

Field Botanists Of Ontario

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The globally rare Eastern Prairie White-fringed Orchid
(*Platanthera leucophaea* (Nutt.) Lindl.); photo by M.J. Oldham



FIELD BOTANISTS OF ONTARIO NEWSLETTER

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Standard source for scientific names of vascular plants:

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Field Trip Reports:

Marblehead Peninsula and Kelley's Island, Ohio.

May 9, 1999. Led by Allison Cusick.

The Marblehead Peninsula is an elevated limestone tableland surrounded on three sides by the waters of Lake Erie. It is the southernmost point in a chain of islands and promontories across the western part of Lake Erie, which includes Point Pelee, Pelee Island, Middle Island and Kelley's Island.

A grassland alvar formerly occupied the central portion of the Peninsula. It was the only location for this plant community in Ohio. Almost all of the alvar has been destroyed over the past century by quarrying, and there is still an active quarry on the Peninsula. However,

the rocky, barren landscape left on the floor of the former quarry contains many elements of alvar: it is flat, with broad expanses of bare limestone interspersed with cracks and depressions filled with small tough shrubs, grasses and sedges capable of surviving extremes of drought and inundation. It supports a "pseudo alvar" flora very similar in composition to the original, having spread from the true alvar. This pseudo alvar, part of which is protected within the Lakeside Daisy Preserve, is the only naturally occurring Ohio site for the globally rare Great Lakes endemic Lakeside Daisy (*Hymenoxys herbacea* (Greene) Cusick), which was blooming lustily throughout this small state-owned preserve during the visit.

Allison Cusick, the foremost authority on Lakeside Daisy, described the plant's adaptations to dispersal in the barren



Lakeside Daisy (*Hymenoxys herbacea*);
photo by M.J. Oldham

environment. The seeds are wind dispersed, skipping across the flat terrain like tiddly winks before lodging in a rock crevice. Lakeside Daisy dispersed in a wide area of 200+ acres across the limestone on the Marblehead Peninsula during the time that the terrain was laid bare. The seeds can no longer disperse so easily, as they are trapped by ridges of successional vegetation that have grown up between the quarries, where they cannot germinate. The seedlings flower within 2-3 years of germination, and in subsequent years produce a tussock of short stolons. The central part of the tussock eventually dies, producing the ring of flowers characteristic of the older plants (some may live to 25 years). Not only is the daisy self-incompatible, but it also cannot be pollinated by very closely related individuals. The population therefore probably requires a large number of individuals to remain viable.

Other plants that fill the cracks in the old quarry floor show many morphological similarities to the Lakeside Daisy; likely similar adaptations to the harsh, droughty

environment. For example, the abundant sedge *Carex eburnea* Boott also forms tussocks to conserve moisture and resist desiccation from freezing. Spring Bluets (*Hedyotis nigricans* (Lam) Fosburg) and Balsam Ragwort (*Senecio pauperculus* Michx.) are among the tiny plants that bloom early to take advantage of spring moisture and nutrient-containing meltwater. A few non-natives are inevitably adapted to the alvar environment: Wall Mustard (*Diploaxis muralis* (L.) DC.) was the weed of choice here. The greatest threat is probably Common Reed (*Phragmites australis* (Cav.) Trin. ex Steudel), which surrounds the alvar and is quick to invade deeper cracks and depressions.

The field trip ended up on Kelley's Island, a short ferry ride north of the Marblehead Peninsula, where Allison and his co-workers have introduced (by seed) a population of Lakeside Daisy to an abandoned quarry. This introduced population is thriving; insurance against the destruction of the mainland population. Kelley's Island also sustains the finest example of lakeshore alvar on Lake Erie. Lakeshores add wave and ice action to the toll of environmental stresses. The resulting flora is sparse even for alvars, with the few plants visible including scattered Wild Strawberry (*Fragaria virginiana* Miller ssp. *virginiana*), Alum-root (*Heuchera americana* L. var. *americana*), Four-flowered Loosestrife (*Lysimachia quadriflora* Sims) Pringle's Aster (*Aster pilosus* Willd. var. *pringlei* (A. Gray) Blake), and Balsam Ragwort.♣

Sarah Mainguy

Features:

Ontario's Globally Rare Plants

Michael J. Oldham[†]

(Reprinted from the Ontario Natural Heritage Information Centre Newsletter, 5(1): 8-9).

