### VICIA LATHYROIDES (FABACEAE): NEW TO THE FLORA OF TEXAS

### Sonnia Hill

3612 VZ CR 4915 Ben Wheeler, Texas 75754, U.S.A. sonnia36@hotmail.com

## Jason R. Singhurst

Wildlife Diversity Program Texas Parks and Wildlife Department Austin, Texas 78704 U.S.A. jason.singhurst@tpwd.state.tx.us

# Ruth Loper

13456 CR 2235 Whitehouse, Texas 75759, U.S.A. ronloper@earthlink.net

### Walter C. Holmes

Department of Biology Baylor University Waco, Texas, 76798 U.S.A. walter\_holmes@baylor.edu

### ABSTRACT

Vicia lathyroides is reported for the first time as occurring in Texas. The overall distribution of the species and a comparison with a similar species are also discussed.

### RESUMEN

Se cita como nueva a Texas Vicia lathyroides. La distributión total de la especie y una comparación con una especie semejante son discutidos también.

Vicia lathyroides L. (spring vetch) is not included in the recent references enumerating the vascular flora of Texas (Correll & Johnston 1970; Hatch et al. 1990; Johnston 1990; Jones et al. 1997; Turner et al. 2003). The record cited here constitutes the first reported occurrence of the species in the state and the West Gulf Coastal Plain (The Nature Conservancy 2003).

Voucher specimen: U.S.A. TEXAS. Smith Co.: ca. 4 mi NW of Troup on TX Hwy 110 at jct. with Co. Rd. 2235, ca. 0.7 mi E on Co. Rd. 2235, 29 Mar 2007, Hill & Loper s.n. (BAYLU, BRIT).

The species, which was twining around itself and the plants near it, was discovered growing in a very disturbed sandy meadow. Other species occurring in the area were *Cerastium glomeratum*, *Facelis retusa*, *Geranium carolinianum*, *Plantago virginica*, *Senecio ampullaceus*, *Soliva pterosperma*, *Trifolium campestre*, *T. dubium*, *Veronica arvensis*, *Vicia minutiflora*, and *V. sativa*.

Vicia lathyroides is regarded as a native of Asia Minor, Europe, and northwest Africa (Webb 1980). It has been reported as naturalized in Tasmania (Hnatiuk 1990, a record considered by Buchanan (2005) to be in error), Japan (Katsuyama et al. 2001), New Zealand (Webb 1980), and the United States (Hermann 1960; Isley 1990; USDA, NRCS 2007). It is widely established in the United States where it grows in sandy grasslands, old fields, and sand dunes in Alabama, California, Georgia, Massachusetts, Mississippi, North Carolina, South Carolina, Virginia, and Washington (USDA NRCS 2007). The spread of this species appears related to its usefulness for fodder, forage, soil enrichment and stabilization, and cover, particularly in drier and relatively non-fertile sandy places. Curiously, the species has experienced a decrease in numbers in the more northern parts of its region of origin, apparently from pressure on the sites for other uses (Wolf-Murphy 2005-2006). Its survival in Northern Ireland is threatened (Wolf-Murphy 2005-2006). It is also cited in the "Red Data Books" in various northern European countries, e.g., Great Britain (Cheffings & Farrell 2005) and Estonia (Lilleleht 2001–2002).

The following comments and measurements are from Isely (1990), who considers this inconspicuous vetch to be similar to the common *Vicia sativa* L. (also an introduced species) but in miniature form. Both have sessile solitary or paired light violet flowers clustered in the upper leaf axils. *Vicia lathyroides* may be distinguished by its mostly solitary but occasionally paired flowers with corollas 5–6 mm long, leaves with

J. Bot. Res. Inst. Texas 1(2): 1253 - 1254. 2007

4-6(-8) leaflets, and unbranched (simple) tendrils. *Vicia sativa* has mostly paired flowers with corollas 10-25(-30) mm long, leaves with mostly (6-)8-14 leaflets, and simple to branched tendrils.

This is the third species of *Vicia* to be reported as adventive in Texas within the past eight years. Neill (1999) reported the occurrence of *V. lutea* in Madison Co., while *V. grandiflora* was reported in Fannin Co. by Singhurst et al. (2002). Jones et al. (1997) cited 12 species and subspecies of the genus in Texas, a total that does not include the three species reported as new since 1999. Only six of the now known 15 species or subspecies are native to the state.

### **ACKNOWLEDGMENTS**

We are grateful to Tom Wendt of the University of Texas Plant Resources Center (TEX-LL) for his assistance and access to the herbarium. Gina Gollub, a herbarium worker at BAYLU, helped with preparation of the manuscript. Amanda Neill and an anonymous reviewer are thanked for their constructive reviews.

### REFERENCES

- Buchanan, A.M. 2005. A census of the vascular plants of Tasmania 4<sup>th</sup> ed. Tasmania Herb. Occas. Pub. 7, Tasmanian Museum and Art Gallery, Hobart.
- CHEFFINGS, C.M. and L. FARRELL (eds.). 2005. Species status No. 7. The vascular plant red data list for Great Britain. http://www.jncc.gov.uk.
- CORRELL, D.S. and M.C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner.
- Hatch, S. L., K. N. Ghandi, and L.E. Brown. 1990. Checklist of the vascular plants of Texas. Texas Agric. Exp. Sta. Publ. MP-1655. Texas A&M University, College Station.
- HERMANN, F. J. 1960. Vetches of the United States—native, naturalized, and cultivated. Agriculture Handbook 168, U.S.D.A. Washington, DC.
- Ниатіик, R.J. 1990. Census of the Australian vascular plants, Bureau of the Flora and Fauna, Canberra.
- ISLEY, D. 1990. Vascular flora of southeastern United States. vol. 3, pt. 2. Leguminosae (Fabaceae). University of North Carolina Press, Chapel Hill.
- JOHNSTON, M.C. 1990. The vascular plants of Texas: a list, up-dating the manual of the vascular plants of Texas. Published by the author, Austin.
- Jones, S.D., J.K. WIPFF, and P.M. Montgomery. 1997. Vascular plants of Texas: a comprehensive checklist including synonymy, bibliography, and index. University of Texas Press, Austin.
- Katsuyama, T.A., A. Sasaki, and M. Igart. 2001. *Vicia lathyroides* L. (Leguminosae), naturalized in Japan. J. Jap. Bot. 76:173–174.
- LILLELEHT, V. 2001–2002. Red data book of Estonia. Comision [sic] for Nature Conservation of the Estonia Academy of Science. http://zbi.ee/punane/English/index.html.
- Neill, A.K. 1999. Vicia lutea (Fabaceae) new to Texas. Sida 18:1265–1266.
- SINGHURST, J.R., M. WHITE, and W.C. HOLMES. 2002. Noteworthy collections: Texas. Three species new for Texas. Castanea 67:213–216.
- The Nature Conservancy. 2003. The west Gulf coastal plain ecoregional conservation plan. West Gulf Coastal Plain Ecoregional Planning Team, San Antonio, Texas.
- Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. Atlas of the vascular plants of Texas. Vol. 1. Sida Bot. Misc. 24. Botanical Research Institute of Texas. Fort Worth.
- USDA, NRCS. 2007. The PLANTS database, National Plant Data Center, Baton Rouge, LA. http://plants.usda. gov/plants.
- Webb, C.J. 1980. Checklist of dicotyledons naturalized in New Zealand 5. Leguminosae. New Zealand J. Bot. 18:463–472.
- Wolf-Murphy, S. 2005–2006. Priority species in northern Ireland. http://www.habitas.org.UK/priority/splist.asp.