Supplementary notes to the flora of Cyprus II.

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Supplementary notes to the flora of Cyprus II.

Abstract


Continuing a series of miscellaneous contributions by various authors, this second instalment includes data on 174 vascular plant taxa of Cyprus, concerning mainly chorological aspects. *Setaria adhaerens* var. *fontqueri* and *Saccharum strictum* are new records for the island. Chromosome numbers are given for *Glaucosciadium cordifolium* (2n = 18, first count for this species), *Nigella nigellastrum* (2n = 12) and *Valantia hispida* (2n = 18). New taxonomic considerations result in the new combinations *Scutellaria cypria* subsp. *elatior* and *Valantia hispida* var. *eburnea*.

Introduction

Since the publication of the first instalment (Hand 2000) several contributions to the flora of Cyprus have appeared (Coulot 2000, Chrtek & Slavík 2001, Rouet 2001), which include many additions to the knowledge of the botanical divisions of the island and complete the results of Meikle’s (1977, 1985) standard flora of the island. All known publications citing specimens have been considered in this second instalment, which again concentrates on the more important supplements. The other extensive material collected in Cyprus by several contributors and the editor during the last years will be the base of a chorological project to be realized in the years to come.

Because Chrtek & Slavík (2001) continued their series about the flora of Cyprus after a longer break, the nearly identical title of the present series has been changed. Explanations and criteria for the inclusion of data in the present series are to be found in Willdenowia 30: 53-54. The chromosome numbers have been obtained from somatic mitoses of root tips of plants raised from seeds (for further details about the standard method used, see e.g. Vogt & Aparicio 2000).

Contributions to the instamals to follow are welcome and should be sent to the editor. Contributors to this instalment (apart from the editor) are Heinz Kalheber (Runkel), Dr Norbert Kilian (Berlin), Prof. Dr Hildemar Scholz (Berlin) and W. Schwöbel (Köln), all Germany.
Spermatophyta

Ranunculaceae

Anemone blanda Schott & Kotschy
The species, common in the Pentadactylos range, was known only from a single site in the Troodos range (Meikle 1977).
Division 2: Pano Panagia, flanks of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, Kalheber 97-101; Pano Panagia, vicinity of summit Panagia (= Profitis Elias mountain), shady slopes, alt. c. 1100 m, 30.4.1998, Hand 2376.
R. Hand & H. Kalheber

Ranunculus cadmicus var. cyprius Boiss.
The endemic variety is locally common in the central part of the Troodos range and has not been collected in its W part. Chrtek & Slavík (2001) summarize arguments that the taxon merits the higher rank of a species.
Division 2: Pano Panagia, Cedar valley, path from parking area to the summit Tripylos, alt. c. 1250 m, 9.4.1992, Kalheber 92-394; H. Kalheber

Nigella nigellastrum (L.) Willk.
Chromosome number: 2n = 12. This counting confirms earlier results (e.g. Strid 1970).
Division 3: Choirokoitia, between ruins of the archaeological site, alt. 150 m, 8.10.1998 (seeds), K. P. Buttler, cultivated in B until 14.6.1999, Hand 3316. (ed.)

Nigella damascena L.
+ Division 2: Vretsia, at the track to Gefyra Roudia, c. 4.5 km before the bridge, alt. c. 450 m, 28.4.1998, Hand 2343; between Kato Gialia and Agia Marina, alt. c. 100 m, 30.3.1997, Kalheber 97-159.
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Papaveraceae

Glaucium corniculatum var. tricolor (Spreng.) Ledeb.
Meikle (1977) reports only a single collection of this variety from Cyprus.
Division 1: Pegeia, SE Akrotiri Lara, sandy beach and neighbouring sandy fields, alt. c. 2 m, 8.3.1998, Hand 1886.
+ Division 3: Agia Varvara, c. 1.5 km N, near group of rocks E of river Ezousa, waste ground, alt. c. 50 m, 29.3.1999, Hand 2699. (ed.)

Berberidaceae

Bongardia chrysogonum (L.) Endl.
+ Division 2: Pano Lefkara, at the track to Kato Drys, alt. c. 600 m, 14.4.1992, Kalheber 92-726; ibid., 8.4.1997, Kalheber 97-621.
H. Kalheber

Leontice leontopetalum L.
+ Division 2: Pano Lefkara, at the track to Kato Drys, alt. c. 600 m, 14.4.1992, Kalheber 92-725; ibid., 8.4.1997, Kalheber 97-620; Vavla, near Moni Agiou Mina, c. 330 m, 14.4.1992, Kalheber 92-748. The records from the same region mentioned by Alziar (2000) belong to division 2 or 3.
H. Kalheber
Fumariaceae

Fumaria judaica Boiss.
+ Division 2: Pano Panagia, flanks of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, Kalheber 97-086.

Cruciferae

Sinapis arvensis L. var. arvensis
+ Division 1: Neo Chorio, c. 1.5 km NNE Agios Minas, field margins, alt. c. 200 m, 3.4.1999, Hand 2724. (ed.)

Diplotaxis viminea (L.) DC.
+ Division 1: Kathikas, towards Agios Georgios Pegeias, fields above gorge, alt. c. 500 m, 10.4.1992, Kalheber 92-437; Neo Chorio, S exposed slope of Smigies, lower and middle part, rocky phrygana, alt. c. 350 m, 3.4.1999, Hand 2709.
R. Hand & H. Kalheber

Cakile maritima Scop.
+ Division 3: Mari, Governor’s Beach W of Vasiliko, alt. c. 2 m, 6.4.1997, Kalheber 97-488.

Alyssum umbellatum Desv.
In Cyprus known only from a single collection from the neighbouring summit Khorteri (Meikle 1977).
Division 2: Stavros tis Psokkas, track to Tripylos from road to Kykko NNW, lower and middle part, Cedrus libani-Pinus brutia forest, alt. c. 1100 m, 12.5.1999, Hand 3219. (ed.)

Alyssum foliosum Bory & Chaub.
According to Meikle (1977) collected only twice in Cyprus.
Division 2: Pano Panagia, Cedar valley, path from parking area to the summit Tripylos, alt. c. 1200 m, 9.4.1992, Kalheber 92-39; between Stavros tou Agiasmati and Lagoudera, alt. 880-1220 m, 3.3.1998, Hand 1840; Kannaviou, serpentine rock between road and river Ezousa half-way towards Melamiou junction (exactly at the border between divisions 1 and 3), alt. c. 350 m, 24.3.1998, Hand 1999.

Clypeola jonthlaspi L. var. jonthlaspi
+ Division 1: Kissongerra, c. 1 km below Mavrokolyvos dam, eroded clay on serpentine ridge S of the river, alt. c. 100 m, 22.3.1998, Hand 1984a; Sarama, hills N/NW Ge-tyra Skarfoou, rocky phrygana, alt. c. 200 m, 31.3.1999, Hand 3352. (ed.)

Clypeola jonthlaspi var. lasiocarpa Guss.
Meikle (1977) cites relatively few collections from Cyprus. At least in the W part of the island it is a common plant, maybe overlooked because of its flowering and fruiting in early spring.
+ Division 1: Kissongerra, c. 1 km below Mavrokolyvos dam, eroded clay on serpentine ridge S of the river, alt. c. 100 m, 22.3.1998, Hand 1984b; Pegeia, NE, at the old track to Kathikas, beginning of the upper third, grassy slope, alt. c. 400 m, 3.3.1998, Hand 1840; Kannaviou, serpentine rock between road and river Ezousa half-way towards Melamiou junction (exactly at the border between divisions 1 and 3), alt. c. 350 m, 24.3.1998, Hand 1999.
Prastio, at the road to Kidasi near the striking rock gate, on rocks on the opposite river side, alt. c. 150 m, 27.2.1998, Hand 1798; Episkopi (near Pafos), c. 3 km SSE, little gorge below E 606 road, rocky slope with phrygana, mostly serpentine, alt. c. 300 m, 4.3.1998, Hand 1852; Agia Varvara (near Acheleia), c. 1.5 km NNE, slopes above citrus plantations, rocky phrygana, alt. c. 150 m, 17.4.1999, Hand 2843.

Sisymbrium orientale L.

Chlorakas, at the cemetery, alt. c. 80 m, 27.4.1999, Hand 2919.

Torularia torulosa (Desf.) O. E. Schulz

Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, Kalheber 97-562.

Polygalaceae

Polygala venulosa Sm.

It is not clear whether the specimens cited by Alziar (2000) are from division 2 or 3.

Caryophyllaceae

Gypsophila pilosa Huds.

Della & Iatrou (1995) have added some further records of this hitherto rarely collected species. All collections support Meikle’s (1977) suggestion that G. pilosa is a (now established?) alien in Cyprus.

Silene aegyptiaca (L.) L. f.

Letymvou, defile on mountain ridge N of the village, margin of a vineyard, alt. c. 400 m, 11.5.1999, Hand 3197.

Silene laevigata Sm.

Dierona, c. 7.3 km towards Akrounta, rivulet above road, macchia in open Pinus brutia forest, alt. c. 610 m, 28.4.1999, Hand 2930.

