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Supplementary notes to the flora of Cyprus VIII

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Source: Willdenowia, 45(2) : 245-259

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

URL: https://doi.org/10.3372/wi.45.45210

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RALF HAND (ed.)[1]

Supplementary notes to the flora of Cyprus VIII

Abstract

Hand R. (ed.): Supplementary notes to the flora of Cyprus VIII. – Willdenowia 45: 245–259. 2015. – Version of record first published online on 17 July 2015 ahead of inclusion in August 2015 issue; ISSN 1868-6397; © 2015 BGBM Berlin.

DOI: http://dx.doi.org/10.3372/wi.45.45210

Continuing a series of miscellaneous contributions by various authors, the eighth and final instalment includes information on 104 taxa focussing on the taxonomy, chorology and ecology of the Cyprus flora. Two new combinations, *Allium cyprium* subsp. *lefkarense* and *Myosotis paucipilosa*, are validated. Fifteen taxa are new to the island, e.g. the indigenous species *Alcea acaulis*, *Atriplex davisii*, *Euphorbia berythea*, *Rumex crispus* and the aliens *Cirsium arvense* and *Sisymbrium altissimum*. Chromosome numbers are given for 22 taxa. Many of them are first counts of Cypriot material. Counts for *Arenaria pamphylica* subsp. *kyrenica*, *Bosea cypria*, *Campanula podocarpa*, *Hirtellina lobelii*, *Noccaea cypria*, *Phlomis brevibracteata* and probably *Salvia dominica* seem to be the first ever for these taxa.

Additional key words: alien species, *Allium*, chromosome numbers, distribution, eastern Mediterranean, *Myosotis*

Introduction

The current 8th instalment will be the last of this series, which was started in the year 2000. This notula series was not intended to last for ever. Its original intention "to bring together widely scattered results by various authors" has been achieved and, hopefully, inspired the botanical exploration of Cyprus somewhat. On the other hand, the situation with the floristic scene in Cyprus has changed considerably. A growing number of significant records is published nowadays by Cypriot authors in domestic sources (see recent instalments of the series by Hadjikyriakou 2013 and Kefalas 2014), which is a welcome development. Furthermore, a new electronic journal dealing with floristic issues and intending faster publication of plant records will be launched in the near future. Probably, it will be embedded in the online checklist to the Flora of Cyprus (Hand & al. 2015+: www.flora-of-cyprus.eu).

At this point I would like to thank all authors who made their data available since 2000 and contributed to the success of the series. Often, very significant records have been provided by the contributors. Some of these records would have deserved separate publications.

Explanations about nomenclature have been published in instalment I (Hand 2000), chromosome counts in instalment II (Hand 2001) and status categories of alien taxa in instalment IV (Hand 2004). Criteria for the inclusion of data have been modified in instalment VI (Hand 2009). Additional explanations can be found in instalment VII (Hand 2011). It should be stressed that apart from Meikle's (1977, 1985) detailed standard flora and floristic treatments on Cyprus published since, all known papers widely scattered in the taxonomic literature have been considered when accepting specimen-based records as supplementary. Taxonomy and nomenclature of species and their infraspecific taxa mentioned in the texts of the contributions follow Meikle (1977, 1985) or amendments discussed in this series. Another feature that soon will be available online (Hand & al. 2015+) is documentation of specimens collected in Cyprus plus georeferenced collection sites (georeferences are not published in this series).

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If not stated otherwise, specimens are kept in the private herbaria of the contributors, those of the editor at B.

Pteridophyta

Dennstaedtiaceae

Pteridium aquilinum subsp. ***pinetorum*** (C. N. Page & R. R. Mill) J. A. Thomson

So far, it has not been clarified which infraspecific taxa of bracken occur in Cyprus (see, e.g., Thomson 2008; Der & al. 2009 on taxonomy). The species seems to be rather uniform in Cyprus, but more studies are needed to clarify whether the nominal subspecies occurs as well.

+ Div. 2: Troodos village, picnic site near turn-off to military station on the road to Prodromos N of Chionistra summit, 1800 m, pine forest, 22 Sep 2010, *Hand 5724 & Christodoulou*, det. Frank. D. Frank & R. Hand

Spermatophyta

Adoxaceae

Viburnum tinus L. subsp. ***tinus*** – RDB: VU.

Div. 7: Atalou, NW of Halevga not far from Agios Georgios Atalou church, c. 400 m, among tall shrubs, 15 Aug 2013, *Hadjikyriakou 7245*; ibid., 8 Apr 2014, *Hadjikyriakou 7312*. G. Hadjikyriakou

Amaranthaceae

Amaranthus caudatus L.

First specimen-based record for Cyprus. To be classified as casual.

+ Div. 3: Trachoni Lemesou, c. 13 m, cultivated land, 21 Jul 2013, *Hadjikyriakou 7240*. G. Hadjikyriakou

Bosea cypria Schinz & Autran

Chromosome number: 2*n* = 34. This endemic of Cyprus has not been counted before.

Div. 3: Choirokoitia, at small cave on nature trail WNW of neolithic site, 190 m, on rocks, 20 Sep 2010, *Hand S-153* (B-seedbank), cult. *Cubr 49372* (B-garden herb.). (ed.)

Amaryllidaceae

Allium autumnale P. H. Davis

Chromosome number: 2*n* = 16 (Fig. 1A). The results differ from the only other count by Tzanoudakis (2000), who mentioned 2*n* = 24 for this Cypriot endemic. Further studies are recommended to clarify the situation.

Div. 7: Agios Amvrosios, NNW of Palaia Vrysi, a bit W of junction near to a water-tank, 450 m, road bank in open *Pinus brutia* forest, 30 Sep 2010, *Hand 5768 & Hadjikyriakou*, cult. *Cubr 49590* (B-garden herb.). (ed.)

Allium cupani subsp. ***cyprium*** Meikle

Chromosome number: 2*n* = 14 (Fig. 1B). The number is identical to the only other count of this Cypriot endemic by Tzanoudakis (2000).

Div. 5: Agios Sozomenos, rocky plateau above rock chapel, WNW of abandoned village, c. 220 m, open soil between rocks, 29 Nov 2010, *Hand 5540 & Christodoulou*, cult. *Cubr 47283* (B-garden herb.). (ed.)

Allium curtum Boiss. & Gaill.

Chromosome number: 2*n* = 32. The only other count of Cypriot plants revealed 2*n* = 16 (Tzanoudakis 2000). The critical species group comprising *A. curtum* and *A. rubrovittatum* Boiss. & Heldr. is currently under reconsideration.

Div. 5: Bogazi, c. 2 km SSW of village centre, Trikazi area, 0 m, sandy beach, *Hand 5549 & Hadjikyriakou*, cult. *Cubr 47234* (B-garden herb.). (ed.)

Allium cyprium Brullo & al. s.l.

A revision of *Allium stamineum*, treated by Meikle (1985) in a wide sense, by Brullo & al. (1993) resulted in the description of three new species – all endemic to Cyprus. Recently, another diploid taxon, *A. kyrenium*, has been described (Giusso del Galdo & al. 2015). The studies of these species obviously were based on a very limited number of specimens and living plants, i.e. only material from the type localities and very few additional places. Plants of the *A. stamineum* species group are widespread in Cyprus and we can present some new results based on field studies and the cultivation of many plants from various parts of Cyprus.

