

THE ALCALA 'SILENE' IN THE GIBRALTAR BOTANIC GARDENS

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RESUMEN

Silene gazulensis es el nombre propuesto para una nueva especie del género descubierta en los últimos años en Alcalá de los Gazules. Se pensó que esta planta era *Silene tomentosa*, endémica de Gibraltar, que se creyó extinguida hasta ser descubierta de nuevo en 1994, o bien, *Silene andryalifolia*, especie relativamente común en el litoral mediterráneo español. Tras los trabajos conjuntos de Gibraltar y la Universidad de San Pablo de Madrid parece ser una nueva especie. Mientras que en Madrid se hizo un análisis genético de la planta, en el Jardín Botánico de Gibraltar se analizó el desarrollo y la morfología de plantas crecidas de semillas recogidas en Alcalá. Esta comunicación describe por primera vez las plantas de esta especie que han sido cultivadas en el Jardín Botánico de Gibraltar. Se describen las diferencias entre estos especímenes y las plantas de *Silene tomentosa*. Este trabajo complementa aquellos otros que establecen a *Silene gazulensis* como un nuevo endemismo del Campo de Gibraltar.

INTRODUCTION

At the same time that it was assumed that *Silene tomentosa* OTTH had become extinct in its type locality of Gibraltar (Cortes & Linares 1993), plants claimed to be of this species were found in la Pena Arpada, Alcalá de los Gazules, Cadiz Spain (Galan de Mera 1993). This led to considerable controversy (e.g. García Murillo 1993) as to the identity of the Alcalá plant.

Work was subsequently carried out at the Universidad San Pablo CEU (genetic studies) and at the Gibraltar Botanic Gardens (propagation) which seems to have established a difference between the species (Galan de Mera *et al.* in prep/).

The proposed formal description of the Alcalá plant will appear elsewhere. This paper does not propose to establish the status of this plant, merely sets out to give a botanical description of the individual plants which have flowered in the Gibraltar Botanic Gardens in 1998 and 1999 from seed collected at Pena Arpada and sown in 1996.



Figure 1. Similar aged plants of the Alcala *Silene* (Left) and *Silene tomentosa* (right)

DESCRIPTION

Silene sp. is a woody-based perennial, branching from the base.

Stems are erect or ascending, ranging from 7 to 16 cm long, with an average of around 15 cm.; densely tomentose, with multicellular non-glandular hairs which reach up to 0.5 (- 0.6)mm. on the lower parts. Peduncles coated with a sticky substance, and appear to be less hairy than the stems or calices.

Leaves opposite, fairly thick and stiff, densely tomentose, giving the plant a greyish-green appearance. Hairs multicellular, up to 0.4 mm. long, but longer around the nodes, where some are branched. Margins entire, sometimes slightly undulated. The lower leaves spatulate, elliptical, mucronate, from 4 to 8 cm. long ; maximum width ranges from around 8 mm to 19 mm.

Bracts linear-lanceolate, up to 3.4 cm. long, longer than the peduncles. Bracteoles 3 to 4 (-5) mm. long, longer than the pedicels.

Flowers from 1.2 to 2.0 cm. across, in a dense or lax thyrs (a branched panicle, the individual branches of which are dichasia). The panicles consist of three branched levels below a solitary central top flower; each branch ending in one central flower and two lateral ones. Petals white; claw exerted, from 13 to 15 mm. long, widest near the top; limb narrowly obovate, from 3 to 5 mm wide, 6 to 9 mm. long, bifid to half way, without coronal scales. Calyx from 1.4 to 2.0 cm. long, umbilicate at the base, cylindrical, becoming club-shaped in fruit; densely covered with glandular and non-glandular multicellular hairs; with ten green veins; calyx teeth five, obtuse, 1.4 to 2 mm. long, with wide scarious margins which are finely ciliate, tips



Figure 2. Flowers of the Alcala *Silene* grown from seed at the Gibraltar Botanic Gardens.



Figure 3. Flowers of *Silene tomentosa* grown from seed at the Gibraltar Botanic Gardens.

Comunicaciones

of teeth sometimes violet. Stamens ten, hairless, exserted; anthers pale yellow, about 2 mm long. Pedicels of the central flowers 2 to 6 mm. long, those of the lateral flowers generally shorter from 0.5 to 1 mm. long; densely pubescent.

Capsule about 1 cm. long and up to 0.5 cm. wide, ovoid, yellowish, opening by 5 or 6 teeth. Carpophore 4 to 9 mm. long, pubescent. Styles three, about 1.2 cm. long.

Seeds reniform, tuberculed, brown to greyish-brown, 1.0 to 1.2 mm long and 0.8 to 1.0 mm. wide; faces concave; back wide, flat or concave.

This species flowers from April to May.

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