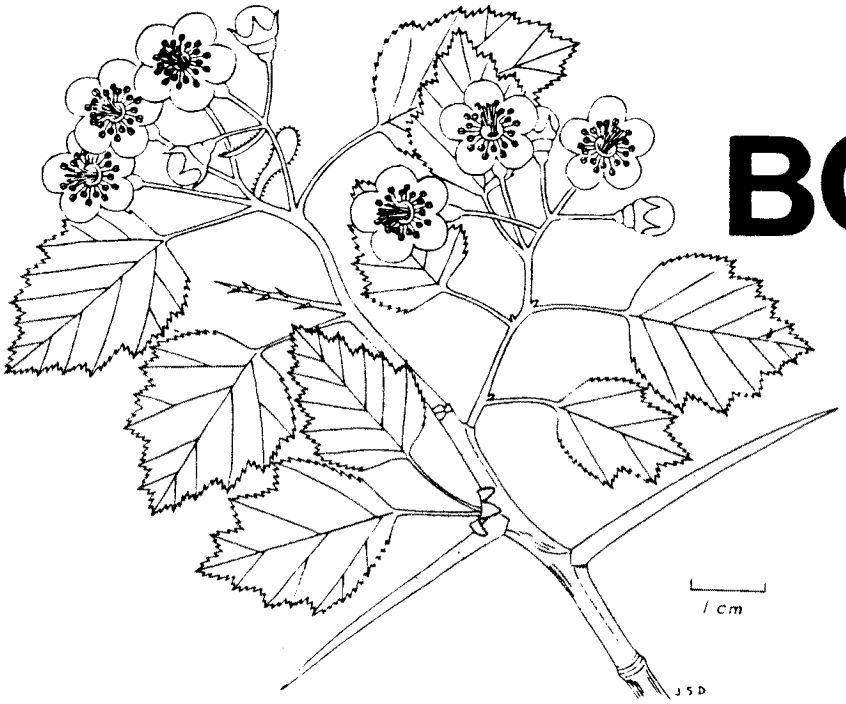


Crataegus pruinosa

FIELD BOTANISTS OF ONTARIO

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NEWSLETTER

Summer 1991

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FIELD TRIPS & WORKSHOPS

It is not too late to register for the FBO Field Trips and Workshops remaining in 1991. An updated registration form for the remaining trips is enclosed with this newsletter.

ANNUAL GENERAL MEETING 1991

The Field Botanists of Ontario AGM for 1991 is to be held in Simcoe on the weekend of September 13 to 15. The reason for choosing the time and place was to attract as large an attendance as possible. It is within a short drive from Toronto, and is after school has started so everyone should be back from their summer travels. An outline of the programme, and registration forms are enclosed with this newsletter.

!! MARK YOUR CALENDER AND PLAN TO ATTEND !!

FIELD BOTANISTS of ONTARIO

NEWSLETTER
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NEWSLETTER ILLUSTRATIONS:

The cover drawing of *Crataegus pruinosa* was done by FBO member Jane Davies. It was drawn for Phipps, J.B. and M. Muniyamma (1980) A taxonomic revision of *Crataegus* (Rosaceae) in Ontario. Canadian Journal of Botany 58:1621-1699. It was also used on the handouts for the *Crataegus* workshop and is reproduced by permission from J.B. Phipps.

The illustration of goldenseal (*Hydrastis canadensis*) was drawn by Zile Zichmanis and published in "Conserving Carolinian Canada" which is reviewed in this newsletter. It is reproduced by permission of the artist.

FROM THE PRESIDENT

Another lush summer is upon us. Anyone who attempted to seek out vernals this spring found themselves racing against time. The abundant moisture during April and May combined with unusually hot humid days caused an explosion in vegetation and accelerated flowering of everything. By late May the landscape and woodlands had the appearance of mid summer.

Amid this verdant wonderland a more ominous threat has gathered momentum and is unleashing havoc in our upland and riparian forests. Garlic mustard (*Alliaria petiolata*) is in the process of conquering and displacing our native understory herbaceous flora. In the last few years many undisturbed and protected forest communities have succumbed to this pernicious weed. Point Pelee, Niagara escarpment, forests in Niagara Region and the Grand River Forest are but a few of our finer natural areas that are on the verge of being conquered. Right now attention and some preliminary research is being focused on purple loosestrife (*Lythrum salicaria*). Research on the spread of garlic mustard is needed as well as the setting up of test plots to measure the impact it has on our native flora. In the meantime be on the lookout for the spread of this plant. Check your favourite woods and observe changes in the understory. We would like to hear back from our members on their findings.

