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Source: Willdenowia, 36(1) : 271-284

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: https://doi.org/10.3372/wi.36.36122

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ELEFTHERIOS KALPOUTZAKIS & THEOPHANIS CONSTANTINIDIS

Additions and annotations to the flora of Peloponnisos (S Greece)

Abstract

Kalpoutzakis, E. & Constantinidis, T.: Additions and annotations to the flora of Peloponnisos (S Greece) – Willdenowia 36 (Special Issue): 271-284. – ISSN 0511-9618; © 2006 BGBM Berlin-Dahlem.
doi:10.3372/wi.36.36122 (available via http://dx.doi.org/)

Based on a floristic survey in SE Peloponnisos, focusing on Mt Parnonas and its southeastern environment, new localities and annotations are presented for 14 endemic or otherwise noteworthy taxa. Seven taxa, *Asperula lutea* subsp. *rigidula, Centaurea pseudocadmea, C. subsericans, Cephalaria setulifera, Convolvulus boissieri* subsp. *parnassicus, Klasea cretica, Scutellaria rupestris* subsp. *cytherea,* are reported for the first time from mainland Peloponnisos. The taxonomic status of *Minuartia favargeri* is reconsidered and its inclusion into *M. pichleri* confirmed by the study of several new populations.

Key words: floristics, endemic species, *Minuartia,* conservation, Mediterranean, Mt Parnonas.

Introduction

Peloponnisos is the southernmost part of the Greek mainland and a diverse area, both topographically and floristically. Coastal plains, high mountains (Taigetos, 2404 m; Killini 2374 m; Chelmos, 2355 m), table lands, rivers, hills and valleys form a spectacular landscape and provide a variety of habitats that support a rich flora. Peloponnisos has attracted botanists already since early times (Lack & Mabberley 1999). However, in contrast to several Greek islands, this part of Greece has never been the subject of a full, published Flora. Iatrou (1986) and Tan & Iatrou (2001) offered concise accounts of the endemic taxa of the area. Available floristic field guides (e.g. Strasser 1997), although certainly useful to professional and amateur botanists, do not provide all information expected from state-of-the-art floristic publications.

After Tan & Iatrou (2001) it might have seemed that the prospect of finding new or rare species in Peloponnisos would be meagre. Nevertheless such discoveries continue to be made (Vassiliades & Persson 2002, Kalpoutzakis & Constantinidis 2004, 2005, Constantinidis & Kalpoutzakis 2005). In this report we present floristic results from SE Peloponnisos, mostly Mt Parnonas and the lower mountains southeast of it.

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The area

Mt Parnonas or Parnon (also known with the older names Malevo and Kronion) forms a long massif roughly following a NW to SE direction (Fig. 1). Its northern limit is unclear and the lower slopes begin about 20 km southeast of the city of Tripolis. The highest peaks are Megali Tourla (1934 m, with the adjacent peaks of Mikri Tourla and Roussa Petra, both above 1800 m), Psari (1839 m), Gaitanorachi (1801), Profitis Ilias (1780 m) and Korombilia (1777 m), followed by several peaks with a slightly lower altitude. The massif consists mostly of limestone, with sporadic flysch and schist found near the villages of Agios Ioannis, Agios Petros, Kosmas and Kastanitsa. The Parnonas slopes are forested to various degrees with *Abies cephalonica, Pinus nigra, Juniperus drupacea* (a tree with a disjunct distribution, also growing in Turkey and Syria) and *J. oxycedrus* forming various plant communities (Bergmeier 2002). Where the soil quality permits (acid to slightly acid pH, low calcium content), *Castanea sativa* forms forests. The southeastern borders of Parnonas are found near the village of Kremasti and further south and east it is replaced by the lower mountains of Madara (1326 m), Chionovouni (1298 m), Gaidourovouni (1184 m), Kalogerovouni (1095 m), Korakia (934 m), Koulochera (1126 m, also known under the name Zarax or Zarakas) and Megalo Vouno (705 m). The eastern slopes of these mountains (except Gaidourovouni) face the Mirtoo Sea. All mountains S of Parnonas consist predominantly of hard limestone and dolomite and are mostly deforested, with the exception of Mts Madara and Chionovouni, which keep some woody vegetation consisting mostly of *Abies cephalonica.* Macchia, sometimes tall and rich, is present in areas where grazing pressure and human interference are low.

Material and methods

The fieldwork in Peloponnisos started in 2001 and is still in progress. Special attention has been paid to the floristic diversity on mountains in the eastern and southern parts of the area, including Mt Taigetos. The collected specimens are temporarily kept in ACA, with a second, incomplete set in UPA. Nomenclature follows the two published volumes of Flora Hellenica (Strid & Tan 1997, 2002), Med-Checklist (Greuter & al. 1984, 1986, 1989) with some exceptions, Flora Europaea (Tutin & al. 1968-1980) and monographic revisions. An alphabetical sequence of families, genera and species applies to the floristic catalogue below. Abbreviations used: Nom. = Nomos, Ep. = Eparchia (both administrative units); *Co* = Constantinidis, *Ka* = Kalpoutzakis (both collector's names); ibid. = *ibidem* (same locality).

Annotated list of taxa

Caryophyllaceae

Minuartia pichleri (Boiss.) Maire & Petitm. (syn. *M. favargeri* Iatrou & T. Georgiadis)
Nom. Arkadias, Ep. Kinourias: Farmasoni SSE of Agios Andreas, foothills of Kakokephala peak (37°20'N, 22°46'E), limestone rocks and walls in a doline near the road, c. 130 m, 28.3.2002, *Ka 1025;* Mt Parnonas, gorge of Mazias close to Agios Georgios chapel, c. 7 km from Agios Panteleimon along road to Kastanitsa (37°16'N, 22°40'E), calcareous cliffs and rocky places, c. 500-550 m, 7.4.2002, *Ka 1047;* ibid., 26.5.2002, *Co & Ka 10143;* Vigla, c. 1.6 km from Agios Panteleimonas along road to Prastos (37°18'N, 22°41'E), steep limestone rocks with *Thalictrum orientale, Cymbalaria microcalyx, Inula verbascifolia,* c. 500 m, 28.4.2002, *Ka 1088;* Linakas, c. 3.6 km from Agios Panteleimonas towards Prastos (37°17'N, 22°40'E), steep limestone rocks, c. 450-550 m, 28.4.2002, *Ka 1091;* c. 11.2 km from Agios Panteleimon along road to Kastanitsa (37°16'N, 22°39'E), hard calcareous rocks with *Asperula boryana,* c. 750 m, 28.4.2002, *Ka 1093*; ibid., c. 800 m., 28.4.2002, *Ka 1122;* Peak of Sina between Agios Panteleimon and Prastos (37°17'N, 22°41'E), calcareous rocks, 917 m, 17.8.2002, *Ka 1199;* Agios Nikolaos Sintzas, c. 6.4 km SW of Leonidion (37°08'N, 22°49'E), steep, calcareous rocks mostly S and SE of the nunnery, c. 550-600 m, 30.5.2003, *Co & Ka 10676;* E part of Spathi summit, NW of Tiros (37°15'N, 22°48'E), steep limestone cliffs facing E, with *Stachys chrysantha, Inula verbascifolia* subsp. *methanea,*

