

Recommended References for the Identification of Canadian Vascular Plants

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ADDITIONAL KINDS OF IDENTIFICATION AIDS

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VALUE OF IDENTIFICATION

INTRODUCTION

There is need for accurate plant identification, particularly in relation to biodiversity protection, alien invaders, and commercial collecting of wild plants. Researchers, agricultural advisers, students, and many others have asked us what literature we use to identify plants. To be practical, a list of identification aids must be relatively short and selective. The objective is to indicate the important, available sources, rather than provide an overwhelmingly complete list. The following is a personal selection, representing the references we use most frequently.

We have included the most complete, current, and useful references for identifying plants in Canada as a whole, and in specific geographical areas. In listing those we consider most relevant, we have often excluded works of narrow coverage. We have included, despite narrow coverage in some cases, texts that are particularly useful for a particular group or a limited area that is otherwise not covered in the major comprehensive works available. For example, for the province of Ontario, which has no comprehensive identification manual, we have listed several sources with relatively narrow coverage, and we have also included a reference to the adjacent Michigan flora. In contrast, for British Columbia, which has a recent authoritative flora, we have not cited several works of narrower scope, despite their excellence.

References listed below include not only books with identification keys, descriptions, and illustrations that are useful for identification, but also major lists of plants. These lists help to indicate what is present, so that a larger floristic guide covering a broad area can be conveniently used (by simply eliminating the species that are not listed for a given region).

Geographically based texts are not the only kinds of identification aids that are available. Others include special bibliographies, vascular plant herbaria and their staff, expert systematists, guides to collecting, and information organized in subject categories such as cultivated plants and poisonous plants. Examples of these kinds of aids are outlined in the concluding section "Additional Kinds of Identification Aids." Also included in this section is a listing of special information sources that will assist with identifications, determining correct names, and related information. Finally, we present information on the importance of plant identification that may assist those working in this area to encourage the increasing support that is needed to do the job.

Acknowledgments. Reviewers: W.J. Cody, J. Cayouette. Artwork: B. Brookes.



Illustration:

A lesson in plant identification. Frontispiece of: Pallas, P.S. 1784. *Flora Rossica. Imperiali J.J. Weitbrecht, Petropoli (St. Petersburg), Russia. vol. 1.*

NOTES ON CRITERIA

Various aspects that influenced our choice of identification aids are indicated below in the following list. We emphasize that none of these was essential for inclusion.

1. Quality and recency of publication: accuracy of information. (Classic treatments, although dated, often remain useful, and some outstanding examples are included.)
 2. Quantity: inclusion of a substantial number of species in Canada.
 3. Coverage: all of the species of a relatively large area. (In cases where regions are not adequately treated in a comprehensive flora, local floras are cited.)
 4. Exclusivity: only or mostly the species of a relatively large area. (Florals from adjacent U.S. states are included only when, in the absence of adequate Canadian floras, they substantially assist in identification of Canadian plants.)
 5. Complementarity: references such as simple lists of species and guides to nomenclature that, in combination with other works, assist in identification and provision of correct names.
 6. Inclusion of identification keys.
 7. Inclusion of information (additional to keys) assisting in identification: illustrations, distribution maps, descriptions.
 8. Guides to plants of distinctive, widespread habitats in Canada: northern plants, aquatic plants, weeds.
 9. Guides to plants of large and economically important or popular Canadian families or genera: grasses, sedges, ferns.
 10. Guides to extremely important classes of economic plants in Canada: trees, toxic plants, cultivated plants.
 11. Information on where identification aids can be located for foreign plants of potential danger to Canada as introduced weeds, alien invaders, commodity contaminants, illicit drugs, etc.
 12. Key bibliographic tools of assistance to researchers in locating extensive information needed to clarify problems in classification. (This information will be important primarily to specialists, but occasionally plants are encountered that simply cannot be satisfactorily identified using guides such as listed here, and it will be necessary to search out very specialized publications or locate an expert for help.)
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GUIDES

Guides to large areas of Canada

- Aiken, S.G. and S.J. Darbyshire. 1983. Grass genera of Western Canadian cattle rangelands. Monograph No. 29. Research Branch, Agriculture Canada, Ottawa, ON. 173 pp. [One of several useful tools for identifying Canadian grasses.]
- Best, K.F. and J.B. Campbell. 1971. Prairie grasses identified and described by vegetative characters. Publication 1413, Canada Department of Agriculture, Ottawa, ON. 239 pp. [This guide includes a vegetative key, and describes and illustrates 104 grass species characteristic of rangelands of the Prairie Provinces. For each, details of the top of the leaf sheath are shown.]
- Boivin, B. 1966-1968. Énumération des plantes du Canada. *Provancheria* (Mémoires de l'Herbier Louis-Marie, Université Laval, Quebec) no 6. Irregularly paginated. [An authoritative compilation of Canadian plant species, with an indication of their provincial distribution and references to related classification literature. Also published in *Naturaliste Canadian* vols. 93 and 94.]
- Boivin, B. 1967-1981. Flora of the Prairie Provinces. *Provancheria* (Mémoires de l'Herbier Louis-Marie, Faculté d'Agriculture, Université Laval). 5 vols. [Lacking illustrations (except for part 5) and distribution maps, nevertheless the most complete flora for the Prairie Provinces.]
Part 1 (1967). Pteroids, ferns, conifers and woody dicopsids. *Provancheria* 2: 1-202. (Reprinted from *Phytologia* 15: 121-159, 329-446; 16: 1-47).
Part 2 (1968-1969). Digitatae, Dimerae, Liberae. *Provancheria* 3: 1-185. (Reprinted from *Phytologia* 16, 17, 18).
Part 3 (1972). Connatae. *Provancheria* 4: 1-224. (Reprinted from *Phytologia* 22, 23).
Part 4 (1979). Monopsida. *Provancheria* 5: 1-189. (Reprinted from *Phytologia* 42, 43).
Part 5 (1981). Gramineae. *Provancheria* 12: 1-107.
- Boivin, B. 1992. Les Cypéacées de l'est du Canada. *Provancheria* 25: 1-230. [A guide to the sedge family of Canada, with all species illustrated.]
- Budd, A.C., J. Looman, K.F. Best, and J. Waddington. 1987. Budd's flora of the Canadian Prairie Provinces. (Latest revision.) Research Branch Publication 1662. Agriculture Canada, Ottawa, ON. 863 pp. [Includes many illustrations but not distribution maps.]
- Cody, W.J. and D.M. Britton. 1989. Ferns and fern allies of Canada. Publication 1829/E. Agriculture Canada Research Branch, Ottawa, ON. 430 pp. [Includes illustrations and distribution maps. Also issued in French as *Les fougères et les plantes alliées du Canada*.]
- Crow, G.E., and C.B. Hellquist. 2000. Aquatic and wetland plants of northeastern North America: a revised and enlarged edition of Norman C. Fassett's *A manual of aquatic*

