

***EPILOBIUM LEPTOPHYLLUM* (ONAGRACEAE) IN THE TEXAS FLORA**

JEFFREY N. MINK

Department of Biology
Baylor University
Waco, TX 76798-7388
Jeffrey_Mink@baylor.edu

JASON R. SINGHURST

Wildlife Diversity Program
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, TX 78704

WALTER C. HOLMES

Department of Biology
Baylor University
Waco, TX 76798-7388

ABSTRACT

Epilobium leptophyllum is reported as new to Texas. This species was collected from Wheeler County, in the southern Great Plains of the Panhandle area of the state. A collection from Lake Meredith National Recreation Area in Potter County also is documented here.

KEY WORDS: *Epilobium*, Onagraceae, Lake Meredith National Recreation Area, Great Plains, Texas

Recent field study conducted in Wheeler County, on the eastern edge of the Texas Panhandle, has resulted in the discovery discussed below. The vegetation of Wheeler County is part of the mixed grass prairie of the Great Plains. In Texas this vegetational region is recognized as the Rolling Plains.

***Epilobium leptophyllum* Raf.** (Onagraceae). Until now, only two species of *Epilobium* were known to occur in Texas: *E. ciliatum* Raf. and *E. coloratum* Biehler. The former occurs in the southern portion of the trans-Pecos region, while the latter is known from the Rolling Plains of the Panhandle (Turner et al. 2003). A third species, *E. leptophyllum* Raf., is documented here.

Voucher specimen: **TEXAS.** Wheeler Co.: Britt Ranch, 2.3 miles N of jct. of Tex. Hwy 152 and FM 592, from entrance of ranch, ca. 5.1 mi. NNE to NW headwaters of Murtaugh Creek, 27 Jul 2010, Holmes, Singhurst, and Mink 15094 (BAYLU). Fig. 1.

Epilobium leptophyllum was discovered in a marshy meadow near the headwater springs of the Northwest Fork of Murtaugh Creek, a broad marshy stream valley that flows south into Sweetwater Creek, a tributary of the North Fork of the Red River. Specimens of *Epilobium leptophyllum* were uncommon and infrequently encountered in immediate proximity to fen margins. The aquatic systems in this area, which flow through hills composed of loose and deep sands, support a wide range of more eastern herbaceous species such as *Eupatorium perfoliatum*, *Euthamia gymnospermoides*, *Carex annectens*, *Carex stricta*, *C. triangularis*, *Apios americana*, and *Agrimonia parviflora*. Other unusual species of the area were *Utricularia macrorhiza*, *Myriophyllum sibiricum*, and *Verbena hastata*. The most abundant herbaceous plants growing in association with *E. leptophyllum* included *Eleocharis rostellata*, *Schoenoplectus pungens*, *Equisetum laevigatum*, and

Typha latifolia. The only woody plant (shrub) of abundance was *Baccharis salicina*, which occurred along the periphery of surface water areas and marsh inclines.

The *Epilobium* plants were erect, 60–90 cm tall; the leaves strigillose-pubescent, 7 cm long, and about 2 mm wide with entire-revolute margins. The flowers were white.

The known occurrence nearest to the Wheeler County record of *Epilobium leptophyllum* is in Roger Mills Co., Oklahoma, which is approximately 24 km to the east (*Freeman 18359 & C.A. Morse*, KANU). An adjacent distributional record northward is at least 176 km in Meade Co., Kansas (*McGregor & Barkley 1977*). This Wheeler County locality is probably the southernmost known for *E. leptophyllum*.

In researching voucher distribution of *Epilobium leptophyllum*, the authors became aware of the existence of a previously unpublished collection in Texas (*Nesom & O'Kennon 2005*), from a locality about 140 km to the west of the Wheeler Co. record, which is documented here.

TEXAS. Potter Co.: Lake Meredith Natl. Recreation Area, Chicken Creek area, vicinity of access road ca. 1 mile westward along creek to confluence with Canadian River; N35° 28' 29", W101° 45' 30", immediate sandy terraces and marshy margins of Chicken Creek and adjacent riparian woods, ca. 3000-3010 ft elev.; *Epilobium leptophyllum* rare, in muck at edge of *Typha* population, 22 Sep 2002, *Nesom & O'Kennon 919* (BRIT).

Texas collections of *Epilobium leptophyllum* represent significant southern distributional extensions for the species. The PLANTS database (USDA, NRCS 2011) lists *E. leptophyllum* for New Mexico, citing *Martin & Hutchins (1981)* and a specimen from NMC, but SEINET (2011) does not include specimen documentation for the species in New Mexico from ENMU, NMC, NMCR, RM, or UNM. *Allred (2009)* appears to interpret the citation of *E. lineare* Muhl. by *Wooton & Standley (1915; Wooton 661* from the White Mountains) as being correctly identified as *E. leptophyllum*. In any case, southern distributional limits for *E. leptophyllum* can be reliably based on the collections from Potter and Wheeler counties, Texas.

ACKNOWLEDGEMENTS

The authors thank Josh Britt, who guided our collecting trip on the Britt Ranch. We are also greatly indebted to Mr. David Britt, owner of the ranch, for permitting access to this wonderful botanical treasure. Craig Freeman of the Herbarium of the University of Kansas (KANU), supplied information about the Oklahoma record of *Epilobium leptophyllum*. Guy Nesom furnished information on the collection from Potter Co., Texas.

LITERATURE CITED

- Allred, K.W. 2009. Flora Neomexicana I: The Vascular Plants of New Mexico. An annotated checklist to the names of vascular plants, with synonymy and bibliography. Published by Lulu.com.
- Martin, W.C. and C.R. Hutchins. 1981. A Flora of New Mexico, Vol. 2. A.R. Gantner Verlag K.G.; Hirschberg, Germany.
- McGregor, R.L. (coord.) and T.M. Barkley (ed.). 1977. Atlas of the Flora of the Great Plains. Iowa State University Press, Ames.
- Nesom, G.L. and R.J. O'Kennon. 2005. Vascular plants of Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument: Potter, Moore, and Hutchinson counties, Texas. Results of a 2002 floristic inventory and related research and reviews. Final report, Jan 2005, to the U.S. National Park Service. <http://science.nature.nps.gov/im/units/sopn/documents/Nesom&OKennon.2004.LAMR-ALFL_VascularPlant.pdf>

- SEINET. 2011. Southwest Environmental Information Network. Managed at Arizona State Univ., Tempe. <<http://swbiodiversity.org/seinet/index.php>>
- Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. Atlas of the Vascular Plants of Texas, Vol. 2. Sida, Bot. Misc. 24. Botanical Research Inst. of Texas, Fort Worth.
- USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, March 2011). National Data Center, Baton Rouge, Louisiana.
- Wooton, E.O., and P.C. Standley. 1915. Flora of New Mexico. Contr. U.S. Natl. Herb. 19: 1–794.



Figure 1. *Epilobium leptophyllum* prior to collection (Holmes, Singhurst, & Mink 15094, BAYLU). Photograph by Jason Singhurst.