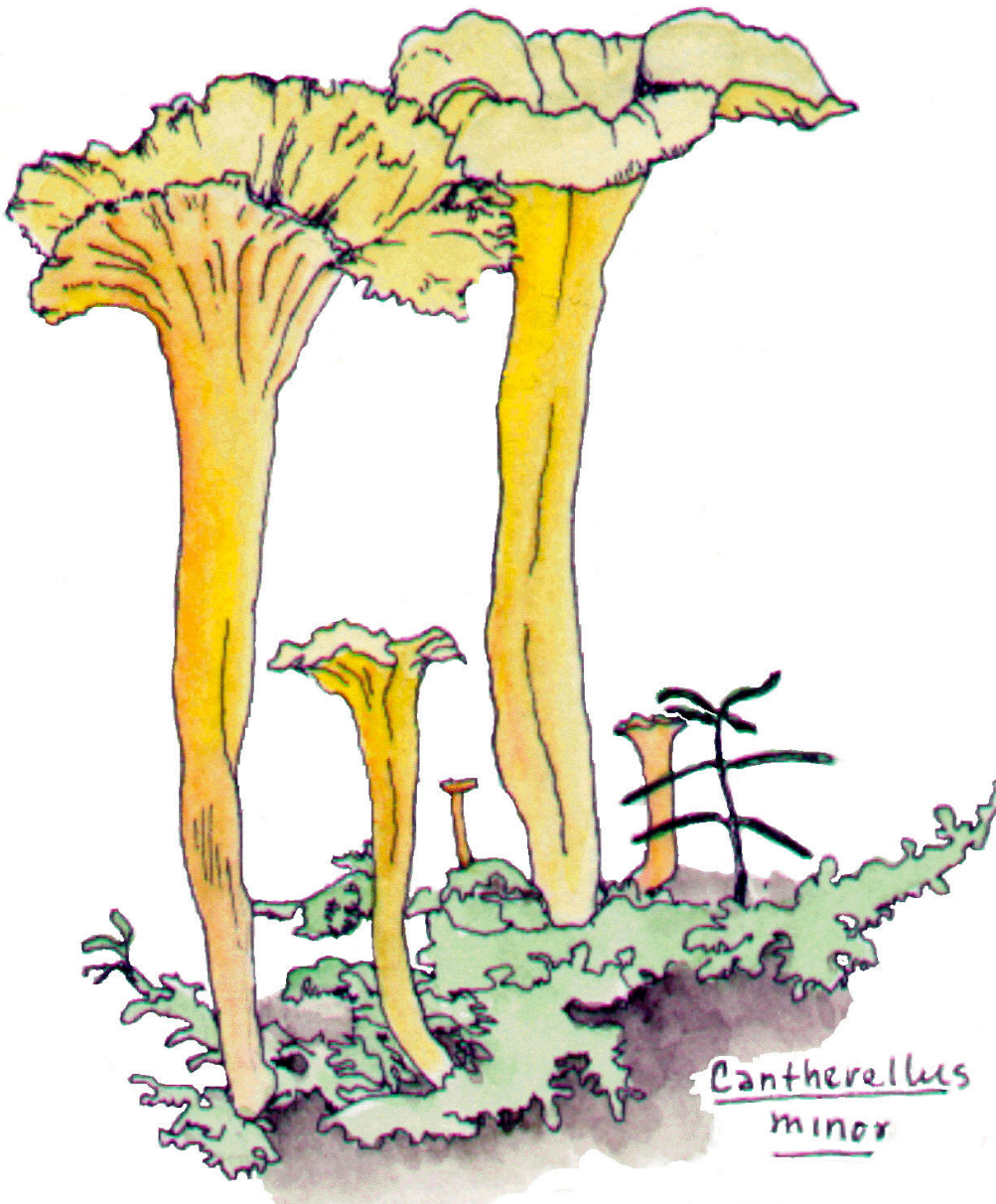
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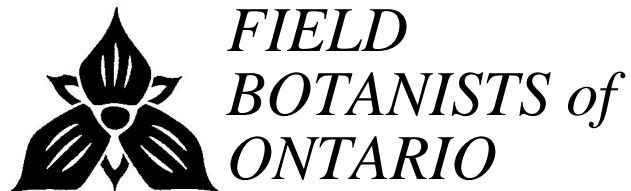
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FIELD BOTANISTS OF ONTARIO NEWSLETTER

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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 15(2) - Summer 2002** is **August 1, 2002**.

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.

**Field Botanists of Ontario
Revenue and Expense Statement
January 1 to December 31, 2001**

	2001		2000	
Bank Balance Beginning	5300.45		6436.60	
REVENUE				
Memberships	2596.00		2439.00	
Field Trips	1310.00		2286.00	
Workshops	0.00		0.00	
A.G.M.	1175.00		623.00	
Donations (1)	185.00		840.00	
Publications	0.00		50.00	
Bank Interest	0.00		3.21	
U.S. Exchange	<u>45.39</u>	(5236.39)	<u>28.40</u>	(6269.61)
	10536.84		12706.21	
EXPENSES				
Field Trip Honoraria	375.00		349.30	
Field Trip Refunds	24.00		0.00	
Workshop	0.00		0.00	
Honoraria	725.00		975.00	
A.G.M. Honoraria	425.00		425.00	
A.G.M.	663.09		588.13	
Newsletter (2)	2018.01		1868.76	
President	26.73		0.00	
Treasurer	0.00		76.08	
Donations	0.00		3000.00	
Liability Insurance	551.88		0.00	
Bank Service Charges (3)	58.69		19.69	
F.O.N. Membership	<u>50.00</u>	(4917.40)	<u>50.00</u>	(7405.76)
	5619.44			
Bank Balance Ending	5769.44 (4)		5300.45	

NOTES

- (1) Two trip leaders donated \$150.00 honoraria
- (2) Newsletter float increased from \$700. to \$1000.
- (3) Transfer to new account resulted in various one-time charges
- (4) One uncashed cheque for \$75.

George Bryant, Treasurer

Field Trip Reports:

Simcoe County Mushroom Trip, Midland Area.

