

ADDITIONS TO THE FLORA OF SOUTHERN INDIANA, V and VI

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ABSTRACT: Fifty-eight taxa of vascular plants categorized as either 1) new to Indiana, 2) new to southern Indiana, or 3) rarely observed in southern Indiana were found during field inventories from 1990 through 1993. Those taxa new to Indiana are: *Asclepias viridis*, *Diodia virginiana*, *Eupatorium album*, *Lonicera sempervirens*, *Lygodium palmatum*, *Panicum annulum*, *Paspalum floridanum*, *Ranunculus sardous*, *Sedum pulchellum*, *Senna obtusifolia*, *Styrax grandifolius*, *Uvularia perfoliata*, and *Vitis rupestris*. *Carex woodii*, *Chloris verticillata*, *Hieraceum longipilum*, *Hypericum adpressum*, *Lycopodium obscurum*, *Lysimachia vulgaris*, *Panicum verrucosum*, *Panicum villosissimum*, *Potamogeton pusillus*, *Puccinellia pallida*, *Sida hermaphrodita*, and *Viburnum rafinesquianum* are new to southern Indiana. Those taxa rarely observed in southern Indiana include *Aristida purpurascens*, *Azolla* (cf.) *caroliniana*, *Bacopa rotundifolia*, *Bartonia paniculata*, *Carex gigantea*, *Carex lupuliformis*, *Cimicifuga rubifolia*, *Crotonopsis elliptica*, *Didiplis diandra*, *Dryopteris cristata*, *Eupatorium hyssopifolium*, *Eupatorium rotundifolium*, *Festuca paradoxa*, *Gentiana villosa*, *Hieraceum caespitosum*, *Helianthemum bicknellii*, *Juncus secundus*, *Leptochloa panicoides*, *Linum striatum*, *Ludwigia glandulosa*, *Lycopodium clavatum*, *Mikania scandens*, *Muhlenbergia capillaris*, *Rhexia mariana* var. *mariana*, *Rhynchospora corniculata*, *Sagittaria graminea*, *Satureja vulgaris* var. *neogaea*, *Scleria triglomerata*, *Senna occidentalis*, *Strophostyles leiosperma*, *Utricularia vulgaris*, *Woodwardia areolata*, and *Zosterella dubia*.

KEYWORDS: Distribution of rare plant species, Indiana flora, rare plant species.

INTRODUCTION

This publication represents numbers five and six in a series of bi-yearly reports presented at the Fall Meeting of the Academy on additions to the vascular flora of southern Indiana (Homoya, 1983, 1987; Homoya and Abrell, 1986; Homoya and Hedge, 1990). Southern Indiana as defined here is that area south of U.S. Highway 40 east of Indianapolis and U.S. Highway 36 west of Indianapolis. Endangerment status comes from *Indiana's Rare Plants and Animals: A Checklist of Endangered and Threatened Species* (Indiana Department of Natural Resources, 1993). For the most part, the nomenclature follows Gleason and Cronquist (1991). Natural region names follow Homoya, *et al.* (1985). Voucher specimens will be deposited in the herbarium at Indiana University in Bloomington.

SPECIES NEW TO INDIANA

***Asclepias viridis* Walter.** (Harrison County; 8 June 1993; *Homoya and Abrell 93-06-08-44*). Seven plants of this distinctive milkweed were found on an eroded, limestone barrens within the watershed of Little Mosquito Creek. The occurrence of the Ozark milkweed here is not too surprising given that it occurs in nearby Hardin County, Kentucky (Cranfill, 1991). This species has also been discovered in an old field in Jefferson County (P. MacMillan, pers. comm.).

Diodia virginiana L. (Gibson County; 1 August 1991; *Homoya and Abrell* 91-08-01-101; Harrison County; 25 July 1991; *C. Hedge, Homoya, et al.* 91-07-25-91; and Pike County; 3 October 1991; *Homoya and Abrell* 91-10-03-221). Scattered populations were found growing along the exposed borders of the Ohio and Patoka Rivers. Since the initial discoveries in 1991, this species has been collected at several additional locations along the Ohio River as far upriver as Switzerland County.

