

CAREX GRANULARIS (CYPERACEAE): FIRST RECORD IN FLORIDA

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ABSTRACT

Carex granularis is first reported here as a member of the Florida native flora. One small population was found growing in Chattahoochee (Gadsden Co.) in a seepage habitat with limestone influence.

Carex granularis is reported here from Florida from collections made in the town of Chattahoochee, Florida (Gadsden Co.), where it grows in calcareous seeps amid other calciphilic graminoids. It has not previously been considered as part of the state's flora (Cochrane & Naczi 2002; Wunderlin et al. 2021). The species is widespread in eastern North America but has not been known to reach as far south as Florida. This locality represents an extension from closest stations approximately 180 miles northwest in Wilcox Co., Alabama (*Wiersema 1510*, UNA) and 145 miles northeast in Houston Co., Georgia (*Echols 550*, GA).

Voucher specimens. Florida. Gadsden Co.: Town of Chattahoochee, calcareous seepage directly W of a calcareous glade on the E side of Bonnie Hill Road, with *Rhynchospora divergens*, *Rhynchospora colorata*, *Carex gholsonii*, *Rhynchospora globularis*, 30.677343, -84.839445, 26 Apr 2020, *Ward SG 294* (NY); same locality, 25 May 2020, *Ward SG 310* (NY). The identity of these plants as *C. granularis* has been confirmed by Rob Naczi (NY).

Prior to the description of *Carex gholsonii*, the concept of *C. granularis* encompassed plants of the southeastern coastal plain with green foliage, a loosely cespitose form, longer perigynia with straighter beaks, and shorter bract blades (compared to glaucous foliage, densely cespitose, shorter more stout perigynia with outcurved beaks, and longer bract blades, Fig. 1) (Naczi et al. 2002). At the time of the description of *C. gholsonii*, no syntopic occurrences with *C. granularis* were known, but both taxa grow within close proximity and without apparent intergradation in seeps around Chattahoochee. While many specimens in Southeast herbaria are still labeled as *C. granularis*, many appear to be the more recently recognized *C. gholsonii* (e.g., *McDaniel 5928*, GSW). *Carex granularis* is reported for Baldwin and Dale cos., Alabama (*Larsen 1747*, TROY; *Rundell 217*, UWAL; *Pennington 563*, TROY) (Keener et al. 2021), but these specimens appear to be *C. gholsonii* or *Carex venusta*.

Carex granularis in the Chattahoochee area appears to have much larger culms with more glaucous leaves compared to plants identified as such in more northern states (e.g., New York, Fig. 1B). However, the species varies in perigynia shape, texture, and color (Cochrane & Naczi 2002). Plants with more ellipsoid perigynia have been described as *C. shriveri* or *C. haleana* (Cochrane & Naczi 2002), although those from Florida have less ellipsoid perigynia and are more compact and globose (Fig. 1A).

Collections of *Carex granularis* are generally uncommon in Alabama and Georgia and the sedge is listed as rare in North Carolina (S1), South Carolina (S2), and Georgia (S3?) (Nature Serve 2021; K. Bradley, pers. comm.). Overall, *C. granularis* is much less common in the southeastern coastal plain compared to midwestern and northeastern states.