Cerastium illyricum subsp. pilosum Rouy & Foucaud

Episkopi/Ezousa, c. 2.5 km SSW, N side of striking rock barrier, rocky slope, alt. c. 100 m, 6.4.1999, Hand 2753; Kathikas towards Agios Georgios Pegeias, terraces with Ceratonia siliqua plantations S of the Avgas gorge, alt. c. 300 m, 10.4.1992, Kalheber 92-467.

Cerastium glomeratum Thuill.

Kannaviou, serpentine rocks c. 400 m below village on the left bank of the river Ezousa, rocky ground, alt. c. 350 m, 6.5.1999, Hand 3095; Choirokoitia, between ruins of the archaeological site, alt. 150 m, 13.4.1992, Kalheber 92-637.
Cerastium brachypetalum subsp. roeseri (Boiss. & Heldr.) Nyman
+ Division 1: Episkopi/Ezousa, c. 2.5 km SSW, N side of striking rock barrier, rocky slope, alt. c. 100 m, 6.4.1999, Hand 2754.

Cerastium semidecandrum L.
Collected only once in Cyprus in 1905 but probably overlooked as suggested by Meikle (1977).
+ Division 2/6 (at the border): Between Agios Theodoros and Asinou church, Pinus brutia forest, 2.4.1997, Kalheber 97-286. H. Kalheber

Arenaria rhodia subsp. cypria (Holmboe) McNeill
+ Division 3: Kannaviou, serpentine rock between road and river Ezousa half-way towards Melamiou junction (exactly at the border between divisions 1 and 3), alt. c. 350 m, 24.3.1998, Hand 2004; Kannaviou, serpentine rocks c. 400 m below village on the left bank of the river Ezousa, rocky ground, alt. c. 350 m, 6.5.1999, Hand 3094; Dierona, c. 7.3 km towards Akrounta, rivulet above road, maechia in open Pinus brutia forest, alt. c. 610 m, 28.4.1999, Hand 2928. (ed.)

Sagina maritima G. Don
+ Division 3: Avdimou, at the coast towards Pissouri Bay, alt. c. 1 m, 12.4.1992, Kalheber 92-604. H. Kalheber

Illecebracaeae
Herniaria cinerea DC.
+ Division 3: Episkopi, ruin area of Kourion at the road Lemesos-Pissouri, alt. c. 100 m, 12.4.1992, Kalheber 92-537. H. Kalheber

Tamaricaceae
Tamarix tetragyna Ehrenb.
+ Division 1: Pafos, beach at the Tombs of the Kings area, alt. 2 m, 8.4.1992, Kalheber 92-336. H. Kalheber

Linaceae
Linum grandiflorum Desf.
The attractive species from N Africa is well known to gardeners (colour photo in e.g. Brickell 1999) and escapes here and there form cultivation (according to specimens in B known as alien from France, Germany and Italy). Chilton (1997) lists the taxon as “introduced” for Cyprus without further details. In the Pafos area it has been sown in public flower beds and is spreading now.
+ Division 1: Pafos, Danaes Avenue S of the traffic circle at the stadion, road side, 11.4.1999, Hand 2792; Geroskipou, along coastal track near public beach, c. 3 km S of village, field margin, alt. c. 3 m, 20.4.1999, Hand 2865. (ed.)

Linum strictum subsp. spicatum (Pers.) H. Lindb.
+ Division 2: Between Kato Gialia and Agia Marina, alt. c. 100 m, 30.3.1997, Kalheber 97-136; Kato Pyrgos, coastal slope W Akro Kokkina, below road, rocky phrygana, alt. c. 20 m, 10.4.1999, Hand 2769. R. Hand & H. Kalheber
Geraniaceae

**Geranium columbinum** L.
+ Division 3: Pyrga, towards Moni Stavrovouniou, N side of the mountain, alt. c. 500 m, 9.4.1997, *Kalheber 97-639.*
  
**Erodium cicutarium** (L.) L'Hér.
+ Division 1: Kathikas towards Agios Georgios Pegeias, fields above gorge, alt. c. 500 m, 10.4.1992, *Kalheber 92-436; Sarama, hills N/NW Gefyra Skarfo, rocky phrygana, alt. c. 200 m, 31.3.1999, *Hand 3360.*
  
**Erodium moschatum** (L.) L'Hér.
+ Division 2: Pano Panagia, flanks of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, *Kalheber 97-085.
  
**Erodium ciconium** (L.) L'Hér.
+ Division 1: Baths of Aphrodite, coastal track to Fontana Amoroza, alt. c. 50 m, 6.4.1992, *Kalheber 92-161.
+ Division 3: Kouklia, coastal slopes c. 2.5 km WNW of Petra tou Romiou, rocky phrygana, alt. c. 10 m, 14.3.1998, *Hand 1921; Avdimou, W part of the Avdimou Bay, alt. c. 10 m, 12.4.1992, *Kalheber 92-628; Episkopi, steep track to coast SW of Apollo temple, rocky slope, alt. c. 40 m, 18.3.1999, *Hand 2587. Reported by Alziar (1985) and Coulot (2000) for division 3 without cited specimens.**
  
**Erodium botrys** (Cav.) Bertol.

**Erodium laciniatum** (Cav.) Willd.
+ Division 1: Pafos, beach at the Tombs of the Kings area, alt. c. 2 m, 8.4.1992, *Kalheber 92-333.
  
Oxalidaceae

**Oxalis pes-caprae** L.
The following site is much above the maximum altitude for Cyprus (800 feet) given by Meikle (1977).
+ Division 2: Pano Panagia, surrounding of Lazarides bridge (= easternmost bridge in Kas-troulli area), riverine forest, alt. c. 550 m, 28.3.1999, *Hand 2681. (ed.)

Leguminosae

**Medicago orbicularis** (L.) Bartal.
+ Division 1: Pafos, grassy hill c. 200 m away from harbour castle, alt. c. 15 m, 10.4.1998, *Hand 2158; Tala, vicinity of Agia Varvara chapel in the Mavroklysempos valley, alt. c. 175 m, 16.4.1998, *Hand 2188; Pano Akourdaleia, E flank of Pitharolakhos gorge WSW of the village, upper slope, open macchia, alt. c. 375 m, 8.5.1999, *Hand 3137. (ed.)

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Medicago scutellata (L.) Mill.
+ Division 1: Tala, vicinity of Agia Varvara chapel in the Mavrokolympos valley, alt. c. 175 m, 16.4.1998, Hand 2189; Lysos, NE of the village, at junction to Kynousa, fields and neighbouring phrygana, alt. c. 500 m, 23.4.1998, Hand 2261. (ed.)

Medicago rotata Boiss.
+ Division 2: Between Agios Theodoros and Asinou church, Pinus brutia forest, 17.4.1992, Kalheber 92-910.

Medicago coronata (L.) Bartal.
+ Division 1: Baths of Aphrodite, c.1 km SSW, at the trail on the plateau, open Pinus brutia forest, alt. c. 120 m, 5.4.1998, Hand 2077. (ed.)

Medicago disciformis DC.
+ Division 3: Agios Tychon, ruin area of Amathous, alt. c. 30 m, 6.4.1997, Kalheber 97-470. H. Kalheber

Medicago truncatula Gaertn.
+ Division 1: Pafos, coast near the harbour castle, rocky and sandy beach, alt. c. 5 m, 8.4.1998, Hand 2120; Pegeia, rocky plateau NW of Coral Bay, alt. c. 25 m, 8.4.1992, Kalheber 92-351; Pegeia, fields in the plain NW of Agios Georgios Pegeias, alt. c. 15 m, 10.4.1992, Kalheber 92-472.
+ Division 3: Episkopi (near Pafos), c. 3 km SSE, little gorge below E 606 road, rocky slope with phrygana, mostly serpentine, alt. c. 300 m, 4.3.1998, Hand 1862.

Medicago rigidula (L.) All.
+ Division 1: Kannaviou, serpentine rock between road and river Ezousa half-way towards Melamiou junction, sparse phrygana (exactly at the border of divisions 1 and 3), alt. c. 350 m, 24.3.1998, Hand 2005; Pegeia, between Agios Georgios Pegeias and Avgas gorge, alt. c. 30 m, 5.4.1992, Kalheber 92-126.

Trifolium cherleri L.
+ Division 1: Sarama, hills N/NW Gefyra Skarfou, rocky phrygana, alt. c. 200 m, 31.3.1999, Hand 3350. (ed.)

Trifolium dasyurum C. Presl
+ Division 1: Tala, c. 1 km NW, at the track to chapel Agia Varvara, rocky phrygana, alt. c. 200 m, 15.3.1998, Hand 1939. (ed.)

Trifolium scutatum Boiss.
+ Division 3: Agios Tychon, ruin area of Amathous, alt. c. 30 m, 6.4.1997, Kalheber 97-472. H. Kalheber

Trifolium campestre Schreb.
The cited specimen with long peduncles much exceeding the subtending leafs and small inflorescences is intermediate between T. campestre subsp. campestre and subsp. paphium Meikle (the latter restricted to the W part of the island). As pointed out by Meikle (1977) the species
varies in many characters in Cyprus as greatly as in other parts of its area. It should be given further attention in the future.

