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A Preliminary Report on the Flora of Southwestern Iowa

By MARCUS J. FAY

A survey of the vascular plants of southwestern Iowa was made by the writer in order to obtain more adequate data on the flora of that region. The area considered in this investigation consists of approximately five thousand square miles in the extreme southwestern corner of the state, most of which lies in the drainage basin of the Missouri River. (See Fig. 1) Sixteen counties comprise the primary sphere of study, extending four tiers of counties east from the Missouri River, and four tiers of counties north of the Iowa-Missouri state line. The sixteen counties, listed in alphabetical order, are as follows: Adair, Adams, Audubon, Cass, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, and Union. Occasional collections were made in Carroll, Greene, and Monona counties. Species collected in those three counties, plus a small number which were collected in Decatur County by others, are also included.

Field exploration was started in August, 1951, was carried on

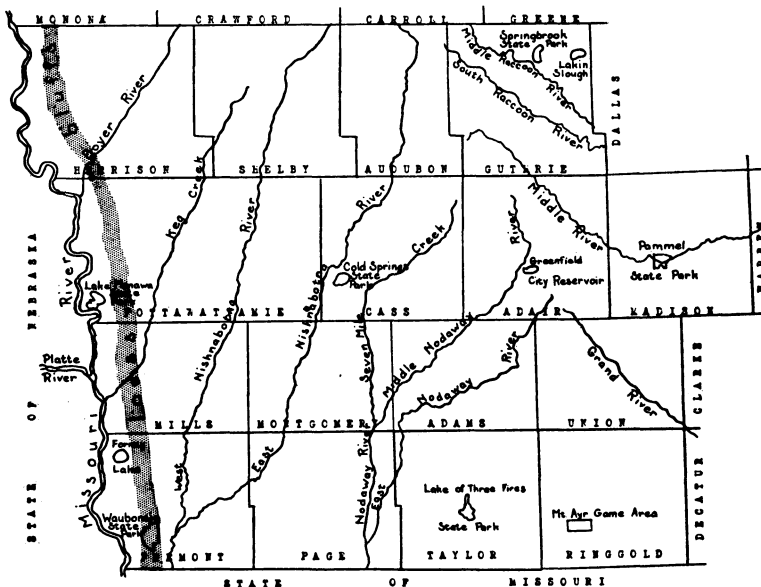


Figure 1

during the entire growing season of 1952, and will be continued in 1953. Over four thousand collections, totalling approximately ten thousand individual specimens, have been made. When identification and labeling of the material is completed, it will be distributed to various herbaria; one complete set of the specimens will be retained in the Herbarium of the State University of Iowa. Although the field survey and the author's collections furnish the principal data upon which the components of the flora are based, a search through the Herbarium of the University of Iowa and a partial search through the Herbarium of Iowa State College were completed in order to gather data from specimens previously collected in or near southwestern Iowa. Additional information was obtained from literature reports.

This paper is restricted chiefly to a brief discussion of the scope of the survey. The annotated catalogue of plants, with the known distribution, frequency, and habitats for each species within the area, will be published later.

Over 1,000 species have so far been identified as being represented in southwestern Iowa. Of these, 158 are introduced or adventive and the remainder are indigenous or naturalized. The writer thus far has collected 903 species in the region. Two species not previously known to occur in Iowa were discovered. They are as follows:

Corispermum hyssopifolium L., collected in dry, sandy alluvium near the Missouri River, Sect. 24, Cincinnati Twp., Harrison County; No. 4703.

Senecio glabellus Poir., collected in swampy woods bordering the Nishnabotna River, Sect. 30, Riverton Twp., Fremont County; No. 2777.

Many localities having special botanical interest still exist in southwestern Iowa even though most of the acreage is well suited for agriculture and is under cultivation. The loess bluffs, which extend from north to south in a narrow band approximately paralleling the Missouri River at an average distance of eight miles from it, present one of the most distinctive habitats in the entire state of Iowa. The range of several species within Iowa is restricted to the arid crests and western slopes of these peculiar, wind-formed hills.

Remnants of virgin prairie may be found in scattered places in nearly every county, usually along railroads. One of the most extensive moist, lowland prairie remnants occurs in Sect. 28, Douglas Twp., Union County. The dry, round-topped gravel knobs in the Monteith area of Guthrie County are illustrative of short-grass prairie. Rich, unpastured, wooded areas are infrequent throughout this portion of Iowa. The best examples of these are found

along the Raccoon River in Guthrie County, near Middle River in Madison County, and on the eastern slope of the loess bluffs in Fremont County. The various state parks, which are indicated on the map, also present sizeable areas of forest vegetation. Most of the aquatic habitats are artificial lakes found in state parks, or ox-bow lakes and ponds located near the Missouri River.

Following are listed some of the larger families with the number of species and genera in each:

	No. species	No. genera
Compositae	189	53
Graminae	124	55
Cyperaceae	76	4
Leguminosae	61	27
Rosaceae	43	12
Labiatae	36	18
Scrophulariaceae	32	16

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