A GUIDE TO REFERENCES FOR CURATORS OF SMALL HERBARIA

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From time to time those of us who manage herbaria will get a letter or a telephone call from a former student or person working for a company or agency needing information on topics like making a collection of plant voucher specimens, or setting up a herbarium. Perhaps you are a teacher who has arrived at an institution and found bundles of student collections from previous years, and you want to set up a teaching herbarium to go along with courses being taught. Or perhaps, you work for an environmental consulting firm and need vouchers for comparison work. So, how does one go about setting up an herbarium for student and/or local use? “What references are most helpful sitting on the shelf for identification and curation of plant specimens?”

We have compiled information that we feel would be helpful to an individual beginning a curatorial adventure centered in upper Mid-West North America, with emphasis on the Great Lakes region. The list of floras provided reflects this geographic area. Most information has been gleaned through experience and from some key references given below. Two books especially helpful were: Frodin, D. G. 2001. Guide to Standard Floras of the World, 2nd ed. Cambridge University Press, Cambridge, 1100 pp., and Woodland, D. W. 2000. Contemporary Plant Systematics, 3rd ed. Andrews University Press, Berrien Springs, MI, 569 pp. The references we feel are a “must have” are indicated by an asterisk *. Comments explaining the use or value of a reference are given following many bibliographic entries.

Herbarium Techniques


Indexes for Bibliographic, Illustrative, and Nomenclatural Literature

*Brummitt, R. K. 1992. Vascular Plant Families and Genera. Royal Botanic Gardens, Kew, UK, 804 pp. This volume lists nearly 14,000 accepted generic names, and over 10,000 other names, with their authors as currently used at the Royal Botanic Gardens, Kew, UK. The accepted names are also listed family by family for easy reference.


*Mabberley, D. J. 1997. The Plant-Book. A Portable Dictionary of the Higher Plants, second edition. Cambridge University Press. Cambridge, UK. This work is an alphabetical listing of families and genera of vascular plants. It follows the Cronquist system of classification and has a layout much like Willis’ A Dictionary of Flowering Plants. It includes information on family descriptions, distributions, number of species, economic uses, and examples, as well as less detailed information on synonymy and tribal and subfamily levels. Pertinent recent literature is also included. This is a very handy reference.

Terminology and Dictionaries


**Specific and Comprehensive Guides**

Brummitt, R. K. & C. E. Powell (eds.). 1992. Authors of Plant Names. Royal Botanic Gardens, Kew, UK, 732 pp. This book lists nearly 30,000 authors of plant Latin names and gives a recommended standardized abbreviation for each of these authors’ names. Some biographic information is also given.

*Cronquist, A. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press, New York, 1262 pp. This is a most comprehensive study of flowering plant families, with detailed descriptions, examples, illustrations, keys to the families, and fossil record information, all of which are based around Cronquist’s classification scheme, a scheme that has been largely replaced by a more recent one by the Angiosperm Phylogeny Group. This classification system can be accessed on the website of the Missouri Botanical Garden: <http://www.mobot.org/> and continue on to: <http://www.mobot.org/MOBOT/Research/APweb/welcome.html>.


Lawrence, G. H. M., et al. (eds.) 1968. B-P-H. Botanico-Periodicum-Huntianum. Hunt Botanical Library. Pittsburgh, PA (Supplementum 1991, written by G. D. R. Bridson & E. R. Smith.). This reference provides standardized abbreviations to over 20,000 botanical journals and is especially helpful in identifying older reference citations. This guide is used by many current botanical journals as a guide for abbreviating journal literature citations.

**Basic Systematic texts**


*Heywood, V. H. (ed.). 1993. Flowering Plants of the World. B. T. Batford, London, 335 pp. It is said that a new edition of this lovely book is being prepared with family descriptions matching the new APG classification system. We hope the families will still have the lovely watercolor illustrations of the older edition.


versity Press, Berrien Springs, MI, 569 pp. This text has the broadest geographical coverage of the books listed here. It gives a more global view and discusses the greatest number of vascular plant families. It includes a CD with more than 4,700 color images.


**Floras and Manuals**

A flora is a taxonomic treatment of all plants occurring in a geographical area. It can also refer to the plants living in a region. This area can be small, such as a nature preserve of a few hectares (or acres), or more extensive such as a regional, state, or country flora. Each written flora is developed following predetermined guidelines on the type of coverage to be included. These guidelines might involve all plants or only vascular plants; only a listing of names; descriptions, keys, and distributions; ecological, geological, or soil information; how the flora will be used; etc. The book with all or part of this information is called a manual; in practice, the two words are used interchangeably.

**Bibliographies**

Frodin, D. G. 2001. Guide to Standard Floras of the World, 2nd ed. Cambridge University Press, Cambridge, 1100 pp. This is a very expensive reference book and costs almost $300.00 and is normally out of reach of most herbaria. It may be purchased by some libraries and be available in the reference section of an academic library. It is the most extensive reference on this subject worldwide and makes it handy to know what books are available before a person travels to a foreign country. An abridged list is found in Appendix II of: Woodland, D. W. 2000. Contemporary Plant Systematics, 3rd ed. Andrews University Press, Berrien Springs, MI, 569 pp.

**Cultivated Plant Manuals**


**General Keys**

The two references listed here are most helpful when you have plant material where the family is not recognized, when the specimen is a cultivated plant, or the origin is unknown.


**Regional Floras that Include the Great Lakes Region**


*Flora North America Editorial Committee. 1993—. Flora of North America. Vol. 1—. Oxford University Press, New York (a new, multi-volume series). This will ultimately be a 30 volume series to the over 20,000 species of vascular plants in North America. Approximately one-fourth of the volumes have been published with other volumes in various stages of preparation. Every herbarium curator should have access to a set if at all possible.


Illinois
*Mohlenbrock, R. H. 1970–1982. The Illustrated Flora of Illinois. (Ongoing se-
ries, 10 vols. published thus far.) Southern Illinois University Press, Carbondale and Edwardsville.


**Indiana**


**Michigan**


Minnesota

Ohio

Wisconsin


Virtual or Web-Herbaria
http://sciweb.nybg.org/science2/VirtualHerbarium.asp
http://www.vplants.org/ (Deals with the Chicago region and includes fungi)
http://www.cals.ncsu.edu/botany/ncsc/type_links.htm
http://scarab.science.oregonstate.edu/mailman/listinfo/herbaria

CDs
