

RUDBECKIA GRANDIFLORA VAR. GRANDIFLORA (ASTERACEAE)
IN LOUISIANA, U.S.A.

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ABSTRACT

The nominal variety of *Rudbeckia grandiflora* (Asteraceae) is recognized as occurring in Louisiana. A specimen recently collected by the author, plus older herbarium specimens, document this taxon's occurrence in Bossier, Caddo, and Webster parishes. The habitats at the collection sites are discussed briefly and a rarity rank is proposed as the first step in the recognition of this taxon new for Louisiana.

RESUMEN

Se reconoce que la variedad nominal de *Rudbeckia grandiflora* (Asteraceae) está presente en Louisiana. Un espécimen original del autor, mas los especímenes de herbario más antiguos, colocan este taxón en las parroquias de Bossier, Caddo o Webster. Se discute brevemente el hábitat en los sitios de recolección y se describen los primeros pasos en la protección del nuevo taxón para el estado.

KEY WORDS: State record, Louisiana, Coneflower, Bodcau

Rudbeckia grandiflora (D. Don) J.F. Gmel. ex DC. (Asteraceae) is conventionally treated as having two varieties, namely, var. *grandiflora* and var. *alismifolia* (Torr. & A. Gray) Cronquist (Urbatsch & Cox 2006). Previously, the species was thought to be represented in Louisiana only by var. *alismifolia* (Thomas & Allen 1996; USDA, NRCS 2019). Sources suggesting the presence of var. *grandiflora* in the state did not provide herbarium specimens to support their assertions (Cronquist 1980; Gandhi & Thomas 1989).

A specimen of var. *grandiflora* was collected by the author in a forest clearing adjacent a high-quality calcareous prairie in Bodcau Wildlife Management Area, Bossier Parish, in northwestern Louisiana, June 2019. Features that distinguished this variety included hairs present along the entire scape with proximal hairs spreading, and hairs of the stem and the leaf surface ca. 1mm long, compared to hairs shorter than 0.5 mm in var. *alismifolia* (Urbatsch & Cox 2006). This collection prompted a reexamination of the *Rudbeckia grandiflora* specimens from Louisiana. One specimen determined as var. *grandiflora*, proved to represent var. *alismifolia* (Lowell Urbatsch & Jennifer Kluse, pers. comm., August 2019). Among the other 150 herbarium specimens examined (SERNEC Data Portal 2019), six, all from Bossier, Caddo, or Webster parishes in northwestern Louisiana, were identified as var. *grandiflora*.

Brief field surveys were conducted based on the locality data acquired. The taxon was found to be extant at four sites in Louisiana (two new and two historically collected from) as of August 2019. The largest population located was the 2019 collection site at Bodcau WMA. It harbors ~20 individuals. In total, at all sites examined, fewer than 100 individuals were observed at the time of the surveys. The most southern locality in Louisiana represents a 105 km geographic range extension for this taxon. The verified records bring the number of states in which both varieties overlap to five (Urbatsch & Cox 2006). It should be noted that a few populations of var. *alismifolia* were observed in these parishes during the same field season, but none were nearby to the populations of var. *grandiflora*.

The habitats at the collection sites were very similar and often consisted of clearings in pine- or post oak dominated forests. My personal observations for the sampling locations indicate that most of the localities identified are proximal to grassland elements. Soils were primarily mapped as Gore and Forbing complexes with circum-neutral to mildly acid pH (California Soil Resources 2019).

The author alerted the managing parties of Bodcau WMA to the presence of this newly recorded taxon

and subsequently learned that the area containing the largest population known in the state was scheduled for salvage cutting (Randall Bordelon pers. comm., August 2019). The area of known occurrence was then flagged, but the ground disturbance that ensues outside of this flagged zone may destroy individuals which were not located before the cut. The author recommends that the Louisiana Natural Heritage Program track var. *grandiflora* until its range is further understood, and that managers of potential habitat are informed of their inherent roles in its protection. NatureServe (2019) provides a rank of “G5T4?” for the taxon. *Rudbeckia grandiflora* var. *alismifolia* is well-represented throughout Louisiana though it is likely affected by the same threats as var. *grandiflora*. Based upon the presence of active threats, the size of known populations, and apparent fidelity to natural settings I recommend ranks of “S5T1” and “S5T5” for var. *grandiflora* and var. *alismifolia*, respectively. This range extension and habitat description should aid in further work on the taxon within its entire range.

Voucher specimen: **U.S.A. Louisiana. Bossier Parish:** Bodcau WMA, SW of Cotton Valley, 19 Jun 2019, *John Michael Kelley 050* (LSUS).

Additional specimens examined (with known whereabouts): **U.S.A. LOUISIANA. Bossier Parish:** clear-cut pine woods on hill at oil well beside LA-157, 3.5 mi SW of Webster line and Bayou Bodcau in Carterville oil field W of Springhill, 11 Jun 1987, *R. Dale Thomas 100,159* (LSU). **Caddo Parish:** Power line R.O.W in Walter Jacobs Park, 10 Jun 1977, *L.R. Raymond 765* (LSUS). **Webster Parish:** along LA 160 ca. 1 mi W of Cotton Valley, in wet pasture in pine forest, 4 Jul 1979, *C.M. Allen & K. Vincent 8935* (USF).

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