Eupatorium album L. (Perry County; 13 June 1991; *Homoya* 91-06-13-34). The white-bracted eupatorium is locally common west of Derby in remnant barrens and old fields. Its occurrence in Indiana is a northern range extension from known populations in Hardin County, Kentucky (Cranfill, 1991).

Lonicera sempervirens L. (Jefferson County; 15 June 1993; *Homoya and C. Hedge* 93-06-15-51). Deam (1940) did not accept this species as a member of our flora, neither as a native nor naturalized exotic. Numerous plants of the honeysuckle were found growing in a wet, acidic flatwoods in southwest Jefferson County. The site is of high natural quality and has exceptional diversity (e.g., *Maianthemum canadense*, *Isotria verticillata*, *Carex buxbaumii*, *Spiraea tomentosa*, *Viola lanceolata*, and *Eleocharis wolfii*). *Lonicera sempervirens* does not appear to be a recent escape, as it is not growing on the woods' edge nor near any evidence of a homesite. If not native here, *L. sempervirens* is at least naturalized and reproducing.

Lygodium palmatum (Bernh.) Swartz. (Ripley County; 19 August 1992; *Homoya, R. Hedge, and T. Hulvershorn* 92-08-19-93). Several large patches of climbing fern were found in a young regrowth flatwoods of red maple and sweet gum on the Jefferson Proving Ground (JPG). Wet, acidic flatwoods are relatively common at JPG and elsewhere in southeastern Indiana, so additional populations of this interesting fern may exist.

Panicum annulum Ashe. (= *P. dichotomum* L. [Gleason & Cronquist]). (Harrison County; 28 June 1989; *Homoya and C. Hedge* 89-06-28-78; and 19 May 1991; *Homoya, B. McKnight, and M. Sargent* 91-05-19-18). This distinctive grass was found at two separate barrens remnants in the Big Barrens Region of Harrison County. Although considered by some to be a variant of the common *Panicum dichotomum*, this grass appears morphologically distinct and has a fidelity to barrens (at least in Indiana).

Paspalum floridanum Michx. (Harrison County; 31 August 1990; *Homoya and R. Hedge* 90-08-31-126). This large bead-grass was found growing in a road shoulder and adjacent fields and pastures approximately three miles southwest of Corydon. The senior author has observed this species extending its range northward in Illinois for several years, and thus its appearance in Indiana is not surprising.

Ranunculus sardous Crantz. (Jefferson County; 4 May 1990; *Homoya and C. Hedge* 90-05-04-8). Large populations of this buttercup occur in agricultural fields and highway rights-of-way in southern Jefferson County. This European species is expected to spread and establish elsewhere in the State.

Sedum pulchellum Michx. (Johnson County; 6 June 1992; *Homoya and D. Zay* 92-06-08-28). The senior author has observed this stoncrop for over ten years at the Atterbury Fish and Wildlife Area, and it appears to be well established and persistent. Plants are quite common in the shallow soil on and bordering the

numerous paved roads on the property. This species is native to rocky barrens in Kentucky and southern Illinois, but indigenous populations are unknown for Indiana.

***Senna obtusifolia* (L.) Irwin & Barneby.** (Pike County; 3 October 1991; *Homoya and Abrell 91-10-03-220*). Several plants of this species were found growing in the ballast and adjacent ditches along the Southern Railroad about two miles east of Winslow. The origin of these plants is unknown. They may be railroad waifs, but given that the species occurs naturally in lowland habitats (through which the track is placed) and that the species occurs in nearby southern Illinois (Mohlenbrock and Voigt, 1959), the population could be considered indigenous. In 1991, John Thieret (pers. comm.) also discovered a population of this species in Dearborn County.