- plants. University of Wisconsin Press, Madison, WI. 2 vols. [[A useful and current text with keys and numerous line drawings.]
- Darbyshire, S.J. 2005. A key to the common grasses of southeastern Canada by vegetative characteristics. *Can. Bot. Assoc. Bull.* 38: 58-63. [A very useful tool for identifying grasses.]
- Darbyshire, S.J., M. Favreau, and M. Murray. 2000. Common and scientific names of weeds in Canada / Noms populaires et scientifiques des plantes nuisibles du Canada. Research Branch Publication 1387/B. Agriculture and Agri-Food Canada, Ottawa, ON. 132 pp. [A valuable list giving accurate scientific and one selected common English name and one French name for 1130 taxa of weedy plants.]
- Ferrar, J.L. 1995. *Trees in Canada*. Fitzhenry & Whiteside Ltd., Markham, ON, and Canadian Forest Service, Natural Resources, Ottawa, ON. 502 pp. [Includes useful line drawings, colour photographs, and distribution maps.]
- Fernald, M.L. 1950. *Gray's manual of botany*. 8th edition. Van Nostrand Reinhold, New York, NY. 1632 pp. [One of the most useful floras ever produced and still very useful despite its age. Page 6 notes that this guide covers "the area south of the Straits of Belle Isle and from Anticosti Island westward along the 49th parallel of latitude in Quebec to the northwestern corner of Minnesota." This includes the southern tip of NF-LAB; all of NF-NFLD, NS, PE, and NB; southern, central, and northwestern ON; and southern QC; useful for southern MB, but not intended to cover this region. The 1970 printing includes corrections.]
- Flora of North America Editorial Committee. *Flora of North America north of Mexico*. Oxford University Press, New York, NY. [Eight of the 30 volumes planned to cover the entire flora of North America are currently available as outlined below. There is much variation in the quality of the treatments in this work, but many are written by world authorities and include the most current taxonomic decisions. In press and expected in early 2006 are the following: Volume 19, Magnoliophyta: Asteridae, Part 6: Asteraceae, part 1; Volume 20, Magnoliophyta: Asteridae, Part 7: Asteraceae, part 2; and Volume 21, Magnoliophyta: Asteridae, Part 8: Asteraceae, part 3. Scheduled for publication in late 2006 is Volume 7 (Magnoliophyta: Dilleniidae, part 2). Scheduled for publication in 2007 are Volume 6 (Magnoliophyta: Dilleniidae, part 1), and Volume 8 (Magnoliophyta: Dilleniidae, part 3; and Rosidae, part 1). Most of the information is available online: http://www.efloras.org/flora_page.aspx?flora_id=1. To find the volume in which a family appears, see <http://www.fna.org/FNA/families.shtml>.]
1993. Vol. 2, Pteridophytes and Gymnosperms. 475 pp.
1997. Vol. 3, Magnoliophyta: Magnoliidae and Hamamelidae. 590 pp.
2000. Vol. 22, Magnoliophyta: Alismatidae, Arecidae, Commelinidae (in part), and Zingiberidae. 352 pp.

2002. Vol. 26, Magnoliophyta: Liliidae and Orchidales. 723 pp.
2002. Vol. 23, Magnoliophyta: Commelinidae (in part): Cyperaceae. 608 pp.
2003. Vol. 25, Magnoliophyta: Commelinidae (in part): Poaceae, part 2. 783 pp. [This volume covers over half of the grass family in North America north of Mexico. It and vol. 24 (containing *Poaceae*, part 1, still in preparation) differ from the other *Flora of North America* volumes in that they were originally intended for publication under a separate title within a single volume—a successor to Hitchcock’s classic *Manual of Grasses of the United States*. With identification a key focus, this volume has many more illustrations than other FNA volumes: almost every species is illustrated. Also included are species known only from cultivation, and species that are considered serious threats to American agriculture but which are not yet established.]
2003. Vol. 4, Magnoliophyta: Caryophyllidae, part 1. 559 pp.
2005. Vol. 5, Magnoliophyta: Caryophyllidae, part 2. 656 pp.
- Frankton, C. and G.A. Mulligan. 1987. *Weeds of Canada* (revised). NC Press Ltd., Toronto, and Agriculture Canada, Ottawa, ON. 217 pp. [A guide to 230 weedy species of Canada, mostly illustrated.]
- Gleason, H.A. 1968. *The new Britton and Brown illustrated flora of the Northeastern United States and adjacent Canada*. Hafner, New York, NY. 3 vols. [This very useful, illustrated manual is superseded by the combination of Gleason and Cronquist (1991) + Holmgren (1998).]
- Gleason, H.A. and A. Cronquist. 1991 (7th printing, 2004). *Manual of vascular plants of Northeastern United States and adjacent Canada*. 2nd edition. The New York Botanical Garden, Bronx, NY. 993 pp. [Covers NS, PE, NB, southern QC, southern and central ON; useful for northwestern ON and southern MN, but not intended to cover this region. Page numbers in this non-illustrated manual correspond to the illustrations on the matching page numbers in Holmgren 1998, listed below. The 7th printing, 2004, includes corrections and other changes, outlined in Foreword on p. v).]
- Hitchcock, A.S. 1971. *Manual of the grasses of the United States*. 2nd edition. Dover, New York. 2 vols. (1051 pp.). [A much-used tool for identifying grasses. Abundantly illustrated.]
- Hitchcock, C.L. and A. Cronquist. 1973. *Flora of the Pacific Northwest*. University of Washington Press, Seattle. 730 pp. [An authoritative flora with illustrated keys. Includes “an indefinite fringe of British Columbia.”]
- Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson. (Editors). 1955-1969. *Vascular plants of the Pacific Northwest. Compositae*. University of Washington Press, Seattle, WA. [A classic and popular flora that includes “an indefinite southern fringe of British Columbia.” Has excellent descriptions, illustrations and keys. Hitchcock and Cronquist

