

*Amelanchier sanguinea*

FIELD BOTANISTS OF ONTARIO

NEWSLETTER

Spring 1991

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!!! READ THIS: IT IS IMPORTANT !!!

FIELD TRIPS & WORKSHOPS

Enclosed with this newsletter is a calendar of FBO field trips and workshops for 1991. We have increased the scope and range of field trips this year and offer you an exciting program. Please note that as well as having some new trip formats we have made **IMPORTANT CHANGES IN THE FIELD TRIP REGISTRATION.**

To try and save paper we are using a single registration form covering all the trips. Please fill out the form indicating the trips you wish to attend and enclosing post dated cheques for the trip fees. **DETAILS OF FIELD TRIPS WILL BE SENT ONLY TO THOSE PEOPLE WHO REQUEST IT.**



NEWSLETTER

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NEWSLETTER ILLUSTRATIONS:

This issue of the FBO Newsletter is illustrated from the "Field Guide to the Common Forest Plants in Northwestern Ontario" by K.A. Baldwin and R.A. Sims which is reviewed on page 4. Annalee McCole drew most of the illustrations for the field guide and her drawings are reproduced here with permission of the authors.

ORCHIDS OF THE WESTERN GREAT LAKES

Case F.W., Jr. (1987) Orchids of the western Great Lakes Region. Cranbrook Institute of Science Bull. # 48. ix + 252 pp., with 44 colour plates, US\$28.95.

Available from Nature Canada Bookshop, 453 Sussex Drive, Ottawa, Ontario, K1N 5Z4 at \$39.95, discounted to \$35.95 for members of the Canadian Nature Federation.

In their hands-across-the-border classic Our Wild Orchids, Morris and Eames referred in 1929 to the "brotherhood". This informal alliance of orchidophiles is still alive and well; its international, intergenerational, intergender and productive characteristics are evident in both editions of Fred Case's book.

Many readers of the FBO Newsletter are familiar with the first edition. The second retains the general plan of the first. Introductory chapters entitled The Orchid Family, Orchid Ecology, Origins and Distribution Patterns of Great Lakes Orchids, and Growing Native Orchids are followed by a key to the genera giving a page reference to a description of each genus and the beginning of its species accounts. In both editions the keys are illustrated by line drawings, the genera are presented in "taxonomic" sequence and the species are in alphabetical sequence according to their Latin names. Each species account begins with the common and Latin names and an introductory section followed by detailed descriptions of habit, season, general distribution, habitat and, occasionally, varieties, forms or hybrids. Both editions conclude with a selected bibliography, a glossary and indexes of Latin and common names.

One should not conclude from the above that there is little difference between the two editions. During the

quarter-century between them there have been many developments in the orchid lore of the region. In revising his book, Mr. Case has successfully met the challenge arising from new discoveries and re-alignments. The book is now thicker, with 105 additional pages and 12 additional plates. The necessary changes and additions have been thoroughly integrated, seldom relegated to footnotes, and never to remote appendices. Where extensive re-writing was not required, the author has often exchanged or rearranged a few words to improve clarity of expression. Older readers with failing eyesight will appreciate that the fine-print parts of the species accounts have been reset in larger type.

The attractive photographic section is midway through the book and comprises 135 pictures, all in colour, nearly all by the author, and nearly all of excellent quality. Eight of a dozen frequent orchid habitats described in the introductory part of the book are shown here, followed by one to four pictures of each species. The species pictures are presented in the order of the species accounts, sometimes showing varieties, forms or hybrids.

This is a handsome hard-cover book, printed on shiny paper of good quality. I have used my similarly bound copy of the first edition extensively for more than twenty years and it is still in mint condition except for my copious underlinings and handwritten annotations. Copies of the new edition should prove to be equally durable.