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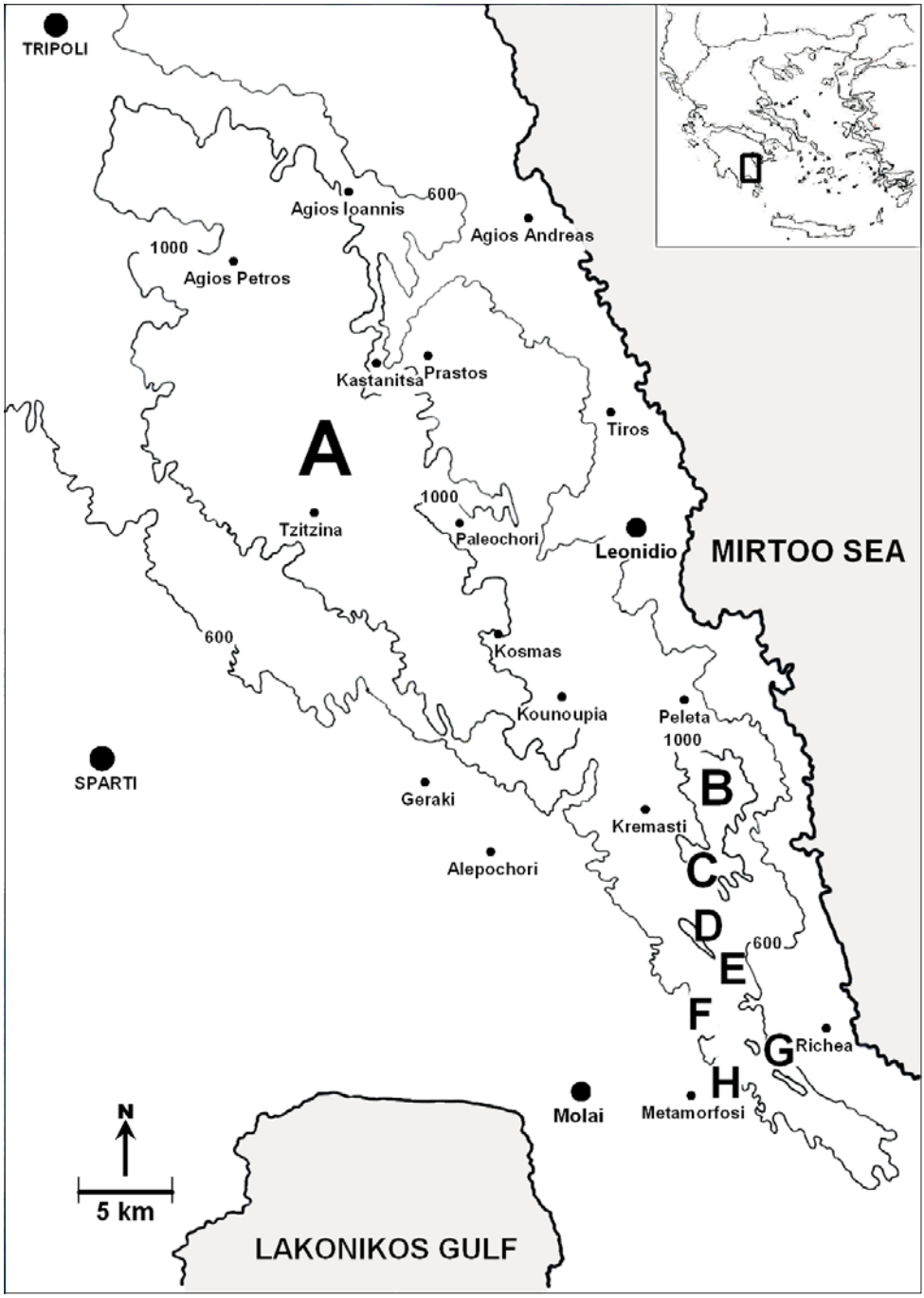


Fig. 1. The area of Mt Parnonas (A) and the lower mountains to its southeast (B = Madara, C = Chionovouni, D = Gaidourovouni, E = Korakia, F = Kalogerovouni, G = Koulochera and H = Megalo Vouno) as defined by the 600 m and 1000 m isohypses, with the most important villages, towns and cities also indicated.

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Asperula taygetea, etc., c. 850-900 m, 8.8.2004, *Ka 1585* (c. 500 plants); NE slopes of summit Aetorachi SW of Leonidio (37°09'N, 22°49'E), steep rocks with much *Scabiosa crenata,* limestone, c. 500-600 m, 3.5.2005, *Ka 1671* (c. 30 plants). — NOM. LAKONIAS, EP. EPIDAVROU-LIMIRAS: Mt Koulochera, upper NE slopes and along crestline from chapel of Profitis Ilias to NE (36°49'N, 22°59'E), steep, rocky calcareous slopes with *Acer sempervirens* and *Amelanchier* sp., c. 1000-1100 m, 31.5.2003, *Co & Ka 10689*; ibid., c. 500 m W of summit Koumboriza (36°48'N, 22°59'E), precipitous localities facing N, with sparse *Acer sempervirens, Stachys chrysantha,* limestone, c. 850-870 m, 1.6.2004, *Ka 1527*; Mt Korakia, NE of main summit (36°51'N, 22°59'E), rocks and cliffs of hard limestone, with *Quercus coccifera, Acer sempervirens, Fraxinus ornus, Scabiosa hymettia, Campanula versicolor, Ptilostemon chamaepeuce, Stachys chrysantha, Inula verbascifolia* subsp. *methanea,* c. 800-900 m, 31.5.2004, *Ka 1500 & 1518*; c. 1.1 km from Charakas towards Kiparissi (36°55'N, 23°00'E), cliffs with much *Scabiosa hymettia,* limestone, c. 500-550 m, 2.5.2005, *Ka 1667*; Mt Chionovouni, c. 4.6 km WNW Mitropolis (36°59'N, 22°57'E), ravine with steep slopes and dry stream bed, limestone, c. 570-600 m, 28.5.2005, *Co & Ka 11348*.

Minuartia favargeri was described from a single locality of Mt Parnonas, close to the convent of Elona (Iatrou & Georgiadis 1985). It differs from *M. pichleri*, a local endemic of Mts Taigetos and Killini, in its denser, glandular indumentum, longer leaves, small calyx (sepals 2.5-3 mm long), smaller petals (more than 1.5 times as long as sepals), shorter staminal glands, a protruding capsule, and the shape of the tubercles on the dorsal seed surface. It was treated as a variety of *M. pichleri* by Kamari (1995) and as a mere synonym two years later (Kamari 1997). Tan & Iatrou (2001) resurrected the taxon at species level without adding any new specimens to those reported by Kamari (1997).

A study of 16 populations and subpopulations from Mts Parnonas, Koulochera, Chionovouni and Korakia convinced us that *Minuartia favargeri* cannot be maintained at species level. The plants from Mts Parnonas and Chionovouni have, as a rule, long basal leaves (up to 23 mm, especially if grown in protected or shady conditions), while those of Mts Koulochera and Korakia have short leaves, 4-8(-10) mm. Almost all plants from Parnonas have 4-5.5 mm long sepals, only very exceptionally 2.5-3 mm long as those described for *M. favargeri,* but those of Mts Koulochera and Korakia have c. 3-4 mm long sepals. Shape and length of petals may vary but generally they are about 1.5-2 times as long as the sepals in all specimens, with some random exceptions. The plants from Mts Korakia and Koulochera generally have petals twice as long as sepals. Tan & Iatrou (2001: 87), while considering petal length a difference between the two species, illustrate them with practically identical flowers. Another character, the density of glandular indumentum, is difficult to estimate and seems to be affected by environmental factors. Staminal glands are mostly very short to almost sessile in all cases. Seed sculpturing (in specimens with ripe capsules) generally agrees with what Iatrou & Georgiadis (1985) report for *M. favargeri* but deviations, even in the same plant, are found. The study of our specimens made it clear that the supposed differences between *M. pichleri* and *M. favargeri* may hold true when a few specimens are examined but they represent random differences between two populations rather than between two distinct species. We therefore confirm the inclusion of *M. favargeri* within the variation of *M. pichleri,* with the latter name having priority.

