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Contribution to the flora of Cyprus. 2.

Abstract

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The second part of the results of a floristic investigation of Cyprus is presented, including 152 species and subspecies. *Otanthus maritimus* subsp. *atlanticus* is described as new. Two species new for Cyprus, *Anagallis latifolia* and *Garhadiolus angulosus*, are reported.

Introduction

This is in continuation of our first contribution (Chrtěk & Slavík 1981) which dealt with taxa treated in vol. 1 of *Flora of Cyprus* (Meikle 1977). We visited Cyprus in April 1978 and botanized mainly in the vicinity of Paphos and Limassol. Occasional field trips were made to the Troodos Mts., the vicinity of Polis and Larnaka and the southern coast of the island. This second contribution, devoted to taxa covered by vol. 2 of *Flora of Cyprus* (Meikle 1985), i.e. the latter part of dicotyledons (*Valerianaceae* to *Salicaceae*) also considers, besides our own (C&S) herbarium specimens, plentiful herbarium material collected by Prof. Dr. J. Dostál (*D*) in April 1982 (mainly vicinity of Paralimni) and a small collection by Dr. Č. Čihálik (*C*) of May 1984. In some easy taxa (e.g. *Mandragora officinarum* L.) our field data were also used, as were plants grown from seed collected by Dr. R. Neuhäusl and Dr. Z. Neuhäuslová (*N&N*) in Cyprus in August 1981. A third contribution is planned, to contain monocotyledons.

The arrangement of taxa and nomenclature follows Meikle's *Flora of Cyprus* (Meikle 1985). The localities are arranged according to the phytogeographical regions of Cyprus as defined by Meikle (1977), the individual divisions of which are marked by numbers 1—8.

This contribution reports data on 152 species and subspecies from 317 localities. Two species (*Anagallis latifolia* L. and *Garhadiolus angulosus* Jaub. & Spach) are new to Cyprus. When comparing our localities with distributions given in Meikle's flora, it appears that certain species are new to some of the eight regions mentioned above. These include thirteen taxa for region No. 1 (*Evax contracta* Boiss., *Helichrysum italicum* (Roth) Donx, *Anthemis pseudocotula* Boiss., *Matricaria aurea* (Loefl.) Sch. Bip., *Senecio vulgaris* L., *Sonchus oleraceus* L., *Campanula erinus* L., *Anagallis arvensis* var. *caerulea* (L.) Gouan, *Convolvulus althaeoides* L., *Misopates orontium* (L.) Raf., *Plantago cretica* L., *Plantago afra* L., *Parietaria lusitânica* L.), seven taxa for region No. 3 (*Senecio vulgaris* L., *Chondrilla juncea* L., *Anagallis foemina* Mill., *Orobancha crenata* Forssk., *Plantago amplexicaulis* Cav., *Mercurialis annua* L., *Ficus carica* L.), and nine taxa for

region No. 4 (*Helichrysum italicum* (Roth) Don, *Atractylis cancellata* L., *Garhadiolus angulosus* Jaub. & Spach, *Anagallis latifolia* L., *Blackstonia perfoliata* subsp. *intermedia* (Ten.) Zeltner, *Centaureum erythraea* Rafn, *C. acutiflorum* (Schott) C vançara & Chrtek, *Convolvulus dorycnium* L., *Cuscuta planiflora* Ten.).

The overall taxonomy and distribution of *Otanthus maritimus* (L.) Hoffmanns. & Link is dealt with in detail. Two subspecies can be distinguished: subsp. *maritimus* with grey-white indumentum and subsp. *atlanticus* Chrtek & B. Slavík with greyed-yellowish indumentum. Only subsp. *maritimus* occurs in Cyprus.

Valerianaceae

Centranthus calcitrapa (L.) Dufr. subsp. *orbiculatus* (Sm.) Meikle

2. Kakopetria, Solea valley, D 41900.

Valerianella discoidea (L.) Lois.

3. Amathus, fallow fields N. of the hotel Amathus, C&S 802.

Valerianella muricata (Steven) Baxter

1. Neokhorio, Baths of Aphrodite, waste place, C&S 763.— 3. Amathus, fallow fields, C&S 799.

Dipsacaceae

Scabiosa prolifera L.

1. Paphos, road-side N. of the hotel Dionysos, C&S 891; Paphos, waste place S. of the Paphos Beach Hotel, N&N (S No.1173a).

Pterocephalus brevis Coult.

4. Paralimni, rocky calcareous slopes near the chapel Hagios Elias, D 41183, D 41185, D 41443, D 41891.

Asteraceae

Evax contracta Boiss.

1. Paphos, in ruins Saranda Kolones, C&S 760, near the lighthouse, C&S 783, dry brook bed N. of the Paphos Beach Hotel, C&S 730; Yeroskipos, on coastal sanddunes S. of the village, C&S 935.

Bombycilaena discolor (Pers.) Laing

4. Paralimni, shrubby places between Pernera and Sunrise, D 41526.

Filago eriocephala Guss.

4. Paralimni, rocky calcareous slopes W. of the town, D 41882; between Paralimni and Dherinia, coast N. of Pernera, D 41561.

Filago pyramidata L.

1. Paphos, on the way by the municipal bath, C&S 814, dry brook bed N. of the Paphos Beach Hotel, C&S 837; Akhelia, stony bank of the river Ezousas S.W. of the village, C&S 932.— 3. Amathus, stony hillside N. and N.E. of the hotel

Amathus, C&S 776, C&S 807.— 4. Paralimni, stony pastures on the coast near Pernera, D 41728.

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

4. Paralimni, stony seashores S. of Pernera, D 41574.

***Phagnalon graecum* Boiss. & Heldr.**

1. Paphos, in ruins Saranda Kolones, C&S 831; Akhelia, bank of the river Ezousas S.W. of the village, C&S 850.— 3. Amathus, grassy slope N. of the hotel Amathus, C&S 705.

Meikle (1985) considers *Phagnalon graecum* Boiss. & Heldr. to be a subspecies of *P. rupestre* (L.) DC. In view of their distinctive morphological features, especially of the capitula, and their distribution, we consider them as separate species. In Cyprus, *P. graecum* is only known from the S.W. part of the island and *P. rupestre* from the N.E. part (Fig. 1). No intermediate forms were seen.

***Helichrysum conglobatum* (Viv.) Steud.**

4. Paralimni, rocky shores N. of the hotel Pernera, D 41501, D 41502.

***Helichrysum italicum* (Roth) Don**

1. Skoulli, grassy places in maquis, C&S 768.— 2. Pano Panayia, rocky slope, C&S 902.— 3. Amathus, rocky slope N. of the hotel Amathus, C&S 762.— 4. Ayia Napa, rocky seashores S.W. of the village, C 12.

***Asteriscus aquaticus* (L.) Less.**

4. Larnaca, edges of cultivated fields 4 km N. of the town, C 24.

***Pallenis spinosa* (L.) Cass.**

1. Paphos, waste places near the hotel Dionysos, C&S 739.— 4. Paralimni, rocky calcareous places between the hotel Pernera and the chapel Hagios Elias, D 41617, D 41618.

