

## **STOKESIA LAEVIS (ASTERACEAE), A NATIVE OF THE TEXAS FLORA**

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### **ABSTRACT**

*Stokesia laevis* is reported as new to the native flora of Texas based on a collection from a baygall forest of northern Jasper County. The population is disjunct there from its nearest known occurrence in western Louisiana. A list of species associated with *Stokesia* and a list of noteworthy species for the area (rare for Texas) are provided.

*Stokesia laevis* (Hill) Greene is not included in the Manual of the Vascular Plants of Texas (Correll & Johnston 1970), Atlas of the Vascular Plants of Texas (Turner et al. 2003), Plants Database (USDA, NRCS 2019), Biota of North America Program (Kartez 2019), or Flora of North America North of Mexico (Strother 2006). We report the species as a member of the native flora, based on the following specimen.

**Voucher.** Texas. Jasper Co.: 0.4 mi ESE of the junction of FS Rd 352 and FS RD 352A on W side of Trout Creek, second west fork S of the head of Trout Creek, baygall and moderately seepy seepage slopes along drainageways between sandhill ridges and on banks of small perennial side stream flowing into the main stem of Trout Creek, Angelina National Forest, 31° 4'40.88" N, 94° 11'44.17" W, 4 Sep 2019, *Singhurst, Philipps, Loos, Keith, & Buckingham 22,272* (BAYLU, TEX). Figures 1-3.



Figure 1. *Stokesia laevis* in Jasper Co., Texas. Photo by Jason Singhurst, 4 September 2019.



Figure 2. *Stokesia laevis* in fruit, Jasper Co. Texas. Photo by Jason Singhurst, 4 September 2019.

*Stokesia laevis* is native to Alabama, Florida, Georgia, Louisiana, Mississippi, and South Carolina of the southeastern USA and is introduced in North Carolina (Kartesz 2019). The Texas location is approximately 80 km (50 miles) from the nearest eastern location in Sabine Par., Louisiana (Kartesz 2019). Throughout its range, the species occurs in pitcher plant bogs, seeps, low pine woodlands, and wet ditches, as well a wider range of soil and moisture conditions.

The species was discovered by Peter Loos on 16 August 2019 during a botanical survey of the Trout Creek watershed in the Angelina National Forest. The plants grow on moderately wet seepage slopes along drainageways between sandhill ridges and on banks of a small perennial side stream that flows into main stem of Trout Creek. They were photographed by Loos on 16 August 2019 and identified by regional botanists as *Stokesia laevis*. The population was surveyed on 4 September 2019. Forty-three plants were observed in an area less than 1000 m<sup>2</sup> — 21 had maturing fruit and 22 were rosettes of varying size.

The location is a baygall (seepage forest) within an intact mature longleaf pine (*Pinus palustris*) upland. Common associated species include *Magnolia virginiana*, *Nyssa biflora*, *Quercus laurifolia*, *Cyrilla racemiflora*, *Rhododendron oblongifolium*, *Viburnum nudum*, *Persea palustris*, *Lyonia ligustrina*, *Myrica heterophylla*, *Vaccinium corymbosum*, *Toxicodendron vernix*, *Osmunda regalis*, *Osmunda cinnamomea*, *Smilax walteri*, *Sphagnum* sp., and numerous sedges (Cyperaceae). A population of the globally rare roughstem coneflower (*Rudbeckia scabrifolia*) was present as well as other characteristic baygall flora, including *Coreopsis tripteris*, *Doellingeria sericocarpoides*, *Eleocharis tuberculosa*, *Eupatorium perfoliatum*, *Oxypolis rigidior*, *Platanthera ciliaris*, and *Woodwardia areolata*.



Figure 3. Baygall forest habitat of *Stokesia laevis* in Jasper Co., Texas. Photo by Jason Singhurst, 4 September 2019.

This region of Texas occurs at the western edge of the Gulf coastal plain and contains a unique assemblage of rich woods, bog, and baygall species considered rare in the state. Noteworthy peripheral species in this region (southern Angelina and Sabine counties and northern Jasper and Newton counties) include *Amelanchier arborea*, *Bartonia paniculata* var. *texana*, *Calycocarpum lyonii*, *Cornus alternifolia*, *Houstonia purpurea*, *Lyonia lucida*, *Magnolia pyramidata*, *Phlox divaricata*, *Platanthera integra*, *Prenanthes barbata*, *P. altissima*, *Rudbeckia laciniata*, *Stewartia malacodendron*, *Trillium ludovicianum*, *Verbesina walteri*, and *Xanthorrhiza simplicissima*, among others. *Stokesia laevis* may be added to the rare plant list.

#### ACKNOWLEDGEMENTS

We are indebted to United States Forest Service for providing access to this population, managing this unique landscape with their prescribed burning program, and the potential opportunity to locate additional *Stokesia laevis* plants in the baygall habitats of the Angelina National Forest. This study and report result from cooperation between federal, state, and local agencies, as cited in the affiliations of the authors.

#### LITERATURE CITED

- Correll, D.S. and M.C. Johnston. 1970. Manual of the Vascular Plants of Texas. Texas Research Foundation, Renner, Texas.
- Kartesz, J.T. 2019. Taxonomic Data Center. The Biota of North America Program (BONAP). Chapel Hill, North Carolina.

- Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. Atlas of the Vascular Plants of Texas. Vol. I, Dicots. Sida, Bot. Misc. 24.
- USDA, NRCS. 2019. The PLANTS Database. National Plant Data Team, Greensboro, North Carolina. <<http://plants.usda.gov>> Accessed 9 Sep 2019.
- Strother, J.L. 2006. *Stokesia*. Page 201, in Flora of North America Editorial Committee (eds.). Flora of North America North of Mexico, Vol. 19. Oxford Univ. Press, New York and Oxford.