



AQUATIC PLANT NOTES

Issue #2

Greetings! This is FDEP's Aquatic Ecology and Quality Assurance Section's second issue of a periodic e-newsletter to inform Lake Vegetation Index (LVI) samplers and other plant-interested parties of new and noteworthy items related to aquatic plant identification in Florida. The focus of this issue is the sedge *Cyperus blepharoleptos* (common name is Cuban bulrush, or burhead sedge; synonyms are *Oxycaryum cubense* and *Scirpus cubensis*).

Introduction

Cyperus blepharoleptos is a leafy sedge that spreads by reddish rhizomes. It was previously known as *Oxycaryum cubense*, and prior to that, as *Scirpus cubensis*. The spiral arrangement of the scales surrounding the flowers and fruits resembles other *Scirpus* (or *Schoenoplectus*), and so its history is that it has been treated as *Scirpus cubensis*, but then was placed in its own monotypic genus (*Oxycaryum*) based on molecular study. Recent molecular analysis, however, supports its placement in the genus *Cyperus*, resulting in its new designation as *Cyperus blepharoleptos* (Larridon et al. 2011). In overall habit, it appears more like a *Cyperus* than a *Scirpus* (or *Schoenoplectus*), with its short, leafy growth form and the leafy bracts subtending the inflorescence.

In Florida, *C. blepharoleptos* is a vigorous invader in freshwater wetlands and lakes, and forms floating mats, relying on the presence of other aquatic species for establishment. There are two recognized forms of *C. blepharoleptos*, and both are present in Florida. A single-headed form occurs in the Panhandle and north Florida (forma *paraguayense*), while a form with multiple, stalked heads occurs from around Gainesville to further south in the Florida peninsula (forma *cubense*).

Field Identification

- ❖ Tight, rounded bur-like heads
- ❖ Long, leafy bracts that spread underneath the inflorescence
- ❖ Slender, triangular stem
- ❖ Very slender leaves that grow from the base of the stem
- ❖ Overall glossy green, "grassy" appearance
- ❖ Grows in dense, floating mats
- ❖ Single-headed form occurs in panhandle and north Florida
- ❖ Multiple, umbel-like head occurs in north-central to south Florida

Photos



Figure 1. *Cyperus blepharoleptos* (single-headed form) at Lake Jackson, Leon County, May 2017



Figure 2. *C. blepharoleptos* habit (single-headed form)
Photo: USGS Non-Indigenous Aquatic Species website



Figure 3. *C. blepharoleptos* (single-headed form) at Lake Iamonia, Leon County, May 2017



Figure 4. Close-up of *C. blepharoleptos* (single-headed form) Photo: Southeasternfloradotcom



Figure 5. *C. blepharoleptos*, senescent in the forefront at an unnamed small lake, Jefferson County, October 2016



Figure 6. *C. blepharoleptos* (multi-headed form)
Photo: Floridagrassesdotorg

Figure 7.



Figure 7. Multi-headed form of *C. blepharoleptos*. (from UF-IFAS 1996)

Figure 8.

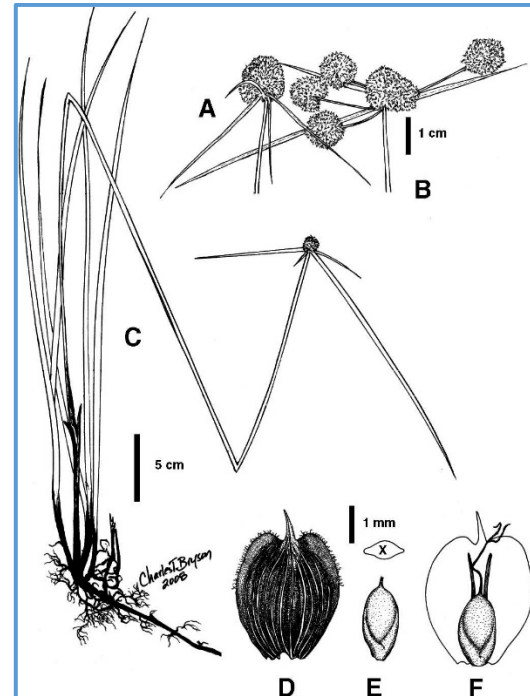


Figure 8. Single-headed form of *C. blepharoleptos*, also showing scale (D), achene (E), and achene within scale, with stigma, style, and anthers attached (F). (from Bryson et al. 2008)

Additional Information

- ❖ Mat or raft-forming, floating habit facilitates vegetative reproduction and transport of fragments by moving water (Bryson et al. 2008)
- ❖ Very vigorous invader--similar to *Pistia stratiotes* and *Salvinia molesta* in its vegetative reproductive capability (Bryson et al. 2008)
- ❖ Corky, buoyant achenes are adapted to dispersal by moving water (Bryson et al. 2008)
- ❖ Species has been in the southeastern United States for more than a century (Bryson et al. 2008), but has become more invasive in recent years
- ❖ Florida panhandle voucher specimens (single-headed form) are confirmed from Bay, Leon, Wakulla, and Escambia Counties (Jacono 2017)
- ❖ DEP Lake Vegetation Index (LVI) data includes records for many Florida counties, including: Alachua, Bay, Columbia, Flagler, Gadsden, Jackson, Leon, Putnam, Union, and Walton in the panhandle and north Florida, and Brevard, Citrus, Collier, Glades, Hardy, Hendry, Hernando, Highlands, Hillsborough, Indian River, Lake, Levy, Manatee, Martin, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Seminole, St. Lucie, Sumter, and Volusia in the peninsula and south Florida.

References

- Bryson, C.T., V.L. Maddox and R. Carter. 2008. Spread of Cuban club-Rush (*Oxycaryum cubense*) in the Southeastern United States. *Invasive Plant Science and Management*. 1: 326-329.
- Jacono, C. 2017. *Oxycaryum* update. Summary presented to the Florida Exotic Pest Plant Council.
- McLaurin, C.S. and R.M. Wersal. 2017. *Cyperus blepharoleptos*. United States Geological Survey Nonindigenous Aquatic Species Database, Gainesville, FL.
Available from <https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=2819> Revision Date: 2/2/2011
- Larridon, I., M. Reynders, W. Huygh, K. Bauters, K. Van De Putte, A.M. Muasya, P. Boeckx, D.A. Simpson, A. Vrijdaghs, and P. Goetghebeur. 2011. Affinities in C3 *Cyperus* lineages (Cyperaceae) revealed using molecular phylogenetic data and carbon isotope analysis. *Botanical Journal of the Linnean Society*. 167: 19-46.