The distribution map of each species is now placed with its species account, a welcome change from the arrangement in the first edition where maps were placed together in a separate section. The maps cover all of Wisconsin and Michigan, the adjacent parts of eastern Minnesota, northern Illinois, northern Indiana, northern Ohio, and the large part of Ontario

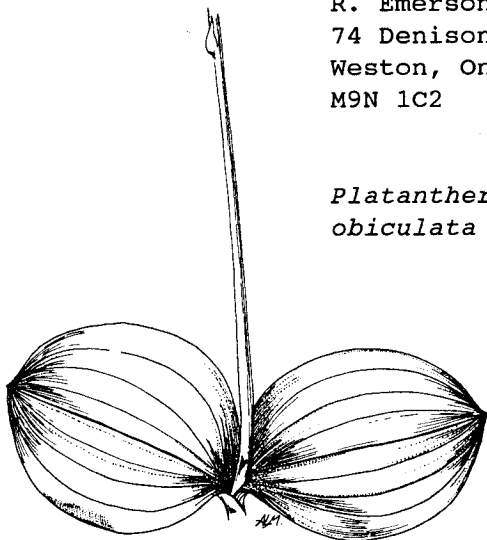
that lies west of 79°W and north to 49°N. Readers interested in the distribution of orchids in Ontario will be disappointed to find that the maps are compiled on the one dot per county system. This works fairly well where counties are small and uniformly shaped, which is generally true in the American states. It does not work well where the counties are less uniform as in southern Ontario, and it can be seriously misleading when applied to the huge irregular districts of northern Ontario. For example, it appears from Mr. Case's maps that 32 species have been collected from Algoma, and each species is represented on its map by a single dot placed at the centre of the southern third of Algoma. My records indicate that 27 of these Algoma species have been collected almost exclusively near the coasts of Lake Superior and the North Channel of Lake Huron, possibly 160 Km. from the location indicated by the dot on the map. Readers should be cautious when interpreting northern Ontario "distributions" from these maps.

I noticed very few errors, only one of which seems worth mentioning here. In the fourth last line of page 236, *auriculata* should read *australis*.

In summary, I think Mr. Case is to be congratulated on this thoroughly revised edition of his book. The "brotherhood" will bless him for it.

R. Emerson Whiting
74 Denison Road West
Weston, Ontario
M9N 1C2

*Platanthera
obiculata*



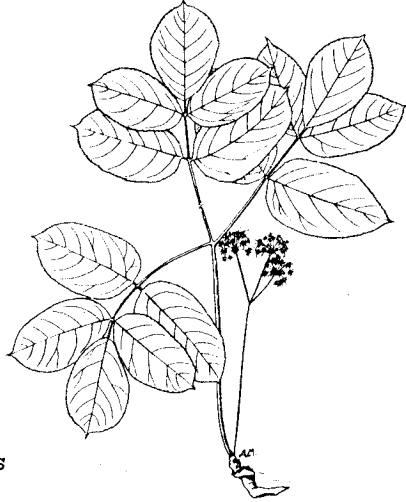
FOREST ECOSYSTEM CLASSIFICATION

Sims R.A., K.A. Baldwin, G.D. Racey, T.S. Whitfield, W.D. Towill and G. M. Wickware. (1989) Northwestern Ontario Forest Ecosystem Classification Publications. Northwestern Ontario Forest Technology Development Unit, Ontario Ministry of Natural Resources, Thunder Bay.

Forest Ecosystem Classification (FEC) is a process widely used by forest managers in the development of integrated forest management plans. In this context forest ecosystem refers to landscape/forest units as described by dominant vegetation and soil types. The FEC system was developed from data collected from mature forest stands, greater than 50 years old, in a large number of geographic locations in north central and north western Ontario. The large scope of the study provided detailed records and descriptions of the landform features, slope, aspect, soil texture and moisture conditions, and corresponding vegetation types from a range of different ecosystems.

