

ROMULEA ROSEA (IRIDACEAE) NEW FOR THE ARKANSAS FLORA

BRETT E. SERVISS

Department of Biological Sciences
Box H-7570
Henderson State University
Arkadelphia, Arkansas 71999
servisb@hsu.edu

TRICIA K. SERVISS

Arkadelphia, Arkansas 71999

JONATHAN W. HARDAGE

Bismarck, Arkansas 71929
jh201098@reddies.hsu.edu

ABSTRACT

Romulea rosea (L.) Ecklon is reported here for the first occurrence outside of cultivation in Arkansas and in the eastern USA. In 2009, a small population of naturalized *R. rosea* plants was discovered growing in a lawn in the city of Arkadelphia, Clark County. This population slowly has increased in size over the past decade but has not spread beyond the immediate site of discovery. Photographs of *R. rosea* in habitat and keys to identification of the similar genera of Iridaceae currently known from the Arkansas flora are provided.

In 2009, a small, naturalized population of *Romulea rosea* (L.) Ecklon (rosy sandcrocus, onion grass) was discovered in Clark Co., Arkansas (Figs. 1–2). This genus and species previously have not been documented in the Arkansas flora outside of cultivation (Smith 1994; Arkansas Vascular Flora Committee 2006; Gentry et al. 2013). The plants initially were discovered growing in an unkempt lawn in a residential area in the city of Arkadelphia. The population has persisted and slowly increased in size since 2009, consisting of six plants as of 2020. To our knowledge, the population has not spread beyond the initial area of discovery. No cultivated plants of *R. rosea* were present in the vicinity of the population. Although the origin of the population is unknown, establishment is presumed to be via seeds or corms that were introduced to the site via contaminated soil or horticultural materials. Increases in the number of individuals appears to be via seeds, as most of the plants in the population are spaced too widely for production vegetatively from offsets. The population will continue to be monitored.

Voucher specimen. Arkansas. Clark Co.: Arkadelphia, N of O’Connell St. and 19th St. intersection, small, naturalized population of about six plants of unknown origin growing in unkempt lawn area of residence, not cultivated or persisting from cultivation, 23 Mar 2020, *Serviss 8721* (HEND).

Romulea rosea is a cormose perennial that is native to South Africa (de Vos 1983; Manning & Goldblatt 2001; Goldblatt 2002). It sometimes is cultivated in the USA as an ornamental for its small but showy, pink flowers (Bailey & Bailey 1976). It previously has been documented in the USA only from California, where it is naturalized in several counties, and Texas (Goldblatt 2002; Singhurst et al. 2009; Kartesz 2015; USDA, NRCS 2020), making our record apparently the first documented occurrence of this genus and species outside of cultivation in the eastern USA. The plants naturalized in North America correspond to *R. rosea* var. *australis* (Ewart) M.P. de Vos, which has become a common weed of lawns, pathways, and roadsides in Australia (Goldblatt 2002).



Figure 1. *Romulea rosea* naturalized in Clark Co., Arkansas. The naturalized population consists of about six plants and is present in a residential lawn in Arkadelphia — three flowering plants can be seen in the photograph.



Figure 2. (A–D) *Romulea rosea* plant and habit (from naturalized plants in Clark County). (A) Close-up of flower; notice the yellow throat, indicating that it is *R. rosea* var. *australis*. (B) Close-up of leaves; notice the two grooves on either side of the large midvein — this character and the plant's small size help to distinguish it from other Iridaceae species in Arkansas. (C) Side view of flower and scape — the flowering scape and leaves originate below ground from a small corm. (D) Lower stem, corm, and roots.

In Arkansas, *Romulea rosea* possibly could be confused with *Crocus* (if plants are sterile), which only recently has been documented from the state's flora (Serviss et al. 2016). *Romulea* can be reliably distinguished from *Crocus* using the following key (modified from Sell & Murrell 1996).

1. Leaves flat, channeled, and with a white line on the adaxial surface; flowers yellow to orange **Crocus flavus**
 1. Leaves subterete, with 4 grooves (2 on each surface, 1 on either side of the midrib), without white line; flowers pink to magenta with yellow throat **Romulea rosea**

ACKNOWLEDGEMENTS

We are grateful to Ms. Kristen Benjamin, Henderson State University, and James Peck for their helpful editorial suggestions regarding this paper. We also thank the Henderson State University Department of Biological Sciences and the Ellis College of Arts and Sciences for supporting this work.

LITERATURE CITED

- Arkansas Vascular Flora Committee. 2006. Checklist of the Vascular Plants of Arkansas. Arkansas Vascular Flora Committee, Fayetteville.
- Bailey, L.H. and E.Z. Bailey. 1976. Hortus Third. A Concise Dictionary of Plants Cultivated in the United States and Canada. Vol. 2. MacMillan.
- de Vos, M.P. 1983. *Romulea*: Pp. 10–73, in O. Leistner. (ed.). Flora of Southern Africa, Vol. 7. Botanical Research Institute, Pretoria.
- Gentry, J.L., G.P. Johnson, B.T. Baker, C.T. Witsell, and J.D. Ogle. 2013. Atlas of the Vascular Plants of Arkansas. Vascular Flora Project, Univ. of Arkansas, Fayetteville.
- Goldblatt, P. 2002. *Romulea*. P. 407, in Flora of North America Editorial Committee (eds.). Flora of North America North of Mexico, Vol. 26. Oxford Univ. Press, New York and London.
- Kartesz, J.T. 2015. Taxonomic Data Center. The Biota of North America Program (BONAP). Chapel Hill, North Carolina. <<http://www.bonap.org/index.html>> Accessed March 2020.
- Manning, J.C. and P. Goldblatt. 2001. A synoptic review of *Romulea* (Iridaceae: Crocoideae) in sub-Saharan Africa, the Arabian Peninsula and Socotra including new species, biological notes, and a new infrageneric classification. *Adansonia*, sér. 3, 23: 59–108.
- Sell, P.D. and G. Murrell. 1996. Flora of Great Britain and Ireland. Vol. 5 (Butomaceae through Orchidaceae). Cambridge Univ. Press, Cambridge.
- Serviss, B.E., J.H. Peck, and K.R. Benjamin. 2016. *Crocus flavus*: A new genus and species of non-native Iridaceae for the Arkansas (U.S.A.) flora. *J. Bot. Res. Inst. Texas* 10: 571–574.
- Singhurst, J.R., K.M. Fleming, R. Loper, V. Privett, and W.C. Holmes. 2009. *Romulea rosea* (Iridaceae): Adventive in Texas. *Phytologia* 91: 73–75.
- Smith, E.B. 1994. Keys to the Flora of Arkansas. Univ. of Arkansas Press, Fayetteville.
- USDA, NRCS. 2020. The PLANTS Database. National Plant Data Team, Greensboro, North Carolina. <<http://plants.usda.gov/java/>> Accessed March 2020.