Division 3: Pyrga, slopes of Stavrovouni, alt. c. 450 m, 9.4.1997, Kalheber 97-644.

H. Kalheber

**Lotus halophilus** Boiss. & Spruner

+ Division 1: Ineia, at the coast c. 1 km SSE Lara, sandy beach at the creek mouth, alt. c. 5 m, 7.5.1997, Hand 1251; Pafos, beach at the Tombs of the Kings area, alt. c. 2 m, 8.4.1992, Kalheber 92-317; ibid., 1.4.1997, Kalheber 97-236; Pegeia, rocky plateau NW of Coral Bay, alt. c. 30 m, 8.4.1992, Kalheber 92-364.

R. Hand & H. Kalheber

**Lotus edulis** L.

+ Division 3: Pissouri, valley towards Pissouri Bay, alt. c. 30 m, 12.4.1992, Kalheber 92-570.

Mentioned by Coulot (2000) for the same division but without cited specimens.

H. Kalheber

**Astragalus sinaicus** Boiss.

+ Division 2: Kato Pyrgos, coastal slope W of Akro Kokkina, below road, rocky phrygana, alt. c. 20 m, 10.4.1999, Hand 2764.

H. Kalheber

**Scorpiurus muricatus** var. *subvillosus* (L.) Lam.

+ Division 2: Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, Kalheber 97-582.

H. Kalheber

**Hippocrepis unisiliquosa** subsp. *bisiliqua* (Forssk.) Bornm.

+ Division 1: Pegeia, between Agios Georgios Pegeias and Avgas gorge, alt. c. 30 m, 5.4.1992, Kalheber 92-079.

H. Kalheber

**Hippocrepis ciliata** Willd.

+ Division 2: Kato Pyrgos, coastal slope W of Akro Kokkina, below road, rocky phrygana, alt. c. 20 m, 10.4.1999, Hand 2763.

(edi.)

**Onobrychis venosa** (Desf.) Desv.

+ Division 2: Pano Panagia, flanks of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, Kalheber 97-076; Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, Kalheber 97-577.

A record from the Leikara area (Alziar 2000) may belong to this division or division 3.

H. Kalheber

**Vicia sativa** var. *angustifolia* L.

+ Division 1: Koili, towards Moni Agiou Neofytou, alt. c. 500 m, 5.4.1992, Kalheber 92-025.

H. Kalheber

**Vicia monantha** Retz.

+ Division 2: Between Agios Theodoros and Asinou church, *Pinus brutia* forest, 17.4.1992, Kalheber 92-887.

H. Kalheber

**Vicia palaestina** Boiss.

+ Division 1: Pegeia, between Agios Georgios Pegeias and Avgas gorge, alt. c. 30 m, 5.4.1992, Kalheber 92-119.
+ Division 2: Pano Lefkara, at the track to Kato Drys, alt. c. 600 m, 14.4.1992, Kalheber 92-720; Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, Kalheber 97-569. H. Kalheber

**Lens nigricans** (M. Bieb.) Godr.

According to Meikle (1977) rare and collected only twice in Cyprus (cf. also the recent taxonomic treatment of the genus by Ferguson & al. 2000).

**Lathyrus annuus** L.

+ Division 2: Between Kato Gialia and Agia Marina, alt. c. 100 m, 30.3.1997, Kalheber 97-160; Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, Kalheber 97-564. H. Kalheber

**Lathyrus sativus** L.

+ Division 1: Pafos, c. 500 m ENE Tombs of the Kings, as a weed in fields, alt. c. 10 m, 14.3.1999, Hand 2565. (ed.)

**Lathyrus blepharicarpus var. cyprius** Meikle

+ Division 2: Pano Panagia, rocky slope on the SE flank of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, Kalheber 97-092; Pano Panagia, slope SW of Moni Chryssorogiatissa, below picnic site, pasture, alt. c. 800 m, 5.4.1999, Hand 2742; Kato Pyrgos, coastal slope W of Akro Kokkina, below road, rocky phrygana, alt. c. 20 m, 10.4.1999, Hand 2765. R. Hand & H. Kalheber

**Lathyrus setifolius** L.

Meikle (1977) cites a single unrevised collection from Larnaca only.

+ Division 2: Between Kato Gialia and Agia Marina, alt. c. 100 m, 30.3.1997, Kalheber 97-183. H. Kalheber

**Rosaceae**

*Crataegus monogyna* Jacq.

+ Division 1: Tala, ENE (above) Moni Agiou Neophytou, bank of a rivulet, alt. c. 450 m, 9.5.1999, Hand 3156. (ed.)

**Neuradaceae** (included in Rosaceae by Meikle 1977; the systematical position of the genus is still discussed controversially, cf. e.g. Huber 1993, Ronse Decraene & Smets 1995)

**Neurada procumbens** L.

According to Meikle (1977) in Cyprus known only from “sand-dunes by the shore between Limassol and Amathus”. The following record means a slight extension of the species’ area. Obviously, *N. procumbens* is highly endangered by the destruction of sand-dunes by hotel constructions.

**Crassulaceae**

*Crassula alata* (Viv.) Berger

+ Division 3: Episkopi, ruin area of Kourion at the road Lemesos-Pissouri, alt. c. 100 m, 12.4.1992, Kalheber 92-568. H. Kalheber
**Cucurbitaceae**

_Echallium elaterium_ L.
+ Division 3: Timi, W edge of the village, at track near cemetery, field margins and waste land, alt. c. 50 m, 24.4.1999, _Hand 2883_.
Mentioned without cited specimens for this division by Alziar (1985). (ed.)

**Umbelliferae**

_Eryngium creticum_ Lam.
+ Division 1: Pafos, beach at the Tombs of the Kings area, alt. c. 2 m, 1.4.1997, _Kalheber 97-233_.

_Eryngium glomeratum_ Lam.
+ Division 3: Pano Archimandrita, towards Chapotami valley, 11.4.1992, _Kalheber 92-508_.

_Scandix australis_ L.
Meikle (1985) gives a maximum altitude of 1000 feet above sea-level for this species in Cyprus.
+ Division 2: Agios Ioannis, SW slope of mountain SE of the village, phrygana on abandoned vineyards, alt. c. 800 m, 4.5.1999, _Hand 3061_.

_Torilis heterophylla_ Guss.
+ Division 3: Kalokedara, striking rockslide at the road c. 1.5 km NE, alt. c. 600 m, 4.5.1999, _Hand 3073_; Kannaviou, on the left bank of river Ezousa below the bridge, humid ground along track, alt. c. 320 m, 6.5.1999, _Hand 3100_. (ed.)

_Daucus carota_ L. s. l.
+ Division 3: Anglisides, S slope of Stavrovouni and adjacent fields, alt. c. 300 m, 9.4.1997, _Kalheber 97-658_.

_Daucus glaber_ (Forssk.) Thell.
+ Division 3: Agios Tychnon, dunes at the coast c. 1.2 km E Amathus, open sands, alt. c. 5 m, 7.5.1999, _Hand 3113_. (ed.)

_Cachrys crassiloba_ (Boiss.) Meikle
+ Division 3: Kannaviou, serpentine rocks c. 400 m below village on the left bank of the river Ezousa, rocky ground, alt. c. 350 m, 6.5.1999, _Hand 3096_. (ed.)

_Bupleurum trichopodum_ Boiss. & Spruner
+ Division 1: Baths of Aphrodite, at the coastal track to Fontana Amoroza, open ground N of the forest area, alt. c. 50 m, 6.4.1992, _Kalheber 92-230_.

_Pimpinella peregrina_ L.
+ Division 3: Tala, NW slope of Tsarta SE of Moni Agiou Neofytou and vicinity of the monastery, 1.4.1997, _Kalheber 97-230_.

_Ferula communis_ L.
+ Division 1: Tala, NW slope of Tsarta SE of Moni Agiou Neofytou and vicinity of the monastery, 1.4.1997, _Kalheber 97-226_.

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**Tordylium aegyptiacum** (L.) Poir.

+ Division 2: Pano Lefkara, at the track to Kato Drys, alt. c. 600 m, 8.4.1997, *Kalheber 97-598.*

**Glaucosciadium cordifolium** (Boiss.) B. L. Burtt & P. H. Davis

Chromosome number: 2n = 18 (voucher: *Cubr 38084*). Obviously, the chromosome number of this monotypic genus restricted to parts of Turkey and Cyprus has never been recorded before.

+ Division 3: Trimiklini, road side at S edge of village, rocky bank, alt. c. 580 m, 30.4.1999, *Hand 3015*; Kalokedara, striking rockslide at the road c. 1.5 km NE, rocky slope, alt. c. 600 m, 4.5.1999, *Hand 3072.*


**Rubiaceae**

**Valantia eburnea** Brullo and **Valantia hispida** L.

Brullo (1991) described *Valantia eburnea* as a new species endemic to W Cyprus. Apart from this taxon the small genus *Valantia* comprises only six species including two recently described taxa with very restricted areas on Italian islands (Aiello & al. 1981, Brullo 1979, 1980). The morphology of the fructiferous corpora (= recurved accrescent peduncles and pedicels) is considered to be the most important character of diagnostic value (Aiello & al. 1981). The description of *V. eburnea* is based on plants (or better the remains of this spring annual) collected in autumn 1989. They show "a fructiferous corpus quite different from the known species" (Brullo 1991). Plants cultivated in Sicily proved to be constant in several characters, e.g. the occurrence of only a few bristles on the corpora compared to numerous bristles in typical *V. hispida* (Brullo 1991).

