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FIELD BOTANISTS OF ONTARIO

Matteuccia struthiopteris

NEWSLETTER

Winter 1990/91

CONTENTS:

UPCOMING FIELD TRIPS & WORKSHOPS:

We are starting the outing season in March with a Workshop on Ferns and Fern Allies given by Dr. Don Britton. Information and an application sheet are enclosed with this newsletter. A full and exciting program of other trips is being planned. We will send out information on these with the Spring 1991 Newsletter.

Field trips are one of the main functions of the Field Botanists of Ontario, so plan to attend as many trips as you can this year to get full benifit of your membership.

FIELD BOTANISTS of ONTARIO

NEWSLETTER
Published quarterly by the FBO.
ISSN: 1180-1417

The FBO is a non-profit organization founded in 1983 for those interested in botany and conservation in the province of Ontario.

! ! ! ! MEMBERSHIP DUES ! ! ! !

With the start of the new year Field Botanist of Ontario memberships are now past due. If you have not yet renewed your membership, please do so now. Use the yellow membership form enclosed with this news letter. If you have already renewed please pass the form along to a friend who you think might like to join the FBO. Remember, you must be a member of the FBO to attend field outings.

FBO POLICY ON PLANT NAMES

Most articles in the FBO Newsletter have traditionally given both the scientific and the common names of all the plants mentioned. Following publication of the Checklist of the Flora of Ontario: Vascular Plants (Morton and Venn, 1990), scientific nomenclature will follow this list.

Common names will normally follow Riley (1989) as this is the most comprehensive list available at present. Exceptions will be made for articles where common names are a feature of the text or in special cases where more specific common names exist.

Article submitted to the newsletter will be edited to conform to this policy.

References cited:

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

Riley, J.L. (1989) Distribution and Status of the Vascular Plants of Central Region. Ontario Ministry of Natural Resources, parks and Recreational Areas Section, Central Region, Richmond Hill. 110 pp.

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* THE DEADLINE FOR SUBMISSIONS TO *
* THE SPRING 1991 ISSUE OF THE *
* FBO NEWSLETTER IS *
* **MARCH 15, 1991** *
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CALL FOR NEWSLETTER MATERIAL

The FBO Newsletter is always looking for news, illustrations and other material and we would like to include more articles from our members. Do you have any interesting information, comments, jokes or stories? Can you write entertaining or informative material about your favourite botanist or plant? Can you draw plants in pen and ink?

You do not have to submit polished articles. Handwritten notes are acceptable as long as they are readable, and scientific plant names can be added or corrected during editing. If you have an IBM compatible personal computer and wish to submit articles on 5.25" diskette, please convert the file to ASCII if possible and pack the diskette with strong cardboard. The diskette can be returned once the article is published if you wish.

Drawings should be in pen and ink (no half-tone greys). You do not have to send the original, a clean photocopy is good enough.

We are looking into the possibility and expense of reproducing black and white photographs in future newsletters. We will keep you posted on the results.

Please send all newsletter material to the editor:

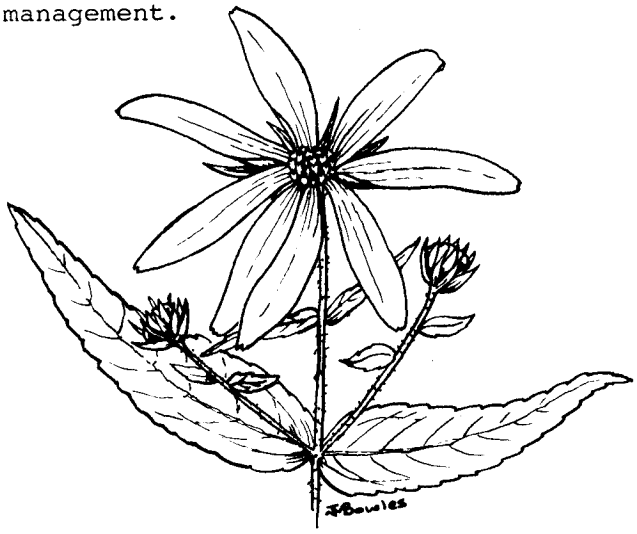
Jane Bowles, RR# 3,
THORNDALE, Ontario N0M 2P0

Deadlines for submission are March 15, June 15, September 15 and December 15 for the Spring, Summer, Autumn and Winter newsletters respectively. If you want to see your article before it is published please send it at least 2 weeks earlier and state that you wish to proof read it.

