



Sphaeralcea bonariensis (Malvaceae): A newly recorded introduced species in the flora of the United Arab Emirates

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Abstract

This article reports the presence of the alien species *Sphaeralcea bonariensis* (Cav.) Griseb. for the first time in the United Arab Emirates (UAE). Voucher specimens are deposited in the Herbarium of the Royal Botanical Gardens, Kew and in the herbarium of the Sharjah Seed Bank and Herbarium (SSBH) laboratory, UAE. This report emphasizes the importance of monitoring and regular reporting of emerging threats of introduced species, to avoid any possible negative impacts on native biodiversity in the future. The Arabian Gulf flora, including that of the UAE, has yet to be comprehensively investigated, and the chance of introductions of exotic plants is high, due to the large proportion of agricultural materials being imported from other countries.

Key words: Arabian Peninsula, Deserts, *Sphaeralcea bonariensis*, United Arab Emirates

Alien invasive species are considered a major threat to global biodiversity, due to the potential for modifying ecosystem process and function (Vitousek *t.* 1997). At present, the number of introduced species is growing globally as a result of increased trade and travel. Accidental introductions are the main source of invasive plants across the globe, and it is perceived that the tendency for introduction of such species into the native flora becomes more prominent with globalization and expansion of trade relations. Some proportion of such species may become invasive within a novel ecosystem (Cronk & Fuller 2014). It is therefore essential to understand the mechanisms through which they might pose major threats to native biodiversity. Monitoring of introduced species is crucial to understanding their dynamics in new habitats, and to decision making for their control (Pyšek and Richardson 2010).

During the April 2012 floral surveys of SSBH in the Dhaid area of Sharjah Emirate, UAE, *Sphaeralcea bonariensis* (Cav.) Griseb. was recorded for the first time in this country. *S. bonariensis* (family: Malvaceae) is a perennial species native to South America. The species is reported from Bolivia, Paraguay, Uruguay and northern and central Argentina (<http://florabonaerense.blogspot.ae>). Comparisons of the morphological characteristics with similar species in the UAE and other floras indicated that this species is a new record for the flora of the UAE. Plant identification was also made by taxonomists at the Royal Botanic Gardens (RBG), Kew. Literature review revealed that this species was hitherto not reported from the UAE (Jongbloed 2003; Karim and Fawzy 2007). Hence, we are reporting *S. bonariensis* here as an addition to the Malvaceae of UAE. Voucher specimens are deposited in the RBG Kew, and the Sharjah Seed Bank & Herbarium (SSBH), Sharjah, UAE.

During repeated field surveys, only a single individual of *S. bonariensis* was recorded from a locality beside Dhaid Road (N: 25.01112 and E: 55.88496, Alt.: 185 m a.s.l.). The plant was recorded along this road and boundaries of farms, which seems to be the typical habitat of this species as reported in South America (Ghersa *et al.* 2002). The recorded plant was about 1.2 m tall (Figure 1). It carried a large number of flowers and flowering buds. The flower colour is salmon-pink or pink-orange (Figure 2). Other plant species associated with *S. bonariensis* include *Zaleya pentandra*, *Portulaca oleracea*, *Setaria verticillata* and *Cenchrus ciliaris* (*Pennisetum ciliare*).

It is believed that the introduction of *S. bonariensis* to the UAE was accidental, and may have been introduced via imported agricultural products from South American or southern African countries where this species already occurs. Despite our extensive literature review, the route of entry for *S. bonariensis* into the UAE is currently unclear. As trade