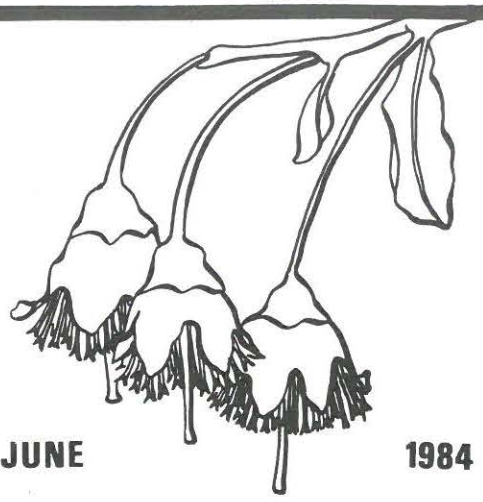
THE PLANT PRESS

FIELD BOTANISTS OF ONTARIO NEWSLETTER

Vol. 2 No. 2 **JUNE** **1984**



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Front page illustration: *Vaccinium stamineum* (deerberry) flowers (X3) by Marcel Jomphe

"FIELD BOTANISTS OF ONTARIO" - NOT YET!

by Rick Bobbette, 148 Kempenfeldt Dr., Barrie, Ontario L4M 1C2 and
Fran Westman, R.R. 1, Midland, Ontario L4R 4K3

We need more response to our proposed club, so if you thought you missed the "deadline", or that your opinions were not needed, dig out the constitution flyer from the March issue and send in your comments!

What the response to the "Field Botanists of Ontario" constitution and questionnaire has lacked in quantity has been made up for in quality. However, as one respondent pointed out, the constitution presented (which was actually adapted from another Ontario club) requires 25-32 people just to fill out the executive. To date we have had a response from only 23 people, with about one third willing to get "embroiled in the business".

The light response to the idea of a club, of which THE PLANT PRESS would be a committee, suggests that the club may have to be a committee of THE PLANT PRESS! We will summarize the constitution responses we have - and hopefully will get - and produce a working paper for informal discussion at the Bruce Peninsula Botany Weekend (8-10 June 1984 at Red Bay Lodge).

Over this year we shall have to formalize and incorporate THE PLANT PRESS, if only to be more fair to those involved in its production. If we get enough response for an organization and enough individuals willing to get involved, we can develop a club that can have THE PLANT PRESS as one of its functions. If not, then we will have to design an organization around THE PLANT PRESS. This organization could then be gradually expanded into other province-wide activities. The summary of responses received to date is as follows:

Name: 94% agree with the name "Field Botanists of Ontario"

Objectives: 90% agree on these; there were questions about conservation issues and what "technical quality" means

Potential activities of interest (listed in decreasing order of priority):

- Field trips - 2.2
- Work shops - 2.5
- Conservation - 2.7
- Education - 3.4

Comments on the constitution: many!

UPDATE ON THE COUNTY/REGIONAL PLANT CHECKLIST PROJECTS IN SOUTHERN ONTARIO

There has been very little new information since Steve Varga's compilation appeared (THE PLANT PRESS 1(4):69-75). To date we have received the following additional news:

Simcoe County: The actual number of vascular plants reported for this county is about 1550. The original estimate was low because names on the list had not been counted for some time.

Gray County: Donald Kirk is hoping to start a checklist project here.

Bruce Peninsula: Joe Johnson came to the Bruce in 1971. Marion Shivas was involved in the compilation of a number of plant lists prior to 1978 when she was active with the FON Wild Flower Committee. Peter Peach was not involved in compilation of checklists.

Regional Municipalities of Prescott-Russell and Stormont-Dundas-Glengarry: Albert Dugal and Mike Shchepanek have collected plants for the National Herbarium here since the middle 1970's. So far as we know, it was never their intention to produce a checklist and there is no preliminary checklist for the entire area.

Brant County: Paul Eagles has recorded the names of over 500 plants on file cards; specimens have been deposited in WAT.

ANOTHER WHITE WILD COLUMBINE RECORD

"I was very interested to see Jim Hodgins' report on the white-flowered form of the wild columbine (Aquilegia canadensis L. forma albiflora House) from Durham Region [THE PLANT PRESS 2(1):13]. It came as a surprise to read that this was the first reported sighting for Ontario; I had no idea that it was so rare.

"I have a colour slide, taken in 1977, of a similar plant. It was found with many of the normal-coloured members of its species growing among poison ivy in dry, rocky soil...on the Cape Croker Indian Reserve, Bruce County... Poison ivy is very common (too common, most would say) in this habitat and columbine frequently is found with it.

"The plant which I photographed was 35 cm high and bore 3 flowers. The following year, in 1978, it flowered again, but I have not looked for it since then. Now that its near-

whether he wanted to discuss one rare species, many rare species, or entire ecosystems, for example.

"For most of us, transplanting means the removal of a plant or plants from the place where it is presently growing to some other place where we hope it will grow or we actively will ensure that it grows. Humans have done this for several thousands of years going back to the dawn of agricultural practice. Based upon tens of thousands of horticultural successes which man has had, I would suggest that it is counterintuitive to assert that plants cannot be successfully transplanted. However, for reasons not at all obvious to me, Professor Keddy ignores this long record of successes to deal with the case of transplanting into 'similar habitat'. Why is this important? How is life in a botanical zoo, i.e. a garden, any different than a precarious existence in a 'natural area'? These are the basic questions which I expected to see addressed based on the scope of the title.

"Paul Keddy holds that the life history and the ecological response of a species must be known before it can be transplanted. The practical man, the horticulturalist, the experimenter goes out and transplants despite an enormity of species-specific ignorance. He fails or he succeeds, but he understands intuitively that he does not need to duplicate the entire characteristics and milieu of the wild population in order to 'preserve' the species.

"Indeed, should an ecologist argue for 'preservation' of a species? What about the changes in gene frequencies which will almost certainly result from ongoing environmental change? Genetic theory tells us that species are dynamic entities which may change in time and/or space. I think that the best contribution an ecologist could make to the transplanting debate would be to provide some rationale and justification for preserving habitats. From an ecological perspective I think that the preservation of one or another species is trivial - except for the species whose existence is threatened. And there are good ecological grounds to link the survival of Homo sapiens with the protection, not of Franklinia alatamaha or Erica fairii, but of natural vegetation and habitats."

Jeff Kaiser, Mississauga

ADDITIONAL INFORMATION ABOUT RUBBERWEED ON THE BRUCE PENINSULA

[It was Vince Elliott's intention to provide information only on recently-discovered, large populations of rubberweed on the Bruce (THE PLANT PRESS 2(1):6-7). However, we recently received the following additional information:]..."Rubberweed was discovered on the Bruce in the late 1960's before I came here. I know of 6 records of rubberweed for the Bruce. Three of these are small populations on the shoreline of Georgian Bay; the other 3 are not on the shoreline. All 6 localities occur within the study area of the proposed national park [see pages 33 to 44 of this issue] or on the Indian lands surrounded by the study area. Four of these 6 stations for rubberweed were discovered by me as far as I can tell. I did discover the population near the Dyers Bay turnoff in 1976, but "Joe's rubber patch" and "Vince's rubber patch" are so close that I consider them a single locality ...The rubberweed locality described in Vince's report is far south of the other 5 localities on the Bruce."