- (1973), listed above, is a condensed version.]
1955. Part 5, Compositae. 343 pp.
1959. Part 4, Ericaceae through Campanulaceae. 510 pp.
1961. Part 3, Saxifragaceae to Ericaceae. 614 pp.
1964. Part 2, Salicaceae to Saxifragaceae. 597 pp.
1969. Part 1, vascular cryptogams, gymnosperms and monocotyledons. 914 pp.
- Holmgren, N.H. 1998. Illustrated companion to Gleason and Cronquist's Manual. The New York Botanical Garden, Bronx, NY. 937 pp. [This is the illustrated companion to the most current floristic guide to northeastern North America (see Gleason and Cronquist 1991).]
- Johnson, D., L. Kershaw, A. MacKinnon, and J. Pojar. 1995. Plants of the western boreal forest & aspen parkland. Lone Pine Publishing, Edmonton, AB. 392 pp. [This guide includes many colour photographs, as well as illustrated keys, and covers a large area of western Canada.]
- Kartesz, J. T. and C.A. Meachum. 1999. Synthesis of the North American Flora, version 1.0. North Carolina Botanical Garden, Chapel Hill, North Carolina. [A CD-ROM with interactive software. This is a comprehensive, authoritative source of names of vascular plants and their synonyms combined with information on geography, common names biological attributes and uses.]
- McGregor, R.L. and T.M. Barkley. (Editors.) 1977. Atlas of the Flora of the Great Plains. The Iowa State University Press, Ames, IO. 600 pp. [Presents distribution maps for species treated in the following flora. Useful for determining which species occur at the Canadian border.]
- McGregor, R.L., T.M. Barkley, R.E. Brooks, and E.K. Schofield. (Editors.) 1986. Flora of the Great Plains. University Press of Kansas, Lawrence, KS. 1392 pp. [The plains region extends into the southern portions of AB, SK, and MB. Although most of the Great Plains are in the U.S., a large proportion of the species also occurs in Canada.]
- Polunin, N. 1940. Botany of the Canadian eastern arctic. Bull. 92. Nat. Mus. Can., Ottawa, ON. 408 pp. [A classic and comprehensive work.]
- Polunin, N. 1959. Circumpolar arctic flora. Oxford Univ. Press, Oxford, U.K. 514 pp. [Although dated, this is still a very valuable reference. Includes many illustrations, but no distribution maps.]
- Scoggan, H.J. 1978–1979. The flora of Canada. National Museum of Natural Sciences, Ottawa, ON. 4 vols. [A valuable compilation of information on the Canadian flora, includes identification keys and information on distribution, but lacks descriptions and illustrations.]

Part 1 (1978): General survey. *Publications in Botany* 7(1): 1-89.

Part 2 (1978): Pteridophyta, Gymnospermae, Monocotyledoneae. *Publications in Botany* 7(2): 93-544.

Part 3 (1978): Dicotyledoneae (Saururaceae to Violaceae). *Publications in Botany* 7(3): 547-1115.

Part 4 (1979): Dicotyledoneae (Loasaceae to Compositae). *Publications in Botany* 7(4): 1117-1711.

Swink, F. 1990. The key to the vascular flora of the northeastern United States and southeastern Canada. *Plantsmen's Publications*, Flossmore, IL. 514 pp. [A useful identification aid.]

Guides for Provinces and Territories

Alberta

- Hallworth, B. and C.C. Chinnappa. 1997. Plants of Kananaskis Country, in the Rocky Mountains of Alberta. University of Alberta Press, Edmonton, AB. 366 pp. [An excellent guide with line drawings, keys, colour photographs, and descriptions. Although local, it applies to much of the Rocky Mountain area.]
- Kershaw, L., J. Gould, D. Johnson, and J. Lancaster. 2001. Rare vascular plants of Alberta. Univ. Alberta Press, Edmonton, AB and Nat. Resour. Can., Can. For. Serv., North For. Cent., Edmonton, AB. 484 pp. [Describes and provides excellent colour photographs of about 485 species of rare native vascular plants of Alberta.]
- Kuijt, J. 1982. A flora of Waterton Lakes National Park. The University of Alberta Press, Edmonton, AB. 684 pp. [A well illustrated and useful guide, covering a large portion of the Rocky Mountains.]
- Moss, E.H. and J.G. Packer. 1983. Flora of Alberta. 2nd edition. University of Toronto Press, Toronto, ON. 687 pp. [Has distribution maps, no illustrations.]

British Columbia

Note: There are numerous excellent guides to specific groups of plants of British Columbia that have been produced by the Royal British Columbia Museum, but these are superseded by Douglas et al., cited below, for identification purposes. However, in many cases they contain additional information, and deserve to be on the bookshelf of any serious student of the B.C. flora.

- Calder, J.A. and R.L. Taylor. 1968. Flora of the Queen Charlotte Islands. Part 1, Systematics of the Vascular Plants. Monograph No 4 Part 1. Canada Department of Agriculture, Ottawa, ON. 659 pp. [Includes a few illustrations and many distribution maps.]
- Douglas, G.W., et al. (Editors). 1999-2002. Illustrated Flora of British Columbia. [Note the two series below. This flora includes many illustrations in each volume and distribution maps in volume 8. Provides up-to-date and definitive coverage of the flora of British Columbia. Also note E-Flora BC, Electronic atlas of the plants of British Columbia, <http://www.geog.ubc.ca/~brian/florae/efloraintroductionpage.html>, which presents much of the information in this flora (note cautions regarding validity of map data).]
- Douglas, G.W., G.B. Straley, D. Meidinger, and J. Pojar (Editors). 1999-2002. Illustrated Flora of British Columbia, Victoria, BC. Ministry of Environment, Lands and Parks, and Ministry of Forests, British Columbia. Vols. 1-2.
- Volume 1 (1998): Gymnosperms and Dicotyledons (Aceraceae through Asteraceae). 436 pp.
- Volume 2 (1998): Dicotyledons (Balsaminaceae through Cuscutaceae). 401 pp. [This series is continued below, without Straley as an editor.]

Douglas, G.W., D. Meidinger, and J. Pojar (editors). 1999-2002. Illustrated Flora of British Columbia. Ministry of Environment, Lands and Parks, and Ministry of Forests, British Columbia, Victoria, BC. Vols. 3-8.
Volume 3 (1999): Dicotyledons (Diapensiaceae through Onagraceae). 423 pp.
Volume 4 (1999): Dicotyledons (Orobanchaceae through Rubiaceae). 427 pp.
Volume 5 (2000): Dicotyledons (Salicaceae through Zygophyllaceae) and Pteridophytes. 389 pp.
Volume 6 (2001): Monocotyledons (Acoraceae through Najadaceae). 361 pp.
Volume 7 (2001): Monocotyledons (Orchidaceae through Zosteraceae). 379 pp.
Volume 8 (2002). General summary, maps and keys. 457 pp.

