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## New finding of *Phitosia crocifolia* (*Compositae*) in E Peloponnisos

### Abstract

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*Phitosia crocifolia* (Boiss. & Heldr.) Kamari & Greuter (= *Crepis crocifolia*) is a monotypic endemic genus of the Greek flora, known, so far, to occur only on the Taigetos range in S Peloponnisos, Greece. Recently, it was also discovered on the main summit area (Megali Tourla or Kronion) of Mt. Parnonas, E Peloponnisos. It occurs on limestone, stony and rocky open places, at about 1810-1870 m altitude. The taxon has been listed in the recent Greek Red Data Book as Endangered. *Phitosia crocifolia*, under the name *Crepis crocifolia*, is legally protected by several directives for the nature.

*Key words*: *Phitosia*, *Crepis crocifolia*, plant distribution, Red list, Greece.

### Introduction

*Phitosia crocifolia* (Boiss. & Heldr.) Kamari & Greuter has been included erroneously by several authors (see Babcock 1947 and Kamari 1991, 1995 for previous references) under the genus *Crepis* as *C. crocifolia* Boiss. & Heldr., until 2001. Under the same name, it was also included in the first Red Data Book of the Greek flora (Phitos & al. 1995) as an Endangered species. *Phitosia crocifolia* is listed in the latest Red Data Book (Phitos & al. 2009) also as Endangered, according to IUCN (2001) criteria [B1a,b(iii,iv,v)+2a,b(iii,iv,v)], because of its limited distribution and division into few, small subpopulations, restricted, so far, on Mt. Taigetos in S Peloponnisos (Greece). Additionally, it is being strongly grazed by sheep and goats.

*Phitosia crocifolia* is protected, under the name *Crepis crocifolia*, by the Bern convention, the Directive 92/43/EEC, where it is listed in Annex II (Natura Code: 1786) and by the Greek Presidential decree 67/81. However, it still remains an Endangered taxon.

So far, the geographical distribution of *Phitosia crocifolia* covers only the Taigetos range from Mt. Xerovouna in the north towards the summit area of Mt. Profitis Ilias and Mt. Mavrovouna to the south, at 1600-2130 m alt. Recently, *Phitosia* was also found by Ch. Kyriakopoulos (Kamari & al. 2009) in the small, but very interesting, Rindomou gorge of Mt. Taigetos, at 1350 m alt. It always grows always on limestone substrate, on dry rocky places, in cliffs and crevices, where it coexists with some other important endemic

species, e.g. *Aethionema carlsbergii* Strid & Papan., *Campanula papillosa* Halácsy, *Jurinea taygetea* Halácsy, *Minuartia juniperina* subsp. *glandulifera* (Halácsy) Kamari, *Scabiosa taygetea* Boiss. & Heldr. subsp. *taygetea*, *Scutellaria rupestris* Boiss. & Heldr. subsp. *rupestris*, *Silene taygetea* Halácsy ex Vierh., etc.

## Results and Discussion

*Phitosia crocifolia* (Boiss. & Heldr.) Kamari & Greuter in Bot. Chron. 13: 14 (2000).

### Investigated specimens

*Phitosia crocifolia* was, so far, known to be restricted only on the Taigetos range. However, the third author, G. Kofinas, discovered it also on Mt. Parnonas, at the summit area named Megali Tourla or Kronion. Despite the fact that the area has been repeatedly visited in the past by many Botanists (professionals and amateurs alike), the taxon had never been encountered until now! G. Kofinas, an amateur naturalist, recognised (28.8.2010) that some plants from Mt. Parnonas resembled *Phitosia*, based on the photographic material he saw in the latest Red Data Book (Phitos & al. 2009). He sent photos of the habitat (Fig. 1) and of the plants (Fig. 3) to the first author and to E. Kalpoutzakis for identification. G. Kofinas visited again the area again with Ch. Kyriakopoulos and others on 17.9.2010, in order to collect living material and herbar-specimens for better confirmation.

About 150 individuals (ca. 90 mature) were counted, located in three small places on the summit area of Mt. Parnonas, with N to NW exposure. The total distribution area is ca.  $100 \times 200 = 20.000 \text{ m}^2$ .

### Collected specimens

Greece, Peloponnisos (Pe), Nomos Arkadias/Lakonias, Prov. Kynourias: "in the main summit area of Mt. Parnonas, named Megali Tourla or Kronio, on limestone substrate, on rocky open places, alt. 1810-1870 m, 37° 16' 45.57" N, 22° 36' 41.40" E, 17 Sep 2010, Ch. Kyriakopoulos, G. Kofinas, A. Papagianopoulou & A. Adamopoulos sub Kyriakopoulos Pn 301, (UPA).

## Habitat of the new occurrence

*Phitosia crocifolia* grows on Taigetos range (see Kamari & Greuter 2000 and Kamari & al. 2009) and on the conical summit area of Mt. Parnonas (Fig. 2). Especially on Mt. Parnonas, *P. crocifolia* occurs on stony and rocky open places or in stabilized screes, where it coexists with the local endemic species, *Asperula malevonensis* Ehrend. & Schonb.-Temesy, *Astragalus agraniotii* Orph. ex Boiss., *Viola parnonia* Kit Tan, Sfikas & Vold and with the endemic species to both Taigetos and Parnonas Mts, *Achillea taygetea* Boiss. & Heldr., *Asperula boryana* (Walp.) Ehrend., *Asperula mungieri* Boiss. & Heldr., *Crepis heldreichiana* (O. Kuntze) Greuter and *Sideritis cladestina* (Bory & Chaub.) Hayek subsp.

