

RESOURCES FOR MINNESOTA TERRESTRIAL AND AQUATIC PLANT IDENTIFICATION, NOMENCLATURE AND ECOLOGY

Compiled by Janet Boe, Minnesota Department of Natural Resources with contributions from Carol Estes Mortensen (CEM), John C. Almendinger (JCA), Nancy Sather (NS), Hannah D. Texler (HDT), Mark Fulton (MF), Dan MacSwain (DM), Laura Van Riper (LVR) Donna Perleberg (DP).

Last updated: February 18, 2015 by Hannah D. Texler. Send corrections or additions to Regional Plant Ecologist Hannah Texler at:

hannah.texler@state.mn.us

VASCULAR PLANT IDENTIFICATION

Popular Keys and Manuals

Baumgardt, J.P. 1982. **How to identify flowering plant families: a practical guide for horticulturists and plant lovers.** Timber Press, Portland, Oregon.

Contains introduction, a key to some plant families, floral diagrams, pronunciation, photographs of representative plants, and drawings and text for each family, with a listing of the more common genera. CEM

Black, M. R. and E. J. Judziewicz. 2009. **Wildflowers of Wisconsin and the Great Lakes Region.** Second Edition. Cornerstone Press, University of Wisconsin – Stevens Point.

Borman, S., R. Korth, and J. Temte. 1997. **Through the looking glass: a field guide to aquatic plants.** Wisconsin Lakes Partnership and Wisconsin Department of Natural Resources. DP

Brown, L. 1979. **Grasses: an identification guide.** Houghton Mifflin Company, New York, New York.

Line drawings and species descriptions for selected grasses found in northeastern U.S. Also includes selected grass-like plants.

Cobb, B. 1963. **A field guide to the ferns.** Peterson Field Guide Series, Houghton Mifflin Co., Boston, Massachusetts.

Covers an area from Wisconsin eastward, but many Minnesota species included. Includes keys, line drawings, and species descriptions.

Chambers, B., Legasy, K. and Bentley, C. 1996. **Forest Plants of Northern Ontario.** Lone Pine Publishing, Auburn, Washington.

Over 300 species of trees, shrubs, wildflowers, grasses, ferns, mosses and lichens found in Cottage Country, Algonquin Park, the Ottawa Valley, the Lake Huron region and Georgian Bay.

Courtenay, B. and J.H. Zimmerman. 1972. **Wildflowers and weeds.** Van Nostrand Reinhold Co., New York.

Small color photographs of many herbaceous species. Modified keys. Quite comprehensive. Covers the Great Lakes region of the U.S. and Canada.

- Eastman, J. 1995. **The book of swamp and bog: trees, shrubs, and wildflowers of eastern freshwater wetlands**. Stackpole Books, Mechanicsburg, Pennsylvania.
Wetland plants listed alphabetically. Line drawings. Information (3-4 pages per species) includes identification tips, synonymous common names, close relatives, biology and life history, associated species, and cultural information.
- Eggers, S.D., and D.M. Reed. 1997. **Wetland plants and plant communities of Minnesota and Wisconsin**. U.S. Army Corps of Engineers, St. Paul District.
Color photographs and descriptions of selected wetland plants. Available online (last accessed on 4/29/14): <http://www.npwrc.usgs.gov/resource/plants/mnplant/index.htm>
- Elvecrog, H. and B. Bartodziej. 2005. **Lake Phalen shoreland restoration: walking tour and plant guide**. Ramsey-Washington Metro Watershed District, St. Paul
Using this book as a resource, you can take a walking tour of the lake and learn about a comprehensive restoration plan using diverse, native plant shoreland communities and the specific activities undertaken at each shoreline project site. Included are maps and guides to plant identification.
- Fink, D.F. 1994. **A guide to aquatic plants**. Ecological Services Section, Minnesota Department of Natural Resources, St. Paul.
An illustrated guide to common aquatic plants in Minnesota. Includes discussion of state regulations and factors that influence aquatic plant abundance.
- Hipp, A.L. 2008. **Field guide to Wisconsin sedges. An introduction to the genus *Carex* (Cyperaceae)**. University of Wisconsin Press, Madison.
Keys, habitat information, descriptions, and beautiful watercolor illustrations of 157 species of *Carex*. HDT
- Looman, J. 1982. **Prairie grasses**. Publication 1413. Agriculture Canada. Canada Communication Group Publishing, Ottawa.
Includes 107 grass species identified and described by vegetative characters and illustrated (whole plant) with line drawings. Primarily rangeland species, but some forest and wetland species included.
- Minnesota Department of Natural Resources. 2002. **Restore your shore: a guide to protecting and restoring the natural beauty of your shoreland**. Interactive CD.
A multimedia program to help design and implement shoreland projects. An extensive Plant Guide features a searchable Native Plant Encyclopedia of over 400 trees, shrubs, ferns, wildflowers, grasses, sedges, rushes, and vines to select ecologically appropriate native plants for projects from backyard butterfly gardens to large-scale ecological restorations.
- Minnesota Department of Natural Resources. 2014. **Restore your shore**.
<http://www.dnr.state.mn.us/restoreyourshore/index.html>
A web-based tool for shore land owners and professionals who wish to develop an understanding of shoreland ecosystems, learn from past native plant community restoration experiences and provide information for designing and implementing their own restoration project. DM