The FBO reserves the right to reject unsuitable material.

TRIP TO BRANTFORD PRAIRIE

On August 25, 1990 Don Kirk led a trip for FBO members to look at the remnants of a prairie habitat at Brantford. The area northwest of Brantford has been blessed with large deposits of sand and gravel overlooking the Grand River. These deposits created conditions which allowed for the maintenance of a prairie flora near the northeastern limits of this habitat. A railroad was built across the prairie and the local flora fortuitously colonized the embankments and sides of this rail bed. Recent developments which include urban development, aggregate extraction and land clearing have all but eliminated the native prairie habitat. We therefore are left only with remnants of the prairie, primarily on the railroad right-of-way. The recent closure of the Lake Erie and Northern Railroad offers an opportunity to ensure that the prairie species are saved for future generations through proper land management.



Helianthus divaricatus

During the field trip to examine the remaining prairie flora, four sites were visited. The first site was along the railroad right-of-way on the south side of Hardy Road opposite ACG aggregates office. Here the north side of the railroad had a moderate embankment topped by oak woods (*Quercus alba* and *Q. velutina*) thus providing a warm, sunny south exposure. The distance from the shoulder of the railroad to the base of the embankment was not very large, but supported a number of characteristic prairie species. These included Canada wild-rye (*Elymus canadensis*), Indian grass (*Sorghastrum nutans*), flowering spurge (*Euphorbia corollata*), little blue-stem (*Andropogon scoparius*) and tall bluestem (*Andropogon gerardii*) as well as blue grama grass (*Bouteloua curtipendula*). On the slope and into the woods there were a few plants of pale-leaved sunflower (*Helianthus strumosus*), woodland sunflower (*Helianthus divaricatus*), hairy bush clover (*Lespedeza hirta*) and a single hard-leaved goldenrod (*Solidago rigida*).

The second site was located about a kilometer east of the first site on Hardy Road. The vegetation here was of an entirely different character since the site was very wet. There was standing water in the centre area which covered about half a hectare. It was suggested that the site was a burrow pit for materials used in the original construction of the nearby railroad. Some of the plant species recorded here included sky-blue aster (*Aster oolentangiensis*), both rough-leaved and rough goldenrod (*Solidago patula* and *S. rugosa* respectively), tick-trefoil (*Desmodium canadense*) and Kalm's lobelia (*Lobelia kalmii*). A number of nodding ladies'-tresses (*Spiranthes cernua*) were noted. Also recorded were variegated scouring rush (*Equisetum variegatum*), northern meadow spikemoss (*Selaginella apoda*) and American bulrush (*Scirpus americanus*). The margins of the site had a number of small shrubby cinquefoil (*Potentilla fruticosa*) of a particularly fine flower colour. Unfortunately, others had noted this before and only holes remained where some of this species should have been.

The third site examined was along the railroad track running between the golf course and the Grand River. Portions of this area were relatively flat while in other parts the cuts for the railroad bed left tall steep grassy banks. Any vegetation growing here must be adapted to dry hot conditions. Here we found more tall bluestem, blue grama grass, porcupine grass (*Stipa spartea*) and sand dropseed (*Sporobolus cryptandrus*). Between the railroad and the river there were several specimens of smooth sumac (*Rhus glabra*) and the less common dwarf chinquapin oak (*Quercus prinoides*).

We ate lunch under the welcome shade of oak trees at the west end of Powerline Road where is becomes a dead end above the Grand River. We examined the open areas at the top of the bluff and the wooded slopes above the river. A portion of the Grand River Trail traverses the area near the bottom of the hill. Both little bluestem and blue grama grass were found here as well as wild crab (*Malus coronaria*), long-fruited anemone (*Anemone cylindrica*) and ninebark (*Physocarpus opulifolius*).