First of all, the distinctiveness of the triploid *Allium marathasicum* Brullo & al. can be confirmed. It is a mor-

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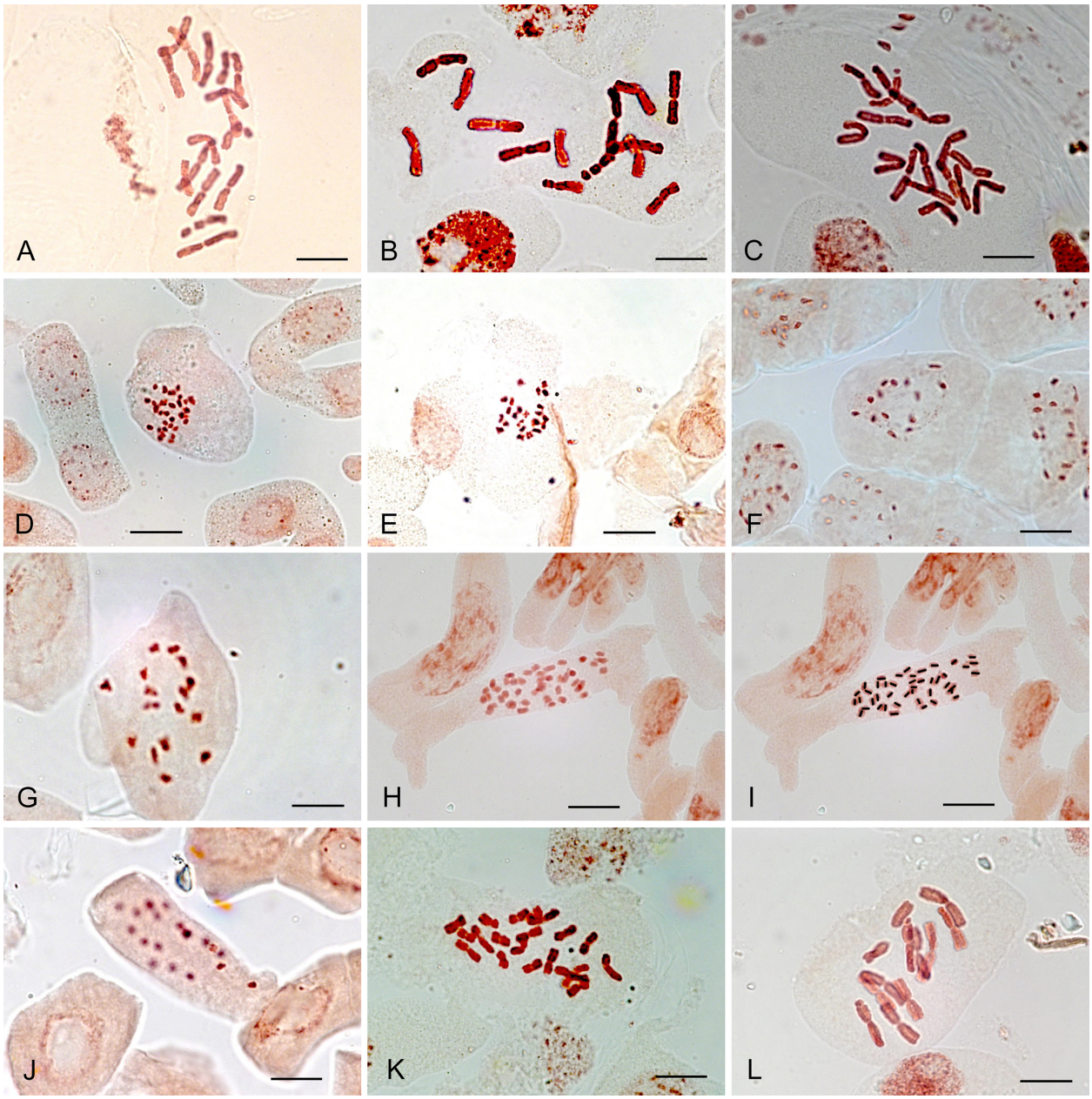


Fig. 1. Metaphases of root-tip mitoses – A: *Allium autumnale*, 2*n* = 16; B: *A. cupani* subsp. *cyprium*, 2*n* = 14; C: *A. cyprium* subsp. *cyprium*, 2*n* = 16; D: *Hirtellina lobelii*, 2*n* = 34; E: *Cynoglossum montanum* subsp. *extraeuropaeum*, 2*n* = 24; F: *Microthlaspi natolicum* [subsp. *sporadium*] var. *pentadactylonis*, 2*n* = 14; G: *Campanula podocarpa*, 2*n* = 16; H, I: *Arenaria pamphylica* subsp. *kyrenica*, 2*n* = 44 (I with additional markings); J: *Erodium crassifolium* subsp. *crassifolium*, 2*n* = 18; K: *Phlomis brevibracteata*, 2*n* = 20; L: *Nigella unguicularis*, 2*n* = 12. – Scale bars: A, D, E, G, L = 5 µm; B, C, F, H, I, J, K = 10 µm.

phologically clearly diagnosable taxon being restricted to the Marathasa area at high altitudes of the central Troodos range.

The three other taxa, all diploids, are widespread from coastal areas to the highest peaks of the mountain ranges. Plants matching the description of *Allium lefkarense* Brullo & al. are to be found mainly on limestone and gypsum, sporadically on pillow lavas, mostly at lower and medium altitudes (sea level to c. 840 m). More or less typical plants of *A. cyprium* occur at the higher elevations of the Troodos mountains, chiefly on serpentinites and diabase. The morphological differences even of typical populations are rather weak (see also keys and descriptions in Brullo & al. 2007; Giusso del Galdo & al. 2015): above all general habit, coloration of the perianth, spathe nervation and capsule size. Obviously, because only a limited number of specimens has been seen by the cited authors the morphological variability of the taxa was underestimated. Examples are scape length and flower number per inflorescence. To name but one detail: Giusso del Galdo & al. (2015) mentioned the maximum number of 25 flowers per umbel for *A. kyrenium*, but published a photograph showing more than 30 flowers, which should be a typical number for *A. lefkarense*.

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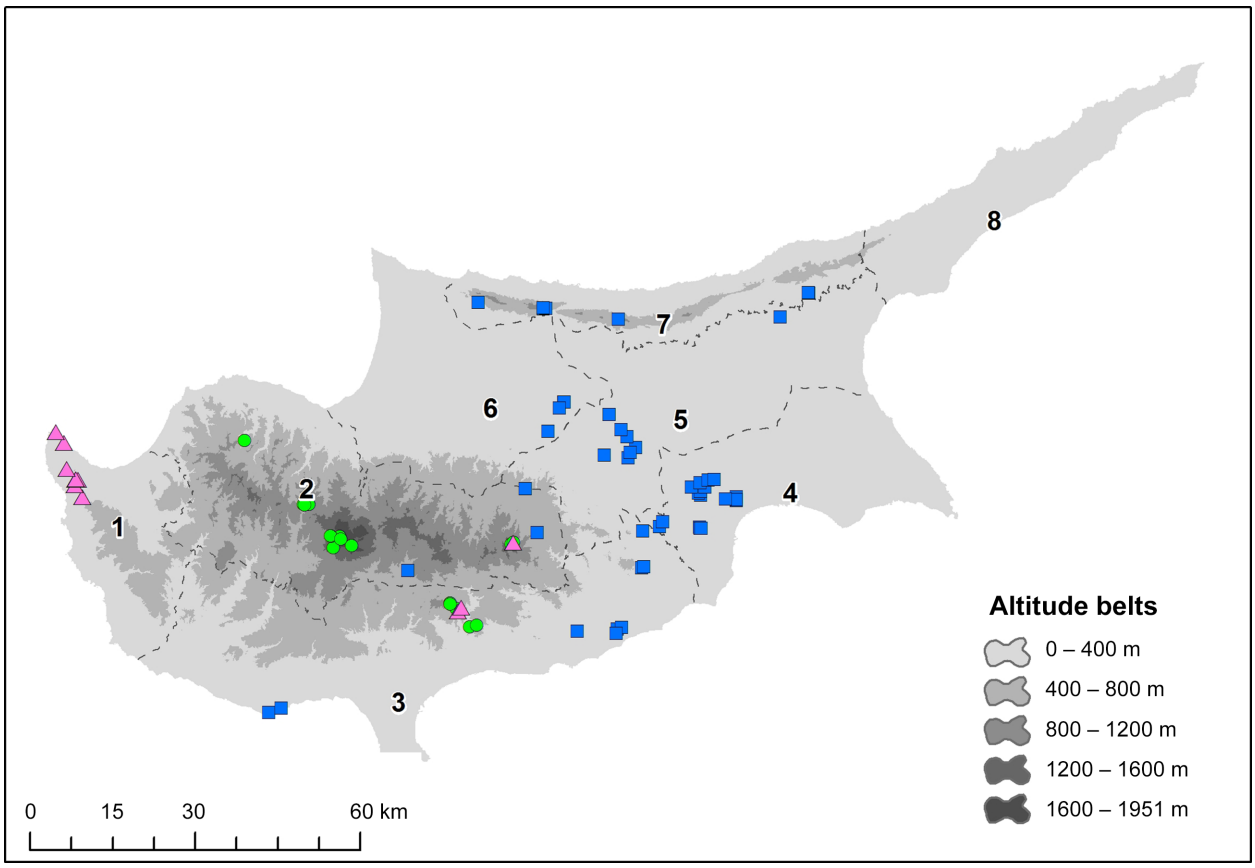


Fig. 2. Distribution of *Allium cyprium* – ●: *A. cyprium* subsp. *cyprium*; ■: *A. cyprium* subsp. *lefkarense*; ▲: transitional populations.