The discovery of new populations of *Minuartia pichleri* promises a safer future for the species characterized as Vulnerable (Kamari 1995). Further populations were observed by Kalpoutzakis on Parnonas (e.g., Kakovrachos NW of the village of Tiros, and Gerovrachos SW of Sapounakeika) but no vouchers were collected. Population size varied from 50 to over 1500 plants. In a polymorphic species such as *M. pichleri* it is important to safeguard not just a few populations but the whole range of variation found on the different mountains.

Compositae

Centaurea pseudocadmea Wagenitz

NOM. LAKONIAS, EP. EPIDAVROU-LIMIRAS: Mt Gaidourovouni, upper NE part (36°55'N, 22°54'E), scrub with *Quercus coccifera, Phillyrea latifolia* and *Acer sempervirens,* also open places close to

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the summit, limestone, c. 1100-1150 m, 31.5.2003, *Co & Ka 10706 & 10727;* Mt Chionovouni, upper S and SSE parts of summit Tourla (36°56'N, 22°56'E), stony slopes and open *Abies cephalonica* forest with much *Erica manipuliflora, Juniperus oxycedrus, Quercus coccifera, Genista acanthoclada, Sesleria taygetea,* limestone, c. 1100-1274 m, 17.5.2004, *Co & Ka 11038*; ibid., S slope and along crest, with *Phlomis cretica, Erica manipuliflora, Stachys chrysantha, Teucrium capitatum,* c. 1200-1250 m, 31.5.2004, *Ka 1510, 1510a*.

New for Peloponnisos. We were surprised to find plants with procumbent to ascending stems, clearly tomentose leaves, involucral bracts with well-developed lacerate margins and a few apical cilia (usually 2-4 pairs) and pink-purplish florets on the summits of Mts Gaidourovouni and Chionovouni. They appeared to agree well with specimens of *Centaurea pseudocadmea* (e.g., *Co 3895 & 6752*, both in UPA), previously known only from the upper parts of Mt Kitheronas (Sterea Ellas) and confused with the Anatolian *C. cadmea* Boiss. (Wagenitz 1971). The only noteworthy difference of the Peloponnesian plants is that they generally have smaller appendages on bracts. This is not surprising however, as the two distribution areas are c. 150 km apart. The number of apical cilia is rather variable in both the Peloponnesian and the Kitheronas specimens. The formation of distinct cilia with large auricles along appendage margins in some capitula links two *Centaurea* sections, *Phalolepis* and *Acrolophus* (see also Gamal-Eldin & Wagenitz 1991). The specimens *Kalpoutzakis 1510 & 1510a* were collected in the contact zone between *C. pseudocadmea* and *C. subsericans* and may be of hybrid origin.

On Mt Gaidourovouni the plants were observed in very low, critical numbers and the population is certainly threatened in the same way as the known populations on Mt Kitheronas. However, on the summit area of Mt Chionovouni thousands of plants occur and offer hope for a survival of the species.

Centaurea subsericans Halácsy

Nom. Lakonias, Ep. Epidavrou-Limiras: Mt Chionovouni, lower SE parts of summit Tourla (36°56'N, 22°56'E), rocky slopes with openings in *Quercus coccifera - Genista acanthoclada* low scrub, limestone, c. 650-1000 m, 17.5.2004, *Co & Ka 11035;* summit of Profitis Ilias, c. 1.5-2 km SSE of Kremasti (36°57'N, 22°53'E), E facing stony area along the crest, with scattered *Quercus coccifera, Phillyrea latifolia, Thymelaea tartonraira,* limestone, c. 1000-1050 m, 31.5.2004, *Ka 1508*; Mt Chionovouni, S part of summit Tourla (36°56'N, 22°56'E), S facing stony slope with sparse *Quercus coccifera, Pistacia lentiscus, Salvia pomifera* subsp. *calycina, Cotinus coggygria,* limestone, c. 950-1100 m, 31.5.2004, *Ka 1509;* NNW part of Mt Chionovouni, c. 2.6 km from Kremasti towards Peleta (36°58'N, 22°53'E), rocky slope with scattered *Abies cephalonica, Quercus coccifera, Thymelaea tartonraira, Coridothymus capitatus, Teucrium capitatum,* probably dolomite, c. 920-970 m, 1.6.2004, *Ka 1531*.

While the *Centaurea* specimens on the summit of Mts Chionovouni and Gaidourovouni fitted well those from the type locality of *C. pseudocadmea,* the plants in the middle parts of Mt Chionovouni and on the summit of Profitis Ilias were attributed to *C. subsericans* only with some hesitation. They form pure populations on the Profitis Ilias summit and grow in a belt between 700 and 1100 m on Mt Chionovouni, but do not enter the area of the *C. pseudocadmea* populations found higher up at 1100-c. 1280 m (mostly along the crest) on Mt Chionovouni. They were not seen on Mt Gaidourovouni, where only *C. pseudocadmea* grows. They appear to have a different habit that makes distinction from *C. pseudocadmea* in the field rather easy. They have longer, usually ascending stems, narrower segments of basal and cauline leaves, longer appendages of bracts on average, which end in a usually distinct, longer and sometimes slightly patent mucro. The lateral cilia on the bracts are well-developed, 4-7 along each margin, with hyaline auricles at base and more rarely they form a hyaline margin with 2-3 cilia on top. Their tomentose leaves and large auricles on bracts differentiate them clearly from *C. affinis* subsp. *laconiae* Prodan, which also exists on Mt Parnonas. They look quite similar to plants of *C. subsericans* collected on Mt Pateras (UPA, isotype!) and form the first record of this species in Peloponnisos.

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However, the separation of *Centaurea subsericans* from *C. pseudocadmea* is not undisputed (Gamal-Eldin & Wagenitz 1991). The co-occurrence of these very similar (although attributed to different sections!) *Centaurea* species on the SE Peloponnesian mountains reminds of the situation on Mts Pateras, Kitheronas and Elikonas in SE Sterea Ellas, where equally both species are found. A closer look at recent collections from these mountains of Sterea Ellas revealed a remarkable variation of leaf shapes and structure of appendages that makes distinction particularly difficult. However, according to Constantinidis & Kamari (1994) and Constantinidis & al. (1997), the plants of *C. subsericans* from Mt Elikonas are diploid ($2n = 18$), while those of *C. pseudocadmea* from Kitheronas (locus classicus) tetraploid ($2n = 36$). The chromosome numbers of the Peloponnesian plants are still not known but if two different cytotypes exist, they may form a barrier to hybridization. The decision to keep the populations on the summits of Mts Chionovouni and Gaidourovouni *(C. pseudocadmea)* separate from those of the middle parts of Mts Chionovouni and Profitis Ilias *(C. subsericans)* is supported by preliminary work with molecular markers (RAPDs), which suggests relationships of *C. subsericans* with the group of *C. attica* Nyman.