The Northwestern Ontario Forest Ecosystem Classification is the third such publication for the province. Published jointly by the Ontario Ministry of Natural Resources and Forestry Canada, Ontario Region, it covers all of Northern Ontario from the Ontario-Manitoba border in the northwest and Manitowadge to White River in the east. This publication expands and improves upon the format of the "Field Guide to Forest Ecosystem Classification System for the Clay Belt, Site Region 3E" (Jones et al. 1983) by division into three companion volumes: Vol. 1; "Forest Ecosystem Classification for Northwestern Ontario", Vol. 2; "Common Forest Plants in Northwestern Ontario" and Vol. 3; "Northwestern Ontario Forest Ecosystem Interpretations". Volumes 1 and 2 comprise the bulk of the classification system and potential management

interpretations based on it. These volumes will be of most interest to professional botanists, researchers, and forester managers. Volume 2 has a potentially broader application outside the professional community, and so will be described in detail here. All three volumes are in ring-binder, field-size, format.



*Aralia
nudicaulis*

The "Field Guide to Common Forest Plants in Northwestern Ontario" authored by K.A. Baldwin and R.A. Sims with illustrations by A. McColm is a guide to the field identification of 152 common plants within the NWO FEC region. Plants are organized according to 6 common life forms: trees, shrubs, herbs, graminoids, bryophytes and lichens. Entries for each plant include Latin and common names; description - subdivided into general, leaves, flowers, and fruit; habitat; and notes. Each entry is accompanied by excellent line drawings which often highlight the diagnostic features of the plant. Plant entries use lay terminology making them quite accessible for non-botanists. A partially illustrated glossary assists the user with any technical terminology, while a reference section suggests other texts applicable to plant identification in the northwestern region. Plants covered in the field guide are related to the ecosystem classification as a whole by inclusion of ordination plots indicating which vegetation units they are found in.

For the naturalist and casual plant seeker, this is the most valuable and accessible volume of the three. Given the paucity of botanical information for northern Ontario, and lack of field guides or manuals for the boreal forest, this guide responds to a real need. Moreover, part of it's intent as outlined in the introduction, is to focus the forest manager's attention on the totality of the ecosystem - the forest is made up of much more than trees. This ecological approach is vital to the conservation and appreciation of the forest resource base, and it is exciting to see an application of this nature for the management of Ontario's forests.

"Field Guide to the Forest Ecosystem Classification for Northwestern Ontario" (Volume 1) authored by R.A. Sims, W.D. Towill, K.A. Baldwin and G.M. Wickware, provides an in-depth description of each of the soil and vegetation types in the NWO classification. This is supported by a number of schematic diagrams indicating relative position along different environmental gradients e.g. % sand for soil types and vegetation types found along a gradient of increasing soil moisture. Instruction on how to use the soil and vegetation keys is provided along with information on common conventions employed by them such as determining % cover or whether or not the stand can be designated as a "pure stand". These aspects of the classification facilitate it's application by the forest managers.

"Northwestern Ontario Forest Ecosystem Interpretations" by G.D. Racey, T.S. Whitfield and R.A. Sims, the third volume in this set is a guide to potential management interpretations based on the ecosystem classification units. It provides a number of site interpretations which are intended as references against which to classify specific forest sites or stands. Information on consideration of wildlife habitat and silviculture practices are also included. The volume

will be of assistance in planning for harvesting, assessing regeneration potential and evaluating competition and value to wildlife.



Carex vaginata

The forest ecosystem classification system has always been intended as a way of increasing communication between forest managers and other researchers and professionals working in the field. The North Western Ontario FEC Publications go further than any of the previous publications in making the information accessible to the layman and to the non-forester. I think that they will provide a valuable resource for anyone working in, or visiting the northwest. The publication is available from:

Northwestern Ontario Forest Technology Development Unit,
Ontario Ministry of Natural Resources,
R.R. #1, 25th Side Road,
THUNDER BAY, Ontario
P7C 4T9.

Deborah Metsger

REVIEW OF THE HALIBURTON FLORA

Skelton, Eleanor G. and Emerson W. (1991) Haliburton Flora: an Annotated List of the Vascular Plants of the County of Haliburton, Ontario. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto, Ontario. 142 pp. \$12.95.