- Minnesota Department of Natural Resources. 2001. **Minnesota non-native terrestrial plants: an identification guide for resource managers**. Division of Trails and Waterways, St. Paul. Pocket guide includes woody plants, forbs, and grasses. Color photo with identification, biological and ecological information, as well as threats and control methods, on facing page.
- Minnesota Department of Transportation. 2014. **Minnesota Noxious Weeds**. Includes identification and management information on Minnesota's Noxious Weeds and native look-a-like species for identification comparison. <http://www.dot.state.mn.us/roadsides/vegetation/pdf/noxiousweeds.pdf>
- Mohlenbrock, R.H., and J.W. Thieret. 1987. **Trees: a quick reference guide to trees of North America**. Macmillan Publishing Company, New York, New York. Popular key. Includes color plates, distribution maps, and brief species descriptions for about one third of the most common native species found north of Mexico.
- Mortensen, C.E. 2001. **Weeds of the northern lakes states**. U.S. Forest Service, Leech Lake Band of Ojibwe, and Bureau of Indian Affairs. Pocket guide includes color photos (often including close-up photos of identifying characteristics) facing a one-page fact sheet that includes identification, natural history, and ecological information for most common invasive species in region.
- Moyle, J.B., and E.W. Moyle. 2001. **Northland wildflowers: the comprehensive guide to the Minnesota region**. Revised edition. University of Minnesota Press, Minneapolis. Photographs of some of the more common Minnesota flowering plants.
- Newcomb, L. 1977. **Newcomb's wildflower guide**. Little, Brown, and Co., Boston, Massachusetts. Includes many line drawings and a few colored drawings. Covers eastern North America from central Minnesota eastward. Used by MNDNR Forestry in plant identification training courses.
- Newmaster, S.G., A.G. Harris, and L.J. Kershaw. 1997. **Wetland plants of Ontario**. Lone Pine Publishing, Edmonton, Alberta, Canada. Color photos, line drawings, and species descriptions. Includes sections on bryophytes, sedges, and grasses as well as forbs and woody plants.
- Oslund, C., and M. Oslund. 2001. **What's doin' the bloomin'? A pictorial guide to wildflowers of the Upper Great Lakes Regions, Eastern Canada and Northeastern U.S.A.** Plant Pics LLP, Duluth, Minnesota. Very good (some are excellent) color photos of wildflowers, including close-ups of many characters not usually seen in a guide. Not typical plant identification guide; best used in addition to a guide like Peterson's or Newcomb's. Most of book has wildflowers arranged in order of bloom time, followed by additional chapters on vines, trees and shrubs, grasses and sedges, and ferns and relatives.
- Peterson, R.T., and M. McKenny. 1968. **A field guide to wildflowers of northeastern and northcentral North America**. Houghton Mifflin Company, Boston, Massachusetts. Popular key to many species of flowering plants, grouped by flower color. Illustrated with colored plates.

- Petrides, G.A. 1972. **A field guide to trees and shrubs**. Peterson Field Guide Series, Houghton Mifflin Company, Boston, Massachusetts.
Includes species descriptions and some line drawings.
- Severin, B.C. 1980. **A key to the woody plants of Minnesota**. St. Mary's Press, Winona, Minnesota.
Key based on vegetative structures. Line drawings of leaves. Includes cultivated as well as native plants.
- Shaw, D. and R. Schmidt. 2003. **Plants for stormwater design: species selection for the Upper Midwest**. Minnesota Pollution Control Agency, St. Paul.
A guide that offers specific, detailed suggestions on selecting appropriate species for all design environments while protecting water quality and mitigating stormwater runoff.
- Symonds, G.W.D. 1958. **The tree identification book**. William Morrow and Co., New York, New York.
Uses photographs to identify trees. Includes photographs of leaves, twigs, bark, fruit. Covers species from Maine to North Dakota and Texas to Florida.
- Symonds, G.W.D. 1963. **The shrub identification book**. William Morrow and Co., New York, New York.
Uses photographs to identify shrubs. Includes many but not all shrub species found in MN. Especially useful when only part of a plant (e.g., leaves, buds) is available.
- Tekiela, S. 1999. **Wildflowers of Minnesota**. Adventure Publications, Cambridge, Minnesota.
Color photos and species descriptions for 200 plants found in Minnesota. Organized by color. Pocket size (about 4 x 6 inches).
- Van Bruggen, T. 1976. **Wildflowers of the northern plains and Black Hills**. Bulletin No.3. Badlands Natural History Association, Interior, South Dakota.
Color photographs and species descriptions of many prairie (mostly) plants. Grouped by flower color.
- Wisconsin Department of Natural Resources. 2010. **A Field Guide to Terrestrial Invasive Plants in Wisconsin**. Identification and control information for invasive plants.
<http://dnr.wi.gov/topic/invasives/documents/wi%20inv%20plant%20field%20guide%20web%20version.pdf>

Technical Keys and Manuals

Minnesota

- Allison, H. 1959. **Key to the grasses of Minnesota found in the wild or commonly cultivated as crops**. Department of Botany, University of Minnesota, Minneapolis.
Key to the grasses of the state. Species not illustrated, but includes illustrations of grass anatomy. Includes glossary and common names. Out of print. Available from University of Minnesota libraries and herbarium.