Despite the heat, I found this field trip to be one of the most interesting I have been on with the FBO. Thanks to Don for sharing his knowledge and recent discoveries in the area.

W.D. McIlveen

Malus coranaria

COLD RECEPTION FOR HOT SPOTS

The Summer 1990 issue of the FBO Newsletter contained a call for members to report any favorite botanical "hot spots" they knew of so that the FBO could compile a register of the best botanizing locations in the province.

So far the response has been zero. Unless information and response sheets pour in soon George Bryant, who volunteered to co-ordinate the project, will go out and bury it in his garden. Obviously this project did not reflect the wishes and needs of our membership.

Anemone cylindrica

FALL ANNUAL MEETING FOR 1991

Attendance at the 1990 Annual General Meeting was disappointingly low in spite of the wonderful surroundings and fascinating botanical area.

In order to try and get a better turnout for our annual meeting this year it will be held in September and within easy driving distance of Toronto. It is tentatively scheduled for the weekend of September 13-15 somewhere in Norfolk County. Make sure you keep this weekend free.

IN DEFENCE OF SCIENTIFIC NAMES

The scientific names of plants always seem to create a problem for non-professional botanists. It is understandable that some people might choke over scientific names which are often long, difficult to pronounce and seemingly meaningless, but lately I have heard another complaint which I have to comment on: "but they keep changing the scientific names!"

First of all, why use scientific (Latin) names at all? Why not use the common or vernacular names which are easier to remember and usually have some meaning in everyday language? To start with common names are not universal. They are usually only applicable in a single language so the same plant may have dozens of names and the one you use may depend on your mother tongue, where you live, who your grandmother was, when you first heard the name and which books you have read. Vernacular names can be poetic and evocative and may have wonderful histories, but they are indifferent as a means of mass communicaion.

Another point is that in most parts of the world only very small portions of the total flora have been given common names. If you insist on using common names you either end up lumping all kinds of species under one name like "sedge" or you translate the scientific name into your language which can be ludicrous. Why should "Fernald's hay sedge" be preferable to *Carex aenea* Fernald.

The convention of a generic name and a specific epithet tells you something about the relationships of plants, but is not used in vernacular names. For example in the genus *Eupatorium*, the two species *E. maculatum* and *E. purpureum* are know in English respectively as spotted Joe-Pye-weed and sweet-scented Joe-Pye weed, but *E. perfoliatum* goes by the name of boneset. There is no indication of the close relationship of the three species.

Going the other way, it is quite common that two unrelated plants have the same vernacular name. For example, two woodland plants are snowberry and creeping snowberry. The first is *Symphoricarpos albus* (L.) S.F.Blake, a relative of the honeysuckles and the second is *Gaultheria hispidula* (L.) Muhlenb. ex Bigelow in the heath family or Ericaceae.

My favorite example involves the genus *Pyrola*. The common names for plants in the genus include shinleaf and pyrola. Shinleaf refers to a particular species *Pyrola elliptica* Nutt., but can also refer to the genus. *Pyrola asarifolia* Michaux is not only known as pink pyrola or pink shinleaf, but also as bog wintergreen. The name "wintergreen" also applies to plants in at least five other genera. *Gaultheria procumbens* L. (a close relative of creeping snowberry by the way) is called wintergreen or checkerberry. *Chimaphila maculata* (L.) Pursh can be called spotted wintergreen or striped wintegreen and *Monesis uniflora* (L.) Gray is called one-flowered wintergreen or one-flowered pyrola. At least these last two are in the same family. Less closely related are *Trientalis borealis* Raf. (chickweed wintergreen) and *Polygala paucifolia* Willd. which is variously known as fringed polygala, fringed milkwort, gaywings and flowering wintergreen. No doubt you can add your own examples to help with the confusion.

