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FIELD BOTANISTS OF ONTARIO NEWSLETTER

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The **deadline** for submissions for **Volume 12(2) - Summer 1999** is **June 21st, 1999**.

Cover photo: Foamflower (*Tiarella cordifolia* L.) by Ed Morris

Standard source for scientific names of vascular plants:

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.

New Records for *Carex oligocarpa* (Cyperaceae) in Southern Ontario.

Tyler W. Smith¹ and Michael J. Oldham²

Few-fruited Sedge (*Carex oligocarpa* Schk. ex Willd.) is one of two Ontario species in *Carex* Section *Oligocarpace* Carey. It is found in rich, dry to mesic forests in eastern North America, often associated with calcareous bedrock. Rare in much of its range, it was recorded from only five Ontario locations in the "Atlas of the Rare Vascular Plants of Ontario", of which only one was based on a collection made after 1925 (Ball and White 1982). Since that time new records have been reported for Pelee Island, Hastings County, Prince Edward County (5 stations), and the Ottawa Valley in Quebec (Hay and Gagnon 1986, Macdonald *et al.* 1992). There are also recent records from Lennox and Addington County in southeastern Ontario (M.J. Oldham and P.M. Catling collections at DAO, MICH, TRTE). *Carex oligocarpa* is considered provincially rare and ranked S2 (typically between 6 and 20 extant

populations) by the Ontario Natural Heritage Information Centre (Oldham 1996). The purpose of this paper is to report a new county record for *C. oligocarpa* in the Regional Municipality of Hamilton-Wentworth and the rediscovery of this species in the Niagara Regional Municipality.

The Hamilton-Wentworth population was discovered in the Berry Tract nature sanctuary of Royal Botanical Gardens on June 9th, 1998. Eleven fruiting plants were located within 10 metres of the Bruce Trail at the crest of the Niagara Escarpment, just north of Patterson Road. Invasive exotic plants dominate this area of the sanctuary. Dog-strangling Vine (*Cynanchum* sp.) and Garlic Mustard (*Alliaria petiolata* (M. Bieb.) Cavara & Grande) dominate the understory, and Amur Honeysuckle (*Lonicera maackii* (Rupr.) Maxim.) and White Mulberry (*Morus alba* L.) comprise much of the shrub layer. However, several significant native species are found in this community. A small number of Red Mulberry (*Morus rubra* L.) trees are present and seedlings have been found. This is one of the last significant populations of *M. rubra* in Ontario, and is under study by members of the recovery team for that species. Chinquapin Oak (*Quercus muehlenbergii* Engelm.) and Oval-headed Sedge (*Carex cephalophora* Muhlenb. ex Willd.), both significant species in Hamilton-Wentworth (Goodban 1995), are also present

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at the site. A voucher specimen of *C. oligocarpa* from this location has been deposited at HAM (photocopy at NHIC).

Until recently, the only Niagara Regional Municipality record of *Carex oligocarpa* was a 1905 collection by A.B. Klugh (TRT 189605) from Fosters Flats, Niagara Falls. Recent fieldwork at Fosters Flats (Varga and Kor 1993, Riley *et al.* 1996) has failed to relocate *C. oligocarpa* and it is presumed extirpated at this site. During fieldwork for the Ecological Survey of the Niagara Escarpment by Brendon Larson in 1991, a second Niagara site for *C. oligocarpa* was discovered at Beamsville Escarpment Area of Natural and Scientific Interest (Jalava *et al.* 1992, Riley *et al.* 1996). Several clumps were found growing in a mesic broadleaf forest of Sugar Maple (*Acer saccharum* Marsh.) on the escarpment plain. A specimen (B. Larson 91-513) has been deposited at TRT. A second extant Niagara R.M. population was discovered on August 5th, 1998 by Madeline Austen, Jennifer Line, and Helen Godschalk at Wainfleet Wetland Conservation Area (specimen at MICH) during fieldwork for an NHIC gap analysis project.

The new record for Hamilton-Wentworth and the rediscovery in Niagara of *Carex oligocarpa* are very significant additions to our knowledge of the flora of Ontario. The Hamilton population particularly lends support to the hypothesis that *C. oligocarpa* may occur in other locations along the north shore of Lake Ontario or elsewhere on the Niagara Escarpment. Further searching, particularly in rich woods over limestone bedrock, may reveal populations of *C. oligocarpa* elsewhere in southern Ontario. Particular attention should be paid to records of Hitchcock's Sedge (*C. hitchcockiana* Dewey). This species occurs in similar habitats, and as the only other Ontario member of *Carex* Section *Oligocarpaceae*, is very similar in appearance to *C. oligocarpa*. The two are distinguished by the larger size, hairy leaf sheaths and brownish leaf bases of *C. hitchcockiana*, contrasted with the smaller dimensions, smooth leaf sheaths and reddish leaf bases of *C. oligocarpa* (Voss 1972).

Acknowledgements

We would like to thank Madeline Austen, Jennifer Line, and Helen Godschalk for permission to report their recent Niagara collection, and the Niagara Peninsula Conservation Authority for permission to conduct research and collect specimens on their properties. Jim Pringle and Tony Reznicek verified our collections.

Literature Cited

- Ball, P.W. and D.J. White. 1982. *Carex oligocarpa* Willd. Cyperaceae. One page in G.W. Argus *et al.*, editors. 1982-87. Atlas of the Rare Vascular Plants of Ontario. Four parts. National Museum of Natural Sciences, Ottawa. Looseleaf.
- Goodban, A.G. 1995. The Vascular Plant Flora of the Regional Municipality of Hamilton-Wentworth, Ontario. Hamilton Region Conservation Authority, Ancaster.