- Almendinger, J.C. 2006. **Key Plants Appearing in the Field Guides to Native Plant Communities of Minnesota: Forest and Woodlands.** Minnesota Department of Natural Resources, Grand Rapids, Minnesota.
A training manual to help learn the plants appearing in the Minnesota DNR Native Plant Community classification system. Available online (last accessed on 4/29/14):
http://files.dnr.state.mn.us/forestry/ecsilviculture/npc_plantID.pdf
- Carlson, R.A. and J.B. Moyle. 1975. **Key to the common aquatic plants of Minnesota.** Minnesota Department of Conservation, St. Paul.
An illustrated key to many of the common emergent and submergent aquatics found in Minnesota. Note taxonomy is not current so scientific names should be used with caution. Refer to MNTAXA for appropriate taxonomy.
- Chadde, S.W. 2013. *Minnesota flora: an illustrated guide to the vascular plants of Minnesota.* CreateSpace Publishing.
Keys to Minnesota's vascular plant families, genera and species. Over 1,900 species described, including maps of county distribution. Illustrated with line drawings.
- Clemants, S.E. 1985. **A key to the rushes (*Juncus* spp.) of Minnesota.** *The Michigan Botanist* 24:33-37.
The most current technical treatment of the genus in Minnesota.
- Lakela, O. 1965. **A flora of northeastern Minnesota.** University of Minnesota Press, Minneapolis.
Technical keys to plants found in St. Louis and Lake counties. Includes distribution maps for each species within the two counties, species descriptions, and a few line drawings.
- Morley, T. 1969. **Spring flora of Minnesota.** University of Minnesota Press, Minneapolis.
Key to Minnesota plants blooming before 7 June. Not illustrated.
- Moyle, J.B. 1964. **Northern non-woody plants.** Burgess Publishing Company, Minneapolis, Minnesota.
Technical key to some of the more common ferns and flowering plants in Minnesota.
- Ownbey, G. B., and T. I. Morley. 1991. **Vascular plants of Minnesota.** University of Minnesota Press, Minneapolis.
Available in both hard and soft cover. Checklist of and distribution maps for all plants collected from state. Includes common names for most plants.
- Rosendahl, C.O. and A. Cronquist. 1945. **The goldenrods of Minnesota: a floristic study.** *American Midland Naturalist* 33(1): 244-253.
A good identification key to begin with for Minnesota material. Nomenclature somewhat outdated.
JCA
- Rosendahl, C.O. and A. Cronquist. 1949. **The asters of Minnesota: a floristic study.** *American Midland Naturalist* 44 (2): 502-512.
A good identification key to begin with for Minnesota material. Nomenclature somewhat outdated.
JCA

- Russell, N.H. 1958. **The violets of Minnesota.** *Minnesota Academy of Science* 25-26:126-191. Illustrated. A good identification key to begin with for Minnesota material. JCA
- Sather, N. and K. VanNorman. 1988. **Results of a survey for *Sparganium glomeratum* in the Chippewa National Forest.** Minnesota Department of Natural Resources, Natural Heritage Program, St. Paul. Includes key to species of *Sparganium* in Minnesota.
- Sculthorpe, C.D. 1967. **The Biology of Aquatic Vascular Plants.** Reprint 1985. Koeltz Scientific Books, Königstein. 610 pp.
- Seaholm, J.E. 1964. **A taxonomic study of the genus *Galium* in Minnesota.** *Minnesota Academy of Science* 31 (2): 99-104. The best key for Minnesota material. Illustrated. JCA
- Smith, W.R. 1993. **Orchids of Minnesota.** University of Minnesota Press, Minneapolis. Key, line drawing, distribution map, and photograph for all orchid species found in Minnesota. Also includes detailed species descriptions, chart of known flowering dates, and glossary.
- Smith, W.R. 2012. **Native Orchids of Minnesota.** University of Minnesota Press, Minneapolis. The book provides information on 49 different species of Wild Orchids found in Minnesota, including background information, keys, range maps, extensive technical documentation and descriptions. DM
- Smith, W.R. 1988. **A new bladderwort for Minnesota.** *Minnesota Plant Press* 7(3): 1-4. Includes a key to species of *Utricularia* found in Minnesota. *Utricularia purpurea* had not been collected in Minnesota when this key was written but is described in the article. Illustrated.
- Smith, W.R. 2008. **Trees and Shrubs of Minnesota.** University of Minnesota Press, Minneapolis.
- Tryon, R. 1980. **Ferns of Minnesota.** University of Minnesota Press, Minneapolis. Technical keys, distribution maps, line drawings, silhouettes, and a few color photographs of ferns, horsetails, and related plants.
- University of Minnesota Sustainable Forests Education Cooperative. University of Minnesota College of Food, Agricultural and Natural Resource Sciences. **Silvics and Silviculture.** A series of PDF documents that contain helpful information in differentiating commonly confused Minnesota plant species. Available online (last accessed on 4/29/14): <http://sfec.cfans.umn.edu/silviculture/index.htm>
- Wheeler, G.A. and Ownbey, G.B. 1984. **Annotated list of Minnesota *Carices*, with phytogeographical and ecological notes.** *Rhodora* 86: 151-231. The distribution maps and species descriptions contain information not found in keys. JCA