Joe Johnson, Wiarton

MORE INFORMATION ABOUT THE CONSTANCE BAY SAND HILLS

"Readers who want to learn more about the Constance Bay Sand Hills in Ottawa-Carleton should be aware of two references which give fairly complete descriptions of the plants and plant communities. The second article also provides a description of the recent situation with regard to the Ontario Ministry of Natural Resources' reforestation program. These references are:

Breitung, A.J. 1957. Vascular flora on the sand dunes at Constance Bay, Ontario. Le Naturaliste Canadien 84:79-87.

White, D.J. 1979. The Sand Hills. Trail & Landscape 13(4):126-131.

"The Sand Hills were not formed on a Champlain Sea shoreline, but are abandoned deposits laid down by the Ottawa River during its higher stages in the Post-Champlain Sea period (Geological Survey of Canada. 1974. Survicial materials and terrain features/Ottawa-Hull Ontario-Quebec. Map 1425A).

"Black spruce and Norway spruce are uncommon reforestation constituents at the Constance Bay Sand Hills; red pine and jack pine are the dominant planted conifers."

Joyce Reddoch, Gloucester

ENVIRONMENTAL IMPACT ASSESSMENTS: BOTANISTS AND WILDLIFE BIOLOGISTS MUST WORK TOGETHER

by Gilbert Proulx, Wildlife Consultant,
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Environmental Impact Assessment is a recent process which has developed rapidly because of a recognition by all segments of society of the importance of environmental quality. Often, wildlife biologists with ecological training and/or experience are called upon to predict the impacts of a human action on wildlife and to suggest mitigating measures. However, a major problem that wildlife biologists encounter in environmental assesments is a lack of sound data (Duffy 1975; Dolan & Maestro 1975; Brink 1978). This lack of data becomes a frustration to wildlife biologists when the time comes to predict the short- and long-term impacts of a proposed action, or to discuss the mitigating measures or project modifications. The intents of this article are (1) to define some of the major factors leading to a lack of valid information and (2) to explain how botanists can help wildlife biologists to remedy this situation.

To date much of the attention of environmental managers and consultants has focused upon single aspects, such as wilderness classification, basic plant and animal inventories, or primary terrain classification without due consideration that wildlife species are integral parts of ecological communities (Hendee & Stankey 1973; Wagner 1977; Polunin & Edsvik 1979). Brink (1978) stated that "deadlines and limited data bases are dilemmas that contrast with the biologist's training... Many analyses rely heavily on description of impacts". Time and budget constraints, limited data bases, restricted involvement of biologists in areas other than their specialty and short-cut techniques all lead to the production of inadequate environmental assessments.

In many instances the wildlife biologist is asked to compensate for inadequate baseline studies with generalizations of management rationales, extrapolation from previous findings and speculations. However, during their formal education, biologists are exposed to scientific methods. They learn that data should be statistically valid and conclusions not warranted by the data should be avoided. Of course, a wildlife biologist who does not thoroughly understand the ecological processes of an area, or who is incapable of producing sound recommendations relative to impacts of an action, could simply state that it in his report. According to Thomas (1979), "to say we don't know enough is to take refuge behind half-truth and ignore the fact that decisions will be made regardless of the amount of information available...it is far better to examine available knowledge, combine it with expert opinion on how the system operates, and make predictions about the consequences of alternative management actions". I believe that one should be cautious about applying studies conducted in other regions, since there is no guarantee that environmental factors and the wildlife populations reported in those studies are similar to the ones of the region being investigated. As Stankey (1982) pointed out, "...the diversity and uniqueness of individual areas warrant more site-specific research". The wildlife biologist who compensates for missing data might be transforming environmental impact assessments into 'scientific guesswork'.

It is doubtful that we will see the day when environmental assessments will be based on a thorough understanding of the several constituents of an ecosystem. However, the least we can do today is to establish contacts between various consultants with different areas of expertise. A large number of factors, biotic as well as abiotic, affect animal populations. Undoubtedly plants are living in balance with animal populations, hence the ecological relationship. All animals depend directly or indirectly on plants for food. The quantity and quality of plants have an impact on the reproduction, health, survival and general well-being of animals. In turn, animals influence the growth and distribution of plants. Often those doing environmental assessments fail to recognize this important relationship which exists between animals and plants.

One example of a failure to recognize the relationship between plants and animals occurred in a study in Newfoundland (Proulx 1982). In this assessment of the impacts of hydroelectric development on caribou populations, the approach consisted of a behaviour study of the animals and little attention was paid to habitat characteristics, plant density and quality. Botanists were asked to break down the study area into associations such as Kalmia or Cladonia barrens, tuck, fen, bog, marsh or disturbed areas. However, not all

Hendee, J.C. and G.H. Stankey. 1973. Biocentricity in wilderness management. Bioscience 23:535-538.

Kaminski, R.N. and H.H. Prince. 1981. Dabbling duck and aquatic macro-invertebrate responses to manipulated wetland habitat. J. Wildl. Manage. 45:1-15.

Polunin, N. and H.K. Edsvik. 1979. Ecological principles for the establishment and management of national parks and equivalent reserves. Environ. Conserv. 6:21-26.

Proulx, G. 1982. The future of the Upper Salmon caribou research - July 1982. Northland Associates Ltd., report presented to Hydro Newfoundland and Labrador. 12 pp.

Proulx, G. and F.F. Gilbert. 1983. The ecology of the muskrat (Ondatra zibethicus) at Luther Marsh, Ontario. Can. Field Nat. 97:377-390.

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Thomas, J.W. 1979. Preface. Pages iv-v in J.W. Thomas, ed. Wildlife Habitats in Managed Forests - The Blue Mountains of Oregon and Washington. U.S. Dep. Agric. Handb. No. 553. U.S. Gov. Print. Off., Washington, D.C. 512 pp.

Wagner, F.H. 1977. Species vs. ecosystem management: concepts and practices. Trans. North Am. Wildl. and Nat. Res. Conf. 42:14-24.

PROPOSED NATIONAL PARK IN THE BRUCE PENINSULA: SIGNIFICANT BOTANICAL SITES IN SOUTHERN PARTS OF THE STUDY AREA

by Joe Johnson, P.O. Box 556, Wiarton, Ontario NOH 2TO

The study area of the proposed national park in the Bruce Peninsula includes much of the northern tip of the Bruce (Figure 1). About 80% of the study area occurs in St. Edmunds Township and about 20% in Lindsay Township. For several years Parks Canada has said that the proposal would not go forward without the support of the local people. Boundaries of the proposed park have not yet been set, but these are expected to occur somewhere within the study area. My purpose in writing this article is to draw attention to some botanically significant sites in southern parts of the study area, in Lindsay Township (Figure 1).