One of the benefits the Natural Heritage Information Centre (NHIC) derives from being part of the network of conservation data centres is being able to use the standardized protocols and ranks used throughout the hemisphere. Each individual data centre, such as the NHIC, assigns subnational ranks

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Ontarios's Globally Rare Plants

<u>Scientific Name</u>	<u>Common Name</u>	<u>GRANK</u>	<u>SRANK</u>	<u>Family</u>
<i>Botrychium acuminatum</i> W.Wagner	Pointed Moonwort	G1	S1	Ophioglossaceae
<i>B. ascendens</i> W.Wagner	Upswept Moonwort	G3?	SH	Ophioglossaceae
<i>B. campestre</i> W.Wagner	Prairie Dunewort	G3	S1	Ophioglossaceae
<i>B. hesperium</i> (Maxon & R.T. Clausen) W.Wagner & Lellinger	Western Moonwort	G3	S1	Ophioglossaceae
<i>B. pallidum</i> W.Wagner	Pale Moonwort	G2	S1	Ophioglossaceae
<i>B. pseudopinnatum</i> W.Wagner	False Northwestern Moonwort	G1	S1	Ophioglossaceae
<i>B. rugulosum</i> W.Wagner	Rugulose Grapefern	G3	S2	Ophioglossaceae
<i>Asplenium scolopendrium</i> L. var. <i>americanum</i> (Fern.) Kartesz & Gandhi	Hart's-tongue Fern	G4T3	S3	Aspleniaceae
<i>Cystopteris laurentiana</i> (Weath.) Blasdell	Laurentian Bladder Fern	G2G4	S2S3	Dryopteridaceae
<i>Polygonum franktonii</i> S.J. Wolf & McNeil	Frankton's Knotweed	G2G4	S1?	Polygonaceae
<i>Sida hermaphrodita</i> (L.) Rusby	Virginia Mallow	G2	S1	Malvaceae
<i>Crataegus disperma</i> Ashe	Hawthorn	G3	S1?	Rosaceae
<i>Crataegus suborbiculata</i> Sarg.	Hawthorn	G3?	S2	Rosaceae
<i>Linum medium</i> (Planchon) Britton var. <i>medium</i>	Stiff Yellow Flax	G5T3	S3	Linaceae
<i>Agalinis skinneriana</i> (Alph. Wood) Britton	Pale Purple False Foxglove	G3	S1	Scrophulariaceae
<i>Cirsium hillii</i> (Canby) Fern.	Prairie Thistle	G3	S3	Asteraceae
<i>Cirsium pitcheri</i> (Torr. ex Eat.) Torr. & A.Gray	Dune Thistle	G3	S2	Asteraceae
<i>Hymenoxys herbacea</i> (Greene) Cusick	Lakeside Daisy	G2	S1	Asteraceae
<i>Solidago houghtonii</i> Torr. & A.Gray	Houghton's Goldenrod	G3	S2	Asteraceae
<i>Potamogeton hillii</i> Morong	Hill's Pondweed	G3	S2	Potamogetonaceae
<i>Potamogeton subsibiricus</i> Hagstr.	Pondweed	G3	S1	Potamogetonaceae
<i>Carex juniperorum</i> Catling, Reznicek, & Crins	Juniper Sedge	G2	S1	Cyperaceae
<i>C. lupuliformis</i> Sartw. ex Dewey	Knobbed Hop Sedge	G3?	S1	Cyperaceae
<i>C. schweinitzii</i> Dewey ex Schwein.	Schweinitz's Sedge	G3	S3	Cyperaceae
<i>C. wiegandii</i> Mack.	Wiegand's Sedge	G3	S1	Cyperaceae
<i>Elymus lanceolatus</i> (Scribn. & J.G.Smith) Gould ssp. <i>psammophilus</i> (J.M. Gillett & Senn) A.Löve	Great Lakes Wheatgrass	G5T3?	S3	Poaceae
<i>Iris lacustris</i> Nutt.	Dwarf Lake Iris	G3	S3	Iridaceae
<i>Cypripedium arietinum</i> R.Br.	Ram's-head Lady's-slipper	G3	S3	Orchidaceae
<i>Isotria medeoloides</i> (Pursh) Raf.	Small Whorled Pogonia	G2G3	S1	Orchidaceae
<i>Listera auriculata</i> Wieg.	Auricled Twayblade	G3	S3	Orchidaceae
<i>Platanthera leucophaea</i> (Nutt.) Lindl.	Eastern Prairie White Fringed Orchid	G2	S2	Orchidaceae

(Sranks) to plants, animals, and vegetation communities within its jurisdiction. Subnational ranks from throughout the range of a species, combined with input from experts, is used to develop global ranks (Granks). Both global and subnational ranks are frequently updated when information from the data centre network suggests a rank needs revising upward or downward. Global ranks are extremely important in assigning conservation priorities, in fact, global rank is one criterion used by the

province's Committee on the Status of Species at Risk (COSSARO) to decide which species should be recommended for addition to Ontario's official Vulnerable, Threatened, and Endangered species list.