Wheeler, G.A. 1981. *Carex of Minnesota*. Ph.D. Dissertation. University of Minnesota, St. Paul.
A full treatment of the taxonomy of *Carex* including a key for the state. This is the authoritative treatment of the genus. The key is not illustrated, and the author uses precise botanical language.
JCA

XID Services, Inc. **Flora ID Minnesota**.

This expert system computer plant key of all vascular plants known to occur in Minnesota includes descriptive information for each plant species. Keys allow the user to select from menus of plant characteristics to identify species, color photos, definitions of terms, and a user guide. Can be purchased from: FLORA 10 NORTHWEST, LLC. 731 NW 5th, Pendleton, OR 97801. 541-276-5547, Fax 541-276-8405. flora@ucinet.com. HDT

Regional

Barnes, B.V., and W. H. Wagner, Jr. 2003. **Michigan trees, revised and updated: a guide to the trees of the Great lakes region**. University of Michigan Press, Ann Arbor.
Keys, descriptions, line drawings, key characters for identification, and habitat information for trees and shrubs of Michigan. Also useful for Minnesota. HDT

Case, F.W., Jr. 1987. **Orchids of the western Great Lakes region**. Second edition. Bulletin 48. Cranbrook Institute of Science.
Keys., photographs, distribution maps, and extensive species descriptions for Great Lakes orchid species. First edition 1964.

Chadde, S. 2002. **A Great Lakes wetland flora: a complete guide to the aquatic and wetland plants of the Upper Midwest**. 2nd edition. Pocketflora Press. Laurium, Michigan.

Crow, G.E., and C. B. Hellquist. 2000. **Aquatic and wetland plants of northeastern North America**. 2 Volumes. The University of Wisconsin Press, Madison.
A revised and enlarged edition of N.C. Fassett's A manual of aquatic plants. Volume one includes ferns, gymnosperms, and dicots. Volume two includes monocots.

Czarapata, Elizabeth. 2005. **Invasive Plants of the Upper Midwest: An Illustrated Guide to Their Identification and Control**. University of Wisconsin Press, Madison.

Farrar, J.L. 1995. **Trees of the northern United States and Canada**. Iowa State University Press, Ames.
This is a gem. Excellent photos and line drawings of overall features and details (bark texture, twigs, leaves) enable quick and reliable identification. Thorough verbal descriptions of all aspects of morphology and natural history. This is what all botanical reference books ought to be like- the book won an award for presentation quality. MF

Fassett, N.C. 1951. **Grasses of Wisconsin**. University of Wisconsin Press, Madison.
Includes 58-page section of illustrations and a glossary.

Fassett, N.C. 1957. **A manual of aquatic plants**. University of Wisconsin Press, Madison.
Technical keys to aquatic plants found from Minnesota south to Missouri and east to the east coast. Includes line drawings of many plants.

- Fassett, N.C. 1976. **Spring flora of Wisconsin**. University of Wisconsin Press, Madison.
Key to Wisconsin plants blooming before 15 June. Some illustrations.
- Fernald, M.L. 1950. **Gray's manual of botany**. 8th edition. American Book Company, New York, New York.
Classic technical key and plant descriptions for ferns and flowering plants found in central and northeastern United States and adjacent Canada. Includes pronunciation guides and a few line drawings.
- Flora of North America Editorial Committee. 1993. **Flora of North America north of Mexico, Vol. 2: Pteridophytes and Gymnosperms**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps to ferns, conifers, and related plants. Volume 1 relates the history of the Flora of North America project.
- Flora of North America Editorial Committee. 1997. **Flora of North America north of Mexico, Vol. 3: Magnoliophyta: Magnoliidae and Hamamelidae**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for water lilies, buttercups, nettles, walnuts, and related plants.
- Flora of North America Editorial Committee. 2003 . **Flora of North America north of Mexico, Vol. 4: Caryophyllidae Part 1**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for Achatocarpus, Amaranth, Cactus Carpet-weed, Fig-marigold, Four-o'clock, Goosefoot, Madeira-vine, Pokeweed, Purslane.
- Flora of North America Editorial Committee. 2005 . **Flora of North America north of Mexico, Vol. 5: Caryophyllidae Part 2**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for Buckwheat, Leadwort, and Pink family.
- Flora of North America Editorial Committee. 2010 . **Flora of North America north of Mexico, Vol. 7: Salicaceae to Brassicaceae**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for
- Flora of North America Editorial Committee. 2009 . **Flora of North America north of Mexico, Vol. 8: Paeoniaceae to Ericaceae**. Oxford University Press, New York, New York.
- Flora of North America Editorial Committee. 2006 . **Flora of North America north of Mexico, Vol. 19: Asteraceae Part 1**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for the Composite family.
- Flora of North America Editorial Committee. 2006 . **Flora of North America north of Mexico, Vol. 20: Asteraceae Part 2**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for the Composite family Part two.
- Flora of North America Editorial Committee. 2006 . **Flora of North America north of Mexico, Vol. 21: Asteraceae Part 3**. Oxford University Press, New York, New York.
Technical key, species descriptions, and distribution maps for the Composite family Part three.