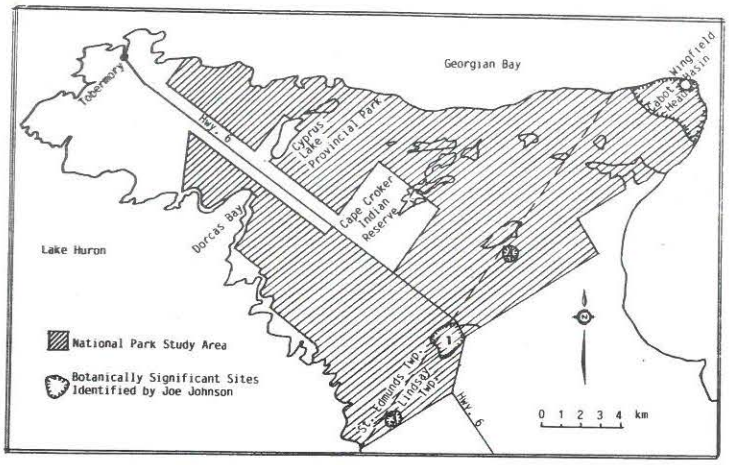


Figure 1. Map of northern tip of the Bruce Peninsula showing study area of the proposed national park (after a map by Parks Canada, used here with permission) and botanically significant sites in the southern part of the study area (numbers follow text, site 2 has been intentionally deleted).

1. Jack pine/bedrock area

This is a jack pine community on mostly dry, dolomite pavement, with scattered alvar-like openings. The entire site is poorly defined but probably encompasses over a hundred hectares in the centre of the Peninsula along Hwy. 6 on both sides of the township boundary. Botanically interesting portions occur mainly on the Lindsay side. The site includes the following features:

(a) a high development of the flora of open limestone pavement as well as conifer forest on limestone;

(b) an abundance of many plant species which are usually found closer to the Lake Huron shoreline in Bruce County;

(c) a few species, most notably ferns, which are provincially rare (Argus & White 1977) and usually occur closer to the Niagara Escarpment;

(d) a total of 18 provincially rare plants (Argus & White 1977), the largest number of rare species which I know of on the Bruce for an area of such comparatively small size (according to parts of the Atlas which have been published (Argus & White 1982; 1983), 6 of the species at

By 10 June striped coralroot (Corallorhiza striata) is in the peak of its flowering period or slighlty past. This orchid is fairly common on the Bruce and it begins to flower here about 20 May.

Another orchid at its peak on 10 June is Hooker's orchid (Platanthera hookeri). This species begins to flower at about the same time as the large-flowered yellow lady's-slipper. Hooker's orchid progresses into full bloom rapidly, yet the individual flowers last for weeks.

One of the most famous rarities of the Bruce, stemless rubberweed (Hymenoxys acaulis var. glabra) (=Actinea herbacea), is usually a little past its best by 9 June. However, individual flower heads of this species are still available at this time. This species begins to flower at the beginning of May.

Canada bluets (Houstonia canadensis) tends to be at its best around 10 June. Although the individual flowers are rather minute, this species can put on an impressive display in areas where populations are particularly dense. A species of blue-eyed grass (Sisyrinchium mucronatum), which is the species so common on the Lake Huron shore, yet restricted to it, is in flower by 10 June except for late seasons.

Pitcher plant (Sarracenia purpurea), which is common along the Lake Huron shore, is often at or approaching its peak flowering period by 10 June.

Wild columbine (Aquilegia canadensis) puts on quite a show in sone parts of the Bruce at this time.

Butterwort (Pinguicula vulgaris) and the shrub Rubus parviflorus are beginning to flower by 10 June if spring is early. Showy orchis (Galearis spectabilis) (=Orchis spectabilis) is usually well past its prime by 10 June, but in late seasons it may be not much past its peak.

CANADIAN AND UNITED STATES BOTANISTS COOPERATE IN LOCATING RARE PLANTS IN QUETICO PROVINCIAL PARK AND SUPERIOR NATIONAL FOREST

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by Shan Walshe, Quetico Provincial Park, Ministry of Natural Resources, Atikokan (Nym Lake), Ontario P0T 1C0
(reprinted from Atikokan Progress, 4 April 1984, with permission from the author)

In January 1983, the Ministry of Natural Resources in Atikokan received a letter from Miss Kathleen Lederle of the United States Forest Service requesting assistance in locating several rare plant species discovered by Dr. Olga Lakela some thirty years before along the Canadian-United States border waters. Miss Lederle was under contract to relocate these plants, write up specific locality and habitat descriptions, and determine the degree of abundance of each. Since I had found most of these species while doing field work for the book Plants of Quetico from 1970 to 1978, I was called upon to assist.

On 2 August 1983, after seven months of correspondence and planning, Kate and I met at the Quetico Park Entry Station on Lac La Croix and then proceeded to Bottle Portage. At each end of this muddy portage is a weedy aquatic wonderland where Lakela had recorded two rarities, Vasey's pondweed (Potamogeton vaseyi) and western waterwort (Elatine triandra). We found the pondweed at once, but for the time being, the waterwort eluded us.

As we left Bottle Portage and paddled east up Iron Lake, a steady rain began, which was to continue all day, but which could not dampen the excitement and anticipation built up by months of planning. At beautiful Curtain Falls separating Crooked Lake from Iron Lake, Lakela had discovered shore plantain (Littorella americana). To our delight, we found that thirty years later it was growing in abundance not only at Curtain Falls but all along the shores of Crooked and Iron Lakes and Lac La Croix. Though on the United States "Rare and Endangered Species" list, it was certainly not rare here.

On a sand beach somewhere on Iron Lake, Lakela had collected the extremely rare Mount Katahdin sedge (Carex katahdinensis). In thirteen years in Quetico I had seen it only once, growing in a very distinct shrubless plant community of large-fruited bog cranberry (Vaccinium macrocarpon), prairie slough grass (Spartina pectinata) and Kalm's lobelia (Lobelia kalmii). Paddling along the U.S. shore of Iron Lake, Kate and I kept our eyes peeled for open grassy clearings and soon had found five new localities of this rare sedge.

Soaked to the skin and oblivious to the rain, we made our way back to Bottle Portage where Kate and I both waded into the weedy, mud-bottomed marsh to have one last look for western waterwort. And lo and behold I soon found it growing in six inches of water - what an end to a perfect day!

WHITE FORM OF THE SHOWY LADY-SLIPPER (*Cypripedium reginae* forma *albolabium*) DISCOVERED IN GRAY COUNTY

by Vincent Elliott, Stokes Bay, Ontario

The base of the Bruce Peninsula near Colpoy Bay is characterized by an extensive limestone plain with local swamps. In one of these swamps, just north of Oxenden in Gray County, the white form of showy lady-slipper (*Cypripedium reginae* forma *albolabium*) was discovered in 1977. Unlike the usual kind of showy lady-slipper, the lip of the white form is creamy white instead of mauvish pink. Thus the entire flower is white and quite striking.

