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CONTRIBUTIONS TO THE FLORA OF SOUTHERN ILLINOIS

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THIS paper is a further report on the progress of studies made on the distribution of vascular plants in the southern counties of Illinois.

Work in the field and the herbarium of Southern Illinois University during the summer of 1955 uncovered eight plants previously unreported for Illinois and numerous additional locality records for some of the rarer species. Twelve of the latter are enumerated below, along with the additions to the Illinois flora.

All specimens cited are deposited in the herbarium of Southern Illinois University.

SPECIES NEW TO ILLINOIS

Glyceria pallida (Torr.) Trin. This species may be added to the Illinois flora as it occurs in shallow water in the LaRue Swamp. According to Mosher (1918), specimens in the herbarium of the University of Illinois labelled *G. pallida* actually belong to the genus *Poa.* COLLECTION DATA: shallow water, LaRue Swamp, Union County, June 6, 1952, *Bailey and Swayne 2485*.

Hystrix patula Moench var. bigeloviana (Fern.) Deam. This variety of the Bottlebrush-grass with pubescent lemmas was found in a calcareous woods where it was much more abundant than the typical variety. COL-LECTION DATA: woods at base of limestone cliffs, one mile north of the Pine Hills, Jackson County, July 5, 1955, *Mohlenbrock and Stewart 5466*.

Elymus interruptus Buckl., which is a rather poorly understood species with a peculiarly disjunct distribution in the United States, has been found for the first time in Illinois. It occurs in rich moist soil along the edges of woods. COLLECTION DATA: Little Grand Canyon, Jackson County, June 21, 1951, Voigt 877; Pine Hills, Union County, October, 1955, Voigt 1311. **Carex oxylepis** Torr. & Hook. was collected in a low swampy cypress woods. It is known from Butler and Dunklin Counties in southeastern Missouri (Palmer and Steyermark, 1935). Several species of *Carex* occur in this woods including *C. grayii* var. *hispidula*, *C. muskingumensis*, and *C. louisianica*. COLLECTION DATA: swampy woods east of Dongola, Union County, July 11, 1955, Voigt and Mohlenbrock 5553.

Chenopodium polyspermum L. Collections in freight yards often produce rare and interesting adventive species. One such waif found growing in cinders along the railroad is the Many-seeded Goosefoot. It has been reported from Hancock County, Illinois (Kibbe, 1952) but no specimens have been seen. COLLECTION DATA: in cinders along GMO railroad, Murphysboro, Jackson County, June 18, 1955, *Mohlenbrock 5420A*.

Draba cuneifolia Nutt. ex Torr. & Gray. This small crucifer has been attributed to Illinois several times but, according to Jones (1955), the occurrence of it in the state seems to be based on a statement by Patterson (1876), "Credited to Illinois in Gray's Manual," and a statement by Higley and Raddin (1891), "Chicago, April 1875, *Babcock*. Probably a waif." No authentic specimens for Illinois have been cited by any previous author. However, *Draba cuneifolia* has been found in limestone talus in Monroe County. COLLECTION DATA: one mile south of Fults, T4S, R10W, section 36, Monroe County, April 21, 1952, *Bailey and Swayne 2077*.

Prunus mexicana S. Wats. The Big-tree Plum is listed in the New Britton and Brown Flora (Gleason, 1952) from southern Missouri to Texas while the Eighth Edition of Gray's Manual (Fernald, 1950) does not mention this species. A specimen about twenty feet tall was found growing in talus at the base of a massive limestone bluff. COLLECTION DATA: base of limestone bluff, one mile north of the Pine Hills, Jackson County, July 5, 1955, *Mohlenbrock and Stewart 5468*.

Rubus enslenii Tratt. is recorded by Fernald (1950) only as far west as Indiana. However, it occurs along a rocky stream in Randolph County in southwestern Illinois. COLLECTION DATA: along Piney Creek, Randolph County, May 22, 1954, *Mohlenbrock and Voigt 2470*.

ADDITIONAL LOCALITIES FOR RARE SOUTHERN ILLINOIS SPECIES

Isoetes melanopoda Gay and Dur. was found growing in great abundance in a roadside ditch in Jackson County. The station is under water for a portion of each year. Some of the specimens were exceedingly robust and one was found to have 80 leaves. A few pale-based specimens which may be segregated as forma *pallida* (Engelm.) Fern. occur with the species. The nearest known station of *I. melanopoda* to the Jackson County one is in St. Clair County, about 100 miles to the north (Neill, 1950). COLLECTION DATA: (typical), along Route 3, two miles south of Junction of Routes 3 and 144, Jackson County, June 13, 1955, *Mohlenbrock 5385*: (forma *pallida*), *Mohlenbrock 5386*.