MacKinnon, A., J. Pojar, and R. Coupé. 1992. Plants of Northern British Columbia. Lone Pine Publishing, Edmonton, AB. 345 pp. + index. [A very useful, user-friendly text for the northern part of the province. It includes keys and illustrations (many in colour).]

Manitoba

Cody, W.J. 1988. Plants of Riding Mountain National Park, Manitoba. Publication 1818. Research Branch, Agriculture Canada, Ottawa, ON. 319 pp. [Has keys and descriptions of 669 species, and hundreds of illustrations. Also available in French.]

Scoggan, H.J. 1957. Flora of Manitoba. National Museum of Canada Bulletin 140, Biological Series 47. Department of Northern Affairs and National Resources, Ottawa, ON. 619 pp. [An excellent, although dated, compilation of the vascular flora of the province, but lacks illustrations and distribution maps. Additions to this work have been published in the Canadian Field-Naturalist, and are on file in the Manitoba Museum of Man and Nature.]

New Brunswick

Hinds, H.R. 2000. Flora of New Brunswick. 2nd edition. University of New Brunswick, Fredericton, NB. 695 pp. [Maps and illustrations provided for most species. Additions and corrections available at <http://www.unb.ca/biology/Flora.html>.]

Also see - Haines, A. and T.F. Vining. 1998. Flora of Maine: a manual for identification of native and naturalized vascular plants of Maine. V.F. Thomas Co., Bar Harbor, ME. 847 pp. [Can be used for parts of NB and Quebec adjacent to Maine.]

Newfoundland and Labrador

Bouchard, A., S. Hay, and E. Rouleau. 1978. The vascular flora of St. Barbe South district, Newfoundland; an interpretation based on biophysiographic areas. *Rhodora* 80: 228-308. [This describes the flora of a large part of Newfoundland in terms of biophysiographic units.]

Damman, A.W.H. 1965. Key to the *Carex* species of Newfoundland by vegetative characteristics. Publication No. 1017. Canadian Department of Forestry, Ottawa, ON. 39

pp. [A useful guide to the identification of a large and difficult group of Newfoundland plants.]

Hay, S.A., A. Bouchard, and L. Brouillet. 1990. Additions to the flora of the Island of Newfoundland. *Rhodora* 92: 277-293.

Meades, S.J., S.G. Hay, and L. Brouillet. 2000. Annotated list of the plants of Newfoundland and Labrador. www.nfmuseum.com/meades.htm ["This checklist documents over 1,300 taxa of plants known to occur in the Province of Newfoundland and Labrador, Canada. It includes scientific names, English and French common names, key synonyms, range and specific habitat preferences, and notes on scarcity, notable range extensions, questionable reports and taxonomic problems. The checklist is available for download as a set of WordPerfect, or MSWord files."]

Robertson, A.W. 1984. *Carex* of Newfoundland. Ministry of Supply and Services, Ottawa, ON. 252 pp. [Distributed by Canadian Forestry Services, St. John's Newfoundland. A guide to the sedges of Newfoundland.]

Rouleau, E. and G. Lamoureux. 1992. Atlas of the vascular plants of the island of Newfoundland and of the islands of Saint-Pierre-et-Miquelon. / Atlas des plantes vasculaires de l'île de Terre-Neuve et des îles de Saint-Pierre-et-Miquelon. Groupe Fleurbec, Saint Henri-de-Lévis, QC. 777 pp. [Presents a checklist and over a thousand excellent, detailed distribution maps.]

Rousseau, C. 1974. [This is listed below for Quebec, and gives information on many plant distributions for Labrador.]

Northwest Territories and Nunavut

Aiken, S.G., M.J. Dallwitz, L.L. Consaul, C.L. McJannet, L.J. Gillespie, R.L. Boles, G.W. Argus, J.M. Gillett, P.J. Scott, R. Elven, M.C. LeBlanc, A.E. Zamluk, and A.K. Brysting. 2002. Flora of the Canadian Arctic Archipelago: descriptions, illustrations, identification, and information retrieval. Version: 25th March 2002. <http://www.mun.ca/biology/delta/arctic/> [Provides illustrated, interactive, identification to the more than 300 taxa known to occur on the Canadian Arctic Islands. A useful source of information, including descriptions, illustrations, and distribution maps.]

Catling, P.M., W.J. Cody, and G. Mitrow. 2005. A compilation of additions to the flora of the continental portions of Northwest Territories and Nunavut. *Botanical Electronic News*. In press. [Includes all additions to the 1980 flora (below) reported up to 2004.]

Mallory, C. and S. Aiken. 2004. Common plants of Nunavut. Nunavut Department of Education, Nunavut Wildlife Management Board, and Canadian Museum of Nature. Ottawa, ON. 400 pp. (200 in English, 200 in Inuktituk). [A popular guide with colour

illustrations.]

Porsild, A.E. and W.J. Cody. 1980. Vascular plants of Continental Northwest Territories, Canada. National Museums of Natural Sciences, National Museums of Canada, Ottawa, ON. 667 pp. [This flora includes the previous Districts of Mackenzie, Franklin, and Keewatin, portions of which are now included in Nunavut. Nunavut was created in 1999 from a large portion of the “Northwest Territories,” including Keewatin, northeastern Mackenzie, and a portion of Franklin. Additions to this flora have been published mostly in the Canadian Field-Naturalist.]

Porsild, A.E. 1964. Illustrated flora of the Canadian Arctic Archipelago. National Museum of Canada Bulletin 146. 218 pp. [Covers Canadian Arctic Islands. Includes illustrations and distribution maps.]

Nova Scotia

Roland, A.E. and E.C. Smith. 1969. The flora of Nova Scotia. The Nova Scotia Museum, Halifax, NS. 746 pp. [An updated version is indicated below, but this original manual remains very useful, and contains some information not included in the update.]

Roland, A.E. and M. Zinck. 1998. Roland’s flora of Nova Scotia. Nimbus Publishing and Nova Scotia Museum, Halifax, NS. 2 vols. [Includes many illustrations and distribution maps.]

Nunavut

See “Northwest Territories and Nunavut.”

Ontario

Alex, J.F. 1992. Ontario weeds: descriptions, illustrations and keys to their identification. Ontario Ministry of Agriculture and Food, Toronto. 304 pp. [A very useful text for identifying common weedy plants.]