Eleanor and Emerson Skelton have produced an attractive and authoritative book, which is a welcome addition to the growing number of regional publications on the Ontario flora. Haliburton County lies in a part of the province which has received little botanical attention, making a flora particularly useful. Although a number of county floras exist or are in preparation for the southwestern part of the province (see Varga and Allen 1990), few published lists are available for central Ontario.

The Skelton's book contains features which will make it appeal to both the casual naturalist and the seasoned botanist. The book begins with a foreword by Sheila McKay-Kuja, followed by a brief introduction, then a discussion of 'Features of Haliburton Significant to the Flora'. This section briefly covers topography, drainage, roads, rocks and glacial deposits, soils, climate, forests, wetlands, open-water and other habitats. Three useful maps accompany the introductory sections (location of Haliburton in southern Ontario, main highways and larger lakes, and postglacial topography). A section on methods covers collecting and collections, territory covered, identification and nomenclature, voucher specimens, and an explanation of abundance ratings. Short sections on acronyms, abbreviations, and symbols used, and a list of maps used in establishing locations, complete the introductory portion of the book. The main body of the book (95 of its 142 pages) is an annotated list of plants, presented in taxonomic order by family, and alphabetically by scientific name within each family.

Following the annotated list are acknowledgements, literature cited, additional publications consulted in identification (a useful list, and a feature not usually seen in books of this nature), and an index to common names followed by an index to scientific names.

Each entry in the list contains scientific name, common name, sometimes a common synonym or two, an indication of abundance, a succinct (and very valuable) statement of habitat, a symbol (+) for introduced species, and a list of townships where the species was found. The township list also indicates which township records are based on specimens and where these are deposited. The abundance ratings are divided into four categories: rare - found in one or two locations (however *Polygonum careyi* is listed as rare, yet three townships are listed), uncommon - found in three to six locations, fairly common - found in seven or more locations, and common - numerous and widely distributed. Plants considered rare in Ontario by Argus et al. (1982-1987) are so indicated in the text (although *Carex folliculata* was missed).

The Skelton's flora is based largely on the 2,100+ specimens they collected in Haliburton between 1976 and 1984. All their collections are housed at TRT (University of Toronto herbarium, located in the Botany Department of the ROM), making it easy for future researchers to examine them. Eleanor and Emerson received assistance in specimen identification from a number of professional botanists, who are named in the acknowledgements. In the case of difficult taxa or significant range extensions, it would have been useful to indicate if a specialist had made or confirmed an identification. For example, the boreal willow, *Salix planifolia*, is listed from one site, but Soper and Heimburger (1982) map no locations south of Lake Nipissing, and Voss (1985) indicates that in Michigan it is known only from Isle Royale in

Lake Superior. Although Dr. George Argus is acknowledged as having assisted with willow identifications, it is not indicated whether or not he saw the *S. planifolia* collection.

The 'Haliburton Flora' includes 899 species, and an additional 23 named taxa (subspecies, varieties, forms, and hybrids). From my biased southwestern Ontario perspective, I was surprised to see that such common and widespread weeds of my area, such as *Alliaria petiolata* (garlic mustard), *Puccinellia distans* (reflexed salt-marsh grass), *Sporobolus cryptandrus* (sand dropseed), *S. neglectus* (overlooked dropseed), and *S. vaginiflorus* (ensheathed dropseed) are not recorded for Haliburton (though I expect some of these might turn up with further fieldwork). Even the widespread wetland weed, purple loosestrife (*Lythrum salicaria*), is thankfully rare in Haliburton (at least at present!). I suspect that the higher proportion of natural habitat in Haliburton (vs. southwestern Ontario) may mean that weeds are a less important component of the flora. It would be interesting to know the percentage of non-native taxa in the Haliburton flora, a figure not given in the introduction. Although I am sure that the Skelton's have produced a reasonably complete list of Haliburton's vascular plants, there will always be additions to a list for such a large area (452,282 hectares), particularly weeds. On checking my own collection records for a couple of brief trips to Haliburton, I was able to add *Alopecurus pratensis* (Glamorgan Township, specimen at DAO) and *Carex haydenii* (Glamorgan Township, specimen at MICH) to the Haliburton list. Hopefully a flora like this will encourage others to botanize Haliburton and adjacent counties.