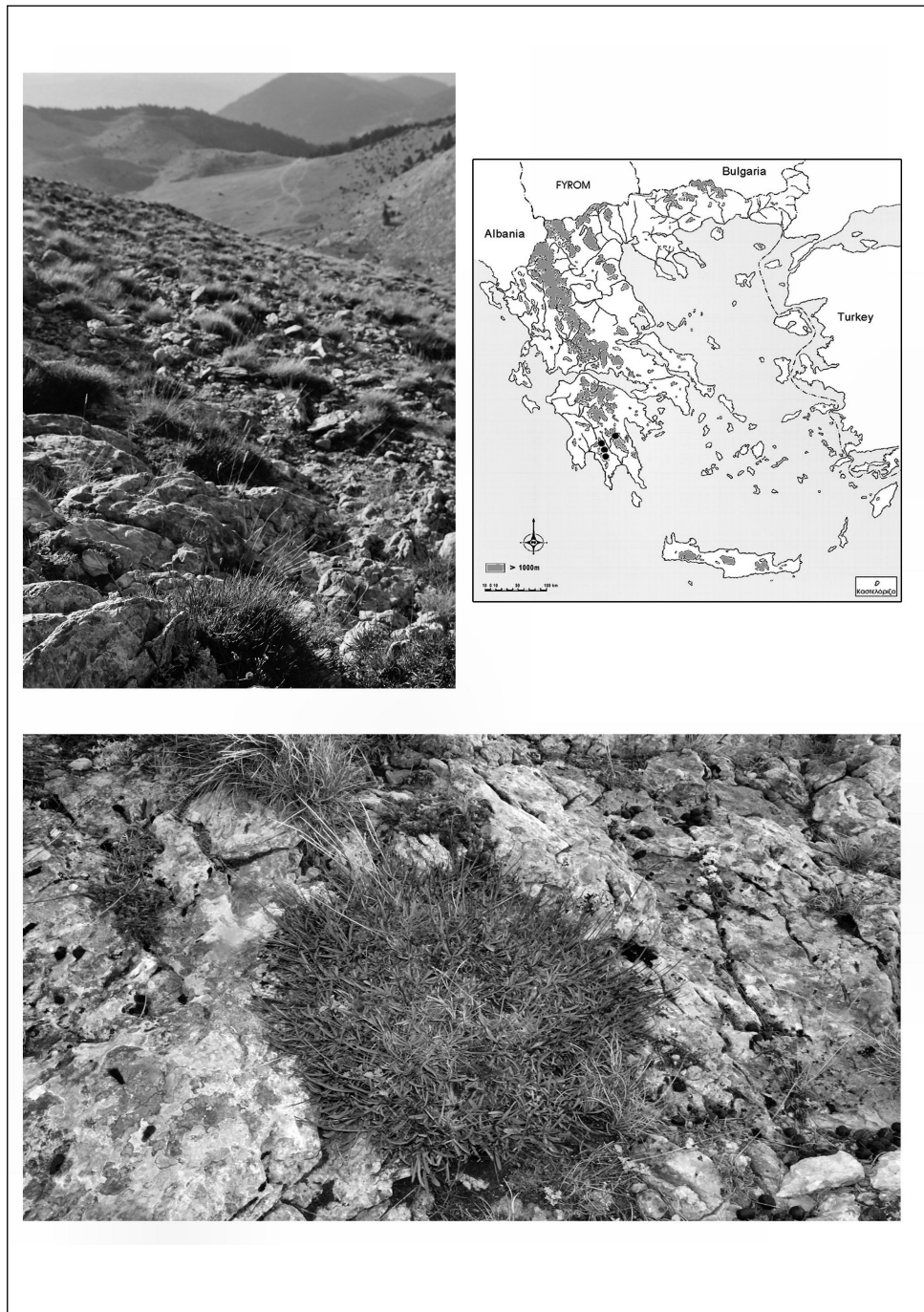


Fig. 1-3. *Phytosia crocifolia*: 1, habitat; 2, geographical distribution & 3, a specimen from the summit area of Mt. Parnonas, E Peloponnisos, Greece.

*cladestina*. In the wider distribution area, but in similar altitudinal range of Mt. Parnonas, other Peloponessian or Greek endemic taxa also occur, e.g. *Achillea umbelata* Sm., *Anthemis laconica* Franzén, *Asperula taygetea* Boiss. & Heldr., *Centaurea affinis* Friv. subsp. *laconiae* Prodan, *Cerastium candidissimum* Correns, *Cirsium hypopsilum* Boiss. & Heldr., *Dianthus serratifolius* Sm. subsp. *abbreviatus* (Halácsy) Strid, *Fritillaria graeca* Boiss. & Spruner, *Galium thymifolium* Boiss. & Heldr., *Gypsophila nana* Chaub. & Bory, *Lamium garganicum* L. subsp. *pictum* (Boiss. & Heldr.) P.W. Ball, *Rindera graeca* (A. DC.) Boiss. & Heldr., *Taraxacum panhellenicum* Sonck, *Trinia frigida* (Boiss. & Heldr.) Drude, *Viola phitosiana* Erben etc.

The occurrence of *Phitosia crocifolia* on the two mountains, Taigetos and Parnonas, is, therefore, not out of the ordinary, since many other endemic taxa occur in both, not only at similar altitudes, as mentioned above, but also at lower ones, like *Athamanta arachnoidea* Boiss. & Orph., *Bolanthus laconicus* (Boiss.) Barkoudah, *Campanula stenosphon* Boiss. & Heldr., *Hypericum taygeteum* Quézel & Contandriopoulos, *Genista halacsyi* Heldr. etc.

*Phitosia crocifolia*, even with the new finding, still remains an Endangered taxon, because the hereby presented population is also small and the total number of species subpopulations is below ten, all of which are under heavy grazing pressure by goats and sheep.

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