



Supplementary notes to the flora of Cyprus II.

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RALF HAND (ed.)

Supplementary notes to the flora of Cyprus II.

Abstract

Hand, R. (ed.): Supplementary notes to the flora of Cyprus II. – Willdenowia 31: 383-409. 2001. – ISSN 0511-9618.

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 instalments 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*. R. Hand & H. Kalheber

*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*.
H. Kalheber

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.)

Diploaxis 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*. Alziar (1985) already saw the species in the same division (Amathous) but did not cite specimens.
H. Kalheber

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, 3.4.1997, *Kalheber 97-334*; Spilia, E of the village, Adelfoi area, alt. 1330-1619 m, *Kalheber 97-381*.
H. Kalheber

Clypeola jonthlaspi L. var. *jonthlaspi*

- + Division 1: Kissonerga, c. 1 km below Mavrokolympos dam, eroded clay on serpentine ridge S of the river, alt. c. 100 m, 22.3.1998, *Hand 1984a*; Sarama, hills N/NW Gefyra Skarfou, 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. Coulot (2000) saw the species in division 3 but does not cite a specimen.

- + Division 1: Kissonerga, c. 1 km below Mavrokolympos 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*.

- + Division 3: 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*. (ed.)

***Sisymbrium orientale* L.**

- + Division 1: Chlorakas, at the cemetery, alt. c. 80 m, 27.4.1999, *Hand 2919*. (ed.)

***Torulularia torulosa* (Desf.) O. E. Schulz**

- + Division 2: Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, *Kalheber 97-562*. H. Kalheber

Polygalaceae

***Polygala venulosa* Sm.**

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

- + Division 2: Pano Panagia, serpentine track to the fire lookout, SE of the village, lower half, phrygana, alt. c. 900 m, 16.5.1999, *Hand 3272*. (ed.)

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.

- + Division 1: Letymvou, defile on mountain ridge N of the village, margin of a vineyard, alt. c. 400 m, 11.5.1999, *Hand 3197*. (ed.)

***Silene aegyptiaca* (L.) L. f.**

- + Division 2: Pano Lefkara, at the track to Kato Drys, alt. c. 600 m, 14.4.1992, *Kalheber 92-712*; Kapedes, E of the village, S of the road to Kataliontas, marl slopes, alt. c. 500 m, 7.4.1997, *Kalheber 97-559*.

The site near Lefkara mentioned by Alziar (2000) belongs to division 2 or 3.

H. Kalheber

***Silene laevigata* Sm.**

- + 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 2930*. (ed.)

***Cerastium illyricum* subsp. *pilosum* Rouy & Foucaud**

- + 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 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*. R. Hand & H. Kalheber

***Cerastium glomeratum* Thuill.**

- + 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 3095*; Chirokoitia, between ruins of the archaeological site, alt. 150 m, 13.4.1992, *Kalheber 92-637*.

R. Hand & H. Kalheber

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. (ed.)

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* 3091; Dierona, c. 7.3 km towards Akrounta, rivulet above road, macchia 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

*Illecebraceae**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, Danaos 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.

Chrtek & Slavík (2001) prefer species rank for the two subspecies recognized by Meikle (1977).

- + 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. H. Kalheber

***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 Skarfou, rocky phrygana, alt. c. 200 m, 31.3.1999, *Hand* 3360. R. Hand & H. Kalheber

***Erodium moschatum* (L.) L'Hér.**

- + Division 2: Pano Panagia, flanks of Profitis Elias mountain, alt. c. 1000 m, 29.3.1997, *Kalheber* 97-085. H. Kalheber

***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. R. Hand & H. Kalheber

***Erodium botrys* (Cav.) Bertol.**

Meikle (1977) cites only a single collection for Cyprus. Coulot (2000) mentions the species for division 3 without cited specimen.

- Division 2: Between Kato Gialia and Agia Marina, alt. c. 100 m, 30.3.1997, *Kalheber* 97-138. H. Kalheber

***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. H. Kalheber

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 Kastroulli 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 Mavrokolympos 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.)