Sunday, August 26, 2001

Forget Site, Midland:

The summer had been extremely dry which offered poor prospects for finding mushrooms. Some rain had fallen a few days prior, but was too close to the trip date to offer meaningful respite. Instead, the weather waited until the trip date at which time we were treated to a drizzle for much of the day. The troops were not daunted and we had a good time despite the wet. Despite the challenges, we were able to find nearly 50 fungus species. Some of these were common types, but some were particularly interesting including, a few new species for Simcoe County.

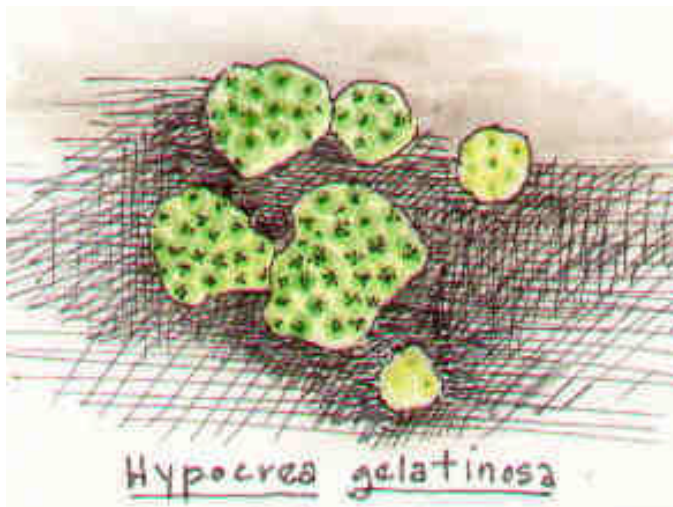
The first part of the trip was spent in the hardwood forest near the road. Almost immediately, we had the opportunity to compare the Thick-maze Oak Polypore (*Daedalea quercina* Fr.) and Thin-maze Flat Polypore (*Daedaleopsis confragosa* (Fr.) Schroerr.). Bob pointed out Reddish-brown Crust (*Hydnochaete badioferruginea* (Mont.) Lev.) and Hexagonal-pored polypore (*Polyporus alveolaris* (DC.: Fr.) Bond & Singer) growing on dead wood. Orange Pinwheel Marasmius (*Marasmius siccus* (Schw.) Fr.) was fruiting on the ground. Conks of the Tinder Polypore (*Fomes fomentarius* (Fr.) Kickx) were present on scattered trees. At one place, we saw the Violet Toothed Polypore (*Trichaptum bififormis* (Fr. in Kl.) Ryv.) growing on a hardwood log and, later in the day, on Balsam fir, we were able see the related Violet Toothed Polypore (*Trichaptum abietinus* (Pers.: Fr.) Donk) that grows only on coniferous wood. True to its name, the Mossy Maple Polypore (*Oxyporus populinus* (Fr.) Donk) was

present on the trunk of a maple tree, having its cap covered by a moss. On some rotted wood, we found the tell-tale signs of Green Stain (*Chlorociboria aeruginacens* (Nyl.) Kan.), but the reproductive structures had not formed.

A dead American Beech sported some Carbon Cushion (*Hypoxylon deustum* (Hoffm.:Fr.) Grev.). On the damp underside of a log, we saw the small balls (stroma about 3 mm across) of the Yellow Cushion Hypocrea (*Hypocrea gelatinosa* (Tode ex Fr.) Fr.). The young specimens were pale yellow, but turned grey-green at maturity. This was one of the species new to the Simcoe County list. Also on old wood were several specimens of Crown-tipped Coral (*Clavicornia pyxidata* (Pers.: Fr.) Doty). The Milk-white Toothed Polypore (*Irpex lacteus* (Fr.) Fr.) was fairly common growing on the underside of dead branches. There were few paper birch trees in the forest stand, but we found one with a few of the characteristic conks of the Birch Polypore (*Piptoporus betulinus* (Bull.:Fr.) Karst). Rounding out the fungus list for the morning were Yellow Pleuteus (*Pleuteus admirabilis* (Pk.) Pk.), Bear Lentinus (*Lentinellus ursinus* (Fr.) Kuh.), Decorated Mop (*Tricholomopsis decora* (Fr.) Singer), and Fawn Mushroom (*Pleuteus cervinus* (Schaeff. ex Fr.) Kum.), as well as the, Chocolate Tube Slime Mold (*Stemonitis splendens* Rost.)

After lunch, some of us had a quick look at the conifer grove on the south side of the road. Bob located a Hemlock Varnish Shelf (*Ganoderma tsugae* Murr.) on Eastern hemlock wood, the hallmark host for this species. The other fungi here included a small Artist's Conk (*Ganoderma applanatum* (Pers.) Pat.) and some Turkey-tail (*Trametes versicolor* (Fr.) Pil.)

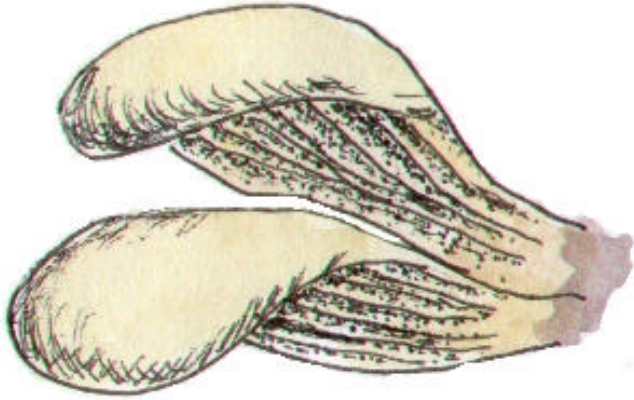
For the afternoon portion of the trip, we walk along the trail into the interior of the forest tract. The trail sloped downwards to the north and we crossed an old field type clearing en route. Hairy Parchment (*Stereum*



Yellow Cushion Hypocrea (*Hypocrea gelatinosa* (Tode ex Fr.) Fr.) by Irene McIlveen.



Green Jelly Club (*Leotia atrovirens*) by Irene McIlveen.