With respect to FBO matters we are attempting to recapture former members. Using Stephen Gray's membership data records a letter was sent out to approximately 120 former members whose membership had elapsed for more that two years. However despite the mail campaign, only around 20 renewals have come in to date. We know these botanists are out there, but we also know that for many time is at a premium. Considering that we have kept the trip and annual registration fees down and that in most cases our outings are only a day long, I hope that we can entice more former members to rejoin. A similar campaign will be carried out in the fall or early winter to contact members who have not renewed in the past 18 months.

Deborah Metsger and George Bryant have devised a new field trip registration system for this year. The purpose is to reduce the waste in paper by sending out separate notices in every newsletter and also to give members more lead time to decide which trips to attend. Essentially anyone can plan an entire field season to suit their schedule. To date approximately 150 people have registered for our regular trip outings (not including the Annual Meeting). A second registration form is enclosed in this issue of the newsletter in case you decide to go on our later summer trips.

Be sure and plan for the Annual General Meeting this September. Details are provided in the special insert of this newsletter. We are being ambitious and taking a group out to the tip of Long Point to see the wet meadows and dunes. This is a rare privilege and the FBO may be the first botanical group to do it. We are, of course, counting on the weather and lake conditions. We have scheduled the trip for Saturday, however if conditions are not favourable we may postpone it to Sunday.

Donald Kirk

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* THE DEADLINE FOR SUBMISSION TO THE *
* **FALL 1991** ISSUE OF THE *
* *FBO NEWSLETTER* *
* IS *
* **SEPTEMBER 20, 1991** *
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CONSERVING CAROLINIAN CANADA

Gary M. Allen, Paul F.J. Eagles and Steven D. Price (eds.) 1991 Conserving Carolinian Canada. University of Waterloo Press. 346 pp. $28.00

A symposium was held in January 1988, addressing the eastern deciduous forest in Ontario, known as the Carolinian Forest Zone. This long-awaited 346-page volume contains proceedings of that workshop plus additional relevant articles. It is authored by over 40 biologists from a broad spectrum of backgrounds, added to by as many other contributors including reviewers and artists, and supported by several sponsors and institutions. Nevertheless, it is a well integrated volume of natural history research projects in Carolinian Canada. The value of the work is evident in the funding involved: for example WWF alone provided over $159,000. It will be of particular interest as a reference work for biologists interested in rare plant data and contacts.

One of the greatest strengths of this book is its scope. The scale of study ranges from broad investigations of natural areas down to several reports on individual species. Each chapter is written as a scientific report, some in more depth than others. In common to all reports are recommendations for protection and conservation. Lists such as those of rare plants of Sassafras Woods in Halton Regional Municipality, butterflies and birds at risk, plants used as nectar sources for the endangered Karna Blue butterfly (*Lycaeides melissa samuelis*) and an excellent annotated list of the provincially rare plants of the Carolinian Zone (15 pages long!) fill this book. Landowners are told about the Natural Heritage Stewardship Program and the Conservation Land Tax Rebate Program, for (financially timely?) promotion of good land protection.

M. Cadman contributes an informative article on the Ontario Rare Breeding Bird Program. I equally appreciated M. Oldham's report on the Ontario Herpetofaunal Study which contains sample grid maps of the significant species. These reports are accompanied by news on reconstruction of banding stations at Long Point, habitat use by insectivorous bats and information on flying squirrels. The number of County and Regional Floras being compiled in southern Ontario is astounding.

These individual studies are put in context in the initial chapter of the book, which draws together the theory behind the need for these biological inventories. Extensive references include the literature and acknowledgments following each chapter, and the information on additional projects supported by the WWF in the introduction.

The few shortcomings that exist do not detract from the value of the book. Criteria listed for consideration of sites as significant natural areas differ somewhat between the first two reports. Also, because this book was three years in the making, some parts are already out of date. For example, the COSEWIC designation "rare" is used instead of the currently used designation "vulnerable". In addition, a Natural Heritage Data Centre (or Canadian National Conservation Data Centre) is introduced in the final section of the book. A province by province summary of the status of the CNCDC's efforts is given, but readers will likely be looking forward to updated information of this Centre plus a confirmation of its ultimate name.