***Otanthus maritimus* (L.) Hoffmanns. & Link**

4. Paralimni, sandy seashores near the hotel Pernera, D 41914.

Otanthus maritimus (*Filago maritima* L., *Athanasia maritima* (L.) L., *Diotis maritima* (L.) Desf., *Diotis candidissima* Desf., nom. illeg.) is a characteristic plant of sand dunes and sandy seashores. It is a Mediterranean element found on the shores of the Mediterranean Sea, including the islands (e.g. Cyprus, Aegean Islands, Sicily, Sardinia, Corsica, Balearic Islands), rarely on the Black Sea shores (Georgia, Turkey, Bulgaria), on the shore of the Atlantic Ocean from Gibraltar to the southern part of Great Britain and southern Ireland, and on the Canary Islands. Pobedimova (1967) reports this species from the eastern coast of Great Britain up to 55°N (whereas in the *Atlas of the British flora* it not mapped beyond 53°N). We have found one specimen from Edinburgh in PR. The area of this species seems to gradually shrink; for instance, in Great Britain it has not been recorded since 1936 (Perring in Hawksworth 1974). Apart from the overall distribution map of *Otanthus maritimus* published by Pobedimova (1967), further partial maps are available: e.g. for Great Britain and Ireland (Perring & Walters 1962, 1976, Hawksworth 1974), France (Dupont 1990), Italy (Pignatti 1982), S.W. Calabria (Tegano 1957), E.

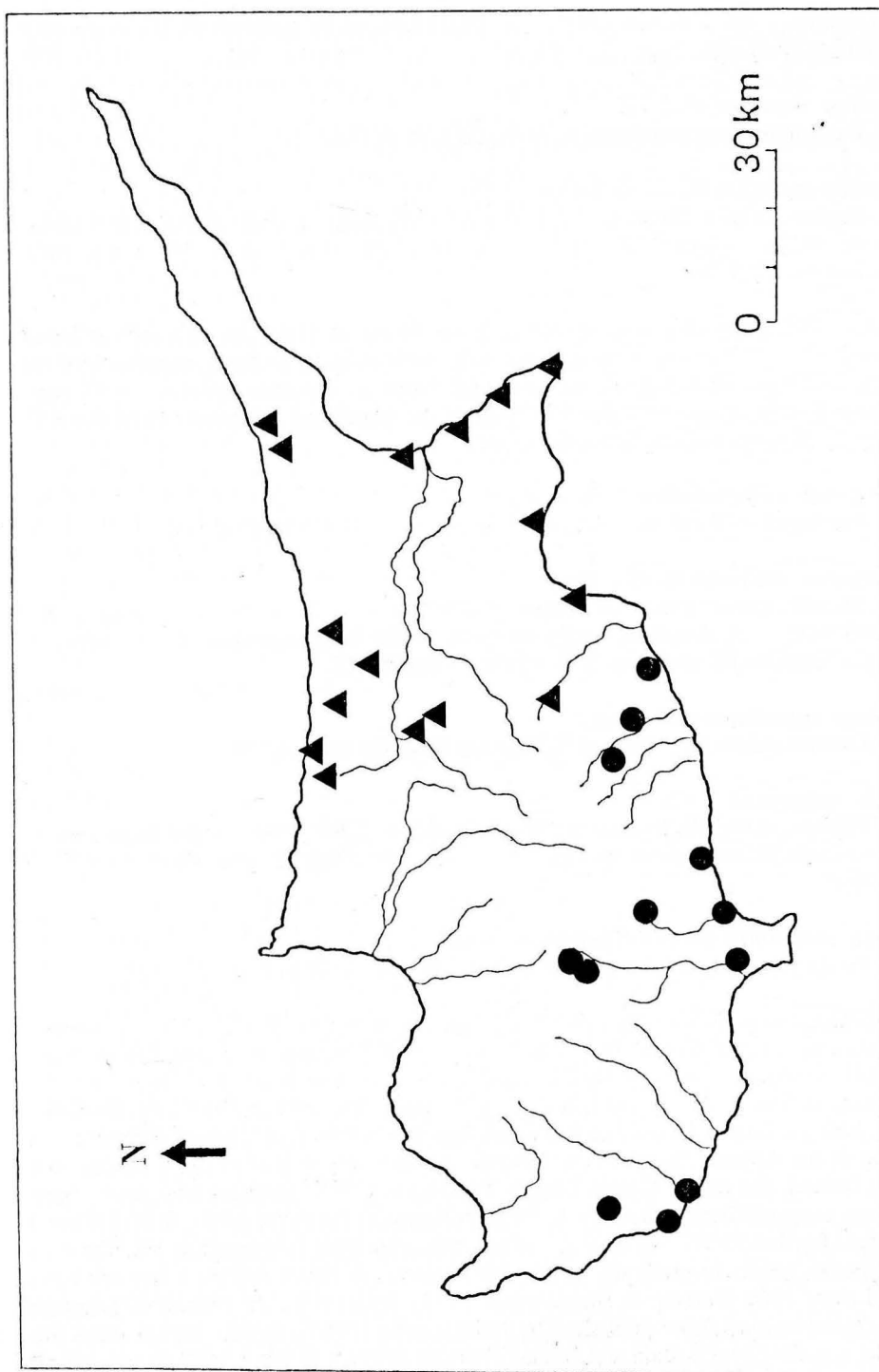


Fig. 1. Distribution of *Phagnalon graecum* Boiss. & Heldr. (●) and *Phagnalon rupestre* (L.) DC. (▲) in Cyprus.

Andalusia (Valdés & al. 1987), the Cordillera Cantábrica (Mayor & al. 1974), and Catalonia (Folch 1980).

So far, the species has been considered to be homogeneous from the taxonomic point of view (see also Pobedimova 1967: 545); no infraspecific taxa have been recognized in the literature. When studying herbarium material, the most significant among the characters considered (shape and size of achenes and involucre bracts, size of flowers, colour and density of indumentum) proved to be the colour of the indumentum covering the whole plants. Two basic colour types of indumentum can be distinguished, grey-white and grey-yellowish (most closely corresponding to "greyed-yellow group no 161 and 162"—R.H.S. Colour Chart, The Royal Horticultural Society of London, 1966). All available specimens from the Mediterranean, the Atlantic coast of the Iberian Peninsula and the coast of the Bay of Biscay in France (Fig. 2) had a grey-white indumentum. No material from the Canary Islands was seen. Plants from the Atlantic coast of France (from the Pyrenees to Cherbourg) and from the south of England and Ireland (Fig. 3) had a grey-yellowish indumentum. These plants are usually more branched in the upper part than that with a grey-white indumentum, and they form dense tufts. Having assessed the correlation between indumentum colour and geographical distribution, we conclude that *Otanthus maritimus* is to be subdivided into two subspecies, subsp. *maritimus* with a grey-white indumentum and subsp. *atlanticus* with a grey-yellowish indumentum. Similar differences in the indumentum colour are found e.g. between *Filago vulgaris* Lam. and *F. lutescens* Jord.

Otanthus maritimus (L.) Hoffmanns. & Link subsp. *maritimus*. — Described from "in Europae australis, marisque mediterranei littoribus". — Indumentum griseo-albescent.