Klasea cretica (Turrill) J. Holub

Nom. Lakonias, Ep. Epidavrou-Limiras: Mt Gaidourovouni, c. 0.6-0.8 km along a SW leading secondary road crossing the main road Kremasti-Lambokambos (36°55'N, 22°55'E), openings of *Quercus coccifera - Phillyrea latifolia* scrub, limestone and terra rossa, c. 680 m, 31.5.2003, *Co & Ka 10704;* ibid., 12.6.2003, *Co & Ka 10736;* ibid., 6.7.2003, *Ka s.n.;* c. 3 km SW of Mt Koulochera, along road from Richea to Metamorphosi (36°49'N, 22°57'E), stony, calcareous slopes burnt rather recently, with low vegetation of *Quercus coccifera, Phillyrea latifolia, Coridothymus capitatus, Genista acanthoclada,* c. 660 m, 6.7.2003, *Ka s.n.*; NNE slopes of Mt Korakia (36°52'N, 22°58'E), c. 300-700 m, 18.4.2004, *Ka s.n.* (rosette leaves); Mt Chionovouni, lower SE parts of summit Tourla (36°56'N, 22°56'E), rocky slopes with small openings in *Quercus coccifera - Genista acanthoclada* low scrub, limestone, c. 650 m, 17.5.2004, *Co & Ka 11031* (rosette leaves); S part of Koulochera, below easternmost summit Samari (36°49'N, 23°00'E), rocky slope with *Quercus coccifera, Phillyrea latifolia, Genista acanthoclada,* c. 800-850 m, 1.6.2004, *Ka 1524* (rosette leaves).

New for Peloponnisos. We adopt the distinction between the two genera *Serratula* and *Klasea* indicated by Greuter (2003) and report *Serratula cichoracea* subsp. *cretica* Turrill as a member of *Klasea*. When first collected, the plants were though to belong to the related *Klasea flavescens* subsp. *mucronata* (Desf.) Cantó & S. Rivas-Martínez but a specimen sent to L. Martins (Jena) was determined as *K. cretica*. Morphologically, these two are very similar to each other, but *K. cretica* has generally wider involucral bracts (>3.5 mm), cauline leaves obtuse-mucronate rather than acute-mucronate, and most importantly, the leaf surfaces are completely glabrous in contrast with *K. flavescens* where multicellular hairs are concentrated on the veins (Martins, pers. comm.). Differences between the Cretan and the Peloponnesian plants are found in the size and distribution of leaves on the stem: the Cretan plants have numerous, large leaves, all or most of which are clearly decurrent on the stem, while the plants of Peloponnisos are almost leafless in their upper third and have small leaves on the lower part of the stem, thus approaching the illustration of *Serratula cichoracea* subsp. *mucronata* (Desf.) Jahandiez & Maire from Libya in Jafri & El-Gadi (1983).

Klasea cretica is a rare plant, previously known from the eastern parts of Crete. We have no reasons to consider the plants of Peloponnisos as a recent introduction. They are slightly different morphologically from the Cretan plants and were collected or observed in at least ten different localities in the valley of Lambokambos and the surrounding mountains, where all populations are well established in natural habitats. Once the identity of the species is known, its rosette leaves are easily spotted among phrygana and scrub. The plants bloom in mid-summer, mostly July, but their inflorescences are often browsed by animals before anthesis and/or seed setting. This reduces the possibility of collecting intact specimens necessary for proper identification. However, the species produces stolons and thus can spread even when no ripe seed is formed.

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Convolvulaceae

Convolvulus boissieri subsp. ***parnassicus*** (Boiss. & Orph.) Kuzmanov
NOM. LAKONIAS, EP. EPIDAVROU-LIMIRAS: Mt Chionovouni, summit of Tourla (36°56'N, 22°56'E), flat, stony and gravelly places along the crest and just N of the highest point, with scattered *Abies cephalonica, Juniperus* sp., *Quercus coccifera, Phlomis cretica, Stachys chrysantha,* limestone, c. 1200-1270 m, 31.5.2004, *Ka 1512*.

New to Peloponnisos. The closest known localities of *Convolvulus boissieri* subsp. *parnassicus* are Mts Gerania and Pateras in Sterea Ellas (Constantinidis 1997, as *C. compactus* Boiss.), some 140-150 km to the north. Its occurrence in S Peloponnisos is evidently disjunct, as it has never been collected on the mountains of N or central Peloponnisos. A total of about 80-100 plants were observed in two adjacent localities on Chionovouni. The largest population grows very close to the summit of Tourla.

Cruciferae

Alyssum taygeteum Heldr.
NOM. ARKADIAS, EP. KINOURIAS: Mt Parnonas, Liouta, ENE of summit Megali Tourla (37°17'N, 22°36'E), steep rocky slope, rock crevices and small pockets with some organic material, limestone, c. 1600-1800 m, 20.6.2003, *Ka 1347* (in flower); ibid., 19.8.2004, *Ka 1615* (in fruit).

This is a new locality for a rare Greek endemic described from Mt Taigetos and also known from Mt Chelmos in N Peloponnisos and Mt Giona in Sterea Ellas (Hartvig 2002). We counted about 300 plants growing in a precipitous locality on the upper parts of Mt Parnonas.

Draba strasseri Greuter
NOM. LAKONIAS, EP. EPIDAVROU-LIMIRAS: Mt Koulochera, dirt road to the summit of Profitis Ilias c. 180 m from junction with main road Metamorphosi to Richea (36°49'N, 22°58'E), slope with white marly gravel, with scattered *Coridothymus capitatus, Genista acanthoclada, Phlomis cretica*, *Erica manipuliflora,* c. 860 m, 5.4.2003, *Ka 1254;* Mt Gaidourovouni, NE upper part close to the summit (36°55'N, 22°54'E), open places in scrub of *Quercus coccifera, Phillyrea latifolia* and *Acer sempervirens,* limestone, c. 800-1150 m, 12.4.2003, *Ka 1264*; ibid., 31.5. 2003, *Co & Ka 10712;* Mt Chionovouni, NW slopes c. 2.6 km SE from Kremasti towards Peleta (36°58'N, 22°53'E), stony places with sparse trees and shrubs of *Abies cephalonica, Juniperus oxycedrus, Erica manipuliflora, Quercus coccifera, Genista acanthoclada, Thymelaea tartonraira,* hard dolomite, c. 920-970 m, 12.4.2003, *Ka 1263;* lower SE parts of Tourla summit (36°56'N, 22°56'E), rocky slopes with small openings in *Quercus coccifera - Genista acanthoclada* low scrub, limestone, c. 650-1000 m, 17.5.2004, *Co & Ka 11019;* upper S and SSE parts of Tourla summit (36°56'N, 22°56'E), sparse *Abies cephalonica* forest with much *Erica manipuliflora, Juniperus oxycedrus, Quercus coccifera, Genista acanthoclada* and *Sesleria taygetea,* limestone, c. 1100-1274 m, 17.5.2004, *Co & Ka 11045*. — NOM. ARKADIAS/LAKONIAS, EP. KINOURIAS/EPIDAVROU-LIMIRAS: Mt Madara, NW parts of summit Troumbas (37°01'N, 22°53'E), stony area with *Abies cephalonica, Quercus coccifera, Phillyrea latifolia* and small rocks, limestone, c. 1000-1100 m, 27.3.2005, *Ka 1648* (c. 500 plants).

Draba strasseri is a rare endemic (Tan & Stevanovic 2002) previously known from the type locality on Mt Profitis Ilias (one of the peaks of Mt Koulochera), while Strasser (1986) indicates a second site, SE of Kremasti, which roughly coincides with the collection site of *Ka 1263*. Our collections show that *Draba strasseri* is more widespread than previously thought, as it occurs on four mountains at c. 700-1150 m above sea level. The populations on Mt Koulochera consist of c. 150-200 plants; those on Mt Chionovouni of at least 200 plants (parts of this mountain are still under study), whereas on both Mt Gaidourovouni and Mt Madara at least 500 plants were found.