In several parts of Cyprus, plants are known to occur that show a combination of intermediate characters: combination of yellowish with purplish coloration of the perianth, sometimes combining both colour types in different flowers of the same individual and intermediate size of the plants. Such populations mostly occur on igneous formations (diabase, serpentinites). Some populations are closer to *cyprium* or *lefkarense* respectively. All observations speak in favour of incipient speciation: both extremes are connected by a zone of secondary contact. Such intermediate populations can also be found in certain areas where no typical representatives of the two "parental taxa" are growing, namely in the Akamas peninsula on serpentines and other igneous formations as well as on stabilized sand dunes (see also map, Fig. 2). Cultivation showed that most characters are constant in common garden experiments. The situation is quite similar to other endemic taxa of Cyprus, such as *Pterocephalus multiflorus* and *Scutellaria cypria*, which are also represented by two subspecies with more or less significant edaphic preferences and connected by transitional zones with morphologically intermediate populations.

Consequently, we recommend to treat the three diploid taxa as two subspecies of an endemic species. Transitional plants can be assigned to *Allium cyprium* s.l. Because capsule size and tepal colour seem to be the most significant morphological characters to differentiate typical representatives of the two subspecies, we recommend to treat the recently described Pentadaktylos taxon *A. kyrenium* as a synonym of *A. cyprium* subsp. *lefkarense*. However, molecular studies are recommended to clarify the phylogenetic affinities within the *A. stamineum* group in and outside Cyprus.

Allium cyprium subsp. ***lefkarense*** (Brullo & al.) Christodoulou & Hand, **comb. & stat. nov.** ≡ *Allium lefkarense* Brullo & al. in Candollea 48: 280. 1993.
= *Allium kyrenium* Giusso & al. in Phytotaxa 213: 283. 2015, syn. nov.

Selected specimens and one new chromosome count:

Allium cyprium subsp. ***cyprium***
Chromosome number: 2*n* = 16 (see below: *Hand 5855*; Fig. 1C). Confirmation of the number counted by Brullo & al. (1993).
Div. 2: Mylikouri, Astrakas cliffs, rocky hill c. 250 m SSW of hairpin bend of Kykko road, 965 m, 18 Jun 2011, *Hand 5855*; Prodromos, Potamos Chartzis, 1400 m, igneous moutainside, 11 Jul 1999, *Christodoulou* (B, CYP 4161).

Allium cyprium subsp. ***lefkarense***
Div. 3: Pissouri, cliff area at W part of Pissouri bay, near small beach, 5 m, open rocky slope of dry stream, 12 Jun 2011, *Hand 5827*; Pissouri,

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Pissouri bay, Pikrokremmos area, above cliffs E of settlement, 55 m, openings in phrygana, 14 Jun 2011, *Hand S-316* (B-seedbank); Tochni, conspicuous slope SSE of village, W of road to Choirokoitia, c. 100 m, open gypsum rocks, 26 Sep 2010, *Hand S-211* (B-seedbank).

Div. 5: Athalassa, Athalassa National Forest Park, 175 m, 4 Jun 2010, *Christodoulou CY-20* (B-seedbank).

Div. 7: Buffavento, middle part of ascent to castle, 833 m, in rock crevices, 30 May 2013, *Hand 6141*; Agios Iakovos, c. 2.3 km WSW of village on Ypsarovounos, 260 m, very open gypsum slopes, 25 Sep 2010, *Hand 5745 & Hadjikyriakou*; Larnakas tis Lapithou, NW of village by the road, 325 m, on cliffs and rocks, 21 Jun 2011, *Hand 5865 & Hadjikyriakou*.

Allium cyprium – transitional populations.

Div. 1: Akamas, Argakin ton Kavourotipon, 150 m, openings of *Juniperus phoenicea* maquis on pillow lava slopes, 7 May 2006, *Christodoulou* (B, CYP 5180); Neochorio, Smigies, SE of picnic site by track to Agios Minas, 250 m, open serpentine rocks, 14 Jun 2011, *Hand 5831*.

Div. 2: Machairas, top of Kakokefalos, 1268 m, on rocks, 31 May 2013, *Hand 6150*.

Div. 3: Prastio, Kyparissia peak, Lemesos forest, 690 m, openings of maquis on serpentine, 19 May 2010, *Christodoulou* (B).

C. S. Christodoulou & R. Hand

Allium dentiferum Webb & Berthel.

Taxonomy of this species and its relatives remains controversial. It has been synonymized with *Allium longispathum* Redouté by Tison & de Foucault (2014). Plants from Cypriot populations that do not fit the concept of Brullo & al. (2008) are currently under reconsideration.

+ Div. 3: Livadi Akrotiriou, c. 1 m, margins of marshy place, 17 Jun 2014, *Hadjikyriakou 7326*.

G. Hadjikyriakou & R. Hand

Apiaceae

Bupleurum nodiflorum Sm. – RDB: EN.

Div. 3: SE of Agia Varvara, Pafos district, c. 200 m, grassy place, 22 May 2012, *Makris in Hadjikyriakou 7214*. C. Makris

Eryngium campestre L.

The occurrence of this species in Cyprus has been doubtful for a long time (Meikle 1977), but a growing number of sites has been discovered during the last years (Hand 2009; Kefalas 2013).

+ Div. 3: Lady's Mile Akrotiri, c. 1 m, sandy place, 16 Mar 2014, *Charilaou & Hadjikyriakou 7297*; ibid., 25 May 2014, *Hadjikyriakou 7323*. P. Charilaou & G. Hadjikyriakou

Ferula glauca L. (≡ *F. communis* subsp. *glauca* (L.) Rouy & E. G. Camus).

First substantiated record for Cyprus. It is mentioned for the island in several sources (e.g. Reduron 2007), but the background is unclear. It is native to the Mediterranean countries from France to Turkey (Reduron 2007). In Lapithos, it grows on cliffs and abandoned fields between 80 and 150 m altitude and should be classified as indigenous to Cyprus. Species rank is preferred because *Ferula communis* and *F. glauca* coexist in many parts of the Mediterranean. Both taxa are clearly diagnosable and do not show signs of intermediacy in sympatry.

+ Div. 7: SE of Lapithos, c. 100 m, on cliffs, 15 Feb 2014, *Hadjikyriakou 7294 & 7296*; ibid., 18 Mar 2014, *Hadjikyriakou 7298 & 7299*; ibid., 8 Apr 2014, *Hadjikyriakou 7313*; ibid., 20 May 2014, *Hadjikyriakou 7317*.

G. Hadjikyriakou

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

First record of this conspicuous umbellifer for the Pentadaktylos range. Its limited and isolated occurrence on steep, nearly inaccessible marl slopes may be the reason why it has escaped attention. Plants from the new site differ somewhat from Troodos populations, e.g. by more delicate leaves with 4 pairs of pinnae (vs 3 pairs) and 5–12 flowers in each umbellule (vs 10–30+), but the species displays a wide array of morphological variation in Turkey and Lebanon. Habit could also be influenced by the ecological conditions at this unusually low altitude.

+ Div. 7: Glistra, SW of Chartsia, 250 m, steep eroded marl slopes, 10 May 2013, *Kefalas* (CYP 6091); ibid., 2 Jun 2013, *Hand 6161 & Kefalas* (B); ibid., 29 Jun 2013, *Kefalas* (CYP 6112); ibid., 7 Sep 2013, *Kefalas* (B, CYP).

K. Kefalas

Tordylium apulum L. – RDB: VU.

Div. 7: Agios Sintis at Amvrosios Keryneias, c. 20 m, among phrygana not far from coast, 14 Mar 2013, *Hadjikyriakou 7226*; Agios Amvrosios, near Agios Dimitrianos chapel, 19 m, 8 Apr 2014, *Hand 6397 & Hadjikyriakou*.

G. Hadjikyriakou

Tordylium carmeli (Labill.) Al-Eisawi

Chromosome number: $2n = 20$. First count of Cypriot material.

Div. 1: Episkopi, by road to Nata, along track on W side of Ezousas ford, 135 m, waste ground near garden, 20 Jun 2011, *Hand S-358* (B-seedbank), cult. *Cubr 48715* (B-garden herb.). (ed.)

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Torilis arvensis (Huds.) Link subsp. ***arvensis***
The only Cypriot record for this taxon is based on the cited exsiccatum and has been published by Alziar (2000). A revision revealed that it belongs to *Torilis tenella* (Del.) Rchb. Consequently, the nominal subspecies of *T. arvensis* must be deleted from the list of Cypriot taxa. The latter is in fact a segetal weed confined to W and C Europe, where it is on the verge of extinction. According to Dimopoulos & al. (2013), records from Greece may all refer to *T. arvensis* subsp. *recta* Jury (Jury 1996).
Div. 4: entre Xylophagou et Ayia Thekla (Larnaca), 5 m, 12 Apr 1991, *Alziar & al.*, *Iter Med. 4*, *056*, rev. Hand (B). (ed.)

