

Additions to the Flora of Southern Indiana, III.

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Introduction

This paper is a continuation of a report published in 1986 on additions to the flora of southern Indiana (6). Southern Indiana is defined here as that area south of U.S. Highway 40 east of Indianapolis and U.S. Highway 36 west of Indianapolis. Information on current endangerment status in the state comes from Aldrich *et al.* (1). Natural region names come from Homoya *et al.* (7), and plant nomenclature primarily follows Crovello *et al.* (2). Most of the specimens discussed are to be deposited in the Deam Herbarium at Indiana University in Bloomington, Indiana (IND).

Species New To Indiana

Andropogon ternarius Michx. Harrison County. This species of beard grass was discovered growing in an old field adjacent to a natural sinkhole pond northwest of Laconia. The grass was common at the site. Although its occurrence may represent a vestige of the presettlement barrens that existed in the region, it is also possible that it is an example of a recent range expansion from the south. This is made in light of the fact that it colonizes old fields elsewhere in its range, such as other *Andropogon* species do here, and that it appears to have recently invaded nearby southern Illinois (Olson, pers. comm.). (August 26, 1987 *Homoya et al.* 87-08-26-49).

Species New To Southern Indiana

Aralia nudicaulis L. Ripley County. Several large patches of wild sarsaparilla were discovered growing in a mesic upland forest situated on the upper slope of a steep hillside in Versailles State Park. (May 16, 1986 *Homoya* 86-05-16-17).

Napaea dioica L. Ohio County. Formerly known to occur in Indiana only in the floodplain of the upper half of the Wabash River, this species was recently discovered on the south side of the valley where Laughery Creek flows into the Ohio River. Numerous individuals of this state-threatened plant were observed growing along roadsides and in small tributaries of Laughery Creek. (July 17, 1987 *Homoya and Martin* 87-07-17-38).

Panicum addisonii Nash. (= *Dicanthelium ovale* (Ell.) Gould and Clark var. *addisonii* (Nash) Gould and Clark). Vigo County. This grass, most common on the eastern coastal plain, occurs in widely scattered localities in the midwest. In Indiana, it is restricted to dry, sandy knolls where barrens vegetation predominates. In southern Indiana it was collected at the Little Bluestem Nature Preserve. (August 27, 1986 *Homoya* 86-08-27-70).

Infrequently Collected Species In Southern Indiana

Aster linariifolius L. Deam (3) listed three counties in southern Indiana for this attractive aster, these being Floyd, Harrison, and Perry counties. I have encountered this aster at only two sites in southern Indiana, once at Elizabeth Hill in Harrison County (a Deam collecting site), and once near Rockhouse Hollow in the Hoosier National Forest in Perry County. At the latter site the few plants noted were growing on a rocky crest of a hill dominated by chestnut oak. It was not collected.

Carex seorsa Howe. Jefferson County. The first discovery in southern Indiana of this sedge was made in Jackson County in 1985 (6). Since that time, a second population has been found, this one occurring in a vernal pool of a flatwoods natural community (May 15, 1986 *Homoya and Aldrich* 86-05-15-15).

Cirsium carolinianum (Walt.) Fern. and Schub. Perry County. This species, previously considered extirpated in Indiana, was discovered growing in three separate populations in and around limestone barrens in the Hoosier National Forest. This native thistle, which blooms in the spring, was referred to by Deam (3) as *Cirsium virginianum* (L.) Michx. Current nomenclature restricts that name to a plant confined to the southeastern coastal plain (4). (May 29, 1987 *Homoya and Spingarn* 87-05-29-11).

Eleocharis wolfii Gray. Ripley County. Cited as occurring only in Jefferson County in the Flora of Indiana (3), this state-endangered spikerush has since been collected in Spencer, Posey, and Lake counties, and now in Ripley County. The Ripley County specimens were collected in a vernal wet depression in a flatwoods. (July 16, 1987 *Homoya* 87-07-16-36).

Gentiana alba Muhl. Perry County. Three separate populations of this state-endangered gentian were found growing in a series of natural barrens in the Mogan Ridge area of the Hoosier National Forest. (September 10, 1987 *Homoya and Spingarn* 87-09-10-61). I recently observed, but did not collect, this species in Ripley and Franklin counties as well.

Glyceria acutiflora Torr. Owen County. Three collections of this grass, all made before 1936, were all that were known prior to the Owen County discovery. The populations of the historic collections are now apparently extirpated, leaving the Owen County population as the only extant one in Indiana. The new population was discovered growing in a small sinkhole pond situated high on a forested slope. The pond, dominated by buttonbush (*Cephalanthus occidentalis* L.), also has a large population of the rare log sedge, *Carex decomposita* Muhl. In Indiana, the *Carex* and the *Glyceria* are known from sinkhole ponds more than in any other habitat. This same phenomenon is true for these species in Missouri as well (8). (June 12, 1987 *Homoya and Brothers* 87-06-12-30).

