

Mimosa strigillosa (Fabaceae) new to Missouri

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ABSTRACT. — Basic ecological, identification, nativity, and collection information are reported for the first collection of *Mimosa strigillosa* Torr. & A. Gray in Missouri.

INTRODUCTION

Mimosa strigillosa Torr. & A. Gray (Fabaceae), commonly known as powderpuff, herbaceous mimosa, or sunshine mimosa, is a perennial, herbaceous, vining legume nearly endemic to the Gulf Coastal Plain. It occurs from Florida to eastern Texas, north to southern Arkansas, with outlying populations in Tulsa County, Oklahoma, and Pope, Massac, and Alexander counties in southernmost Illinois (Basinger 2003; Kartesz 2015). Typical habitats throughout its range include riverfront forests and disturbed areas (Basinger 2003; Weakley 2015; Claire Ciafré, pers. comm.; pers. obs.).

A population of *M. strigillosa* was recently discovered at Donaldson Point Conservation Area in New Madrid County, Missouri, representing the first report of this species in the state (Figure 1). The population occupied a patch approximately five m² in area, growing along a gravel road in a riverfront forest near the Mississippi River, in sandy soil below a moderately closed canopy. Both flowering and fruiting stems were present on 24 August 2017. Associates included *Ambrosia trifida* L., *Campsis radicans* (L.) Seem. ex Bureau, *Desmanthus illinoensis* (Michx.) MacMill. ex B.L. Rob. & Fernald, *Heliotropium indicum* L., *Leptochloa panicea* (Retz.) Ohwi, *Rubus trivialis* Michx., *Spermacoce glabra* Michx., *Sida spinosa* L., and *Toxicodendron radicans* (L.) Kuntze.

Voucher Specimen: **U.S.A. MISSOURI:** NEW MADRID CO.: Donaldson Point Conservation Area. 6.5 kilometers E-SE of New Madrid. UTM 16 S 0278730 4049529 (-89° 28.3575, 36° 33.9363). 24 August 2017, *Braun 20170824.02* (MO).

Mimosa strigillosa would key imperfectly to *Mimosa* or *Acaciella* in Yatskievych's (2006) treatment of Mimosoideae, depending on the specimen. Flower color, stem armament, and fruit characters would confound the use of the key. Several characteristics distinguish *M. strigillosa* from *M. nuttallii* (DC. ex Britton & Rose) B.L. Turner, the more widespread *Mimosa* in Missouri:

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Stems densely armed; fruits linear, subterete; peduncles erect to spreading.....*M. nuttallii*
Stems unarmed or with a few sparse prickles; fruits oblong-reniform, laterally compressed;
peduncles all erect.....*M. strigillosa*



Figure 1. *Mimosa strigillosa*, New Madrid County, Missouri. **A:** inflorescence; **B:** infructescence; **C:** foliage. All photos by the author.

In addition to the key characters above, *M. nuttallii* occurs in prairies, glades, open woodlands, roadsides, and other dry communities in the Ozark and prairie ecoregions of Missouri, while *M. strigillosa* typically occurs in riverfront forests, lawns, and other disturbed areas of the Mississippi River Alluvial Plain.

DISCUSSION

Basinger (2003) debated whether the Illinois populations were native, but ultimately suggested that the species may be adventive there based on the presence of adventive associated taxa in one population, the distance from the nearest population, and a possible dispersal vector (river barge traffic). Oklahoma's single population is likewise considered adventive in the state (Kartesz 2015). Spread of this species may have increased following the 2006 release of *M. strigillosa* "Crockett Germplasm" in the southern United States by the U.S. Department of Agriculture's Natural Resource Conservation Service for use as forage, landscaping, and lawn replacement (USDA 2012). However, the Illinois collections in Massac and Alexander counties were made in 2000 and 2002, respectively, indicating that these populations had been established before the release of Crockett Germplasm, although it is possible that it could have arrived by other anthropogenic means.

It is likely that the Missouri population, downstream of the Illinois populations, likewise does not represent escaped Crockett Germplasm material. The Missouri population of *M. strigillosa* is associated with mostly native (albeit weedy) flora. Several native coastal plain species occur disjunctly at the northernmost edge of the Mississippi embayment, particularly species associated with upland sand communities. New Madrid county is a reasonable distance (approximately 280 km) from the core range of this species farther south. In the past few decades, a few southern species appear to have expanded their ranges northward. These include *Eupatorium rotundifolium* L., *Eupatorium torreyanum* Short & Peter, and *Tipularia discolor* (Pursh) Nutt. (Justin Thomas, pers. comm.; pers. obs.). It is plausible that this population may also be recently migrated and should be considered a native occurrence. The apparent preference of this species for disturbed areas indicates that *M. strigillosa* should be assigned a low coefficient of conservatism for this region.

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