Some additional observations concerning this taxon can be given, which lead to a revised taxonomic treatment. In 1998 and 1999 several populations could be observed over longer periods of up to three months including controls at the locus typi at Pafos. Furthermore, many specimens of *V. hispida* s. l. were collected in several parts of W Cyprus considering the ecological and altitudinal amplitude of the group.

The coastal plants, probably identical to the maritime forms already mentioned by Meikle (1977), had fructiferous corpora and other characters totally identical to the plants described and illustrated by Brullo (1991), but only in the early spring approximately until March. Later developing upper parts of stems and fructiferous corpora showed an increasingly denser indumentum towards the end of spring. These upper parts of the plants are indistinguishable from typical *V. hispida* either from Cyprus or from other parts of the Mediterranean area. Mainly these upper parts break away in early summer and may play an important role in the epizoocorous distribution (cf. Ehrendorfer 1970). The lower internodes with the striking bleached, ivory coloured corpora remain until autumn and often to the next spring. Obviously, they are primarily distributed by wind and water (many sites are reached by the sea in strong winter storms). *Eburnea* type plants are common in but not restricted to coastal habitats (sandy and rocky beaches). They were found also in the interior of the island, mainly in xeric habitats such as dry, rocky slopes, whereas typical *V. hispida* grows more often but not exclusively in somewhat mesic situations. Morphologically intermediate populations (i.e. plants with medium numbers of bristles on the lower fructiferous corpora) are common and there is no clearcut difference between the two taxa.

Other characters which should differentiate both taxa according to Brullo (1991; e.g. presence or absence of dorsal snout-like appendices on the corpora, number of mericarps in seed bearing cavity, length of hairs on stems, flower size) are much more variable than described.
According to Brullo (1991) “ *V. hipida* lacks … the occurrence of two mericarps in the seed bearing cavity” (*V. eburnea* typically should have two). This is not in accordance with earlier results of Ehrendorfer (1976) and Aiello & al. (1981) who mention “usually two” respectively “two” mericarps. In *V. hispida* the number of bristles on the corpora is highly variable; the aforementioned authors give 15-25 on the dorsal part or 13-32 in total. Plants from the E Mediterranean coasts, e.g. from Greece or Israel (see below), have sometimes much fewer bristles. Corpora from the Libyan Cyrenaica depicted in Brullo (1979) sub *V. hispida* seem to be partly much closer to *eburnea* type plants from Cyprus than to Cypriot *V. hispida* illustrated by Brullo (1991) or *V. hispida* material in general. According to Brullo (1991) the [hermaphrodite?] flowers of *V. hispida* possess a smaller corolla (1-1.5 mm in diameter) than those of *V. eburnea* (hermaphrodite flowers 1.8-2.2 mm, male flowers 1.2-1.5 mm). Ehrendorfer (1976) mentions 1.5-2 mm for the hermaphrodite flowers of *V. hispida* in the Flora Europaea area.

Summarizing the results it seems that the plants named *V. eburnea* by Brullo are surely more than mere habitat induced variants. Because no clear morphological, ecological and geographical break but a gradual transition from one extreme (*V. eburnea*) to the other (typical *V. hispida*) exists, the former, possibly not endemic to Cyprus, should be treated as mostly sympatric variety of the highly polymorphic *V. hispida*. The ranks of species or subspecies seem inappropriate for the reasons given. Populations approaching *eburnea* are to be found in the whole E Mediterranean area westwards to the Greek mainland. However, a revision of the species *V. hispida* s.l., especially of material from Greece and Libya eastwards is in urgent need.

*Valantia hispida* var. *eburnea* (Brullo) Hand, *comb. & stat. nov.*
≡ *Valantia eburnea* Brullo in Willdenowia 20: 73. 1991 (isotype B!)

Specimens seen (all rev. Hand):

**Valantia hispida** var. *hispida*

Division 1: Neo Chorio, S exposed slope of Smigies, lower and middle part, rocky phrygana, alt. c. 350 m, 3.4.1999, *Hand* 2708; Pegeia, between Agios Georgios Pegeias and Avgas gorge, 5.4.1992, *Kalheber* 92-062; Baths of Aphrodite, coastal track to Fontana Amorosa, alt. c. 50 m, 6.4.1992, *Kalheber* 92-235; Pegeia, fields in the plain NW of Agios Georgios Pegeias, 10.4.1992, *Kalheber* 92-489; Pafos, sandy beach SW lighthouse, alt. c. 2 m, 12.3.1999, *Hand* 2535; Tala, slope NW above Agios Neofytoys, phrygana, alt. c. 450 m, 12.03.1999, *Hand* 2532.

Division 2: Troodos-Gebirge, bei Kykko, in Schotter, alt. c. 1250 m, 15.4.1987, *Hiepko* 2804 (B); Pano Panagia, area between Alonoudhi bridge and next bridge WNW, rocky, shadowy riverine forest, alt. c. 650 m, 28.3.1999, *Hand* 2677.

**Valantia hispida** var. *eburnea*

Division 1: Pafos, rocky coast at the S edge of the Tombs of the Kings area, alt. c. 2 m, 10.5.1998, *Hand* 2431; Pafos, coastal track SSW lighthouse, rocky coast, alt. c. 5 m, 27.04.1999, *Hand* 2921; Pafos, coast W of harbour castle, rocky coast, alt. c. 5 m, 29.3.1999, *Hand* 2684; Paphos, costa rocciosa, 9.10.1988, *Brullo & Pavone* (B); Agia Marinouda, c. 1 km NNE, in geologically varied valley below rubbish-tip, phrygana, alt. c. 150 m, 9.4.1998, *Hand* 2137.
Division 2: Agios Ioannis, SW flank of height 879, SE of the village, phrygana on abandoned vineyards, alt. c. 800 m, 4.5.1999, Hand 3056; Pano Panagia, serpentines form the picnic area near Moni Chrysorriogiatissa towards summit of Panagia, lower part, alt. c. 820 m, 30.4.1998, Hand 2370.

Division 3: Agia Varvara, c. 1.5 km N, near group of rocks E of river Ezousa, waste ground, alt. c. 50 m, 29.3.1999, Hand 2689a; Timi, W edge of the village, from cemetery c. 500 along track, field margins and waste land, alt. c. 50 m, 24.04.1999, Hand 2886; Kouklia, small gorge in coastal slope c. 1.5 W Petra tou Romiou, alt. c. 5 m, 10.4.1998, Hand 2152; bei Petra tou Romiou am Meer, alt. 2 m, 30.3.1995, Ulrich (B); Dierona, c. 7.3 km towards Akrounta, rivulet above road, macchia in open *Pinus brutia* forest, alt. c. 610 m, 28.4.1999, Hand 2934.

Valantia hispida (transitus var. eburnea in var. hispida)

Division 1: Cap Drépanum (base W de la presqu'île d'Akamas), alt. 40 m, 11.4.1992, Lambi- non 92/Cy/208 & van den Sande (B); Pegeia, between coast and Avgas gorge, rocky river bed, alt. c. 30 m, 29.4.1997, Hand 1206; Koili, towards Moni Agiou Neofytou, alt. c. 500 m, 5.4.1992, Kalheber 92-024; Pafos, E edge of the town, beach at Hotel Paphian Bay, 28.3.1997, Kalheber 97-022.

Division 2: Kannaviou, hill W of the road, NE junction to Anadiou, rocky phrygana, alt. c. 350 m, 22.03.1999, Hand 2630.

Division 3: Nikokleia, below Asprokremnos dam, phrygana on gravel, alt. c. 25 m, 20.3.1999, Hand 2590; Agia Varvara, c. 1.5 km N, near group of rocks E of river Ezousa, waste ground, alt. c. 50 m, 29.3.1999, Hand 2689b; Limassol-Zakaki, E part of the salt lake, dry part of the salt lake, alt. 0 m, 30.4.1997, Hand 1215; Mari, Governor’s Beach W of Vasiliko, alt. c. 1 m, 6.4.1997, Kalheber 97-502.

Selected intermediate specimens from outside Cyprus:


ISRAEL: Palaestina australis, Jaffa, in siccis arenosis, 7.4.1897, Bornmüller (Iter Syr. 738) (B); Ölberg bei Jerusalem, 25.5.1904, Kneucker (B).

LEBANON: Montium Libani australis in declivitatibus occidentalis ad pagum Bhamdûn, alt. 1200-1300 m, 18.6.1910, J. & F. Bornmüller (Iter Syr. II 11888) (B).

Valantia hispida an V. columella (Boiss.) Meikle?