The use of scientific names is governed by a set of internationally agreed rules which, although they seem complicated, are aimed at providing a stable method for naming taxonomic groups of plants. These rules are laid out in the International Code of Botanical Nomenclature ("The Code").

The modern code was established at the International Botanical Congress in 1930, but is updated or clarified by agreement at other International Congresses. It covers all plants as well as fungi and slime moulds.

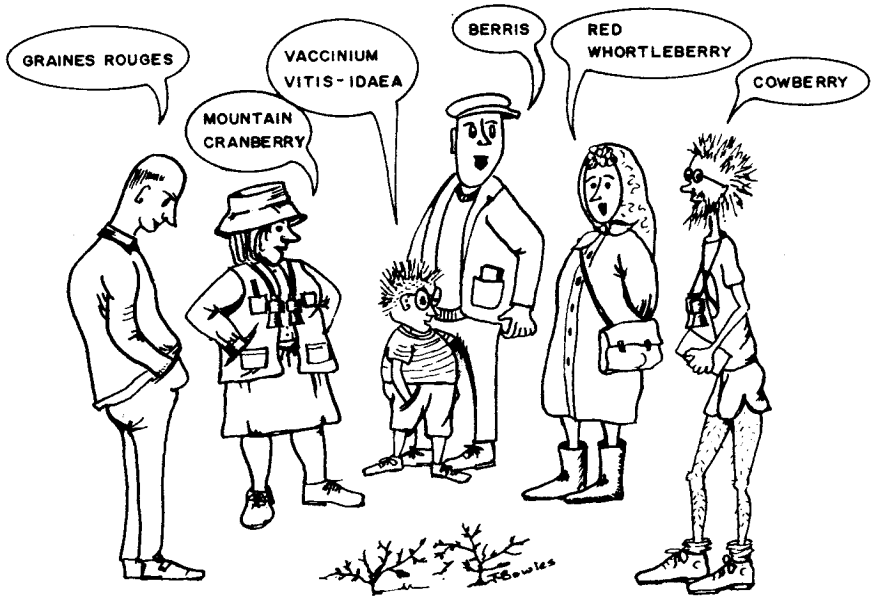
The provisions of The Code are divided into Rules which put past nomenclature into order and prevent names which contravene the rules from being maintained, and Recommendations which are supposed to help bring about uniformity and consistency.

Plants are classified into related groups or **taxa** (singular **taxon**) which are arranged hierarchically into six successive ranks: division, class, order, family, genus and species. Intermediate ranks, where needed can be created by adding the prefix "sub" as in subgenus or by introducing suplementary terms such as tribe, section or series. The names of the taxa in upper ranks are single words or **uninomials** such as **Asteraceae** or combinations of uninomials separated by an indication of the lesser rank such as *Aster* subgenus *Virgulus*. Species names are **binomials** consisting of the generic name and the specific epithet such as *Aster macrophyllus*.

In order for a name to be accepted it must be effective, valid and legitimate. An **effective** name must be published and distributed in print and generally accessible to botanists, libraries and institutions. A **valid** name is effectively published, has the correct form, is legitimate and is accompanied by a description or "diagnosis" of the taxon or a reference to a previous description. A **legitimate** name must obey all the rules of the International Code of Botanical Nomenclature. The **correct** name of the plant is the first legitimate name and it has to be accepted under the rules of The Code.

There are some important principles in The Code. First, the name of any taxonomic group is based on priority of publication. In other words, unless specific exceptions are made the earliest legitimate name for a taxon is the one that stands. The earliest valid date set for this rule is 1753, publication of "Species Plantarum" by Linnaeus. Secondly, the name must be backed by a "type specimen" of the taxon deposited somewhere in a herbarium. Thirdly, each taxon can bear only one correct name. Also the same name cannot be used for different taxa.

When plant names are changed, especially when the old name is familiar and established it can be confusing and annoying. It does happen sometimes, but stability of names will



eventually be achieved by vigourous application of The Code. Contrary to the perception of some Field Botanists there are really only three reasons for changing a plant name.

If the name being used is incorrect in that for some reason it does not follow the rules, then it has to be given up. For example if the name already belongs to another taxon.