Araceae

Arum hygrophilum Boiss.
A collection of this much-confused species has already be mentioned by Bedalov & al. (2002) for this division, but without an exact locality.
Div. 1: Kritou Tera, above waterfall NE of village, in valley leading down to Choli, c. 200 m, shaded orchard, 28 Apr 2005, *Hand 4721*, *Christodoulou & Hadjikyriakou*; Lysos, below water basin at church, dry rivulet near road, 535 m, eutrophicated ground under trees, *Hand S-263 & Christodoulou (B-seedbank)*, cult. *Cubr 49000* (B-garden herb.).
C. S. Christodoulou & R. Hand

Arum sintenisii (Engl.) P. C. Boyce – RDB: VU.
Chromosome number: 2*n* = 28. Confirmation of the only other count for this endemic species (Bedalov & al. 2002).
Div. 1: Androlikou, NE of village, grazed slope with rocks, 21 Apr 1998, *Christodoulou* (living plant from garden cultivation transferred in 2010), cult. *Cubr 48385* (B-garden herb.).
(ed.)

Asparagaceae

Asparagus officinalis L.
A rarely documented casual in Cyprus.
+ Div. 3: Trachoni Lemesou to Zakaki, c. 15 m, citrus groves, 5 Aug 2013, *Hadjikyriakou 7243*.
G. Hadjikyriakou

Asteraceae

Achillea millefolium L.
An introduced alien, new for Cyprus and to be classified as casual.
+ Div. 2: Trikoukia, c. 1400 m, irrigation channel, 21 Jul 1990, *Christodoulou in Hadjikyriakou 4755*. C. S. Christodoulou

Anthemis amblyolepis Eig
+ Div. 6: Livera, c. 20 m, rocky place near coast, 13 Mar 1997, *Diolas in Hadjikyriakou 2350*; 2 km S of Akrotirion Kormakitis, c. 3 m, flat rocky place, 1 Apr 2004, *Hadjikyriakou 5973 & Hadjikyriakou f.*
I. Diolas, G. Hadjikyriakou & Th. Hadjikyriakou

Bidens bipinnata L.
Second record for Cyprus, but for the time being to be classified as casual.
Div. 2: Kato Platres, in the village, c. 1000 m, 15 Nov 2011, *Hadjikyriakou 7200*.
G. Hadjikyriakou

Bidens subalternans L.
Second location in Cyprus, but for the time being to be classified as casual.
+ Div. 3: Trachoni Lemesou to Zakaki, c. 15 m, citrus groves, 26 Jul 2013, *Hadjikyriakou 7241*; ibid., 6 Sep 2013, *Hadjikyriakou 7247*.
G. Hadjikyriakou

Cirsium arvense (L.) Scop.
First record for Cyprus, apparently alien for the island and for the time being to be classified as naturalized non-invasive. It is also well established at Pasia Livadi, not far from Armyrolivado, where the very rare endemic and critically endangered *Crypsis hadjikyriakou* Raus & H. Scholz grows (≡ *Sporobolus hadjikyriakou* (Raus & H. Scholz) P. M. Peterson). Both wetlands belong to the rare habitat type 6460 (Peat grasslands of Troodos, according to Directive 92/43 EEC). The population dynamics of the alien thistle need a thorough monitoring in the years to come.
+ Div. 2: Troodos square, c. 1720 m, margins of pine forest and road, 1 Aug 2012, *Hadjikyriakou 7219*; ibid., 10 Jul 2014, *Hadjikyriakou 7329* (herb. Hadjikyriakou, B). G. Hadjikyriakou

Filago aegaea subsp. ***aristata*** Wagenitz
Formerly known only from a single gathering. More records have been added recently (see Hand 2004, 2011). The new sites confirm its very scattered occurrence along the N fringe of Cyprus from Akamas to Pentadaktylos.
+ Div. 2: Limnitis, 5 m, steep coastal banks on pillow lavas, 31 Mar 2012, *Kefalas* (B).
Div. 7: Panagra pass, 60 m, stream banks, 9 Apr 2012, *Kefalas*, *Paradisis & Papanikolas* (B).
K. Kefalas, N. Papanikolas & A. Paradisis

Hirtellina lobelii (DC.) Dittrich – RDB: DD.
Chromosome number: 2*n* = 34 (Fig. 1D). Possibly this is the first count ever for this species.
Div. 7: Halevga, N of Halevga, slope below the picnic site, 610 m, fissures of limestone rocks at base of vertical cliffs, 29 Nov 2010, *Kefalas CY-35* (B-seedbank). (ed.)

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Table 1. Differences between *Myosotis refracta* s.str. and *M. paucipilosa* (based on Grau 1968 and material from Greece amd Cyprus at B).

	***Myosotis refracta* s.str.**	***Myosotis paucipilosa***
Fruiting calyx position	often only partly touching stem	often tightly appressed to stem
Fruiting calyx indumentum	completely covered with hooked hairs	lower ⅓ without hooked hairs
Nutlet shape	max. width never above middle	max. width above middle
Nutlet wrinkle position	median	marginal
Chromosome number	$2n = 44$	$2n = 20$

Taraxacum sect. ***Ruderalia*** Kirschner & al.

The identity of introduced dandelions has been discussed but not solved by Wittzell (1999). Currently, they are classified as naturalized non-invasive in Cyprus. Plants from the cited location (where certainly introduced, with grass seeds?) could not be assigned to any known species of this notoriously critical section. They show a certain influence by *T.* sect. *Erythrosperma* (H. Lindb.) Dahlst.

+ Div. 2: Panagia tou Kykkou, close to monastery entrance, c. 1200 m, irrigated lawn, 14 May 2009, *Hand 5504 & Christodoulou*, rev. Uhlemann (B).

C. S. Christodoulou, R. Hand & I. Uhlemann

Tripleurospermum inodorum (L.) Sch. Bip. s.str. (= *Matricaria perforata* Mérat ≡ *T. perforatum* (Mérat) M. Laínz) – RDB: CR.

A new location for this naturalized non-invasive (for other records see Hadjikyriakou & al. 2004).

+ Div. 2: Troodos village, coming from Troodos, 100 m before turning to Armyrolivado, Sep 2012, *Christofides* (seeds), cult. *Cubr 49832* (B-garden herb.), conf. Vogt.

Y. Christofides & R. Vogt

Boraginaceae

Cynoglossum montanum subsp. ***extraeuropaeum*** Brand

Chromosome number: $2n = 24$ (Fig. 1E). First count of Cypriot plants.

Div. 2: Troodos village, by the road to Prodromos, opposite base station of ski lift, 1800 m, disturbed ground, 22 Sep 2010, *Hand S-189 & Christodoulou* (B-seedbank). (ed.)

Myosotis refracta Boiss. s.l.

A revision of the annual taxa of *Myosotis* L. (Grau 1968) resulted in the acceptance of two subspecies of *M. refracta*: the nominal taxon, widely but disjunctly distributed from Spain to Iran, and subsp. *paucipilosa* Grau, which is known to occur sympatrically with the typical subspecies in parts of Greece and Turkey. A third taxon, *M. refracta* subsp. *aegagrophila* Greuter & Grau from Crete (Greuter & Grau 1970), did not find general acceptance and has been synonymized with the nominal taxon (Strid 1991; Dimopoulos & al. 2013) – a view that is shared here. Another subspecies, *M. refracta* subsp. *chitralica* Kazmi, was described from W and C Asia (Kazmi 1971) and also may need a critical reconsideration.

A revision of material from Cyprus revealed that both generally accepted Euro-Mediterranean taxa occur in Cyprus. As already remarked by Greuter & Grau (1970), the distribution area of *paucipilosa* is completely embedded in the area of the nominal taxon, and both taxa behave nearly as independent species ("beinahe als selbständige Arten"). We think that they should be treated as species because (1) their areas are sympatric, (2) there seems to be no ecological separation, (3) they are karyologically distinct and (4) they are clearly and easily diagnosable by a set of characters (see Table 1).

Myosotis paucipilosa (Grau) Ristow & Hand, **comb. & stat. nov.** ≡ *Myosotis refracta* subsp. *paucipilosa* Grau in Mitt. Bot. Staatssamml. München 7: 90. 1968.

The new results from Cyprus confirm sympatry and the morphological differences. Unfortunately, efforts to count the chromosome numbers of Cypriot material have so far failed. The only known counting of *paucipilosa* revealed a dysploid number on the diploid level (Grau 1968).