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Dipsacaceae

Cephalaria setulifera Boiss. & Heldr.

Nom. Lakonias, Ep. Epidavrou-Limiras: Mt Gaidourovouni, upper NE part close to the summit (36°55'N, 22°54'E), open places in scrub of *Quercus coccifera, Phillyrea latifolia* and *Acer sempervirens,* limestone, c. 800-1150 m, 31.5.2003, *Co & Ka obs.;* Mt Koulochera, lower parts of the NW peak below the chapel of Profitis Ilias (36°49'N, 22°59'E), rocky, calcareous places, c. 750-800 m, 17.7.2003, *Co & Ka 10750;* ibid., 14.8.2003 *Ka s.n.* — Nom. Arkadias/Lakonias, Ep. Kinourias/Epidavrou-Limiras: Mt Madara, NW slopes of Troumbas summit (37°01'N, 22°53'E), stony places with *Abies cephalonica, Quercus coccifera, Phillyrea latifolia,* limestone, c. 900-1250 m, 10.8.2005, *Ka 1745*.

New for Peloponnisos. Small populations of this rare species were found on the slopes of Mts Gaidourovouni, Madara and Koulochera, S of Mt Parnonas. The Peloponnesian plants do not show any noteworthy differences from those of Attiki (Sterea Ellas), the southernmost locality known until now.

Constantinidis (1997) mapped the total known distribution of *Cephalaria setulifera,* which is revised here (Fig. 2). The species is considered endemic to Greece, as previous records from Montenegro (Verlaque 1985) are questioned. Kokkini (1991) treated it at subspecific rank as *Cephalaria flava* subsp. *setulifera* (Boiss. & Heldr.) Kokkini but we prefer to keep its specific status, in accordance with Szabó (1940), until the polymorphic *Cephalaria* taxa in Greece are monographed and the same criteria apply to all their taxonomic categories. The populations of *C. setulifera* in S Peloponnisos are disjunct, c. 140 km S of the closest known population on Mt Gerania in Sterea Ellas.

Labiatae

Scutellaria rupestris subsp. ***cytherea*** (Rech. f.) Greuter & Burdet

Nom. Arkadias, Ep. Kinourias: Mt Parnonas, N and SE of the nunnery of Agios Nikolaos Sintzas, c. 6.4 km SW of Leonidion (37°08'N, 22°49'E), foot of steep, calcareous rocks, c. 550-600 m, 30.5.2003, *Co & Ka 10678;* N slopes of Aetorachi summit, SW of Leonidion (37°09'N, 22°48'E), banks of a small torrent, c. 250 m, 3.5.2005, *Ka 1673*.

New for the mainland of Peloponnisos. The complex morphological pattern of the *Scutellaria rubicunda* group in Greece is outlined by von Bothmer (1987). Eight subspecific taxa are recognized, six of them having a narrow distribution range. *S. rupestris* subsp. *cytherea* was considered until now as endemic to the island of Kithira.

The collected plants agree fully with *Scutellaria rupestris* subsp. *cytherea.* They have several stems mostly lying on the ground and a dense inflorescence. The corolla tube is pale greenish to ochre-yellow. The lower corolla lip is wider than the upper, cream to ochre-yellow, without spots. The upper lip is pale rose-violet. The dimensions of leaves and the type of indumentum also agree.

Apart from Agios Nikolaos and Aetorachi no additional populations were found. The other populations found all belong to subsp. *parnassica* (Boiss.) Greuter & Burdet, which is distributed almost all over Peloponnisos except in its southeasternmost parts, where it is replaced by *S. rupestris* subsp. *caroli-henrici* Bothmer, and in the alpine and subalpine areas of Mts Taigetos, Parnonas and Menalon, where it is replaced by *S. rupestris* subsp. *rupestris*. The occurrence of subsp. *cytherea* on Kithira and at the foothills of Mt Parnonas is remarkable, because subsp. *caroli-henrici* intercalates in the area of the Maleas promontory. However, a similar distribution pattern is shown by *Teucrium francisci-werneri* Rech. f.

Teucrium aroanium Boiss.

Nom. Lakonias, Ep. Epidavrou-Limiras: Mt Koulochera, c. 100-400 m SW of Koumboriza summit (36°48'N, 22°59'E), vertical limestone cliffs facing S, with sparse *Acer sempervirens, Quercus coccifera, Stachys chrysantha, Bupleurum fruticosum, Hypericum empetrifolium* subsp. *empetrifolium, Asperula taygetea, Micromeria juliana, Inula verbascifolia* subsp. *methanea,*

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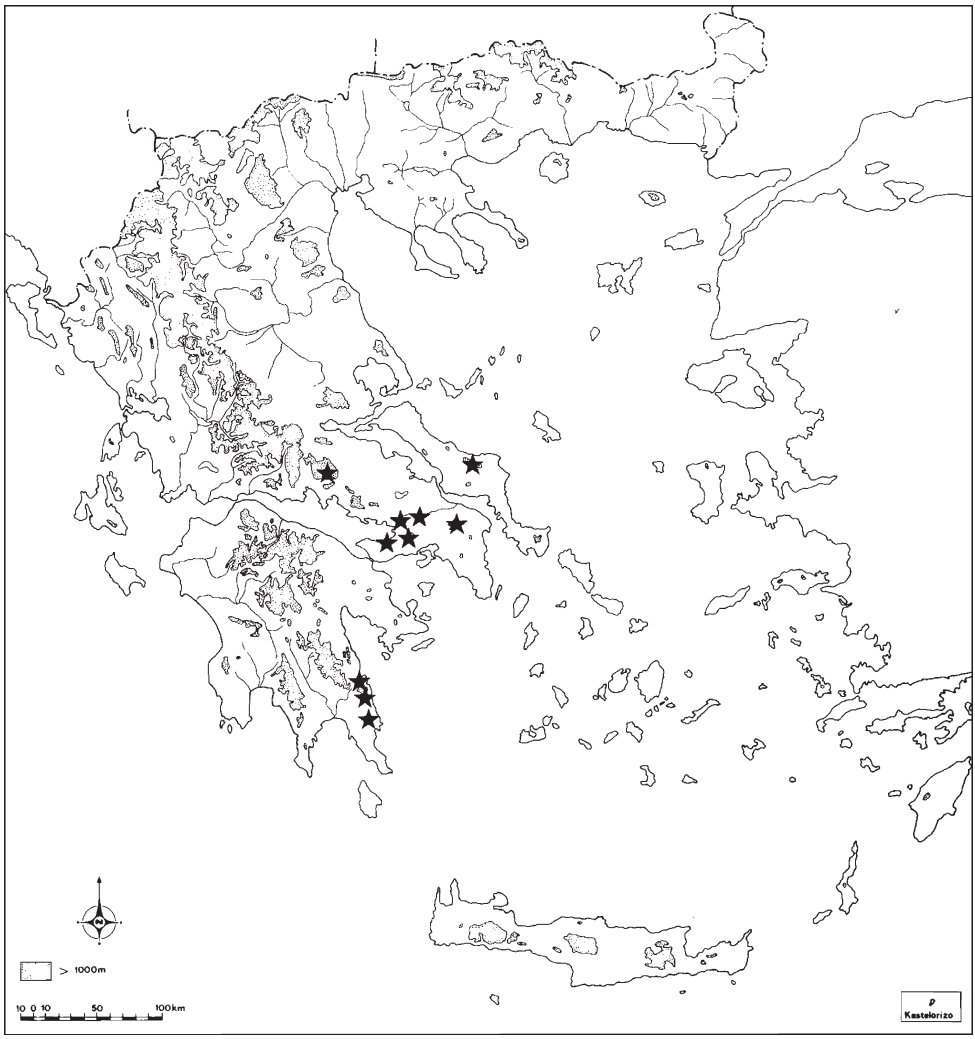


Fig. 2. The total known distribution of the Greek endemic *Cephalaria setulifera*.