Ophioglossum engelmanni Prantl. The occurrence of this species of Adder's-tongue in Randolph County marks the third known station for it in Illinois. The others are in Hardin County, 120 miles to the southeast, and Jersey County, 100 miles to the north. In Randolph County, the species occurs in thin soil under *Juniperus virginiana* on high limestone bluffs on the Menard prison grounds. It is very abundant at this site. COLLECTION DATA: limestone bluffs, Illinois State Penitentiary, Menard, Randolph County, June 21, 1955, *Mohlenbrock and Voigt*.

1957] Mohlenbrock and Voigt,—Flora of So. Illinois

Asplenium bradleyi D. C. Eaton. The rare Bradley's Spleenwort, first collected in Illinois in 1954 (Mohlenbrock, 1954) from Randolph County and later from Jackson County (Mohlenbrock, 1955) has been found in a deep shaded sandstone ravine at Panther's Den in Williamson County. COLLECTION DATA: Panther's Den, Williamson County, July 12, 1955, Boll-winkel and Voigt 1312.

Bouteloua curtipendula (Michx.) Torr. Although Side-oats Grama is rather common in northern Illinois and on the hill prairies along the Mississippi River in western Illinois, the collection from Hardin County represents the first of this species from southeastern Illinois. It occurs on limestone bluffs overlooking the Ohio River at Cave-in-Rock. COLLECTION DATA: limestone bluffs, Cave-in-Rock State Park, Hardin County, August 10, 1955, *Mohlenbrock 5593*.

Carex intumescens Rudge is a robust sedge which resembles the typical-variety of *Carex grayii*. It has been collected in low woods in southern Illinois and was known previously in Illinois from Cook and Peoria Counties, but had not been collected since 1908. COLLECTION DATA: northeast of Karnak, Illinois, Johnson County, May 30, 1952, *Bailey and Swayne 2457*.

Carex oligocarpa Schk. ex Willd., which is extremely rare in southern Illinois, was collected in a calcareous woods near the base of a massive limestone cliff. COLLECTION DATA: one mile north of the Pine Hills, Jackson County, July 5, 1955, *Mohlenbrock and Stewart 5467*.

Carex decomposita Muhl. The Cypress-knee Sedge, known previously in Illinois only from the LaRue Swamp in Union County, has been collected in a cypress-tupelo gum swamp in Pulaski County where it grows on rotting wood. COLLECTION DATA: swamp, 1½ miles west of Pulaski, Pulaski County, July 2, 1955, *Voigt 1805*.

Spiranthes ovalis Lindl. The discovery of this species in Union County brings to four the number of known stations for it in Illinois. It is apparently rare throughout its entire range. Our specimen was growing in a calcareous woodland ravine between limestone bluffs. Only one plant was found. COLLECTION DATA: Pine Hills, Union County, October, 1955, Mohlenbrock 5762.

Descurainia sophia (L.) Webb. This adventive mustard, while occurring sparingly in northern Illinois, was unknown south of Champaign County until it was recently discovered along a railroad in Jefferson County by Mr. Joe Garrison. COLLECTION DATA: along railroad, Mt. Vernon, Jefferson County, May 28, 1955, J. Garrison.

Cardiospermum halicacabum L. The discovery of the very interesting Balloon vine in Jackson County marks the second occurrence of it in Illinois. It grows on scrubby shrubs in a frequently inundated floodplain along the Mississippi River. COLLECTION DATA: near Neunert, Jackson County, Brewer.

Fraxinus quadrangulata Michx. The Blue Ash was collected on a steep limestone bluff in southwestern Jackson County. This makes the second collection for it in southern Illinois, the other having been made in Union County. COLLECTION DATA: one mile north of the Pine Hills, Jackson County, July 5, 1955, Mohlenbrock and Stewart 5462.

Kickxia elatine (L.) Dumort. The Canker-root is another of the railroad waifs recently found in southern Illinois. It was previously known from four central and northern counties. COLLECTION DATA: along GMO railroad, Murphysboro, Jackson County, June 18, 1955, *Mohlenbrock 5419.*— SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE

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A REVISION OF THE VERNAL SPECIES OF HELENIUM (COMPOSITAE)

HOWARD F. L. ROCK

(Continued from page 116)

The author has deliberately refrained from referring to the vernal species of *Helenium* throughout the earlier portion of this paper in any formal subgeneric sense in order to make his position clear at this point. Ordinarily, the vernal species of *Helenium* conform to at least a subgenus in *Helenium*, if one were to follow the concepts that prevail in the *Compositae* today. However, inasmuch as this revision was conducted primarily on the basis of herbarium specimens and the data they provide, and to a lesser extent on field studies, any change in the formal subgeneric classification of *Helenium* from that



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