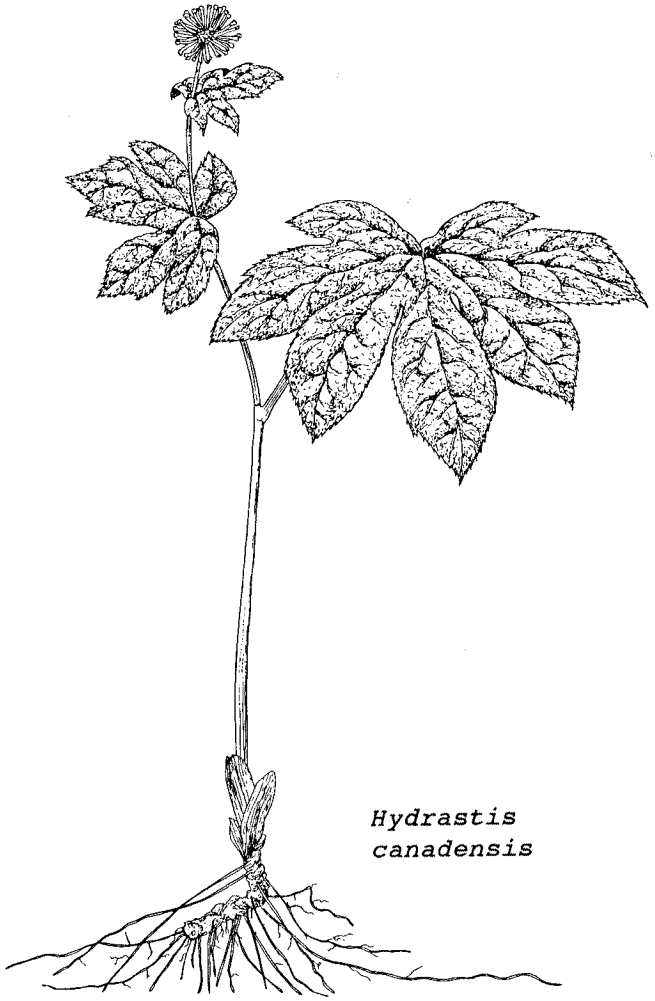
The volume is amply illustrated with maps, charts and pen and ink drawings of species at risk. The species illustrated are accompanied by short informative captions.

The final chapter in the book pro-

vides a summary of the reports presented and the implications resulting from the Carolinian Canada Program. This summary is followed by a table of current site protection information as of the time of publishing.

This book will be of interest to naturalists concerned with an overall view of natural history, threats currently imposed on natural ecosystems and the political implications resulting from these threats in southern Ontario.

Laurie Consaul



Hydrastis canadensis

GARLIC MUSTARD MANAGEMENT

A paper by Nuzzo, Kennay and Fell (1991, Natural Areas Journal 11(2): 120) suggests ways to manage garlic mustard (*Alliaria petiolata*) in natural areas. If you have a garlic mustard invasion these tips may help.

Garlic mustard is biennial. Seeds geminate in spring. The plants overwinter as rosettes and bloom the following year. Effective control involves removing plants before they set seed.

Burning in fall or early spring over several years has proved useful in some sites if the burn is intense enough to destroy the plants. Unburned plants must be pulled by hand.

Cutting the stems also works. Second year stems removed at ground level will usually die, and seed production is reduced by about 98% by cutting stems 10 cm. above the ground. Where garlic mustard grows in pure stands it can be scythed, but the cut material must be removed because even severed stems will sometimes set viable seeds.

Hand pulling young plants in light infestations is also effective if the root is removed, but it disturbs the soil and may bring dormant garlic mustard seeds to the surface.

Herbicides are a last resort, and must only be applied under strictly controlled conditions. Spot applications can be made in late fall or early spring when the garlic mustard is still green, but the danger to native species is minimized because most are dormant.

Once garlic mustard is controlled the new plants must be monitored and removed by hand before they can set seed.

J.B.

REPORT ON THE HAWTHORN WORKSHOP

The *Crataegus* field identification workshop, London area, was conducted by Dr. James Phipps of the University of Western Ontario, Plant Sciences Department on May 25 and 26, 1991. Dr. Phipps is senior author of Phipps and Muniyama (1980, Canadian Journal of Botany 58: 1621-1699) the basic treatment of Ontario *Crataegus*.

Ten serious field botanists met at 9.00 a.m. in the UWO Plant Sciences laboratory for an hour and a half orientation lecture. Dr. Phipps described the flower and fruit of hawthorns in some detail. He noted that up until the end of the 19th century about 100 species had been described for North America, but by 1920 over 1000 species had been described. Now only about 150 species worldwide are recognized, most of which are in the North Temperate Zone.

The spectacular changes in the number of species has been interpreted as an indication that hawthorn taxonomy is very difficult, and the problem has been handled by arbitrary lumping. Dr. Phipps says that the confusion is largely due to the ability of some hawthorns to reproduce asexually. One third of Ontario *Crataegus* are obligate apomicts (they always reproduce asexually), one are third facultative apomicts (they sometime reproduce asexually) and about one third are fully sexual and easy to identify.

Characters to look for include the habit of the plant, colour of the twigs, shape, size and colour of thorns, spur shoot leaf size and shape, stamen number, colour of the fresh anthers, size, shape and colour of the haw, and flowering time.

Handouts included a key to the Series of Ontario *Crataegus*, descriptions of the series, a key to the species and distribution maps and line drawings from Phipps and Muniyama (1980), but improved with some name changes. Professor Phipps advised us to first identify specimens as to Series and to get to know the common species. He said that any graduate student or field botanist can learn to do this!