Oyster Mushroom (*Pleurotus ostreatus* (Jacq. ex Fr.) Kummer) by Bill McIlveen.

hirsutum (Willd. ex Fr.) S.F.G.) was present on dead birch. On the way, some micro-fungi were also noted, or at least their effects were evident here. They included the Dutch elm disease (*Ceratostomella ulmi* Buisman) on American Elm, Apple scab (*Venturia inaequalis* (Cke.) Wint.) on crabapple, and the round, fist-sized galls of Pine Gall Rust (*Endocronartium harknessii* J.P. Moore) on Scots Pine. At several places in the forest proper, the large cankers caused by *Eutypella parasitica* Davidson & Lorenz were evident.

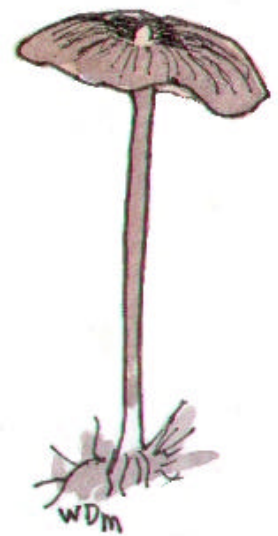
As we proceeded further into the woods, the habitat became more and more damp until we reached the edge of wooded swampy area. At least three species of *Hygrophorus* were seen on the day. They included Fading Scarlet Waxy Cap (*Hygrophorus miniatus* (Fr.) Fr.) in moss, Waxy Cap (*Hygrophorus nitidus* Berk & Curt.), and Golden Waxy Cap (*Hygrophorus flavescens* (Kauffman) Smith & Hesler). The remains of a cluster of the green-topped Green Jelly Club (*Leotia atrovirens*) were pointed out on the ground. The White Cheese Polypore (*Tyromyces chioneus* (Fr.) Karsten) was seen on maple. Oyster Mushroom (*Pleurotus ostreatus* (Jacq. ex Fr.) Kummer) and Dryad's Saddle (*Polyporus squamosus* Huds. ex Fr.) were growing from dead tree trunks. The species list for the day continued to grow. Hen-of-the-Woods (*Grifola frondosa* (Fr.) S.F. Gray), Rooted Oudemansiella (*Oudemansiella radicata* (Rel. ex Fr.) Sing.), White Holopus (*Leccinum holopus* Smith & Thiers), Bitter Bolete (*Tylopilus fellus* (Bull. Fr.) Karst.), Flat Crep (*Crepidotis appianatus* (Pers. ex pers.) Kum.), a *Pleuteus* species on Paper Birch wood, Deceptive Milky (*Lactarius deceptivus* Pk.), Russula (*Russula paludosa* Britz.), Changeable Melanoleuca (*Melanoleuca melanoleuca* (Pers. ex Fr.) Murr.), and Common Scaber Stalk (*Leccinum scabrum* (Bull. ex Fr.) S.F.G.) were all ticked on our list. We found a few of the wonderful Dead Man's Fingers (*Xylaria polymorpha* (Pers. ex Mer) Grev.) reaching out of the ground.

At the edge of the wettest area, there were numerous patches of moss. In these, we added Lavender Baeospora (*Baeospora myriadophylla* (Pk.) Singer), and Insect-egg Mass Slime (*Leocarpus fragilis* (Dicks.) Rost.). Without a doubt though, the most

spectacular discovery for the day was Small Chantrelle (*Canthrellus minor* Pk.). This orange-yellow trumpet was growing in groups of 10 to 50 and there must have been well in excess of 1000 individuals. A few were collected for identification or illustration, and I suspect that a few were also subjected to taste testing. More than once, Bob wondered aloud about the commercial value of this stand.

I think I can say on behalf of all the participants that, despite the drizzle, they had a very interesting and informative day. Thank you very much to Bob for leading the trip. FBO has greatly benefitted from your wide range of knowledge that you have shared over the years. 🍄

W.D. McIlveen



Lavender Baeospora (*Baeospora myriadophylla* (Pk.) Singer) by Bill McIlveen.

Field Trip to Whitefish Point, Michigan.

Saturday, August 4, 2001

Most field botanists in Ontario are well aware of the high quality of work that went into *Michigan Flora* [1], therefore, when we learned that Ed Voss himself had agreed to lead a trip for FBO, we were very eager to sign up. As an added bonus, the trip was to Whitefish Point, a place that I had long wanted to visit, and was also on Lake Superior, one of my very favorite lakes. On August 4, 2001, about a dozen FBO members met Ed Voss in front of the Shipwreck Lighthouse complex located at the tip of Whitefish Point. The site has been rather too-well-developed for attracting tourists. A well-known Bird Observatory has developed there as well.

The first part of the day was spent near the tip of Whitefish Point. At this location, there is a sand dune running east to west along the shore of Lake Superior. East of the point where Whitefish Bay begins, the shore is quite flat and without trees for a few hundred meters from the shore of Lake Superior (Figure 1). Ed Voss told us that the sand in the area had been deposited in the



Figure 1. Lake Superior shoreline at Whitefish Point

former Lake Algonquin. Currents in the present Lake Superior are sweeping the sand along the shore and are causing the easterly growth of the point. As this process has been occurring for a long time, a series of dune ridges has formed resulting in a swale and hollow landscape over a large part of the Whitefish Point peninsula.

In from the east shoreline, the woods at the Point were largely open stands of Jack Pine with a scattering of other tree species. The shore flats had quite extensive stands of Woolly Beach-heath (*Hudsonia tomentosa* Nutt.). The low-growing clumps of this species were seen to be quite effective in trapping the blowing sand (Figure 2). Between the heath clumps, the sand was often swept away leaving small, flat, worn beach stones. The notable species included Three-toothed Cinquefoil (*Potentilla tridentata* Sol ex Aiton), Kalm's Hawkweed (*Hieracium kalmii* L.), Coast Jointweed (*Polygonella articulata* (L.) Meissner), Common Hairgrass (*Deschampsia flexuosa* (L.) Trin.), Hairy Goldenrod (*Solidago hispida* Muhlenb. var. *hispida*), and Sagewort Wormwood (*Artemisia campestris* L. ssp. *borealis* (Pallas) H.M. Hall & Clements).

