England, J.K. and B.R. Keener. 2017. *Sisyrinchium minus* (Iridaceae) new to Alabama. Phytoneuron 2017-2: 1–4. Published 4 January 2017. ISSN 2153 733X

SISYRINCHIUM MINUS (IRIDACEAE) NEW TO ALABAMA

J. KEVIN ENGLAND
Department of Biological and Environmental Sciences
University of West Alabama
Livingston, Alabama 35470
tsugas@hotmail.com

BRIAN R. KEENER
Department of Biological and Environmental Sciences
University of West Alabama
Livingston, Alabama 35470
bkeener@uwa.edu

ABSTRACT

Sisyrinchium minus (Iridaceae) is reported new for the vascular flora of Alabama from collections made from 1987 to 2015. Several of the localities are in the Blackland Prairie district and the species is regarded as native to Alabama, disjunct from its primary range to the west.

Recent collections from Alabama identified as *Sisyrinchium minus* Engelm. & A. Gray have led to the conclusion that the species has never been documented for the state before now. The taxon was not included in *Plant Life of Alabama* (Mohr 1901) and was apparently overlooked for inclusion in a recently published checklist for the state (Kral et al. 2011), despite a collection predating that publication by 24 years (Fig. 1). *Sisyrinchium minus* also has not been included in the Alabama Plant Atlas (Keener et al. 2016).

Sisyrinchium minus Engelm. & A. Gray

Voucher specimens. **USA. Alabama.** Marengo Co.: 2.5 air mi WSW of Demopolis, along N side of Lock and Dam Rd. 0.06 mi E of jct. with Gandy Ferry Rd, 32.511093° -87.88064°, 1 May 2012, *England 3431* (UWAL; VDB). Monroe Co.: 3.5 air mi WNW of Franklin, Haines Island Park at site of old Davis Ferry, boat landing, 31.72563° -87.46920°, 13 May 2015, *Keener 8842* with Davenport and Davison (UWAL); off Co. Rd. 17 at Haines Island Park, ca. 16 mi W of Beatrice, 31.725189° -87.47055°, 13 May 2015, *Davenport 5746* (SAMF). Sumter Co.: 2.8 air mi NE of Coatopa, along Mundy Rd. ca. 0.25 mi N of jct. with Co. Rd. 23, 32.507778° -88.029444°, 17 Apr 2010, *Keener 5808* with Duckworth (UWAL; MIN, duplicates to be distributed). Wilcox Co.: By Alabama Hwy 22 [5?], E side of Flatwood, 1 May 1987, *Kral 73815* (VDB, UWAL; duplicates to be distributed).

Sisyrinchium minus was originally described from the prairie region of Texas, where it apparently is native (Englemann & Gray 1845). It is one of three annual species [*S. rosulatum* E.P. Bicknell, *S. cernuum* (E.P. Bicknell) Kearney] currently recognized in the genus from North America north of Mexico (Cholewa & Henderson 2002). Since its description, discoveries have been made in neighboring and nearby states, including Arkansas, Oklahoma, Louisiana, and Mississippi (Kartesz 2015). Despite the recent discovery in Arkansas in 2007, it is considered native there because the only known population occurs along the margin of prairie flatwoods where other somewhat rare natives occur (T. Witsell, pers. comm.). In light of this, the species is regarded as an "S1" species, meaning it is tracked by the Arkansas Natural Heritage Commission as "Critically Imperiled" (NatureServe 2015). In Oklahoma, the first collection of *S. minus* was in 1981, where the habitat was recorded as a lawn weed on a college campus, suggesting an adventive occurrence (Taylor & Taylor 1987). It is unclear if the presence of *S. minus* in Louisiana and Mississippi represents native populations or adventive ones. *Sisyrinchium minus* has also been collected in southern California and North Carolina, where both populations are undoubtedly adventive (Kartesz 2015).