Archie Hallett, a physics professor from the University of Toronto, now head of a community college in Bermuda, found this colony at the edge of a dense alder-willow swamp. At the time of discovery, the colony was extensive and many individual plants were scattered among tall grasses and sedges, the usual kind of showy lady-slipper, pink pyrola (*Pyrola asarifolia*) and small-flowered yellow lady-slipper (*Cypripedium calceolus* var. *parviflorum*). Archie reported his discovery to Betty Siegrist, the owner of the property. Other naturalists quickly learned of the discovery and these orchids were photographed by many individuals. The orchid habitat has suffered from this impact and the number of plants of the white form has dwindled to about 20 in 1983.

[How rare is this white form of showy lady-slipper in Ontario? Dr. Donald Gunn photographed it in the Luther Marsh in 1962 and in 1968. He returned to the same locality some years later and could not find any of the white form. He assumed that the thicket had become too overgrown. In recent years Rick Bobbette has photographed this white form in the Minesing Swamp, Simcoe County. Oxenden and the Minesing appear to be the only Ontario localities where forma *albolabium* still occurs. Does anyone know of any other localities for this rare form in Ontario?]

AN INTRODUCTION TO EDIBLE, MEDICINAL AND POISONOUS PLANTS: *Taraxacum* (DANDELION) AND *Plantago* (PLANTAIN)

by William E. Cattley, Orillia, Ontario

By definition, a weed is an "undesirable plant"; and perhaps one should also add, "a plant whose virtues have not yet been discovered". The common dandelion and the plantains suit either of these descriptions equally well. Below is an introduction to the origins of the names and some of the virtues of these well-known weeds.

Taraxacum spp. (dandelion)

The dandelion (*Taraxacum officinale*) is a plant of many names and places. It is indigenous to Europe and Asia, but long since naturalized throughout the civilized world. It and similar species of the genus *Taraxacum* are found from South America to Alaska, from Newfoundland to Greenland and the Arctic, across Canada from coast to coast and throughout the United States.

In Germany, *Taraxacum officinale* is known as Lowengahn; in Holland, paardenbloem and in France, dent-de-leon. In English speaking countries, the name dandelion is universal and has been anglicized from the French dent-de-leon. The literal translation of this name (tooth of a lion) reminds us of the fanciful resemblance of the dandelion's leaf shape to a lion's tooth. The names facedock, blowballs and four o'clock are occasionally used, with dumble-dor in Newfoundland and pissenlit in the province of Quebec.

The origin of the scientific name of the dandelion has long been shrouded in mystery, although translation of the specific name "officinale" from the Latin "officina" (meaning shop or laboratory) is self-explanatory. The generic name "Taraxacum" is thought by some scholars to be of Arabic origin, from the word "tharakh-chakon"; other scholars of the classics suggest the name to be of Persian origin, derived from the word "tarashqun"; and still others suggest the Greek word "tarach", meaning "trouble and disorder", an allusion to inflammation of the eye, for which the juice of this plant was used for treatment.

Taraxacum was mentioned as a medicinal drug in the writings of the "father of medicine", Hippocrates (460-370 B.C.); Galen, a pharmacist-physician (131-200 A.D.) and other ancient physicians. It was listed in the United States

Phegopteris hexagonoptera (Michx.) Fée (SOUTHERN OR BROAD BEECH FERN) DISCOVERED IN THE DISTRICT OF MUSKOKA

by J.P. Goltz, Ontario Veterinary College, Department of Pathology, University of Guelph, Guelph, Ontario N1G 2W1
D.M. Britton, Department of Botany and Genetics, University of Guelph, Guelph, Ontario N1G 2W1 and
R.E. Whiting, 74 Denison Rd., Weston, Ontario M9N 1C2

On 13 August 1983 the authors discovered a small colony of *Phegopteris hexagonoptera* (southern or broad beech fern) (Aspleniaceae) in the region designated "Town of Gravenhurst" (formerly Morrison Township) in the District of Muskoka. The colony of over 50 fronds was confined to an area of about 25 sq m on a very gently sloping, south-facing clay hill in a mixed woods of sugar maple, basswood, white ash, yellow birch, hemlock and hop hornbeam. Large colonies of *Adiantum pedatum* (maidenhair fern), *Polystichum acrostichoides* (Christmas fern), *Dryopteris intermedia* (intermediate wood fern), *D. spinulosa* (spinulose wood fern) and *Athyrium filix-femina* (lady fern) were found throughout the woods, but only the single stand of *P. hexagonoptera* was detected. Nearby grew several plants of *Circaea quadrisulcata* (enchanter's nightshade).

Individual fronds of *Phegopteris hexagonoptera* at the site of discovery ranged to 57 cm in height and to 18 cm in maximum width. Although the plants grew in almost full shade, a number of fronds, especially the smaller ones, were strongly wilted, presumably due to the abnormally dry soil conditions created by a prolonged drought. The normal moisture level of the soil at this site is not known. Several fronds were collected and deposited in the herbarium of the University of Guelph (OAC).

Phegopteris hexagonoptera is a rare plant in Canada (Dickson & White 1983) and like most other rare plant species is not protected by federal or provincial legislation (Vincent 1981). Taxonomic, historical, geographical and ecological information pertaining to *P. hexagonoptera* is reviewed in detail by Vincent (l.c.). This species has been extirpated from much of its former range apparently because it does not tolerate environmental disturbances, especially those affecting soil and moisture requirements (Vincent l.c.).

The occurrence of *Phegopteris hexagonoptera* in the District of Muskoka represents the first confirmed record for this species in the Georgian Bay region of Ontario and a northern range extension of about 125 km from the nearest collection site (Figure 1). A specimen of *P. hexagonoptera* in the herbarium of the Royal Botanical Gardens, Hamilton (HAM), was apparently collected by J.C. Jury in moist open woods at Lake of Bays on 29 August 1937. However, the lack of specific data on the location from which this collection was made, the paucity of information on the collector and the apparent disparity between the Lake of Bays site and known populations of this species have forced many authors to discount this record. Unsubstantiated reports of *P. hexagonoptera* at Owen Sound (Morris 1910) and near Dorset (Wright 1920) have also been published. In light of the recent discovery, this species could conceivably occur at these localities and should be looked for.

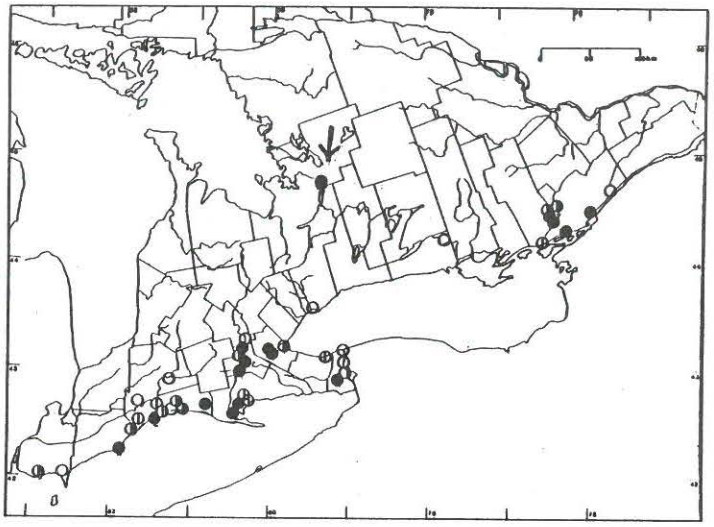


Figure 1. Distribution of *Phegopteris hexagonoptera* in Ontario based on Dickson & White's (1983) map from the Atlas of the Rare Vascular Plants of Ontario (map used with permission) and the new Muskoka record.