Because the province has been entirely glaciated several times there are very few species endemic to (only found in) Ontario. In addition, because of its mid-continent position, most species which are rare within the boundaries of the province are common to the



Knobbed Hop Sedge (*Carex lupuliformis*) is the culm on the left of the picture, next to the very similar Common Hop Sedge (*Carex lupulina*); photo by M.J. Oldham

south, north, east or west. Of the 732 vascular plants currently considered provincially rare and tracked by the NHIC, only 31 (4%) are globally rare (see table). These species are ranked G1, G2, or G3 by The Nature Conservancy and generally have fewer than 100 populations world-wide. In compiling the table on page 4, taxonomically questionable species, whose Granks are followed by a 'Q' (e.g., several Ontario species of hawthorn, genus *Crataegus*), were omitted. Of these 31 globally rare plants, only one is officially listed as Vulnerable, Threatened, or Endangered in Ontario and only five are nationally listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Of the 31 globally rare plants listed in the accompanying table, False Northwestern Moonwort (*Botrychium pseudopinnatum*) is the only species endemic to Ontario. The only other G1 (typically known from fewer than five sites globally) vascular plant species in Ontario is

also a moonwort, Pointed Moonwort (*Botrychium acuminatum*). These tiny fern relatives are easily overlooked in the field and are difficult to identify. Both False Northwestern Moonwort and Pointed Moonwort occur in the Lake Superior region of Ontario and hopefully, with further botanical exploration, will be found in a few more locations. Five other *Botrychium* species are listed in the table, making it by far the Ontario genus with the most global rarities.

Although not entirely restricted to Ontario, a few plants are more common in the province than anywhere else in their range. Lakeside Daisy (*Hymenoxys herbacea*), American Hart's-tongue Fern (*Asplenium scolopendrium* var. *americanum*) and Stiff Yellow Flax (*Linum medium* var. *medium*) all have the vast majority of their world populations in Ontario and should be high priorities for conservation attention. A group of plants for which Ontario has a high conservation responsibility is the Great Lakes endemics. These plants have evolved in the Great Lakes basin and are generally restricted to shoreline sites in Ontario, Michigan, and Wisconsin. Globally rare Great Lakes endemics include Dune Thistle (*Cirsium pitcheri*), Houghton's Goldenrod (*Solidago houghtonii*), and Dwarf Lake Iris (*Iris lacustris*).

The status and distribution of vascular plants is, in general, far better known than for non-vascular plants, and as a result many non-vascular plants do not yet have global ranks assigned. However we do know that several globally rare non-vascular plants occur in the province. For example, there are two moss species, *Tortula cainii* Crum & Anderson and *Neomacounia nitida* (Lindb.) Irel., which are apparently endemic to Ontario. *Tortula cainii* is a moss of alvar woodlands which is ranked G1 and known in the world only from a few sites in Bruce, Simcoe, and Victoria Counties, Ontario. *Neomacounia nitida* is known only from two collections by John Macoun from near Belleville in southeastern Ontario made in 1862 and 1864. Plants were growing on elm trees in a swamp which has since been destroyed. Despite not having been seen alive in more than a century it is possible that *Neomacounia nitida* will again be found by some fortunate botanist. ♣



The globally rare Juniper Sedge (*Carex juniperorum*); photo by W.D. Bakowsky.

1998 Ontario Botanical Highlights

Michael J. Oldham[†]

(Reprinted from the Ontario Natural Heritage Information Centre Newsletter, 5(1): 9-11).

