

**CYPERUS TETRAGONUS AND DESMODIUM TRIFLORUM:  
NEW VASCULAR PLANT RECORDS FROM ALABAMA**

**MICHAEL WOODS and ALVIN DIAMOND**

Department of Biological and Environmental Sciences  
Troy University, Alabama 36082  
mwoods@troy.edu

&

**JAMES R. BURKHALTER**

Department of Biology  
University of West Florida  
Pensacola, Florida 32514

**ABSTRACT**

Two species of vascular plants are documented as new to Alabama: *Cyperus tetragonus* (native) and *Desmodium triflorum* (introduced). A complete set of the voucher specimens is housed at UWFP.

These two new records of vascular plants are reported for Alabama as a result of field studies. One of the species is native to the state. The second represents a non-native taxon established, at least locally, in the flora. Records were determined using the Alabama Plant Atlas (Keener et al. 2016), the North American Plant Atlas (Kartesz 2015), and searches of the literature.

**CYPERUS TETRAGONUS** Ell. (Figure 1)

**Alabama.** Baldwin Co.: Historic Blakeley Sate Park, edge of low woods along E side of Tensaw River, 30.747716° -87.924024°, 17 Aug 1985, *Burkhalter & Hedges 10057* (UWFP).

This represents the first report of this taxon from Alabama. It was not included in the Annotated Checklist of the Vascular Plants of Alabama (Kral et al. 2011), nor has it been included on the Alabama Plant Atlas website (Keener et. al 2016). *Cyperus tetragonus* is a native of the coastal states from North Carolina to Florida and also Arizona and New Mexico (Kartesz 2015). Tucker (2002) states that the status of *C. tetragonus* from the southwestern United States requires further study. The habitats include maritime forests, dunes and edges of brackish marshes along the Atlantic Coast from North Carolina to Georgia (Weakley 2015). In Florida, this taxon occurs in most counties in the peninsula and seven counties in the panhandle. The habitats include dunes, flood plains, hammocks, mesic hardwoods and xeric woodlands (Wunderlin et al. 2016). The North Carolina Natural Heritage Program (2014) gives this taxon a rank of S1 (extremely rare, often five or fewer occurrences, or, because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province). In South Carolina it has S2 rank (restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province) (South Carolina Heritage Trust Program 2014). NatureServe (2015) ranks this taxon as N4? (uncommon but not rare; some cause for long-term concern due to declines or other factors). The “?” denotes inexact or uncertain numeric rank. It is likely the N4 ranking is because of the abundance and wide distribution of this taxon in Florida.

**DESMODIUM TRIFLORUM** (L.) DC. (Figure 2)

**Alabama.** Baldwin Co.: Lillian, SW corner of US Hwy 98 and County Hwy 99, weedy, grassy roadside, 30.408314° -87.437247°, 28 Nov 2009, *Burkhalter 22570* (TROY, UWFP).

*Desmodium triflorum* is a pantropical species that has been introduced to subtropical and temperate regions in the southern United States (Isely 1990). In the United States, it occurs

throughout Florida (Wunderlin et al. 2016) and St. Tammany Parish, Louisiana (*MacDonald 8031*, VSC). In Florida, the first report of this taxon west of the Apalachicola River was from Escambia County on the University of West Florida campus (*Burkhalter 21256*, FSU, UWFP) (Kunzer et al. 2009). This represents the first report of this taxon from Alabama. It was not included in the Annotated Checklist of the Vascular Plants of Alabama (Kral et al. 2011) nor has it been included on the Alabama Plant Atlas website (Keener et al. 2016). This collection was made from a weedy, grassy roadside; associated species included *Dichondra carolinensis*, *Euphorbia hirta*, *Hypochaeris radicata*, *Pectis prostrata*, and *Plantago lanceolata*.



Figure 1. *Cyperus tetragonus* from Baldwin County.



Figure 2. *Desmodium triflorum* from Baldwin County.

**LITERATURE CITED**

Iseley, D. 1990. Vascular Flora of the Southeastern United States. Univ. of North Carolina Press, Chapel Hill.

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

- Keener, B.R., A.R. Diamond, L.J. Davenport, P.G. Davison, S.L. Ginzburg, 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.
- Kral, R., A.R. Diamond Jr., S.L. Ginzburg, 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. BRIT Press, Bot. Res. Inst. of Texas, Fort Worth.
- Kunzer, J.M., R.P. Wunderlin, L.C. Anderson, and J.R. Burkhalter. 2009. New and noteworthy plants from Florida. *J. Bot. Res. Inst. Texas* 3: 333–339.
- NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <<http://explorer.natureserve.org>> Accessed 8 July 2016.
- North Carolina Natural Heritage Program. 2014. Natural Heritage Program list of rare plant species of North Carolina. L.G. Robinson and J.T. Finnegan (eds.). Office of Land and Water Stewardship, North Carolina Department of Environment and Natural Resources, Raleigh.
- South Carolina Heritage Trust Program. 2014. Rare, Threatened and Endangered Species and Communities. South Carolina Department of Natural Resources, Columbia.
- Tucker, G.C. 2002. *Cyperus* (Cyperaceae). Pp. 141–191, *in* *Flora of North America North of Mexico*, Vol. 23. Oxford Univ. Press, New York and Oxford.
- Weakley, A.S. 2015. Flora of the Southern and Mid-Atlantic States. Working draft of May 21, 2015. Univ. of North Carolina Herbarium, North Carolina Botanical Garden, Chapel Hill. <<http://www.herbarium.unc.edu/flora.html>> Accessed 28 June 2016.
- Wunderlin, R.P., B.F. Hansen, A.R. Franck, and F.B. Essig. 2016. Atlas of Florida Vascular Plants (<http://florida.plantatlas.usf.edu/>). [S.M. Landry and K.N. Campbell (application development), USF Water Institute.] Institute for Systematic Botany, Univ. of South Florida, Tampa.