Phlomis cretica, c. 860-870 m, 1.6.2004, *Ka 1528*; Mt Chionovouni, c. 4.6 km WNW of Mitropolis (36°59'N, 22°57'E), ravine with steep slopes and dry stream bed, limestone, c. 570-600 m, 28.5.2005, *Co & Ka 11353;* Mt Chionovouni, c. 0.9-1.0 km from Charakas towards Kiparissi (36°55'N, 23°00'E), steep calcareous cliffs by the road, limestone, c. 510-530 m, 28.5.2005, *Ka & Co 11360*. — Nom. Arkadias, Ep. Kinourias: Mt Parnonas, slopes of Poundes summit c. 2.5 km WNW of Leonidion (37°10'N, 22°49'E), steep calcareous cliffs facing E and SE, with *Inula verbascifolia* subsp. *methanea, Asperula taygetea, Erica manipuliflora, Stachys chrysantha, Ptilostemon chamaepeuce, Salvia pomifera, Brassica cretica* subsp. *laconica,* c. 420-450 m, 30.12.2004, *Ka 1630* (stems and calyces); Aetorachi summit, SW of Leonidion (37°08'N, 22°48'E), steep cliffs and rocky places, with *Teucrium francisci-werneri* and *Scabiosa crenata,* c. 650-670 m, 25.6.2005, *Ka 1697*.

Teucrium aroanium is a regional Greek endemic known from several gatherings on Mts Chelmos and Killini in northern Peloponnisos and one old collection in the S part of Mt Taigetos, made in

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1904 by Maire & Petitmengin (Tan & Iatrou 2001). We found additional localities for this species on Mts Koulochera, Parnonas and Chionovouni.

On Koumboriza approximately 100 large tufts and 150 smaller plants were present in semishade. A second population with c. 20 tufts was observed on a cliff, c. 700 m SE of the summit at 770 m. A third population with 10 tufts was found on N exposed rocks c. 500 m E of the summit. The plants growing in shade have considerably larger leaves than those gowing under more sunny conditions. On Mt Parnonas the populations are difficult to access and comprise at least 120 tufts. On Mt Chionovouni at least 100 plants were observed in each of the two localities. The low altitude of our collections is notable, 420-870 m, compared to the 900-2000 m reported for the species before.

Thymus laconicus Jalas

Nom. Lakonias, Ep. Lakedemonos: Mt Parnonas, c. 11 km NNW of Geraki towards Kallithea (37°03'N, 22°39'E), degraded scrub with *Quercus coccifera, Pistacia lentiscus, Sarcopoterium spinosum, Satureja thymbra, Genista acanthoclada, Coridothymus capitatus,* limestone and schist, c. 630-650 m, 17.8.2004, *Ka 1608;* 3.9 km SE of Geraki towards Alepochori (36°58'N, 22°43'E), calcareous slope left of the road, close to an olive grove, with *Quercus coccifera, Calicotome villosa, Sarcopoterium spinosum, Coridothymus capitatus,* c. 320 m, 21.11.2004, *Ka obs.;* 6.3-7 km SE of Geraki, *Ka obs.;* 5.9-7.1 km NNW of Geraki towards Kallithea (37°01'N, 22°40'E), stony slope right of the road, scrub with *Quercus coccifera, Pistacia lentiscus, Genista acanthoclada, Globularia alypum, Coridothymus capitatus,* limestone, c. 390 m, 21.11.2004, *Ka obs.;* Mt Parnonas, c. 7.7 km NNE of Geraki towards Kosmas (37°01'N, 22°41'E), roadsides and stony area with *Phlomis fruticosa*, *Calicotome villosa,* limestone, c. 640-650 m, 21.11.2004, *Ka obs*. — Nom. Arkadias, Ep. Kinourias: Mt Parnonas, 12.6-13 km from Leonidio towards Vaskina (37°11'N, 22°49'E), stony slopes with *Quercus coccifera, Phillyrea latifolia, Cotinus coggygria, Coridothymus capitatus,* limestone, 890-910 m, 12.6.2005, *Ka 1689*; ibid., 25.6.2005, *Ka 1705*.

Tan & Iatrou (2001) report only two sites of the rare *Thymus laconicus,* an endemic species of S Peloponnisos and indicate its altitude as 50-150 m, although the type was collected at c. 550 m. According to our records the species grows up to 910 m, or even higher. Being superficially similar to *Coridothymus capitatus*, it often escapes attention, especially when not in flower. The populations of *T. laconicus* visited by the first author range from 60 to at least 500 plants. Recently, a population of over 200 individuals was found between the villages of Alepochori and Gouves.

Linaceae

Linum hellenicum Iatrou

Nom. Lakonias, Ep. Epidavrou-Limiras: N foothills of Mt Megalo Vouno, 7 km NE of Metamorphosi towards Richea (36°49'N, 22°56'E), low, rather dense vegetation of *Quercus coccifera, Phillyrea latifolia, Genista acanthoclada,* close to a quarry, limestone, c. 550-580 m, 31.5.2003, *Co & Ka 10685;* NW part of Mt Korakia, c. 5.2 km from Lambokambos along road to Richea (36°51'N, 22°58'E), stony area with *Arbutus unedo, Cotinus coggygria, Erica manipuliflora, Phlomis cretica, Globularia alypum, Putoria calabrica,* white marl, c. 610-620 m, 12.5.2004, *Ka 1497a,b;* ibid., NE slope, c. 650 m, 12.5.2004, *Ka 1498;* S to SW slopes of Mt Koulochera (36°49'N, 22°59'E), with *Quercus coccifera, Genista acanthoclada, Phlomis cretica, Erica manipuliflora,* c. 900-1000 m, 12.5.2004, *Ka 1503*.

Twelve years after its description by Iatrou (1989) only two localities were known for this rare Greek endemic (Tan & Iatrou 2001). Our observations extend the known range to the north and almost double its altitudinal amplitude, which now reaches 1000 m. Only few plants were observed at the locality of *Co & Ka 10685,* but the populations of *Ka 1498* and *Ka 1503* are richer, each consisting of c. 300-500 individuals. In the NW part of Mt Korakia *(Ka 1497)* about 100 plants were found.

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Linum hellenicum differs from other species of *L.* sect. *Syllinum* by its pink petals, contrasting with the yellow or white petals in other species. All plants found in *Co & Ka 10685* and *Ka 1503* localities had pink, dark pink or pink-violet flowers. However, in *Ka 1497* c. 10-20 individuals had pure white flowers and in *Ka 1498* about a quarter of the population was white-flowered, and a few plants were found with both pink-violet and white flowers on the same inflorescence or on different inflorescences. The possibility, that this is the result of hybridization with a white-flowered *Linum,* possibly *L. phitosianum* Christod. & Iatrou, which also occurs in SE Peloponnisos, is excluded because our field research did not spot any plant of typical *L. phitosianum* on Mts Koulochera and Korakia or in the surrounding area. Moreover, the white-flowered plants, which occur in mixed populations, are morphologically identical with the pink-flowered plants, corolla colour being their only difference. A report from NW of Richea of *L. phitosianum* by Sfikas (2004) is evidently based on a misidentification, because the relevant photograph clearly shows an individual of *L. hellenicum*. Our observations thus indicate that *L. hellenicum* may have two corolla colours, pink or white, with pink being more common than white. The white corolla colour links *L. hellenicum* with other white species of *L.* sect. *Syllinum.* In Greece, most of the white *L.* sect. *Syllinum* taxa are found in small, often isolated populations and a better understanding of their morphological variation is needed for a correct taxonomic interpretation.