In the small swale at the end of the road behind the



Figure 2. Effectiveness of Woolly Beach-heath. (*Hudsonia tomentosa*) clumps in trapping blowing sand on beach at Whitefish Point

first dune, we saw Michaux's Sedge (*Carex michauxiana* Boeckeler), Larger Canadian St. John's-wort (*Hypericum majus* (A. Gray) Britton), Marsh Cinquefoil (*Potentilla palustris* (L.) Scop.), and, Blue-leaved Willow (*Salix myricoides* Muhlenb.). The larger dune immediately to the west had Gillman's Goldenrod (*Solidago simplex*. Kunth ssp. *randii* (Porter) Cronq.), Bog Willow (*Salix pedicellaris* Pursh), and Huron Tansy (*Tanacetum bipinnatum* (L.) Shultz-Bisping ssp. *huronense* (Nutt.) Breitung) (Figure 3). A photograph of the latter species graces the cover of the last volume of the Michigan Flora. Ed pointed out the differences between the two native Mountain-ashes; Showy (*Sorbus decora* (Sarg.) C. Schneider) and American (*Sorbus americana* Marshall) that were growing nearly side by side. Other species in the woods were Tall Bilberry (*Vaccinium ovalifolium* Smith) and Swamp Juneberry (*Amelanchier bartramiana* (Tausch) M. Roeme).

The next stop was at an easily-accessible bog surrounding a small lake named Barclay Lake (Figure 4). The shore had a good representation of typical bog species. Northern Yellow-eyed-grass (*Xyris montana* Ries) had developed a good show of its small yellow flowers. We saw Few-flowered Sedge (*Carex pauciflora* Light.), Three-leaved Buckbean (*Menyanthes trifoliata* L.), Bullhead Pond-lily (*Nuphar variegatum* Engelm. ex Durand), Horned Bladderwort (*Utricularia cornuta* Michaux), and Bog Laurel (*Kalmia polifolia* Wangenh.). Ed Voss pointed out differences between at least three species of sundews growing at this bog – English Sundew (*Drosera anglica* Hudson), Spatulate-leaved Sundew (*D. intermedia* Hayne), and Round-leaved Sundew (*D. rotundifolia* L.) (Figure 5).

Later in the afternoon, we went to the mouth of the Two-hearted River located west of Whitefish Point. This river empties into Lake Superior from behind the dunes running parallel to the shore. After crossing a suspension bridge just west of the mouth, we walked along the beach or on the walking trail on dunes into the woods. The dunes were open near the bridge but were mostly wooded further to the west. These woods included Red, White and Jack Pine, paper Birch and Red



Figure 3. Huron Tansy (*Tanacetum bipinnatum*) at Whitefish Point.



Figure 4. The bog at Barclay Lake

Maple. Some of the plant species seen here included Mountain Bilberry (*Vaccinium membranaceum* Douglas ex Torrey), Black Crowberry (*Empetrum nigrum* L. ssp. *hermaphroditicum* (Lange ex Hagerup) D. Love), Giant Rattlesnake-plantain (*Goodyera oblongifolia* Raf. var. *oblongifolia*), Northern Comandra (*Geocaulon lividum* (Richardson) Fern.), Round-leaved Pyrola (*Pyrola americana* Sweet), Creeping Snowberry (*Gaultheria hispidula* (L.) Muhlenb. ex Bigelow) as well as the foliage of Hooker's Orchid (*Platanthera hookeri* (Torrey ex A. Gray) Lindley). Because they were growing close together, we were able to compare the growth forms of Pinesap (*Monotropa hypopithys* L.) with Indian-pipe (*Monotropa uniflora* L.), and American Beach Grass (*Ammophila breviligulata* Fern.) with American Dune Grass (*Leymus mollis* (Trin.) Pilger.). There was also more Huron Tansy and Sagewort Wormwood to examine at this location as well.

Despite the long distance to travel, this trip was extremely worthwhile. In addition to having perfect weather (although it was very hot elsewhere, the lake kept us very comfortable), we were able to see a number of plant species that were either quite uncommon for Ontario or were new for me. As another bonus, Ed signed my copy of his book for me. Finally, I would like to say "Thank you" personally and on behalf of FBO to Ed Voss for leading this excellent trip. If you ever agree to lead a similar trip for FBO in the future, I for one will be sure to sign up! 🍄

W.D. McIlveen

1. Voss, E.G. 1996. Michigan Flora. 3 Vols. Bulletin 61. Cranbrook Institute of Science and University of Michigan Press.

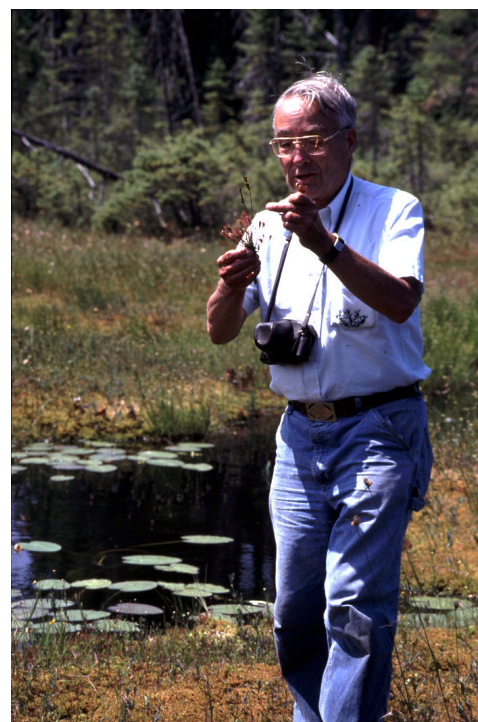


Figure 5. Ed Voss demonstrating some finer points in distinguishing between sundew species.

Review:

Bill Casselman. 1997. *Canadian Garden Words*. Little, Brown, and Company (Canada) Ltd. 356 pp. List Price \$19.95 (Soft cover).