- Hay, S.G. and D. Gagnon. 1986. *Carex oligocarpa* (Cyperaceae), a rare sedge in Canada newly discovered in Quebec. *Rhodora* 88:427-433.
- Jalava, J.V., B. Larson, C.A. Schaefer and S. Varga. 1992. Biological Inventory and Evaluation of the Beamsville Escarpment Area of Natural and Scientific Interest. Ontario Ministry of Natural Resources, Southern Region, Aurora, Ontario. OFER 9203. v + 80 pp. + maps.
- Macdonald, I.D., M.J. Oldham and D.A. Sutherland. 1992. New stations for *Carex oligocarpa* (Cyperaceae) in Prince Edward County, Ontario. *Michigan Botanist* 31:75-78.
- Oldham, M.J. 1996. Natural Heritage Resources of Ontario: Rare Vascular Plants. Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough, Ontario. 53 pp.
- Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I: Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southern Region, Aurora. Open File Site Report 9601. v + 629 pp., vii + 310 pp.
- Varga, S. and P.S.G. Kor. 1993. Reconnaissance Survey of the Niagara Gorge Area of Natural and Scientific Interest. Ontario Ministry of Natural Resources, Southern Region, Aurora.
- Voss, E.G. 1972. Michigan Flora Part I. Gymnosperms and Monocots. *Bull. Cranbrook Inst. Sci.* 55 and *Univ. Michigan Herbarium*. xv + 488 pp.



Mountain Maple (*Acer spicatum* Lam.).
Photo by Ed Morris

New Vascular Plants for Thunder Bay District, Ontario.

Allan G. Harris¹ and Michael J. Oldham²

The following is an annotated list of additions to the Thunder Bay District vascular plant checklist (Thunder Bay Field Naturalists 1998). Some species are included in the recently revised version of the checklist based on records reported here. Others species reported here were discovered after the revised Thunder Bay plant checklist went to press. Additions include species newly discovered in the field, as well as recently described species and older specimens from herbaria.

One deletion from the checklist needs to be made. A collection (M.J. Oldham #17454, DAO, LKHD, MICH) initially identified as *Juncus gerardii* Loisel, and reported as this by Harris and Oldham (1996), has been revised by A.A. Reznicek to *Juncus compressus* Jacq. (also reported by Harris and Oldham (1996), but based only on a sight record). *Juncus gerardii* should be removed from the list of Thunder Bay District plants.

Nomenclature follows Morton and Venn (1990) with the following exceptions: *Botrychium spathulatum* and *Corispermum* spp. are recently recognized species considered provincially rare in Ontario (Oldham 1996); *Scirpus hattorianus* is a "split" from *S. atrovirens* which is gaining acceptance.

Nine of the species are rare in Ontario (Oldham 1996). Herbarium specimens are cited using the following acronyms: ALTA (University of Alberta, Edmonton), DAO (Agriculture Canada, Ottawa), LKHD (Lakehead University, Thunder Bay), MICH (University of Michigan, Ann Arbor), NHIC (Natural Heritage Information Centre, Peterborough), TRT (University of Toronto, Toronto), TRTE (University of Toronto, Erindale Campus, Mississauga), and UNB (University of New Brunswick, Fredericton). An exclamation point (!) or "det." indicates a specimen has been verified by or identified by the botanist listed. We would like to thank Tony Reznicek, Randy Bayer, Peter Ball, Hal Hinds, Don Britton, and Herb Wagner for identifying or verifying selected specimens. Wasyl Bakowsky assisted with fieldwork and specimen identification. Erika North helped locate herbarium specimens.

Selaginellaceae

Prairie Spikemoss

Selaginella densa Rydb.

Collected in 1998 at Stanley Cemetery prairie, near Kakabeka Falls (M.J. Oldham & W.D. Bakowsky #20982, OAC, verified by D.M. Britton). Rare and local in *Stipa comata* stand on hillside. A prairie and mountain species known from western Ontario along the Manitoba border. The Stanley record is a considerable eastward extension of its Ontario range. Provincially rare.

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Ophioglossaceae

Spatulate Moonwort

Botrychium spathulatum W.H. Wagner

Collected in 1998 at Marathon (M.J. Oldham #20704b, MICH (det. W.H. Wagner), NHIC). Dry, sandy ground near tracks. This widespread boreal species is very similar to *B. minganese* (Wagner and Wagner 1990). A specimen from Angler Settlement, Thunder Bay District, is the holotype (original specimen from which the description of the species is made). Other Thunder Bay District specimens are from Silver Islet and Mobert (Wagner and Wagner 1990). Provincially rare.

Dryopteridaceae

Marginal Shield Fern

Dryopteris marginalis (L.) Gray

Collected at Michipicoten Island in 1964 (J.H. Soper & F.A. Fraser, TRT 139239) in a rock crevice at the base of a cliff. Also reported from Pukaskwa National Park (Anon. No date) and from the south end of Lake Nipigon (Cody and Britton 1989), but no specimen could be located for these sites. This distinctive fern, which is common in southern Ontario, is an eastern species at the northwest limit of its range.

Poaceae

Hairy Chess

Bromus commutatus Schrader

Single specimen collected on waste ground near Marathon in 1939 (T.M.C. Taylor *et al.*, TRT). An introduced weed.

