Missouriensis, **43**: 16-19. 2025.
**pdf effectively published online 27 December 2025 via https://monativeplants.org/missouriensis*

First report of *Solidago delicatula* (thin-leaved goldenrod) in Missouri

ANDREW P. BRAUN[1]

ABSTRACT. — *Solidago delicatula* is reported new to Missouri from Barton County. Taxonomic background and local ecological notes are provided, as well as a discussion of distinctions from the similar *Solidago ulmifolia*.

INTRODUCTION AND DISCUSSION

Recognition of *Solidago delicatula* Small (thin-leaved goldenrod or smooth elm-leaved goldenrod as a distinct species from *S. ulmifolia* Muhl. ex Willd. was recently supported by Beck et al. (2021). *Solidago delicatula* has also been treated as *S. ulmifolia* var. *microphylla* A. Gray, but more recent authors support this taxon at the species level (Semple & Cook 2006). This species generally occupies a region similar in distribution to that described by Küchler (1985) as the Cross Timbers ecoregion, with additional occurrences in the southwest end of the Bluestem prairie/Oak-hickory mosaic and adjacent ecoregions (Kartesz 2015). In their treatment of North American *Solidago*, Semple and Cook (2006) described its habitat as "sandy and alluvial soils, dry open woods, banks of shaded creeks."

This species was predicted as possibly occurring in Missouri given relatively numerous occurrences in Kansas and Oklahoma counties adjacent to Missouri, and by the density of those proximal records (see Braun 2019). In October 2023, I found *S. delicatula* in Prairie State Park, Barton County, Missouri, ca. 1.8 miles east of the Kansas-Missouri border.

> *Voucher specimen*: **U.S.A. MISSOURI**: BARTON CO.: Prairie State Park, "Wild 40" (Sect. 17), prairie/woodland/thicket edge on rocky slope, associated with *Quercus marilandica*, *Rhus copallinum*, *Andropogon gerardii*, *Lonicera japonica*, 5 October 2023, *A.P. Braun 20231005.02, with D.F. Evilsizor & E.S. Bowyer* (MO).

At Prairie State Park this species appears to be most abundant near rocky, sandstone-dominated upland waterways at the prairie-woodland interface. The community appears to be a small, degraded Cross Timbers-like, dry to dry-mesic sandstone woodland, with species and geomorphology similar to the typical communities of those areas. At this site, *Quercus marilandica* and *Andropogon gerardii* are present, but the area is heavily overgrown with ruderal trees (e.g., *Prunus serotina*), clonal shrubs (e.g., *Rhus copallinum*), and exotic vines (e.g., *Lonicera japonica*). Also present nearby are species more indicative of open canopy settings, such as *Eryngium*

[1] ANDREW P. BRAUN — Missouri State Parks, Prairie State Park, 128 NW 150th Lane, Mindenmines, MO 64769. email: andrew.braun@dnr.mo.gov.

yuccifolium and *Gentiana puberulenta*. The flora suggests a degraded dry/dry-mesic prairie/woodland edge community. Recent reintroduction of fire at this site appears to have increased the density of *S. delicatula* stems. At the collection site, 150-200 individuals were observed over an area of 0.5-1 hectares, most of which were in a late-flowering stage, though some plants remained vegetative. The species was later found in other nearby areas under somewhat different associations, but generally in areas with sandstone geology near upland waterways at the prairie-woodland edge. In an adjacent drainage, it was associated with *Quercus prinoides*, which also seems to share an affinity for prairie edges. This site was similarly dominated by ruderal trees, shrubs, and vines.

Solidago delicatula can be distinguished from the superficially similar *S. ulmifolia* by its glabrous or nearly glabrous leaf surfaces (**Figure 1**, adaxially hairy in *S. ulmifolia*) and somewhat less rigid, narrower leaves (**Figure 2.A**), but they share a similar gestalt of a goldenrod with the largest leaves at the base (**Figure 2.B**).

Freeman (2014) assigned a coefficient of conservatism of 4 to *S. delicatula* for Kansas. A similar ranking for Missouri seems appropriate given its apparent ability to persist in degraded remnants locally. Future searches for the species in Missouri should concentrate on dry, acidic (sandstone or possibly chert geologies), oak woodland-prairie edges in the southwestern portion of the state.