W.D. McIlveen

If you ever wondered where the names of different plants originated, this book by Bill Casselman is for you. Despite the reference to "Garden" in the title, the book does cover many native species as well as those that have escaped from cultivation. The book is divided into several sections dealing with Annuals; Bulbs, Corms, Rhizomes & Tubers; Herbs; Perennials; Trees Native to Canada; and Wild Plants of Canada. The book is liberally enhanced with old black and whites wood cuts, as well as drawings from other sources and some of these are rather humorous.

Over 200 plant species or species groups are covered including species, genus, family, and common names. For each, he has myths and word lore and a whole lot of other material. For some, he discusses place names that were derived from some association with plants. For others, he lists English and French surnames derived from a botanical foundation.

The prose is true to the Casselman biting and satirical style with lots of whimsy, irreverence and mocking references to naughty topics thrown in. A few short examples of this include his attempts to grow the European version of the Dog's Tooth Violet *Erythronium dens-canis*. "But North American species have wintered

over with more success in my modest plot of ground than the big European poop which has been winter-killed frequently whilst under my apparently oafish ministrations.” Under “beech” he says “The obsolete adjective beechen was much used by minor English poets who frequently repined ‘under beechen boughs’ or ‘under yonder beechen shade’ often eating fruit ‘up piled in beechen bowl’ whereupon the reader upchucked on poetaster’s page.” After reviewing the uses of birch including the creation of snow glasses, canoes, moose horns, and containers from the bark or birch oil for preserving leather, he refers to the pre-Christian fertility rite practices in Russia, Sweden, Germany and England. These involved the birch in some manner including its use as a May-pole during which its collection from the woods caused the puritans of the day to complain “that of fortie, threescore, or a hundred maides going to the wood overnight, there have scarcely the third part of them returned home againe undefiled.”

The word sources are extremely wide ranging, coming from a myriad of languages: Latin, Greek, old French, old English, German, not to mention Jewish, Russian and Scandanavian. Sorry but I can’t vouch for the authenticity of all of these sources, my knowledge of these, and Cree and Ukranian, among others is somewhat rusty. Since word mastery is Casselman’s specialty, I would defer to his vast knowledge here. I would; however, make a small issue with his suggested derivation of *Ranuculus*. He is correct in that this name means “little frog” in Latin. He suggests that the name was applied because buttercups like damp place just like amphibians do. It is my understanding; however, that the name was used because the seed is shaped like a tadpole; hence the appropriateness of the “little frog” appellation.

I found the book to be chock full of information and fun to read but not one suited for reading end to end in the way one would read a novel. It will serve very well as a reference for botanists or for those people needing to know something about the derivation of words. Although the list price on the cover was \$19.95, I picked it up for an investment of \$6.99 as a remaindered copy, a truly bargain price. I recommend that if you find one, pick it up, take it home (after paying of course) and enjoy! 🍄

Botanical Diversion:

Salad Taxonomy

Carl Rothfels

Craving exciting dinner-table conversation? Looking to impress friends and colleagues? Welcome to the Salad Taxonomy Game! Scared of Latin? Scared of salad? Welcome to the Salad Taxonomy Game! Learn to play and improve your botanical skills while wetting your toes in (and whetting your appetite for) the science of taxonomy. You’ll never look at your food the same way again.

Start with Salad:

Being the *déclassé* North Americans that we are, dinner typically starts with salad. Crunch into a big piece of lettuce (*Lactuca sativa* L.) and you’re munching on a member of the ASTERACEAE. In Ontario we have a number of *Lactuca* species, ranging from the abundant weed *Lactuca serriola* L., to less common natives like *Lactuca hirsuta* Nutt. All are fairly waxy unappetizing plants with poisonous latex sap (perhaps some people feel that way about salad lettuce, too). Whoever thought to cultivate them? Aside from the ubiquitous lettuce (really just filler for the rest of the salad), ASTERACEAE is uncommon in our diets; the only other composite you might see on your plate is our favourite pickled thistle: artichoke hearts (*Cynara scolymus* L.), or some dandelion leaves (*Taraxacum* spp.), or one of the few truly North American foodstuffs, the jerusalem artichoke (*Helianthus tuberosus* L.). Yup, the nutty jerusalem artichoke is a sunflower. Who’d a thunk it? Tastes great sliced thinly and scattered raw over a salad.

No salad would be complete without some SOLANACEAE. Surprisingly, this family is consistently among the world’s most poisonous and psychoactive, and is home to such infamous plants as belladonna (*Atropa belladonna* L.), angel trumpets (*Brugmansia* and *Brunfelsia* spp.), jimson weed (*Datura* spp.), and mandrake (*Mandragora*). While kids still occasionally kill themselves with *Datura*, the SOLANACEAE’s position as number one killer is due to our addiction to another member: *Nicotiana tabacum* L., better known as tobacco. Despite this roster of toxicity, SOLANACEAE features very prominently in our salad bowls. Tomatoes (*Lycopersicon esculentum* L.), bell and chili peppers (*Capsicum* spp.) are all in this family, while eggplant (*Solanum melongena* L.) and potato (*Solanum tuberosum* L.) are in the *Solanum* genus itself. The toxicity of this family was well known to earlier settlers – Colonel Robert Gibbon Johnson had to eat a bushel of tomatoes in public before people were satisfied that they weren’t poisonous. That was in 1820, and it took another century for their commercial popularity to take off (MBG 1992). Also worth mentioning is that tomatoes are a new world species; they didn’t reach Europe until Columbus brought them back with him. And pasta is from China. What did Italians use to eat??

We need more stuff for our salad. How about some avocado (*Persea americana* Mill.; LAURACEAE), some olives (*Olea europaea* L.; OLEACEAE), cucumber (*Cucumis sativus* L.; CUCURBITACEAE), and a radish or two (*Raphanus sativus* L.; BRASSICACEAE). Then we could eat our salad while looking out the window at some of its relatives: sassafras (*Sassafras albidum* (Nutt.) Nees; LAURACEAE) is confamiliar with avocado; ash and lilac trees (*Fraxinus* spp. and *Syringa* spp.; OLEACEAE) are in the olive family; wild cucumber (*Echinocystis lobata* (Michaux) T.&G.; CUCURBITACEAE) is one of two native cucurbits in Ontario; and a myriad mustards and cresses and cardamines (BRASSICACEAE) are prominent members of this large family.

