

### BOOK REVIEW

**Michigan Flora, Part II: Dicots (*Saururaceae*—*Cornaceae*).** Edward G. Voss. (Sept.) 1985. Cranbrook Institute of Science, Bulletin 59, and University Michigan Herbarium. 744 p. hardcover. Available from Cranbrook Institute of Science (Publications), 500 Lone Pine Rd., P.O. Box 801, Bloomfield, Michigan 48013. \$12.50, plus postage and handling.

Michigan Flora, Part II, by Edward G. Voss, is the second volume of a projected three-volume work dealing specifically with the plant species occurring in the state of Michigan. Part I, which appeared in 1972, covers gymnosperm and monocot groups. Part II (1985) covers roughly one-half of the dicots, specifically the apetalous and polypetalous families. Part III, to appear in the future (date apparently uncertain), will treat the sympetalous families of dicots. As may be surmised, the family arrangement order is basically that of the traditional Englerian system. Although Englerian in family enumeration, a tidbit of new terminology is invoked; the dicots, for example, are referred to as the Magnoliopsida (apparently *sensu* Cronquist). However, this classificatory saltation presents no actual practical problem.

Voss' Michigan Flora is done the way that a flora should be done. It is based on actual specimen records (mostly in Michigan herbaria) and the author's extensive first-hand field experience, as opposed to being merely compiled from previously existing sources. This primary approach to documentation of the flora of Michigan is reflected in the accurate, detailed, and inclusive keys to genera and to species; in the clear statements of habitat (unfortunately not usually accompanied by phenological information); and in the county distribution maps provided for virtually all taxa covered. The work is comprehensive in that both native and naturalized (including some escaped) taxa are encompassed. The listing of references to taxonomic studies for many of the genera is quite beneficial. Not consistent with this generally primary and comprehensive approach are the illustrations (line drawings) which are mostly taken from previous sources and often not specifically from Michigan material. Nonetheless, a reasonable consistency of appearance of these drawings is somehow the outcome in the final product and enough representative taxa are illustrated to be significantly helpful. By contrast, the relative handful of color photographs placed together toward the front of Volume II seem more ornamental than fundamentally useful. However, the number and placement of photographs are in keeping with a similar color presentation in Volume I.

The section on the use of the book in the frontmatter of Volume II, abbreviated from information in Volume I,

is helpful indeed. It may be, however, that the author has not completely satisfied the stated intent of producing a work "to help interested persons to expand their knowledge of the plants . . ." The keys are frequently technical and perhaps, though one cannot generalize, more intelligible to the professional than to the amateur botanist. The glossary in the back of the book does help alleviate this problem. Descriptive information in addition to the keys is often relatively scant and this could present a problem to the uninitiated. Regardless, successful identification to species is certainly an attainable goal for most serious users of this work in that the keys to genera and to species are straightforward, wholly dichotomous, and the various couplets readily comparable throughout. Employment of the yoked (vs. bracketed) key format, along with a simple numbering system, makes the keys easy to follow if the technical phrases can be mastered.

One serious drawback to Volume II is that no key to dicot families is given. The author indicates in the preface to Volume II that an overall key to dicot families will appear in Volume III. However, since Volume III is not published, and may not be in the immediate future, this provides little help for the users of Volume II. This could cause problems for the amateur botanist. The user of Part II must already know to what family the unknown plant belongs before identification to genus and species can be pursued. Even after the appearance of Part III, it may be awkward to have the key to dicot families placed in a position in the volumes other than at the beginning of the dicots (i.e., toward the front of Part II). Additionally, it will be necessary to lug three volumes into the field to make certain of having the opportunity to identify any plant which might be stumbled upon. The author's stated idea for a future one-volume compact edition (abridging the three volumes) for convenient field use is a very good one.

Irrespective of any drawbacks, *Michigan Flora, Part II*, by Edward Voss is a careful, thorough, and accurate work on the first half of the dicot taxa of Michigan. The potential usefulness of the work to a variety of people is enormous. Since there is really no other comparable treatment of the flora of Michigan, I eagerly await the future publication of Part III. Whereas Voss' work on the Michigan flora may not be the last word on the subject, it is by far the most definitive one to date. It is a must for the book shelf (or the field pack) of botanists interested in the flora of the Great Lakes region.

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## BOOK REVIEW

**Cincinnati Fossils, an Elementary Guide to the Ordovician Rocks and Fossils of the Cincinnati, OH, Region.** Edited by R. A. Davis, published by the Cincinnati Museum of Natural History, 1720 Gilbert Avenue, Cincinnati, Ohio 45202, \$4.75 + tax.