The following specimens seem to approach *V. columella* in the exceptionally hirsute-hispid indumentum of the fructiferous corpora (cf. Meikle 1977; 776, note on *V. hispida*).

Division 2: Kato Gialia, towards Agia Marina, alt. c. 100 m, 30.3.1997, Kalheber 97-115; Kato Pyrgos, coastal slope W Akro Kokkina, below road, rocky phrygana; alt. c. 20 m, 10.4.1999, Hand 2770.

Valantia hispida var. hispida

Chromosome number: 2n = 18. The same chromosome number has been found by several other authors, e.g. Dahlgren & al. (1971) or Luque & Díaz Lifante (1991), who counted in W Mediterranean plants.

Division 3: Gerasa, road to Kalo Chorio, 1.2 km N of junction to Apsiou, valley of small brook, alt. 460-470 m, 12.10.1998 (seeds), K. P. Butler, cultivated until 7.6.1999, *Cabr* (accession number 081-10-99-10, garden herbarium B) and 14.6.1999, Hand 3315.
Galium setaceum Lam. var. setaceum
+ Division 1: Baths of Aphrodite, at the coastal track to Fontana Amoroza, open ground N of the forest area, alt. c. 50 m, 6.4.1992, Kalheber 92-225; Agia Marinouda, c. 1 km NNE, in geologically varied valley below rubbish-tip, phrygana, alt. c. 150 m, 9.4.1998, Hand 2135; Melandra, NE of the village, vicinity of track junction, alt. c. 600 m, 23.4.1998, Hand 2278; Pegeia, river valley NE of crossing at Coral Bay, dry river bed, alt. c. 50 m, 21.3.1999, Hand 2611.
R. Hand & H. Kalheber

Galium murale (L.) All.
+ Division 3: Pano Archimandrita, towards Chapotami valley, 11.4.1992, Kalheber 92-508; Mari, Governor’s Beach W of Vasiliko, alt. c. 5 m, 6.4.1997, Kalheber 97-556.
H. Kalheber

Valerianaceae

Valerianella triceras Bornm.
In Cyprus the rare species has been collected only twice at the nearby Papoutsa summit (Meikle 1985).
Division 2: Agios Theodoros, rivulet above road 4.4 km before the turn-off to Askas, N of Papoutsa, alt. c. 1100 m, 10.5.1999, Hand 3187. (ed.)

Dipsacaceae

Scabiosa argentea L.
Meikle (1985) mentions the taxon for Cyprus only from a restricted area of limestone and chalk hills at the S edge of the Central Troodos range.
Division 2: Pano Panagia, flanks of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, Kalheber 97-096.
H. Kalheber

Scabiosa cyprica Post
Known only from the same region as S. argentea (Meikle 1985). Additionally, Tsintides (1998) mentions the species from the Oritaes Forest NW of Petra tou Romiou without further details. This and the following lowland site extend the area of the endemic species considerably.
Division 3: Avdimou, plateau above the coast towards Pissouri Bay, alt. c. 100 m, 12.4.1992, Kalheber 92-611.
H. Kalheber

Pterocephalus brevis Coult.
+ Division 2: Kato Pyrgos, coastal slope W of Akro Kokkina, below road, rocky phrygana, alt. c. 20 m, 10.4.1999, Hand 2773. (ed.)

Pterocephalus multiflorus Poech
The species is one of the many examples of Cypriot endemic vicariads with more or less completed separation as species or subspecies. P. multiflorus subsp. multiflorus has been found only in the Troodos range and its direct vicinity, subsp. obtusiflorus Holmboe mainly in the Penta-dactyllos range with isolated sites at the S coast (Meikle 1985). The only features distinguishing both taxa seem to be the general form of the leaflet and its apex. Even these features are difficult to judge in the highly variable populations from W Cyprus. Therefore, the determination of subspecies below should be treated as provisional.
+ Division 1: Empa, serpentine quarry at the road to Tala, serpentine rocks, alt. c. 150 m, 7.3.1998, Hand 1875 (transitus multiflorus-obtusifolius); Kathikas, at the road
to Pegeia, c. 1.8 km WSW, slope S of the road, alt. c. 500 m, 14.4.1998, Hand 2180 (transitus multiflorus-obtusifolius); Tala, NW slope of charta SE of monastery Agios Neofytoς, 1.4.1997, Kalheber 97-225 (transitus multiflorus-obtusifolius); ibid., slope SE (above) monastery Agios Neofytos, c. 30 m below transmitter on summit, phrygana, alt. c. 575 m, 21.2.1998, Hand 1758 (subsp. obtusifolius); Pano Akourdaleia, E flank of Pitharolakhs gorge WSW of the village, upper slope, open macchia, alt. c. 375 m, 8.5.1999, Hand 3140 (subsp. multiflorus).

Division 2/3: Lapithiou, at the track between Moni Panagia Chrysorrogiatissas and Kannaviou, 7.4.1992, Kalheber 92-256 (subsp. multiflorus).

Division 3: Nata, rocky hill W of the Xeros Potamos bridge, alt. c. 100 m, 9.3.1998, Hand 1904 (subsp. obtusifolius); Agia Varvara, c. 1.5 km N, near group of rocks E of river Ezousa, rocky phrygana, alt. c. 50 m, 29.3.1999, Hand 2694 (subsp. multiflorus).

**Compositae**

*Evax pygmaea* (L.) Brot.

There was only a somewhat doubtful collection from the N part of the island but Meikle (1985) assumes that these “dowdy little Composites … may not be so rare in Cyprus as would appear”. Alziar (1985) collected the species twice in Cyprus (including division 1).

Division 1: Pegeia, rocky plateau NW of Coral Bay, alt. c. 30 m, 8.4.1992, Kalheber 92-362, det. Wagenitz. H. Kalheber

Evax eriosphaera Boiss. & Heldr.

The cited specimens are from areas much above the maximum altitude of 1000 feet above sea-level given for the species in Cyprus by Meikle (1985).

Division 2: Stavros tis Psokas, Cedar Valley, path from the picnic site and parking to the summit Thremetussa (1407 m), alt. c. 1200 m, 9.4.1992, Kalheber 92-416, det. Wagenitz; Agios Ioannis, SW slope of mountain SE of the village, phrygana on abandoned vineyards, alt. c. 800 m, 4.5.1999, Hand 3067.

R. Hand & H. Kalheber

*Bombycilaena discolor* (Pers.) M. Laínz

Division 1: Sarama, hills N/NW Gefyra Skarfou, rocky phrygana, alt. c. 200 m, 31.3.1999, Hand 3358. (ed.)

**Phagnalon rupestre** (L.) DC. subsp. rupestre

The taxonomic treatment by Meikle (1985), who prefers subspecific rank for the two taxa occurring in Cyprus (*Ph. rupestre* subsp. graecum (Boiss. & Heldr.) Hayek is restricted to the S and W of the island), is followed here for the moment. Chrtek & Slavík (1993) have mapped the distribution in Cyprus and come to the conclusion that both taxa should be separated as species, because no intermediate forms were seen. The possible contact zone of the two taxa, the Pitsylia region, has been neglected by collectors until now and the taxonomic situation needs to be clarified for a final judgement. The specimen from division 3 cited below (collected where the areas of both taxa meet according to the map in Chrtek & Slavík 1993) has intermediately coloured and shaped phyllaries and may indicate the E part of such a contact zone.

Division 3: Platanistasa, at the old aqueduct NE (below) turn-off N of the village, phrygana, alt. c. 775 m, 10.5.1999, Hand 3193. (ed.)

Otanthus maritimus (L.) Hoffmanns. & Link subsp. maritimus
The separation of two subspecies by Chrtek & Slavík (1993) is followed here.
+ Division 2: Gialia, sandy beach W of the village, W of the coastal road, alt. c. 3 m, 10.4.1999, Hand 2781.

Carduus pycnocephalus subsp. albidus (M. Bieb.) Kazmi
The record from “Ayia Mavri, Kilani” (Alziar 2000) may be from this division or division 2.
R. Hand & H. Kalheber

Silybum marianum (L.) Gaertn.

Tolpis barbata (L.) Gaertn.
Hitherto in Cyprus known only from collections from the Akamas area in the extreme NW (Meikle 1985, Alziar 2000).
+ Division 2: 1 km E of Agios Theodoros, 17.4.1992, Kalheber 92-879.
+ Division 3: Agia Varvara, c. 1.5 km NNE, slopes above citrus plantations, rocky phrygana, alt. c. 150 m, 17.4.1999, Hand 2849.

Koelpinia linearis Pallas
+ Division 4: Larnaca, SW shore of the salt lake, near Hala Sultan Tekkesi, alt. 3 m, 18.4.1992, Kalheber 92-943.

Crepis pulchra L.
+ Division 3: Gerasa, at track c. 200 m W above picnic site Agia Paraskevi, Pinus brutia forest, alt. c. 600 m, 30.4.1999, Hand 3022.

Crepis foetida subsp. commutata (Spreng.) Babc.
+ Division 2: Kato Gialia, at the track to Agia Marina, 30.3.1997, Kalheber 97-155.