If we wanted to be creative, we could add some capers (CAPPARACEAE), alfalfa sprouts (*Medicago*

sativa L.; FABACEAE), and okra (*Abelmoschus*; MALVACEAE). Maybe we should make a waldorf salad instead, in which case we'd need raisins (*Vitis*; VITACEAE) or currants (*Ribes*; GROSSULARIACEAE), spinach (*Spinacia*; CHENOPODIACEAE) and walnuts (*Juglans*; JUGLANDACEAE). Do waldorf salads have orange pieces in them? That would be RUTACEAE, and I'd recommend the canned clementines, personally. Very juicy.

On To the Main Course:

The Salad Taxonomy Game need not end with salad. Our main course would probably feature some corn (*Zea mays* L.), wheat (*Triticum aestivum* L. -- most often as flour), or rice (*Oryza sativa* L.) All three are in the POACEAE, the grass family. Yup, the bulk of our vegetable diet consists of grasses. Somehow, I find that disconcerting. Rice alone is the staple for an estimated 1.6 billion people worldwide (MBG 1992). Asparagus (*Asparagus officinalis* L.; LILIACEAE), beets (*Beta vulgaris* L.; CHENOPODIACEAE), swiss chard (also *Beta vulgaris* L.) and parsnip (*Pastinaca sativa* L.; APIACEAE) make nice side dishes. APIACEAE, like SOLANACEAE, is one of those strange families with many highly edible species mixed with many highly toxic ones. While we like to see carrots (*Daucus carota* L. var. *sativus* Hoffman), celery (*Apium graveolens* L.), fennel (*Foeniculum vulgare* Miller), dill (*Anethum graveolens* L.), caraway (*Carum carvi* L.), or parsley (*Petroselinum crispum* (Miller) A.W. Hill) on our plates, water-hemlock (*Cicuta maculata* L.), a common plant in southern Ontario, is "usually considered to be the most violently poisonous plant in temperate North America" (Voss 1985). Never dig for wild parsnips without knowing exactly what you're doing!

Still hungry? Squash (*Cucurbita maxima* Lam. and *Cucurbita pepo* L.), pumpkin (*Cucurbita* spp.), and zucchini (*Cucurbita pepo* L.) are all in the CUCURBITACEAE, while radishes (*Raphanus sativus* L.), mustard (*Brassica* spp), turnip (*Brassica rapa* L.), rutabaga (*Brassica napus* L.), horseradish (*Armoracia rusticana* Gaertn., May., & Scherb.), wasabi (*Wasabia*), broccoli, brussel sprouts, cauliflower, cabbage, and kohlrabi are in the BRASSICACEAE. Despite looking very different from each other, broccoli, cauliflower, brussel sprouts, kale, and kohlrabi are not just in the same family, they are the same species (*Brassica oleracea* L.)!!

Sweet potatoes (*Ipomoea batatas* (L.) Poir.) are not potatoes at all, instead they are in the viney morning glory family (CONVOLVULACEAE). While sweet potatoes are frequently called yams (damn those taxonomically inept supermarkets), a yam (*Dioscorea* spp.) is a different beast altogether, in its own family, the DIOSCOREACEAE. Both families have native members in Ontario (the yam being confined to southern Ontario), and 10000 year-old fossilized sweet potatoes have been discovered in the Andes (MBG 1992). Yams, not to be outdone, can grow to 100 pounds and are used in some cultures as a medium of ritualized exchange; in some cases only male members of the community are allowed to grow them (MBG 1992).

Aside from POACEAE, our most important food-

family is the FABACEAE, the legumes, or pulses. Soybeans (*Glycine max* (L) Merr.) (and thus tofu), lentils (*Lens*), beans (*Phaseolus vulgaris* L.), and peas (*Pisum sativum* L.) are some of the most commonly consumed members of this family, but don't forget the consummate bar food, peanuts (*Arachis hypogaea* L.), which, being in the FABACEAE, are not nuts at all. One of my favourite side dishes is garbanzo beans (FABACEAE) fried with some chopped onions (*Allium cepa* L.) and garlic (*Allium sativum* L.) with maybe some chives (*Allium schoenoprasum* L.) on top. All of which are in the lily family, LILIACEAE.

Care For Some Fruit Salad?

As we all know, salad and the main course are just the warm-up. It's in the dessert (fruit salad) that things really get interesting. We can make most of it without going outside of two families: RUTACEAE and ROSACEAE. RUTACEAE is likely to be familiar to [Ontario botanists] only through Prickly-ash (*Zanthoxylum americanum* Miller), which forms those nice impenetrable walls of thorns in southeastern Ontario. The family is most common, though, in tropical areas, which is where we get grapefruit, lemons, limes, mandarins, clementines, oranges, tangerines and ugly fruit (all in the *Citrus* genus) as well as a few others, like kumquat (*Fortunella*). ROSEACEAE adds many more items to our salad: apple (*Malus*), pear (*Pyrus*), raspberry (*Rubus* spp.), strawberry (*Fragaria* spp.), saskatoon berries (*Amelanchier* ssp.), quince (*Cydonia*), and cherries (*Prunus* spp.), peaches (*Prunus persica* (L.) Batsch), apricots (*Prunus armeniaca* L.), nectarines (*Prunus persica* again), and plums (*Prunus* spp.).

A typical fruit salad would also have some grapes (VITACEAE) and maybe some gooseberries (GROSSULARIACEAE), which are not related to the chinese gooseberry (better know as the Kiwi) of the ACTINIDIACEAE. Pineapple (*Ananas comosus* (L.) Merr.), as at home in a fruit salad as on a pizza, is in the largely epiphytic BROMELIADACEAE, and blueberries and cranberries (*Vaccinium* spp.) are in the heath family (ERICACEAE). Of course, no fruit salad would be complete without some bananas (*Musa X paradisiaca* L.; MUSACEAE).