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*.
 + Division 3: Pyrga, S slopes of Stavrovouni, phrygana, 13.4.1992, *Kalheber 92-648*.

H. Kalheber

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*.

R. Hand & H. Kalheber

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*.

R. Hand & H. Kalheber

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 leaflets 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*. (ed.)

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*. (ed.)

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 Lefkara 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).

- Division 2: Between Stavros tou Agiasmati and Lagoudera, alt. 1000 m, 16.4.1992, *Kalheber* 92-843. H. Kalheber

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 blepharicarpos 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 Chrysosorogiatissa, 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.

- Division 3: Agios Tychon, dunes at the coast c. 1.2 km E of Amathous, open sands, alt. c. 5 m, 7.5.1999, *Hand* 3111. (ed.)

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**Ecballium 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* 97-235. H. Kalheber

Eryngium glomeratum Lam.

- + Division 3: Pano Archimandrita, towards Chapotami valley, 11.4.1992, *Kalheber* 92-508. H. Kalheber

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.
+ Division 6: Between Agios Theodoros and Asinou church, *Pinus brutia* forest, 17.4.1992, *Kalheber* 92-881; *ibid.*, 2.4.1997, *Kalheber* 97-290. R. Hand & H. Kalheber

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. H. Kalheber

Daucus glaber (Forssk.) Thell.

- + Division 3: Agios Tychon, 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. H. Kalheber

Pimpinella peregrina L.

- + Division 1: Tala, NW slope of Tsarta SE of Moni Agiou Neofytou and vicinity of the monastery, 1.4.1997, *Kalheber* 97-230. H. Kalheber

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. H. Kalheber

Tordylium aegyptiacum (L.) Poir.

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

Glaucosciadium cordifolium (Boiss.) B. L. Burt & 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*.

- Division 2: Pano Panagia, at the road 300 m N of Moni Panagias Chrysorrogiatissas, alt. 850 m, 4.10.1998 (seeds), *K. P. Buttler*, cultivated until 21.7.2000 and 4.8.2000, *Cubr 38084 & 38084a* (accession number 081-01-99-10, garden herbarium B).
(ed.)

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 epizoochorous 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. hispida* 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 Amoroza, 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 Neofytos, 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: Pegeia, between Agios Georgios Pegeias and Avgas gorge, 5.4.1992, *Kalheber 92-060*; Pegeia, terraces above the coast E of Agios Georgios Pegeias, alt. 30-50 m, 31.3.1997, *Kalheber 97-219*; Lempa, at the striking terrace towards Chlorakas, W of the road, fallow land, alt. c. 75 m, 19.2.1998, *Hand 1740*; 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 1902*; Pafos, beach in the Tombs of the Kings area, alt. c. 2 m, 8.4.1992, *Kalheber 92-341 & 92-342*; *ibid.*, 1.4.1997, *Kalheber 97-244*; Pafos, rocky coast at the S edge of the Tombs of the Kings area, alt. c. 2 m, 10.5.1998, *Hand 2431*; Pafos, coast below the lighthouse, rocky beach, alt. c. 2 m, 8.4.1998, *Hand 2114*; 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 Chrysorrogiatissa 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, *Lambinon 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, beach in the Tombs of the Kings area, alt. c. 2 m, 1.4.1997, *Kalheber 97-245*; 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:

- GREECE: Fokis, Ep. Parassidhos, 2,3 km OSO Paralias Aj. Panton, Straßenrand, Felskante, alt. 100 m, 16.3.1997, *Eisenblätter & Willing 51693* (B); Argolis, Ep. Ermionidhos, 0,9 km W Ermioni, Kiesstrand, alt. 0-10 m, 14.4.1996, *Eisenblätter & Willing 43.890* (B).
- 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 occidentalibus 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 97-135*; 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. Buttler*, cultivated until 7.6.1999, *Cubr* (accession number 081-10-99-10, garden herbarium B) and 14.6.1999, *Hand 3315*. (ed.)

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 tricerias* Bornm.**

In Cyprus the rare species has been collected only twice at the nearby Papoutsas summit (Meikle 1985).