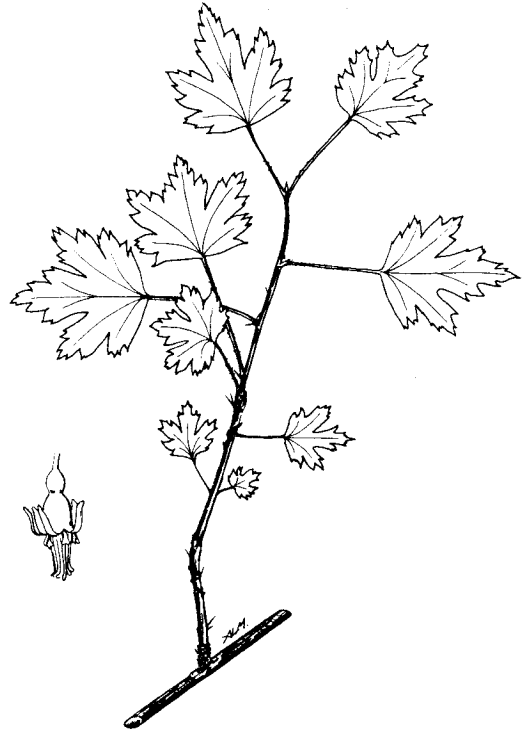
The Skelton's book is remarkably free of typographical errors. The closest I could find to a spelling mistake was the use of Melastomaceae rather than Melastomataceae. I suspect this mis-

take arose through reference to Britton and Brown (Gleason 1952), where this family is also spelled incorrectly; Gleason and Cronquist (1963) corrected the error in their 'Manual of Vascular Plants'. This book is obviously the result of a labour of love by its authors, and is an excellent example of what can be accomplished by competent and dedicated amateur field botanists. I strongly recommend the 'Haliburton Flora' to all Ontario field botanists and particularly to anyone attempting to compile a regional list. It is a great shame that the primary author, Eleanor Skelton, did not live long enough to see the finished product in print (she died in October 1989). However the 'Haliburton Flora' will be a lasting tribute to a dedicated couple and their ambitious retirement project.

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- Voss, E.G.** 1985. Michigan Flora. Part II. Cranbrook Institute of Science and University of Michigan Herbarium. 724 pp.

Michael J. Oldham
O.M.N.R., Aylmer District



Ribes hirtellum



Ribes oxycanthoides

RESPONSES TO THE CALL FOR HOTSPOTS

Some members have responded to the appeal in the last FBO Newsletter for information on botanical "hotspots".

The gist of some responses was that members felt that they did not know of any sites better than those they had visited on FBO field trips or seen described in FBO Newsletter articles. These sites are already assumed to be on the hotspot list.

A second theme was that people might be reluctant to advertise hotspots that contain rare plants, have fragile habitats or that might become a target for specimen collectors or "wild plant" gardeners. A letter from Joan Crowe expresses these concerns:

"Might I suggest that the lack of response to your call for members to report botanical "hotspots" is that people who know of such places would rather not have others trampling all over them and either collecting herbarium specimens or transplanting whole plants to their gardens?"

"There is a serious lack of awareness in Ontario about the dangers of disturbing and damaging the environment in pursuing an interest in Botany and, especially, horticulture."

"It is considered a major sin in Britain now to pick a bluebell. It has been realised how fragile plant communities are and how devastating population pressure is. Much more education is needed in Ontario in this respect."