- Flora of North America Editorial Committee. 2000. **Flora of North America north of Mexico, Vol. 22: Magnoliophyta: Alismatidae, Arecidae, Commelinidae (in part) and Zingiberidae**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for arrow grasses, spiderworts, rushes, cattails, and related plants.
- Flora of North America Editorial Committee. 2002. **Flora of North America north of Mexico, Vol. 23: Magnoliophyta: Commelinidae (in part): Cyperaceae**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for the sedge family.
- Flora of North America Editorial Committee. 2007: **Flora of North America north of Mexico, Vol. 24: Poaceae Part 1**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for grasses (Poaceae) part one.
- Flora of North America Editorial Committee. 2003: **Flora of North America north of Mexico, Vol. 25: Poaceae Part 2**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for grasses (Poaceae) part two.
- Flora of North America Editorial Committee. 2007. **Flora of North America north of Mexico, Vol. 27: Mosses Part 1**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for mosses.
- Flora of North America Editorial Committee. 2002. **Flora of North America north of Mexico, Vol. 26: Magnoliophyta: Liliidae: Liliales and Orchidales**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for the lily and orchid families.
- Flora of North America Editorial Committee. 2003. **Flora of North America north of Mexico, Vol. 25: Magnoliophyta: Commelinidae (in part): Poaceae, part 2**. Oxford University Press, New York, New York.
 Technical key, species descriptions, and distribution maps for 6 subfamilies of the Poaceae (grass family). Remainder will be in Vol. 24.
- Gleason, H.A., and A. Cronquist. 1991. **Manual of vascular plants of northeastern United States and adjacent Canada**. Second edition. New York Botanical Garden, New York.
 Updated version of manual (technical key and plant descriptions) that contains same information (but updated) as the illustrated flora but lacks the line drawings.
- Gleason, H.A. 1952. **Illustrated flora of the northeastern United States and adjacent Canada**. Macmillan Publishing Co. New York, New York.
 Three volumes. Includes keys, descriptions, and line drawings of all species known to occur in area covered. Out of print. Available in most university libraries. An earlier edition is published in paperback by Dover.
- Great Plains Flora Association. 1986. **Flora of the Great Plains**. R.L. McGregor, coord.; T.M. Barkley, ed., University Press of Kansas, Lawrence.
 Technical key to plants of the Great Plains, including western Minnesota. Not illustrated.

- Great Plains Flora Association. 1977. **Atlas of the flora of the Great Plains**. R.L. McGregor, coord.; T.M. Barkley, ed., The Iowa State Univ. Press, Ames.
Distribution maps to accompany the keys found in Flora of the Great Plains. Includes western Minnesota.
- Hitchcock, A.S. 1950. **Manual of the grasses of the United States**. Dover Publications, Inc., New York, New York.
Two volumes. Revised by Agnes Chase. First published in 1935. The Dover edition is a reprint of the revised edition published by the U.S. Government Printing Office in 1950. Includes keys, species descriptions, distribution maps, and line drawings.
- Holmgren, N.H. 1998. **Illustrated Companion to Gleason and Cronquist's Manual. Illustrations of the Vascular Plants of Northeastern United States and Adjacent Canada**. The New York Botanical Garden, New York, New York.
Excellent black and white illustrations, with page numbers corresponding to Gleason and Cronquist.
- Lahring, H. 2003. Water and wetland plants of the Prairie Provinces: a field guide for Alberta, Saskatchewan, Manitoba, and the Northern United States. Canadian Plains Research Center. DP
- Lellinger, D.B. 1985. **A field manual of the ferns and fern allies of the United States and Canada**. Smithsonian Institution Press, Washington, D.C.
Contains color photographs and introductory chapters on nomenclature, ecology, and structure. Comprehensive keys to fern-allies and ferns, with glossary, bibliography, checklist, and indices to common and scientific names. CEM
- Michigan Flora Online**. A. A. Reznicek, E. G. Voss, & B. S. Walters. February 2011. University of Michigan. Web. 3-19-2014. <http://www.michiganflora.net/home.aspx>
An online searchable and browsable form of the *Field Manual of Michigan Flora*, (Voss & Reznicek, 2012). It includes basic information about vascular plants, including spore bearing vascular plants, distribution maps, keys, brief discussions and identification notes.
- Preston, R.J. 1976. **North American trees**. Iowa State University Press, Ames.
Technical keys, line drawings, and distribution maps for tree species found north of Mexico.
- Rosendahl, C.O. 1955. **Trees and shrubs of the Upper Midwest**. University of Minnesota Press, Minneapolis.
Includes keys, some line drawings, and a few photographs. Also includes detailed species descriptions.
- Schuyler, A.E. 1967, **A taxonomic revision of North American leafy species of *Scirpus***.
Proceeding, Academy of Natural Sciences of Philadelphia 119(6): 259-323.
Technical key requiring fruits and rhizomes. Not illustrated.
- Scoggan, H.J. 1957. **Flora of Manitoba**. Bulletin No. 140. Biological Series No. 47. National Museum of Canada, Ottawa.
Technical keys and habitat descriptions. Not illustrated.

