

THE REDISCOVERY OF *RHYNCHOSPORA SOLITARIA* HARPER
(CYPERACEAE) IN GEORGIA

Edwin L. Bridges

Florida Department of Environmental Regulation, 2600 Blair Stone Road,
Tallahassee, Florida 32399 U.S.A.

&

Steve L. Orzell

Florida Natural Areas Inventory, 1018 Thomasville Road, Suite 200-C,
Tallahassee, Florida 32303 U.S.A.

ABSTRACT

Rhynchospora solitaria was previously known only from three Harper collections (in 1900, 1902, and 1953), the two earliest collections from the type locality in south Georgia. It has recently been discovered at a new site in Turner County, Georgia. A key to the species is provided, and collection and habitat data are given, and compared to the existing literature.

KEY WORDS: *Rhynchospora solitaria*, Cyperaceae, Georgia, seepage herb bogs

Rhynchospora solitaria Harper (section *Eurhynchospora*) was first collected by Roland M. Harper (*Harper 668*, Sept. 1900, TYPE: NY; Isotype: GH), in moist pine barrens near Tifton, Berrien County, Georgia (Harper 1901; Gale 1944). This locality is now in Tift County, which was created from Berrien County after 1900. Harper (1901) noted *R. solitaria* to be an inconspicuous plant, growing scattered among grasses with *Burmannia capitata* (Walt.) Mart. and *Sarracenia psittacina* Michx. Among the other species Harper collected at this site on this date was the type specimen of *Baldwinia* (= *Balduina*) *atropurpurea* Harper (Harper 1901). He also collected *Sarracenia flava* L. and *Oxypolis ternata* (Nutt.) Heller from this site. Two years later, he returned to

the type locality at Tifton and made another collection (*Harper 1677*, Sept. 26, 1902 [US,GH]) of *R. solitaria* (Harper 1904). He also notes having seen this sedge in the south Georgia counties of Colquitt and Irwin (Harper 1904, 1967). Both of these counties are adjacent to Tift County. Apparently Harper did not collect voucher specimens from these Georgia counties (Gale 1944). Later, on August 4, 1953, when he revisited the type locality at Tifton, he found the site to be a tangle of kudzu, but he noted having collected *R. solitaria* about five miles southwest of the type locality (apparently in Tift County) on the same day (Harper 1967).

According to the literature, no other collections of *Rhynchospora solitaria* have been made (Gale 1944; Godfrey & Wooten 1979; Kukenthal 1950). The type locality was threatened with destruction as early as 1902 (Harper 1904, p. 15), but since Harper (1904, p. 15) noted having seen this species in additional counties, there existed the possibility that it might be rediscovered from some previously unrecorded location. During a recent trip with Mr. Wilson Baker, the authors discovered *R. solitaria* in Turner County, which lies immediately north of Tift County, in southern Georgia. The collection data are as follows:

Rhynchospora solitaria Harper (Cyperaceae). UNITED STATES.

Georgia: Turner Co.: Hillside seepage bogs above small impoundment on N side of paved county road (S1531; Co. Rd. 249) connecting US 41 and GA 33, ca. 2.5 mi NW of jct. with US 41 at a point ca. 1.0 mi N of center of Ashburn, at head of tributary to West Fork Deep Creek; Ashburn 7.5' Quad.; 31° 43' 54" N, 83° 42' 09" W; Elev. 410-420 ft.; 12 Oct 1991, Orzell, Bridges, & Baker 18383 (GA,MO,NCU,NY,TEX).