Yours sincerely,
Joan M. Crowe"

In southern Ontario a list of the most significant botanical sites for regional municipalities and counties in the Carolinian Zone has recently been published by Steve Varga and Gary Allen (1990). In summaries of the

status of 15 county floras and checklists they asked each of the compilers to list the "top ten (or more)" sites for the area. If similar lists could be made for each of the remaining counties, municipalities and districts in Ontario "project hotspot" would be well on its way to completion.

For general interest and personal amusement we suggest the following "top ten" list of regions for the whole province:

- 1) Bruce Peninsula
- 2) Walpole Island
- 3) Pelee Island
- 4) Backus Woods and St. Williams
- 5) Long Point
- 6) Pinery and Grand Bend
- 7) Lake Superior's north shore
- 8) Rondeau
- 9) Alfred Bog
- 10) Rainy River & Lake of the Woods

Within any and each of these you may be able to name your own botanical epicentre.

Reference cited:

Varga, S. & G.M. Allen. 1990. County/Regional Municipality Vascular Plant Floras for the Carolinian Zone of Canada. 129-153 *In* Conserving Carolinian Canada, G.M. Allen, P.F.J. Eagles and S.D. Price, eds. University of Waterloo Press, Waterloo. 346 pp.



G.B.

Monotropa uniflora

CHECKLISTS AND RARE PLANT MAPPING IN ELGIN, MIDDLESEX & OXFORD COUNTIES

Oldham, M.J., W.G. Stewart, D. McLeod and J.M. Bowles (1991) Preliminary Annotated Checklist of the Vascular Plants of Elgin, Middlesex and Oxford Counties, Ontario. Ecology Program, Ontario Ministry of Natural Resources, Aylmer District.

This preliminary checklist of the flora of the three counties in Aylmer District of the Ministry of Natural Resources has just been released as a direct result of rare species mapping projects in the Elgin, Middlesex and Oxford counties.

About 2000 rare plant populations in the three counties have been plotted on 1:50,000 maps and some on 1:10,000 maps. Each population also has an information sheet and an entry in a database. Information on location will not be released to the public, but will be used to for planning, wetland evaluations, rare plant monitoring, Area of Natural and Scientific Interest (ANSI) studies and other purposes under the "Protection Mandate" of the MNR.

The checklist is still in its preliminary form and it is intended that it should be revised and updated. It contains a list of vascular plant species known from each county and an indication of status including the number of known sites (1-5) for rare species in each county.

Enquiries about the checklist or information on the occurrences of rare species in Elgin, Middlesex and Oxford counties should be directed to:

Mike Oldham
District Ecologist
Ministry of Natural Resources
Aylmer District
353 Talbot St. W.
AYLMER, N5H 2S8

REPORT ON THE FERN WORKSHOP

The workshop format proved successful once again as 32 enthusiastic botanists ranging in expertise from the amateur to the professional gathered in Guelph on February 20th. There was quite a spirit of camaraderie as many of the participants were acquainted from field trips and the last workshop. It would have been interesting to have had each person introduce themselves with a couple of sentences.