The habitat and companion species at the Muskoka site are typical for *Phegopteris hexagonoptera* according to Vincent (1981). The colony grew in rich woods overlying the Precambrian Shield near its southern edge, close to the Severn River which drains limestone regions and provides suitable habitat for several calciphilic species. Most stations of *P. hexagonoptera* in Ontario occur in woods overlying limestone bedrock. However the precise soil pH requirements and geological affinities of this species have not been defined.

Vaccinium stamineum L.



MARCEL JOMPHE, 1984

PECULIAR HOODED LADIES'-TRESSES (*Spiranthes romanzoffiana*) NEAR WINGFIELD BASIN, BRUCE PENINSULA

by Vincent Elliott, Stokes Bay, Ontario

Wingfield Basin is an inlet of Georgian Bay on Cabot Head, the northeast tip of the Bruce Peninsula, about 30 km east of Tobermory. Several hundred hectares of Jack pine and cedar scrub with extensive openings surround Wingfield Basin. The openings are flat and poorly-drained after rains, yet they may be quite dry during periods of drought. Grasses and sedges are dominant here with scattered, low, shrubby willows and sand cherry (*Prunus pumila*). This habitat is well-suited to a number of orchid populations, those of hooded ladies'-tresses (*Spiranthes romanzoffiana*) being of particular interest.

Many of us have found hooded ladies'-tresses difficult to identify because they are so variable. We have found them with lips not properly fiddle-shaped and some with a fringe (like *Spiranthes cernua*) on the lip. But the ones at Wingfield Basin are the most baffling. There seem to be three distinct phenotypes growing there.

The first flowers in late July to mid-August. It appears to be the typical variety of *Spiranthes romanzoffiana* (Figure 1).

The second flowers at about the same time as the typical variety and grows in clumps. It has spreading sepals which make the flowers appear like little stars (Figure 2).

The third flowers slightly later than the other two previous ones. It has very small, compact flowers and is now more common than the first. The flowers are no more than 4-5 mm long, 2 mm across and 3 mm deep. The lip, if detached and spread out, is 2 mm X 5 mm, almost without any constriction (Figure 3).

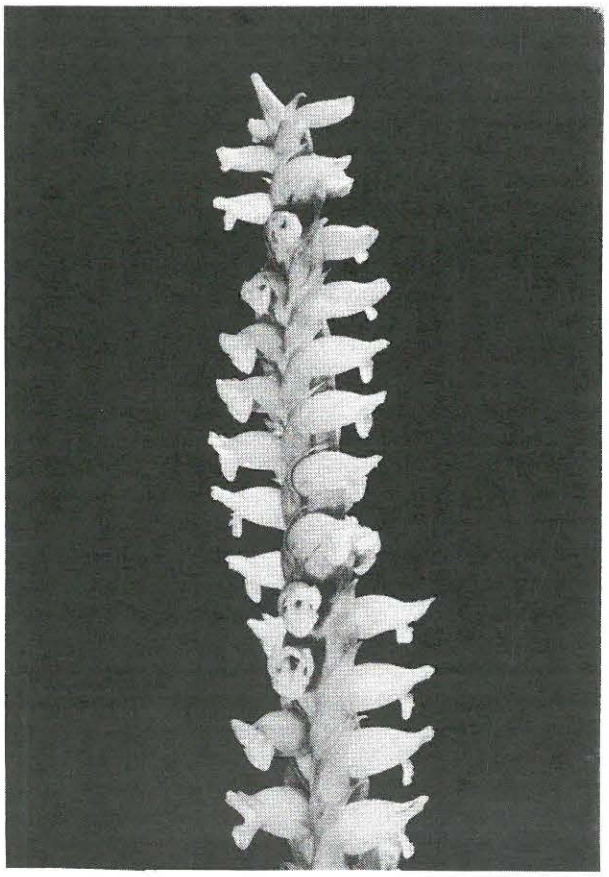


Figure 1. *Spiranthes romanzoffiana* (typical variety) (X2). Photographed by Ross Brown at Wingfield Basin, Bruce Peninsula, 3 August 1976.

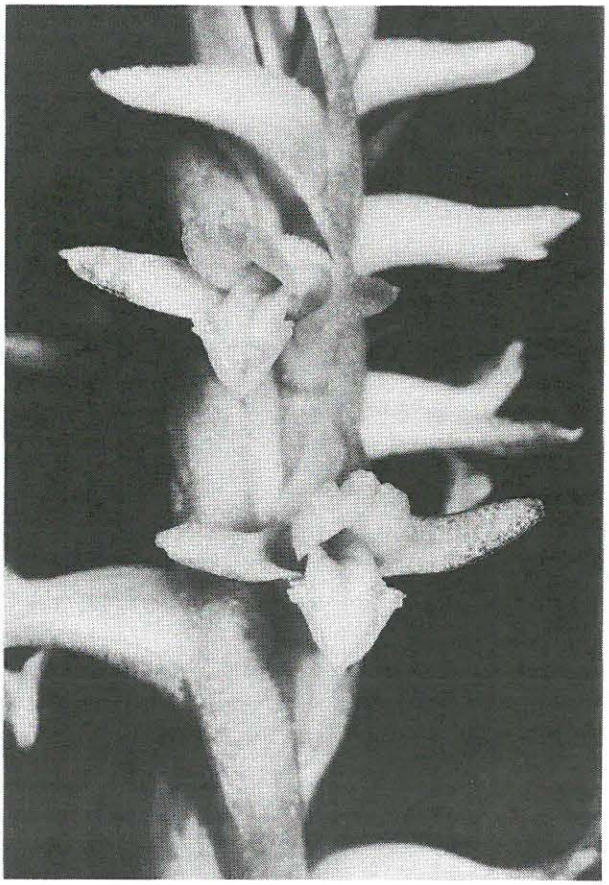


Figure 2. *Spiranthes romanzoffiana* phenotype with spreading sepals. Photographed by Ross Brown at Shore Rd. (between Howdenvale and Pike Bay), Bruce Peninsula, 12 August 1979.

capensis (jewelweed) were then dominant on this small opening on a seepy slope. Based on the abundance of other weedy species, this site appeared to have been grazed by livestock in the past. Although we found no more specimens of Cacalia plantaginea, we did find scattered plants of Selaginella apoda (spikemoss), a tiny fern ally which occurs in moist, calcareous habitats.