***Styrax grandifolius* Aiton.** (Crawford County; 1 August 1990; *Homoya and C. Hedge 90-08-01-106*). Several shrubs of various sizes were observed growing on a dry, forested hilltop a few miles north of Leavenworth. The population appears natural, making it the northernmost occurrence for this species in the Midwest. The next closest population that the authors are aware of is in Alexander County, Illinois (Mohlenbrock, 1986).

***Uvularia perfoliata* L.** (Harrison County; 19 October 1990; *Homoya 90-10-19-168*). This species has been reported by many authors over the years, but, as Deam (1940) stated, all are undoubtedly misidentifications of *U. grandiflora*. However, the senior author has seen three populations of bona fide *U. perfoliata* growing in deep southern Harrison County. This species differs from *U. grandiflora* by its smaller size, colonial habit, mostly glabrous leaves (note: the leaves of some individuals of *U. grandiflora* are glabrous), slightly later flowering period, occupation of drier habitats, and flowers with relatively untwisted tepals that are noticeably glandular-papillose within. The fruiting capsules of the two are also very different (Braun, 1967). The species is on the very edge of its range in Indiana, extending northward from nearby Hardin County, Kentucky (Cranfill, 1991).

***Vitis rupestris* Scheele.** (Harrison County; 2 August 1990; *Homoya and C. Hedge 90-08-02-109*). Sand grape is a non-climbing grape that grows on rocky stream banks. Several vines were found growing in limestone and chert gravels bordering Indian Creek. This grape most closely resembles *V. riparia*, differing in its habit and leaf shape (*V. rupestris*' leaves are more reniform in shape).

SPECIES NEW TO SOUTHERN INDIANA

***Carex woodii* Dewey.** (Jennings County; 23 September 1992; *Homoya and C. Hedge 92-09-23-126*). This sedge was at one time thought to be very rare (Deam, 1940) and even threatened in the State (Aldrich, Bacone, and Homoya, 1986). However, field work (and an ability to recognize the species vegetatively) has shown otherwise. Seemingly every mesic forest north of Indianapolis contains this species, and several populations are known in southern Indiana. To date, the southernmost *C. woodii* was collected in Jennings County on the Jefferson Proving Ground.

***Chloris verticillata* Nutt.** (Davies County; 19 September 1991; *Homoya 91-09-19-191*). Introduced from the western states, this grass is becoming more common in the State, especially in sandy, disturbed areas. The senior author has

seen it growing in the lawns and waste areas of downtown Indianapolis. The Daviess County population was growing in a sandy cemetery.

***Hieraceum longipilum* Torr.** (Harrison County; 11 August 1992; *Homoya* 92-08-11-92). Previously known only from the far northern part of the State, 10-15 flowering plants of this species were observed growing in a remnant chert barrens in southern Harrison County. They were found as scattered individuals amongst the much more common *H. gronovii*.

***Hypericum adpressum* Barton.** (Daviess County; 18 September 1991; *Homoya* and *R. Hedge* 91-09-18-188). A large population of the state-endangered creeping St. John's-wort was discovered for the first time in southern Indiana by Cloyce Hedge, Hank Huffman, and Harold Allison. Homoya and R. Hedge collected it soon thereafter at the same location — a wet, sandy depression in the Plainville Sand Section of the Southwestern Lowlands Natural Region.

***Lycopodium obscurum* L.** (Jefferson County; 18 January 1990; *Homoya* and *R. Hedge* 90-01-18-3; Ripley County; 22 September 1992; *Homoya*, *C. Hedge*, and *D. Zay* 92-09-22-109). In the past four years, several populations of this clubmoss have been found in the wet, acidic flatwoods of the Muscatatuck Flats and Canyons Section of the Bluegrass Natural Region. Most, if not all, of these populations are the result of a recent range expansion phenomenon, as they typically grow in young forests that occupy previously cultivated ground.