Taxonomy and classification of plants is not carved in stone and is far from "perfect". Taxa may be amalgamated, split or transfered on the basis of better knowledge of the relationships of plant groups. This inevatably involves some name changes. Unfortunately some changes come about through the perceptions of different taxonomists and the taxonomic fashions of the day. The obvious example is the difference between the "splitter" and "lumper" philosophies. The 19th centuary botanist Seargent described and published hundreds of hawthorn (*Crataegus*) species, but modern techniques have shown that may of these taxa should be lumped into far fewer species.

The third reason for changing a name is if an older valid name is found. Unfortunately there are some taxonomists who are really frustrated lawyers and who delight in searching obscure foreign literature apparently with the express purpose of digging up old names and confusing everyone. In some of these cases the established name can be conserved by agreement and the correct name rejected. An example is *Triticum aestivum* which is not the correct name for bread wheat, but it has been conserved because of the economic importance of the plant and the well established name.

A recent example of a scientific name change of a familiar taxon is that of false Solomon's seal. This genus has been widely known as *Smilacina* and is now included in the genus *Maianthemum*. *Smilacina* was not the original name. Linnaeus included the taxon in the genus *Convallaria* (lily-of-the-valley), but the genera were separated for taxonomic reasons in 1763 by Adanson under the name of *Vagnera*, for the species *V. stellata*, and later by Moench in 1795 as *Polgonastum* (LaFrankie, 1986). Then in 1807 Desfontaines published a monograph on *Smilacina* and included five species, *S. stellata*, *S. racemosa*, *S. trifolia*, *S. borelais* and *S. ciliata*. The first three of these are familiar, the last was combined with *S. racemosa*, and *S. borealis* was placed in another genus (*Clintonia*) by Rafinesque. The name *Smilacina* was conserved by agreement over the two earlier genus names at an International Botanical Congress in 1905.

In 1986 LaFrankie proposed that the difference between *Maianthmum* and *Smilacina* was not sufficient to merit generic rank, but this was not a new idea. According to Lafrankie it had been proposed formally in 1821 by Link, in 1814 by Pursch and in 1888 by Greene and suggested by Therman in 1956. So the correct names for *Smilacina stellata*, *S. racemosa*, and *S. trifolia* are now *Maianthemum stellatum*, *M. racemosum* and *M. trifolium*. Note that the ending of the specific epithet has changed to agree with the generic name.

Jane M. Bowles

Selected References:

LaFrankie, J.V. Jr. (1986) Transfer of the species of *Smilacina* to *Maianthemum* (LILIACEAE). Taxon **35(3)**: 584-9.

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

Stace, C.A. (1989) Plant Taxonomy and Biosystematics. (2nd Edition) Edward Arnold. 265 pp.

FIELD TRIP ORGANIZATION FOR 1991

At a recent FBO executive meeting a new sub-committee was formed to organize and co-ordinate all the field excursions. It is hoped that in the furture this will streamline the process of arranging outings so that more excursions can be organized and all trips can be announced further ahead. Members of the Field Trip Sub-Committee are Deborah Metsgar and George Bryant. Their phone numbers are given in the masthead on page 2 of this newsletter.

Planning is already underway for a series of field excursions and plant workshops in 1991. We are trying to cover a spectrum of topics and locations including old favourites, identification workshops for particular plant groups, exploration in new areas, and trips to areas of natural and scientific interest (ANSI's) looking at what needs to be preserved.