Specimens seen: — **France**: Gironde, Soulac, Le Gurd 1928, A. Bouchon in Soc. Cénomane Exs. No. 2070 (BRNU, PR); Landes, Léon, Huchet, 1934, C. Sarrasat (PR); Biarritz, Chambre d'amour 1881 *Bordere* (PR); Hérault, Maguelonne, 1857, A. Guillard, (BRNU), 1875, *Aubouy*, (BRNU), 1902, E. Maudou, (PR); Marseille, *Huguenin* (PR); Cap Croisette, 1874, *Heitmann* (PRC), 1875, *Heitmann* (BRNU); Var, Giens 1906, L. Verguin (PR); Var, St. Maxime, 1911, *Saguet* (BRNU); Nice, J. N. Bayer (PR); Mospellii (PR). — **Corse**: Ajaccio (PRC); Bonifacio, Santa Manza, 1880, E. Reverchon (PR). — Portugal: Porto, 1891, O. Buchtien (BRNU). — **Spain**: Cádiz, I. de Sancti Petri, 1965, J. Borja (PR). — Gibraltar, 1848, *Funk* (PR). — **Italy**: Liguria: Albenga (PR); Varigotti (PR), 1865, *Pichler* (BRNU), 1879, A. Piccone (BRNU), 1910, G. Gresino (BRNU). — Toscana: Massa-Carrara, W. Streinz (PR); Pisa, Migliarino, 1878, *Lommier* (BRNU), 1904, 1905, E. Müller (BRNU); Forte, Bibbona, 1911, *Nicheletti* (BRNU). — Lazio: Ostia, Castel Fusano, 1880, G. Cuboni (PR, PRC). — Campania: Napoli, Cuma, 1912, G. Pellanda (BRNU); Bajal—Pozzuoli, 1893, *Evers* (BRNU). — Calabria: Cosenza, Paola, 1958, G. Moggi in Pl. Ital. Exs. No. 45 (PR). — Abruzzi: Francavilla, 1875, *Porta & Rigo* in Iter Italicum No. 26 (BRNU), 1899, G. Rigo in Iter Italicum No. 129 (BRNU). — Sardegna: Tempio, Santa Teresa, 1881, E. Reverchon (PR); Isola di Sant'Antioco, 1899, U. Martelli (PR). — Sicilia: Trapani, 1906, H. Ross in Ross. Herb. Sicul. No. 548 (BRNU, PR, PRC), 1919, A. Ponzio (BRNU). — **Croatia**: Biževo, J. C. Pittoni (PR); Dubrovnik (PRC). — **Greece**: Athos, monaster Chilandar, 1884, S. Breuer (PR); Litóchoro, Plaka, 1891, P. Sintenis & J. Bornmüller in Iter Turcicum No. 1282 (BRNU, PR, PRC), 1891, P. Sintenis in Schultz Herb. Norm. No. 2843 (PR); Alikí, *Leonis* (BRNU); K. Sunion, W. Spruner (PR); Náxos 1897, Ch. *Leonis* (PR), 1889, T. Heldreich (PR); Náxos, prope urbem, 1898, Ch. *Leonis* in Fl. Aegaea No. 131 (BRNU, PR, PRC); Náxos, prope Chalki, 1897, Ch. *Leonis* in Dörfler

Fl. Aegaea No 274 (BRNU, PR); Ródos, prope Rhodes, 1870, *E. Bourgeau* (PR). — **Crete**: Sieber (BRNM, BRNU, PR); Rethymno (PR, PRC). — **Turkey**: Kütschük Tschekmedje, 1902, *A. Schwöder* (BRNU). — **Cyprus**: Paralimni, Pernera, 1982, *J. Dostál* (PR). — Egypt: Burg el Arab, 1976, *J. Chrtek & Z. Slavíková* (PRC); Al'Alamain, 1979, *M. Sulek* (PRC). — **Morocco**: Hidoum, 1931, *Sennen & Mauricio* in Sennen Pl. Espagne No. 7882, (BRNU, PR); Yazanen, Beni— Bu— Gafar, 1932, *Sennen & Mauricio* in Sennen Pl. Espagne No. 8433 (BRNU).

All reports of *Otanthus maritimus* from the Mediterranean, and probably from the W. and N.W. coast of the Iberian Peninsula and the Canary Islands as well, belong in all likelihood to this subspecies. According to the herbarium material studied by us, this subspecies occurs also on the Atlantic coast of France, northwards up to the mouth of the river Gironde (Soulac), where it reaches the northern limit of its geographical distribution.

Otanthus maritimus subsp. *atlanticus* Chrtek & B. Slavík, subsp. nova. — Type: "Cherbourg, 1849, herb. A. le Jolis (PR)". — Indumentum griseo— lutescens.

Specimens seen: — **Ireland**: Wexford, Lady Island, 1926 (PRC). — **Great Britain**: Suffolk, Dunwich, *J.S. Henslow* (PR); Edinburgh, 1897, *R. Kniæek* (PR). — **France**: Cherbourg, 1849, herb. A. le Jolis, (PR), *Palvet* (PR), *Brébine* (PR); Belle Île, *Dabsoz* (PR), Presqu'île de Ruis, St. Gildas, 1867, *C. Pontarlier* (BRNU), Olonne, 1880, *C. Pontarlier* (PRC); Cap Ferret, 1853 (PR); Bayonne, ad ostium Adour, 1830, *Endress* (PR); Pyrénées (PR).

Anthemis palaestina (Reut. ex Kotschy) Boiss.

1. Akhelia, grassy bank of the river Ezousas S.W. of the village, C&S 757.

Anthemis tricolor Boiss.

1. Akhelia, grassy bank of the river Ezousas S.W. of the village, C&S 835.— 2. Kykko monastery, Č 31.— 4. Paralimni, seashore N. and S. of Pernera, D 41259, D 41563.

Anthemis rigida Boiss. ex Heldr.

1. Akhelia, stony bank of the river Ezousas S.W. of the village, C&S 872.— 4. Paralimni, seashore N. and S. of Pernera, D 41244, D 41245, D 41564, D 41581.

Anthemis cotula L.

4. Larnaca, edges of cultivated fields 4 km N. of the town, Č 22.

Anthemis pseudocotula Boiss. subsp. *rotata* (Boiss.) Eig

1. Paphos, cultivated field N. of the Paphos Beach Hotel, C&S 833.— 3. Amathus, grassy slope N. of the hotel Amathus, C&S 764.

Chrysanthemum coronarium L.

1. Akhelia, grassy place S.W. of the village, C&S 721.— 4. Larnaca, seashores N. of the town, C 06; Paralimni, near Pernera, D 41778.

Matricaria aurea (Loefl.) Sch. Bip.