Figure 1. *Sisyrinchium minus* from Wilcox Co., Alabama (*Kral 73815*, UWAL).

Figure 2. Map of Alabama with counties of documented *Sisyrinchium minus* populations in gray.

Figure 3. Capsules of *Sisyrinchium minus* (left) and *Sisyrinchium rosulatum* (right).

The Alabama populations of *Sisyrinchium minus* (Fig. 2) were discovered in moist habitats, including floodplains, mudflats, roadside ditches, and low fields. Several of the localities are in the Blackland Prairie physiographic district of Alabama, although not in an actual prairie and usually in circumneutral to slightly alkaline soils. The Marengo County population, which may have the most undisturbed habitat, was discovered under bald cypress (*Taxodium distichum*) along the edge of a seasonally flooded area of an embayment of the Tombigbee River. Also occurring at this locality was *Crassula aquatica*, a species reported in a previous paper (England 2013). The Blackland Prairie district of Alabama (and Mississippi) often harbors many unrelated species with a disjunct distribution between the Blackland Prairies of Texas and Arkansas and those of Alabama and Mississippi. Because a similar pattern is represented here, we believe *S. minus* should be treated as native in Alabama.

In the southeastern USA, *Sisyrinchium minus* could be confused with *S. rosulatum*, both of which are diminutive annuals. They can be easily separated by the shape of the capsules (Fig. 3). *Sisyrinchium rosulatum* produces globose capsules, while the capsules of *S. minus* are barrel-shaped.

ACKNOWLEDGEMENTS

We thank Anita Cholewa (MIN) for determining a duplicate of the Sumter Co. collection. We are grateful to Dr. Guy Nesom for reading the manuscript and providing helpful suggestions.

LITERATURE CITED

Cholewa, A.F. and D.M. Henderson. 2002. *Sisyrinchium*. Pp. 351–371, in Flora of North America Editorial Committee (eds.). Flora of North America North of Mexico, Vol. 26. New York and Oxford.

England, J.K. 2013. *Crassula aquatica* (Crassulaceae) rediscovered in Alabama. Phytoneuron 2013-1: 1–2.

Englemann, G. and A. Gray. 1845. Plantae Lindheimerianae; An enumeration of the plants collected in Texas, and distributed to subscribers by F. Lindheimer; with remarks and descriptions of new species, etc. Boston J. Nat. Hist. 5(2): 210–264.

Kartesz, J.T. 2015. North American Plant Atlas. The Biota of North America Program (BONAP). .(http://bonap.net/napa). Chapel Hill, North Carolina. [maps generated from J.T. Kartesz, 2015. Floristic Synthesis of North America, Version 1.0. Biota of North America Program (BONAP).

Keener, B.R., A.R. Diamond, L.J. Davenport, P.G. Davison, S.L. Ginzbarg, C.J. Hansen, C.S. Major, D.D. Spaulding, J.K. Triplett, and M. Woods. 2016. Alabama Plant Atlas. [S.M. Landry and K.N. Campbell (original application development), Florida Center for Community Design and Research. Univ. of South Florida]. Univ. of West Alabama, Livingston, Alabama. <http://www.floraofalabama.org/>

Kral R., A.R. Diamond Jr., S.L. Ginzbarg, C.J. Hansen, R.R. Haynes, B.R. Keener, M.G. Lelong, D.D. Spaulding, and M. Woods. 2011. Annotated Checklist of the Vascular Plants of Alabama. Bot. Res. Inst. of Texas, Fort Worth.

Mohr, C.T. 1901. Plant life of Alabama: An account of the distribution, modes of association, and adaptations of the flora of Alabama, together with a systematic catalogue of the plants growing in the state. Contr. U.S. Natl. Herb. 6.

NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer> Accessed: 20 Dec 2016.

Taylor, R.J. and C.E.S. Taylor. 1987. Additions of the vascular flora of Oklahoma-IV. Sida 12: 233–237.