- Division 2: Agios Theodoros, rivulet above road 4.4 km before the turn-off to Askas, N of Papoutsas, 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 Oritas 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 Pentadactylos 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 Neofytos, 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 Pitharolakhos 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 Chryssorrogiatissas 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*). (ed.)

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. Láz

+ 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 2: Platanistasa, at the old aqueduct NE (below) turn-off N of the village, phrygana, alt. c. 775 m, 10.5.1999, *Hand 3193*.

Division 3: Anglisides, fields N of the village towards Stavrovouni, 13.4.1992, *Kalheber 92-672*, rev. Hand (transitus subsp. *graecum* in subsp. *rupestre*). (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. (ed.)

Carduus pycnocephalus subsp. *albidus* (M. Bieb.) Kazmi

- + Division 3: Pyrga, towards Moni Stavrovouniou, N side of the mountain, 9.4.1997, *Kalheber* 97-623.

The record from "Ayia Mavri, Kilani" (Alziar 2000) may be from this division or division 2. H. Kalheber

Silybum marianum (L.) Gaertn.

- + Division 3: Pyrga, towards Moni Stavrovouniou, N side of the mountain, 9.4.1997, *Kalheber* 97-628. H. Kalheber

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. R. Hand & H. Kalheber

Koelipinia linearis Pallas

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

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. (ed.)

Crepis foetida subsp. *commutata* (Spreng.) Babç.

- + Division 2: Kato Gialia, at the track to Agia Marina, 30.3.1997, *Kalheber* 97-155. H. Kalheber

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 Pegeias 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. R. Hand & H. Kalheber

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 Skarfou, rocky phrygana, alt. c. 200 m, 31.3.1999, *Hand* 3359. (ed.)

Sonchus tenerrimus L.

- + Division 3: Pissouri, valley towards Pissouri Bay, alt. c. 30 m, 12.4.1992, *Kalheber* 92-586. H. Kalheber

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 Chrtek & Slavík (1993) and Rouet (2001; "Paphos plage" erroneously to division 2).

R. Hand & H. Kalheber

Solanaceae*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. *elator* 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 Chrtek & Slavík (1981).

Scutellaria cypria subsp. *elator* (Meikle) Hand, **comb. & stat. nov.**

≡ *Scutellaria cypria* var. *elator* Meikle in Ann. Musei Goulandris 6: 93. 1983.

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). (ed.)

***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 Chrysorogiatissas and Kannaviou, 7.4.1992, *Kalheber 92-289*.

R. Hand & H. Kalheber

***Ajuga iva* (L.) Schreb.**

- + Division 1: Pegeia, between Agios Georgios Pegeias and Avgas gorge, 5.4.1992, *Kalheber 92-135*; Kathikas, towards Agios Georgios Pegeias, fields above gorge, alt. c. 500 m, 10.4.1992, *Kalheber 92-425*; *ibid.*, 31.3.1997, *Kalheber 97-201 & 97-447*.

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*.
H. Kalheber

***Euphorbia helioscopia* L.**

+ Division 3: Pano Archimandrita, towards Chapotami valley, 11.4.1992, *Kalheber 92-539*;
Agios Tychon, ruin area of Amathous, alt. c. 30 m, 6.4.1997, *Kalheber 97-474*.
The collection cited by Alziar (2000) may be from this division (or division 2).
Another record by Coulot (2000, "Skarinou") is not based on collected specimens.
H. Kalheber

***Euphorbia sintenisii* Freyn**

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

***Euphorbia veneris* M.S. Khan**

This endemic of Cyprus was known only from the central part of the Troodos range (Radcliffe-Smith in Meikle 1985). Tsintides (1998) mentions the occurrence of "very robust plants" from Odhou in the E spurs 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*.
(ed.)

Fagaceae

***Quercus alnifolia* Poech**

+ 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 2931*.
Common in the Limassol Forest area (cf. e.g. Tsintides 1998) but not collected and documented so far.
(ed.)

