Allium calamarophilon - the rediscovery of a 'ghost' species

Apostolis Kaltsis, NKUA Seed Bank

When working intensively in the field, sometimes great findings await. That is the case with *Allium calamarophilon*, a particularly rare endemic species of Evia Island, which was located by the researchers of "Conserving the Flora of the Balkans: Native Plants of Greece" Project during field work. How rare this species is? One can tell by the fact that no sightings by botanists had been recorded for 42 years, that is, since its discovery and description! Moreover, no pictures of this plant in its habitat had been taken or published, as at the time when the new species was discovered, the plant specimens were in fruiting stage (there is only one photo depicting a flowering individual cultivated from a collected bulb). Even in the "Top 50 plants of the Mediterranean islands" edition (2005 & 2017), which includes *Allium calamarophilon*, no data regarding the population and conservation status are presented (thus its designation as DD, data deficient).

It is not strange that so little was known until now about *Allium calamarophilon*. It was discovered in the summer of 1980 by Dimitrios Phitos, Professor Emeritus of Botany in the University of Patras, on the rocky coast of a remote cove NE of the town of Kymi, Evia Isl. He visited the area by a small boat, along with other fishermen fishing squids and collected some fruiting individuals of this wild garlic growing on vertical maritime cliffs[1]. Moreover, the description of the original location, 'locus classicus', in the published article was quite vague and no further details on the exact locations were made available through the years.

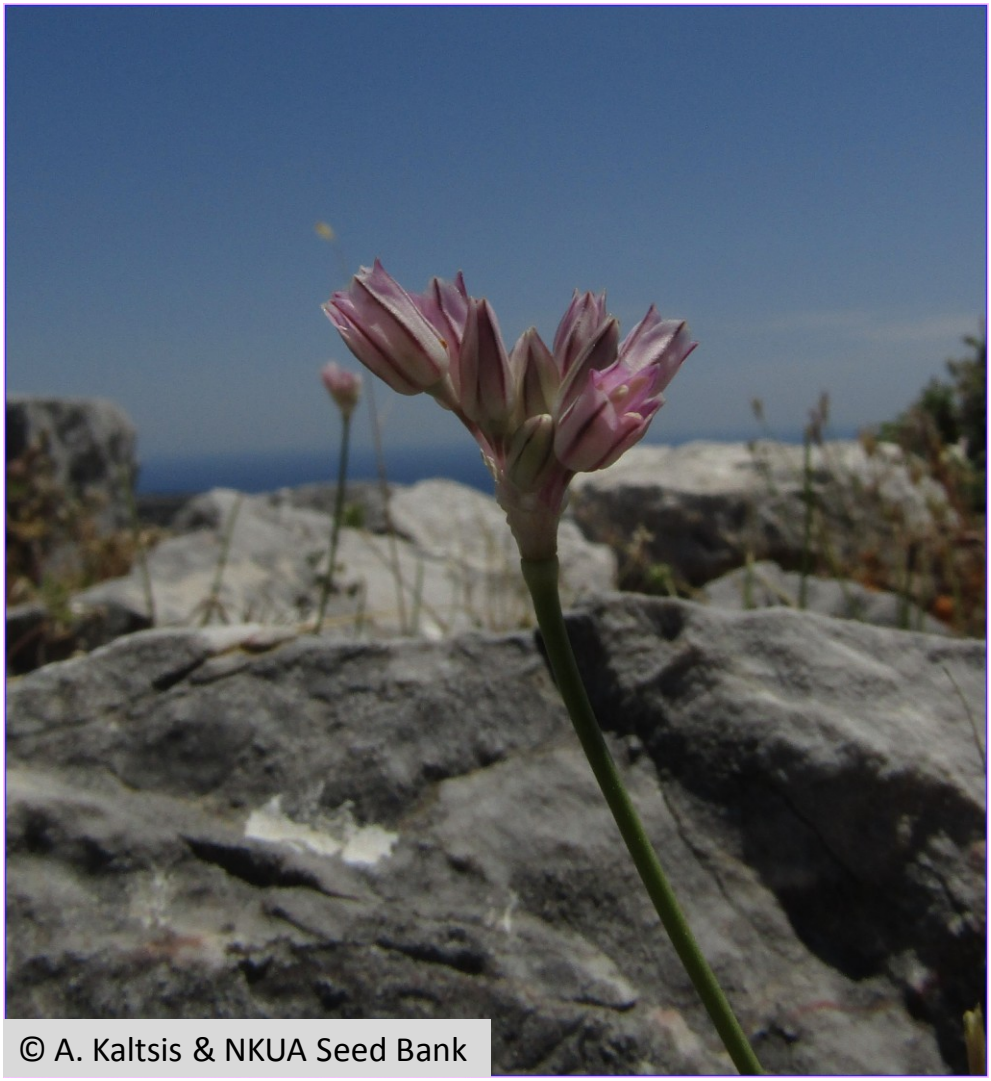
Thus, the plant was considered a 'lost species' (sensu IUCN 2023) until a researcher of our team, Apostolis Kaltsis, who was conducting field work in central Evia in June 2022, in the wider area of Kymi town, with the aim to locate populations of some of the project's target-species, did notice some low wild garlics sprouting from rock margins. As he had been familiar with the picture of this plant, since he had been part of a field mission to locate this species back in 2007 (obviously with no success), he almost immediately realized that these plants resembled a lot to the individual depicted in the single *Allium calamarophilon* picture published till then. Being quite confident about his findings, Apostolis took several pictures of the plants and conducted quick research on the area, on the top of a low rocky hill, to make an estimate of the local subpopulation size. Living specimens of the species were removed from the field and were handed to the project's taxonomist, Ms Katerina Goula. No later than a couple of days after, Katerina confirmed that the plant specimens belong to the mysterious *Allium calamarophilon*!

The new occurrence contributed significantly to what it was known for this rare species: June – and not July – is the main flowering period, the occurrence altitude reaches 350

[1] The name of the species, 'calamarophilon', means actually 'fond of squids', as the cove where it was discovered is well-known for the large concentrations of flying squids (*Todarodes sagittatus*) meeting there to reproduce during summer nights.

m, its habitat is not exclusively maritime rocks but also open rocky sites and rock crevices inland. The exact location of 'locus classicus' was not verified when *A. calamarophilon* was spotted at the new site; however, in close distance (less than 800 m away), the coast of a cove fitted perfectly to the description of 'locus classicus': indeed, after contacting Prof. Phitos, it was confirmed that this coast is the 'locus classicus' of the species! And it is true that this site is almost inaccessible by land, as the ravine ending to this cove is very steep and inaccessible by the land.

Our team revisited the new occurrence site in late July 2022 to collect seeds from the species, but seed dispersal had already taken place. Consequently, we repeated field visits in 2023, the first one taking place in mid-June, during full flowering, in order to assess the population size in the area: we estimated a total number of 1000-1200 individuals. We visited the area again, just 4 weeks afterwards and the population was found in full fruiting stage, therefore a notable seed lot of ca. 1500 seeds was collected, currently stored in the NKUA Seed Bank.



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