At present we have a list of 15 possible venues. Details of all trips will be finalized shortly, and a complete schedule will be published in the Spring newsletter. To tantalize your palate here is a sneak preview of a few of the venues:

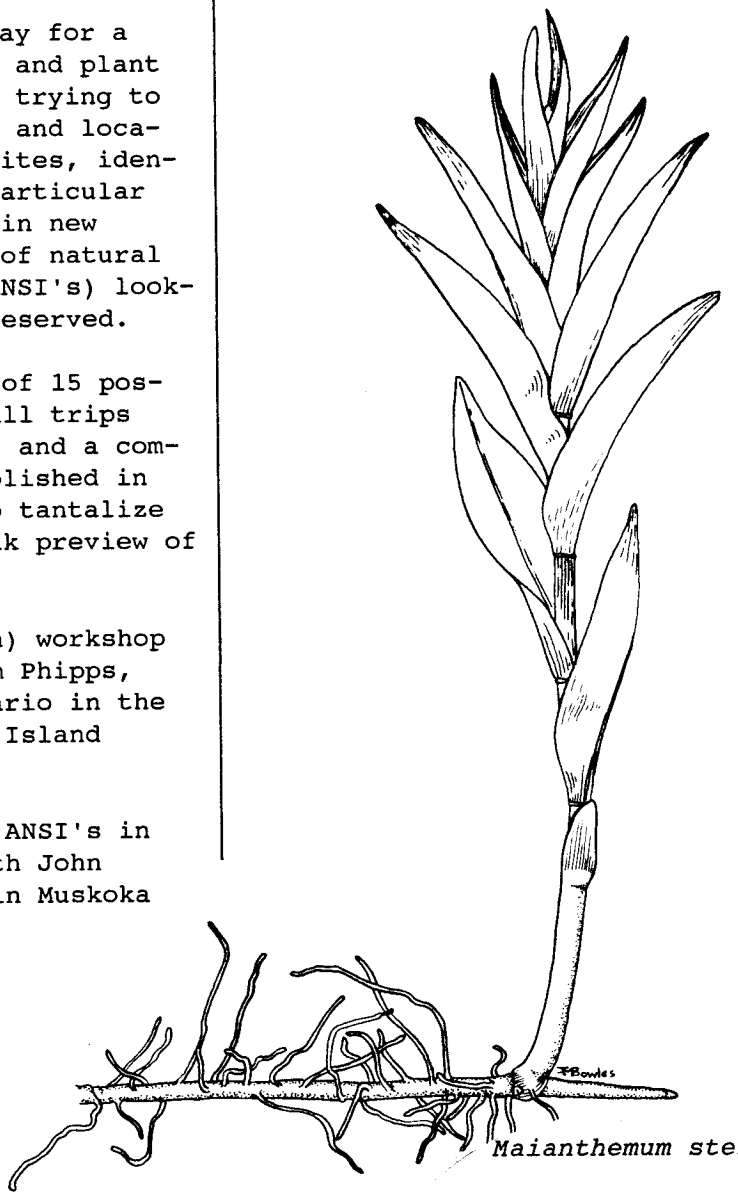
May: A **Crataegus** (hawthorn) workshop and field day with Dr. Jim Phipps, University of Western Ontario in the London area, and a Peelee Island excursion with Don Kirk

July: Exploration of some ANSI's in the Oak Ridges Moraine with John Riley, and a plant foray in Muskoka and Haliburton Counties.

August: An aquatic plants workshop at Rice Lake with Jeff Warren and Deb Metsger, and exploring for native prairies with Steve Varga.

September: Trips associated with the Annual General Meeting in Norfolk County.

If you have ideas for a field trip or know anyone, including yourself, who would be willing to lead one please contact Debra or Geogre before making any arrangements on behalf of the FBO.



Maianthemum stellatum

FLORA OF LONG POINT

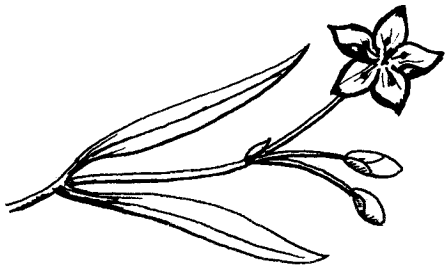
Reznicek, A.A. and P.M. Catling. 1989. Flora of Long Point, Regional Municipality of Haldimand-Norfolk, Ontario. The Michigan Botanist Vol. 28(3): 99-175.

The 35 Km. spit of Long Point is one of the most conspicuous landforms in Ontario and also one of the most inaccessible. Access to the Point is restricted by water gaps and private property such that a botanical excursion will normally be confined to the base. This very comprehensive regional Flora will be of particular interest to those who have ambition to explore the length of Long Point, but to date have been foiled by geography.