1. Ayios Neophytos, grassy place, C&S 886.

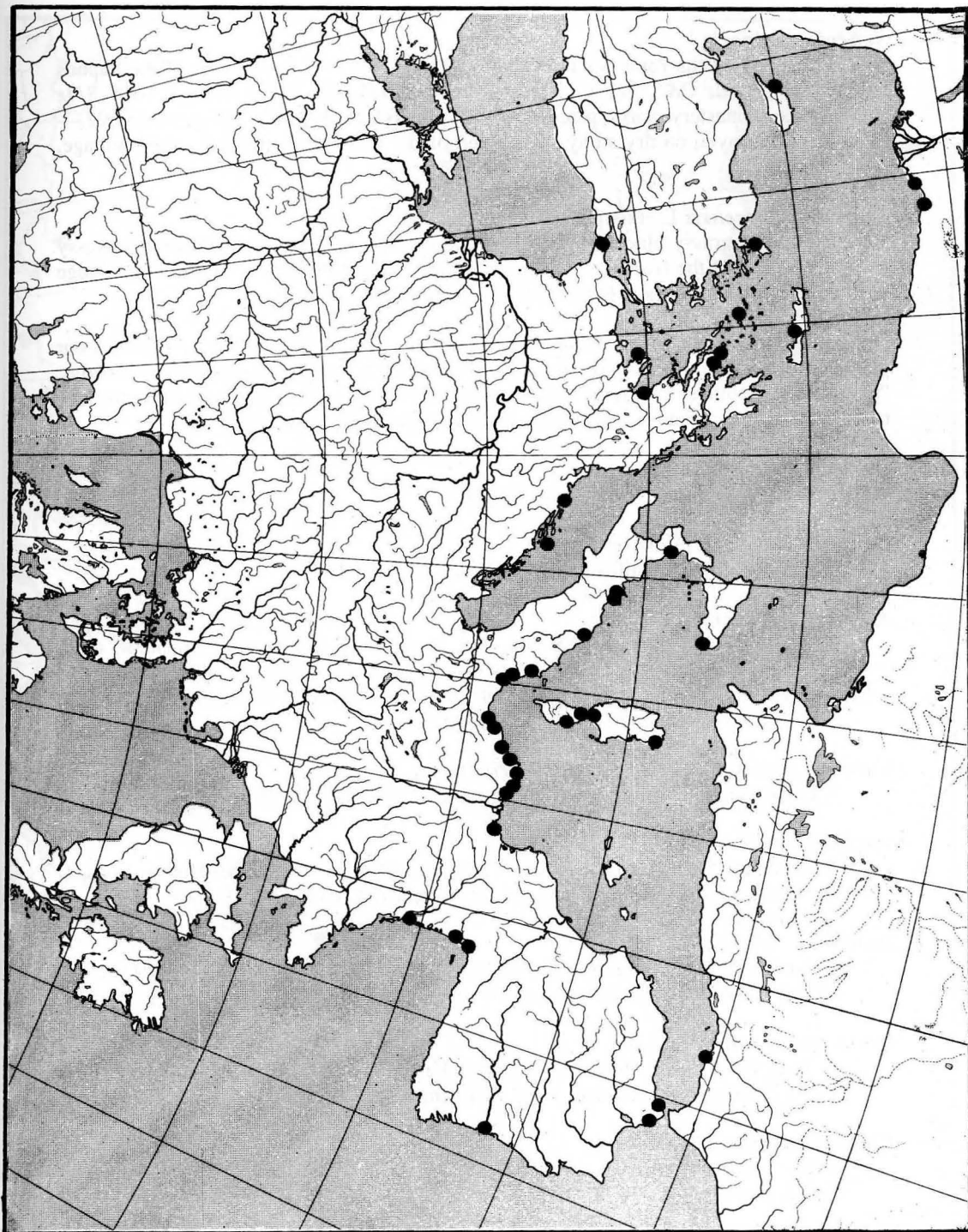


Fig. 2. Distribution of *Otanthus maritimus* (L.) Hoffmanns. & Link subsp. *maritimus*, based on specimens from the following herbaria: BRNM, BRNU, PR, PRC.

***Senecio vulgaris* L.**

1. Paphos, in the ruins Saranda Kolones, C&S 722, waste place N. of the Paphos Beach Hotel, C&S 718.— 2. Kato Platres, road-side in the village, C&S 811; Kykko monastery, waste place, C&S 711; Pano Panaia, in the village, C&S 822.— 3. Yermasoyia, on dry stony stream bed of the river Yermasoyia S. of the village, C&S 917.

***Calendula arvensis* L. (s.str.).**

1. Paphos, grassy places by the hotel Dionysos, C&S 765; Akhelia, on dry grassy stream bed of the river Ezousas S.W. of the village, C&S 824.— 4. Paralimni, edge of cultivated fields near Pernera, D 41679, D 41781.

Meikle (1985: 937) divides *Calendula arvensis* L. into three infraspecific taxa. All our plants correspond to *Calendula arvensis* L. s.str. which is described by Meikle as follows: "plants with a thinly arachnoid indumentum, uniformly yellow or orange florets, and trimorphic (rostrate, alate or cymbiform, and inner annulate) achenes".

***Echinops spinosissimus* Turra**

1. Paphos, Christian Catacombs, C&S obs.

***Cardopatum corymbosum* (L.) Pers.**

4. Larnaca, edges of cultivated fields N. of the town, Č 30.

***Atractylis cancellata* L.**

1. Paphos, rocky place, C&S 742.— 3. Temple of Apollo near Episkopi, C&S 740; Amathus, grassy slope, C&S 861.— 4. Larnaca, edges of cultivated fields, Č 37; Paralimni, calcareous slope W. of the town, D 41888; between Paralimni and Ayia Napa, rocky slopes, D 41762.

***Carduus argentatus* L. subsp. *acicularis* (Bertol.) Meikle**

4. Paralimni, rocky places between Pernera and the chapel Hagios Elias, D 41614.

***Carduus pycnocephalus* L.**

4. Paralimni, fallow fields between Table Mountain and the chapel Hagios Elias, D 41188; between Table Mountain and Ayia Napa, D 41632.

***Notobasis syriaca* (L.) Cass.**

4. Paralimni, stony fields between Pernera and the chapel Hagios Elias, D 41615, D 41623; Larnaca, field borders N. of the town, Č 35.

***Onopordum cyprium* Eig**

4. Paralimni, Table Mountain between Paralimni and Ayia Napa, D 41628, D 41635; Larnaca, field borders N. of the town, Č 26.

***Cynara cornigera* Lindl.**

4. Between Paralimni and Ayia Napa, fallow fields near Hagios Elias, D 41627, D 41651, D 41652, D 41658, D 41668.

***Crupina crupinastrum* (Moris) Vis.**

3. Amathus, dry slope N. of the hotel Amathus, C&S 713, C&S 864.— 4. Paralimni, rocky pasture near Hagios Elias, D 41182, D 41467, D 41822, D 41825.