***Lysimachia vulgaris* L.** (Harrison County; 30 July 1993; *Homoya*, *B. Abrell*, and *R. Hedge* 93-07-30-66; Switzerland County; not vouchered). This exotic species is apparently becoming more common in the U.S. as it invades wetlands and the shorelines of major watercourses. Our populations were found growing on the flood-scoured banks of the Ohio River.

***Panicum verrucosum* Muhl.** (Perry County; 30 August 1990; *Homoya* and *R. Hedge* 90-08-30-125). Hundreds of individuals of this distinctive annual grass were discovered on the borders of a small pond and wetland in the Shawnee Hills. The pond is on a ridge top and appears to be an old, long-abandoned farm pond. However, since the pond habitat supports numerous plants uncommon for the area, including *Sphagnum*, *Viola lanceolata*, *Platanthera clavellata*, *Rhynchospora corniculata*, and *R. capitellata*, it may be a natural depression. A pine plantation occurs next to the pond, which may account for the occurrence of the referenced species (perhaps the pine seedlings were wrapped in sphagnum moss, which contained the seeds of the plants listed above).

***Panicum villosissimum* Nash.** (Harrison County; 19 May 1991; *Homoya*, *B. McKnight*, and *M. Sargent* 91-05-19-19). This grass is common in a chert barrens remnant in the southern part of the County. *Panicum villosissimum* is a drought tolerant plant, which also occurs in the sand barrens of northern Indiana.

***Potamogeton pusillus* L.** (Pike County; 10 July 1991; *Homoya* and *Abrell* 91-07-10-63). Because of the undercollecting typical of pondweeds, this species is probably more common than records indicate. The species was found to be abundant in a slow-moving stream flowing through a wetland near the Patoka River.

***Puccinellia pallida* (Torr.) R.T. Clausen.** (Harrison County; 5 May 1991; *Homoya* 91-05-18-13). A sinkhole pond near Laconia harbors this mostly northern grass, which grows on the border of the pond with buttonbush, *Glyceria septentrionalis*, *Carex lupulina*, and *C. comosa*.

***Sida hermaphrodita* (L.) Rusby.** (Switzerland County; 6 August 1991; *Homoya and C. Hedge 91-08-06-122*). This tall perennial was first collected in southern Indiana by John Baird and Allison Cusick on 30 October 1990 (Cusick, pers. comm.). Subsequently, the authors collected this species at the same location, a roadside bank bordering the Ohio River. This mostly eastern species extends westward through Ohio and Kentucky along the Ohio River drainage.

***Viburnum rafinesquianum* Schultes.** (Franklin County; 24 May 1991; *Homoya and T. Brothers 91-05-24-25*). This species is apparently at the southern limit of its range in Indiana. Several shrubs were noted growing on steep, rocky, limestone slopes not far from Laurel.

SPECIES RARELY OBSERVED IN SOUTHERN INDIANA

***Aristida purpurascens* Poiret.** (Harrison County; 22 September 1993; *Homoya 93-09-22-94*). Numerous individuals of this three-awn grass occur in a remnant chert barrens in southern Harrison County. This grass was also seen at another barrens site in Perry County but was not collected.

***Azolla* (cf.) *caroliniana* Willdenow.** (Posey County; 14 August 1991; *Homoya and R. Hedge 91-08-14-132*). Thousands of individuals of this fern were found growing in the mud of a large, shallow pond just south of a levee road bordering the south side of Hovey Lake. The determination to species is tentative, as certain identification of *Azolla* species in our range requires inspection of the megaspores with a scanning electron microscope.

***Bacopa rotundifolia* (Michx.) Wettst.** (Washington County; 10 August 1992; *Homoya and Abrell 92-08-10-85*). Thick mats of this creeping, floating aquatic were found around the border of a sinkhole pond. The pond was within a horse pasture, but the pond border was not heavily disturbed, as there were few horses. This population is one of only two extant populations known to the authors.