Well known to the botanical community, the two authors spent a total of 36 person days on Long Point during three different years. From studying the text, it is apparent that they also did a lot of herbarium work and research prior to publication.

Besides their annotated list of 601 species the work includes chapters on a number of topics including the history of botanical collection, rare species, excluded species, vegetation patterns and phytogeography. Photographs, maps, histograms and diagrams also provide interesting supplements to the text.

Of particular interest is a comparison between the flora of the three Lake Erie peninsulas: Point Pelee, Rondeau and Long Point. Although the number of species is about the same (Point Pelee 766, Rondeau 797, Long Point 691), the character of the flora is quite different. Long Point lacks the deciduous forests of the more southern sand spits. Perhaps this explains why some of the common deciduous understorey plants such as wild leek (*Allium triccocum*), narrow-leaved spring



Claytonia virginica

beauty (*Claytonia virginica*) and sharp-lobed hepatica (*Hepatica acutiloba*) have not been discovered to date.

What Long Point does have in great abundance are sedge meadows, grass meadows and savannahs. The vast extent of the these open areas is a major factor in the tremendous number of grass and sedge species (82 of each). Some may argue that the diligence of the authors also contributed to this impressive number. Surely there is no area in Ontario of this size that can boast anywhere near these numbers of these groups. For anyone wishing to study grasses and sedges a visit to Long Point with this Flora in hand would be unbeatable.

The text contains a brief discussion on the impacts of deer browsing and mentions that since 1980, exclosure and control plots have been established to implement further study. Unquestionably the deer overpopulation and severe browsing have had a real negative impact on Long Point.

Over the years as more Ontario county or regional Floras have been published the standards of research and presentation have attained ever higher level. This Flora is no exception to that generalization. It will be of great value for years to come to the amateur and professional field botanist alike. Rumour has it that it may already have become a collectors item.

G.B.

NIAGARA'S TREES AND SHRUBS

Sunday October 14, 1990

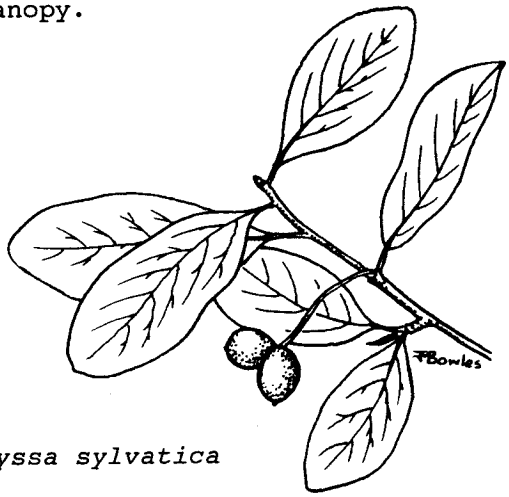
On a sunlit autumn Sunday, 20 or more FBO members visited George Meyers' Grimsby garden to experience some of the original plant diversity of Niagara. His suburban neighbourhood, originally a peach orchard, is blessed with sandy silt loam soil with a high iron content, natural soil acidity and a 215+ day growing season.

To the accompanying trill of the resident mockingbird, George, with wit, enthusiasm and passion introduced us to his plants. His emphasis in the last two decades has been focussed on four genera - *Quercus* (oak), *Magnolia* (magnolia), *Ilex* (holly), and *Rhododendron* (rhododendron), mostly grown from seeds or cuttings.

George is an oak expert (oakspert?) who has successfully grown dozens of species, varieties and hybrids of oaks on his property from acorns obtained from places such as Virginia, Pennsylvania and Essex County. He may have the world's largest specimen of bear oak (*Quercus ilicifolia*) in his backyard!