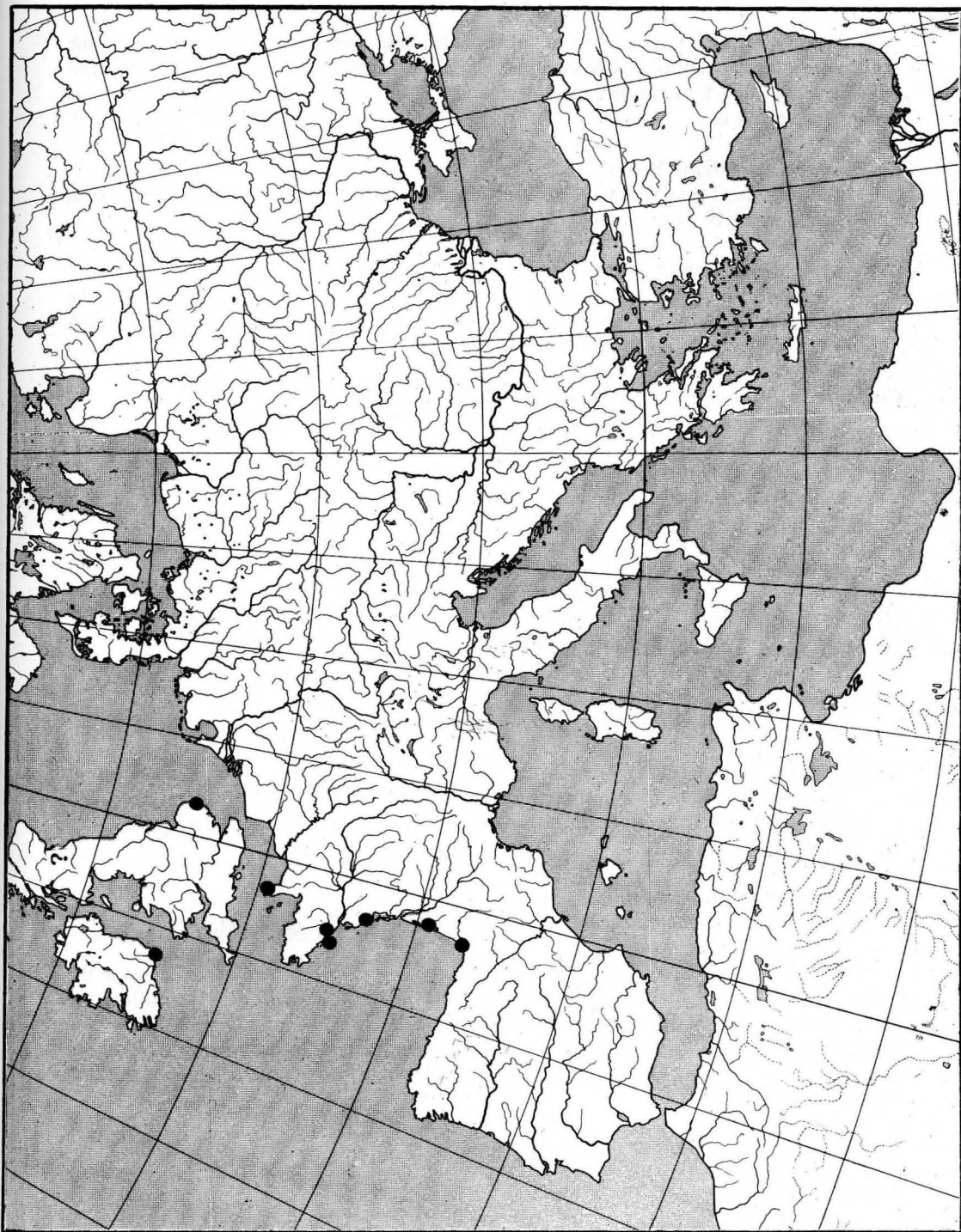


Fig. 3. Distribution of *Otanthus maritimus* subsp. *atlanticus* Chrtek & B. Slavík, based on specimens from the following herbaria: BRNM, BRNU, PR, PRC.

We have studied this species on rather plentiful herbarium material as well as in the field and found that all plants belonged to the species mentioned. The other, *Crupina vulgaris* Cass., which might be expected to occur in Cyprus (see Meikle 1985: 967), was never observed by us.

***Centaurea hyalolepis* Boiss.**

4. Paralimni, Table Mountain between Paralimni and Ayia Napa, *D* 41637; Larnaca, field borders N. of the town, *Č* 19.

***Centaurea aegialophila* Wagenitz**

1. Paphos, stony field borders in the town, *C&S* 733, sandy seashores E. of the town, *C&S* 795.— 4. Paralimni, rocky seashores S. of Pernera, *D* 41263, *D* 41264, *D* 41576; Ayia Napa, coastal rocks W. of the village, *Č* 46.

***Carthamus lanatus* L. subsp. *baeticus* (Boiss. & Reut.) Nyman**

4. Paralimni, near Hagios Elias, *D* 41317.

***Scolymus hispanicus* L.**

4. Table Mountain between Paralimni and Ayia Napa, *D* 41636.

***Cichorium endivia* L.**

4. Paralimni, Table Mountain S. of the town, *D* 41884.

***Hyoseris scabra* L.**

1. Paphos, Tombs of the Kings, *C&S* 777.

***Rhagadiolus edulis* Gaertn.**

1. Neokhorio, Baths of Aphrodite, waste place, *C&S* 816.

***Rhagadiolus stellatus* (L.) Gaertn.**

1. Ayios Neophytos, waste place near the monastery, *C&S* 844.— 3. Amathus, dry hill-side N. of the hotel Amathus, *C&S* 875.— 4. Paralimni, near Pernera, *D* 41694, *D* 41706.

***Garhadiolus angulosus* Jaub. & Spach**

4. Paralimni, seashore near Pernera in the direction of Famagusta, *D* 41243.

The genus *Garhadiolus* Jaub. & Spach comprises four to five annual herb species in the Irano-Turanian region, which are sometimes referred to *Rhagadiolus*. We follow the delimitation of genera as proposed in *Flora palaestina* (Feinbrun-Dothan 1978). The occurrence of *G. angulosus* in Cyprus was to be expected. It occurs nearby in southern Asia Minor and western Syria and Lebanon, from where it extends to Afghanistan and western Pakistan.

***Hedypnois rhagadioloides* (L.) F. W. Schmidt**

3. Paphos, waste places, *C&S* 775, *C&S* 794.— 4. Paralimni, fallow fields between Paralimni and Hagios Elias, *D* 41836.

***Crepis fraasii* Sch. Bip.**

2. Pedhoulas, shrubby slope, *D* 41421.

Crepis foetida L. subsp. *foetida*

4. Paralimni, seashore near Pernera, *D* 41249.

Crepis micrantha Czerep.

1. Paphos, waste place near the hotel Dionysos, *C&S* 805.

Crepis aspera L.

1. Paphos, rocky ground N.E. of the town, *C&S* 801.— 4. Paralimni, near Pernera and Table Mountain, *D* 41159, *D* 41436, *D* 41785, *D* 41788, *D* 41789, *D* 41796.

Hypochaeris achyrophorus L.

1. Paphos, road-side by the hotel Dionysos, *C&S* 841.

Leontodon tuberosus L.

1. Neokhorio, Baths of Aphrodite, pastures, *C&S* 860.

Chondrilla juncea L.

3. Yermasoyia, on dry stony stream bed of the river Yermasoyia S. of the village, *C&S* 916.

Sonchus oleraceus L.

1. Paphos, cultivated field N. of the Paphos Beach Hotel, *C&S* 791; Akhelia, fallow field on the bank of the river Ezousas S.W. of the village, *C&S* 873.— 3. Yermasoyia, on stony stream bed of the river Yermasoyia S. of the village, *C&S* 914.

Tragopogon sinuatus Avé-Lall.

1. Paphos, Christian Catacombs, *C&S* 753.— 2. Between Pano Lefkara and Kato Lefkara, shrubby slope, *D* 41389, *D* 41390, *D* 41391.

Geropogon hybridus (L.) Sch. Bip.

3. Moutayiaka, road-side, *C&S* 938.— 4. Paralimni, Table Mountain S. of the town, *D* 41447, *D* 41889; Paralimni, between Pernera and Sunrise, *D* 41512, *D* 41709.

Urospermum picroides (L.) F. W. Schmidt

1. Paphos, Christian Catacombs, *C&S* 726; Akhelia, stony bank of the river Ezousas S.W. of the village, *C&S* 803.— 4. Paralimni, several places near Pernera, *D* 41249a, *D* 41527, *D* 41797.

*Campanulaceae**Campanula erinus* L.