Specimens seen (see also Grau 1968 for further Cypriot material of *refracta* s.str.):

Myosotis refracta s.str.

Div. 2: Pano Panayia (Paphos), 800 m, calcaires et silex du Paléogènes, 22 Apr 1991, *Alziar & al.*, *Iter Medit. 4*, *1133* (B).

Myosotis paucipilosa

+ Div. 2 Odou, NNE, W of Moutti tou Charaka, N and NW of summit 1228, c. 1180 m, banks of roads and tracks, 9 Apr 2005, *Hand 4554*; Lagoudera, 1 km SSE of village, c. 1200 m, in vineyards, 26 Apr 2007, *Hand 5243*.

R. Hand & M. Ristow

Brassicaceae

Diplotaxis tenuifolia (L.) DC.

First record for Cyprus. It is cultivated on the island as a salad plant, and it has appeared in the vicinity of Livadi Akrotiriou in the last few years. Apparently, it is an escape from the nearby cultivation of aromatic plants. However, it

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seems to be spreading along the road and should be classified as naturalized non-invasive. Apart from Europe it is native to Turkey, whereas it is naturalized in Israel (Hedge 1965; Marhold 2011).

+ Div. 3: Livadi Akrotiriou, c. 1 m, margins of marshy place and road, 20 Jul 2013, *Hadjikyriakou 7239*. G. Hadjikyriakou

Crambe hispanica L. – RDB: EN.

+ Div. 1: Episkopi Pafou, c. 250 m, vertical cliffs, 5 Feb 2013, *Makris in Hadjikyriakou 7225*. C. Makris

Microthlaspi natolicum [subsp. ***sporadium***] var. ***pentadactylonis*** F. K. Mey.

Chromosome number: 2*n* = 14 (Fig. 1F). Number differing from the only other count of Cypriot material: Polatschek (1983) gave 2*n* = 42 for a plant named as *Thlaspi annuum* (= *T. natolicum*), but this may be the result of differing taxonomic concepts in the *M. perfoliatum* species group.

Div. 2: Sykopetra, at pass to Palaichori, where district border Lemesos-Lefkosia crosses road, c. 1050 m, banks in open pine stands, 13 May 2009, *Hand S-57* (B-seedbank). (ed.)

Noccaea cypria (Bornm.) F. K. Mey.

Chromosome number: 2*n* = 14. This is the first count of this Cypriot endemic.

Div. 2: Troodos range, Chionistra summit, 1920 m, 12 Jun 2009, *Christodoulou* (B-seedbank), cult. *Cubr 47520* (B-garden herb.). (ed.)

Sisymbrium altissimum L.

First record from Cyprus. Occurs in Europe and SW Asia (including Turkey, Lebanon, Syria; Marhold 2011). Most probably an alien for the island and to be classified as casual; however, more collections are needed.

+ Div. 2: Chandria to Madari, c. 1200 m, roadside, 8 May 2014, *Makris in Hadjikyriakou 7316*. C. Makris

Campanulaceae

Campanula podocarpa Boiss. – RDB: RE.

Chromosome number: 2*n* = 16 (Fig. 1G). This is the first count for this E Mediterranean species.

Div. 2: Troodos village, S of settlement, dry valley W of horse stables, 1720 m, on fine debris on old terraces in very open pine forest, Aug 2011, *Papachristophorou CY-37* (B-seedbank), cult. *Cubr 48759* (B-garden herb.). (ed.)

Capparaceae

Cleome iberica DC.

+ Div. 3: 1 km E of Amasgou Monastery, c. 400 m, roadside, 23 May 2013, *Hadjikyriakou 7234*. G. Hadjikyriakou

Caryophyllaceae

Arenaria pamphylica subsp. ***kyrenica*** McNeill

Chromosome number: 2*n* = 44 (Fig. 1H, I). This is the first count for this taxon.

Div. 7: Kalograia, Argaki tous Maronites, c. 2 km W of Agia Paraskevi, c. 250 m, on limestone rocks, 3 May 2007, *Hand 5343 & Hadjikyriakou*. (ed.)

Cerastium dichotomum L.

+ Div. 1: Lysos, on road to Pelathousa, NW of crossing of stream, at track N of road, 350 m, field margin, 25 Mar 2012, *Hand 5924*. (ed.)

Dianthus tripunctatus Sm. – RDB: DD.

Div. 1: Pelathousa, c. 450 m, grassy place, 14 May 2014, *Makris in Hadjikyriakou 7321*.

Div. 3: SE of Agia Varvara Pafos district, c. 200 m, grassy place, 22 May 2012, *Makris in Hadjikyriakou 7213*. C. Makris

Minuartia thymifolia (Sm.) Bornm.

Recently, this species has been transferred to the segregate genus *Sabulina* Rchb. by Dillenberger & Kadereit (2014). First of all, the authorship of the basionym *Arenaria thymifolia* has to corrected (Sm., not Sibth. & Sm.). More important still is that the presented key to genera does not work in the case of *M. thymifolia*. It reads "Petals usually not exceeding sepals, when petals longer than sepals, plants from W North America …". *Minuartia thymifolia*, an E Mediterranean species, always shows petals clearly longer than sepals (see, e.g., photographic documentation in Hand & al. 2015+).

+ Div. 3: Mandria, S of village, 2 m, sandy beach, 27 Mar 2012, *Hand 5931*.

Div. 8: Agios Symeon, c. 2.6 km SE, on plateau near road crossing at small marked *Tulipa* site, 45 m, abandoned field, 31 Mar 2012, *Hand 5966 & Hadjikyriakou*; unusual location of this otherwise strictly coastal species. G. Hadjikyriakou & R. Hand

Silene alexandrina (Asch.) Danin (≡ *S. apetala* var. *alexandrina* Asch.).

+ Div. 2: Kato Pyrgos, at road below medieval observation tower, 20 m, fine debris, 24 Mar 2012, *Hand 5919*.

+ Div. 8: Agios Theodoros, Akrotirio Elaia, between small lighthouse and abandoned building W of it, 20 m, among rocks, 31 Mar 2012, *Hand 5970 & Hadjikyriakou*. G. Hadjikyriakou & R. Hand

Silene cretica L. – RDB: DD.

+ Div. 3: SE of Agia Varvara Pafos district, c. 200 m, grassy place, 22 May 2012, *Makris in Hadjikyriakou 7212*. C. Makris

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Silene dichotoma subsp. ***racemosa*** (Otth) Hayek – RDB: EN.

Div. 3: Fasoula, at road at E edge of village, 150 m, on rocks, 26 Mar 2012, *Hand 5927*. (ed.)

Silene fruticosa L.

+ Div. 3: Sympoulas in Episkopi military base, c. 60 m, cliffs and rocky place, 8 Dec 2013, *Hadjikyriakou 7292*. G. Hadjikyriakou

Silene galataea Boiss.

+ Div. 3: Apsiou, Amirou, on track to Akrounta, c. 700 m ± E of monastery, 350 m, shaded banks under pines, 4 Apr 2012, *Hand 6000*; ibid., Lemesos forest, Agios Fotios site, 442 m, rocky bank below crossing of stream, serpentine, 23 May 2013, *Hand 6107 & Hadjikyriakou*.
G. Hadjikyriakou & R. Hand

Chenopodiaceae (*Amaranthaceae* s.l.)

Atriplex davisii Aellen

First records for Cyprus. Details on the determination of this species and its distribution in neighbouring countries can be found in Suchorukow (2007). Probably, the species is more widespread along the coast but is neglected because of its late fruiting. It is certainly indigenous to Cyprus, but has escaped attention in the past.

+ Div. 3: Fassouri, N edge of Fassouri reedbeds, 1 m, grassy marshes, 20 Sep 2010, *Hand 5710*, det. Sukhorukov.
+ Div. 4: Ammochostos, Agios Loukas Lake, 10 m, brackish marshy ground in dry lake, 27 Nov 2011, *Kefalas* (B); ibid., 3 Nov 2012, *Kefalas*, det. Sukhorukov (B, CYP 5976, herb. Hadjikyriakou); Kouklia dam, 15 m, brackish margins of dam, 3 Nov 2012, *Kefalas*, det. Sukhorukov (B, herb. Hadjikyriakou).
+ Div. 5: Eyglenjia, in a garden, 20 Sep 1989, *Della 3337*, rev. Sukhorukov (K; "*Chenopodium*").
R. Hand, K. Kefalas & A. Sukhorukov

Atriplex tatarica L. s.l.