Some interesting species seen in his garden were Spanish moss (*Tillandsia usneoides*) which George winters indoors, a vigorously growing bristly greenbriar (*Smilax hispida*) vine, wild yam (*Dioscorea villosa*) termed "a pest", a little walnut (*Juglans microcarpa*) from Texas, a mockernut hickory (*Carya tomentosa*) from Virginia, a large (6 m.) American chestnut (*Castanea dentata*) interfering with the TV cable line, several specimens of Georgia oak (*Quercus georgiana*) a tree on the U.S. Endangered species list, red mulberry (*Morus rubra*) the native mulberry obtained from Pelee Island, large specimens of pokeweed (*Phytolacca americana*) whose purple berries dropped by thrushes and "mockers" decorated my windshield, paw paw (*Asimina triloba*) whose fruit I found quite delicious, redbud (*Cercis canadensis*), Kentucky coffee tree (*Gymnocladus dioicus*), beach pea (*Lathyrus japonicus*) which grew "spontaneously" prickly pears (*Opuntia humifusa, O. lindheimer, O. fragilis*), sheep laurel (*Kalmia angustifolia*), green dragon (*Arisaema dracontium*) which "grows quickly", devil's walking stick (*Aralia spinosa*), dwarf hackberry (*Celtis tenuifolia*), beauty-berry (*Callicarpa americana*), bladdernut (*Staphylea trifolia*) and a green fig (*Ficus carica*) which needs bringing in in the winter.

Our botanic cavalcade then proceeded to Grassie Tupelo Swamp which, after a roadside lunch, we explored. This is a unique Carolinian forest with high-bush blueberry (*Vaccinium corymbosum*) the dominant shrub under the black gum (*Nyssa sylvatica*) or Tupelo tree canopy.



Nyssa sylvatica

At ground level we found swamp dewberry (*Rubus hispidus*) and leather-leaved grape fern (*Botrychium multifidum*) alongside such boreal species as starflower (*Trientalis borealis*) and goldthread (*Coptis trifolia*). We also found garter snakes, spring peepers and wood frogs.

Jane Bowles, Judy Hernandez, Andre Lachance and others were busy attempting identification of some interesting slime moulds, yellow coral fungus

and deadly galerina (*Galerina autumnalis*) mushrooms.

On our return George showed us a large Osage Orange tree (*Maclura pomifera*) beside an equally exotic onion-domed Ukrainian church. Beside Beaman Falls George procured for me a branch of silverleaf summer grape (*Vitis aestivalis*) which I hope will root in my Scarborough garden.

We all left home with a renewed appreciation of past riches and diversity of the Niagara forestlands now mostly bulldozed housing, roads, orchards and vineyards.

Thankfully there are dedicated people like George Meyers who are our "role models" in the preservation of our dwindling North American flora.

Paul McGaw

Populus tremuloides in mid-February.

Alnus incana ssp. *rugosa* in early-March.

Bob Bowles

CSEB NATIONAL CONFERENCE 1991

The 1991 national conference of the Canadian Society of Environmental Biologists (CSEB) will be held at Novotel Hotel (North York City Centre), North York, Ontario on April 4 and 5, 1991. The theme of the conference is the quantification and assessment of the present status of Canadian Natural Resources. Presentations will cover a wide variety of natural resource topics including forestry, agricultural soils, fisheries, wildlife, and aquatic and terrestrial ecosystems.

A plenary session of invited speakers will be held on the first day, followed by contributed papers on the second day. Contributed poster sessions will be held over the two days. It is proposed to publish the proceedings as a special CSEB publication.

For further information about this conference please contact:

Mr. Paul Schaap,
National Conference Chairman,
MacLaren Plansearch Inc.,
Atria North - Phase II,
2235 Sheppard Avenue East,
WILLOWDALE, Ontario M2J 5A6.

Telephone: (416) 756-3866.
Fax: (416) 756-4998.

Abstracts are presently being accepted and should be submitted as soon as possible to:

Mr. Norm Yan,
Conference Program Chairman,
Environment Ontario,
Dorset Research Centre,
P.O. Box 39 Bellwood Acres Road,
Dorset, Ontario P0A 1E0.

Telephone: (705) 766-2418
Fax: (705) 766-2254.