The origin of this single plant of Cacalia plantaginea remains a mystery. Perhaps a small fen-like community occurred here in the past, but was subsequently degraded by livestock; perhaps seed was somehow transported to the site from the Bruce Peninsula. I think that it is unlikely that more stations of this plant will be found in the Orillia area. However, I shall watch this single plant and note any changes in the "population".

Documentation: Ontario: Simcoe County: Orillia Twp., 44°34' N; 79°28' W. Photographs and voucher specimen, 17 June 1983, Wm. E. Cattley, No. 223-C, personal herbarium of WEC; voucher specimen of inflorescence branch, 17 August 1983, Wm. E. Cattley, MICH; photographs of plant and habitat, 18 September 1983, A.A. Reznicek, personal herbarium of WEC, MICH TRTE.

References

White, D.J. & R.V. Maher. 1983. Cacalia plantaginea (Raf.) Shinners. In Atlas of the Rare Vascular Plants of Ontario, Part 2. G.W. Argus and D.J. White, editors. Botany Division, National Museum of Natural Sciences, Ottawa.

Reznicek, A.A. & R.S.W. Bobbette. 1979. Preliminary checklist of the flora of Simcoe County, Ontario. Distributed privately.



Figure 1. Cacalia plantaginea (Indian-plantain) (X 1/3) illustrated by Susan Reznicek from photographs of the plant at the Orillia site.

virginica (meadow beauty). This provincially rare plant is an Atlantic coastal plain species which is restricted to the shorelines of certain lakes, mainly in the Muskoka-Parry Sound area. Currently Mirek is a biological consultant with the firm M.M. Dillon.

Susan Sieradzki
75 Westbury Cres., Cambridge, Ontario
N3C 3G3 (519-658-5047)
Susan is interested in aquatic plants of the Grand River watershed. She gathered ecological data on this subject for 2 years and wrote reports for the Grand River Conservation Authority. Susan has also made a quaternary seed collection for the University of Waterloo Earth Sciences Department.

Ronald Stuckey
Department of Botany, The Ohio State University, 1735 Neil Avenue, Columbus, Ohio 43210
Professor Stuckey does research on the vascular flora of Ohio, especially aquatic flowering plants, rare plants and prairie plants. The invasion of foreign aquatic plants into the United States, phytogeography of flowering plants and History of Botany, particularly pioneer botanists of the first half of the nineteenth century in eastern North America and the Ohio Valley are of particular interest.

Steve Taylor
Great Lakes Forest Research Centre, P.O. Box 490, Sault Ste. Marie, Ontario P6A 5M7
Steve is interested in general ecology, especially successional aspects in plant growth. His master's thesis (University of Toronto) on spruce forest succession near Kapuskasing is nearing completion; however, Steve's current work involves studies on cutover succession near Nipigon and wetland ecology in the Clay Belt. He has collected plants from the Clay Belt; these have been deposited in the herbarium at the Great Lakes Forest Research Centre. Steve hopes to make more plant collections in Algoma District.

Sheila Thompson
Department of Geography, University of Western Ontario, London, Ontario N6A 5B7
Sheila is interested in alien plant populations from the families Commelinaceae, Leguminosae and Malvaceae. Aquatic weeds and population dynamics in relation to range extensions are of particular interest.

INFORMATION AND REQUESTS

BRUCE PENINSULA BOTANY WEEKEND 8-10 JUNE

All systems are "go" for the first-ever get-together of Ontario field botanists in the Bruce Peninsula, as announced in the March issue of THE PLANT PRESS. With 50 registrations, we will have Red Bay Lodge all to ourselves and we can devote the whole weekend to botany - no birders, no early-morning bird-walks! Those of you who have been there before will know that we will be well looked after by our host and hostess, Roy and Shirely Bullen. For the field trips we are fortunate to have the services of the two best local guides in the business, Vince Elliott and Joe Johnson, and others with expertise in special areas such as fens, alvars and bryophytes. Meet at the Lodge after 6 p.m. on the Friday evening; bring wet-weather gear; water-proof boots for wet areas; insect repellent; labelled thermos (name, choice of beverage); and up to 4 slides with which to introduce yourself and your interests to the rest of the gathering. If you have any special requests re accomodation, the address is R.R. 1, Mar, Ontario NOH 1X0, telephone (519) 534-1027.

Those who have not registered but would still like to come should seek accomodation at Evergreen Lodge or Wildwood Lodge, the address for both of these lodges is also R.R. 1, Mar, Ontario NOH 1X0.

Harry Williams,
Millbrook, Ontario
L0A 1G0

FIELD TRIP TO THE OBJIBWAY PRAIRIE 18 AUGUST

A special field trip to the Ojibway Prairie has been arranged for us on Saturday, 18 August 1984. Meet at 11 a.m. at the Ojibway Nature Centre in Windsor for a talk by Paul Pratt, which will be followed by a picnic lunch and an afternoon field trip. For more information contact the organizer/leader of this event:

Paul Pratt,
Ojibway Nature Centre,
2450 MacDougall St.,
Windsor, Ontario
N8X 3N6 (519-966-5852)

Since 1980 this project has been continued and I have coordinated the submissions until 1983, when I asked to be relieved of this job. In response to my request, the Systematics & Phytogeography Section has appointed Dr. Paul M. Catling (DAO), Chairman, and Dr. Erich Haber (CAN) to continue the project as a Checklist Committee.

The file now contains 95 items grouped by area of coverage as follows: Ontario 39, Quebec 14, Newfoundland & Labrador 8, Saskatchewan 7, Northwest Territories 6, Manitoba 5, New Brunswick 5, Nova Scotia 5, Alberta 3, and British Columbia 3. Of the 39 Ontario items, 27 are checklists, 11 are identification lists and 1 is a bibliography for the province. At the moment, copies of teh complete list are available to members of the CBA/ABC on request. If the requests become too numerous, it might be necessary to discontinue free distribution or resort to lending an item for copying. The latter practice would necessitate keeping a second copy of any item sent out on loan.

The repository was not intended to be a file of reprints of published checklists and copies of published floras, nor was it to be the basis of any future bibliography of Canadian floristics. The original intent was simply to bring together and make available information about unpublished checklists, including those in research reports, government contract reports, internal office files, etc. Common examples are checklists resulting from surveys of national and provincial parks, candidate park areas, and environmental impact studies. Other important floristic information is often buried in identification lists and the latter can be useful guides to locating material when vouchers have been deposited in an institutional herbarium. Such lists are seldom published and are soon lost to view in office or personal files; hence mostly unknown or unavailable to botanists who might be interested in the information.

Items now in the repository are accompanied by information on some or all of the following fields (comments have been added, based on problems which arose during the compilation of the list):

1. Province or Territory: this is essential.
2. Area covered: description should be as

Canadian Botanical Association - Repository of Checklists

Information to be supplied with the checklists:

Province: _____

Area covered: _____

_____

(Location of center: lat./long. or UTM grid): _____

_____

Investigator: _____

Scope of study (length or span of field work): _____

_____

Purpose of study: _____

Vouchers (where deposited): _____

Flora(s), etc., used for identification _____

_____

Specimens determined by: _____

1952. (These rules do not apply to cultivar names.)