***Bartonia paniculata* (Michx.) Muhl.** (Ripley County; 19 August 1992; *R. Hedge, Homoya, and T. Hulvershorn 92-08-19-122*; Jefferson and Jennings Counties; not vouchered). First found in Indiana in 1985 (*Homoya and Abrell, 1986*), this species has since been found to be abundant throughout most of the Jefferson Proving Ground. *Bartonia paniculata* grows in the young regrowth forests on the wet, acidic flats that are common at the property.

***Carex gigantea* Rudge.** (Posey County; 14 August 1991; *Homoya and R. Hedge 91-08-14-133*). This endangered sedge is known from two areas in the State, the sinkhole wetlands of Harrison County and the swamplands of the lower Wabash River. The authors were unaware of extant occurrences of *C. gigantea* in the lower Wabash until the discovery of two small populations in southern Posey County. Both populations were in overcup oak dominated swamps.

***Carex lupuliformis* Sartwell.** (Posey County; 14 August 1991; *Homoya and R. Hedge 91-08-14-134*). Closely resembling *Carex gigantea* and *C. lupulina*, *C. lupuliformis* is a rare sedge of swamps and floodplain forests. A small population was found growing in the proximity of *C. gigantea* in southern Posey County.

***Cimicifuga rubifolia* Kearney.** (Posey County; 11 August 1993; *Homoya, Abrell, and R. Hedge 93-08-11-67*). Over twenty-five sites were checked for this

species during a status survey for the U.S. Fish and Wildlife Service. Two new populations were discovered, in addition to the one previously collected in Harmonie State Park (Homoya and Abrell, 1986). The population in the Park is near extirpation, owing to severe grazing pressure by white-tailed deer.

***Crotonopsis elliptica* Willd.** (Jennings County; 11 September 1992; *Homoya, et al.* 92-09-11-103). A small population of the elliptical rushfoil was discovered on the xeric bank of a gravel road in the Jefferson Proving Ground. This population is considerably disjunct from Spencer County, the only other location in the State for the species.

***Didiplis diandra* (Nutt.) A. Wood.** (Gibson County; 26 September 1991; *Homoya and R. Hedge* 91-09-26-199; Pike County; 18 September 1991; *Homoya and R. Hedge* 91-09-18-181). Water-purshlane was found at several locations on the Patoka River floodplain during an inventory there for the U.S. Fish and Wildlife Service. Most populations were growing on exposed mud in the basins of river oxbows and swamps.

***Dryopteris cristata* (L.) A. Gray.** (Ripley County; 1 July 1992; *Homoya and C. Hedge* 92-07-01-64). In southern Indiana, *Dryopteris cristata* is an uncommon fern of seep springs. Thus, it was a surprise to find it growing in a different habitat — wet, acidic flatwoods. At least two populations were discovered in flatwoods during an inventory of the Jefferson Proving Ground.

***Eupatorium hyssopifolium* L.** (Jackson County; 12 September 1991; *Homoya and R. Hedge* 91-09-12-173; Ripley County; 22 September 1992; *Homoya and C. Hedge* 92-09-22-118). This species continues to expand its range in Indiana by moving into the southeastern counties. In addition to the Ripley County collection, the species was also observed at several other locations within the Jefferson Proving Ground.

***Eupatorium rotundifolium* L.** (Ripley County; 19 August 1992; *R. Hedge, Homoya, and T. Hulvershorn* 92-08-19-123). Like *Eupatorium hyssopifolium*, this species is also increasing its range. First reported for Indiana by Homoya and Hedge (1990), *E. rotundifolium* was found to be locally common at the Jefferson Proving Ground.

***Festuca paradoxa* Desv.** (Perry County; 20 June 1991; *Homoya and S. Olson* 91-06-26-53). A small population of this grass was discovered in a limestone barrens west of Derby. Elsewhere, this species is known only from Cass and Posey Counties.