Field trips on Saturday and Sunday morning took us on a 100 Km. tour of five sites from Glencoe to Granton and were scheduled with the accuracy worthy of a successful military operation. Even the weather seemed to have been programmed; it rained while we were not actually in the field. Saturday's activities wound up with identification of specimens in the UWO herbarium between 8.00 and 10.30 p.m.

Among the species that Dr. Phipps identified for us in the field, that are widespread in southwestern Ontario were *C. monogyna* (a European introduction) *C. crus-galli* (an impressive stand of large trees along Fish Creek just south of Highway 7 is at about their northern limit), *C. punctata*, *C. macracantha*, *C. succulenta*, *C. calpodendron*, *C. chrysocarpa* var *aboriginum*, *C. dodgei*, *C. macrosperma*, *C. pedicillata*, *C. pringlei*, *C. holmesiana* and *C. mollis*.

In addition we found the following species which have a more local distribution: *C. suborbiculata*, *C. lumaria*, *C. dodgei* var *flavida*, *C. rugosa*, and *C. perjucunda* (endemic to Middlesex County and perhaps only a hundred or so years old). *C. fulleriana* is very rare and was identified in the evening among the specimens brought back to work on.

Those who gratefully took home a bundle of identified specimens found that they had some work on their hands! It was a privilege to take part in this important workshop.

Dorothy Tiedje

HAWTHORN WONDERLAND

The hawthorn workshop attracted many favourable reviews from those who participated. Christine Kampny has provided her own comments on this remarkable event and has illustrated them with a cartoon. Those who attended may be able to identify themselves in the group!

"The hawthorn (*Crataegus*) field identification workshop ... provided practice in both field identification and keying, but your chances of a correct identification are still best if your last name is "Phipps" and you carry a gemscoop as a multipurpose field tool.

"Knowledge about identifying the sections and species of *Crataegus* is rather like the Cheshire Cat: it appears, then disappears until only the grin is left, only to reappear at unexpected times. Thanks to Dr. Phipps, our leader through hawthorn wonderland, the participants of the workshop now have an outline of the creature and can recognize it by its stripes."

CHILD BOTANISTS AT THE AGM

At a recent meeting of the Executive the issue was raised of children attending the Annual General Meeting. Very few people do bring children to FBO functions and it would be interesting to know if problems with baby sitting are keeping people away.

We want to find out how many people would like to bring their children to the Annual Meeting and either share in the cost of child care and/or have at least one field program for children.

If you are interested please contact Deborah Metsger (461)-267-4803 or make a note on your AGM Registration indicating the number and age(s) of your children.



NEW THREATENED & ENDANGERED SPECIES

In April the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) added 20 new taxa (species, subspecies or populations) to the national list of extirpated, endangered, threatened and vulnerable wildlife. Four of the species were plants. Golden seal (*Hydrastis canadensis*) is now listed as threatened, Illinois tick trefoil (*Desmodium illinoense*) is extirpated from Canada and thread-leaved sundew (*Drosera filiformis*) and white prairie gentian (*Gentiana alba*) are officially listed as endangered.

The numbers of Canadian plants on the COSEWIC list now includes two extirpated, nineteen endangered, twenty-two threatened and twenty-one vulnerable species.

Decisions on the official status of species whose continued existence in Canada is uncertain are made mainly on the recommendation of COSEWIC Status Reports. These are papers concerning the reproductive biology, ecology, population biology, distribution, present status, threats, management considerations and so on of the candidate species.

There are fifteen species of plants with populations in Ontario for which reports are in preparation. World Wildlife Fund Canada is sponsoring reports on white wood aster (*Aster divaricatus*), American columbo (*Frasera caroliniensis*), trumpet creeper (*Campsis radicans*), wood poppy (*Stylophorum diphyllum*), goat's rue (*Tephrosia virginiana*), deerberry (*Vaccinium stamineum*), Engelman's quilwort (*Isoetes engelmanii*), catbrier (*Smilax rotundifolia*), Provancher's fleabane (*Erigeron philadelphicus* ssp. *provancheri*) and branched Bartonia (*Bartonia paniculata* ssp. *paniculata*). The Ministry of Natural Resources is sponsoring reports on oval ladies'-tresses (*Spiranthes ovalis* var *erostellata*) and southern slender ladies'-tresses (*S. lacera* var. *gracilis*). The Canadian Museum of Nature is producing a report on blunt-lobed woodsia (*Woodsia obtusa*). A report on four-leaved milkweed (*Asclepias quadrifolia*) is being privately sponsored.

People who are interested in finding out more about being an author on Status Reports for plants they consider good candidates for COSEWIC status should contact:

Erich Haber
Canadian Museum of Nature
Botany Division
P.O. Box 3443, Station D
OTTAWA, K1P 6P4

Telephone: (613)-990-6452

J.B.

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