This new "Cincinnati Fossils" represents basically a reprinting of Davis' 1981 version (now out of print) of the famous classic guide to the Ordovician fossils of the Cincinnati area. Only a few changes have been made in this latest version, which basically just makes this valuable book available again. The only changes are an updating of the taxonomy, an expansion of the bibliography (even more than in the 1981 edition), some minor corrections, and the addition of a chart showing the modern correlatives, throughout the Ohio-Kentucky-Indiana area, of the classic stratigraphic terms used in this guide. Unfortunately, as a result of the insertion of this chart, the famous two-page drawings illustrating the classic Ordovician stratigraphy (called "Fossil-Range Charts" in

both of Davis' guides) now occur back-to-back, rather than facing each other (as had been true in all earlier versions), making comparison of the Eden-Maysville and Richmond sedimentary and fossil sequences more difficult. However, Ken Caster's same fine fossil plates, that have been depended upon for identification of Ohio's Ordovician fossils for half a century by Cincinnati-fossil collectors, are still intact, and the new, very useful index to the fossils figured is also still included. Dr. Davis and the Cincinnati Museum of Natural History are thus continuing their fine service by making this classic and much-needed guide available. This guide to the Ordovician fossils of the Cincinnati area is improved with updated correlations, taxonomic correlations, a very helpful index, and even a fine summary of the history of this famous guide. It is a publication of inestimable value to all collectors of Cincinnati's famous fossils.

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## BOOK REVIEW

**The Late, Great Lakes.** William Ashworth. 1986. Alfred A. Knopf, New York. 274 p. \$17.95 cloth.

William Ashworth is an environmental writer whose works include several books on water resource politics and the water crisis in the U.S. He lives in Oregon and is a leader in that state's chapter of the Sierra Club. This book is a compilation of library research along with personal views and interviews collected on a trip through the Great Lakes region.

Eight of the twenty chapters give an overview of the human history of the Lakes, including little-known anecdotes about settlement on the early shores, realities of survival, ironies of early politics, the extent of the resources of the region and their treatment. These are chapters that build in the reader an awareness of the greatness of the Great Lakes, their importance in climate modification, transportation, determination of settlement sites, military victories and economic success or failure of coastal ventures. The author's premise is that the importance of this Fifth Coastline of North America has gone unrecognized in comparison with other coasts, and people have abused it as a result.

Ashworth is a master craftsman of the English language. His writing is intended for lay consumption, and in most instances he has done justice to science as he explains some rather complex processes and concepts such as trophic changes and bioavailable phosphorus. His writing is also interesting, sometimes even amusing. Consider, for example, his description of the type of men employed as voyageurs for the fur trade in the late 1700s:

"small stature (to fit better in the canoes); great strength (to carry more than one ninety-pound bundle at once, thus increasing efficiency); good singing voices (to join in the paddling songs that made the work seem shorter): and—surprisingly, at first glance—an almost universal inability to swim (the [North West Company] Partners wanted to make sure the canoes stayed upright and the furs

inside, and so they chose men who would be exceedingly careful to keep from tipping over)..."  
(p. 41-2)

His treatment of erosion is to classify it as "the biggest nonproblem in the Great Lakes Basin," because the problem is really one of people's lack of good sense in choice of building sites.

There is an unfortunate side of this interesting writing style, however, in that the reader is easily drawn into the writer's word web and begins to absorb and trust all the information presented. Too frequently Ashworth exaggerates to make a point, fictionalizing a situation to dramatize it, particularly in presenting examples of environmental degradation. He describes a harbor at the southern end of Lake Michigan:

"with a floor that is half PCBs, and another in which the bottom sludge is 40 percent mud and 60 percent some sort of twentieth-century witch's brew involving PCBs, chromium, zinc, lead, oil and grease..." (p. 6).

As for attempts to deal with environmental problems, he approaches some well-founded management programs with scorn:

"We call what we do 'management,' but it is really tinkering. We change things without paying attention to what they are connected to; we pull the table leg out to scratch our backs and then complain loudly that the table and everything on it is falling down on top of us."

His undated description of Cleveland's "squalid gray waterfront that looked like the backside of doom," apparently conjured during his 1983 visit there, is not likely to impress those who have labored for waterfront redevelopment. He continues:

"An oily, abused river oozed forth between pilings to spread like a stain across the broad blue-gray expanse of Lake Erie. Cleveland, Ohio, America's tenth largest city and national running joke, the place known to all wags all over the country as

'Mistake on the Lake.' . . . Cleveland has unaccountably turned its back to the water, and its waterfront is a disaster area." (p. 244)

Passages like these form the substance of several chapters and are apparently the origin of the book's title. Similar excerpts make up the greater part of the descriptive dust jacket, forming a first impression that is offensive to anyone who is aware of the remarkable environmental improvements of the last decade. The approach smacks of the emotional outrages perpetrated in the height of the environmental movement, and while such tones are sometimes credited with getting the public's attention and ultimately resulting in action to reverse environmental degradation, they are an anachronism in a 1986 book. Indeed, Ashworth has often given

a quick overview of positive changes in the Great Lakes, while focusing much more attention on negatives.

Perhaps a reawakening of the public is necessary as a means of calling attention to the threats of diversion and to the toxic substances entering the lakes from air, land and water, that Ashworth claims have produced far worse conditions in the Great Lakes now than those of the 1960s. As scientists, let us hope that other voices in addition to the doomsayers will also be heard as the public collects information for new environmental decisions.

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