Several exciting botanical discoveries were made last year in Ontario, including at least five native and three non-native additions to the province's flora, and the rediscovery of two species not documented in the province for more than two decades. Most of the exciting finds in 1998 came from northwestern Ontario during fieldwork by the Natural Heritage Information Centre (NHIC). Mountain Sedge (*Carex saximontana* Mack.) and Torrey's Sedge (*Carex torreyi* Tuckerman), two prairie species, were found on rocky islands and peninsulas of Lake of the Woods. Torrey's Sedge was also found at a prairie remnant along Rainy River, where Heavy Sedge (*Carex grvida* L.Bailey) and

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Pumpell's Brome Grass (*Bromus inermis* Leyss. ssp. *pumpellianus* (Scribn.) Wagnon) were rediscovered in Ontario after not being seen for several decades. Heavy Sedge is only known from one previous Ontario record in Windsor in 1901. Also along Rainy River, Paul Catling and Vivian Brownell discovered Long-toothed Lake Sedge (*Carex laeviconica* Dewey), very close to the site where Wasyl Bakowsky and Mike Oldham had independently found it several weeks earlier. A collection of Shaggy False Gromwell (*Onosmodium molle* Michx.) from Rainy River appears to belong to the western subspecies (*occidentale* (Mack.) I.M.Johnson) rather than the subspecies (*hispidissimum* (Mack.) B.Boivin.) which occurs in southern Ontario. Subspecies *occidentale* has not previously been found in the province. Finally, False Tarragon (*Artemisia dracunculus* L.) was found during NHIC fieldwork by Wasyl Bakowsky and Mike Oldham at Ingolf, where it is probably native, given the large number of other western species which grow nearby. The

only previous Ontario record of this species is an old record from near Toronto, where it was undoubtedly non-native. These additions and rediscoveries are all of primarily western species which are near or at the eastern limits of their distribution in northwestern Ontario.

Another western species discovered in 1998 in Rainy River District during NHIC fieldwork was Jones Primrose (*Primula incana* M.E.Jones). Although previously reported from the province, earlier reports may be based on misidentifications of a similar primrose species, *Primula laurentiana* Fern.

Sue Bryan, Erika North, and Al Harris continue to discover interesting plants in the Thunder Bay area. Sue found an unusual native dandelion on a cliff near Lake Nipigon which appears to be the arctic *Taraxacum lapponicum* Kair. ex Hand.-Mazz., although the specimen is too young to possess mature achenes making an absolute identification impossible. Sue will be revisiting the site this year to try and obtain more mature material. She also found the globally rare Pale Moonwort (*Botrychium pallidum* W.Wagner) nearby. Erika North loaned us a specimen of Long-stemmed Waterwort (*Elatine triandra* Schkuhr) collected in Thunder Bay by Jennifer Mooney in 1996; this is the first record of this rare aquatic in the District. Al Harris reported new sites for a variety of rare plants (*Allium cernuum* Roth, *Carex atratiformis* Britton, *Cypripedium arietinum* R.Br., *Hudsonia tomentosa* Nutt., *Koeleria macrantha* (Ledeb.) Schult., *Leucophysalis grandiflora* (Hook.) Rydb., *Lithospermum canescens* (Michx.) Lehm., *Muhlenbergia racemosa* (Michx.) B.S.P., *Panicum leibergii* (Vasey) Scribn., and *Polystichum braunii* (Spenn.) Fée) in northwestern Ontario, including several new county records.

This summer Brendon Larson surveyed high quality mature forest tracts in southern Ontario as part of a woodlands study by the Federation of Ontario Naturalists and NHIC. Most noteworthy among the plant finds was Slender Green Sedge (*Carex virescens* Muhl. ex Willd.) in Northumberland County, the first Ontario record for this species outside the Carolinian Zone. Field botanist Tyler Smith of the Royal Botanical Gardens made several exciting finds in 1998, including the first record of Few-fruited Sedge (*Carex oligocarpa* Schkuhr

ex Willd.) in Hamilton-Wentworth Regional Municipality. A second recent record in Niagara Regional Municipality for *Carex oligocarpa* was also found during the 1998 Niagara Gap Analysis by Madeline Austen, Helen Godschalk, and Jennifer Line. While conducting a botanical inventory of Sandbanks Provincial Park near the eastern end of Lake Ontario, Vivian Brownell discovered Swamp Rose Mallow (*Hibiscus moscheutos* L.), the first eastern Ontario record of this nationally Vulnerable species. Vivian also found a population of Long-leaved Reed Grass (*Calamovilfa longifolia* (Hook.) Scribn. var. *magna* Scribn. & Merr.) at Sandbanks, the first Lake Ontario record of this provincially rare grass. Ministry of Natural Resources' ecologist Brenda Chambers found Braun's Holly Fern (*Polystichum braunii* (Spenn.) Fée) for the first time in Algonquin Park, and Robert Knudsen found new populations in the Lake Superior area north of Sault Ste. Marie.