Rosaceae

Potentilla arcadiensis Iatrou

Nom. Arkadias, Ep. Kinourias: Mt Parnonas, N, SW and SE of the nunnery of Agios Nikolaos Sintzas, c. 6.4 km SW of Leonidion (37°08'N, 22°49'E), steep, calcareous rocks, c. 550-600 m, 30.5.2003, *Co & Ka 10677* & 25.6.2005, *Ka 1698;* N slope of Aetorachi summit, SW of Leonidion (37°09'N, 22°49'E), steep calcareous cliffs, c. 470-520 m, 3.5.2005, *Ka 1672*. — Nom. Lakonias, Ep. Epidavrou-Limiras: Mt Chionovouni, c. 0.5 km E of Agia Paraskevi chapel (36°54'N, 23°00'E), cliffs and steep rocks facing N, limestone, c. 470-520 m, 10.8.2005, *Ka 1749*.

Potentilla arcadiensis is probably a Tertiary relic endemic (Parolly & Nordt 2002), which has no close relatives in Greece. We found it around Agios Nikolaos Sintzas (4 subpopulations) on almost vertical faces of rocks and cliffs, on the summit of Aetorachi and again on the E slopes of Mt Chionovouni. These are additional localities for this species beyond its locus classicus, the only locality known before. The species is therefore not a single-mountain endemic. The plants always grow on almost inaccessible cliffs or rocks and their vegetative parts emit a smell of incense, especially when crushed. About 250 individuals (both mature and juvenile) were counted around Agios Nikolaus Sintzas, and c. 100 plants in each of the other two localities.

Rubiaceae

Asperula lutea subsp. ***rigidula*** (Halácsy) Ehrend.

Nom. Arkadias, Ep. Kinourias: Mt Parnonas, Choreftria Prastou just NW of Prastos (37°16'N, 22°40'E), shrubs and roadsides, c. 800 m, 24.6.2002, *Ka s.n.;* Mt Parnonas, Koufounia, c. 2.4 km from Prastos towards Agios Vasilios (37°14'N, 22°40'E), c. 850 m, 24.6.2002, *Ka s.n.;* c. 5 km from Mari along road to Kremasti (37°00'N, 22°51'E), macchia with *Acer sempervirens*, *Phillyrea latifolia, Arbutus andrachne, Cotinus coggygria, Erica manipuliflora, Genista acanthoclada,* c. 570 m, 21.6.2003, *Ka 1354*. — Nom. Lakonias, Ep. Epidavrou-Limiras: Mt Megalo Vouno, c. 6.7 km from Metamorphosi to Richea (36°49'N, 22°56'E), roadsides near a quarry, phrygana, c. 540 m, 21.6.2004, *Ka 1361;* Mt. Kourkoula, between Strongylo summit (915 m) and an unnamed summit (842 m) (36°49'N, 22°49'E), low phrygana with much *Genista acanthoclada* and *Quercus coccifera,* limestone, c. 600-850 m, 29.5.2005, *Co & Ka 11373*.

Asperula lutea subsp. *rigidula* (*A. rigidula* Halácsy) was previously known from E Sterea Ellas and Evvia. Although it had been reported by Dimopoulos (1993) from the lower part of Mt Killini in NE Peloponnisos, it was subsequently considered as “possibly extending to northeast

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Peloponnisos", in the absence of confirmed records (Tan & Iatrou 2001). Our collections confirm its presence in Peloponnisos and expand its range to the south.

Our specimens from low altitudes have almost all *Asperula lutea* subsp. *rigidula* characters, i.e. robustness, a branched inflorescence and hirsute corollas, and are indistinguishable from specimens collected in Sterea Ellas, e.g. on Mt Imittos. Plants from higher altitudes are very variable. Those from the upper parts of Mt Parnonas (summit Megali Tourla at c. 1600-1700 m, *Ka s.n.*; E of Gaitanorachi at c. 1400 m, *Ka s.n.*) belong to *A. lutea* subsp. *mungieri* (Boiss. & Heldr.) Ehrend. & Krendl because of their weaker stems, glabrous, unbranched inflorescence and glabrous corollas with dark, papillose mericarps. Many other plants (14 specimens from various localities and 5 observations) are intermediate between subsp. *rigidula* and subsp. *mungieri*. Quite remarkable is *Ka 1357* from Mt Chionovouni, where each of the 5 specimens collected in an area of 1.5 m^2 has a different indumentum type, from almost glabrous to densely hirsute; these plants could perfectly match *A. rigidula* var. *tomentella* Halácsy and var. *glabrescens* Boiss. (Halácsy 1901), with their intermediates. The observation of subsp. *rigidula* in southeast Peloponnisos expands its previously known geographical area (eastern Sterea Ellas and Evvia) to the south.

Unlike previous records (Schönbeck-Temesy & Ehrendorfer 1991), *A. lutea* subsp. *mungieri* is not necessarily confined to an altitude of 1700-2300 m in SE Peloponnisos. Typical forms have been collected as low as 600 m, at the foothills of Mt Taigetos (Langada ravine; *Phitos & Kamari 5245, 5255, 13972, Turland 698,* all in UPA). Although Tan & Iatrou (2001) repeat the high altitude given by Schönbeck-Temesy & Ehrendorfer (1991), they also cite a chromosome count from "Langada Trypi", a locality that should not exceed 1200 m of altitude. Coulot & al. (2003) report *Asperula lutea* subsp. *lutea* from west of Tripi village, at c. 600 m, but we are reluctant to accept their record from almost the same locality where we found *A. lutea* subsp. *mungieri* and consider it a misinterpretation.

Because of the considerable variation found in the *Asperula lutea* group, we prefer to apply subspecies status to its four taxa. Morphological differences may be clear in typical populations on high mountains but in S Peloponnisos and Evvia the situation is more complicated, with many obscure forms that make taxonomic distinction difficult, especially when specimens are without clear geographical information, or when plant sampling is careless and not representative of the existing variation.

Concluding remarks

Our research added five Greek endemic taxa to the flora of Peloponnisos: *Centaurea pseudocadmea, C. subsericans, Cephalaria setulifera, Klasea cretica, Scutellaria rupestris* subsp. *cytherea* and the Balkan endemic *Convolvulus boissieri* subsp. *parnassicus*, and confirmed the presence of *Asperula lutea* subsp. *rigidula*. Moreover, it enabled a revision of the taxonomic status of *Minuartia favargeri.* This brings the number of Greek endemic species and subspecies known from Peloponnisos to c. 363 taxa (as compared to the number of c. 355 given in Tan & Iatrou 2001). The total number of vascular plant taxa in Peloponnisos is now approximately 2980 (species and subspecies), based on Tan & Iatrou (2001) and including the new records by Maroulis & Artelari (2001), Coulot & al. (2003) and Kalpoutzakis & Constantinidis (2005), with an actual percentage of Greek endemics (species + subspecies) of 12.2 %, i.e., between the 12 % estimated by Tan & Iatrou (2001) and 12.5 % given by Iatrou (1986).