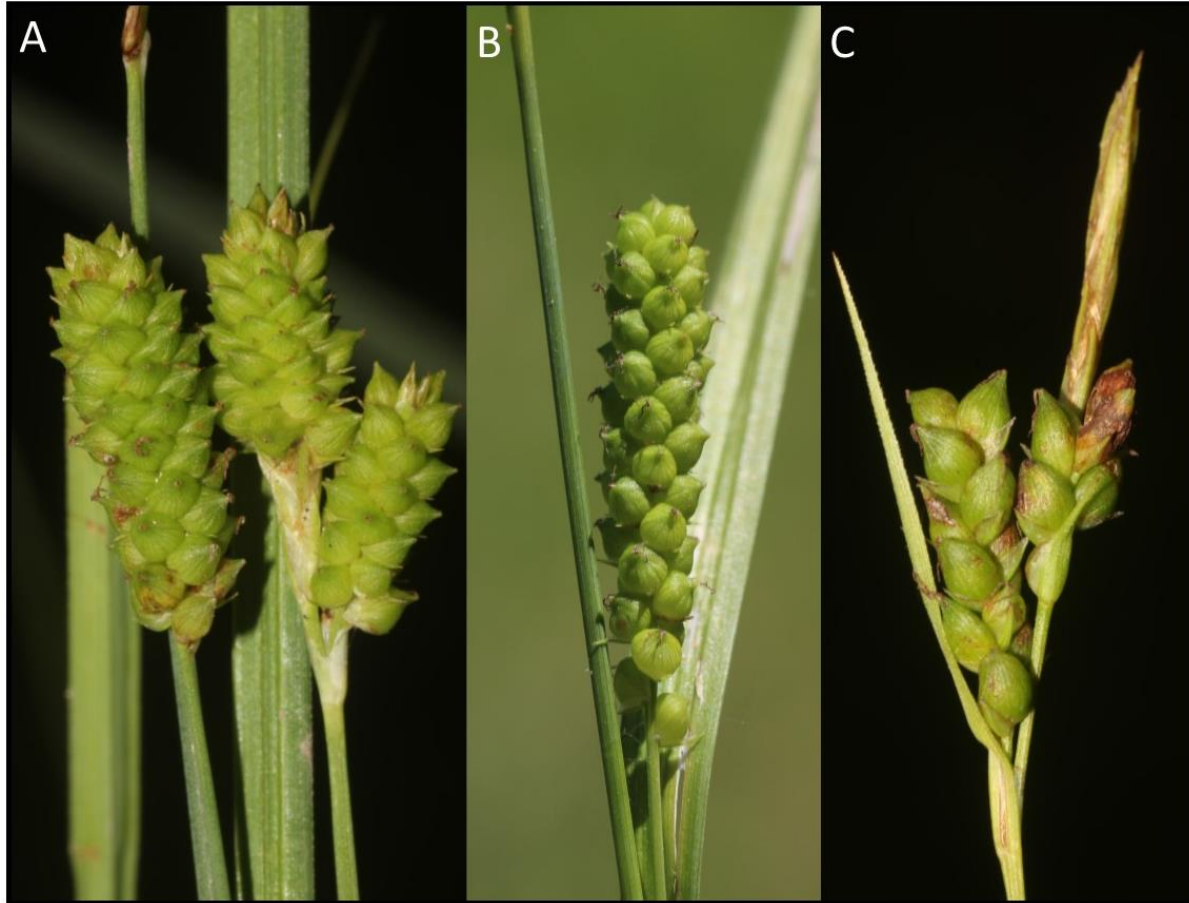


Figure 1. A. *Carex granularis* pistillate spikelets, Gadsden Co., Florida, 30 April 2020. B. *Carex granularis* pistillate spikelet, Monroe Co., New York, 11 June 2018. C. *Carex gholsonii* staminate and pistillate spikelets, Gadsden Co., Florida, 30 April 2020. Photos by Scott G. Ward.

Small remnants of limestone glades occur in Gadsden and Jackson counties in the Florida panhandle, supporting unique plant assemblages with numerous disjunctions or plant species that are otherwise rare in Florida (Johnson et al. 2013). These glades have been the focus of much botanical interest in past years and are still being explored. Numerous collectors have frequented these areas and at least 58 *Carex* taxa have been documented in Gadsden County (Wunderlin et al. 2021), an astounding number considering *Carex* richness drops precipitously in peninsular Florida. Despite calls for conservation of these glade remnants and the encroachment of *Juniperus virginiana* into open glades, multiple remnants are still under threat from development, conversion, or fire suppression.

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