Japanese Brome

Bromus japonicus Thunb. ex Murray

Collected at the Neebing Railway Yard, City of Thunder Bay, in 1998 (M.J. Oldham #20726, DAO, LKHD, MICH). An introduced weed.

Ensheathed Dropseed

Sporobolus vaginiflorus (Torrey ex Gray) Torrey ex Wood

Collected in 1986 at Middle Falls Provincial Park (D. Brunton, TRT 235867). Disturbed roadside. Native to eastern North America, but probably introduced at this location.

Cyperaceae

Prairie Gray Sedge

Carex conoidea Schk. ex Willd.

Collected on a rocky shoreline at the west end of Gunflint Lake in 1996 (M.J. Oldham & W.D. Bakowsky #1877, LKHD (photocopy), MICH (! A.A. Reznicek), NHIC). This population is "*C. katahdinensis*", sometimes treated as a separate species. *Carex conoidea* is an eastern species at the western edge of its range. Known from Quetico and adjacent Minnesota (as *C. katahdinensis*) and recently found at Lake of the Woods (as *C. conoidea sensu stricto*). Provincially rare.

Mosquito Bulrush*Scirpus hattorianus* Makino

Collected north of Watap Lake (M.J. Oldham & W.D. Bakowsky #17769, MICH (! A.A. Reznicek)) in sandy, scrubby woodland and in moist woods near the Stanley Cemetery (M.J. Oldham & W.D. Bakowsky #17836, MICH (! A.A. Reznicek), LKHD). Lumped with *Scirpus atrovirens* by some authorities. This species is not recognized by Morton and Venn (1990), but is treated in Newmaster *et al.* (1998). *Scirpus hattorianus* is widespread in southern Ontario, north to at least Thunder Bay District

Asteraceae**Common Pussytoes***Antennaria howellii* E. Greene

Collected in 1939 from a sand flat near Marathon (T.M.C. Taylor *et al.*, TRT 112145). Recently collected at several sites in Thunder Bay District by Mike Oldham and Wasyl Bakowsky; specimens verified by R.J. Bayer and deposited at ALTA. Local specimens (including M.J. Oldham & W.D. Bakowsky #18826, ALTA (det. R.J. Bayer), LKHD) are ssp. *neodioica* (E. Greene) R.J. Bayer, previously known as *A. neodioica*. Sometimes lumped with *A. neglecta*. This plant is probably locally common in Thunder Bay District, but is difficult to distinguish from other *Antennaria* species.

Pilewort*Erechtites hieracifolia* (L.) Raf. ex DC.

Single specimen collected on a rocky hillside at Pays Plat in 1937 (T.M.C. Taylor *et al.*, TRT). Widespread in eastern North America, northwest to Duluth.

Brassicaceae**Mouse-ear Cress***Arabidopsis thaliana* (L.) Heynh.

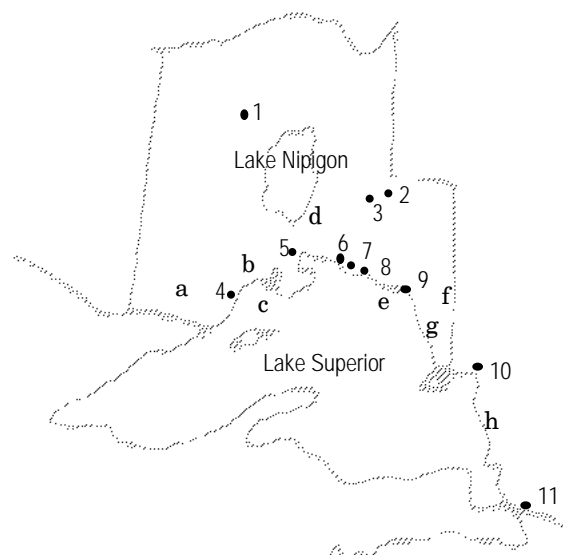
Collected at Hattie Cove campground, Pukaskwa National Park in 1997 (M.J. Oldham #19893, MICH (! A.A. Reznicek)). Introduced European weed.

False Flax*Camelina microcarpa* Andr. ex DC.

Collected in the 1930's from railway tracks and waste ground at Schreiber, Marathon and Patterson Island (R.C. Hosie (Patterson I. specimen), TRT 185873). Introduced weed.

Whitlow-grass*Erophila verna* (L.) Chevall.

Campground weed at Hattie Cove in Pukaskwa National Park in 1997 (M.J. Oldham #19892 MICH (! A.A. Reznicek), TRT). Rare and local. Treated as *Draba verna* by some authors. Introduced European weed.

The Thunder Bay District

Parks			
Kakabeka Falls P.P.	a	Neys P.P.	e
Ouimet Canyon P.P.	b	White River P.P.	f
Sleeping Giant P.P.	c	Pukaskwa Nat.P.	g
Lake Nipigon P.P.	d	Lake Superior P.P.	h
Communities			
Armstrong	1	Schreiber	7
Longlac	2	Terrace Bay	8
Geralton	3	Marathon	9
ThunderBay	4	Wawa	10
Red Rock	5	Sault Ste. Marie	11
Rosspport	6		

Chenopodiaceae**Late-flowering Goosefoot***Chenopodium strictum* Roth

Collected in 1986 in disturbed ground near the Terry Fox Lookout (D. Brunton, TRT 235935). Introduced weed.

American Bugseed*Corispermum americanum* (Nuttall) Nuttall

Collected in 1972 at Lakehead University campus (C.E. Garton, LKHD). Waste ground. This specimen and specimens of the following two species, were originally identified as *C. hyssopifolium*, but recently revised. The taxonomy and distribution of *Corispermum* spp. are still tentative (see Mosyakin 1995). *Corispermum hyssopifolium* is a European species which, though widely reported, may not occur in North America. The three species discussed here are North American species, though sometimes weedy; all are provincially rare.

