

REDISCOVERY OF *LOTUS HALOPHILUS* BOISSIER ET SPRUNER (FABACEAE) FROM THE ISLAND OF COMINO (MALTA, CENTRAL MEDITERRANEAN)Edwin Lanfranco¹ and Darrin T. Stevens²**ABSTRACT**

Surveys were recently carried out at selected sites in the Maltese Islands in order to rediscover the presumably extinct *Lotus halophilus*. The rediscovery of this species is reported, reconfirming the presence of this taxon in the Maltese Islands after more than 70 years.

INTRODUCTION

Lotus halophilus Boissier et Spruner (= *Lotus pusillus* Viviani non Medicus), the Sand Restharrow, is native to the central and eastern Mediterranean (Greuter *et al.*, 1989) and is generally restricted to coastal areas, particularly to sand dunes. It has been historically reported from various parts of Malta, Gozo and Comino, namely from the *Marfa* peninsula and *Mellieha* in northern Malta (Sommier & Caruana Gatto, 1915; Borg, 1927); *Qbajjar* (Borg, 1927), *San Blas* (Borg, 1927) and *ir-Ramla l-Hamra* (Duthie, 1874; Gulia, 1875; Sommier & Caruana Gatto, 1915; Borg, 1927) from northern Gozo; and from *il-Qala ta' Santa Marija* (Borg, 1927) and other, often unspecified, sites in Comino ("on sandy ground by the sea" - Duthie, 1874; "verso il centro dell'isola" - Sommier & Caruana Gatto, 1915; and "on the rocky hills around it [referring to *il-Qala ta' Santa Marija*] and along the valley" - Borg, 1927).

However, these records have remained unsubstantiated for over 70 years, and the species was considered as either possibly extinct or a misidentification for *Lotus cytisoides* L., which is known from the same localities. For this reason, the species was not included in Lanfranco (1989).

The authors undertook different surveys in most of the areas where this species has been historically recorded, and a few individuals of this species were

rediscovered by one of the authors (DTS) in February 1998 on sandy soil adjacent to the extant sand dunes of *il-Qala ta' Santa Marija* in Comino. The species was however identified with certainty only in April 1998, when the plants were observed in flower and fruit by both authors.

The species was accompanied by *Lotus cytisoides* L., *Pancreatium maritimum* L., *Euphorbia pinea* L. and *Plantago crypsoides* Boissier. Other species in the vicinity included *Cakile maritima* Scopoli [including subsp. *integrifolia* (Hornemann) N. Hylander ex Greuter & Burdet], *Echium arenarium* Gussone, *Inula crithmoides* L., *Polycarpon diphylum* Cavanilles and *Tamarix africana* Poir. Parts of a fruiting individual were collected in April 1998 and are deposited in the private herbarium of one of the authors (EL).

Surveys carried out by the authors in the remaining sand dunes of the Maltese Islands where this species had been reported have yielded negative results. In fact, the extant relict sand dune ecosystems of the *Marfa* peninsula (namely *ir-Ramla ta' l-Armier* and *ir-Ramla tat-Torri*), *Mellieha* (referring to *Ghadira*), *ir-Ramla tal-Mixquqa* and *ir-Ramla l-Hamra* are all heavily degraded (Anderson & Schembri, 1989), and many species confined to these areas are either possibly extinct [e.g. *Ammophila littoralis* (Beauvois) Rothmaler, *Otanthus maritimus* (L.) Hoffmannsegg & Link and *Valerianella microcarpa*

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Loiseleur] or on the verge of extinction [e.g. *Calystegia soldanella* (L.) Roemer & Schultes, *Ononis variegata* L. and *Pseudorlaya pumila* (L.) Grande]. Surveys at *il-Qbajjar* have also yielded negative results, possibly because the coastal area is now heavily exploited for recreational purposes, and has been greatly modified since the records of Borg (1927).

Past records also mention *Lotus halophilus* as a host to the endemic Maltese Sand Broomrape, *Orobanche densiflora* Salzmann forma *melitensis* Beck (Sommier & Caruana Gatto, 1915; Borg, 1927; Haslam *et al.*, 1977). Nevertheless, the authors have not observed this broomrape species in Comino, and have never observed it parasitising *L. halophilus*. However it has always been found parasitising *Lotus cytisoides* (Lanfranco, 1989), and is still frequent at *ir-Ramla tat-Torri* and the nearby *Ahrax* garrigue.

Despite previous records, which gave it as present in most sand dune ecosystems, and report it as "*abbondante verso il centro dell'isola*" [referring to Comino] (Sommier & Caruana Gatto, 1915), it seems that currently *L. halophilus* has a very restricted distribution in the Maltese Islands, and is possibly confined to this very small area of Comino, which covers less than 5m² in extent. The species is hence critically endangered on a national scale since,

in addition to the plant's rarity, the site is a popular beach with considerable visitor pressure; moreover, the site is also in close vicinity to an official camping area.

The area where this species has been rediscovered is legally protected by Government Notice 401 of 1996, as provided by the Development Planning Act (Act I of 1992).

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