Figure 1. Adaxial leaf surface of *Solidago delicatula*, Barton County, Missouri. (*Photo by the author*)

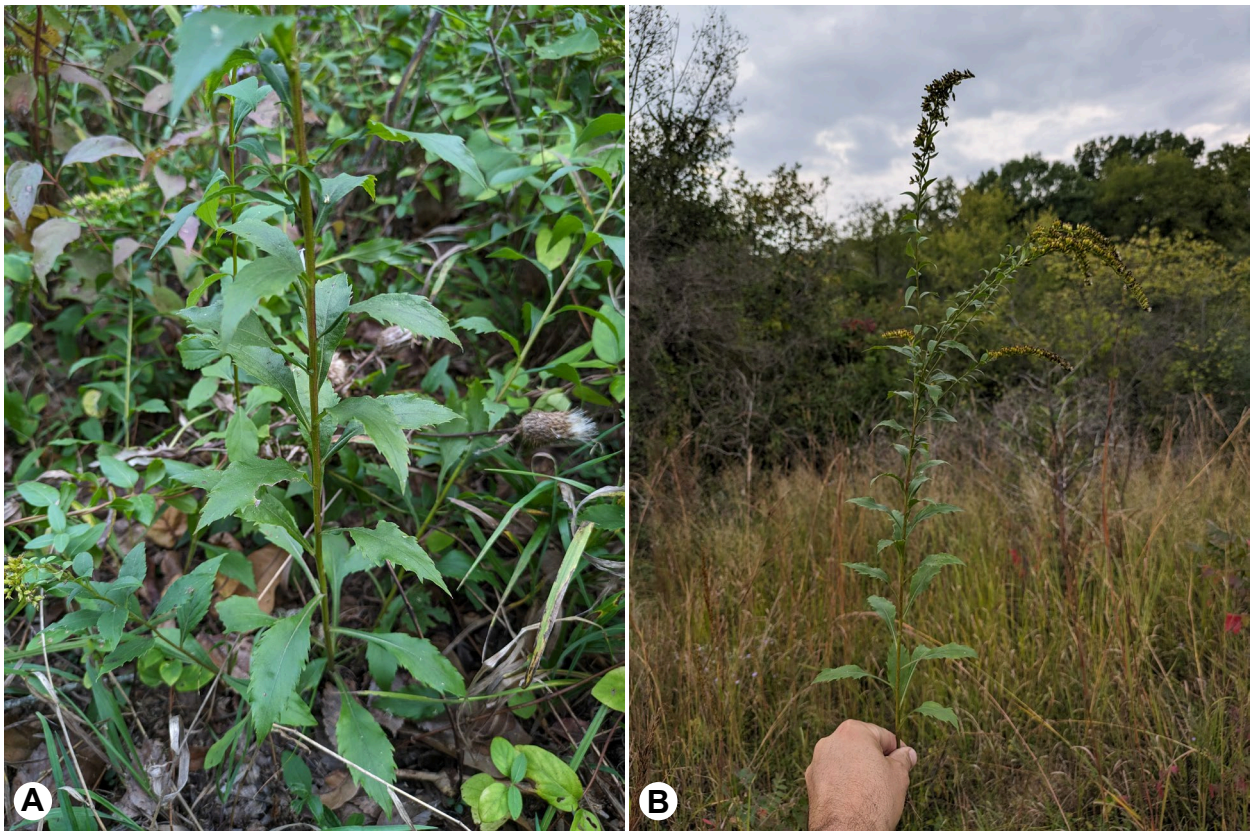

Figure 2. *Solidago delicatula*, Barton County, Missouri. **A.** Mid-stem and basal leaves. **B.** Flowering stem. (*Photos by the author*)

LITERATURE CITED

Beck, J.B., M.L. Markley, M.G. Zielke, J.R. Thomas, H.J. Hale, L.D. Williams, & M.G. Johnson. 2021. Are Palmer's Elm-Leaf Goldenrod and the Smooth Elm-Leaf Goldenrod real? The Angiosperms353 Kit provides within-species signal in *Solidago ulmifolia* s.l. Systematic Botany 46: 1107-1113.

Braun, A.P. 2019. On Our Botanical Radar: Using BONAP Data to Identify Potential State Records. Petal Pusher 34(3):13-14.

Freeman, Craig C. 2014. Coefficients of conservatism for Kansas vascular plants and selected life history attributes. Kansas Biological Survey and R.L. McGregor Herbarium, University of Kansas.

Kartesz, J.T. 2015. The Biota of North America Program (BONAP). North American Plant Atlas. (http://bonap.net/napa). Chapel Hill, NC. [maps generated from Kartesz, J.T. 2015. Floristic Synthesis of North America, Version 1.0. Biota of North America Program (BONAP). (in press)].

Küchler, A.W. 1985. Potential natural vegetation. National atlas of the United States of America, Department of the Interior, U.S. Geological Survey. Reston, VA.

Semple, J.C. & R.E. Cook. 2006. *Solidago.* In: Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico, volume 20, Magnoliophyta: Asteridae, part 7: Asteraceae, part 2 [Online]. Oxford University Press, New York and Oxford. http://beta.floranorthamerica.org/Solidago.