RANUNCULUS PARVIFLORUS (RANUNCULACEAE) NATURALIZED IN KANSAS

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ABSTRACT

Ranunculus parviflorus is documented here in the naturalized flora of southeast Kansas, where it was collected at two locations in the town of Neodesha.

Ranunculus parviflorus L. (Ranunculaceae) (smallflower buttercup) (Figure 1) is a herbaceous annual native to Europe (Salisbury 1931; Fernald 1950; Fitzgerald 2002). The species is naturalized in subtropical and temperate areas of North and South America (Benson 1948; Hernandez 1993) and Australia and New Zealand (Bock 1979).

Ranunculus parviflorus is now found from California north through Oregon and Washington (to British Columbia) and in the eastern USA from western Florida north to New York, west through the Midwest to central Missouri, south through eastern Oklahoma and eastern Texas, east to Florida, including Hawaii (Brouillet et al. 2006; Hickman 1993; Lowe 1921; Mohr 1901; Stone et al. 1992; Wunderlin et al. 1996). Early collections in the USA were made by Chickering at Ft. Monroe, Virginia, in 1878 (KANU) and Curtiss in Gadsden Co., Florida, in 1889 (USFH 6400) (Wunderlin et al. 2018).

Ranunculus parviflorus has not been included in floras or checklists for Kansas (Brooks 1986; Haddock et al. 2015; McGregor et al. 1986; Kartez 2015; USDA, NRCS 2018). This report is the first documentation of the species in the state.

Vouchers. USA. Kansas. Wilson Co.: Neodesha, jct. of Elm Street and N 5th Street, in frequently mowed right of way, 26 May 2017, *Singhurst 21,182* (BAYLU, KANU); Neodesha, jct. of E Spruce Street and N 12th Street, 0.1 mi N of on N 12th St and E 0.1 mi, in frequently maintained lawn and grassland, 28 May 2017, *Singhurst 21,183* (BAYLU, KANU).

Populations of Ranunculus parviflorus at both locations were growing with Carex sp., Cynodon dactylon, Duchesnea indica, Geranium pusillum, Lamium purpureum, Lotus corniculatus, Medicago minima, Nothoscordum bivalve, Schedonorus arundinaceus, Sherardia arvensis, Trifolium repens, and Viola missouriensis. The first vegetative observation of these two Ranunculus parviflorus populations occurred in March of 2016 and March of 2017 and it was not until May 2017 when flowering and fruiting specimens were obtained. The Kansas location is approximately 100 km (65

miles) from a southwestern Missouri location in Jasper Co., Missouri and 90 km (60 miles) from the nearest location in northwest Oklahoma location in Rogers Co. (both locations are based on distributions in Kartesz 2018).



Figure 1. Ranunculus parviflorus in flower and fruit, Wilson Co., Kansas.

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LITERATURE CITED

Benson L. 1948. A treatise on the North American Ranunculi. Amer. Midl. Nat. 40: 1-261.

Bock C. 1979. Ranunculus parviflorus L. dans le bois de Beynes (Yvelines). Cahiers des Naturalistes, n.s. 34: 79–81.

Brooks, R.E. 1986. Vascular Plants of Kansas: A Checklist. Kansas Biological Survey, Lawrence.

Brouillet, L., F. Coursol, and M. Favreau. 2006. VASCAN, the Database of Vascular Plants of Canada. Herbier Marie-Victorin, Institut de recherche en biologie végétale, Univ. de Montréal.

Degener, O. 1946. Flora Hawaiiensis: New Illustrated Flora of the Hawaiian Islands. Published privately, Honolulu.

Fernald, M.L. 1950. Gray's Manual of Botany, 8th ed. American Book Company, New York.

Fitzgerald, R.A. 2002. Ranunculus parviflorus, small-flowered buttercup. In C.D. Preston et al., New Atlas of the British & Irish flora. Oxford Univ. Press, Oxford.

- Haddock, M.J, C.C. Freeman, and J.E. Bare. 2015. Kansas Wildflowers and Weeds. Univ. of Kansas Press, Lawrence.
- 1993. Ranunculus parviflorus L. (Ranunculaceae), especie adventicia en la Hernandez, H. Argentina. Lilloa 38: 117–119.
- Hickman, J.C. (ed.). 1993. Jepson Manual: Higher Plants of California. University California Press, Berkelev.
- Kartez, J.T. 2015. Taxonomic Data Center. (http://www.bonap.net/tdc). Chapel Hill, North Carolina [maps generated from J.T. Kartez, Floristic Synthesis of North America, Version 1.0. Biota of North American Program (BONAP)]. Accessed 23 March 2018.
- Lowe, E.N. 1921. Plants of Mississippi. Mississippi State Geological Surv. Bull. No. 17.
- McGregor, R.L., T.M. Barkley, R.E. Brooks, and E.K. Schofield. 1986. Flora of the Great Plains. Univ. Press of Kansas, Lawrence.
- Mohr, C. 1901. Plant Life of Alabama. Contr. U.S. Natl. Herb., Vol 6.
- Salisbury E.J. 1931. On the morphology and ecology of Ranunculus parviflorus L. Ann. Bot. 45: 539-578.
- Stone, C.P., C.W. Smith, and J.T. Tunison. 1992. Alien plant invasions in native ecosystems of Hawaii: management and research. Papers from a symposium organized by the National Park Service and the Cooperative National Resources Unit at the Univ. of Hawaii. Univ. of Hawai'i Cooperative National Park Resources Studies Unit, Honolulu.
- USDA, NRCS. 2018. The PLANTS Database (http://plants.usda.gov), National Plant Data Team, Greensboro, North Carolina. Accessed 15 February 2018.
- Wunderlin, R.P., B.F. Hansen, and E.L. Bridges. 1996. Atlas of Florida Vascular Plants: CD-ROM. Univ. of South Florida, Tampa.
- Wunderlin, R.P., B.F. Hansen, A.R. Franck, and F.B. Essig. 2018. Atlas of Florida Plants (http://florida.plantatlas.usf.edu/). [S.M. Landry and K.N. Campbell (application development), USF Water Institute.] Institute for Systematic Botany, Univ. of South Florida, Tampa.