- Skawinski, P.M. no date. **Aquatic plants of Wisconsin.** A photographic field guide to submerged and floating-leaf aquatic plants. Self-published and printed in Wausau, Wisconsin, USA. DP
- Skawinski, P.M. 2011. **Aquatic plants of the Upper Midwest.** A photographic field guide to our underwater forests. Self-published and printed in Wausau, Wisconsin, USA. DP.
- Stevens, O.A. 1963. **Handbook of North Dakota plants.** North Dakota Institute for Regional Studies, Fargo.
Technical key and plant descriptions. Includes a few line drawings and black and white photographs.
- Stubbendieck, J., S.L. Hatch, and C. H. Butterfield. 1997. **North American range plants.** Fifth ed. University of Nebraska Press, Lincoln.
Arranged alphabetically by family, tribe, and species. Line drawing and range map on facing page plus 1 page fact sheet including inflorescence characteristics, vegetative characteristics, and forage and habitat information. Includes graminoids, forbs, and woody plants. Glossary.
- University of Illinois at Urbana-Champaign. 1981. **Weeds of the north central states.** University of Illinois Publications Department, Urbana.
Contains drawings of plants and plant parts. Includes range maps. Text discusses plant parts used for identification and explains why the plant is troublesome. CEM
- Van Bruggen, T. 1976. **The vascular plants of South Dakota.** Iowa State University Press, Ames.
Technical key and species descriptions for South Dakota plants. Not illustrated.
- Voss, E.G. 1972. **Michigan flora, Part I: Gymnosperms and monocots.** Cranbrook Institute of Science and University of Michigan Herbarium, Bloomfield Hills.
Includes technical keys, line drawings, species descriptions, and range maps.
- Voss, E.G. 1985. **Michigan flora, Part II: Dicots.** Bulletin 59. Cranbrook Institute of Science and University of Michigan Herbarium, Bloomfield Hills.
Saururaceae through Cornaceae. Includes technical keys, line drawings, species descriptions, and range maps.
- Voss, E.G. 1996. **Michigan flora, Part III: Dicots.** Bulletin 61. Cranbrook Institute of Science and University of Michigan Herbarium, Bloomfield Hills.
Pyrolaceae through Compositae. Includes technical keys, line drawings, species descriptions, and range maps.
- Voss, E. G. and A.A. Reznicek, 2012. **Field Manual of Michigan Flora.** The University of Michigan Press. Ann Arbor, MI.
Includes technical keys, brief species and habitat descriptions, and distribution maps. At least 9 additional volumes of Flora of North America have been published.
- Whitson, T.D., ed. 1991. **Weeds of the West.** University of Wyoming.
Contains good color photos showing the whole plant and the important key characters of leaves, flowers, seeds and roots. Text gives botanical name, family, description of plant, origin of plant, and habitat. Many plants found along roadsides and in other disturbed areas in the Upper Midwest are illustrated and discussed. CEM