First specimen-based records for Cyprus. Already mentioned by Greuter & al. (1984) and Viney (1994) but data on specimens have never been published. For the time being, it is included in the species in a broad sense. There is no modern revision of material from the whole area of this widespread taxon. Its status in Cyprus is difficult to assess: it may have been recently introduced. On the other hand, it fruits very late in the season and may have escaped the attention of collectors visiting the marshes in Div. 4. For the time being, it should be classified as indigenous.

+ Div. 4: Near Klapsides beach, between Pedieos and Gialias estuaries, 0 m, brackish sandy ground, 3 Nov 2012, *Kefalas*, conf. Sukhorukov (B, herb. Hadjikyriakou); ibid., 19 Sep 2013, *Kefalas*, conf. Sukhorukov (B, CYP); S part of old Ammochostos moat, 0 m, brackish waste ground, 19 Sep 2013, *Kefalas* (CYP); Ammochostos, Othellos tower, 0 m, brackish waste ground, 19 Sep 2013, *Kefalas* (CYP).
K. Kefalas & A. Sukhorukov

Noaea mucronata (Forssk.) Asch. & Schweinf.

+ Div. 1: Goudi, NNW of the village, c. 700 m SSW of Chrysochou, garigue, 23 Nov 2011, *Hardman* (B). M. Hardman

Cistaceae

Cistus ×pauranthus Demoly (= *C. parviflorus* Lam. × *C. salviifolius* L.)

+ Div. 3: Lady's Mile Akrotiri, c. 1 m, among *Juniperus phoenicea*, 6 Apr 2014, *Hadjikyriakou 7307*.
G. Hadjikyriakou

Convolvulaceae

Ipomoea purpurea (L.) Roth

Well established in irrigated fields. To be classified as naturalized non-invasive in Cyprus.

+ Div. 3: Trachoni Lemesou to Asomatos, c. 10 m, cultivated land, 20 Nov 2011, *Hadjikyriakou 7201*.
G. Hadjikyriakou

Crassulaceae

Sedum microcarpum (Sm.) Schönland (≡ *Telmissa microcarpa* (Sm.) Boiss.).

+ Div. 2: Limnitis, top of hill NE of conspicuous bend towards Loutros, 140 m, on flat rocks, 2 Apr 2012, *Hand 5981*. (ed.)

Cyperaceae

Cyperus laevigatus subsp. ***distachyos*** (All.) Ball

+ Div. 3: Asomatos, crossing of tracks SE of the village, 4 m, along reeds of salt lake, muddy open ground on track, 20 May 2005, *Hand 5057 & Hadjikyriakou*; ibid., 1 Jun 2013, *Hand S-490 & Hadjikyriakou* (B-seedbank).
G. Hadjikyriakou & R. Hand

Cyperus longus L. subsp. ***longus***

First specimen-based records since the 1930s and 1940s (see Meikle 1985, but the nominal variety also mentioned by Viney 1996).

Div. 5: Dikomo, 235 m, marshy stream, 29 Jun 2013, *Kefalas* (CYP 6114), var. *longus*.
+ Div. 6: Kefalovryso of Kalo Chorio Morfou, 140 m, marshy valley, 3 Jun 2012, *Kefalas* (B), var. *heldreichianus* (Boiss.) Boiss. K. Kefalas

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Isolepis cernua (Vahl) Roem. & Schult. – RDB: EN.
+ Div. 1: Xeros valley, SW of Kathikas, 600 m, wet ground by spring, 6 Apr 2013, *Kefalas & Paradisis* (B). K. Kefalas & A. Paradisis

Elatinaceae

Elatine macropoda Guss.
+ Div. 5: Krines, W of Trikomo, 50 m, rock pool, 20 Apr 2012, *Kefalas* (CYP 5868); Charafti, Trikomo, 5 m, rock pools, 17 Feb 2013, *Yorganci* (CYP 5984).
+ Div. 8: Cape Elea, 20 m, rock pools, 25 Mar 2012, *Kefalas* (CYP 5799); ibid., independently found and collected, 31 Mar 2012, *Hand 5968 & Hadjikyriakou.* G. Hadjikyriakou, R. Hand, K. Kefalas & H. Yorganci

Euphorbiaceae

Euphorbia berythea Boiss. & C. I. Blanche (Fig. 3).
First records for Cyprus. The habitat of the second collection suggests that it is native on the island. It occurs in nearby Israel, Lebanon, Syria and Jordan (see, e.g., Danin 2005).
+ Div. 4: Sotira, Agios Antonios, 9 Mar 2008, *Christodoulou* (CYP 5268); Kavo Gkreko, c. 20 m, rocky place with *Juniperus phoenicea*, 21 Mar 2013, *Makris in Hadjikyriakou 7228*. C. S. Christodoulou & C. Makris

Euphorbia hirta L.
+ Div. 4: Dekeleia, c. 3 m, margins of road and cultivated land, 18 Oct 2013, *Hadjikyriakou 7289*.
+ Div. 7: Agios Amvrosios Keryneias, c. 20 m, garden, 5 Aug 2012, *Hadjikyriakou 7220*; ibid., 4 Aug 2013, *Hadjikyriakou 7242*. G. Hadjikyriakou

Fabaceae

Lens ervoides (Brign.) Grande
+ Div. 1: Akamas, at Erimites, 55 m, rocky phrygana, kafkalla, 23 Mar 2012, *Hand 5910*. (ed.)

Medicago arborea L.
First record for Cyprus and to be classified as casual. It may become established as an alien in the mentioned area in the years to come.
+ Div. 3: Acheleia, N of road c. 500 m S of motorway bridge, 75 m, 1 shrub at base of pylon, at least 1 in cliff to NNE, grown nearby in fenced area, 1 Apr 2012, *Hand 5976*. (ed.)

Ononis alopecuroides L. subsp. ***alopecuroides***
Second published record for Cyprus (see Hadjikyriakou 2009 for the other record and Meikle 1977 on earlier unsubstantiated records). To be classified as naturalized non-invasive in Cyprus. In 2014 it could not be relocated at the mentioned site, but it should be looked for in the vicinity.
Div. 8: Pachyammos/Karpasia, NE of Akro, between main road and beach, 17 m, wet ground by small stream, 28 May 2013, *Hand 6134*. (ed.)



Fig. 3. *Euphorbia berythea*, flowering stem. – Cyprus, Sotira, near Agios Antonios (Ammochostou), 9 Mar 2008, photograph by C. S. Christodoulou.

Trifolium argutum Banks & Sol. – RDB: NT.
Chromosome number: $2n = 16$. First count of Cypriot material.
Div. 1: Pafos, where coastal path W of castle turns to north, 5 m, rocky ground by track, 13 Jun 2011, *Hand S-300* (B-seedbank), cult. *Cubr 48594* (B-garden herb.). (ed.)

Trifolium striatum L.
New for Pentadaktylos range and found at unusually low altitude.
+ Div. 7: Paliomylos river, below Kampyli, 125 m, streamsides, 30 Mar 2013, *Kefalas*, *Paradisis & Tamson* (B). K. Kefalas, A. Paradisis & S. Tamson

Geranicaceae

Erodium botrys (Cav.) Bertol. – RDB: NT.
+ Div. 4: NW of Agia Napa, 50 m, grassy places between shrubs, 21 Mar 2012, *Kefalas* (B); ibid., 2 Mar 2013, *Kefalas* (CYP 5990).
+ Div. 6: Diorios forest, 215 m, grassy openings in pine forest, 22 Mar 2014, *Kefalas & Paradisis* (CYP); between Kormakitis and Livera, 170 m, grassy banks in open pine forest, 22 Mar 2014, *Kefalas & Paradisis* (CYP). K. Kefalas & A. Paradisis

Erodium crassifolium L'Hér. subsp. ***crassifolium*** – RDB: VU.
Chromosome number: $2n = 18$ (Fig. 1J). First count of Cypriot material.

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Div. 4: Aradippou, Rizoelia park, S slopes below hill top, c. 80 m, phrygana on open gypsum slopes, 7 May 2009, *Hand S-16 & Christodoulou* (B-seedbank), cult. *Cubr 47424*, *47947* (B-garden herb.). (ed.)