Pallas' Bugseed*Corispermum pallasii* Steven

Collected in 1986 at Stanley Cemetery (D. Brunton, TRT 235938). Disturbed sandy soil under jack pines. Provincially rare.

Villose Bugseed*Corispermum villosum* Rydb.

Collected at Pays Plat (1937) and Thunder Bay (1953) (R.C. Hosie *et al.* and C.E. Garton, TRT). Railway ballast. Provincially rare.

Elatinaceae**Western Waterwort***Elatine triandra* Schkr.

This small, obscure submergent was collected at Boulevard Lake in August 1996 (J. Mooney, LKHD 103169). Widespread across North America; known from Quetico and northern Minnesota. Provincially rare.

Lentibulariaceae**Inverted Bladderwort***Utricularia resupinata* Greene ex. Bigelow.

This purple-flowered species was collected at Two Island Lake in 1936 (T.M.C. Taylor, TRT 119991). Shallow water on a sand bottom. Its range includes the Atlantic Coastal Plain and the Great Lakes region. Near the northwest limit of its range here; also found in Quetico and northeastern Minnesota.

Onagraceae**Oake's Evening-primrose***Oenothera oakesiana* (A. Gray) Wat. & Coul.

Collected on rocky open ground at the summit of Mount McKay in 1997 (M.J. Oldham & W.D. Bakowsky #19901, MICH (! A.A. Reznicek), LKHD) and in dry, open meadows beside railway near Marathon in 1995 (M.J. Oldham #18039, MICH (! A.A. Reznicek)). Similar to other members of the *O. biennis* group. Its range includes southern Ontario and eastern Quebec, extending west to Minnesota.

Villose Evening-primrose*Oenothera villosa* Thunb.

Collected on a dry roadside in Pardee Township in 1936 (Cormack & Mayall, TRT). The original specimen was identified as *O. biennis*, but revised in 1981. A southern and western species, possibly introduced in Thunder Bay District. Very similar to *O. oakesiana* and related species. Provincially rare.

Polygonaceae**Buckwheat***Fagopyrum esculentum* Moench

Railway near Dawson Road Lots in Conmee Township in 1997 (M.J. Oldham & W.D. Bakowsky #20243, MICH (! A.A. Reznicek)). Asian species escaped from cultivation.

Common Knotweed*Polygonum arenastrum* Jordan ex Boreau

Two records from disturbed ground at Mountain Lake and Kilkenny Twp. (D. Brunton, TRT 235928; C.E. Garton, TRT 231717). Introduced Eurasian weed.

Shore Knotweed*Polygonum buxiforme* Small

Collected at three locations in 1995: Pic River bank, Marathon and Stanley Cemetery (M.J. Oldham & W.D. Bakowsky collections at TRTE and UNB, verified by P.W. Ball and/or H.R. Hinds). Very similar to *P. arenastrum* and *P. aviculare* with which it is sometimes lumped. Considered native to North America, but its range is difficult to delimit due to confusion with similar species.

Rubiaceae**Stiff Marsh Bedstraw***Galium tinctorium* L.

Collected in 1996 in Fraleigh Township near Fallingsnow Lake (M.J. Oldham & W.D. Bakowsky, LKHD, MICH (! A.A. Reznicek), NHIC). Similar to *G. trifidum* with which it is sometime lumped. Eastern North America, west to Minnesota.

Salicaceae**Blue-leaved Willow***Salix myricoides* Muhlenb.

Collected in 1939 at two locations near Marathon (T.M.C. Taylor, TRT 112273). Also reported from Black Bay Peninsula (Soper and Heimberger 1982). Eastern species at the western limit of its range. Provincially rare.

Saxifragaceae**American Grass of Parnassus***Parnassia glauca* Raf.

Collected in 1981 at Black Bay Peninsula (J.L. Riley, TRT 224272). Open graminoid fen. Also reported from Pukaskwa National Park (Anon. No date). Widespread in northeastern North America.

Violaceae

Alpine Violet

Viola labradorica Schrank

Collected at Little Trout Bay in 1996 (M.J. Oldham & W.D. Bakowsky 18841, LKHD (photocopy), MICH, NHIC). Cliff above lake; rare and local. A widespread northern species. Sometimes treated as a variety of *Viola adunca*.

Literature Cited

- Anonymous. No date. Botanical Inventory Pukaskwa National Park (Checklist available through the Friends of Pukaskwa).
- Cody, W.J. and D.M. Britton. 1989. Ferns and Fern Allies of Canada. Research Branch, Agriculture Canada. Publication 1829/E. 430 pp.
- Harris, A.G. and M.J. Oldham. 1996. New plants for Thunder Bay District. Field Botanists of Ontario Newsletter 9(2): 6 – 10.
- 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.
- Mosyakin, S.L. 1995. New taxa of *Corispermum* L. (Chenopodiaceae) with preliminary comments on the taxonomy of the genus in North America. Novon 5(4): 340 – 353.
- Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray, and M.J. Oldham. 1998. Ontario Plant List. Forest Research Information Paper 123, Ontario Forest Research Institute, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario.
- Oldham, M.J. 1996. Natural Heritage Resources of Ontario: Rare Vascular Plants. Second edition. Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough, Ontario. 53 pp.
- Soper, J.H. and M.L. Heimburger. 1982. The Shrubs of Ontario. Royal Ontario Museum Publications in Life Sciences. 495 pp.
- Thunder Bay Field Naturalists. 1998. Checklist of vascular plants of Thunder Bay District (revised). Published by the Thunder Bay Field Naturalists. 52 pp.
- Wagner, W.H. and F.S. Wagner. 1990. Notes on the fan-leaflet group of moonworts in North America with descriptions of two new members. American Fern Journal 80 (3): 73-81.