1. Skoulli, grassy places in maquis, *C&S* 766; Paphos, near the lighthouse, *C&S* 745, *C&S* 761, rocky slope near the hotel Dionysos, *C&S* 715.— 3. Amathus, rocky slope N.E. of the hotel Amathus, *C&S* 898.

Legousia speculum-veneris (L.) Chaix

1. Paphos, road-side by the hotel Dionysos, *C&S* 727.

*Plumbaginaceae**Limonium sinuatum* (L.) Mill.

1. Paphos, sandy seashore near the hotel Dionysos, C&S 741, sandy seashore S. of the Paphos Beach Hotel, N&N (S No.1186a).— 4. Paralimni, seashore N. of the Pernera, D 41499.

Limonium virgatum (Willd.) Fourr.

4. Paralimni, stony seashore near Pernera, D 41792, D 41795.

Limonium echioides (L.) Mill. subsp. *exaristatum* (Murb.) Maire

4. Paralimni, seashore near Pernera, D 41266, D 41267, D 41558; Ayia Napa, rocky seashore W. of the village, Č 28.

*Primulaceae**Cyclamen persicum* Mill.

1. Neokhorio, Baths of Aphrodite, rocky slopes (dark rose in cultivation), of Aphrof Aphrodite, rocky slopes (dark rose in C&S 737, in Christian Catacombs, C&S 702, C&S 786, in the Tombs of the Kings (pink in cultivation), C&S 789.— 3. Amathus, stony slope N. of the hotel Amathus, C&S 743, C&S 867.

Anagallis arvensis L. var. *arvensis*

2. Kato Platres, cultivated field, C&S 819.— 3. Yermasoyia, on stony stream bed of the river Yermasoyia S. of the village, C&S photo.

Anagallis arvensis L. var. *caerulea* (L.) Gouan

1. Paphos, Christian Catacombs, C&S 735C&S 735; Akhelia, on stony stream bed of the river Ezousas S.W. of the viC&S 735.— 4. Between Paralimni and Dherinia near Pernera, cultivated field, D 41703.

Anagallis foemina Mill.

3. Khirokitia, Neolithic settlement, C&S 905.

Anagallis latifolia L.

4. Between Paralimni and Ayia Napa near Hagios Elias, fallow field, D 41655.

Anagallis latifolia has not been previously reported from Cyprus, even though it was known from much of the Mediterranean (Greuter & al. 1989: 370).

*Apocynaceae**Nerium oleander* L.

1. Paphos, stream bed N. of the Paphos Beach Hotel, and valley of the brook behind Tombs of the Kings, C&S obs.— 3. Yermasoyia, stream bed of the river Yermasoyia S. of the village, C&S obs.

*Gentianaceae**Blackstonia perfoliata* (L.) Huds. subsp. *intermedia* (Ten.) Zeltner

4. Paralimni, slope of Table Mountain and shrubby place between Pernera and Sunrise, D 41890, D 41524, D 41525.

***Centaurium erythraea* Rafn**

4. Ayia Napa, rocky seashore W. of the village, Č 38.

Meikle (1985) reports only subsp. *rhodense* (Boiss. & Reuter) Melderis from Cyprus. Because our plants are dwarfed (stems 2.0—2.5 cm high), we abstain from their infraspecific classification. The genus was revised by A. Çvançara (Museum Liberec, Czech Republic).

***Centaurium tenuiflorum* (Hoffmanns. & Link) Fritsch**

1. Paphos, waste place near the lighthouse, C&S 771; Paphos, brook bed N. of the Paphos Beach Hotel, C&S 787; Akhelia, bank of the river Ezousas S.W. of the village, C&S 817.

***Centaurium acutiflorum* (Schott) Çvançara & Chrtek**

4. Paralimni, Table Mountain, D 41450; between Paralimni and Dherinia, near Pernera, D 41689.

Meikle (1985) does not report *Centaurium acutiflorum* from Cyprus. In his special study of the cytogeography of *Centaurium* in Turkey, Rhodos and Cyprus, Zeltner (1991) reports this taxon from two localities in Cyprus (Baths of Aphrodite; Mari, Vasilikos). He treats it as a subspecies, *C. tenuiflorum* subsp. *acutiflorum* (Schott) Zeltner. We are of the opinion that it deserves specific rank because it differs from *C. tenuiflorum* not only cytologically but also morphologically.

Boraginaceae***Cynoglossum creticum* Mill.**

1. Neokhorio, Baths of Aphrodite, waste place, C&S 820.— 3. Amathus, grassy slope N. of the hotel Amathus, C&S 941.— 4. Between Paralimni and Ayia Napa, edges of fields, D 41743.

***Anchusa undulata* L. subsp. *hybrida* (Ten.) Bég.**

2. Kykko monastery, waste place, Č 33.

***Anchusa azurea* Mill.**

3. Moutayiaka, road-side S. of the village, C&S 892.

***Anchusa aegyptiaca* (L.) DC.**

1. Paphos, road-side near the ruins Saranda Kolones, C&S 716.— 4. Between Paralimni and Dherinia, seashore N. of Pernera, D 41537.

***Nonea ventricosa* (Sm.) Griseb.**

1. Akhelia, streamsides of the river Ezousas S.W. of the village, C&S 845.

***Alkanna lehmanii* (Tineo) A. DC.**

4. Paralimni, calcareous slopes of Hagios Elias near Pernera, D 41485.

***Myosotis ramosissima* Rochel**

2. Kykko monastery, mountain slopes, D 41330.

***Myosotis refracta* Boiss.**

2. Kykko monastery, mountain slopes, *D 41330a*.

Buglossoides arvensis* (L.) I. M. Johnst. subsp. *arvensis

2. Kato Platres, fallow fields, *C&S 856*.

***Buglossoides arvensis* (L.) I. M. Johnst. subsp. *gasparrinii* (Heldr. ex Guss.) R. Fern.**

2. Kakopetria, Solea valley, *D 41400*.

***Echium angustifolium* Mill.**

1. Paphos, road-side by the hotel Dionysos, *C&S 751*.— 4. Larnaca, seashore, near the airport, *C&S 930*; Larnaca, seashore 4 km N. of the town, Č 48; Paralimni, Hagios Elias and Pernera, *D 41486*, *D 41678*, *D 41671*.

***Onosma fruticosum* Sm.**

3. Amathus, on shrubby slope N. of the hotel Amathus, *C&S 934*.— 4. Paralimni, Table Mountain and between Pernera and Sunrise, *D 41848*, *D 41531*, *D 41532*.

Convolvulaceae***Convolvulus dorycnium* L.**

4. Paralimni, stony fields between Pernera and Hagios Elias, *D 41619*; Larnaca, edges of cultivated fields 4 km N. of the town, Č 34.

***Convolvulus oleifolius* Desr.**

1. Paphos, Tombs of the Kings, *C&S 734*.— 3. Amathus, on rocky slopes N. of the hotel Amathus, *C&S 929*.

***Convolvulus althaeoides* L.**

1. Paphos, several localities, *C&S obs. & photo*.— 4. Paralimni, Table Mountain and Hagios Elias, *D 41896*, *D 41492*, *D 41811*; Larnaca, edges of cultivated fields, Č 15.

