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## *Centranthus macrosiphon* (Valerianaceae) naturalized in Greece

### Abstract

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New finds of *Centranthus macrosiphon*, naturalized on the island of Salamis, are reported. Notes on older collections and remarks on the ecology, distribution and spread are presented.

### Introduction

There are two annual species of *Centranthus* included in *C.* sect. *Calcitrapa* Lange. One of them is *C. calcitrapae* (L.) Dufr. with a wide Mediterranean distribution extending to Portugal, the Azores and, the Canary Islands. The second *C. macrosiphon* Boiss. is a native of Spain, Morocco and Algeria (Richardson 1975). It has further been reported as an adventive plant in Italy (Pizzolongo 1959, Richardson 1975, 1976, Pignatti 1982), where it is naturalized in a few localities near Napoli, and in Egypt (Pizzolongo 1959).

In Greece, *Centranthus calcitrapae* is a rather common native species known from many localities, whereas *C. macrosiphon* is a rare adventive plant, known up to date from a few localities only.

### History

Heldreich was apparently the first to have collected *Centranthus macrosiphon* in Greece. He first met this plant in 1875 in Attiki close to the place called "Heptalophos". An undetermined specimen belonging to this species is kept in ATHU, labelled as follows: "Flora Attica: pr. Heptalophos, Legit Th. de Heldreich, d. 3 Mai 1875".

"Heptalophos" was not easy to locate. Fortunately Heldreich, on the label of a *Linaria parviflora* specimen kept in ATHU, gave some more information: "in collibus ad Pyrgos Heptalophos". In Greek, "pyrgos" means "tower". On this basis, we may assume that Heptalophos was located in the surroundings of Athens, close to Nea Liosia, at the place now called "Pyrgos Vasilissis" (tower of the queen). There, in Heldreich's time, the royal family owned an estate with some buildings.

Many years later, in 1964, Greuter collected *Centranthus macrosiphon* on the island of Kithira, in Chora and Mirtolangadi. Greuter & Rechinger (1967) state that the plant was beginning to become naturalized.

Finally, Richardson (1975), in his revision of the genus *Centranthus*, states that *C. macrosiphon* is naturalized on the island of Chios; he does not however cite any relevant specimen or bibliographic reference.



Fig.1. Distribution of *Centranthus macrosiphon* in Greece. Open cycle refers to bibliographic evidence without precise locality.

## Distribution and variation

In May 1989 we first found *Centranthus macrosiphon*, growing in the cemetery of the town of Salamis. A specimen was collected, and a few visits were made later to observe its spreading potential. Next year, the population had indeed increased and in 1991 many individuals were observed, growing scattered throughout most of the southwestern part of the cemetery. In search of further localities, we found three more populations of *C. macrosiphon* on Salamis in Paloukia, Ambelakia and Selinia, always close to settlements. This supports the assumption that the taxon on Salamis is currently in the process of becoming naturalized. *C. macrosiphon* may thus be considered, in Greece, as a locally naturalized endoneophyte, in the sense of Yannitsaros & Economidou (1974). The total known distribution of *C. macrosiphon* in Greece is shown in Fig. 1.

*Centranthus macrosiphon* can be easily distinguished from *C. calcitrapae* by its much longer flowers, measuring up to 8-9 mm in length instead of c. 2 mm. *C. macrosiphon* is morphologically uniform in all specimens examined, except for its overall size that ranges from 8 cm to 45 cm or more, being affected by different edaphic factors and humidity.

All examined specimens have glabrous cypselas and can therefore be referred to *C. macrosiphon* var. *macrosiphon* (Fanlo 1986).

## Ecology and population dynamics

The four known populations of *Centranthus macrosiphon* on Salamis vary in size, consisting of 5 to more than 50 individuals. Further populations may exist. The plants grow among gravel, at the base of walls, on roadsides and in fellow fields.

All populations must have originated from garden escapes. However, nowhere was *Centranthus macrosiphon* found growing in gardens, flower-beds or flower pots close to its wild populations, which points at their probable origin from older introductions.

One population, observed for three years, was clearly increasing, but could not colonize areas occupied by more aggressive weeds or ruderals, such as *Setaria adhaerens* (Forssk.) Chiov. and *Ecballium elaterium* (L.) A. Rich. This rather weak competitive ability, as compared to other weeds and ruderals, obviously constitutes the main factor that prevents a rapid spread of *Centranthus macrosiphon*.

*Specimens examined*: — Greece, Nomos Attikis: pr. Heptalophos, 3.5.1875, *de Heldreich* (ATHU). — Nomos Pireos, Isl. Salamis: town of Salamis, SW part of the cemetery, among gravel and near the base of walls, 13.5.1989, *Constantinidis 148* (Herb. Constantinidis); ibidem, 26.5.1991, *Constantinidis 1871* (Herb. Constantinidis, ATHU, UPA); Paloukia, along roadsides, 28.5.1991, *Constantinidis 1872* (Herb. Constantinidis); Ambelakia, among gravel, 28.5.1991, *Constantinidis obs.*; Selinia, abandoned fields, 28.4.1991, *Vallianatou 4307* (Herb. Vallianatou, ATHU).

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