MOSS AND LIVERWORT IDENTIFICATION

- Andrus, R.E. 1980. **Sphagnaceae (Peat Moss Family) of New York State. Contributions to a Flora of New York State III.** R.S. Mitchell, editor. Bulletin No. 442. New York State Museum, University of New York, Albany.
An excellent review of the genus *Sphagnum* including ecology and phytogeography, with illustrated keys to the species. JCA
- Conrad, H.S.; rev. by P.L. Redfearn, Jr. 1979. **How to know mosses and liverworts.** Wm. C. Brown Company Publishers. Dubuque, Iowa.
One in the Pictured Key Nature Series. less intimidating for beginners than some other keys. Uses couplets; major keys lead to genera, then species are keyed out under each genus. CEM
- Crum, H. 1973. **Mosses of the Great Lakes forest. Contributions from the University of Michigan Herbarium. Vol. 10.** pp. 1-404.
A comprehensive, illustrated key to the genera and species of mosses of the Great lakes region. JCA
- Crum, H. 1988. **A focus on peatlands and peat mosses.** University of Michigan Press. Ann Arbor.
Contains keys, illustrations, and photomicrographs of common North American species of peat mosses. Includes an overview of peatland ecology. CEM
- Ireland, R.R., G.R. Brassard, W.B. Schofield, and D.H. Vitt. 1987. **Checklist of the mosses of Canada II.** *Lindbergia* 13(1-2): 1-67.
Commonly cited as standard nomenclature for mosses in North American research papers. JCA
- Schuster, R.M. 1992. **The Hepaticae and Anthocerotae of North America east of the hundredth meridian.** Columbia University Press, New York, New York.
The authoritative work on liverworts and hornworts. Six volumes. JCA
- Thomas, L.P. 1985. **Walk softly upon the earth: a pictorial field guide to Missouri mosses, liverworts, and lichens.** Missouri Department of Conservation, Jefferson City.
A non-technical picture guide to common mosses and other lower plants of Missouri. Includes color photo of each. NS
- McQueen, C.B. 1990. **Field guide to the peat mosses of boreal North America.** University Press of New England, Hanover, New Hampshire.
Contains color photos, brief segments on morphology and terminology, a random access key, descriptive key, macroscopic key, glossary, and suggestions for further reading. CEM
- Vitt, D.H., J.E. Marsh, and R.B. Bovey. 1988. **Mosses, lichens, and ferns of northwest North America.** University of Washington, Lone Pine.
Contains keys, color photographs, and maps. Applies to many species in the Upper Midwest. CE

PLANT ECOLOGY

- Barbour, M.G., J.H. Burk, W.D. Pitts, F.S. Gilliam, and M.W. Schwartz. 1999. **Terrestrial plant ecology**. Third ed., Addison Wesley Longman, Inc., Menlo Park, California.
Broad coverage of plant ecology topics. Arranged in chapters within parts; parts include Background and Basic Concepts (including history of plant ecology), The Species as an Ecological Unit (including plant demography, allocation and life history patterns, and species interactions), The Community as an Ecological Unit (including classification and ordination of communities, methods of sampling, succession, and productivity), and Environmental Factors (light, temperature, fire, soil).
- Barbour, M.G., and W.O. Billings, ed. 2000. **North American terrestrial vegetation**. Second ed. Cambridge University Press, Cambridge, England.
Includes chapters on grasslands, eastern deciduous forests, and freshwater wetlands (including peatlands and prairie potholes). Black and white photos and line drawings.
- Curtis, J.T. 1959. **The vegetation of Wisconsin**. University of Wisconsin Press, Madison.
A classic text. Descriptions of Wisconsin's native plant communities. Based on point vegetation samples.
- Kruckeberg, A.R. 2002. **Geology and plant life: the effects of landforms and rock types on plants**. University of Washington Press, Seattle.
First chapter includes four botanical laws shaped by geology. Subsequent chapters include the historical roots of geobotany, landforms and plant life, influence of rocks on plant life, and the relationship between geology and the distribution of plants. Includes chapter on human influences on the geology-plant interface (agriculture, forestry, mining- including gravel, dams). Black and white photos and illustrations.
- Larson, D.W., U. Matthes and P.E. Kelly. 2000. **Cliff Ecology. Pattern and Process in Cliff Ecosystems**. Cambridge University Press.
- Minnesota Department of Natural Resources. 1999. **Living in the landscape: leaving boundaries behind**. Video produced for the Minnesota DNR by the Center for Global Environmental Education and Aurora Pictures.
Available from Minnesota's Bookstore. This 27-minute video describes the state's natural and cultural heritage by taking the viewer on a tour through Minnesota's ecosystems. HDT
- Minnesota Department of Natural Resources. 2005. **Field guide to the native plant communities of Minnesota. A series in three volumes: the Laurentian Mixed Forest Province (2003); the Prairie Parkland and Tallgrass Aspen Parklands Provinces, and the Eastern Broadleaf Forest Province**. Ecological Land Classification Program, Minnesota County Biological Survey, and Natural Heritage and Nongame Research Program, St. Paul.
Technical keys and information sheets describing hierarchical system (system groups, ecological systems, and native plant community class) for each ecological section within each ecological province. Guides contain maps, factsheets, and tables to help in plant community identification and classification.
- Nichols, S.A. 1999. **Distribution and habitat descriptions of Wisconsin lake plants**. Wisconsin Geological and Natural History Survey Bulletin 96. Madison, Wisconsin. DP

- Tester, J. 1995. **Minnesota's natural heritage: an ecological perspective.** University of Minnesota Press, Minneapolis.
An excellent general introduction to the ecology of the state for the interested public. Includes chapters on the landscape (including geologic history and development of vegetation), climate and weather, deciduous forests, northern coniferous forest, tallgrass prairie, wetlands, lakes, streams and rivers, and the future (including human impacts on Minnesota ecosystems and environmental indicators). Includes color photos.
- Wovcha, D.S., B.C. Delaney, and G.E. Nordquist. 1995. **Minnesota's St. Croix River Valley and Anoka Sandplain; A guide to native habitats.** University of Minnesota Press, Minneapolis.
An interpretive guide to the landscape history and biological diversity of six counties in east-central Minnesota, including maps, descriptions of the landscape, native plant communities, and plants and animals of the region, and a guide to selected sites to visit. HDT
- Weaver, J. E. 1954. **North American prairie.** Johnsen Publishing Company, Lincoln, Nebraska.
Classic describing characteristics of prairie and plants growing there. B/w photos and illustrations.
- Wright, H.E., Jr., B.A. Coffin and N.E. Aaseng, eds. 1992. **The patterned peatlands of Minnesota.** University of Minnesota Press, Minneapolis.
Definitive book on Minnesota's patterned peatlands. Includes chapters on peat landforms, hydrology, water chemistry, peatland development, flora and fauna, human influences, and peatland protection. Includes section of color plates showing patterning at various scales and b/w line drawings throughout.