***Convolvulus arvensis* L.**

4. Paralimni, waste place near Pernera, *D 41680*, *D 41681*.

***Convolvulus coelesyriacus* Boiss.**

1. Neokhorio, Baths of Aphrodite, rocky slope, *C&S 818*; Paphos, dry brook bed N. of Paphos Beach Hotel, *C&S 774*.

***Convolvulus sicus* L.**

4. Paralimni, on rocky slopes of Table Mountain, *D 41892*, *D 41893*, *D 41894*, *D 41898*.

***Convolvulus pentapetaloides* L.**

1. Paphos, road-side by Paphos Beach Hotel, *C&S 748*.

Cuscuta palaestina Boiss.

3. Amathus, on dry grassy slope N. of the hotel Amathus, C&S 732.— 4. Paralimni, fallow fields near Pernera, D 41533, D 41677.

Cuscuta planiflora Ten.

4. Paralimni, calcareous slopes of Hagios Elias, D 41321.

Solanaceae***Withania somnifera*** (L.) Dunal

1. Paphos, road-side near the lighthouse, C&S 729, road-side near the Paphos Beach Hotel, N&N (S No.1172a).

Lycium schweinfurthii Dammer

4. Paralimni, sandy seashore near Sunrise, D 41158.

Mandragora officinarum L.

1. Paphos, on sandy seashore E. of the town, C&S photo.

Hyoscyamus aureus L.

4. Paralimni, calcareous rocks of Table Mountain and Hagios Elias, D 41176, D 41177, D 41464, D 41465, D 41493.

Nicotiana glauca Graham

4. Ayia Napa, seashore, D 41197.

Scrophulariaceae***Verbascum levanticum*** I. K. Ferguson

1. Paphos, Christian Catacombs, C&S obs.— 4. Paralimni, near Pernera and between Table Mountain and Hagios Elias, D 41178, D 41484, D 41494.

Linaria chalepensis (L.) Mill.

1. Paphos, waste place E. of t) Mill.; Yeroskipos, fallow field S.W. of the village, C&S 782.— 3. Kouklia, seashore near Petra tou Romiou, C&S 840.— 4. Between Paralimni and Ayia Napa, fallow fields, D 41720, D 41749.

Misopates orontium (L.) Raf.

1. Paphos, waste places near the lighthouse, C&S 703.— 3. Yermasoyia, on dry stony stream bed of the river Yermasoyia S. of the village, C&S 897; Kolossi, on walls of the Castle, D 41871.— 4. Paralimni, rocky place between Hagios Elias and Table Mountain, D s.n.D

Scrophularia peyronii Post

1. Akhelia, dry stream bed of the river Ezousas S.W. of the village, C&S 825.

Veronica polita Fr.

1. Paphos, Christian Catacombs and road-side N. of the hotel Dionysos, C&S 709, C&S 790.— 2. Pano Panaia, in the village, C&S 853.

***Veronica persica* Poir.**

2. Kato Platres, C&S 838.

***Veronica cymbalaria* Bodard**

1. Paphos, Christian Catacombs, near the hotel Dionysos, W. of the town, C&S 754, C&S 758, C&S 717, C&S 770.— 2 Chrysorroiyatissa monastery, road-side, C&S 952; Kato Platres, road-side, ; Kato ; Pano Panaia, in the village, C&S 937; Kykko monastery, ruderal place, C&S 878, C&S 879; Kakopetria, Solea valley, D 41401, D 41403; Pano Lefkara, on walls, D 41394, D 41395.— 3. Temple of Apollo near Episkopi, on the path, C&S 924; Moutayika, road-side S. of the village, C&S 956.

***Veronica hederifolia* L.**

2. Kykko monastery, waste places, C&S 903, C&S 904.

***Parentucellia latifolia* (L.) Caruel**

1. Paphos, grassy slope near the hotel Dionysos, C&S 723.

***Bellardia trixago* (L.) All.**

1. Paphos, waste places, C&S 744; Akhelia, dry stream bed of the river Ezousas S.W. of the village, C&S 804.— 3. Amathus, dry hill-side N. of the hotel Amathus, C&S 915.

Orobanchaceae***Orobanche ramosa* L. var. *ramosa***

1. Paphos, fallow field N.E. of the town, on *Medicago*, C&S 815.— 3. Yermasoyia, road-side S. of the village, on *Oxalis pes-caprae*, C&S 954; Amathus, grassy slope N. of the hotel Amathus, C&S 948.

***Orobanche crenata* Forssk.**

1. Paphos, in flower-pot in front of the hotel Dionysos, C&S 755; Akhelia, cultivated fields along the river Ezousas S.W. of the village, C&S 792.— 3. Mouttayiaka, cultivated fields near the village, on *Vicia faba*, occasionally on *Oxalis pes-caprae*, C&S 945.

Verbenaceae***Phyla filiformis* (Schrad.) Meikle**

1. Akhelia, grassy bank of the river Ezousas S.W. of the village, C&S 806.— 4. Paralimni, near Pernera, D 41793, D 41794.

Lamiaceae***Thymus capitatus* (L.) Hoffmanns. & Link**

1. Akhelia, stony bank of the river Ezousas S.W. of the village, C&S 883.— 4. Paralimni, near Pernera and Hagios Elias, D 41190, D 41313, D 41500, D 41569.

***Micromeria nervosa* (Desf.) Benth.**

1. Neokhorio, Baths of Aphrodite, shrubby place, C&S 832.— 3 Amathus, rocky slope N. of the hotel Amathus, C&S 943.— 4. Paralimni, rocky places, Hagios

Elias, Table Mountain, Pernera, *D* 41451, *D* 41477, *D* 41504, *D* 41505, *D* 41877, *D* 41878.

***Salvia fruticosa* Mill.**

1. Skoulli, grassy places in maquis S. of the village, *C*&*S* 779.

***Salvia viridis* L.**

1. Paphos, dry brook bed N. of the Paphos Beach Hotel, *he Paphhe* Paphos Beach Hotel, *C*&*S* 759.— 4. Paralimni, *D* 41260.

***Salvia verbenaca* L.**

1. Paphos, Christian Catacombs, *C*&*S* 720.— 4. Paralimni, calcareous slopes on the hill Hagios Elias, *D* 41481.

***Sideritis curvidens* Stapf**

4. Paralimni, Table Mountain, *D* 41435.

***Stachys cretica* L.**

3. Amathus, grassy slope N. of the hotel Amathus, *C*&*S* 900.

***Lamium amplexicaule* L.**

2. Kykko monastery, waste place, *C*&*S* *obs.*; between Pano Lefkara and Kato Lefkara, shrubby slope, *D* 41393.

***Lamium moschatum* Mill.**

1. Paphos, road-side N. of the hotel Dionysos, *C*&*S* 747.— 3. Yermasoyia, on stony stream bed of the river Yermasoyia S. of the village, *C*&*S* 911.

***Phlomis lunariifolia* Sm.**

1. Skoulli, maquis, *C*&*S* 809.

***Prasium majus* L.**

1. Neokhorio, Baths of Aphrodite, maquis, *C*&*S* 810; Paphos, Tombs of the Kings, *C*&*S* 728.— 4. Paralimni, near Pernera and Hagios Elias, *D* 41208, *D* 41209, *D* 41462, *D* 41463, *D* 41480, *D* 41528, *D* 41529.