Crepis sancta (L.) Bornm.
+ Division 1: Koili, towards Moni Agiou Neofytou, alt. c. 500 m, 5.4.1992, Kalheber 92-017; Pegeia, between Agios Georgios Pegas and Avgas gorge, alt. c. 30 m, 5.4.1992, Kalheber 92-095; Baths of Aphrodite, at the coastal track to Fontana Amoroza, open ground N of the forest area, alt. c. 50 m, 6.4.1992, Kalheber 92-216; Kathikas, gorge W of the village, left side of upper part, 10.4.1992, Kalheber 92-452; Pafos, c. 400 m SSW lighthouse, waste land, alt. c. 10 m, 13.3.1999, Hand 2538.

Reichardia intermedia (Sch. Bip.) Cout.
+ Division 1: Pegeia, river valley NE of crossing at Coral Bay, dry river bed, alt. c. 50 m, 21.3.1999, Hand 2617; Sarama, hills N/NW Gefyra Skarflou, rocky phrygana, alt. c. 200 m, 31.3.1999, Hand 3359.

Sonchus tenerrimus L.
+ Division 3: Pissouri, valley towards Pissouri Bay, alt. c. 30 m, 12.4.1992, Kalheber 92-586.
Launaea fragilis (Asso) Pau [Syn.: L. resedifolia auct., non (L.) Kuntze]
+ Division 3: Akrotiri, dunes at the edge of the salt lake c. 1 km N of Moni Agiou Nikolaou, not far from the watch-tower, open sands, alt. 0 m, 7.5.1999, Hand 3124, conf. Kilian. R. Hand & N. Kilian

Campanulaceae

Legousia falcata (Ten.) Janch. var. falcata
Meikle (1985) describes the chorology of the two varieties occurring in Cyprus: L. falcata var. falcata is known from a single gathering from the Akamas area, L. falcata var. scabra (Lowe) Meikle is a common plant of both mountain ranges of Cyprus. The following collections confirm the occurrence of the former in the NW of Cyprus. Alziar (2000) mentions another specimen from that area without infraspecific details.
Division 1:
- Baths of Aphrodite, plateau at the Aphrodite trail, alt. c. 240 m, 6.4.1992, Kalheber 92-242; Drouseia, WNW edge of the village, by the way to the new chapel, field margins, 29.4.1999, alt. c. 600 m, Hand 2984; Neo Chorio, fields c. 1.3 km N Agios Minas, alt. c. 200 m, 19.4.1998, Hand 2212; Lysos, NE of the village, at junction to Kynousa, fields and neighbouring phrygana, alt. c. 500 m, 23.4.1998, Hand 2259.
  R. Hand & H. Kalheber

Boraginaceae

Asperugo procumbens L.
+ Division 1:
  - Kathikas towards Agios Georgios Pegeias, fields above gorge, alt. c. 500 m, 10.4.1992, Kalheber 92-791; ibid., 31.3.1997, Kalheber 97-200.
  H. Kalheber

Anchusa humilis (Desf.) I. M. Johnst.
+ Division 2:
  - Gialia, sandy beach W of the village, W of the coastal road, alt. c. 3 m, 10.4.1999, Hand 2782.
  (ed.)

Convolvulaceae

Convolvulus althaeoides L.
+ Division 1:
  - Pegeia, between Agios Georgios Pegeias and Avgas gorge, alt. c. 30 m, 5.4.1992, Kalheber 92-114; Chlorakas, coast c. 500 m S of the fishermen’s harbour below the village, coastal rocky phrygana, alt. c. 5 m, 9.3.1998, Hand 1898; Episkopi/Ezousa, c. 2 km SSW, along way in the middle part of the slope, phrygana, alt. c. 125 m, 6.4.1999, Hand 2752.
  Reported from division 1 without cited specimens by Chrték & Slavík (1993) and Rouet (2001; “Paphos plage” erroneously to division 2).
  R. Hand & H. Kalheber

Solaceae

Withania somnifera (L.) Dunal
+ Division 3:
  - Kolossi, at Kolossi castle, alt. c. 40 m, 12.4.1992, Kalheber 92-551.
  H. Kalheber
Scrophulariaceae

Linaria pelisseriana (L.) Mill.
Collected only twice in Cyprus (Meikle 1985).
Division 6: fields SW of Asinou church, 17.4.1992, Kalheber 92-928. H. Kalheber

Linaria simplex Desf.
+ Division 3: Agia Varvara (near Acheleia), c. 1.5 km N, near group of rocks E of river Ezousa, waste ground, alt. c. 50 m, 29.3.1999, Hand 2688.
Already mentioned for division 3 by Coulot (2000) but without cited specimen. (ed.)

Veronica anagallis-aquatica L.
+ Division 1: Pegeia, c. 3 km SSE, small gorge in serpentine area at the road to Akoursos, rivulet, alt. c. 100 m, 5.5.1999, Hand 3083. (ed.)

Parentucellia latifolia subsp. flaviflora (Boiss.) Hand.-Mazz.
+ Division 3: Souskiou, 300 m SE Agios Neofytos, slope S of road, phrygana with patches of macchia, alt. c. 250 m, 20.3.1999, Hand 2592.
Reported for division 3 without cited specimen by Alziar (1985). (ed.)

Scutellaria cypria Rech. f.
The differences between the two endemic taxa S. cypria var. cypria and var. elatior Meikle have been described in detail by Meikle (1985). They differ in several morphological characters and are separated ecologically and geographically. Because they merge only in restricted areas (details cf. Meikle 1985) the taxa seem to be a classical example for geographically defined subspecies “en miniature” and not merely varieties. The situation is paralleled by several other taxa in Cyprus, e.g. the varieties of Genista sphacelata Decne., which have been upgraded to subspecies by Chrtck & Slavík (1981).

Scutellaria cypria subsp. elatior (Meikle) Hand, comb. & stat. nov.
The following specimens morphologically intermediate between the two taxa confirm the existence of the aforementioned contact zone in the westernmost part of the Troodos range and adjacent hill regions of W Cyprus.
Division 1: Drouseia, WNW edge of the village, by the way to the new chapel, phrygana on the hill close to the chapel, alt. c. 630 m, 29.04.1999, Hand 2985; Tala, c. 1 km SW Agia Varvara chapel at the track, alt. c. 200 m, 16.4.1998, Hand 2182.
Division 2: Pomos, Livadi valley, from the picnic site above dam to c. 3 km upstream, open Pinus brutia forest, alt. c. 200 m, 18.5.1999, Hand 3307; Kannaviou, Argaki tis Agias valley upstream the road to Panagia, on rocks somewhat above second bridge, alt. c. 450 m, 21.4.1998, Hand 2249; Stavros tis Psokas, Cedar Valley, along Tripylos trail c. 500-1000 m above picnic site, alt. c. 1200 m, 13.5.1998, Hand 2450. (ed.)

Verbenaceae

Phyla nodiflora (L.) Greene
+ Division 1: Coastal meadow NW of Agios Georgios Pegeias, alt. c. 3 m, 10.4.1992, Kalheber 92-491A. H. Kalheber
Labiatae

Rosmarinus officinalis L.
+ Division 1: Marathounta, towards Episkopi, valley below striking rock at the road, on wall, alt. c. 300 m, 6.5.1999, Hand 3108; as almost elsewhere in Cyprus a garden escape or relic (Meikle 1985).

Sideritis perfoliata L.
+ Division 1: Pano Akourdaleia, E flank of Pitharolakhos gorge WSW of the village, upper slope, open macchia, alt. c. 375 m, 8.5.1999, Hand 3138. (ed.)

Phlomis lunariifolia Sm.
+ Division 2: Kannaviou, embankment of the road at the N edge of the village, alt. c. 325 m, 30.4.1998, Hand 2388; Lapithiou, at the track between Moni Panagia Chryssogiatiassas and Kannaviou, 7.4.1992, Kalheber 92-289.
R. Hand & H. Kalheber

Ajuga iva (L.) Schreb.
H. Kalheber

Amaranthaceae

Amaranthus viridis L.
+ Division 1: Pafos, at the street Sinasi below Moutallos, ruderalized bank below rocks, alt. c. 50 m, 17.5.1999, Hand 3285. (ed.)

Chenopodiaceae

Atriplex halimus L.
+ Division 1: Pegeia, rocky plateau NW of Coral Bay, alt. 35 m, 8.4.1992, Kalheber 92-357.
H. Kalheber

Salsola inermis Forssk.
+ Division 3: Avdimou, W part of the Avdimou Bay, alt. 1 m, 5.4.1997, Kalheber 97-433.
H. Kalheber

Santalaceae

Thesium humile Vahl
+ Division 2: Kato Gialia, at the track to Agia Marina, 30.3.1997, Kalheber 97-167.
H. Kalheber

Euphorbiaceae

Euphorbia hierosolymitana Boiss.
First detailed records for Cyprus have been published by Della & Iatrou (1995) for division 3. Meikle (1985) did not see Cypriot material. The collection from the much visited Stavrovouni
area is surprising though larger euphorbias are unpopular plants for collectors.

