

NEW AND NOTEWORTHY VASCULAR PLANT RECORDS FOR ALABAMA

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ABSTRACT

Eight non-native state record species (*Echium vulgare*, *Gibasis pellucida*, *Gladiolus italicus*, *Montia linearis*, *Morus indica*, *Nymphoides peltata*, *Oxalis pes-caprae*, *Origanum vulgare*), one native state record species (*Persicaria meisneriana*), and seven native species of interest (*Coreopsis nudata*, *Elymus churchii*, *Eurybia jonesiae*, *Melanthium hybridum*, *Phlox pulchra*, *Pleea tenuifolia*, and *Polygala baldunii*) are reported here for Alabama. One hybrid taxon state record (*Platanthera* × *rhinehartii* = *P. ciliaris* × *P. integrilabia*) was also recorded.

During routine plant surveys extending to all portions of the state, seventeen new/noteworthy records were collected. Each taxon is detailed in the discussion below. Species non-native (to Alabama) are designated with a dagger (†). Determination of nativity and state/county record status was ascertained by using the Alabama Plant Atlas (Keener et al. 2022), BONAP-Synthesis (Kartesz 2022), NatureServe (NatureServe 2022), SERNEC Data Portal (SERNEC 2022), the Flora of the Southeastern United States (Weakley 2022), and literature searches. Voucher specimens have been deposited in the Alabama Natural Heritage Section Herbarium (ALNHS), the University of West Alabama Herbarium (UWAL), Jacksonville State University (JSU), John D. Freeman Herbarium at Auburn University (AUA), and the Anniston Museum of Natural History Herbarium (AMAL). Exact plant locations are withheld for some due to the sensitive nature of the plant populations and/or special permissions required for access to the sites.

COREOPSIS NUDATA Nutt. Pink Swamp Tickseed (Asteraceae)

Voucher specimen. **Alabama.** Baldwin Co.: Wet/frequently inundated soils of open grassy, pine flatwoods, with *Pinguicula* and *Sarracenia* spp. nearby, burned recently, 30 Apr 2021, *Barger SP#5468* (ALNHS7132); pooled/inundated area of 0.5 m water, 18 May 2021, *Barger SP#5501* (ALNHS7133).

Known from only three Alabama counties (Baldwin, Houston, and Mobile), this rare (S1/G3) species has become increasingly scarce throughout its range due to habitat destruction and hydrological changes. Located on ADCNR-owned property, this location is the only known protected station for this taxon in Alabama. Directed searches for *Coreopsis nudata* at previously documented sites in the state have been largely unproductive except for the 1992 report by Chris Oberholster from Mobile County along the periphery of a cypress depression. This population, which was last observed in 2020, has dwindled to approximately 20 plants.

ECHIUM VULGARE L. (†) Viper's-Bugloss (Boraginaceae)

Voucher specimen. **Alabama.** Jackson Co.: Well-drained rocky calcareous soil of an open, maintained powerline corridor approximately mid-slope of Sand Mountain, ca. 0.25 air mi S of the Tennessee state line, roughly 2.7 air mi N of Bryant, 4 Jun 2022, *Schotz #2286* (ALNHS7900). STATE RECORD.

Previously documented from every other state east of the Mississippi River with the exception of Florida, this collection represents the first known collection from Alabama. Assuming a greater abundance in the mid-Atlantic states and the Northeast, the taxon is a Eurasian adventive having also been introduced throughout the cooler regions of the Southern Hemisphere.

ELYMUS CHURCHII J.J.N. Campb. Church's Wild Rye (Poaceae)

Voucher specimen. **Alabama.** Madison Co.: Redstone Arsenal: Rocky limestone ledge overlooking the Tennessee River at Bell Bluff; open canopy of *Quercus shumardii*, *Quercus muehlenbergii*, and *Fraxinus americana*, roughly 11.0 air mi S of downtown Huntsville, 19 Jun 2017, *Schotz #2242* (AUA85532).

First documented in Alabama by Alfred Schotz from Marshall County in 2007 (Schotz & Dattilo 2012), this collection represents the second county of occurrence in the state. Prior to its discovery in Alabama, the species was known from only the central Ouachita and western Ozark Mountains in Arkansas, Missouri, and Oklahoma. The taxon likely occurs elsewhere in Alabama, particularly along the limestone ledges farther west along the Tennessee River.

EURYBIA JONESIAE (Lamboy) Nesom Jones's Wood-Aster (Asteraceae)

Voucher specimen. **Alabama.** Cherokee Co.: W side of roadway, sporadic along steep embankment; scattered along E side of roadway and further N, 26 Sep 2020, *Finzel s.n.*; 29 Sep 2020, *Barger SP#5312* (ALNHS6902).

Over the course of a three-week period, Dr. Robert Kral collected Jones's Wood Aster along Halawakee Creek in Lee County, Alabama. Those three collections of the uncommon (G3) species had been the only known records for the taxon from Alabama. The above collections represent a new county record for *Eurybia jonesiae*, 42 years after its initial discovery from the state.