***Teucrium divaricatum* Sieber ex Heldreich subsp. *canescens* (Çelak.) Holmboe**

3. Amathus, rocky slope N. of the hotel Amathus, *C*&*S* 950.

***Teucrium micropodioides* Rouy**

1. Paphos, Tombs of the Kings, *C*&*S* 752.— 4. Larnaca, edges of fields N. of the town, Ç 45; Ayia Napa, coastal cliffs W. of the village, Ç 25.

***Ajuga chamaepitys* (L.) Schreb. subsp. *palaestina* (Boiss.) Bornm.**

3. Amathus, in shrubs on the Amathus hill, *C*&*S* 966; Yermasoyia, on stony stream bed of the river Yermasoyia S. of the village, *C*&*S* 953.

*Plantaginaceae**Plantago coronopus* L. subsp. *commutata* (Guss.) Pilg. var. *commutata* (Guss.)

Bég.

1. Akhelia, on stony stream bed of the river Ezousas S.W. of the village, C&S 849.— 4. Paralimni, sandy seashores near Pernera, D 41270, D 41587.

Plantago coronopus L. subsp. *commutata* (Guss.) Pilg. var. *crassipes* Coss. &

Daveau

1. Paphos, waste place near the hotel Dionysos, C&S 714, Tombs of the Kings, D 41866.

Plantago coronopus L. subsp. *commutata* (Guss.) Pilg. f. *weldenii* (Rchb.) Pilg.

4. Paralimni, seashore N. of Pernera, D 41231, D 41549, D 41550.

Plantago amplexicaulis Cav.

3. Amathus, rocky slopes N. of the hotel Amathus, C&S 962.

Plantago lanceolata L.

1. Akhelia, on stony stream bed of the river Ezousas S.W. of the village, C&S 793.

Plantago lagopus L.

1. Paphos, grassy place near harbour, C&S 710; Akhelia, grassy margin of the river Ezousas S.W. of the village, C&S 785.— 3. Yermasoyia, on dry stony stream bed of the river Yermasoyia S. of the village, C&S 951; Paralimni, between Pernera and Dherinia, D 41221.

Plantago albicans L.

3. Amathus, shrubby slope on the Amathus hill, C&S 968.

Plantago cretica L.

1. Paphos, dry brook bed N. of Paphos Beach Hotel, C&S 772.— 3. Amathus, grassy slope N. of the hotel Amathus, C&S 946.— 4. Paralimni, near Pernera, Hagios Elias and Table Mountain, D 41255, D 41438, D 41471, D 41518, D 41801.

Plantago afra L.

1. Paphos, grassy seashore near the lighthouse, C&S 731; Akhelia, dry stony bed of the river Ezousas S.W. of the village, C&S 767.— 3. Amathus, on grassy hillsides N. of the hotel Amathus, C&S 746, C&S 973.— 4. Between Paralimni and Ayia Napa, D 41163, D 41761.

*Chenopodiaceae**Beta vulgaris* L. subsp. *maritima* (L.) Arcang.

4. Between Paralimni and Dherinia, seashore, D 41548, D 41553; between Paralimni and Ayia Napa, seashore, D 41160.

Chenopodium murale L.

4. Paralimni, near Hagios Elias, fallow fields, D 41654.

***Arthrocnemum macrostachyum* (Moric.) Moris & Delponte**

4. Ayia Napa, seashore W. of the village, C 23.

Polygonaceae***Polygonum maritimum* L.**

1. Paphos, on coastal sand-dunes S.E. of the town, C&S 796.

***Polygonum equisetiforme* Sm.**

1. Paphos, sandy seashore E. of the town, C&S 858; Akhelia, stony bank of the river Ezousas S.W. of the village, C&S 876.— 2. Pano Panayia, road-side, C&S 960.— 3. Moutayiaka, road-side, C&S 987.— 4. Paralimni, between Pernera and Hagios Elias, D 41303, D 41407, D 41308, D 41309; between Paralimni and Hagios Elias, D 41837; Pernera near Paralimni, edges of cultivated fields, D 41776.

Rumex cyprius* Murb. subsp. *cyprius

1. Paphos, road-side in the town, C&S 750.— 3. Amathus, grassy slope N. of the hotel Amathus, C&S 852.

All plants collected by us in the vicinity of Paphos and Limassol have fruit valves that are entire or sometimes with an inconspicuous single denticulation, whereas typical plants of this species have margins of the fruit valves distinctly shortly spinulose. Our plants are not however *Rumex vesicarius* L. as the subentire margins of fruit might valves suggest; they differ from it in having distinct, thickened peripheral veins on the fruiting valves. This question is discussed in greater detail in our paper on chromosome numbers (Slavik & al. 1993). A study of the variability of this species throughout its distribution area is required.

***Emex spinosa* (L.) Campd.**

1. Paphos, Tombs of the Kings, C&S 756.— 4. Paralimni, field borders near Pernera, D 41786, D 41787.

Thymelaeaceae***Thymelaea hirsuta* (L.) Endl.**

4. Larnaca, by airport, C&S 999.

Santalaceae***Thesium humile* Vahl**

3. Amathus, hillsides N. of the hotel Amathus, C&S 964.— 4. Paralimni, near Pernera, Sunrise, Table Mountain and Hagios Elias, D 41296, D 41507, D 41690, D 41705, D 41803, D 41806, D 41807, D 41883.

Euphorbiaceae***Euphorbia helioscopia* L.**

1. Paphos, Christian Catacombs, C&S 706.

Euphorbia peplus L.

1. Paphos, Christian Catacombs, C&S 781 cultivated field by the river near Paphos Beach Hotel, C&S obs.— 3. Yermasoyia, on dry stony stream bed of the river Yermasoyia S. of the village, C&S obs.

Euphorbia veneris M. S. Khan

2. In *Pinus pallasiana* woodland under the highest hill resort Troodos, C&S 865.

Euphorbia paralias L.

4. Between Paralimni and Cape Greco, on sand-dunes near Sunrise, D 41165.

Andrachne telephioides L.

3. Amathus, valley N. of the hotel Amathus, C&S 967.— 4. Paralimni, seashore S. of Pernera and Table Mountain, D 41265, D 41567, D 41847; Ayia Napa, rocky seashore W. of the village, Č 17.

Mercurialis annua L.

3. Yermasoyia, dry stony bed of the river Yermasoyia S. of the village, C&S obs.— 4. Paralimni, rocky hillsides of Hagios Elias, D 41662.

*Urticaceae**Urtica urens* L.

1. Paphos, road-side between the harbour and the city, C&S obs.— 4. Paralimni, waste place near Hagios Elias, D 41653.

Urtica pilulifera L.

1. Paphos, waste place in Nea Paphos, C&S 736.

Parietaria judaica L.

1. Paphos, Christian Catacombs, C&S 738.

Parietaria lusitanica L.

1. Paphos, Christian Catacombs, C&S 812.

*Moraceae**Ficus carica* L.

1. Paphos, Christian Catacombs and seashore E. of the town, C&S obs. & photo; Neokhorio, Bath of Aphrodite, C&S obs.— 3. Yermasoyia, dry stony bed of the river Yermasoyia S. of the village, C&S obs.

*Fagaceae**Quercus alnifolia* Poech

2. In the neighbourhood of the highest hill resort Troodos, C&S 871; Kato Amiandos, rocky mountain slopes near the asbestmine, C&S 855; Kakopetria, Solea valley, D 41407.

Salicaceae***Salix alba* L.**

3. Yermasoyia, on the banks of the river Yermasoyia S. of the village, C&S 896.

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