A mortal fruit salad might stop there, but not ours. We're after a legendary fruit salad experience. In goes the papaya (*Carica*; CARICACEAE), guava (*Psidium guajava* L.; MYRTACEAE), star fruit (*Averrhoa*; OXALIDACEAE), the luscious passion fruit (*Passiflora*; PASSIFLORACEAE), the sinful pomegranate (*Pomegranate*; PUNICACEAE), and maybe some mulberries (*Morus*), figs (*Ficus*), or jackfruit (*Artocarpus heterophyllus*) (all in the MORACEAE). In goes the custard apple (*Annona*; ANNONACEAE) and the infamous SAPINDACEAE trio: the lychee (*Litchi chinensis* Sonn.), the rambutan (*Nephelium lappaceum* L.), and the longan (*Dimocarpus longan* Lour.).

Now there's no turning back! Mangos (*Mangifera*; ANACARDIACEAE) are mandatory, which brings us to the Queen of Fruits, the mangosteen (*Garcinia mangostana* L.; CLUSIACEAE). Ah, sweet mangosteen! Who would have guessed that you were related to the St. John's-worts (*Hypericum*)? With the Queen in place

there is no choice but to bring in the King of Fruits, the most (rightfully) infamous fruit of all: the durian (*Durio zibethinus* L./Murr; BOMBACEAE). With the arrival of the king, our fruit salad is truly legendary (and very very smelly).

After Dinner Relaxation:

After digesting our salad, we can curl up by the fire with a cup of coffee (*Coffea*; RUBIACEAE) or tea (*Camellia sinensis* (L.) Kuntze; THEACEAE), or wine (*Vitis*; VITACEAE). Or perhaps we would pour ourselves a nice glass of beer, which is mostly fermented grass [seed] (*Hordeum vulgare* L.; POACEAE). Speaking of grass, did you know that not only is beer made of barley (a grass), but it is [both preserved and] flavoured by hops (*Humulus*), in the CANNABINACEAE? CANNABINACEAE is the marijuana family. Perhaps this fact helps to explain the popularity of beer?

As a final option, we could make ourselves a nice hot chocolate. Chocolate comes from the cacao plant (*Theobroma cacao* L.) in the STERCULIACEAE. Aptly enough, the generic name *Theobroma* means "food of the gods" (MBG 1992). What a well-named plant! I think that this final tidbit, courtesy of the Salad Taxonomy Game, is an appropriate note on which to end our journey; from lettuce to the food of the gods, we've had quite the trip!

Enrichment:

This section is for the competitive Salad Taxonomists who are looking for that little extra family to add to their game, and is far from exhaustive. Contrary to common sense, nettles (*Urtica*; URTICACEAE) make a nice quiche or pie (they taste like spinach - CHENOPODIACEAE). Pine nuts (PINACEAE) are a crucial part of any good pesto, and one of the world's most important starch sources is manioc (*Manihot*; EUPHORBIACEAE). Hickory nuts and pecans (*Carya*) join walnuts (*Juglans*) in the JUGLANDACEAE, and that healthy buckwheat bagel (*Fagopyrum esculentum* Moench; POLYGONACEAE) could be topped with poppy seeds (PAPAVERACEAE) or sesame seeds (*Pedaliun*; PEDALIACEAE). Not many of us eat members of the ACERACEAE, except for the maple syrup we delightedly splash on our pancakes, while macadamia nuts (*Macadamia*; PROTEACEAE) may be the first crop to be cultivated in modern times that wasn't previously cultivated by aboriginal peoples. Brazil nuts (*Bertholletia excelsa* Humb. et Bonpl.) are in the LECYTHIDACEAE, and are thus of no relation to coconuts (*Cocos nucifera* L.; ARECACEAE). A delicious spring snack is sauteed fiddleheads (*Matteuccia struthiopteris* (L.) Todaro; DRYOPTERIDACEAE) and you gotta love those chestnuts (*Castanea*; FAGACEAE) roasting over an open fire, but don't confuse them with the crispy water chestnut delights in our chow mien (*Eleocharis dulcis* (Burm. f.) Trin. ex Henschel; CYPERACEAE). Water chestnuts are the corm of a sedge!

For that final kick, you have to look to the herbs and spices. Lavender (*Lavandula*), mint (*Mentha*), catmint (*Nepeta*), basil (*Ocimum*), oregano (*Origanum*),

rosemary (*Rosmarinus*), sage (*Salvia*), savory (*Satureja*), and thyme (*Thymus*) are all in the mint family (LAMIACEAE); Cinnamon (*Cinnamomum*) is in the LAURACEAE; nutmeg (*Myristica*) is in the MYRISTICACEAE, and allspice (*Pimenta*) and cloves (*Syzygium*) are both in the MYRTACEAE. Ginger (*Zingiber officinale* Rosc.) is in the ZINGIBERACEAE, and vanilla (*Vanilla planifolia* Andr.) originally came from that most-popular of families, the ORCHIDACEAE. Last but not least, the spice that was once so sought after that it was used as currency (MBG 1992), the spice of spices, black pepper (*Piper nigrum* L.), is appropriately in its own family: PIPERACEAE.

What plant families have YOU eaten today?

Recommended Readings:

These two books go especially well with a cup of *Coffea* after dinner. "What's for Dinner?" by Margaret Visser is a book on the natural history of a typical meal and Michael Pollan's "The Botany of Desire" is an insightful examination of the inter-relationship between plants and their people.