Rhynchospora solitaria occurs scattered within the graminoid matrix of lower slope hillside seepage herb bogs or streamhead seepage bogs at the collecting site. These seepage bogs are presently being maintained by periodic prescribed burning of the surrounding gently rolling upland savanna dominated by mature longleaf pine (*Pinus palustris* P. Mill.). We observed *R. solitaria* at two nearby seepage herb bogs but did not locate the plant in other seepage bogs in the vicinity. The solitary slender culms (up to 5-6 dm tall), flat basal leaves, short upper leaves, solitary terminal inflorescence, and narrow spikelets are distinctive features (Harper 1901) of this late autumnal flowering sedge. It appears most closely related to *R. ciliaris* (Michx.) C. Mohr and *R. baldwinii* A. Gray, both of which have stouter culms and broader spikelets. The following key can be substituted at couplets 19 and 20 in the *Rhynchospora* key of Godfrey & Wooten (1979) in order to distinguish *R. solitaria* from similar species:

19. Perianth bristles 12, stout, mostly longer than the achene body.
 *R. baldwinii* A. Gray
19. Perianth bristles 3-6, delicate, mostly shorter than the achene body. 20
20. Leaves with blunt, shortly tapering tips, the largest 2.5-6.0 mm wide and linear-elliptic; inflorescence typically a solitary, terminal, unbranched turbinate fascicle. A
20. Leaves with long tapering tips, generally less than 2 mm wide, long filiform; inflorescence various (solitary, branched, or multiple). .21
- A. Basal leaves 4-6 mm wide, forming a rosette; culms stiffly erect; spikelets elliptic; midribs of the floral scales conspicuously ciliate, not aristate; bristles 6, less than half the length of the achene body.
 *R. ciliaris* (Michx.) C. Mohr
- A. Largest leaves 2.5-3.0 mm wide, widely spaced on a slender delicate culm, not forming a basal rosette; spikelets narrowly lanceolate; midribs of the floral scales smooth, extending into an aristate tip; bristles 3-4, very fragile, at least some equaling or exceeding the achene in length.
 *R. solitaria* Harper

At the time that our collections were made, *Rhynchospora solitaria* was in early flowering and fruiting condition, while many of the other species of *Rhynchospora* in the bog (i.e., *R. macra* [Clarke] Small) were in late fruiting condition, many with shattering spikelets. Associates of *R. solitaria* at the Turner County site include *Aristida virgata* Trin., *Balduina atropurpurea*, *Bigelovia nudata* (Michx.) DC., *Burmanna capitata*, *Coreposis linifolia* Nutt., *Eriocaulon decangulare* L., *Eriocaulon texense* Körn., *Eryngium ludovicianum* Morong (<*Eryngium integrifolium* Walt.), *Juncus trigonocarpus* Steud., *Liatris spicata* (L.) Willd., *Lobelia glandulosa* Walt., *Lophiola aurea* Ker-Gawl., *Marshallia tenuifolia* Raf., *Muhlenbergia expansa* (Poir.) Trin., *Oxypolis filiformis* (Walt.) Britt., *O. ternata*, *Pycnanthemum nudum* Nutt., *Rhexia lutea* Walt., *Rhexia petiolata* Walt., *Rhynchospora chalarocephala* Fern. & Gale, *Rhynchospora macra*, *Rhynchospora oligantha* A. Gray, *Sabatia macrophylla* Hook., *Sarracenia flava*, *Sarracenia minor* Walt., *Sarracenia psittacina*, *Scleria reticularis* Michx., *Tofieldia racemosa* (Walt.) B.S.P., *Xyris baldwiniana* Schultes, *X. drummondii* Malme. Many of these associates (*Balduina atropurpurea*, *Eriocaulon texense*, *Oxypolis ternata*, *Sarracenia flava*, and *Sarracenia psittacina*) are on the Georgia Natural Heritage Program 1990 list of special plants. *Xyris drummondii* is currently a federal category 2 plant under review for possible federal listing (Federal Register 55(35):6184-6229. 1990).

Fire maintained examples of upland longleaf pine savanna and associated seepage herb bogs have become an increasingly rare feature on the Tifton

Upland of southcentral Georgia. We suspect that with additional searches, *Rhynchospora solitaria* may be located at other remaining seepage herb bogs in southern Georgia counties.

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