Valid publication requires effective publication, and several other conditions must be met as well. No botanical name for a new taxon is validly published unless it is accompanied by a description or reference to a published description of the taxon to which the name is applied. (Strictly speaking, the Code makes a fine distinction between a "description" and a "diagnosis," the latter being defined as a "statement of that which in the opinion of the author distinguishes the taxon from others." Either is acceptable, diagnoses being used mostly for intraspecific taxa.) For names published after 1934, a Latin description is required. By 1935, of course, Latin had ceased to be the common language of scholars of different nationalities. The main reason for this requirement in the present day is that no one is likely to write a description in Latin unless one definitely intends to name a taxon considered to be new to science, and unless one is familiar with the rules of botanical nomenclature. This reduces the likelihood of "new" taxa being named by persons unqualified to assess their distinctness or to assign appropriate taxonomic ranks. It also prevents new names from being validly published inadvertently, with vague and abbreviated descriptions such as "a big bush."

Another requirement for valid publication is the designation of a holotype specimen. Holotypes and other nomenclaturally significant specimens were discussed in Lilac Newsletter 9(5):1-3 (1983). Failure to designate a holotype, as when several specimens are given equal status as "types," renders publication of a name invalid. However, like the rule requiring Latin, this rule, which took effect in 1958, was not applied retroactively.

Other rules for valid publication include a clear indication of the author's intent to describe and name a new taxon, and a clear indication of the taxonomic rank of the entity being named.

Thus far, I have discussed the rules pertaining to the naming of new taxa. When a new name is created as the result of a transfer or change in taxonomic rank, the type specimen remains the same, and no new description is required. (Examples include the transfer of the Korean Lilac, now known as Syringa patula, from Ligustrum to Syringa, or the reduction of Syringa amurensis to varietal status within S. reticulata.) In such cases, the rules for valid publication require that the name (basionym) on which the new combination is based be clearly indicated, along with its authorship, the title of the book or journal in which it was published, the volume number if appropriate, the page number, and the year of publication. (Minor errors or discrepancies, such as might occur if a publication dated "1970" was actually published in 1971, do not invalidate a new combination.) Combinations published before 1953 need not have so clear and thorough a citation of the basionym.

Botanical names that are not effectively and validly published have no standing whatsoever in questions of priority. Therefore, "new" names in Syringa that appeared in one case, to my knowledge, in a seed-exchange list and in another case on arboretum labels (neither involving the R.B.G.) are prevented, for all time, from surfacing to cause nomenclatural confusion in the lilacs.

ONTARIO PLANTS IN PRINT

RHODORA
REFERENCES FROM 1980 - 1983

compiled by Patricia M. Eckel, 43 Crescent Ave., Buffalo, New York 14214

Webber, J.M. & P.W. Ball. 1980. Introgression in Canadian populations of Lycopus americanus Muhl. and L. europaeus L. (Labiatae). Rhodora 82:281-304. (plants named L. europaeus in Canada are, for the most part, hybrids derived from this introduced species and the native L. americanus; distribution of the hybrid complex along the St. Lawrence, north shores of Lake Ontario and Lake Erie and recent records from the Bruce Peninsula and Galt are mapped; specimens are cited)

Pireh, W. & R.J. Tyrl. 1980. Cytogeography of Achillea millefolium in Oklahoma and adjacent states. Rhodora 82:361-367. (cytotypes for Ontario shown in distribution map of eastern U.S. and eastern-southeastern Canada)

Sheviak, C.J. & P.M. Catling. 1980. The identity and status of Spiranthes ochroleuca (Rydberg) Rydberg. 82:525-562. (citation of a specimen from Kent Co., Ontario, although the species is more common to the south and east of Ontario; 6 citations of Ontario specimens of Spiranthes cernua)

Over 900 plant taxa, which comprise about 1/5 of the vascular plant flora of Canada, are included. These taxa, which are mainly vascular plants (a few bryophytes and algae are also included), have been assigned four digit reference numbers to be used by Agriculture Canada for computer storage of information pertaining to literature and herbicides. An attempt was made to provide nomenclaturally correct botanical names, with synonyms where appropriate, and one "official" English and French common name for each taxon. Alphabetical lists are provided in three separate tables: by genus (botanical name), English common name and French common name. A fourth table provides a list of the taxa in numerical sequence.

"Common and Botanical Names..." was reviewed by Cavers (Can. Field-Nat. 95:491-493), who questioned the inclusion and exclusion of certain species, but suggested that this publication would become a reference book in offices across the country. I agree with the general tone of Professor Cavers' (1981) comments, but I can think of many more vascular plants encountered in vegetation management in southern Ontario which should be included in the list. Plants such as Vitis riparia (riverbank grape), Juncus dudleyi (a rush), Fragaria vesca (woodland strawberry), Geum canadense (an avens) and Thalictrum pubescens (a meadow rue) should surely be included! As for inclusion of taxa in this list, I have puzzled over many names, such as Dicentra canadensis (squirrel-corn) and D. cucullaria (Dutchman's-breeches). Perhaps some plants listed are uncommon in southern Ontario, where I am familiar with the flora, but "weedy" elsewhere in Canada (e.g. Eryngium planum (eryngo)).

My strongest criticism of this publication is that it includes some native plants listed as rare in Ontario (Argus & White 1977). Native plants such as Lupinus perennis (perennial lupine), Vitis aestivalis (summer grape) and Collinsonia canadensis (horsebalm) are included as weeds in "Common and Botanical Names...", yet are classified as "rare in Canada" in Argus & White (1977). Asclepias verticillata (eastern whorled milkweed), which is included in both publications, occurs from southeastern Saskatchewan (where it is considered provincially rare (Maher et al. 1979), to southern Manitoba, as well as southern Ontario in Canada. Those interested in conserving Ontario's rare native flora must surely be saddened by the implication that some provincially rare plants (Argus & White 1977) are considered "weeds" by the Expert Committee on Weeds. What are the implications of this for botanists documenting evidence for environmental assessment reports and hearings?

For keen amateurs interested in Ontario plants, "Common and Botanical Names.." is of limited usefulness. Many names on the list represent plants which do not occur in Ontario; many Ontario species are omitted. Some confusion results as botanical and common names used in this publication are not always the same as the ones used in recent monographs (e.g. Grasses of Ontario by Dore & McNeill (1980) and Shrubs of Ontario by Soper & Heimburger (1982)).

There is a need for a list of common and botanical names of native and naturalized plants in Ontario, but it should be prepared with more care than was afforded the selection of common and botanical names used in this publication.

Mosses of Eastern North America by Howard A. Crum and Lewis E. Anderson. 1981. Columbia University Press, New York. Two vols. $ 75.00 (Can.) for the set of 2.

and

Moss Flora of the Maritime Provinces by Robert R. Ireland. 1982. National Museums of Canada Publications in Botany No. 13. $ 25.00 (Can.)