Painted Trillium (*Trillium undulatum* Willd.)
Photo by Ed Morris

Comments on *Gentiana rubricaulis* (Gentianaceae).

In the last issue, Volume 11(4), new FBO member Alan Proctor asked a few questions of the FBO membership. He was having trouble identifying some *Gentians* near Caledon Lake, and after much consultation between published sources, he found that they did not agree with respect to character descriptions, nor did his own descriptions of these plants always agree with those sources. He took pictures of living specimens, presented his homework, and requested comments from the FBO membership.

It is not uncommon for sources to sometimes appear to disagree in their descriptions of a particular species' characteristics. This is frustrating at times, but it is understandable in that botanists may disagree about how best to describe subjective characteristics such as the particular shade of green of a plant's foliage. Another example which is often cited in keys, but is of limited use to someone not familiar to both species, is the relative "crunchyness" of the stems of *Hardstem* or *Softstem* *Bulrush* when squeezed between thumb and finger. Subjective characters are not particularly easy to describe in written form, yet they are sometimes convenient recognition characteristics in the field. Often, they are often of little use when identifying pressed specimens.

I would like to thank Dr. Jim Pringle, Sue Bryan,

and Joan Crowe for volunteering their comments, and for Mr. Proctor for writing me initially. The titles used in to introduce each response were invented by the editorial committee, not the original authors.

-Ed

Part 1: General Comments.

Dear Ed,

Here are my comments on *Gentiana rubricaulis* Schwein., in response to your letter of 20th January. Mr. Proctor is obviously aware of my paper on this species in *The Michigan Botanist*. It may enhance my credibility if I mention that I am also responsible for the treatment of the Gentianaceae to appear in the *Flora of North America North of Mexico*.

I have seen specimens of *G. rubricaulis* from the northern parts of Peel and Halton regions and southern Wellington County, so the record is not surprising. The photographs you sent [me] confirm that Mr. Proctor's identification of the plants is correct.

Picture 3 shows a plant that is really typical of *G. rubricaulis*, showing the purplish corolla, strongly ascending involucreal leaves, proportionately long uppermost internode below the involucre, and even the reddish stem to which the specific epithet refers.

Corolla colour is variable in this species. The most common corolla colour is definitely violet rather than blue, with a greyish cast to it--not a very bright colour as gentian corollas go. I have seen this form at many sites, including one near Rocky Saugeen, Ontario, and at and near the University of Michigan Biological Station near Pellston, Michigan. However, in the heart of the range of the species, when I was working on the study represented in *The Michigan Botanist*, I also found fairly often some plants with bluer corollas; Picture 2 appears to show such a plant at the eastern limits of the range. There is a continuum in this respect rather

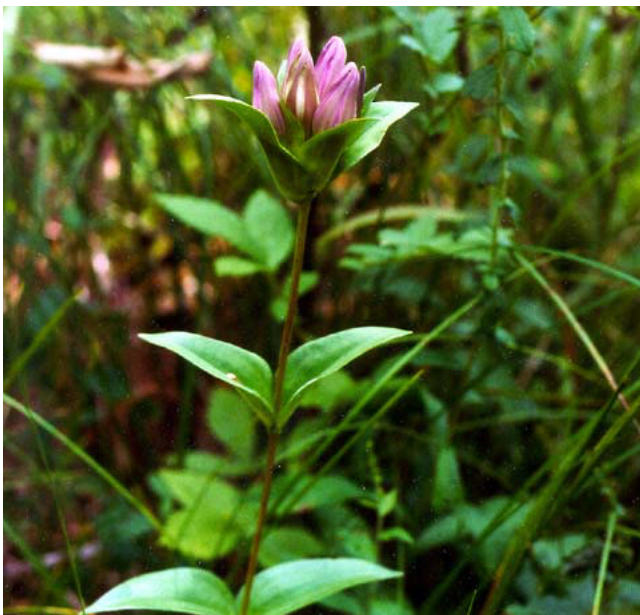
than two sharply demarcated categories. I have also found a few plants that had rose-pink or white corollas. The plant in Mr. Proctor's Picture 1 seems to be an especially attractive one, with the violet of the corollas less greyed than in many plants.

My first impression upon seeing the picture in the Newsletter was that the corollas of that plant were definitely closed than those of most plants of *G. rubricaulis*. It has, however, been quite a while since I've seen *G. rubricaulis* in the field, however, and my mental image of the species may have become overly influenced by herbarium specimens, in which the pressing process tends to spread apart the corolla lobes. There doesn't seem to be a great difference in this respect between the plants in Mr. Proctor's photographs and the "representative specimen" I chose to photograph and then draw long ago, for the illustration in *The Michigan Botanist*, or the plant in another photograph I took when working on that project and which I have been looking at in working on this correspondence.

