

BOOK REVIEW

Michigan Flora, A Guide to the Identification and Occurrence of the Native and Naturalized Seed-plants of the State: Part I. Gymnosperms and Monocots. Edward G. Voss. Cranbrook Institute of Science Bulletin 55 and University of Michigan Herbarium. Bloomfield Hills, Michigan. 1972. xviii + 488 p. \$7.50.

Fifteen years in the making, this beautiful, scholarly, modestly priced book is volume one of a projected 3-volume series on the vascular plant flora of Michigan. The Gymnosperms and Monocots treated here number over 700 species and constitute about one-third of the state's flora. The book is based on an examination of nearly 80,000 herbarium specimens from 40 herbaria and on field work in every county of the state, both accomplished by the author.

While Deam's *Flora of Indiana* (1940) will long continue to be a classic model state flora, even though not illustrated, the *Michigan Flora*, like the recent ones by Steyermark for Missouri (1963), Braun on the Monocots of Ohio (1967), Radford, Ahles, and Bell for the Carolinas (1968), and Hultén for Alaska (1968), have all reached the ultimate in the production of state floras. These books all contain four major features—keys, information about each plant (or taxon), line drawings, and distribution maps. In the *Michigan Flora*, the keys are certainly original. Professor Voss' insistence on having all characters contrasted and the omissions of such phrases as "not as above" clearly reflect his scholarly efforts in making accurate, comprehensive, and workable keys. Formal descriptions of the plants, as in Fernald's *Gray's Manual* (1950) or Gleason's *Illustrated Flora* (1952), are lacking in the *Michigan Flora*. However, pertinent information about each taxon, such as how it contrasts with closely related or easily confused taxa, are mentioned.

The black-and-white line drawings borrowed from other works and original color photographs illustrate about one-half of the state's Gymnosperms and Monocots and aim to show at least one species of each genus or, in more diverse genera, representatives of the major groups. The inclusion of 46 natural-color photographs depicting at least one species from each family (except Ruppiaceae), printed from 35 mm transparencies, certainly adds to the beauty of the book. These color photographs show the characteristic habit (and sometimes the habitat) of the plant. Among the color prints are those of many aquatic plants not generally photographed or even illustrated in any manner in state floras. Size dimensions are given for the black-and-white drawings, but not for the color illustrations. The distributions of most of the taxa are shown by county-dot distribution maps. With the publication of these maps, a large gap in the distributions of the Monocots in the western Great Lakes region is now filled. Maps of Monocots in this region can be found in Braun's *Monocotyledoneae of Ohio* (1967), Deam's *Flora of Indiana* (1940), Jones and Fuller's *Vascular Plants of Illinois* (1955), and Fassett's (and others) *Preliminary Reports on the Flora of Wisconsin* (1929–1953).

Emphasis throughout the book is for the beginning student seeking to learn the flora of Michigan. What is meant by plant identification and the use of keys is detailed at some length, along with explanations concerning taxonomy and nomenclature. The professional taxonomist might at this point even become bored at the discussion of the seemingly obvious and what is to be excluded. Common names of many of the plants are given throughout. A glossary presents definitions of 227 technical terms; in addition, if one of these terms is illustrated in the book, the number of this figure is placed at the end of the definition for easy reference.

Other features are a brief history of floristic work in Michigan and an account on the occurrence of plants in Michigan. In the latter category one finds information on the state's post-glacial history, different plant habitats, distribution patterns, and abundance. Fifty-one references of mostly a general nature are listed on pages 36–38, and the remaining references specific for certain families or genera are each placed with the family or genus to which they pertain. Unfortunately, at least three citations to author's works, Farwell (1914), p. 149, Kükenthal (1949–1951), p. 244, and Daubs (1962 [1965]), p. 372, are not found in any of the lists of references.

The plant names, keys, references, citations, maps, and illustrations are well arranged and spaced from each other throughout. Along with the use of bold face and different sizes of type, the format is very pleasing, making the book easily readable. In a few cases, maps are somewhat removed from the text discussion. Upon seeing this first volume, all will await with anticipation the two volumes for the dicots, which will undoubtedly be accomplished in a similarly scholarly, authentic, and readable style.

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