Hypericum denticulatum Walt. Perry County. Previous collections of this species in Indiana were made in Spencer, Daviess, and Posey counties. The Daviess County and Posey County sites have been destroyed, thus leaving extant populations only in Spencer and Perry counties. The Perry County population occurs in a dry, old field dominated by little bluestem (*Andropogon scoparius* Michx.) Other rare species occurring in this old field include *Scleria pauciflora* Muhl. ex Willd. and *Spiranthes tuberosa* Raf. (August 7, 1987 *Homoya and Spingarn* 87-08-07-42).

Lechea villosa Ell. Harrison County. Reported by Deam (3) as occurring in three southern Indiana counties, I had never encountered this species until discovering it in a natural barrens remnant south of the town of Central Barren. (August 26, 1987 *Homoya, Abrell, Hutchinson, and Stritch* 87-08-26-48).

Ophioglossum engelmannii Prantl. Perry County. As more limestone glades are discovered in southern Indiana, so are occurrences of the limestone adder's tongue fern. To date, seven sites are known to harbor this state-threatened species in Indiana. The newest populations are located in limestone glade in the Hoosier National Forest west of Derby. (May 29, 1987 *Homoya and Spingarn* 87-05-29-10).

Penstemon deamii Pennell. Clark County. According to the authority on *Penstemon deamii* and its allies (Koelling, pers. comm.), *Penstemon deamii* is an Indiana endemic (apparently our only vascular plant endemic). Restricted to the Highland Rim Natural Region, collections of the species have come from Crawford, Harrison, Floyd and Clark counties, with the bulk from the latter. The specimens collected in Marion County that were determined to be *Penstemon deamii*, as cited

by Deam (3), apparently no longer exist. Given the species' restricted range and habitat, it is possible that they were incorrectly identified. The recent Clark County collections were made from roadsides and steep, eroding slopes in Clark State Forest. (May 29, 1986 *Homoya and Brothers* 86-05-29-26).

Poa wolfii Scribn. Spencer and Warrick counties. With the exception of an Owen County collection, all of the previous collections of this rare grass have come from northern Indiana. It was a surprise then to find it occurring rather commonly in the dry flatwoods of the Driftless Section of the Southwestern Lowlands Natural Region. This *Poa* species is one of the rarest of the genus in Indiana, with only four extant populations known. (May 28, 1987 *Homoya and Spingarn* 87-05-28-9).

Scutellaria saxatilis Riddell. Crawford County. Once thought to be extirpated from Indiana, this rock-loving skullcap was rediscovered at a Deam collecting site near the old Carnes Mill on the Little Blue River. Hundreds of plants were found growing on the tops of large, detached sandstone boulders. This location is considerably disjunct from the main area of the species' range, that being from eastern Ohio to eastern Tennessee and eastward. (July 11, 1986 *Homoya* 86-07-11-61).

Trifolium relexum L. Posey County. Several plants of this native clover were found growing in the skid trails of a recently timbered flatwoods in SW Posey County. Formerly thought to be extirpated, this is the only extant site in the state. (July 13, 1986 *Aldrich and Spingarn* 71386).

Trifolium stoloniferum Muhl. ex A. Eaton. Ohio County. Two separate populations of this federally-listed endangered species [Federal Register 52(108): 21478. 5 June 1987] were discovered growing in and around small rocky streams that flow directly into the Ohio River. Two juvenile individuals, each appearing to be *Trifolium stoloniferum*, were discovered in Switzerland and Ripley counties. Additional details are planned to be published elsewhere. (June 16, 1987 *Aldrich, Homoya, and Jacquart* 61687, and *Homoya, Aldrich and Jacquart* 87-06-16-31).

Veronica grandiflora Gaertn. Union County. This species, referred to commonly as the brook-pimpernel, is one of springs and spring-fed streams. Several plants were found in this habitat at Whitewater State Park. Synonymous with *Veronica grandifera* Pennell, this species was recently added to the list of state rare species. (July 2, 1986 *Homoya* 86-07-02-52).

Woodwardia areolata (L.) Moore. Perry County. In the first report of this fern for the state (5). I commented about the phenomenon of range expansion that the species appears to be undergoing at the northern edge of its primary range. Consistent with this phenomenon is the discovery of another Indiana location, this one on a roadbank in the Mogan Ridge area of the Hoosier National Forest. Interestingly, the fern was growing in the shade of another rare species in Indiana, the sourwood (*Oxydendrum arboreum* (L.) DC.) (August 7, 1987 *Homoya and Spingarn* 87-08-07-44).

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