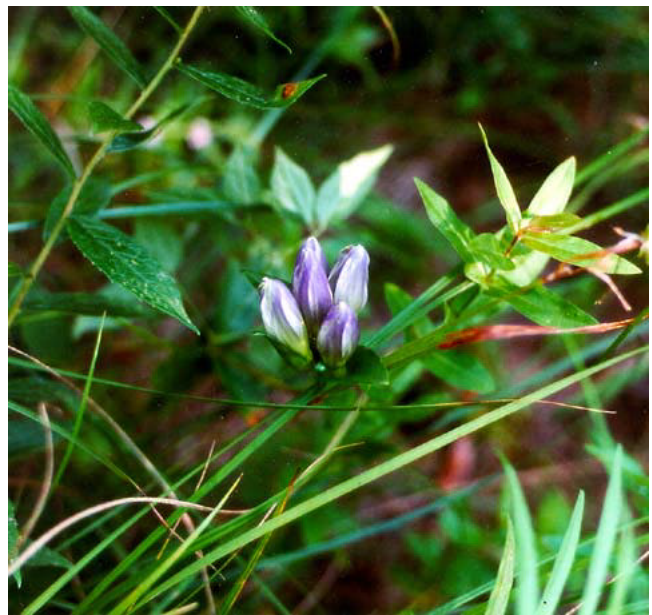
In none of these plants are the corollas completely and tightly closed as in *G. linearis* Froelich. The descriptions in the manuals do not deny the existence of the "vertical folds" in *G. rubricaulis*. In the range of those two manuals, they would be characteristic of all of the species treated by Fernald as section *Pneumonanthe*, so they would not likely be mentioned in the description of an individual species.

With regard to inflorescences, I point out that Fernald says that axillary flowers are "sometimes" present. My manuscript says "rarely." No one says "always" or even "usually." That photograph I got out for this purposes proves that it's definitely not "never."

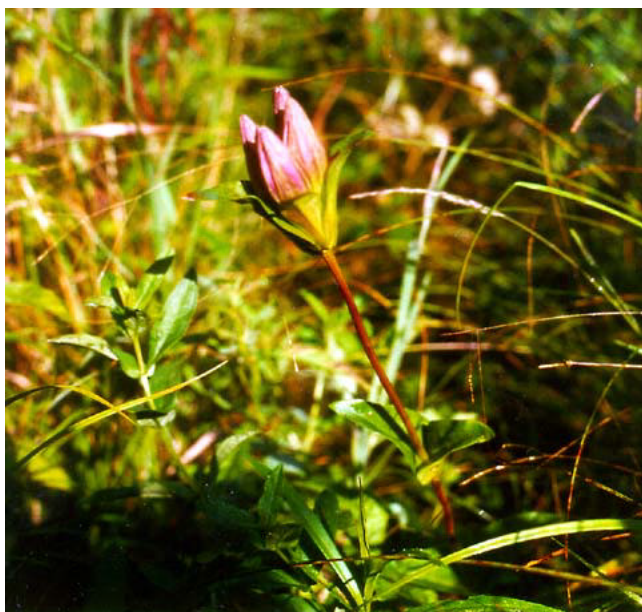
As for "narrow" or "broad" rectangular calyx sinuses, I think it's relevant that these are relative terms. If one is thinking of the species where the sinus is V-shaped, there being no gap between the bases of the calyx lobes, as in *G. prostrata*, then the sinus of *G. rubricaulis* is "broad." In some other context, however, even in



Picture 1 of *Gentiana rubricaulis* Schwein.
Photo by Alan Proctor.



Picture 2 of *G. rubricaulis*. Photo by Alan Proctor



Picture 3 of *G. rubricaulis*. Photo by Alan Proctor.

comparison with the width of the calyx lobes, I could readily see the same calyx sinuses being described as "narrow."

Much the same applies to "light" vs. "full" green. The leaves of *G. rubricaulis*, including those photographed by Mr. Proctor, are definitely a lighter shade of green than one would find, for example, in healthy specimens of the related species *G. linearis* and *G. villosa* L. One could, however, think of many other plants that have lighter green leaves. *G. rubricaulis* often grows in sandy soils that are probably not rich in some essential elements, and probably for that reason the leaves are sometimes a bit paler than those of the relatively robust specimen shown in Picture 1. Picture 2 doesn't show the foliage well, and the plant in Picture 3 seems to have leaves that are lighter green than those of many other plants.

The following is the portion of my manuscript for the Flora of North America North of Mexico dealing with *G. rubricaulis* as it now stands. (I shan't submit a "final" version until the editors are ready for it). Perhaps Mr. Proctor will find that it suits the Caledon Lake plants better.

Jim Pringle

Part 2: Distribution Notes from Grey and Bruce Counties.

Dear Ed,

I was interested in the piece about *Gentiana rubricaulis* in [Volume 11(4)]. Someone sent me some specimens of this from southern Grey County last summer. They were having the same kind of difficulty as was outlined in the article. They sent me some specimens, but they were just flowers and they had opened them up so we couldn't really see what they were like originally. I know I asked them to collect some more this summer, but I don't seem to have kept

a record of this and I can't remember their name! Anyway, it has certainly alerted us to keep a lookout for them. I talked to Joe Johnson and he claims he has no difficulty identifying it even when the flowers have withered! He says there are certain combinations of characteristics which you can look for which pins it down really well. However, he hadn't looked at the Newsletter yet! Incidentally, it is rare in both the Bruce County and southern Grey County according to Joe's treatise that he did for the MNR in 1990. He had no record for Bruce County south of the Peninsula (ie Hwy 21). It certainly seems to be an interesting topic, and maybe other members will have some comments.