GIBASIS PELLUCIDA (M. Martens & Galeotti) D.R. Hunt (†) Dotted Bridalveil (Commelinaceae)

Voucher specimen. **Alabama.** Houston Co.: NE side of a busy thoroughfare, along a sandy creekside bank near an opening at the woodline/roadway, 5 Dec 2019, *Barger SP#5036* (ALNHS7036). Mobile Co.: Drainage canal in residential neighborhood, Mobile, Photo Documentation on 13 Sep 2019, *Finzel*.

First observed on September 13, 2019, in a drainage canal in the city of Mobile by Brian Finzel, the plants were thought to be *Tradescantia fluminensis* Vell. (Small-Leaf Wandering-Jew), however no collection was made; in the weeks that followed the population apparently was erased by flooding at the site. Three months later, *Gibasis pellucida* was collected from an urban-impacted, sandy bank of a small stream in Houston County.

GLADIOLUS ITALICUS Mill. (†) Field Gladiolus (Iridaceae)

Voucher specimen. **Alabama.** Macon Co.: well drained soils of open roadside, near edge of woodline; no evidence of previous homesite, 20 Apr 2022, *Barger SP#5697* (ALNHS7549). STATE RECORD.

Easily distinguished by the anthers being longer than the filaments and ovaries retaining a more globose shape, Field Gladiolus superficially looks like the other naturalizing open, magenta-flowered *Gladiolus* species from Europe. This marks the only known collection of this taxon from Alabama.

MELANTHIUM HYBRIDUM Walt. Slender Bunchflower (Melanthiaceae)

Voucher specimen. **Alabama.** Elmore Co.: Dry, rocky slope of mixed hardwoods; mid-slope above creek with many scattered vegetative plants present, 1 Jul 2021, *Barger SP#5561* (ALNHS7183).

First reported from Alabama in 1969, this uncommon (S1) species had been collected only five times previously. The present collection represents a new county record for this species that occurs more frequently in the Blue Ridge/northeastern USA.

MONTIA LINEARIS (Douglas ex Hook.) Greene (†) Narrow Leaved Montia (Montiaceae)

Voucher specimen. **Alabama.** Etowah Co.: In rocky moss-covered mound, just up from more mesic fern bottom, inside disturbed woodline, 18 Mar 2020, *Hayes & Barger SP#5095* (ALNHS6823). STATE RECORD.

First discovered in Alabama by Adam Hayes, this spring-flowering native of the western USA is thinly and sporadically found as an introduced taxon in a few states east of the Mississippi River.

MORUS INDICA Macé ex. Seringe (†) Korean Mulberry (Moraceae)

Voucher specimens. **Alabama.** Baldwin Co.: weedy and spreading shoots emerging all along roadside shoulder and ditch, many stems present, 7 Oct 2020, *Barger SP#5364* (ALNHS7041). Etowah Co.: Along impacted area of Black Creek, ruderal washed-out ditch in Gadsden near walking bridge/tennis courts, 14 Jul 2016, *Barger & Taylor SP#2644* (ALNHS4256). Mobile Co.: W side of Blakeley Island, ruderal area with many exotics, 4 May 2022, *Barger SP#5709* (ALNHS7509). STATE RECORD.

Observed sporadically for many years throughout Alabama by the lead author, the correct identity of the collections remained elusive due to variable leaf morphology, nomenclatural confusion, and unclear taxonomic status. This taxon has been in the USA and Canada for many years but not readily recognized because of its close genetic relationship and variable morphologies that overlap with *Morus alba*. This was compounded by the confused history of synonyms and the names changes as the Rules of Taxonomic Nomenclature were applied to this entity. The fruits have distinct features but are not present in young and staminate material; the leaves of its fast-growing shoots and suckers have acuminate leaf tips and a tendency toward linear lobing. Likely spread throughout the entire southeastern USA, but overlooked as *Morus alba*, we document *Morus indica* noting that hybridization with other *Morus* spp. (both native and introduced) is likely to occur and make future identifications even more complicated (Burgess & Husband 2006).

NYMPHOIDES PELTATA (Gmel.) Kuntze (†) Yellow Floating-heart (Menyanthaceae)

Voucher specimen. **Alabama.** Calhoun Co.: Golf course pond on W side of roadway, floating nuisance weed in several ponds, 6 Jul 2020, *Spaulding et al. DDS#16,407*; 9 Jul 2020, *Barger SP#5221* (ALNHS6822). STATE RECORD.

First discovered in Alabama by Bill Garland, this non-native species may have been purposefully introduced into ponds of a local golf course. The exact nature of its appearance cannot be positively verified. It is well-established in several nearby ponds near the original collection location.

ORIGANUM VULGARE L. (†) Oregano (Lamiaceae)

Voucher specimen. **Alabama.** Madison Co.: Large colony (n=100+) blooming along a grassy slope along S side of Nature Trail, on the S side of lake, atop Green Mountain, first observed by the collector in 2016, 12 Jul 2021, *Finzel s.n.* (ALNHS7184). STATE RECORD.