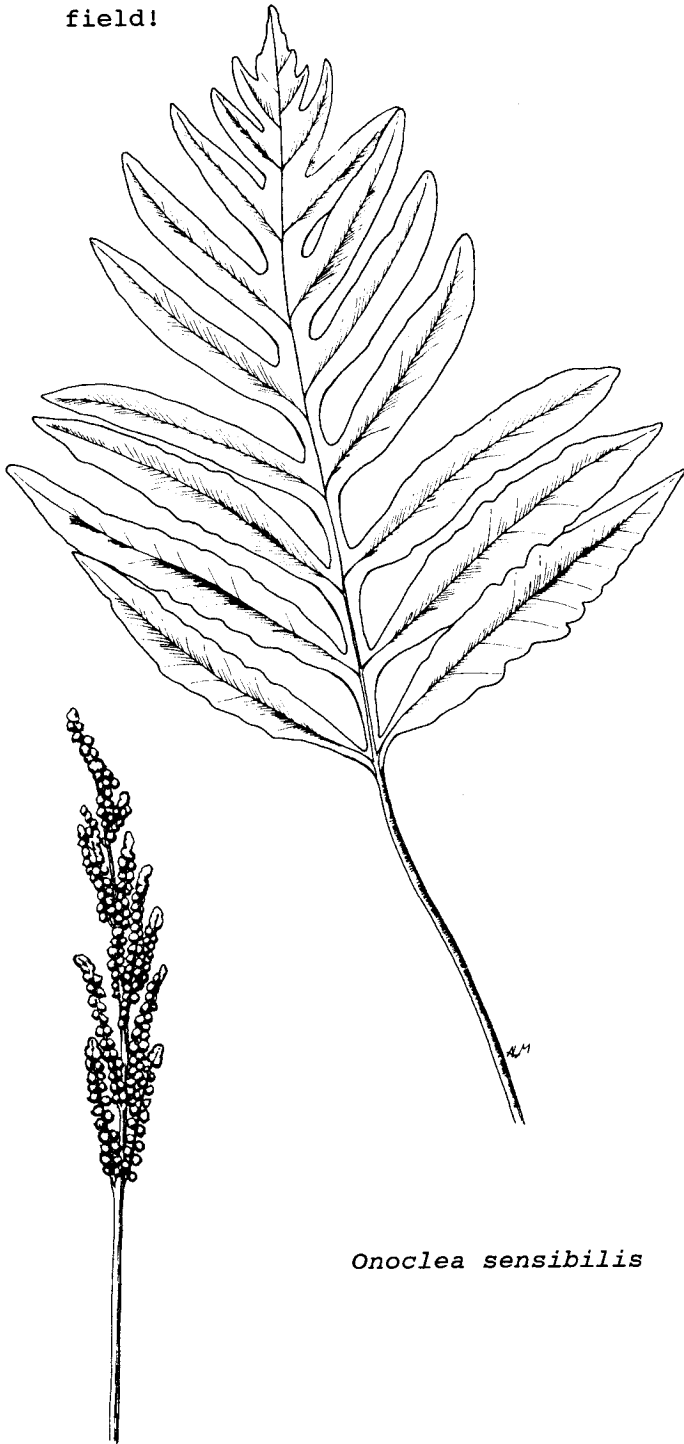
The event was conducted by Dr. Donald Britton from the University of Guelph and co-author with Dr. W.J. Cody of "Ferns and fern allies of Canada" (1989), Publication #1829E, Research Branch, Agriculture Canada. Also on hand was Carol Anne Lecroix, Assistant Curator of the Herbarium.

Dr. Britton opened with an introduction to the Ontario ferns, discussing them with gentle good humour as you would an old friend. He may live to regret offering to identify any gifts of specimens that defy our identification! There are about 135 species (and I use the word loosely depending on how you feel about hybrids!) in Ontario. We have a higher proportion of fern allies in Ontario than is normal for the rest of the world, and a greater diversity of ferns than other provinces. Ferns may grow profusely in B.C., but they are all of a small number of species! Even New Zealand with their tree ferns can't compare with Ontario. At Mono Mills alone, 50 different kinds of ferns and allies can be found.

Several field guides were recommended. If you have a copy of Wherry's "The Fern Guide" hang on to it. It remains one of Dr. Britton's favourites and is now out of print. Of course you still need either Britton's "Ferns of Canada" or the "Checklist of Ontario Pteridophytes" from The Plant Press Vol. 2(4) and Vol. 3(1) to sort out the correct names. Another useful

book is Cody's "Ferns of the Ottawa District". The problem of drawings

The problem of drawings that lack "jizz" was discussed. (Has Mr. Webster heard about jizz, that essence of life that makes a plant look like itself in the field, but like a confusing array of other plants when squashed and dried and/or drawn?). There is no substitute for getting out in the field!