Joan Crowe

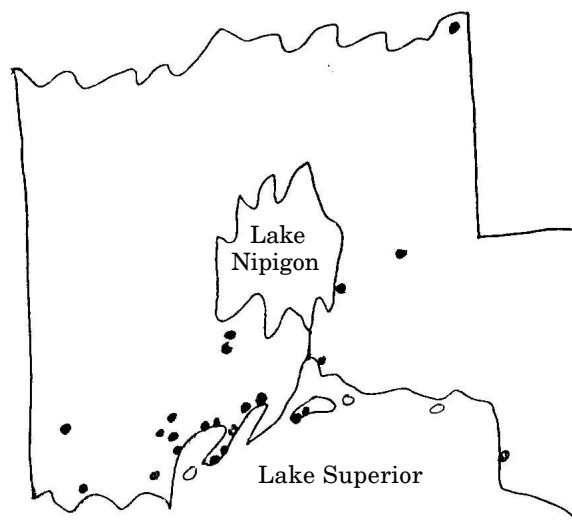
Part 3: Distribution Notes from Thunder Bay District.

Dear Mr. Proctor,

Enclosed is a printout copy of the records of *Gentiana rubricaulis* from the Herbarium at Lakehead University (Claude Garton Herbarium). As you can see, this species is fairly common here in Thunder Bay District. In fact, it is by far our commonest gentian species here. [Included] is a map I drew roughly plotting the locations of these collections (plus a few others for which I have records). The species appears less commonly in the northern half of the district, but this may be largely reflect th lack of collecting north of Lake Nipigon because there are no more roads, just wilderness, so canoe or air access are the only means to get in there and collect anything.

[Below] are the number of entries for each gentian species in Thunder Bay District. This should give you some sense of the "commonness" or rarity.

Sue Bryan



Sketch Map of the distribution of *Gentiana rubricaulis* in the Thunder Bay District.

Gentianaceae of the Thunder Bay District†

Species	# Records	Status
<i>Gentiana andrewsii</i> Griseb.	1	Regionally Rare
<i>Gentiana linearis</i> Froelich	1	Regionally Rare
<i>Gentiana rubricaulis</i> Scwein.	33	
<i>Gentianella amarella</i> (L.) Börner	7	Regionally Rare
<i>Gentianopsis crinita</i> (Froelich) Ma	2	Regionally Rare
<i>Gentianopsis dentonsa</i> (Rottb.) Ma	1	Regionally Rare
<i>Halenia deflexa</i> (Smith) Griseb.	31	

†Records from the Claude Garton Herbarium (LKHD).

Announcements:**A New Organization and Newsletter for Prairie Enthusiasts.**

This spring, "The Bluestem Banner" was introduced by the Ontario Tallgrass Prairie and Savanna Association. The mission statement of this organization is "to achieve the identification, conservation, management and restoration of tallgrass prairie, savanna and related ecological communities in Ontario. General enquiries should be made to:

Don Gordon,
Program Coordinator,
659 Exeter Road,
London, Ontario.
N6E-1L3

(519) 873-4631

tallgrass@carolinian.org

Free Books Available!

Volunteers are needed to review the following publications for the FBO Newsletter. As a reward, you get to keep a copy of the book you review.

Rabaler, R.K. 1998. **Gleason's Plants of Michigan**. Oakleaf Press, Ann Arbor, Michigan. 398 pp.
(see *Publication Notices* for more information)

Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray, and M.J. Oldham. 1998. **Ontario Plant List**. Forest Research Information Paper 123, Ontario Forest Research Institute, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario.

Burke, P.S., C.D. Jones, J.M. Line, M.J. Oldham, and P.J. Sorrill. 1999. **1998 Peterborough County Natural History Summary**. Peterborough Field Naturalists, Natural Heritage Information Centre, Trent University, Peterborough, Ontario. 219 pp.
(see *Publication Notices* for more information)

Volunteers who have received other titles for review, but have not yet submitted their manuscripts to the FBO Newsletter, are not eligible.

Ed Morris & M.J. Oldham

New NHIC Plant Lists Available on the Web.

The last Ontario Ministry of Natural Resources Natural Heritage Information Centre (NHIC) list of the province's rare vascular plants was produced in December 1996. The discovery of several new plants for the province (see FBO Newsletter Volume 11(1):9-12), as well as better information on the distribution and status of others, means a number of revisions to this list need to be made. The new, February 1999, version of the NHIC rare vascular plant list contains 732 plant species considered provincially rare and tracked by the NHIC. For each species the following information is provided: scientific name, common name, family name, global rank, subnational rank, COSEWIC status, MNR status, Ontario counties of occurrence, and notes. The new list can be found on the NHIC web page.

www.mnr.gov.on.ca/MNR/nhic/nhic.html

Thirteen species were recently added to the NHIC rare vascular plant list. For some of these species (e.g., *Artemisia dracuncululus*, *Carex parryana*, *Najas marina*) we are not certain whether the species is native to Ontario or introduced, but based on habitat and phytogeography we feel there is a good chance they are native and until we have evidence to the contrary are treating them as rare native elements of the provincial flora.

Also, for the first time on the NHIC web page, complete lists of the province's vascular plants, bryophytes, and lichens can be found. These lists include scientific name, common name (though many bryophytes and lichens lack a common name), family name, global and subnational ranks (the status of some non-vascular plants is not yet well enough known to assign ranks).

M.J. Oldham

As of March 24th, 1999, the rare species lists had not yet been updated. However, I expect that they will be updated in the very near future.

-Ed



Trailing Arbutus (*Epigaea repens* L.)
Photo by Ed Morris.

