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The Flora of Iowa Revived

LAWRENCE J. EILERS¹

Abstract. Research on the flora of Iowa is being renewed by Dr. Robert F. Thorne and the author. A manual of the vascular plants of the state is planned for the near future. Some revisionary study of Iowa taxa needs to be completed first, but it is hoped that interested botanists will assist in the task. Although there are a few areas that need additional intensive collecting, the state has been quite well surveyed, floristically, and there is need to integrate the information into a usable publication.

Although several authors have published extensive lists of the native and naturalized vascular plants of Iowa in the past (see below), no comprehensive, one-volume manual of the Iowa Flora exists at the present time. Recently, Dr. Robert F. Thorne of Rancho Santa Ana Botanical Garden in Claremont, California, and I agreed to attempt to remedy this situation. In his years at the University of Iowa at Iowa City, Dr. Thorne accumulated a great deal of information on the flora of Iowa, and he and his students conducted floristic surveys of most of the state: Fay (1953), SW Iowa; Van Bruggen (1958), S. Central Iowa; Davidson (1959),

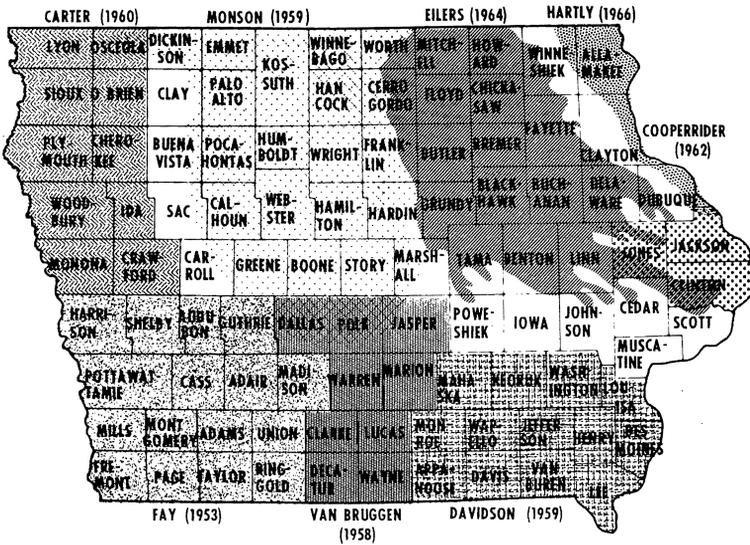


Fig. 1. Major floristic surveys completed in Iowa.

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SW Iowa; Carter (1960), NW Iowa; Cooperrider (1962), Clinton, Jackson and Jones counties; Hartley (1966), the "Driftless Area"; and Eilers (1964), the area of the "Iowan lobe" (Fig. 1). In addition, Monson (1959), of Iowa State University, surveyed the plants of the area covered by the Des Moines (Cary) lobe. Since this information is in separate publications, or unpublished, a compilation into a state flora would serve a very useful purpose. As a preliminary step, Dr. Thorne is planning to publish separately a check list of the vascular plants of Iowa.

PROPOSED FORMAT

Tentatively, plans for the flora include a one-volume manual with: a summary of the pertinent natural history of the state; keys to species and well-marked varieties; a catalog of the species, giving the binomial and common names that are used locally, a summary of the types of habitats, and an indication of relative abundance; distribution maps for each species; a list of excluded species; an inclusive treatment of the literature, work on which is now underway; and an index to family, genus, and common names. Descriptions of species will likely be omitted, except for individual cases of interest. Good descriptions of most species are available elsewhere in the literature, and it does not seem necessary to include them in a state flora.

PREVIOUS STATE "FLORAS"

Probably the first publication of a significant number of Iowa plants was that of C. C. Parry (1848), who, working with the Geological Survey of the Northwest, compiled a list of 727 plants from Wisconsin, Minnesota, and Iowa. The first checklist which included only Iowa plants was that of C. E. Bessey (1871). J. C. Arthur, better known for his work on the fungi, published privately a catalog of phanerogamous plants of Iowa in 1876. The first attempt to produce a manual with keys to the species of Iowa vascular plants was that of T. J. Fitzpatrick (1899). His keys, however, were synoptic and not dichotomous. He also included short descriptions of species. Unfortunately, he never published the *Apetalae*. The most ambitious effort to date must certainly be that of Green (1907) who compiled a preliminary list of some 3115 species of bacteria, fungi, algae, bryophytes, pteridophytes, and spermatophytes with the help of many contemporary botanists of the state. Conard published a "Key to the Families of Flowering Plants of Central Iowa" in 1923, which was the forerunner of his well-known "Plants of Iowa", now in its seventh edition. I have obtained Dr. Conard's permission to revise this useful book of keys to agree with those in the proposed larger flora. Cratty's (1933)

list of plants represented in the Iowa State (then College) herbarium was the most recent attempt to publish a comprehensive check-list of the vascular plants of the state.

It should be understood, of course, that it would be possible to list many others who have contributed in large or small part to the literature on the Iowa flora, but to name one would necessitate naming very many people indeed! A more complete discussion of past work on the plants of Iowa will be given in the introductory portions of the flora. Certainly, the very great amount of effort that these individuals expended has served a real need and deserves recognition.

WORK REMAINING

Although there has been some recent revisionary and monographic work on various taxa of Iowa vascular plants, many taxa remain to be studied carefully for the first time, and older studies need to be updated in the light of contemporary information. In the near future, I intend to publish a summary of the revisionary work that has been completed and that which still remains to be done, hoping to stimulate additional effort. A useful manual of plants is rarely produced by one or two individuals, and it is our intention to attempt to bring together the best of the past work and to integrate it with the contributions of present-day authorities. To this end, we invite the cooperation of Iowa botanists in assisting us with the taxonomic treatment of the various groups with which they are familiar.

Although every effort will be made to make the manual of the Iowa flora accurate and up-to-date, it should be made clear that the eventual publication of a flora of the state will not mean that all of the foundation work will have been completed. Rather, it should be viewed as an interim report, and it is hoped that it will serve to stimulate renewed effort on the study of the plants of this state. To be a "finished product", the plants of Iowa should have been thoroughly collected and carefully studied taxonomically. Certainly, this is not the case at present. Although much collecting has been done in the past, more still needs to be done. New and exciting information comes to light nearly every time an intensive floristic study is made of even a small area; species ranges are extended and more carefully defined, new habitats are found, and, occasionally, new state records are established. This kind of "pioneering" effort has to be completed before we can know the ranges of distribution of the species accurately. Also, careful studies of this nature can bring to light patterns of variation within species that are so important to know in order to understand the population structure and patterns of evolution within species complexes. Additional revisionary work will always be needed, too, as new floristic

formation is accumulated, and as new tools of research are developed. It is hoped that new information of both kinds will accumulate rapidly enough to justify a new revision of the manual every decade.

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