Remarkable results were obtained for the lower mountains SE of Parnonas, including *Achillea occulta* Constantin. & Kalpoutz., which appears to have no close relatives in Greece. Of particular interest is the floristic link between these mountains and E Sterea Ellas, exemplified by species as *Asperula lutea* subsp. *rigidula, Centaurea pseudocadmea, C. subsericans, Convolvulus boissieri* subsp. *parnassicus, Cephalaria setulifera, Galium melanantherum* Boiss. and *Scabiosa hymettia* Boiss. & Spruner. These taxa appear to be absent, or at least very rare, in N and E Peloponnisos.

With respect to the populations of rare or threatened taxa, we discovered new localities for *Draba strasseri* and *Potentilla arcadiensis,* previously known only from their loci classici. New

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localities were also found for *Alyssum taygeteum, Linum hellenicum, Minuartia pichleri, Teucrium aroanium* and *Thymus laconicus*. Our observations add to the necessity of a revised edition for the list of the threatened and rare plants of Greece that would supplement and update the Red Data Book (Phitos & al. 1995).

Acknowledgements

We thank Dr Th. Raus and Dr H. Sipman (Berlin) for their editorial comments, Dr L. Martins (Jena) for his advice on *Klasea cretica* and Dr Z. Kypriotakis for the loan of a *Klasea cretica* specimen.

References

Bergmeier, E. 2002: Plant communities and habitat differentiation in the Mediterranean coniferous woodlands of Mt Parnon (Greece). – Folia Geobot. **37:** 309-331.

Bothmer, R. von 1987: Differentiation patterns in the E Mediterranean *Scutellaria rubicunda* group (*Lamiaceae*). – Pl. Syst. Evol. **155:** 219-249.[CrossRef]

Constantinidis, T. 1997: The flora and vegetation of the mountains Gerania, Pateras and Kitheron (SE Sterea Ellas, Greece). – Ph. D. thesis, Athens [in Greek with an English summary].

— & Kalpoutzakis, E. 2005: A new species of *Achillea* (*Asteraceae: Anthemideae*) from south-east Peloponnisos, Greece. – Bot. J. Linn. Soc. **147:** 249-256.[CrossRef]

— & Kamari, G. 1994: Reports (377-386). [In: Kamari, G., Felber, F. & Garbari, F. (ed.), Mediterranean chromosome number reports 4]. – Fl. Medit. **4:** Pp. 290-295.

— , — & Phitos, D. 1997: A cytological study of 28 phanerogams from the mountains of SE Sterea Ellas, Greece. – Willdenowia **27:** 121-142.

Coulot, P., Rabaute, P., Michaud, H. & Molina, J. 2003: Observations botaniques, Péloponèse, Mai 2001. – Monde Pl. **481:** 18-27.

Dimopoulos, P. 1993: Floristic and phytosociological survey of Mt. Killini – an ecological approach. – Ph. D. thesis, Patras [in Greek with an English summary].

Gamal-Eldin, E. & Wagenitz, G. 1991: *Centaurea* L. – Pp. 488-524 in: Strid, A. & Tan, K. (ed.), The mountain flora of Greece **2.** – Edinburgh.

Greuter, W. 2003: The Euro+Med treatment of *Cardueae (Compositae)* – generic concepts and required new names. – Willdenowia **33:** 49-61.

— , Burdet, H. M. & Long, G. (ed.) 1984, 1986, 1989: Med-Checklist **1, 3, 4**. – Genève & Berlin.

Halácsy, E. de 1901: Conspectus florae Graecae **1.** – Lipsiae.

Hartvig, P. 2002: *Alyssum* L. – Pp. 199-224 in: Strid, A. & Tan, K. (ed.), Flora hellenica **2.** – Ruggell.

Iatrou, G. 1986: Contribution to the study of endemism of the flora of Peloponnisos. – Ph. D. thesis, Patras [in Greek with an English summary].

— 1989: *Linum hellenicum (Linaceae),* a new species from Peloponnisos, Greece. – Willdenowia **19:** 69-73.

— & Georgiadis, T. 1985: *Minuartia favargeri:* a new species from Peloponnesus (Greece). – Candollea **40:** 129-138.

Jafri, S. M. H. & El-Gadi, A. (ed.) 1983: Flora of Libya **107.** – Tripoli.

Kalpoutzakis, E. & Constantinidis, T. 2004: A new species of *Centaurea* (sect. *Phalolepis, Compositae*: *Cardueae*) from eastern Peloponnisos, Greece. – Bot. J. Linn. Soc. **146:** 375-383.[CrossRef]

— & — 2005: New data on the distribution of endemic and rare taxa in the flora of east Peloponnisos, Greece. – Bot. Chron. **18:** 115-136.

Kamari, G. 1995: *Minuartia pichleri* (Boiss.) Maire & Petitmengin. – Pp. 364-365 in: Phitos, D., Strid, A., Snogerup, S. & Greuter, W. (ed.), The Red Data Book of rare and threatened plants of Greece. – Athens.

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— 1997: *Minuartia* L. – Pp. 170-191 in: Strid, A. & Tan, K. (ed.), Flora hellenica **1.** – Königstein.
Kokkini, S. 1991: *Cephalaria* Schrader ex Roemer & Schultes. – Pp. 351-354 in: Strid, A. & Tan, K. (ed.), The mountain flora of Greece **2.** – Edinburgh.
Lack, H. W. & Mabberley, D. J. 1999. The Flora Graeca story. Sibthorp, Bauer and Hawkins in the Levant. – Oxford.
Maroulis, G. & Artelari, R. 2001: New records to the flora of Mount Erimanthos (NW Peloponnisos, Greece). – Fl. Medit. **11:** 311-331.
Parolly, G. & Nordt, B. 2002: A new chasmophytic species of *Potentilla* (*Rosaceae*) from S Anatolia, including some taxonomic remarks on *P*. subg. *Fragariastrum* in the E Mediterranean. – Willdenowia **32:** 73-84.
Phitos, D., Strid, A., Snogerup, S. & Greuter, W. (ed.) 1995: The Red Data Book of rare and threatened plants of Greece. – Athens.
Schönbeck-Temesy, E. & Ehrendorfer, F. 1991: *Asperula* L. – Pp. 281-300 in: Strid, A. & Tan, K. (ed.), The mountain flora of Greece **2.** – Edinburgh.
Sfikas G. 2004: New locality of *Linum phitosianum* – Fisi **106:** 20.
Strasser, W. 1986: Ost-Peloponnes. Botanische Studien 1986. – Steffisburg.
— 1997: Pflanzen des Peloponnes (Süd-Griechenland). – Vaduz.
Strid, A. & Tan, K. (ed.) 1997: Flora hellenica **1.** – Königstein.
— & — (ed.) 2002: Flora hellenica **2.** – Ruggell.
Szabó, Z. 1940: A *Cephalaria* génusz monográphiája. – Mat. Természettud. Közlem **38:** 1-352.
Tan, K. & Iatrou, G. 2001: Endemic plants of Greece. The Peloponnese. – København.
— & Stevanovic, V. 2002: *Draba* L. – Pp. 237-242 in: Strid, A. & Tan, K. (ed.), Flora hellenica **2.** – Ruggell.
Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (ed.) 1968-80: Flora europaea **2-5.** – Cambridge, etc.
Vassiliades, D. & Persson, K. 2002: A new species of *Colchicum* from Greece. – Preslia **74:** 57-65.
Verlaque, R. 1985: Étude biosystématique et phylogénétique des *Dipsacaceae*. III. Tribus des *Knautieae* et des *Dipsaceae*. – Rev. Cytol. Biol. Vég. Botaniste **8:** 171-243.
Wagenitz, G. 1971: *Centaurea pseudocadmea,* eine neue Art der Sektion *Phalolepis* aus Griechenland. – Ann. Naturhist. Mus. Wien **75:** 243-247.

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