**Division 3:** Anglisides, S slopes of Stavrovouni, phrygana, alt. c. 500 m, 13.4.1992, Kalheber 92-658.

**Euphorbia helioscopia** L.

+ Division 3: Pano Archimandrita, towards Chapotami valley, 11.4.1992, Kalheber 92-539; Agios Tycon, ruin area of Amathous, alt. c. 30 m, 6.4.1997, Kalheber 97-474.

The collection cited by Alzari (2000) may be from this division (or division 2). Another record by Coulot (2000, “Skarinou”) is not based on collected specimens.

**Euphorbia sintenisii** Freyn

+ Division 3: Kouklia, valley SE Palaia Pafos, rocky phrygana, alt. c. 40 m, 12.4.1999, Hand 2804.

**Euphorbia veneris** M.S. Khan

This endemic of Cyprus was known only from the central part of the Troodos range (Radelcliffe-Smith in Meikle 1985). Tsintides (1998) mentions the occurrence of “very robust plants” from Odhous in the E spur of the range without cited specimens. The following collection is from a nearby area.

**Division 2:** Agioi Vavatsinias, c. 200 m above, towards Machairas, rocky slope and bank of the track, alt. c. 700 m, 28.4.1999, Hand 2950.

**Liliaceae**

**Asphodelus fistulosus** L.

+ Division 3: Kolossi, at Kolossi castle, alt. c. 40 m, 12.4.1992, Kalheber 92-533; ibid., base of a wall at the sugar cane press, 18.3.1999, Hand 2584.

**Asphodelus tenuifolius** Cav.

The third record for Cyprus and the first outside the coastal area (cf. Meikle 1985).

**Gagea chlorantha** (M. Bieb.) Schult. & Schult. f.

+ Division 1: Koili, towards Moni Agiou Neofytou, alt. c. 500 m, 5.4.1992, Kalheber 92-051.

**Allium roseum** L.

Collected only once in Cyprus by Holmboe in the same area above Pafos (“Tsadha”; cf. Holmboe 1914, Meikle 1985).

**Division 1:** Koili, towards Moni Agiou Neofytou, alt. c. 500 m, 5.4.1992, Kalheber 92-034.

R. Hand & H. Kalheber

H. Kalheber
**Cyperaceae**

*Eleocharis palustris* (L.) Roem. & Schult.

The species is treated by Meikle (1985) in a very broad sense comprising also *E. uniglumis*. The plants mentioned below belong to *E. palustris* in the sense of Central and N European floras. Colour and length of the glumes show a tendency to subsp. *vulgaris* (cf., e.g., Fischer 1994) but determination is not possible due to the lack of ripe fruits.

+ Division 1: Dhrousha, c. 1.5 km NNW church, at track to the valley, wet site in pastures, alt. c. 450 m, 1.3.1998, *R. Hand* 1812.

**Gramineae**

*Catapodium rigidum* (L.) C. E. Hubb.

This species, frequent elsewhere (also on Cyprus), was never collected before in the large area of division 3. Alziar (1985) mentions the site "Skarinou" but without a cited specimen.

+ Division 3: Pyrgos, roadside S of the village, alt. c. 100 m, 3.4.2000, *Scholz*; Amathous, wayside, alt. c. 30 m, 13.4.2000, *Scholz*

**Micropyrum tenellum** (L.) Link

Hitherto in Cyprus only known from the Troodos mountains region and its southern surroundings at altitudes between 800 and 1500 m. The new locality is situated at an altitude below 100 m, c. 5 km N of the coastal line.

+ Division 3: Parekklisia, N of the village, rocky phrygana, alt. c. 120 m, 10.4.2000, *Scholz*.

**Cutandia dichotoma** (Forssk.) Trab.

Already observed by Alziar (1985) in the same region.

+ Division 3: Amathous, E, coastal dunes, alt. c. 5 m, 1. + 4.4.2000, *Scholz*.

**Cynosurus echinatus** L.

The species’ disjunct area between the Troodos range and the Akamas peninsula (the following new record) has many parallels, e.g. *Orchis anatolica* Boiss. or *Arenaria rhodia* subsp. *cypria* (Holmboe) McNeill.

+ Division 1: Drouseia, rocks WNW of the village, N of chapel, grassy patches between rocks, alt. c. 520 m, 29.4.1999, *Hand* 2975, det. *Scholz*. *R. Hand* & *H. Scholz*

**Lamarckia aurea** (L.) Moench

+ Division 1: Pegeia, SW, at crossing to Agios Georgios, rocks, alt. c. 100 m, 13.3.1999, *Hand* 2549, conf. *Scholz*.

**Vulpia brevis** Boiss. & Kotschy

+ Division 3: Amathous, E, coastal dunes near the Pyrgos river, alt. c. 5 m, 1. + 4.4.2000, *Scholz*.

**Vulpia myuros** (L.) C. C. Gmel.

+ Division 3: Limassol-Forest, near Dierona, alt. c. 700 m, 10.4.2000, *Scholz*.

**Lolium perenne** L.

+ Division 3: Kolossi, at Kolossi castle, alt. c. 40 m, 12.4.1992, *Kalheber* 92-554.
**Lolium subulatum** Vis. [Syn.: *L. loliaceum* (Bory & Chaub.) Hand.-Mazz.]

+ Division 1: Neo Chorio, c. 1.5 km NNE Agios Minas, field margins, alt. c. 200 m, 3.4.1999, *Hand* 2725, conf. Scholz. R. Hand & H. Scholz

**Sphenopus divaricatus** subsp. *permicranthus* (Hausskn.) H. Scholz

Division 4: Larnaca, salt lake near the airport, 8.4.2000, *Scholz*. From the same locality several previous collections ("*S. divaricatus*") are known. Subsp. *permicranthus*, more southerly distributed in the Mediterranean-SW Asian area of the species, is distinguished from subsp. *divaricatus* by smaller spikelets and floral parts (Scholz 1990). H. Scholz

**Poa pelasgis** H. Scholz

Division 3: Parekklisia, N of the village, alt. c. 100 m, 7.4.2000, *Scholz*. Very typical specimens, only the apices of the lemma hairs approach a little the Near-East *P. hackelii* Post. Another record for division 3 as "cf. *pelasgis*" (Alziar 2000) may belong here. The first record for Cyprus is also from division 3 (at Stavrovouni, see Alziar 2000). H. Scholz

**Poa trivialis** L. s. l.

Apart from an unlocalized specimen Bor in Meikle (1985) published only a single record from the Pentadactylos area. The following record is the first for the Troodos range and the S part of the island.

+ Division 2: Plataniastasa, at the old aqueduct NE (below) turn-off N of the village, humid ground, alt. c. 775 m, 10.5.1999, *Hand* 3194, det. Scholz. R. Hand & H. Scholz

**Poa infirma** Kunth

+ Division 3: Limassol, eastern suburb, border of street pavement, alt. 10 m, 2.4.2000, *Scholz*; Amathous, fieldpath, 13.4.2000, *Scholz*. H. Scholz

**Lindbergella sintenisii** (H. Lindb.) Bor

+ Division 3: Dierona, c. 7.3 km towards Akrounta, rivulet above road, macchia in open *Pinus brutia* forest, alt. c. 610 m, 28.4.1999, *Hand* 2938, conf. Scholz. R. Hand & H. Scholz

**Parapholis marginata** Runemark

+ Division 1: Pegeia, coast 2-3 km NNE Agios Georgios, sandy beach Toxeftra, alt. c. 3 m, 5.4.1999, *Hand* 2739, det. Scholz.

+ Division 2: Gialia, sandy beach W of the village, W of the coastal road, alt. c. 3 m, 10.4.1999, *Hand* 2791, det. Scholz; Kato Pyrgos, coastal slope W of Akro Kokkina, below road, rocky phrygana, alt. c. 20 m, 10.4.1999, *Hand* 2776, det. Scholz. R. Hand & H. Scholz

**Monerma cylindrica** (Willd.) Coss. & Durieu [Syn.: *Hainardia cylindrica* (Willd.) Greuter]

+ Division 3: Larnaca, salt lake near the airport, 14.4.2001, *Schwöbel*, det. Scholz. Really "rare" in Cyprus (Bor in Meikle 1985 cites only two collections, both from division 7), or confused with species of the genus *Parapholis*? H. Scholz & W. Schwöbel

**Trisetaria linearis** Forsk.

+ Division 3: Amathous, E, coastal dunes near the Pyrgos river, alt. c. 5 m, 4. & 12.4.2000, *Scholz*. 
Bor (in Meikle 1985) reported this species only from two localities, one in division 5, the other in 8. H. Scholz

**Gaudiniopsis macra** (M. Bieb.) Eig


**Avena eriantha** Durieu

+ Division 3: Pyrgos, S of the village, frequent on a grazed floor in a *Ceratonia* plantation, alt. c. 100 m, 3.4.2000, Scholz; Vouni, alt. 700 m, 17.4.1991 (OPTIMA Iter Medit. 4), in Bocconea 11: 20 (1999) erroneously as *A. ventricosa* Coss. H. Scholz