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*.
R. Hand & H. Kalheber

***Asphodelus tenuifolius* Cav.**

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

Division 2: Between Agios Theodoros and Asinou church, *Pinus brutia* forest, 17.4.1992, *Kalheber 92-914*.
H. Kalheber

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

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

***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*.
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*. (ed.)

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*. H. 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: Parekklesia, N of the village, rocky phrygana, alt. c. 120 m, 10.4.2000, *Scholz*. H. Scholz

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

- + Division 3: Amathous, E, coastal dunes, alt. c. 5 m, 1. + 4.4.2000, *Scholz*.
Already observed by Alziar (1985) in the same region. H. 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*.
+ Division 2: Between Agios Theodoros and Asinou church, *Pinus brutia* forest, 2.4.1997, *Kalheber 97-303B*. R. Hand, H. Kalheber & H. Scholz

***Vulpia brevis* Boiss. & Kotschy**

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

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

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

***Lolium perenne* L.**

- + Division 3: Kolossi, at Kolossi castle, alt. c. 40 m, 12.4.1992, *Kalheber 92-554*. H. Kalheber

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: Parekklesia, 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: Platanistasa, 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 Forssk.

- + 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

- + Division 3: Limassol-Forest, near Dierona, alt. c. 700 m, 10.4.2000, *Scholz*.
Second record for Cyprus. First collection in 1991: “Limassol: entre Mandria et Ayios Nikolaos” (division 2; Alziar 2000). H. Scholz

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 *Bocconeia* 11: 20 (1999) erroneously as *A. ventricosa* Coss. H. Scholz

Avellinia michelii (Savi) Parl.

- + Division 3: Parekklesia, 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 2312*, conf. *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 Pitharolakchos 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, *R. 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, coas-

tal slope W of Akro Kokkina, above road, rocky phrygana, alt. c. 20 m, 10.4.1999, *Hand 2780*, det. Scholz.

- Division 3: Kouklia, coastal slopes c. 4 km SE, phrygana, limestone, alt. c. 20 m, 25.3.1999, *Hand 2653*, det. Scholz; Kannaviou, serpentine rocks c. 400 m below village on the left bank of the river Ezousa, alt. c. 350 m, 6.5.1999, *Hand 3093*, det. Scholz. R. Hand & H. Scholz

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.

- Division 2: Agioi Vavatsinias, c. 2.2 km towards Machairas, grassy slope with former orchards, alt. c. 800 m, 28.4.1999, *Hand 2961*, det. Scholz; *ibid.*, c. 200 m above, towards Machairas, rocky slope and bank of the track, alt. c. 690 m, 28.4.1999, *Hand 2957*, det. Scholz; Agios Ioannis, SW slope of mountain SE of the village, phrygana on abandoned vineyards, alt. c. 800 m, 4.5.1999, *Hand 3063*, det. Scholz; Kyperounta, S slope Madhari c. 1 km N/NE, open banks of ways in machia, alt. c. 1350 m, 10.5.1999, *Hand 3163*, det. Scholz.

R. Hand & H. 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*. H. 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.

- + Division 4: Larnaca, fringe of the salt lake near the airport, 8.4.2000, *Scholz* (anthers up to 2.5 mm long). R. Hand & H. Scholz

Bromus rubens L.

- + Division 1: Pafos, Tombs of the Kings area, rocky ground, alt. c. 10 m, 28.2.1998, *Hand 1808*, conf. Scholz; Baths of Aphrodite, c. 1 km S of Pyrgos tis Rigenas, NW of spring, open serpentine slope, alt. c. 325 m, 5.4.1998, *Hand 2088*, conf. Scholz; Pegeia, towards Agios Georgios Pegeias, 31.3.1997, *Kalheber 97-214*, conf. Scholz. R. Hand, H. Kalheber & H. Scholz

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).

- + Division 6: Near Asinou church, *Pinus brutia* forest, 17.4.1992, *Kalheber 92-896*, det. Scholz. H. Kalheber & H. Scholz

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 Pentalia 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. 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* Caldach [Syn.: *S. adhaerens* var. *antrorsa* (A. Braun) H. Scholz]

This variant with antrorsely 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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