Discovered by Brian Finzel, this species is currently only known as a viable escaped population from Arkansas, Georgia, North Carolina, and Virginia in the southeastern USA (Kartesz 2021; Weakley 2022). Oregano is widely cultivated for a variety of culinary and herb garden purposes.

OXALIS PES-CAPRAE L. (†) African Wood-Sorrel (Oxalidaceae)

Voucher specimen. **Alabama.** Mobile Co.: W side of Blakeley Island, near Cochrane Africatown Bridge/Alt. Hwy 90, ruderal sandy area with many exotics, 4 May 2022, *Barger SP#5708* (ALNHS7490). STATE RECORD.

Non-native to North America, this collection marks the first site outside of Arizona, California, and Oregon for the species. Thriving in a ruderal area among many other exotic species, no apparent modes of introduction were observed. Monocultures cover large expanses of sandy soils in California and the Southwest, despite almost never reproducing sexually (CalFlora 2022). Verification of ID was made by Guy Nesom.

PERSICARIA MEISNERIANA (Cham. & Schltld.) M. Gómez Branched Tearthumb (Polygonaceae)

Voucher specimen. **Alabama.** Mobile Co.: Low-lying area within floodplain forest with black, loamy soils and a mature overstory, 4 Nov 2022, *Todia s.n.* (ALNHS7809). STATE RECORD.

Known from Florida and Louisiana, this species was first discovered in Alabama by Gena Todia and Michael K. Jordan in floodplain wetlands associated with Muddy Creek, a tributary to Fowl River (15 miles southwest of Mobile). The wetlands are dominated by an overstory of *Taxodium ascendens*, *Nyssa biflora*, and *Magnolia virginiana*. Until a dense understory of *Ligustrum sinense* and other invasive exotic species was removed from this site nearly 25 years ago, the floodplain was nearly devoid of herbaceous groundcover.

PHLOX PULCHRA Wherry Alabama Phlox (Polemoniaceae)

Voucher specimen. **Alabama**. Shelby Co.: Ca. 30 large, flowering individuals in thin, gravelly soils on steep exposed sandstone bank of Cahaba River, 23 May 2020, *Yawn et al. NDY#22* (ALNHS6871).

A rare (G1) species endemic to Alabama, this collection from Shelby County represents a newly discovered occurrence for the county. With the lack of many recent collections and the thinly scattered distribution (documented previously from Bibb, Jackson, Jefferson, Pike, Shelby, and Walker), the older stations for this species should be investigated to determine its current status.

PLATANThERA × **RHINEHARTII** (*P. ciliaris* × *P. integrilabia*) C. Wilson ex P.M. Brown Rhinehart's Fringed Orchid (Orchidaceae)

Voucher specimen. **Alabama**. Calhoun Co.: Single individual, of intermediate color and spur length, growing within 1 m of both parental lineages (*P. ciliaris* × *P. integrilabia*) in a fire-maintained seepage slope, 11 Aug 2021, *Thompson & Yawn NDY#228* (ALNHS7859).

This rare, naturally occurring hybrid was first collected (by Chuck Wilson *s.n.*, 1 Aug 2016) and was identified by Paul M. Brown (2020) from a now extirpated site north of the town of Cagle in Sequatchie Co., Tennessee. The present collection is believed to be only the second vouchered report of the hybrid and the only known extant occurrence. A putative reference to a third site (from Kentucky) could not be verified.

PLEEA TENUIFOLIA Michx. Rush-Featherling (Tofieldiaceae)

Voucher specimen. **Alabama**. Baldwin Co.: Wet, pine flatwoods of nature preserve, ca. 50 flowering stems, uncommon, 18 Sep 2018, *Barger SP#4198* (ALNHS6094); low wet area of powerline ROW along county road, mixed with graminoids, 7 Oct 2020, *Barger SP#5359* (ALNHS6909).

Possibly more abundant than known, this taxon is challenging to visualize when cloaked in its preferred habitat by tall, wiry grasses. However, with continued pressure from habitat destruction, the known occurrences of this uncommon (S1) species are few.

POLYGALA BALDUINII Nutt. Baldwin's Milkwort (Polygalaceae)

Voucher specimen. **Alabama**. Baldwin Co.: Wet, sandy interdunal swale, frequently inundated low-lying area, with *Distichlis spicata* and *Spartina patens*, 18 Jun 2021, *Barger SP#5504* (ALNHS7136).

With only two previously known collections of Baldwin's Milkwort (from Baldwin County in 1957 and Mobile County in 1970) from Alabama, this rare (S1) species is not commonly encountered anywhere outside central/southern Florida. First relocated by Gena Todia in 2018, this taxon was confirmed by photo identification. Subsequently the population was possibly extirpated, but a second (sub-) population was discovered nearby.

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