Virgil Martin's discovery of several rare bryophytes (*Riccia frostii* Austin, *Physcomitrella patens* (Hedw.) Bruch & Schimp. in B.S.G.) growing on exposed mud of a Waterloo Regional Municipality reservoir prompted he and Mike Oldham to survey similar habitats at several other reservoirs in southwestern Ontario. Because the summer of 1998 was drier than normal in this part of the province, typically inundated shorelines were exposed allowing plants to colonize normally unavailable shoreline habitat. An interesting assemblage of native and non-native plants was found colonizing the exposed reservoir sediments, including Blunt-fruited Yellow Cress (*Rorippa truncata* (Jeps.) Stuckey) which was found at a reservoir in Wellington County. This western North American species which is new to the Great Lakes basin and northeastern North America might have been dispersed by migrating waterfowl.

Although the NHIC only tracks occurrences of rare native species, we are interested in hearing about new discoveries of non-native species also. With an increasingly global economy, species are being moved from continent to continent far more frequently than ever before. Despite stringent regulations, new foreign plant and animal species become established in Ontario each year. Many of these are innocuous and pose little threat to our

native species, but a few become very serious problems (e.g., Zebra Mussel, Purple Loosestrife, Common Dandelion, Eurasian Watermilfoil, Frog's Bit) costing millions of dollars to control (often unsuccessfully). By closely monitoring newly arrived species we can attempt to determine which ones might become problems. In Guelph, Marc Johnson and Carl Rothfels discovered the province's second population of Hyssop-leaved Loosestrife (*Lythrum hyssopifolium* L.). In Perth County, Mike Oldham found Cut-leaved Blackberry (*Rubus laciniatus* Willd.) well-established in an overgrown Scot's Pine plantation, and Allison Cusick discovered Sea-buckthorn (*Hippophae rhamnoides* L.) growing outside cultivation on the beach of Lake Huron at Kincardine, Bruce County; both are new provincial records.

The NHIC would like to thank the individuals mentioned in this article for informing us of their botanical discoveries, as well as any others not mentioned specifically. Many Ontario botanists have been sending in "Rare Species Field Reporting Forms" (available on the NHIC web page www.mnr.gov.on.ca/MNR/nhic/nhic.html) when they find a new rare species site. Completion of these forms greatly assists us in keeping our records up-to-date and ultimately helps us protect rare plant populations in the province. Several botanists continue to provide generous assistance to the NHIC with the identification and verification of rare plant specimens, provision of technical advice, and informing us about new rare plant finds. In particular we would like to thank Peter Ball, Vivian Brownell, Dan Brunton, Sue Bryan, Paul Catling, Brenda Chambers, Bill Crins, Howard Crum, Allison Cusick, Stephen Darbyshire, Bruce Ford, Anthony Goodban, Al Harris, Marc Johnson, Robert Knudsen, Brendon Larson, Linda Ley, Virgil Martin, Jennifer Mooney, Ed Morris, Erika North, Dave Punter, Cathy Quinlan, Tony Reznicek, Carl Rothfels, and Tyler Smith. ♣

Letters:

Bruce Peninsula in Winter Bloom: Greenhouse Warming?

How many wild (i.e. unplanted) angiosperms can bloom outdoors in winter (broadly defined) as far north as the Bruce Peninsula? Five or ten? Would you believe at least 56, including at least 54 at Wiarton in December 1998?!

I strongly suspect that the latter figure would not have been approached without global warming. In the previous 27 Decembers I saw only 11 wild species (in 8 families) blooming in Grey and Bruce Counties, never more than five in one year (1982), and none at all (the way it *should* be) in 17 years. But it is not just this one mild autumn followed by an exceptionally mild December that I saw more late blooming than normal, suddenly without a hint of warning. I saw wild plants [blooming] in Grey-Bruce in only five of the first 20 Decembers I've been here (25%), but in six of the last eight (75%). How long before there's December blooming well into northern Ontario some years, and here every year?

Bellis perennis, the hardiest species, started blooming again this winter in Wiarton the first week of February, and *Vinca minor* by February 12th, both much earlier than ever before to my knowledge.