***Gentiana villosa* L.** (Harrison County; 2 August 1990; *Homoya and C. Hedge* 90-08-02-107 (vegetative only); 21 September 1990; *Homoya and C. Hedge* 90-09-21-147 (flowering)). This very rare gentian was thought to be extirpated in Indiana until it was discovered in a dry woods and regrowth forest near Indian Creek. At this site, the species is doing well, as evidenced by the presence of several dozen individuals.

***Helianthemum bicknellii* Fern.** (Harrison County; 24 June 1992; *Homoya, L. Casebere, and Abrell* 92-06-24-49). An extremely rare plant of southern Indiana, this species of frostweed occurs sparingly in a remnant chert barrens in southern Harrison County. The plant does well where few other plants can, viz., in sterile, acidic, dry soil.

***Hieraceum caespitosum* Dumort.** (Jefferson County; 11 June 1992; *Homoya and R. Hedge* 92-06-11-34). This hawkweed is abundant at the Jefferson Proving

Ground and is apparently spreading throughout much of southeastern Indiana. The species was discovered in Jennings County in 1989 (Homoya and Hedge, 1990). This discovery was the first report of the species from southern Indiana.

***Juncus secundus* P. Beauv.** (Perry County; 30 August 1990; *Homoya and R. Hedge* 90-08-30-119). This state-endangered rush occurs sparingly in the exposed, acidic clay of an old field west of Derby. The old field, abandoned decades ago before purchase by the Hoosier National Forest, is home to numerous native barrens species, that are apparently re-invading the site from nearby barrens remnants.

***Leptochloa panicoides* (C. Presl.) A. Hitchc.** (Posey County; 13 August 1991; *Homoya and R. Hedge* 91-08-13-128). A southern grass, *Leptochloa panicoides* was last collected in Indiana in 1920 by C.C. Deam. His collection site was Pitcher's Lake in Posey County. Several years of searching at Pitcher's Lake failed to reveal the grass, but in 1991, a sizable population was discovered growing at a different oxbow lake not far from Pitcher's Lake.

***Linum striatum* Walter.** (Ripley County; 22 September 1992; *Homoya and C. Hedge* 92-09-22-115). This uncommon flax was found growing at several locations in wet, acidic flatwoods on the Jefferson Proving Ground. The flatwoods community is young regrowth, and considerable light reaches the understory.

***Ludwigia glandulosa* Walter.** (Posey County; 16 July 1991; *Homoya and R. Hedge* 91-07-16-64). Once thought to be extirpated in the State (Aldrich, Bacone, and Homoya, 1986), at least four populations of this species are now known, all in deep southern Posey County. Roadside ditches and ephemeral pools in flatwoods are the habitats.

***Lycopodium clavatum* L.** (Jefferson County; 18 January 1990; *Homoya and R. Hedge* 90-01-18-2). This species appears to have recently spread into southern Indiana, especially in regrowth flatwoods in the southeastern part of the State. Several additional populations were observed on the Jefferson Proving Ground and elsewhere in southeastern Indiana. The range expansion phenomenon, first into northern and now into southern Indiana, must be relatively recent, as Deam (1940) did not list the species for our flora.

***Mikania scandens* (L.) Willd.** (Pike County; 19 September 1992; *Homoya and R. Hedge* 91-09-19-192). The population reported by Homoya (1983) from Pike County was revisited in 1991 after a nine year hiatus. A comparison of notes regarding population size indicates that the plants are reproducing and spreading. The species is now abundant within a ¼ mile radius of the original population.

***Muhlenbergia capillaris* (Lam.) Trin.** (Harrison County; 18 October 1990; *Homoya* 90-10-18-164). This species is a beautiful, but rare, grass of barrens environments. Previously known only from collections east of Elizabeth (now considered extirpated there due to quarry activity), a few clumps were recently discovered in a remnant limestone barrens at Wyandotte Woods.