Baldwin, W.K.W. 1958. Plants of the Clay Belt of northern Ontario and Quebec. Bulletin No. 156. National Museum of Canada, Ottawa, ON. 324 pp. [Contains much information on the vegetation and status of plants in the Clay Belt region.]

Contributions to a flora of New York state. [New York State Museum bulletins published by the State Education Department, Albany, NY. These recent, comprehensive treatments have keys, extensive descriptions and useful illustrations, and can be used to identify plants from much of southern Ontario. Contribution 3, dealing with mosses, is not listed below.]

1. Mitchell, R.S. and J.K. Dean. 1978. Polygonaceae (buckwheat family) of New York State. Contr. to a Flora of New York State I. New York State Mus. Bull. 431. 80 pp.
2. Mitchell, R.S. and E.O. Beal. 1979. Magnoliaceae through Ceratophyllaceae of New York State. Contr. to a Flora of New York State II. New York State Mus. Bull. 435. 62 pp.

4. Mitchell, R.S. and J.K. Dean. 1982. Ranunculaceae (crowfoot family) of New York State. *Contr. to a Flora of New York State IV*. New York State Mus. Bull. 446. 100 pp.
 5. Mitchell, R.S. 1983. Berberidaceae through Fumariaceae of New York State. *Contr. to a Flora of New York State V*. New York State Mus. Bull. 451. 66 pp.
 6. Mitchell, R.S. 1988. Platanaceae through Myricaceae of New York State. *Contr. to a Flora of New York State VI*. New York State Mus. Bull. 464. 98 pp.
 7. Clemants, S.E. 1990. Juncaceae (rush family) of New York State. *Contr. to a Flora of New York State VII*. New York State Mus. Bull. 475. 68 pp.
 8. Furlow, J.J. and R.S. Mitchell. 1990. Betulaceae through Cactaceae of New York State. *Contr. to a Flora of New York State VIII*. New York State Mus. Bull. 476. 94 pp.
 9. Cope, E.A. 1992. Pinophyta (Gymnospermae) of New York State. *Contr. to a Flora of New York State IX*. New York State Mus. Bull. 483. 80 pp.
 10. Clemants, S.E. 1992. Chenopodiaceae and Amaranthaceae of New York State. *Contr. to a Flora of New York State X*. New York State Mus. Bull. 475. 100 pp.
 11. Mitchell, R.S. 1993. Portulacaceae through Caryophyllaceae of New York State. *Contr. to a Flora of New York State XI*. New York State Museum Bull. 486. 124 pp.
- Dickinson, T., D. Metsger, J. Bull, and R. Dickinson. 2004. *The ROM field guide to wildflowers of Ontario*. Royal Ontario Museum and McClelland and Stewart, Toronto, ON. 416 pp. [A valuable reference with colour photos, that treats 550 species (reviewed in *CBA/ABC Bull.* 38(3): 40 (2005).]
- Dore, G.D. and J. McNeill. 1980. *Grasses of Ontario*. Agriculture Canada Research Branch Monograph 26. 566 pp. [Includes illustrations and distribution maps.]
- McKay, S.M. and P.M. Catling. 1979. *Trees, shrubs & flowers to know in Ontario*. J.M. Dent & Sons (Canada) Ltd., Don Mills, ON. 208 pp. [A useful and well-illustrated guide to common species.]
- Meades, S.J., D. Schnare, and K. Lawrence, and C. Faulkner. 2004 (and onwards). Northern Ontario Plant Database Website. Version 1, January 2004. Algoma University College and Great Lakes Forestry Centre, Sault Ste. Marie, ON. www.northernontarioflora.ca/ [Lists records in northern Ontario herbaria and provides links to descriptions and illustrations.]
- Morton, J.K. and J.M. Venn. 2000. *The flora of Manitoulin Island and the adjacent islands of Lake Huron, Georgian Bay and the North Channel*. 3rd edition. University of Waterloo, Waterloo, ON. 375 pp. [Although this annotated checklist features Manitoulin Island, it can be used effectively as an identification aid for much of the northern Lake Huron region of Ontario.]
- Newmaster, S.G. and R. Subramanyam. 2005. *Flora Ontario - integrated botanical information system (FOIBIS)*, phase 1, 2005. <http://www.uoguelph.ca/foibis/> [Latin, English, and

French names as well as classification information are provided for 4,780 species including vascular plants, bryophytes and lichens.]

Newmaster, S., A. Harris, and L. Kershaw. 1997. *Wetland plants of Ontario*. Lone Pine, Edmonton, AB. 240 pp. [A guide to over 450 species of wetland plants, with numerous line drawings.]

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, Sault Ste. Marie, ON. Irregularly paginated. [An authoritative, current list of plant names for Ontario, including synonyms and an indication of conservation status.]

Riley, J.L. 2003. *Flora of the Hudson Bay Lowland and its postglacial origins*. NRC Research Press, Ottawa, ON. 236 pp. [A valuable list of species of an extensive northern region of the province. Includes distribution maps and considerable information.]

Soper, H.J. and M.L. Heimberger. 1982. *Shrubs of Ontario*. Royal Ontario Museum, Toronto, ON. 495 pp. [Includes illustrations and distribution maps for all species.]

Voss, E.G. 1972-1996. *Michigan flora*. Cranbrook Institute of Science, Bloomfield Hills, MI. 3 vols. [This outstanding guide to the plants of Michigan applies very well to much of southern and central Ontario. Includes some illustrations and distribution maps for Michigan.]

Part 1 (1972), Gymnosperms and monocots. *Cranbrook Institute of Science Bulletin* 55. 488 pp. [Printings with corrections in 1990 and 1992.]

Part 2 (1985), Dicots (Saururaceae-Cornaceae). *Cranbrook Institute of Science Bulletin* 59. 727 pp. [Second printing 1998, with corrections and additions on pages 725–727.]

Part 3 (1996), Dicots (Pyrolaceae-Compositae). *Cranbrook Institute of Science Bulletin* 61. 622 pp.

Prince Edward Island

Erskine, D.S., P.M. Catling, and R.B. MacLaren 1985. *The plants of Prince Edward Island, with new records, nomenclatural changes, and corrections and deletions*. Research Branch Publication 1798. Agriculture Canada, Ottawa, ON. 272 pp. + map. [Has distribution maps but not illustrations of species.]

