

# New records of two species of Caryophyllaceae in the flora of the United Arab Emirates

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*Silene arabica* and *Vaccaria hispanica* of the family Caryophyllaceae are reported for the first time from the United Arab Emirates. The two species have been found growing on sandy soils in different parts of the country. *Silene arabica* was found in Dubai and Ra's al-Khaimah, while *Vaccaria hispanica*, the only species in its genus, was recorded in Ajman.

Caryophyllaceae, commonly known as the pink or carnation family, is a taxon of flowering plants that has about 89 genera and 3,000 species found worldwide, mainly in the temperate regions of the northern hemisphere. With around 700 species (Melzheimer, 1988), *Silene* is the largest genus of the family, which is most diverse in the Mediterranean region and the Middle East (Greuter, 1995). *Vaccaria* is a monotypic genus of Caryophyllaceae, comprised of the single species *V. hispanica*.

27 species representing 16 genera of the family have been recorded in different parts of the UAE

(Western, 1993; Jongbloed, 2003; Karim and Fawzi, 2007), the majority having been recorded in the northern regions of the country. Of the 27 reported Caryophyllaceae species in the country, five belong to the genus *Silene*.

The two previously-unrecorded species from the family Caryophyllaceae, *Silene arabica* and *Vaccaria hispanica*, were documented by the authors during various surveys, with data on the plant populations and habitats based on field observations in the field. Identification and verification was undertaken through consultation of different pertinent floras (Chaudhary, 1999; Chaudhary, 2001; Daoud, 1985; Omar, 2000). Study of the relevant literature (Western, 1993; Jongbloed, 2003; Karim and Fawzi, 2007; Feulner, 2011) indicated that these two species of Caryophyllaceae have not previously been reported from the UAE.



Fig. 1. *Silene arabica* plant in its natural habitat, February 2014 (Ra's al-Khaimah). In the UAE it flowers during February-April (Picture by M. Shahid).



Fig. 2. *Silene arabica* flower (Picture by M. Shahid).



Fig. 3. *Vaccaria hispanica* plant growing in sand, February 2014 (Ajman). It flowers in the UAE between February and April (Picture by M. Shahid).





Fig. 4. *Vaccaria hispanica* flower (Picture by M. Shahid).

## Results

*Silene arabica* Boiss., Fl. Orient. 1: 593. 1867 (Figs. 1 & 2)

Synonyms: *S. affinis* Boiss., Diagn. Ser. 2, 1: 72. 1853; non Godr. Mem. Acad. Montp. 1: 417. 1853

*Silene arabica* was found in two different areas in the UAE. In Ra's al-Khaimah, three plants along a roadside (25°37' 839 N, 055°49' 162 E) were recorded, while a single plant was observed in Dubai (25°08' 055 N, 055°22' 747 E) growing under a *Prosopis cineraria* tree. Both of the areas where the species was noted had sandy soils.

The natural range of the species is considered to be West and South Asia where it is found in Sinai (Egypt), Israel, Jordan, Iraq, Iran, Afghanistan and Pakistan (Melzheimer, 1988;). In the Arabian Peninsula, it has been reported in Kuwait, Saudi Arabia and Qatar (Daoud, 1985; Chaudhary, 1999; Norton *et al.*, 2009). The UAE is, therefore, the fourth country of the Peninsula where it has been found. Five different species of the genus *Silene* have previously been reported from the UAE, *S. arabica* therefore becoming the sixth.

*Vaccaria hispanica* (Miller) Rauschert, Feddes Rept. 73: 52. 1966 (Figs. 3 & 4)

Synonyms: *Saponaria hispanica* Miller, 1768, Gard. Dict. ed. 8, Saponaria no. 4 (in errata), 1768; *S. vaccaria* Linnaeus, 1753; *Vaccaria pyramidata* Medikus, 1789; *Saponaria oxydonta* Boiss., 1867

*Vaccaria hispanica* is found in parts of Africa, Asia and Europe. In the Arabian Peninsula, it has been reported in Saudi Arabia (Chaudhary, 2001), Kuwait (Omar, 2000), Qatar (Norton *et al.*, 2009) and Yemen (Wood, 1997). A single plant of the species was recorded by the authors growing on sand along a roadside in the emirate of Ajman (25°23' 853 N, 055°34' 162434 E), a first record for the country.

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