Only 11 of the 56 December bloomers are native to North America. Presumably many of our European plant immigrants are adapted to continuing to bloom and set seed (to some extent) through the mild winters of the British Isles and other coastal areas of north-central Europe influenced by the Gulf Stream. The majority of the 56 could be considered weeds. However, even some native non-weeds bloomed this December, something I had only seen in Grey-Bruce once before, *Aster cordifolius* (Heart-leaved Aster), in 1988.

By the way, many FBO members and others in southern Ontario, as well as the north, would be amazed how much snow is often still lying through Wiarton and elsewhere in Grey - Bruce when some non-natives begin to bloom at favoured locations some time between February and early April. These are: *Bellis perennis* (English Daisy, wild), *Galanthus nivalis* (Snowdrops, mainly planted), *Eranthis hyemalis*

(Winter Aconite, planted) and *Crocus* sp. (Crocus, planted).

An accounting of the species blooming in the wild on the Bruce Peninsula in December, south to a line from Owen Sound to Southampton so as to exclude those communities, follows. The few I've seen elsewhere in Grey-Bruce would

only add one year for one species. I've seen all at Wiarton, but not every time. I mention the specific year for the two not seen in 1998, and a few extremely late dates. An absence of notes means 1998 only, at Wiarton.

Joe Johnson

Town of South Bruce Peninsula

<u>Scientific Name</u>	<u>Common Name</u>	<u>Comments</u>
Ranunculaceae		
* <i>Ranunculus acris</i> L.	Tall or Meadow Buttercup	
* <i>R. repens</i> L.	Creeping Buttercup	1971
<i>R. sceleratus</i> L.	Celery-leaved Buttercup	
Chenopodiaceae		
* <i>Chenopodium album</i> L. var. <i>album</i>	Lamb's Quarters, Pigweed	
Caryophyllaceae		
* <i>Cerastium fontanum</i> Baumg.	Mouse-ear Chickweed	
* <i>Silene vulgaris</i> (Moench) Garcke	Bladder Campion	
* <i>Stellaria media</i> (L.) Villars	Common Chickweed	2 years, to December 26 th , 1982.
Polygonaceae		
* <i>Polygonum aviculare</i> L.	Prostrate Knotweed	including <i>P. arenastrum</i>
<i>P. lapathifolium</i> L.	Pale Smartweed	
* <i>Rumex crispus</i> L.	Curled Dock	
Malvaceae		
* <i>Malva moschata</i> L.	Musk Mallow	
* <i>Malva neglecta</i> Wallr.	Cheeses, Common Mallow	
Violaceae		
* <i>Viola odorata</i> L.	Sweet or English Violet	to December 29 th , in 1998 never before in autumn.
Brassicaceae		
* <i>Brassica rapa</i> L.	Field Mustard, Bird's Rape	
* <i>Capsella bursa-pastoris</i> (L.) Medikus	Shepherd's Purse	
* <i>Diplotaxis muralis</i> (L.) DC.	Stinking Wall Rocket	
* <i>D. tenuifolia</i> (L.) DC.	Narrow Leaved Wall Rocket	
* <i>Erucastrum gallicum</i> (Willd.) Schulz	Dog Mustard	
* <i>Erysimum cheiranthoides</i> L.	Wormseed or Treacle Mustard	
* <i>Sinapsis arvensis</i> L.	Charlock, Wild Mustard	also December 23 rd , 1988 near Meaford.
Rosaceae		
* <i>Potentilla inclinata</i> Vill.	Downy Cinquefoil	[recognized as <i>P. x inclinata</i> by some authors-Ed]
<i>Rubus idaeus</i> L.	Red Raspberry	including <i>R. strigosus</i>
Fabaceae		
* <i>Lathyrus latifolius</i> L.	Everlasting Pea	
* <i>Melilotus alba</i> Medikus	White Sweet Clover	
* <i>Trifolium pratense</i> L.	Red Clover	
* <i>T. repens</i> L.	White Clover	
* <i>Vicia cracca</i> L.	Tufted Vetch	
Euphorbiaceae		
* <i>Euphorbia peplus</i> L.	Petty Spurge	
Geraniaceae		
* <i>Geranium robertianum</i> L.	Herb Robert	
Apiaceae		
* <i>Daucus carota</i> L.	Queen Anne's Lace, Wild Carrot	
Apocynaceae		
* <i>Vinca minor</i> L.	Myrtle Periwinkle	

