

ON THE OCCURRENCE OF *CAPELLA RUBELLA* REUTER (FAMILY BRASSICACEAE) IN THE MALTESE ISLANDS**Darrin T. Stevens**¹**ABSTRACT**

The occurrence of *Capsella rubella* in the Maltese Islands is confirmed for the first time, following doubtful records made more than 70 years ago.

On the 26th January 2001, at Gnien il-Mistrieh (also known as the 'Garden of Repose') in the limits of Floriana, a single plant of the Pink Shepherd's Purse, *Capsella rubella* Reuter [Fam. Brassicaceae, (= Cruciferae)] was observed growing out of the slabs present along the path of the said garden. Upon closer examination, a small population of about 20-30 plantlets of *Capsella rubella* was observed in the adjacent open spaces beneath planted Aleppo Pine trees (*Pinus halepensis* Miller) and close to a planted ornamental *Centaurea* cf. *ragusina*, with reduced competition from other species due to regular clearing of weeds and pine needles in the area.

Capsella rubella is an annual ruderal crucifer, known from Southern Europe and reported from other parts of the Mediterranean region (including North Africa and the Middle East), and naturalised in Central Europe (Greuter *et al.*, 1986; Pignatti, 1982; Polunin, 1969; Tutin *et al.*, 1993). Nevertheless, its exact distribution is not well-known and many records are considered as doubtful (Greuter *et al.*, 1986), probably due to confusion with the related synanthropic and cosmopolitan Common Shepherd's Purse, *Capsella bursa-pastoris* (L.) Medicus (Maltese: *Gargir il-Gemel*), a frequent ruderal species in the Maltese Islands, which *C. rubella* often replaces in arid and exposed localities in the Mediterranean region (Pignatti, 1982).

C. rubella is differentiated from *C. bursa-pastoris*, mostly from its floral characteristics, in that the sepals do not or scarcely exceed the petals, and its fruit, the silicule, whose lateral margins are neither straight nor convex as in *C. bursa-pastoris*, but concave. The samples observed had whitish flowers and silicules with concave lateral margins. The latter are not typical of the species in question, since *Capsella rubella* tends to have purple or reddish-tinged flowers, at least on the margins, although whitish flowers are a known feature within this species (Zángheri, 1976).

The species was considered of doubtful occurrence in the Maltese Islands, since its first and only record from was that of Borg, who described it as "*Capsella bursa-*

pastoris L. var. *rubella* Rent." (sic!), without mentioning any localities and simply stating that it was "frequent with the type, in exposed and arid localities" (Borg, 1927). G. Lanfranco (1969) and Haslam *et al.* (1977) essentially repeat these observations, in the process updating the scientific name to *Capsella rubella*. Haslam *et al.* (1977) proceed further by reporting its distribution range as "Malta, Gozo and Comino" – this distribution range is most probably derived from a misinterpretation of the argument made earlier by Borg (1927), who cites *C. rubella* (for which he gives no localities) as growing with *C. bursa-pastoris* (for which he includes Malta, Gozo, Comino and Cominotto).

Although *Capsella rubella* was reported as frequent from the three main islands of the archipelago, repeated searches made by many subsequent students of the Maltese flora failed to identify any individuals of this species. Moreover, Gulia (1874) does not include *C. rubella* in his work on Maltese Brassicaceae, and similarly, Sommier & Caruana Gatto (1915) fail to mention this taxon in their work on the Maltese flora, neither as a species *per se*, nor as a variant or subspecies of *C. bursa-pastoris*, anomalous omissions if it was as frequent as stated by Borg (1927).

In this respect, since no individuals of *C. rubella* were encountered in the Maltese Islands and no herbarium material possibly attributable to this species has been found in the Argotti Herbarium (E. Lanfranco, pers. comm., 1997), the records by Borg have been considered unsubstantiated, or possible misidentifications for smaller *C. bursa-pastoris* in arid and exposed localities. For this reason, the species was not included as possibly extinct or indeterminate in Lanfranco (1989).

Considering that the taxon is apparently widespread in the Central Mediterranean region, in which it has been confirmed for the neighbouring islands of Sicily and Lampedusa (Bartolo *et al.*, 1988; Pignatti, 1982; Tutin *et al.*, 1993) and Tunisia ("*répandu dans toute la Tunisie*", Pottier-Alapetite, 1979: 222), the absence of *Capsella*

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rubella from the Maltese Islands has often been considered as an anomalous feature.

However, the population observed at Gnien il-Mistrieħ appears very localised in distribution, and other searches in the surrounding grounds have not yielded other specimens of this taxon. This would suggest a relatively recent introduction. Nonetheless, one cannot exclude *a priori* that the species is restricted to an area with regular clearing of vegetation due to its possibly less competitive abilities with respect to the more competitive weeds found in uncleared ground of the area (mainly *Diplotaxis* spp., *Raphanus raphanistrum* s.str., *Capsella bursa-pastoris* and other Brassicaceae; *Mercurialis annua*; *Foeniculum vulgare*; and various Poaceae).

Whilst the species is considered a weed in most of its range, *C. rubella* is currently to be considered as extremely rare and vulnerable, with a restricted distribution in the Maltese Islands. Nonetheless, its occurrence in other areas of the

Maltese Islands cannot be excluded, also considering its ruderal nature and the ease of introduction of seeds from nearby Mediterranean localities.

C. rubella material from Gnien il-Mistrieħ is deposited in the private herbarium of Edwin Lanfranco.

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