Quebec

Blondeau, M. and C. Roy. 2004. *Atlas des plantes des villages du Nunavik / Atlas of plants of the Nunavik villages*. Éditions MultiMondes, Sainte-Foy, QC. 610 pp. [A useful guide for the far northern regions of Quebec. Has excellent maps and illustrations. In French, English, and Inuktitut.]

Fleurbec (group: G. Lamoureux et al.). 1978. *Plantes sauvages des villes et des champs*, vol. 1.

- Fleurbec, Montreal, QC. 273 pp. [Colour photographs. Includes about 85 species.]
- Fleurbec (group: G. Lamoureux et al.). 1981. *Plantes sauvages comestibles*. Fleurbec, Saint-Cuthbert, QC. 167 pp. [Colour photographs. Includes 28 species.]
- Fleurbec (group: G. Lamoureux et al.). 1983. *Plantes sauvages des villes et des champs*, vol. 2. Fleurbec, Saint-Augustin, QC. 208 pp. [Colour photographs, distribution maps. Includes about 90 species]
- Fleurbec (group: G. Lamoureux et al.). 1985. *Plantes sauvages du bord de la mer*. Fleurbec, Saint-Augustin, QC. 286 pp. [A guide to 55 species, colour photographs and distribution maps.]
- Fleurbec (group: G. Lamoureux et al.). 1987. *Plantes sauvages des lacs, rivières et tourbières*. Fleurbec, Saint-Augustin, QC. 399 pp. [Colour photographs and distribution maps. Treats about 60 species.]
- Fleurbec (group: G. Lamoureux et al.). 1993. *Fougères, prêles et lycopodes*. Fleurbec, Saint-Henri-de-Lévis, QC. 511 pp. [Colour photographs and distribution maps.]
- Fleurbec (group: G. Lamoureux et al.). 2005. *Plantes sauvages au menu: cuisine raisonnée*. 2nd edition. Fleurbec, Saint-Henri-de-Lévis, QC. 192 pp. [A guide to edible wild plants.]
- Haines, A. and T.F. Vining. 1998. *Flora of Maine: a manual for identification of native and naturalized vascular plants of Maine*. V.F. Thomas Co., Bar Harbor, ME. 847 pp. [Can be used for parts of Quebec adjacent to Maine.]
- Labrecque, J. and G. Lavoie. 2002. *Les plantes vasculaires menacées ou vulnérables du Québec*. Gouvernement du Québec, ministère de l'Environnement, Direction du patrimoine écologique et du développement durable, QC. 200 pp. [Brief information and distribution maps for 375 species.]
- Lamoureux, G. 2002. *Flore printanière (une mise à jour de Plantes sauvages printanières, 1975)*. Fleurbec, Saint-Henri-de-Lévis, QC. 576 pp. [A guide to 123 spring-flowering wild plants of eastern North America, with colour photographs and distribution maps, as well as extensive ecological information.]
- Louis-Marie, P. 1967. *Flore-manuel de la province de Québec, Canada*. 4th edition. Centre de Psychologie et Pédagogie, Montreal, QC. 317 pp. [An old but very popular and useful text. The 4th edition of 1967 is a re-impression in pocket book format of the 2nd edition (1953), with three pages added at the end. The 3rd edition (1959) presents drawings in colour.]

Marie-Victorin, Frère. 1997. Flore Laurentienne. 3rd edition. Updated and annotated by L. Brouillet, S.G., S.G. Hay, I. Goulet. M. Blondeau, J. Cayouette, and J. Labrecque. Presses de l'Université de Montréal, Montréal, QC (and also republished in 2002 by Gaëtan Morin, Boucherville, QC). 1093 pp. [The most complete flora of Quebec available at this time. Like the 1995 edition, this work has been referred to as the “third edition,” although the 1997 and 2002 printings (which are identical) have many corrections and additions. Includes illustrations, many in colour.]

Marie-Victorin, Frère, and Frère Rolland-Germain. 1969. Flore de l'Anticosti-Minganie. Les Presses de l'Université de Montréal, Montréal, QC. 527 pp. [Provides useful coverage for the Gulf of St. Lawrence area.]

Rousseau, C. 1968. Histoire, habitat et distribution de 220 plantes introduites au Québec. Nat. can. 95: 49-171. [A valuable source of information on introduced plants.]

Rousseau, C. 1974. Géographie floristique du Québec/Labrador. Distribution des principales espèces vasculaires. Les Presses de l'Université Laval, QC. 799 pp. [Not an identification guide, but presents ecological and distributional information for a little over 1,000 species, as well as distribution maps.]

Scoggan, H.J. 1950. The flora of Bic and the Gaspé Peninsula. National Museum of Canada Bulletin 115, Biological Series 47. Canada Department of Resources and Development, Development Services Branch, Ottawa, ON. 399 pp. [A classic flora, still very useful.]

Saskatchewan

Note: Although there are few works dedicated to Saskatchewan alone, and no complete flora designed for identification, the guides listed for the adjacent provinces of Alberta and Manitoba are useful, and so are the general guides for the prairie region and boreal forest listed above.

Hudson, J.H. 1977. *Carex* in Saskatchewan. Bison Publishing House, Saskatoon, SK. 193 pp. [A guide to 100 species, with keys, descriptions, illustrations, and distribution maps.]

Harms, V.L. 2003. Checklist of the vascular plants of Saskatchewan and provincially and nationally rare native plants of Saskatchewan. University of Saskatchewan Press, Saskatoon, SK. 328 pp. [A complete and authoritative annotated checklist.]

Yukon

Cody, W.J. 2000. Flora of the Yukon Territory. 2nd edition. NRC Research Press, Ottawa, ON. 669 pp. [The definitive identification guide to this region. Updates giving additions and range extensions have been published in the Canadian Field-Naturalist.]

Hultén, E. 1968. Flora of Alaska and neighboring territories. Stanford University Press, Stanford, CA. 1008. [Includes illustrations and circumpolar distribution maps.]

Welsh, S.L. 1974. Anderson's flora of Alaska and adjacent parts of Canada. Brigham Young University Press, Provo, UT. 724 pp. [Includes a limited number of species illustrations but no distribution maps.]