Boraginaceae* *Echium vulgare* L. Viper's Bugloss**Lamiaceae*** *Lamium purpureum* L. Purple Dead Nettle 3 years**Scrophulariaceae*** *Chaenorrhinum minus* (L.) Lange Dwarf Snapdragon* *Cymbalaria muralis* P.Gaertn., Mey. & Schreb Kenilworth Ivy* *Veronica agrestis* L. Field Speedwell 1973**Rubiaceae***Galium aparine* L. Cleavers never before in autumn.**Asteraceae***Achillea millefolium* L. Yarrow including *A. lanulosa**Ambrosia artemisiifolia* L. Common Ragweed*Aster cordifolius* L. Heart-leaved Aster 2 years* *Bellis perennis* L. English Daisy 7 years* *Centaurea maculosa* Lam. Spotted Knapweed* *Chrysanthemum leucanthemum* L. Ox-eye Daisy*Erigeron strigosus* Muhl. ex Willd. Rough Daisy Fleabane* *Hieracium caespitosum* Dumort. King Devil, Yellow Hawkweed* *Matricaria matricarioides* (Less.) Porter Pineapple Weed* *Senecio vulgaris* L. Common Groundsel 3 years*Solidago altissima* L. Tall Goldenrod* *Sonchus oleraceus* L. Annual Sow Thistle* *Taraxacum officinale* G. Weber Common Dandelion 6 years - to December 26th, 1982 near Owen Sound, where it could have been barely within or outside the Peninsula.**Poaceae*** *Bromus inermis* Leyss. Smooth Brome Grass excluding *B. pumpellianus** *Dactylis glomerata* L. Orchard Grass* *Festuca arundinacea* Schreb. Tall Fescue* *Poa annua* L. Annual Blue Grass 2 years*P. compressa* L. Canada Blue Grass never before in autumn*P. palustris* L. Fowl Blue or never before in autumn

Fowl Meadow Grass

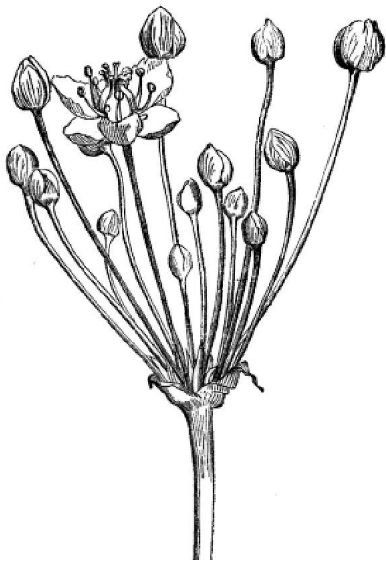
Note that all species I am certain are not native to the Bruce Peninsula are indicated by "*". Note also that none of these are native to North America either.

Have You Seen Flowering Rush?

Flowering Rush (*Butomus umbellatus* L.) is a wetland plant introduced to eastern North America from Eurasia about 100 yrs ago. While most common in the east, it now occurs in western provinces and states. It grows in shallow water, has long, thin, upright, leaves, and umbels of pink flowers. Flowering Rush seems to be an aggressive colonizer in some types of habitats. However, we know very little about this invader and its impact on native plants and animals. The Flowering Rush Project at Queen's University seeks to better understand the ecology, genetics and colonization biology of this exotic species, and provide useful

information to wetland management and conservation agencies.





WE NEED YOUR HELP! If you have seen Flowering Rush in North American wetlands, we encourage you to submit the exact location of your sighting and habitat details to:

Dr. Chris Eckert
 Department of Biology
 Queen's University
 Kingston, Ontario, Canada K7L 3N6
 Ph: 613-533-6158, Fx: 613-533-6617
 Email: eckertc@biology.queensu.ca

You can also submit locations and find out more about this project on our website: <http://biology.queensu.ca/floweringrush>

Publication Notices:

Another "Almost Free" Book to Give Away.

Anyone willing to review the new "A Guide to the Ferns of Grey and Bruce Counties, Ontario" by the Bruce-Grey Plant Committee should contact Ed Morris (see inside cover for contact information) before September 1st, 1999. In the event that more than one person volunteers, the recipient will be determined by drawing names from a hat. Anyone who has already received a "free" publication from the FBO for review, but has yet to submit their review manuscript, is ineligible. Those listed in the acknowledgements of this guide are also ineligible.

Bruce Grey Plant Committee. 1999. **A Guide to the Ferns of Grey and Bruce Counties, Ontario.** Stan Brown Printers, Ltd., Owen Sound, Ontario. pp. 119.