Gerry Bennett: 1921-1999.

Since the 1950's, Gerry was one of Toronto's best known and loved naturalists. He was very active in the field and very personable. He made it a point to know people and to identify them just like plant species, on subsequent occasions. On outings with Gerry, he would occasionally pull me aside, ask for the names of unidentified attendees and then pull out his stubby pencil to log them.

Gerry was active on Field Botanists of Ontario outings, enjoying the fraternizing almost as much as the botanizing. He wrote up field events and contributed botanical quizzes to the FBO Newsletter. His droll wit and delight in puns were quite apparent here. On January 10th, 1999, while putting out birdseed, Gerry was felled by a heart attack.

George Bryant

Publication Notices:

Crins, W.J., C.S. Blaney, and D.F. Brunton. 1998. **Checklist of the Vascular Plants of Algonquin Provincial Park** (3rd edition).

Available for \$2.95 from The Friends of Algonquin Park, P.O. Box 248, Whitney, Ontario. K0J 2M0.

This new version of the Algonquin Park vascular plant checklist updates the earlier 1988 and 1992 editions. The park plant list now stands at 1089 taxa (1049 species, 24 hybrids, and 16 additional varieties/subspecies). The checklist provides a status (common, uncommon, or rare) in both the east and west sides of the park, and will be useful to any botanist visiting the park or interested in the flora of this part of Ontario.



Dutchmen's Breeches (*Dicentra cucullaria* (L.) Bernh.)
Photo by Ed Morris.

Thunder Bay Field Naturalists. 1998. **Checklist of Vascular Plants of Thunder Bay District**. 50 pp.

Available for \$5.00 from Erika North, Claude Garton Herbarium, Lakehead University, 955 Oliver Rd., Thunder Bay, Ontario. P7B 5E1
(cheques should be payable to Erika North).

This checklist, revised in 1998, includes 1106 species of vascular plants known from Thunder Bay District. Updates to the current checklist include 84 species added since the last edition and the addition of "regionally rare" status. Provincially rare, introduced and arctic-alpine disjunct species are listed.

* * *

Belland, R.J. 1998. **Rare Mosses of Canada: A Review and First Listing**. Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Ottawa. 91 pp.

For information on obtaining this publication contact the COSEWIC Secretariat, c/o Canadian Wildlife Service, Environment Canada, Ottawa, Ontario K1A 0H3.

This listing of rare Canadian mosses joins earlier lists of vascular plants (Argus and Pryer 1990) and lichens (Goward, Brodo and Clayden 1998), which help set priorities for the conservation of Canadian plants. Belland lists 214 moss species considered rare in Canada (known from 20 or fewer sites nationally), 22% of the approximately 965 species known from the country. Information on taxonomy, province(s) of occurrence, habitats, ecozones, global rank, national rank, provincial ranks, global range, threats, and references are provided (where known) for each species treated.

* * *

Burke, P.S., C.D. Jones, J.M. Line, M.J. Oldham, and P.J. Sorrill. 1999. **1998 Peterborough County Natural History Summary**. Peterborough Field Naturalists, Natural Heritage Information Centre, Trent University, Peterborough, Ontario. 219 pp.

Available for \$15.00 from the Peterborough Field Naturalists, P.O. Box 1532, Peterborough, Ontario K9J 7H7.

Contains a checklist of the vascular plants of Peterborough County listing 1,166 taxa, as well as chapters covering the birds, mammals, amphibians and reptiles, butterflies, and dragonflies and damselflies of the county.

Keenan, Philip. 1998. **Wild Orchids Across North America: A Botanical Travelogue.** Timber Press, Inc, Portland, OR. 321 pp.

Available for \$39.95 (US) from Timber Press, Inc., 133 S.W. Second Avenue, Suite 450, Portland, OR, 97204-3527.

The author has driven more than 100 000 miles - and walked several hundred more - in pursuit of orchids in their native habitats. This is a delightfully chatty account of his field trips in Canada and throughout the U.S. From Alaska to the Maritime Provinces, from the desert Southwest to the Pine Barres of New Jersey, Keenan, this book documents most of the 145 American orchid species in absolutely remarkable colour photographs. In addition to orchids and other fascinating wildlife still to be found on our continent despite encroaching developing. Additional information may be found at www.timberpress.com

* * *

Rabeler, R.K. 1998. **Gleason's Plants of Michigan.** Oakleaf Press, Ann Arbor, Michigan. 398 pp.

Available for \$21.95 (US) from Oakleaf Press, 920 Vesper Road, Ann Arbor MI. 48103-3015

(734) 668-8579
(734) 668-8538 (fax)
oakleaf@ameritech.net

Gleason's Plants of Michigan is an one-volume field guide to the flora (trees, shrubs, and other flowering plants, and gymnosperms) of Michigan and the surrounding Great Lakes area. It will be useful for naturalists, environmental specialists, and all who love the wildflowers and native plants of the Great Lakes. The book is trade paper, 4 3/4" x 8", 398 pages, made to last in the field, with sewn signatures and a specially waterproof (Kivar®) cover. Gleason's Plants of Michigan is based on the classic The Plants of Michigan by H.A. Gleason, completely updated, revised, and expanded by Richard K. Rabeler of the University of Michigan Herbarium, with editing by Vivienne N. Armentrout and illustrations by Elise Christine Bush. For more information, write to the address above or consult the following web-page:

www.ameritech.net/users/oakleaf/oakleaf.html



Bluebead Lily (*Clintonia borealis* (Aiton) Raf.)
Photo by Ed Morris.