ADDITIONAL KINDS OF IDENTIFICATION AIDS

a. Special bibliographies

A number of bibliographies are available to help the researcher find out exactly what has been done in the past. In some cases complete lists of references concerning the flora of a region exist only as a few copies of old unpublished documents on the shelves of provincial museums or provincial or regional conservation data centres (CDCs). A current list of such resources is beyond the scope of this article (e.g. see the following (also see Pringle (1995) in section g):

Catling, P.M., B.S. Brookes, Y.M. Skorupinski, and S.M. Malette. 1986. Bibliography of vascular plant floristics for New Brunswick, Newfoundland (insular) and Nova Scotia. Technical Bulletin 1986-3E. Agriculture Canada Research Branch, Ottawa, ON. 28 pp. [A comprehensive list of floristic references for the Maritimes.]

Douglas, G.W., A. Češka, and G.G. Ruyle. 1983. A floristic bibliography for British Columbia. Province of British Columbia Ministry of Forests, Land Management Report Number 15. 143 pp. [References are listed by plant family and author.]

With increasing frequency, plants are being imported or introduced to Canada that are not part of the established flora, and is it important to know what tools are available for identification of such foreign material. Frodin (2001) provides a list of the major references:

Frodin, D.G. 2001. Guide to the standard floras of the world. Cambridge University Press, Cambridge, UK. 1100 pp. [A monumental guide to world floras.]

b. Vascular plant herbaria

Vascular plant herbaria in Canada contain authoritatively identified reference specimens that can be used for comparison in identification. Moreover, the staff are often experts on plants of the local region or on particular groups of plants. Some of the herbaria have websites that provide information on services available [see for example the Agriculture and Agrifood Canada vascular plant collection website http://res2.agr.ca/ecorc/dao/index_e.htm]. Information on herbaria is available from various sources, ranging from regional to world coverage, and some principal guides are listed below. (Also see the appendix in Pringle (1995), listed below.)

Boivin, B. 1980. Survey of Canadian herbaria. *Provancheria* (Mémoire de l'Herbier Louis-Marie) 10. 187 pp. [A comprehensive review of Canadian herbaria, with much useful historical information.]

Holmgren, P.K. and N.H. Holmgren. 1998 onwards (continuously updated). Index herbariorum. New York Botanical Garden, Bronx, NY. <http://sciweb.nybg.org/science2/IndexHerbariorum.asp> [The herbaria of the world are listed. This can be used to locate Canadian herbaria: in "Search by Institution" simply type in "Canada" for country, and details for more than 100 Canadian herbaria will be presented.]

Rothfels, C. 2003. Synopsis of Ontario herbaria. *Field Botanists of Ontario Newsletter* 16(1): 7-19. [An example of a recent regional compilation, including some information that is not available elsewhere.]

c. Experts

Index Herbarium mentioned above lists staff and their specialties (in “search by Person” type in “Canada” for country, and details of about 200 Canadians associated with herbaria will be presented). Local experts capable of assisting with plant identification may also be found in universities, museums, conservation data centres, natural resource departments, and the Canadian Botanical Association.

The website of the American Society of Plant Taxonomists (with about 1300 members) lists experts by taxonomic groups (e.g. genera). See <http://www.aspt.net/>. (However, many experts are not members of the society, and will not be listed.)

d. General information on collecting and identifying plants

Bowles, J.M. Guide to plant collection & identification
<http://biology.queensu.ca/~fowler/Bowles.htm> [An online version of a booklet prepared by Dr. Bowles, containing much useful information.]

Brigham, T., M. Schröder, W. Cocksedge, W. 2004. Good practices for plant identification for the herbal industry. Saskatchewan Herb and Spice Association, SK. 54 pp.
<http://www.saskherbspice.org/Good%20Practices%20for%20plant%20identification.pdf>
[A practical guide prepared for the purpose of providing reliable identifications of plants collected for the Canadian herbal and medicinal industries.]

Lamoureux, L. and P. Nantel. 1999. *Cultiver des plantes sauvages... sans leur nuire*. Fleurbec, Saint-Henri-de-Lévis. QC. 81 pp. [Provides information on wild plants of Quebec that have potential to be cultivated. While not primarily intended for identification, this is an admirable synthesis of the subject.]

Savile, D.B.O. 1962. *Collection and care of botanical specimens*. Research Branch Publication 1113. Canada Department of Agriculture, Ottawa, ON. 124 pp. [A comprehensive and excellent source of information on making plant collections. Also available in French as *Cueillette et montage de spécimens botaniques*.]

e. Cultivated plants

Bailey, L.H. 1949. *Manual of cultivated plants*. MacMillan Publishing Co. New York, NY. 1116 pp. [Out of date, but this classic and extensive work is still very useful.]

Bailey, L.H., E.Z. Bailey, and staff of the Liberty Hyde Bailey Hortorium. 1976. *Hortus Third*. A concise dictionary of plants cultivated in the United States and Canada. Macmillan, New York, NY. 1290 pp. [A very large encyclopedia providing information on ornamental

plants. This does not have keys and there are very few illustrations, but is useful when trying to find information about a cultivated plant when at least the genus is known.]

Facciola, S. 1998. *Cornucopia II. A source book of edible plants*. Kampong Publications, Vista, CA. 713 pp. [Does not have keys, but extremely useful for finding information on available cultivars when the species name is known.]

Huxley, A., M. Griffiths, and M. Levy. (Editors). 1992. *The new Royal Horticultural Society dictionary of gardening*. MacMillan, London, U.K. 4 vols. [An extremely large encyclopedia giving information on ornamental plants of the world. This does not have keys and there are very few illustrations, but has a wealth of information, particularly concerning cultivars.]

Rehder, A. 1951. *Manual of cultivated trees and shrubs hardy in North America*. 2nd edition. Macmillan, New York, NY. 996 pp. [An extensive classic work, treating over 2,500 species.]

f. Poisonous plants

Poisonous plant guides have limited identification utility unless it is already suspected that a certain genus is responsible for poisoning, or (in the case of guides organized by symptoms) there is knowledge of the specific effects that have resulted from suspected poisoning. This brief list is included because even limited identification value may be important in cases of poisoning of humans, pets, or livestock.

Burrows, G.E. and R.J. Tyrl. 2001. *Toxic plants of North America*. Iowa State Press (Blackwell Publishing Company), Ames, IA. 1342 pp. [The most extensive source of information on North American toxic plants, includes both wild and commonly cultivated plants, has many illustrations and distribution maps. Organized by plant family and genus. The keys deal only with a few species and are of very limited use. Review: Small, E. 2005. *Agriculture, Ecosystem & Environment* 110: 327-238.]

Frohne, D. and H.J. Pfänder. 1983. *A colour atlas of poisonous plants*. Wolfe Publishing Ltd., Stuttgart, Germany. 291 pp. [Includes descriptions, photographs and reference to microscopic characters]

Hardin, J.W. 1969. *Human poisoning from native and cultivated plants*. Duke University Press, Durham, NC. 167 pp. [A concise guide to over 300 plants with descriptions and illustrations.]