This affordable (\$15) field guide covers 50 ferns, plus historical records for three others, found in Bruce and Grey Counties. The guide not only contains keys and descriptions of these species, but also contains an introduction to the Grey-Bruce region, a section devoted to explaining the life-cycle and parts of ferns, illustration and glossary to aid identification, 50 colour plates, and distribution tables. There is even a section about growing ferns from spores.

Copies may be obtained from:

The Bruce-Grey Plant Committee, c/o The Owen Sound Field Naturalists, Box 401, Owen Sound, Ontario. N4K 5P7

or

The Toronto Field Naturalists, 2 Carlton Street, No. 1519, Toronto, Ontario. M5B 1J3 (416) 593-2656



Barron, George. 1999. **Mushrooms of Ontario and Eastern Canada.** Lone Pine Publishing.

Lone Pine Publishing has produced another in their series of excellent field guides illustrated by colour photographs. Anyone with even a casual interest in mushrooms should buy this guide which contains 875 colour photographs and covers 609 species of eastern Canadian mushrooms. Easy to use keys help distinguish similar genera. The author, George Barron, retired mycologist from the University of Guelph, took the vast majority of the beautiful colour photographs himself. The book is available for \$26.95 in many Ontario bookstores.

Crow, Garrett E. and C. Barre Hellquist. 1999. **Aquatic and Wetland Plants of Northeastern North America**. University of Wisconsin Press.

Currently "in press" at The University of Wisconsin Press, this all new Manual provides the badly needed updating of N. C. Fassett's Manual of Aquatic Plants which appeared in 1940 (revision appendix added by E. Ogden in 1957, Univ. Wisconsin Press), yet retains the features which made Fassett's work a classic. Fassett's treatment of 752 taxa has been greatly expanded in this new, 2 volume reference, to include 1139 plant species typically occurring in aquatic and wetland habitats in the northeast.

The aim of this work is to aid in the identification of vascular plants which are native or have become naturalized in aquatic and wetland habitats in the northeast. The range of the manual covers Newfoundland to Minnesota, south to Virginia and Missouri. The keys treat a total of 1139 species (1186 taxa) representing 295 genera in 109 families. To aid the users, 606 pages of illustrations include figures of 1086 taxa, with 93% of the taxa fully or partially illustrated. To further facilitate the identification process, references to the figures are incorporated into the keys. Volume 1 contains the Introduction, Nuisance Aquatic Plants of the Northeast, General Keys, Pteridosperms, Gymnosperms and Angiosperms/Dicots. Volume 2 contains the Angiosperms/Monocots. Both volumes will have a full index.

For more information on how to order and pre-publication discount, e-mail or write to:

Mr. Steve Salemsen, Associate Director
The University of Wisconsin Press
2537 Daniels Street
Madison, WI 53718-6772

Phone: (608) 224-3889, Fax: (608) 224-3924

E-mail: salemson@facstaff.wisc.edu

Ley, Linda M. and Joan M. Crowe. 1999. **An Enthusiasts Guide to the Liverworts and Hornworts of Ontario**. Lakehead University. 136 pp. Paperback; spiral bound.

This very affordable manual covers the four species of hornworts and 153 species of liverworts known from Ontario. Keys, descriptions and line drawings of all species are provided along with descriptions of habitat and distribution. A few species are illustrated with colour photographs. "Quick check" keys using size, leaf shape, and gemmae colour and shape are also provided. Cost is \$15 (postage included) or US \$10 (postage included). For books picked up from the Claude Garton Herbarium, the price is \$13. Cheques can be made payable to Lakehead University and orders sent to Erika North, c/o Claude Garton Herbarium, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1.



Thanks to Jim Pringle, Mike Oldham and Al Harris informing me of these publications. Note that some of the descriptions of these publications were provided by the publishers. -Ed.

Please Note!

The standard source for scientific names used in this newsletter has changed from Morton and Venn (1990) to the more recent Newmaster *et al.* (1998). Contributors or potential contributors to the newsletter are *not* required to ensure that their submissions follow this source, nor are they required to include authorities with the scientific names in their submissions. The editor will take on the responsibility of updating the scientific names and inserting authorities.

Ed Morris 

Morton, J.K. and J.M. Venn. 1990. A checklist of the flora of Ontario vascular plants. University of Waterloo Biology Series Number 34. 218 pp.

Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray and M.J. Oldham. 1998. Ontario Plant List. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 123, 550 pp + appendices.