PLANT NAMES AND TERMINOLOGY

- Bailey, L.H. 1963. **How plants get their names.** Dover Publications, Inc., New York, New York.
Contains several explanatory chapters, a list of generic names, and a glossary of specific names.
- Brako, L., A.Y. Rossman, and D.F. Farr. 1995. **Scientific and common names of 7,000 vascular plants in the United States.** APS Press, St. Paul, Minnesota.
Includes multiple common names for plants. Listing by scientific name and by common names.
- Coombes, A.J. 2005. **Dictionary of plant names.** Timber Press, Portland, Oregon.
Contains a few pages of introduction, pronunciation guide, and glossary. The main body of text is a dictionary, with pronunciation, derivation, and meaning of botanical names, and their common-name equivalents. CEM
- Gledhill, D. 1992. **The names of plants.** Cambridge University Press, Cambridge, UK.
Contains a few brief chapters on nomenclature followed by the glossary. Few illustrations, but the glossary gives short definitions of terms, translations of Latin names, etc. CEM
- Harris, J.G., and M.W. Harris. 1994. **Plant identification terminology: an illustrated glossary.** Spring Lake Publishing, Spring Lake, Utah. .
Contains dictionary of terms with many illustrations, plus illustrated sections pertaining to roots, stems, surfaces, leaves, inflorescences, flowers, and fruit. CEM

PLANT COLLECTION

- Engelmann, G. 1986. **Instructions for the collection and preservation of botanical specimens.** Ann. Missouri Bot. Gard. 73:504-507.
Reprint of instructions prepared by author in mid 1800s. Contains basic, useful information, e.g., the importance of fruit and flower in identification, dealing with large specimens, label information, and record keeping.
- Hale, A.M. 1976. **A portable electric herbarium drier.** Rhodora 78:135-140.
Describes a break-down plywood and light bulb style plant drier.
- Haynes, R.R. 1984. **Techniques for collecting aquatic and marsh plants.** Ann. Miss. Bot. Gard. 71:229-231.
Recommends collecting plants with flowers and fruits ("...if a specimen cannot be determined, it might as well be left in nature"). Reviews label data important for identification of aquatics, and describes a variety of collecting techniques (floating, waxed paper, construction of a "duckweed press").
- Hicks, A.J., and P.M. Hicks. 1978. **A selected bibliography of plant collection and herbarium curation.** Taxon 27(1):63-99.
Extensive bibliography (784 entries) dealing with herbarium management and plant collection and preservation. Includes index by topic.
- Jenne, G. 1968. **A portable forced air plant drier.** Taxon 17:184-185.
A heater, blower unit, and zippered plastic sections for holding the presses.
- Porter, C.L. 1967. **Taxonomy of flowering plants.** W.H. Freeman and Co., San Francisco.
Basic plant taxonomy text. Includes chapters on plant names, terminology used in describing plants, and field and herbarium methods.
- Radford, A.E., W.C. Dickison, J.R. Massey, and C.R. Bell. 1974. **Vascular plant systematics.** Harper and Row Publishers, New York, New York.
A compendium of information on plant taxonomy. Includes chapters on botanical names, collection and preparation of specimens, herbaria, plant identification, and many other topics.
- Robertson, K.R. 1980. **Observing, photographing, and collecting plants.** Ill. Nat. Hist. Survey 55:1-62.
Broad coverage of topics associated with plant collection. Includes chapters on poisonous plants, plant names (including pronunciation), use of dichotomous keys, plant photography (including information on cameras, films, lenses, and composition), and preparation of herbarium specimens. Illustrated with line drawings and photographs.
- Saville, D.B.O. 1962. **Collection and care of botanical specimens.** Research Branch, Canada Department of Agriculture. Publication 1113. Information Canada, Ottawa.
Describes basic collecting and pressing information for vascular plants. Also includes chapters on collecting and preserving mosses, fungi, and algae. Line drawings illustrate plant press construction, plant dryer, field form, herbarium label.

Tillett, S.S. 1977. **Technical aids for systematic botany: new models of plant-press driers.** *Taxon* 26(5/6):553-556.

Describes laboratory, field-camp, and vehicle-adapted plant driers.

Woodland, D.W. 1991. **Contemporary plant systematics.** Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

General plant taxonomy text that includes chapters on plant names, identification, and collection and preservation of plants.