References Used:

For information on the mangosteen:

a) L. Watson and M. J. Dallwitz (1992-). The Families of Flowering Plants: Descriptions, Illustrations, Identification, and Information Retrieval. Version: 14th December 2000. biodiversity.uno.edu/delta/

b) www.csd.tamu.edu/FLORA/Wilson/tfp/dil/clupage.htm

The incomparable Durian Online:

a) www.ecst.csuchico.edu/~durian/

Many Latin names came from:

a) Flores, Manuel. Introduction to Plant Taxonomy. www.floresflowers.com

An excellent discussion of jackfruit and breadfruit:

a) Zerega, Nyree Conard. 2001. Incorporating *Artocarpus* (Moraceae) phylogenetic studies with the systematics, origins, and conservation of breadfruit (*Artocarpus altilis*). www.nybg.org/bsci/grad/nzerega/

For interesting descriptions of tropical foodplants:

a) Missouri Botanical Garden. 1992. A Tropical Feast. www.mobot.org/education/05actforkidsnfamilies/onlineactivites/tropicalfeast/tropfeast.html

Descriptions (with pictures!) of the fruit produced by Thailand:

a) www.ku.ac.th/AgrInfo/fruit/product/

For those seriously interested in fruit:

a) www.tradewindsfruit.com/index.htm

Also cited:

a) Voss, E.G. 1985. Michigan Flora Part II. Cranbrook Institute of Science Bulletin 59.

b) Voss, E.G. 1996. Michigan Flora Part III. Cranbrook Institute of Science Bulletin 61.

Range Extension:

Purple-stemmed Angelica New to Muskoka.

George Bryant

On June 25, 2001, while negotiating the curves of Muskoka Road 5 near South Bay, I slowed the vehicle to inspect a robust umbellifer growing on the road shoulder. "Angelica" announced a passenger, Helen Juhola, as the vehicle slowed to a stop. Having just seen large stands of the plant in Norfolk County, I concurred with her identification. There were about a dozen plants growing at this site, the largest of which was 1.5 metres high with a 25 cm. globular head. I thought little of it until a perusal of the Muskoka plant list revealed its absence. Jim Goltz confirmed this status and on August 29th, 2001, I was able to show the stand to Jim. The 10" (25 cm) globular head had persisted over the two months. Jim collected a stem and basal leaf to establish the first official record for the Municipal District.

Great or Purple-stemmed Angelica, a.k.a. Dark-purple Alexanders (*Angelica atropurpurea* L.) interestingly is recorded in the Ontario Plant List as both native (S5) and Ornamental. It prefers moist stream banks. Although the Muskoka establishment is clearly anthropogenic, it was beside a marshy area and the plants seemed quite healthy. The species has been recorded throughout southern Ontario, although less commonly in extreme southwestern Ontario. ♣

Notices:

AGM Planned for Sept. 14-15, 2002

Save the date! The FBO AGM returns to southwestern Ontario Sept. 14-15, 2002. This time we are planning to hold it at St. Thomas, Elgin County. Some the destinations being considered for field trips include Springwater Park (old growth forest), Hawk Cliff, Port Burwell Park (dunes and beaches), Dutton Prairie (Compass Plant), Dunwich Swamp, St. Thomas Railroad yards (Skeleton-weed), Yarmouth Natural Heritage Area (Crooked-stem Aster), and Sparta Historic Village. ♣



"Room to Grow" delivered to Minister of Natural Resources.

"Room to Grow" is the title of the Final Report of the Ontario Forest Accord Advisory Board that was delivered to the Ontario Government this March. The Board included members of the Canadian Parks and Wilderness Society, Federation of Ontario Naturalists,

Nature Conservancy of Canada, large forestry companies and the Ministry of Natural Resources. Included in the report were the recommendation that up to 12% of provincial commercial forested land base be managed more intensively (eg: plantations), and the recognition that additional land may need to be set aside as parks or conservation reserves. Currently, the report is available from the Wildlands League website (www.wildlandsleague.org/press.html). However, it had not yet been released by the Ontario Ministry of Natural Resources (www.mnr.gov.on.ca/MNR/oll/ofaab/). ♣



New Protected Area Proposed for Southern Ontario.

The Ontario provincial government has proposed to regulate the St. Williams Crown Lands, near Simcoe, as a "Signature Site" protected area under the 'Ontario's Living Legacy' Crown Land Use Strategy for Ontario. It is the largest block of publicly owned forest in Ontario's Carolinian Forest Zone (1150 ha) to be protected under the strategy. Although past forest management activities had established extensive plantations of red and white pine, and hardwoods, other sections of the site of the site support rare species, including a number of Species At Risk. The principal stakeholder organizations include Norfolk Field Naturalists, Long Point Conservation Authority, and Simcoe Game and Fish Club. At present, the province has not indicated whether the area would be regulated as a provincial park or conservation area. Presumably the decision on its designation has been deferred until additional consultation and management planning has occurred.

For more information:

Alec Denys

Ontario Ministry of Natural Resources

(519) 773-4710



Call for Plant Observations from Ecoregion 3E.

A few months ago, I began consolidating plant records from Ecoregion 3E into a single, annotated list. This area includes much of the northern Clay belt area as well as some boreal Canadian Shield. Major towns include Wawa, Chappleau, Hearst, Timmins, Cochrane, Abitibi, and Kirkland Lake. The purpose of the project was to establish the regional status (rare, occasional, common) of the plants within the ecoregion, as well as to identify northern populations of provincially rare species to the Natural Heritage Information Centre. Much of the information came from ecological inventories of Pukaskwa National Park and the many provincial parks within the Ecoregion. If anyone has botanized in this



Early Saxifrage (*Saxifraga virginicensis* (Michx.) growing on cushions of the moss *Tortella tortuosa* (Hedw.) Limpr.). Photo by Ed Morris, Belanger Bay Alvar, Manitoulin Island.

part of the world, and has recorded plant observations and localities, I would very much like to hear from you.

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Note from the Editor.

Another newsletter has been printed much later than it should have. This spring has been particularly hectic for us. In early April, Carin and I got married. Some serious yet unrelated events also required our full attention. It's only now that things have gotten back to normal. In the interest of avoiding further delays, I sent the newsletter to the press without my usual diligence or input from associate editors. Please forgive the inevitable spelling and gramatical errors, and alert me to any other errors or omissions that are more serious in nature.

I wish to thank the McIlveens, Carl Rothfels, and George Bryant for this issue's submissions. At this time, I am not sure how long it will take me to prepare the summer issue of the newsletter. As it stands I have no content for it whatsoever, and it seems likely that summer and fall issues would have to combined into a double issue. If you 'owe' field trip reports, please finish and send them to me as soon as possible. I hope you have an enjoyable summer.

-Ed

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