**Avellinia michelii** (Savi) Parl.

+ Division 3: Parekklisia, N of the village, rocky phrygana, alt. c. 120 m, 10.4.2000, Scholz. H. Scholz

**Rostraria smyrnacea** (Trin.) H. Scholz [Syn.: *R. berythea* (Boiss. & Blanche) Holub, *Lophochloa berythea* (Boiss. & Blanche) Bor]

+ Division 3: Choulou, c. 2 km ENE, hill S of the road above striking hairpin bend, alt. c. 450 m, 25.4.1998, Hand 3141, det. Scholz. Amathous, E, waste ground, alt. 5 m, 10.4.2000, Scholz; ibid., field path, alt. c. 10 m, 13.4.2000, Scholz. R. Hand & H. Scholz

**Phleum subulatum** (Savi) Asch. & Graebn.

+ Division 1: Pano Akourdaleia, E flank of Pitharolakhos gorge WSW of the village, upper slope, open macchia, alt. c. 375 m, 8.5.1999, Hand 3141, conf. Scholz. R. Hand & H. Scholz

**Polypogon maritimus** Willd.

+ Division 1: Pegeia, c. 3 km SSE, small gorge in serpentine area at the road to Akoursos, rocky slope with sparse phrygana, alt. c. 100 m, 5.5.1999, Hand 3085a, det. Scholz. R. Hand & H. Scholz

**Triplachne nitens** (Guss.) Link

+ Division 3: Amathous, E, coastal dunes near the Pyrgos river, alt. c. 5 m, 12.4.2000, Scholz. H. Scholz

**Piptatherum coerulescens** (Desf.) P. Beauv. [Syn.: *Oryzopsis coerulescens* (Desf.) Hack.]

+ Division 1: Tala, Mavrokolympos valley, at the beginning of the descending track N of the village, alt. c. 200 m, 16.4.1999, Hand 2836, conf. Scholz. R. Hand & H. Scholz

**Bromus optimae** H. Scholz

In addition to the specimens cited in the description of this Cypriot endemic (Scholz 2000) further sites can be given. Obviously, the species occurs mostly in semi-natural habitats both in limestone-sandstone and in igneous areas.

+ Division 1: Evretou, c. 750 m ESE, alt. c. 150 m, 2.5.1999, Hand 3030b, det. Scholz.
+ Division 2: Kannaviou, Argaki tis Agias valley above the road to Panagia, downstream the second bridge, alt. c. 450 m, 21.4.1998, Hand 2235; det. Scholz; Kato Pyrgos, coast-
Bromus regnii H. Scholz

This endemic of Cyprus was known only from its type locality in the E Troodos range (Scholz 1995). It has been re-collected in the vicinity and at two other sites of the range, but also in the W part of the island. Obviously, the taxon seems not to be restricted to serpentine rocks. The site in division 1, for example, lies within an area dominated by Cretaceous clays and sandstones.

+ Division 1: Evretou, c. 750 m ESE, rocky slope, alt. c. 150 m, 2.5.1999, Hand 3030a, det. Scholz.

Bromus rigidus Roth

Often confused with B. diandrus Roth or not distinguished from it and therefore underrecorded.

+ Division 3: Amathous, E, sandy beaches, alt. c. 2 m, 1. and 6.4.2000, Scholz.

Bromus intermedius Guss.

+ Division 1: Marathounta, geologically varied valley 1 km S to SE, along track and on eroded clay slopes, alt. c. 200 m, 24.4.1998, Hand 2293, det. Scholz; Sarama, hills N/NW Gefyra Skarfou, rocky phrygana, alt. c. 200 m, 31.3.1999, Hand 3354, det. Scholz.

Bromus rubens L.


Bromus chrysopogon Viv. [Syn.: B. scoparius subsp. chrysopogon (Viv.) Chrtek & B. Slavík]

The above subspecific relegation (Chrtek & Slavík 1994) is not followed here. B. chrysopogon and B. scoparius are clear-cut, distinct species lacking any intermediates (Scholz 1974, Smith 1985). First recorded by Stapf in 1907 as B. scoparius var. stenanthus Stapf and since that time repeatedly collected. Bor (Meikle 1985) lists all gatherings under B. scoparius, but so far known the real B. scoparius is not a member of the Cypriot flora. B. chrysopogon has already been documented for divisions 1–4 by Chrtek & Slavík (1994), Alziar (2000) and Coulot (2000).
**Bromus caroli-henrici** Greuter [Syn.: *B. alopecuros* subsp. *caroli-henrici* (Greuter) P. M. Sm.]

Recently, Acedo & Llamas (1994) merged this taxon in *B. lanceolatus* subsp. *biaristulatus* Maire & Weiller from the Cyrenaica (N Africa) and accepted its subspecies status under *B. alopecuros*: *B. alopecuros* subsp. *biaristulatus* (Maire & Weiller) Acedo & Llamas. However, as long as the type material of subsp. *biaristulatus* is not studied, these authors’ taxonomic decision seems too hasted. Meikle, in a note to Bor’s treatment of *B. alopecuros* (Meikle 1985), states that all the specimens listed belong to *B. caroli-henrici*; but later the real *B. alopecuros* (“*B. alopecuros* Poir. var. *alopecuros*”) has been reported by Chrtek & Slavík (1994) for division 3.

**Division 3:** Pyrgos, 2 km, pasture land (spikelets glabrous) and grassy slope bordering cereal field (spikelets hairy), alt. c. 50 m, 3.4.2000, **Scholz H. Scholz**

**Bromus tectorum** L.

+ **Division 3:** Limassol-Forest, near Dierona, open *Pinus brutia* woodland, alt. c. 700 m, 10.4.2000, **Scholz H. Scholz**

**Elytrigia juncea** (L.) Nevski [Syn.: *Agropyron junceum* (L.) P. Beauv., *Elymus farctus* (Viv.) Melderis]

+ **Division 3:** Amathous, E, coastal dunes, alt. c. 5 m, 1.4.2000, **Scholz H. Scholz**

**Aegilops triuncialis** var. *persica* (Boiss.) Eig

The taxon not mentioned by Bor in Meikle (1985) differs from the typical species by shorter awns. Slageren (1994) cites only two collections from Cyprus, “Tsadha to Stroumbi” (division 1) and “near Pendalia towards Panayia” (division 3), and gives a dot map of the very scattered distribution in W and Central Asia. Viney (1996) found the variety 1995 “at Karaman” (= Karmi, division 7) but does not give further details.

**Division 1:** Drymou, N edge of the village, field margins at the road, alt. c. 500 m, 3.5.1999, **Hand 3050, det. Scholz. R. Hand & H. Scholz**

**Hordeum glaucum** Steud. [Syn.: *H. murinum* subsp. *glaucum* (Steud.) Tzvelev]

+ **Division 3:** Amathous, near the excavation site, alt. c. 15 m, 31.3.2000, **Scholz H. Scholz**

**Hordeum murinum** L. [Syn.: *H. murinum* L. subsp. *murinum*]

+ **Division 3:** Amathous, E, ruderal place near the coast, alt. c. 3 m, 31.3.2000, **Scholz** (stipe of the central spikelet’s floret c. 0.4 mm long, and awn of the central floret overtopping the awns of the lateral ones (main differential characters between the closely related *H. glaucum* Steud. and *H. leporinum* Link)); for *H. murinum* s.str. in division 1 see Scholz in Hand 2000. **Scholz H. Scholz**

**Setaria adhaerens** (Forssk.) Chiov. var. *adhaerens* [Syn.: *S. verticillata* auct., non (L.) P. Beauv.]

The name *S. adhaerens* has been widely accepted for a species of its own only in recent time (last review: Danin & Scholz 1997). The specimens quoted by Bor (in Meikle 1985) under *S. verticillata* have to be revised; probably, also true *S. verticillata* occurs in Cyprus.

**Division 3:** Limassol, eastern suburb, weed in a public garden, 2.4.2000, **Scholz**; ibid., 1862, **Kotschy 606a (B) (det. as “S. verticillata” by Bor in Meikle 1985). H. Scholz**

**Setaria adhaerens** var. *fontqueri* Calduch [Syn.: *S. adhaerens* var. *antrorsa* (A. Braun) H. Scholz]

This variant with antorsely barbed bristles, infrequent in the whole area of the species, was hitherto not reported from Cyprus.

+ **Division 3:** Limassol, 10.4.2001, **Schwöbel, det. H. Scholz. H. Scholz & W. Schwöbel**
**Pennisetum clandestinum** Chiov.

Native to tropical E Africa this strongly stoloniferous and extensively mat-forming grass now is sometimes used for greening of recreation centres in Mediterranean countries. First collected on Cyprus in 1988 (division 7; Scholz 1998).

+ Division 3: Amathous, irrigated lawn at the strand promenade, alt. c. 2 m, cult., 2.4.2000, Scholz. H. Scholz

**Saccharum strictum** (Host) Spreng.

First record for Cyprus. The area of the species extends from Italy and the Balkan Peninsula to Anatolia, Syria, Israel and Iraq.

+ Division 3: Akrotiri salt lake SW of Limassol, marginal at its northern part, 9.4.2000, Scholz. H. Scholz

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