Lamiaceae

Lavandula stoechas L.
This totally isolated location in the Pentadaktylos range has already been mentioned by Viney (1994), but specimen data have never been published. The species is widespread mostly on igneous rocks in parts of the Troodos range.
+ Div. 7: Between Fterycha and Paleosofos, 220 m, maquis, 24 Mar 2013, *Tamson* (CYP 6017). S. Tamson

Origanum onites L.
Mentioned by Viney (1996) as casual for a locality in the central Mesaoria. The population at the site cited below was discovered by H. Yorganci. It is slowly spreading and should be classified as naturalized non-invasive for Cyprus.
+ Div. 4: Ammochostos, by road to Stylloi, 14 m, roadside, waste ground, 2 Jun 2013, *Hand 6159 & Kefalas* (B). H. Yorganci

Phlomis brevibracteata Turill – RDB: VU.
Chromosome number: 2*n* = 20 (Fig. 1K). First count of this Cypriot endemic.
Div. 3: Alassa, 5 Aug 2008, *Christodoulou* (B-seedbank), cult. *Cubr 49158* (B-garden herb.). (ed.)

Salvia dominica L. – RDB: VU.
Chromosome number: 2*n* = 20. First count of Cypriot material; possibly the first count ever for this species.
Div. 3: Curium, by road E of entrance to archaeological park, 60 m, low rocks by the road, 24 Jun 2011, *Hand S-388* (B-seedbank), cult. *Cubr 49095* (B-garden herb.). (ed.)

Salvia veneris Hedge – RDB: VU.
Chromosome number: 2*n* = 22. The results do not confirm an earlier counting by Yıldız & Gücel (2006), who found 2*n* = 18. Unfortunately, no photographs worthy of publication could be produced, but the former number was found in several plates. Further studies on this rare endemic are recommended.
Div. 7: Kythrea, below former Kefalovryso spring, on steep slope at N edge of village, 270 m, screes of lava intrusions, 30 Sep 2010, *Hand S-250 & Hadjikyriakou* (B-seedbank). (ed.)

Satureja thymbra L. – RDB: EN.
Chromosome number: 2*n* = 30. First count of Cypriot material.
Div. 2: Pachyammos, 100 m, 9 Sep 2009, *Christodoulou* (B-seedbank), cult. *Cubr 48552* (B-garden herb.). (ed.)

Liliaceae

Fritillaria acmopetala Boiss. – RDB: DD.
First record for Cyprus since 1948 (Meikle 1985) and new for Karpasia peninsula. Thought to be possibly extinct (Tsintides & al. 2007).
+ Div. 8: Rizokarpaso, 110 m, shrubby place, 25 Mar 2014, *Paradisis*, *Kefalas & Fesa* (CYP, herb. Hadjikyriakou 7302). M. Fesa, K. Kefalas & A. Paradisis

Lythraceae

Lythrum hyssopifolia L. var. ***hyssopifolia***
+ Div. 8: Pachyammos/Karpasia, NE of Akro, between main road and beach, 17 m, wet ground by small stream, 28 May 2013, *Hand 6135*. (ed.)

Malvaceae

Alcea acaulis (Cav.) Alef.
First record for Cyprus. This species was first found in the year 2000. Its small population consists of about 20 plants, threatened mostly by grazing and agricultural activities. It is to be classified as indigenous for Cyprus. Obviously, this rare species has been overlooked in the past. It is known to occur in most neighbouring countries of the E Mediterranean, with some extensions into the adjacent Irano-Turanian region (see, e.g., Zohary 1972).
+ Div. 5: W of Trikomo, 50 m, dry open grassland on limestone hill, 16 Apr 2015, *Yorganci* (CYP). H. Yorganci

Alcea rosea L.
First records for Cyprus. It is a garden escape, now adequately naturalized in Div. 2 and to be classified as naturalized non-invasive for Cyprus. Seen in many other parts of Cyprus in the last 10 years but inadequately documented.
+ Div. 2: Pano Platres, c. 1200 m, roadside, 28 May 2013, *Hadjikyriakou 7235*; Kato Amiantos, c. 1000 m, roadside, 8 Jun 2013, *Hadjikyriakou 7236*. G. Hadjikyriakou

Onagraceae

Oenothera affinis Cambess.
First record for Cyprus. Well established in an area of one hectare at Episkopi Lemesou since 2005. To be classified as naturalized non-invasive.
+ Div. 3: West of Episkopi Lemesou, c. 10 m, roadside and abandoned land, 27 Oct 2012, *Hadjikyriakou 7224*. G. Hadjikyriakou

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Papaveraceae

Fumaria gaillardotii Boiss. – RDB: DD.
First specimen-based records for this species since 1957. It is mentioned for some other places by Viney (1994), but details and corresponding specimen data have never been published.
Div. 8: Cape Plakoti, 5 m, waste ground near the sea, 17 Feb 2013, *Yorganci* (CYP 5985); ibid., 16 Mar 2013, *Kefalas* (B); Gialousa, 115 m, roadside, 16 Mar 2013, *Kefalas* (B, CYP 6000). K. Kefalas & H. Yorganci

Papaver dubium L.
Inclusion in the Flora of Cyprus (Meikle 1977) was based on the gathering *Kotschy 865* from the "Prodhromos, Lemithou and Tris Elies" area. According to Meikle (1977) "Not recorded since, and perhaps a misidentification". Meikle did not find this specimen at K or any other herbarium. The editor's requests to herbaria holding important Kotschy collections (BP, G, JE, L and W) did not reveal any positive results, neither under *P. dubium* nor any other *Papaver* species known to occur in the W Troodos range. *Papaver paphium* M. V. Agab. & al. is the most likely candidate of confusion, as already suspected by Meikle ("*P. postii*"). Because of the unclarified identity of Kotschy's gathering, *P. dubium* should be classified as questionable for Cyprus. (ed.)

Plantaginaceae

Callitriche brutia Petagna – RDB: EN.
+ Div. 5: Charafti, Trikomo, 5 m, rock pools, 23 Feb 2014, *Kefalas* (B). K. Kefalas

Linaria albifrons (Sm.) Spreng.
+ Div. 5: Lefkosia, Athalassa, as weed in Botanic Garden at information centre, 150 m, 5 Apr 2012, *Hand 6003 & Christodoulou*. C. S. Christodoulou & R. Hand

Linaria micrantha (Cav.) Hoffmanns. & Link
+ Div. 2: Mansoura, peninsula NE of village, 10 m, pillow lava ridge, 24 Mar 2012, *Hand 5914*. (ed.)

Poaceae

Aegilops comosa Sm. subsp. ***comosa***

Confirmation of this *Aegilops* taxon, which seems to be rare in Cyprus and restricted to the Pentadaktylos range (see also van Slageren 1994; Della & Iatrou 1995).
Div. 7: NE of Krini, 370 m, dry rocky slopes with phrygana, 20 May 2012, *Kefalas* (B). K. Kefalas

Aegilops cylindrica Host
An alien species in Cyprus, also known from Div. 4 (Della & Iatrou 1995) and to be classified as naturalized non-invasive.
+ Div. 2: near Troodos square, 8 Jul 1997, *Christodoulou* (CYP 3725); ibid., 17 Jul 1997, *Christodoulou* (CYP 3726). C. S. Christodoulou

Aristida adscensionis subsp. ***coerulescens*** (Desf.) Auquier & J. Duvign. (≡ *A. coerulescens* Desf.).
Formerly thought to be rare in Cyprus. The taxon is nowhere common but easily overlooked in populations of superficially similar grass genera with tufted habit.
+ Div. 4: Troulloi, W of road to Kellia, near turn-off to industrial area, 106 m, pillow lava slope, 11 Apr 2014, *Hand 6414*.
+ Div. 5: Ardana, by road to Trikomo, Foradomantra, c. 100 m, bank of track, sandy marls, 7 Apr 2014, *Hand 6388*.
+ Div. 7: Agios Dimitrianos, N of Chartzeia, c. 30 m, roadside, 20 May 2014, *Hadjikyriakou 7320*; Pileri, 370 m, rocky limestone slopes, 1 May 2014, *Kefalas* (CYP).
+ Div. 8: Aigialoussa, small serpentine ridge NW of Pampoulos, N of main track, 186 m, rocky ground, 6 Apr 2014, *Hand 6378 & Kefalas*. G. Hadjikyriakou, R. Hand & K. Kefalas

Brachypodium pinnatum (L.) P. Beauv.
+ Div. 8: Rizokarpaso, Ronnas valley, S of river, above road bridge, 40 m, dense macchia along track, 28 May 2013, *Hand 6140*. (ed.)

Corynephorus articulatus (Desf.) P. Beauv. (= *C. divaricatus* (Pourr.) Breistr.).
+ Div. 1: Polis, at the beach W of eucalypt forest and camping site, 5 m, sand dunes, 29 Mar 2012, *Hand 5952*. (ed.)