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reviewed by Frank S. Cook, 1 Larkspur Cres., London, Ontario N6H 3R1

When I reawakened an incipient interest in mosses in the 1960's about the only books available for the identification of these difficult plants were Conard's How to Know the Mosses and Liverworts (1956) and Grout's out-dated and confusing Moss Flora of North America North of Mexico (1928-1940), along with a few local moss floras. Crum's Mosses of the Great Lakes Forest (1973) was a most appreciated addition.

The two large volumes of Crum and Anderson and that of Ireland were long overdue. The Mosses of Eastern North America covers roughly the eastern deciduous forest east of the prairie grasslands and south of the boreal forest to the Gulf of Mexico. Moss Flora of the Maritime Provinces covers a much smaller area (New Brunswick, Nova Scotia and Prince Edward Island), but

Volume 12 (1981) $ 10.00
Boivin, B. - Flora of the prairie provinces, Part V. 108 pp.

Volume 13 (1982) $ 3.00
Gervais, C. - La flore vasculaire de la région du mont Logan Gaspésie, Québec.

Volume 14 (1982) $ 3.00
Cinq-Mars, L. - La flore de la station agronomique de Saint-Augustin, Portneuf, Québec et Lional Cinq-Mars (1919-1973) et sa contribution à la phanérogamie par Bernard Boivin. 60 pp.

RESTORATION AND MANAGEMENT NOTES

This journal is published twice each year by the University of Wisconsin Arboretum. It is a forum for the exchange of news, views and information among ecologists, land reclamationists, managers of parks, preserves and rights-of-way, naturalists, engineers, landscape architects and others committed to the restoration and wise stewardship of plant and animal communities. A considerable portion of each issue deals with botanical items and the journal will be particularly relevant for those interested in botanical restoration and management. Volume 1, Number 1 was published in June 1981.

Subscriptions are currently $ 12.00 per year for Canadian and foreign subscribers ($10.00 U.S.) and may be obtained from the University of Wisconsin Arboretum, 1207 Seminole Highway, Madison, Wisconsin 53711.

Michael J. Oldham, Essex

UNIVERSITY OF WATERLOO PUBLICATIONS

The School of Urban and Regional Planning at the University of Waterloo has several titles in its Working Paper Series whcih may be of interest to field botanists:

Number 5: A Bibliography of Wild Rice (Zizania species : Including Biological, Anthropological, and Socio-Economic Aspects by R.C. Suffling and C. Schreiner. June 1977. $ 3.00.

Number 10a: Feasibility Study for Salvage of the Oriskany Flora by G. de Boer, R. Suffling, L. Duquett, and L. McGuire. December 1982. $ 3.00.

Number 10b: Appendices to Feasibility Study for Salvage of the Oriskany Flora by G. de Boer, R. Suffling, L. Duquette, and L. McGuire. December 1982. $ 3.00.

Number 13: Revegetation of Pits and Quarries by R. Suffling. November 1983. $ 5.00.

These publications may be ordered from Mrs. E. Cardwell, Publications, School of Urban & Regional Planning, University of Waterloo, Waterloo, Ontario N2L 3G1.

HOT OFF THE PRESS

SEASONS - SPRING ISSUE ON THE BRUCE

This special issue is devoted entirely to the Bruce Peninsula. It is available for $ 3.00 from the Federation of Ontario Naturalists, 355 Lesmill Road, Don Mills, Ontario M3B 2W8. Anyone who joins the FON before the end of July automatically gets a copy. Membership fees are $ 21.00 (single) and $ 26.00 (family).

ENVIRONMENTALLY SIGNIFICANT AREAS OF THE ESSEX REGION by Michael J. Oldham

Just published by the Essex Region Conservation Authority, 360 Fairview Avenue West, Essex, Ontario N8M 1Y6, this 426 page report is full of biological information pertaining to 33 sites in Essex Region. Comprehensive appendices cover mammals, breeding birds, reptiles, amphibians, butterflies, rare vascular plants and bryophytes of Essex County. This background report to the Essex Region Conservation Plan should serve as a model for other reports in southern Ontario and beyond. At $ 25.00 (Can.) (payable to the Essex Region Conservation Authority), this report is a "must" for serious amateurs and professional biologists.

Jocelyn Webber, Mississauga

THE VASCULAR PLANT FLORA OF PEEL COUNTY, ONTARIO by Jocelyn M. Webber

This 100 page booklet provides an account of the vegetation of Peel and the history of botanical studies in the county. An annotated list of 1334 vascular plants provides distribution by township as well as abundance codes. This publication is available for $ 10.00 (Can.) from Botany Press, 90 Wolfrey Ave., Toronto, Ontario M4K 1K8.

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ONTARIO PLANTS IN PRINT	Mike Oldham	Essex Region Conservation Authority, 360 Fairview Ave. West, Essex, Ontario N8M 1Y6
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OBJECTIVES OF THE NEWSLETTER

1. Provide a medium for communication among Ontario field botanists;
2. Distribute information on Ontario botanists and their activities;
3. Report on projects and research in progress;
4. Distribute current botanical information on subjects such as species distributions, identification keys, field equipment and methods;
5. Monitor Ontario plants in print and provide reviews where appropriate;
6. Encourage publication by field botanists, especially amateurs, both in THE PLANT PRESS and more formal publications.

OPINIONS EXPRESSED IN THIS NEWSLETTER ARE NOT NECESSARILY THOSE OF THE EDITORIAL COMMITTEE

SUBMISSION OF NOTES AND ARTICLES

We are pleased to receive notes and articles about plants in Ontario. These articles should contain original information (i.e. your own observations and experiences) and/or should clarify some confusing aspect. All contributions are informally reviewed by the Editorial Committee. Contributions with content beyond our expertise may be sent to North American specialists. Although our system is not so rigorous as that of scientific journals, we request that articles be well-written and in the style of this newsletter. We are particularly pleased to receive 3 copies of typed, double-spaced manuscripts whenever possible.

DEADLINES FOR SUBMISSION OF MATERIAL

We need a minimum of 3 months to review submissions for the 'Notes and Articles' section and 6 weeks to decide on other submissions. These deadlines will be determined from the first day of the month of publication.

MAPS AND ILLUSTRATIONS

Base maps can be provided for articles appearing in the newsletter. Time permitting, arrangements can be made to provide illustrations.

ISSN 0826-2268

THE PLANT PRESS

BOX 537
STREETSVILLE POSTAL STN
MISSISSAUGA, ONTARIO
L5M 2C1

Second Class Mail - Registration Pending
THE PLANT PRESS Vol. 2 No. 2 (June 1984)

1984 SUBSCRIPTIONS TO THE PLANT PRESS

The 1984 subscription fees are as follows:

all 1984 subscriptions - $ 12.00

back issues (1983)- $ 10.00
(some photocopied)

THE PLANT PRESS is a quarterly publication which is entirely supported by its subscribers.

ABBEY PRINTING
(416) 826-1281

(STREETSVILLE PLAZA)
41 QUEEN ST., NORTH
MISSISSAUGA
ONTARIO
L5N 1A2