***Rhexia mariana* L. var. *mariana*.** (Jefferson County; 22 July 1992; *Homoya and R. Hedge* 92-07-22-68). All previous collections of this species in Indiana have been from the southwestern portion of the State. A large population was discovered in a wide, grassy shoulder of a road within the Jefferson Proving Ground.

***Rhynchospora corniculata* (Lam.) A. Gray.** (Perry County; 30 August 1990; *Homoya and R. Hedge 90-08-30-121*: Posey County; 16 July 1991; *Homoya and R. Hedge 91-07-16-69*). This stout sedge was discovered growing in *Sphagnum* bordering a small pond in the Hoosier National Forest. The species was growing with other plants unusual for the area, including *Panicum verrucosum* and *Rhynchospora capitellata*. In Posey County, a few plants were found in an open, wet depression within a flatwoods.

***Sagittaria graminea* Michx.** (Pike County; 2 October 1991; *Homoya and Abrell 91-10-02-213*). Several individuals of the grass-leaved sagittaria were found growing in an oxbow of the Patoka River. This species was growing with another uncommon plant, *Didiplis diandra*.

***Satureja vulgaris* (L.) Fritsch var. *neogaea* Fern.** (Posey County; 12 August 1993; *Homoya, L. Gray, and R. Hedge 93-08-12-68*). This variety of wild basil, apparently native to North America, was collected from an old field on a ridge bordering the Wabash River south of New Harmony.

***Scleria triglomerata* Michx.** (Harrison County; 14 June 1991; *Homoya and Abrell 91-06-14-36*). A population of several hundred culms occurs in a remnant chert barrens in southern Harrison County. Other unusual plants in this barrens are *Helianthemum bicknellii*, *Hieraceum longipilum*, and *Panicum annulum*.

***Senna occidentalis* (L.) Link.** (Pike County; 3 October 1991; *Homoya and Abrell 91-10-03-219*). Several plants of this impressive legume were found growing in ballast along a railroad track near the Patoka River. This species is probably an introduction to Indiana, but our understanding of its origin is inconclusive. Deam (1940) considered it native, but some authorities consider it an Old World endemic (Gleason and Cronquist, 1991).

***Strophostyles leiosperma* (T. & G.) Piper.** (Jennings County; 11 September 1992; *Homoya, et al. 92-09-11-102*). This uncommon vine was located on the open, sterile bank of a gravel road on the Jefferson Proving Ground. This population is disjunct from other populations in the State, as is the plant growing with it, *Crotonopsis elliptica*.

***Utricularia vulgaris* L.** (Pike County; 10 July 1991; *Homoya and Abrell 91-07-10-61*). This species, Indiana's largest yellow-flowered bladderwort, is very rare in southern Indiana; it is much more common in the northern part of the State. At least two populations were found growing in shallow "dead" swamps (recently flooded areas where standing dead timber is present) along the Patoka River. In these places, one can also find the uncommon *Utricularia gibba*.

***Woodwardia areolata* (L.) Moore.** (Jefferson County; not vouchered: Jennings County; 22 July 1992; *Homoya and R. Hedge 92-07-22-66*: Ripley County; 11 June 1992; *Homoya and R. Hedge 92-06-11-32*). Although not common, *Woodwardia areolata* was observed at several sites within the Jefferson Proving Ground. All populations were growing in wet, acidic flatwoods of young age. This species is apparently still spreading in Indiana, as evidenced by several populations discovered since its initial report for the State (Homoya, 1983).

***Zosterella dubia* (Jacq.) Small.** (Jefferson County; 6 August 1991; *Homoya and C. Hedge 91-08-06-121*). This aquatic plant was discovered growing in shallow water at the shore of the Ohio River near Hanover. Although rather common in lakes and streams in northern Indiana, *Zosterella* is quite rare in the south.

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