Cutandia dichotoma (Forssk.) Trab.
+ Div. 8: Neta, coast ESE of village, 7 m, dunes, 31 Mar 2012, *Hand 5972 & Hadjikyriakou*. G. Hadjikyriakou & R. Hand

Rostraria smyrnacea (Trin.) H. Scholz (= *Lophochloa berythea* (Boiss. & C. I. Blanche) Bor).
+ Div. 2: Kato Pyrgos, SW of medieval observation tower, c. 25 m, on track, 24 Mar 2012, *Hand 5921*. (ed.)

Setaria verticillata (L.) P. Beauv. s.str.
Traditionally, this species was treated in a wide sense (see Bor in Meikle 1985), comprising the var. *verticillata* and var. *aparine* (Steud.) Asch. & Graebn. (= *S. adhaerens* (Forssk.) Chiov.). The latter was accepted at specific rank (e.g. by H. Scholz) and proved to be the dominant taxon in Cyprus. The record below is the first of *S. verticillata* s.str. Taxonomy of the group is very controversial and was recently discussed by Morrone & al. (2014), who recommended treating the taxon as a single polymorphic species.
+ Div. 1: Miliou, c. 200 m, citrus groves, 4 Jul 2014, *Hadjikyriakou 7328*. G. Hadjikyriakou

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Polygonaceae

Rumex crispus L. subsp. ***crispus***

First records for Cyprus. Mentioned by Chilton (2010) for Cyprus but without any details on specimens or exact sites. Found either as a well-established element in natural habitats (riversides, marshy places) or disturbed habitats (moist road ditches) and, considering its occurrence in adjacent countries (see, e.g., Zohary 1966), it seems to be an indigenous taxon that has escaped attention or has previously been confused with *R. cristatus* or *R. pulcher*.

+ Div. 3: Ammati, Ezousa valley, 210 m, marshy place near river, 1 Jun 2014, *Kefalas* (CYP).
+ Div. 3 & 4: Kiti, Tremithos river, 25 m, dry riverbed, 29 Jun 2012, *Kefalas* (B).
+ Div. 4: Frenaros, Sgaftos, 70 m, marshy ground flooded in winter, 25 Jun 2012 *Kefalas* (B); first observation, Mar 2009.
+ Div. 5: Dali, Gialias river, 220 m, margins of marshy pond in river bed, 13 Jun 2013, *Kefalas* (CYP 6106).
+ Div. 6: Strovolos, 185 m, moist road ditch, 13 Jun 2013, *Kefalas* (CYP 6105). K. Kefalas

Ranunculaceae

Nigella ciliaris DC. – RDB: DD.

Because of the unclear situation, this species was classified as "data deficient" in the Red Data Book. It was already known from the wider area until about 100 years ago, confirmed by Viney (1994) but without any published specimen data, relocated by H. Yorganci and then collected in 2012 by a group of Cypriot botanists.

Div. 8: Ronnas valley, Rizokarpaso, 60 m, grassy roadsides, 6 May 2012, *Yorganci & al.* (CYP 5881); ibid., 28 May 2013, *Hand* (B); ibid., 10 Apr 2014, *Hand* (B). H. Yorganci

Nigella unguicularis (Poir.) Spenn. – RDB: LC.

Chromosome number: $2n = 12$ (Fig. 1L). First count of Cypriot material.

Div. 3: Lemona, c. 700 m NNW of Agios Efraim monastery on road to Amargeti, 245 m, grassy banks and field margins, 11 Jun 2011, *Hand S-280 & Hadjikyriakou* (B-seedbank). (ed.)

Ranunculus neapolitanus Ten. – RDB: RE.

Rediscovery and second record for Cyprus of a species thought to be regionally extinct. The first and only record was made by Sintenis & Rigo in 1880 (Meikle 1977).

Div. 7: Lapithos, Argaki tis Kamaras, 120 m, shady valley, 29 Apr 2012, *Kefalas & Paradisis* (B); ibid., 3 Jun 2012, *Kefalas* (B).
A. Kefalas & A. Paradisis

Resedaceae

Reseda minoica Martin-Bravo & Jim. Mejías (– *R. orientalis* auct. cypr. p.p.).

Recently, the revision of the *Reseda odorata* L. species group resulted in the description of a new species, *R. minoica*, which is widespread in Cyprus (Martín-Bravo & Jiménez-Mejías 2013). Some additional specimen data can be added. But it proved that the true *R. orientalis* in the sense of the cited authors also occurs in Cyprus. The record below is the first for the island, one of the few regions where both taxa seem to coexist.

Div. 1: Pafos, vicinity of lighthouse, c. 15 m, rocky pasture, 26 Feb 1998, *Hand 1789*; Pafos, Tombs of the Kings area, c. 5 m, 13 Aug 2002, *Charalambous in Hand 3608*.
Div. 3: Pentakomo, S-exposed coastal slopes c. 1 km W of Akrotirio Dolos, 5 m, open rocky ground, 17 Apr 2005, *Hand 4628*.
Div. 4: Oroklini, near stream NE Gerakomoutti, not far from road, 46 m, on limestone rocks, 21 May 2013, *Hand 6097*.

Reseda orientalis (Müll. Arg.) Kotschy s.str.

+ Div. 2: Pomos, Livadi valley, between the village and the dam, upper part of route, c. 100 m, open *Pinus brutia* forest, 20 Mar 1998, *Hand 1963*. (ed.)

Rubiaceae

Crucianella imbricata Boiss.

+ Div. 3: Sanida, at forest track c. 500 m WNW of Epilas, c. 300 m, terraced young *Pinus* forest with much open rocky ground, 12 May 2005, *Hand 4941 & Hadjikyriakou*.
G. Hadjikyriakou & R. Hand

Galium canum Req.

+ Div. 2: Mansoura, peninsula NE of village, W part, 5 m, on pillow lava rocks, 24 Mar 2012, *Hand 5917*; Limnitis, hill NE of conspicuous bend towards Loutros, 140 m, small limestone cliff, 2 Apr 2012, *Hand 5980*. (ed.)

Galium divaricatum Lam. – RDB: VU.

+ Div. 2: Karavostasi, at road 750 m SSW of military harbour, 30 m, on field, 2 Apr 2012, *Hand 5986*. (ed.)

Rutaceae

Ruta chalepensis L.

+ Div. 2: Kato Pyrgos, at the beach ENE of medieval tower, 2 m, under *Pistacia* shrubs on sand, 2 Apr 2012, *Hand 5987*. (ed.)

Scrophulariaceae

Verbascum orientale (L.) All. – RDB: CR.

Chromosome number: $2n = 44$. First count of Cypriot material.

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Div. 3: Louvaras, Lemesos forest, Kakomalis area, Moutti tis Portas peak, 910 m, rocky igneous slopes, 31 May 2011, *Christodoulou CY-36* (B-seedbank), cult. *Cubr 48593* (B-garden herb.). (ed.)

Verbenaceae

Verbena supina L. – RDB: VU.

Erratum: The locality "Dam N of Gypsou" (see Willdenowia 39: 318. 2009) belongs to Div. 5, not Div. 3.

Violaceae

Viola heldreichiana Boiss. s.str.

First record for Cyprus. Traditionally, representatives of this species group of *V.* sect. *Melanium* Murr. occurring on the upper slopes of central Troodos were named *V. heldreichiana* (Meikle 1977), but according to a revision by Erben (1985), plants from this area belong to *V. rauliniana* Erben. The specimens cited below come from the Tripylos area in the Pafos forest in the W part of the Troodos range. Further studies are needed to clarify the distribution of both segregates in Cyprus.

Chromosome number: *2n* = 16; counts of root-tip material of germinated seeds of the cited specimen in B. First count of Cypriot material.

+ Div. 2: Cedar Valley, 1150–1300 m, rocky igneous slopes in open cedar forest, 13 Apr 2013, *Kefalas*, det. Erben (B, CYP 6056); known at this site since 2008.

M. Erben, R. Hand & K. Kefalas

Acknowledgements

The editor would like to thank the following persons and institutions for their support: M. Meyer and his team of gardeners, M. Cubr and M. Lüchow (all B) for cultivation of plants, preparation of herbarium specimens and support in the laboratory; the "Verein der Freunde des Botanischen Gartens und des Botanischen Museums Berlin-Dahlem e.V." for financial support of collecting trips to Cyprus in the years 2009, 2010, 2011 and 2013; the curators of the herbaria BP, G, JE, L and W for help in locating specimens from Cyprus; Constantinos Papasavvas (Lefkosia, Cyprus) and Michael Rodewald (B) for help in producing the map and Fig. 1, respectively; Mike Hardman (Goudi, Cyprus) for linguistic improvements of an earlier draft; and Thomas Raus (B) and an anonymous reviewer for several improvements of the text.

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