Kingsbury, J.M. 1964. *Poisonous plants of the United States and Canada*. Prentice-Hall, Englewood Cliffs, NJ. 626 pp. [Dated, but still useful. Organized by plant family and genus.]

- Knight, A.P. and R.G. Walter. 2001. A guide to plant poisoning of animals in North America. Teton NewMedia, Jackson, WY. 367 pp. [Available as a book, CD and online by subscription. Organized on the basis of symptoms (plants affecting digestive system, nervous system, kidneys, musculoskeletal system, etc.), rather than on taxonomic relationships of the plants. Colour photographs.]
- Lewis, W.H., and M.P.F. Elvin-Lewis. 2003. Medical botany: plants affecting man's health. Second edition. John Wiley & Sons, Hoboken, NJ. 812 pp. [An extremely useful source of information on poisonous plants and the symptoms of poisoning.]
- Mulligan, G.A. 1990. Poison-ivy, western poison oak and poison sumac (revised edition). Agriculture Canada Publ. 1699E. 13 pp. [A very large proportion of requests for identification concern these plants. Also available in French as L'herbe à la puce, le sumac à vernis et le rhus diversiloba.]
- Mulligan, G.A. and Munro, D.B. 1990. Poisonous plants of Canada. Agriculture Canada Publ. 1842E. 96 pp. [A useful source of information for those interested in plants that poison humans and livestock. Available in French as Plantes toxiques du Canada. Also see Munro, below.]
- Munro, D.B. Canadian poisonous plant information system.
http://www.cbif.gc.ca/pls/pp/poison?p_x=pxtitle.html [Provides information on native Canadian and some cultivated plants that are toxic to livestock, pets and humans. Based on literature up to 1993.]

g. Special information sources

Having used the kinds of references listed above to make an identification, it is sometimes desirable to ensure that the most current classification and nomenclature has been employed. There are numerous monographs of specific genera, families, etc. that are more up to date than some of the references listed above. These can be found through standard literature searches (e.g. AGRIS, AGRICOLA, BIOSIS, etc.).

The International Plant Names Index (IPNI), online at <http://www.ipni.org/index.html>, is a database of the names and associated basic bibliographical details of all seed plants, ferns and fern allies. Its goal is to eliminate the need for repeated reference to primary sources for basic bibliographic information about plant names. The data are freely available and are gradually being standardized and checked. This is an excellent source for confirming bibliographic details of names, but is by no means infallible.

The Integrated Taxonomic Information System (ITIS), available online at <http://www.itis.usda.gov>, is another important developing source of basic information on plant names.

Plants database (of the United States Department of Agriculture)

http://plants.usda.gov/cgi_bin/topics.cgi?earl=checklist.html [Has illustrations, U.S. distribution maps, and considerable information on thousands of North American species.]

Flora of North America Newsletter <http://hua.huh.harvard.edu/FNA/newsletter.shtml>. [This presents current information on the Flora of North America project (see “Guides to large areas of Canada”), and the status of upcoming FNA volumes, as well as new publications and resources concerned with plant identification and classification.]

The biology of Canadian weeds. A series of reviews on weeds of Canada, published in the Canadian Journal of Plant Science, starting in 1973, and continuing to the present. A list of the 131 published papers is available at:

http://www.cwss-scm.ca/Biology_of_weeds/chronological_list.htm. The papers have been republished as 5 volumes:

Mulligan, G.A. (Editor). 1979. The biology of Canadian weeds: contributions 1-32. Publication 1693. Agriculture Canada, Ottawa, ON. 512 pp.

Mulligan, G.A. (Editor). 1984. The biology of Canadian weeds: contributions 33-61. Publication 1765. Agriculture Canada, Ottawa, ON. 415 pp.

Cavers, P.B. (Editor). 1995. The biology of Canadian weeds: contributions 62-83. Agricultural Institute of Canada, Ottawa, ON. 338 pp.

Cavers, P.B. (Editor). 2000. The biology of Canadian weeds: contributions 84-102. Agricultural Institute of Canada, Ottawa, ON. 335 pp.

Cavers, P.B. (Editor). 2005. The biology of Canadian weeds: contributions 103-129. Agricultural Institute of Canada, Ottawa, ON. 516 pp.

The Canadian Museum of Nature published a series of reviews on rare vascular plants of each Canadian province and territory. A list of these, along with other references concerning rare Canadian plants is available in:

Catling, P.M. 2001. Protecting vascular plant biodiversity in Canada: progress and problems with the taxon approach. Pp. 62-81 in J.B. Phipps and P.M. Catling, eds. Proceedings of the Canadian Botanical Association Conference Symposium in London, Ontario, June 2000. Canadian Botanical Association.

It is often necessary to use the names of authors to trace their work. Articles treating botanical history and bibliographies arranged by author are useful for these purposes. The following two are particularly pertinent to Canadian taxonomic literature.

Pringle, J.S. 1995. The history of the exploration of the vascular flora of Canada. Canadian Field-Naturalist 109(3): 291-356.

Small, E., J. Cayouette, B. Brookes, and W. Wojtas. 1995. Canadian biodiversity: a guide to botanical specialists and literature / Biodiversité canadienne: répertoire des botanistes actuels et de leurs publications. Agriculture and Agri-Food Canada, Research Branch,

Central Experimental Farm, Ottawa. [Electronic publication available at:
<http://www.eman-rese.ca/eman/ecotools/botanists/> [In English and French. Provides
full literature citations of thousands of publications dealing with Canadian plants.]

VALUE OF IDENTIFICATION

The value of plant identification is immense, although greatly under-appreciated, and requires continuing education of biologists. For additional information, see the following.

Small, E. 1993. The economic value of plant systematics in Canadian agriculture. *Can. J. Bot.* 71: 1537-1551.

Small, E., J. Cayouette, P.M. Catling, and B. Brookes. 1995. An opinion survey of priorities for plant systematics and phytogeography in Canada. *Can. Bot. Assoc. Bull.* 28(2): 19-22.

Catling, P.M. 2001. A never ending role for biosystematics in the protection of vascular plant biodiversity in Canada. Pp. 3-27 in J.B. Phipps and P.M. Catling, eds. *Proceedings of the Canadian Botanical Association Conference Symposium in London, Ontario, June 2000.* Canadian Botanical Association.]