Onoclea sensibilis

After a quick break for coffee and mini-muffins we were off the lab for a session in hands-on identification of the fern allies. The lab was cramped, but well ventilated. The experience of using a binocular microscope to examine miniature structures was unique for many. The chance to grill the experts on fine points of identification was exquisite joy (... do you see any dimorphic leaves? ... I don't see any! ... where? ... oh THAT!). Everywhere bits of fern and fern allies were falling out of Peterson guides as their owners at last had a chance to confirm names. We continued after lunch with the ferns, sorting out the new names and reaffirming the old. Unfortunately, the specimens we were using did not represent the more difficult taxa. Some of us would have appreciated a more challenging set of taxa to examine in the presence of the expert. A halt was finally called, and the group reluctantly left the lab behind.

The programme ended with a slide show of interesting ferns from Newfoundland to B.C. Again you couldn't help but feel the affection Dr. Britton feels towards his "hobby".

In the future, it may be necessary to hold "beginner" vs. "advanced" workshops, or at least have an advanced component. There seems to be little point in having the Canadian expert at your disposal to distinguish between *Dryopteris* and *Athyrium*. Dr. Britton's talents would have been better directed towards resolving some of the more intricate species complexes. A discussion regarding the reasons for the recent name changes would be appropriate. How can you account for the species diversity in Ontario? Why do we have so many fern allies? Is it a reflection of physiography or evolution? How common are hybrids? Of what significance are they to the flora of Ontario and the evolution of the Pteridophyta.

Dale Hoy

**MUSKOKA NATURAL AREAS INVENTORY
UNDERWAY: BOTANISTS WANTED**

Cottage country is the setting for one of the latest efforts to document significant natural features. The Muskoka Heritage Areas Program, co-sponsored by the District Municipality of Muskoka and the Muskoka Heritage Foundation (a private group), carried out their first season of field work in 1990. Two more years are planned to survey natural and cultural sites throughout the District.

The results of 1990 surveys include 15,000 new records of flora and fauna (stored on dBase IV), and 30 species of vascular plants, newly found or confirmed, to be added to Em Whiting's 1983 provisional list of Muskoka plants. The program staff, which included Don Sutherland and Bob Bowles, also developed a working list of rare species for Muskoka, including those plants thought to be regionally rare or uncommon. Eighteen natural heritage areas have been recommended for protection, with documentation similar to the standard set by the Haldimand-Norfolk Natural Areas Inventory.

Detailed policies to apply to these areas are still being worked out, but the District Municipality has been a key player since the beginning of the survey and appears willing to move quickly on protective policies through the Official Plan. As well, the Muskoka Heritage Foundation is

planning to embark on an ambitious stewardship program to encourage protection by landowners. One of the unique features of the Muskoka program is the emphasis on contact with landowners to ensure they understand and support its objectives.

In biological terms, Muskoka is a region of strong transitions. It sits at the edge of the Shield so it is at the southern limit for many boreal species and at the northern edge of the range of species more typical of southern Ontario. As well, Muskoka's 4600 square kilometres encompass coastal species along the Georgian Bay shore, and species of the cooler Algonquin dome along its eastern boundary. Atlantic coastal plain species are a Muskoka speciality, occurring in many lakes. The 1990 survey turned up several significant new sites for assemblages of these disjunct plants.

Although much of Muskoka remains forested, only 1.5% of the landscape is now protected in parks or ANSIs. The aim of the Heritage Areas Program is to increase that to at least 5%. Field work continues in 1991.

The Program is looking for qualified field botanists, and for students with botanical skills. If you are interested, contact:

**Muskoka Heritage Areas Program
Ron Reid, Program Coordinator
Box 330,
WASHAGO, Ontario
LOK 2B0**

FIELD BOTANISTS OF ONTARIO

Membership in the Field Botanists of Ontario includes subscription to the FBO Newsletter and the privilege of attending field trips and workshops. Annual Membership Fees are \$12.00 single and \$15.00 family.

Send applications for membership to:

**Stephen Gray, Membership Committee Chairperson
615 Perth Street, PEMBROKE, Ontario K8A 6B9**