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Urban Flora of Muğla (Muğla, Turkey)

Abstract

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This investigation was carried on the Urban Flora of Muğla. The research area is located on C2 square according to Davis's grid system. In this study, 576 taxa belonging to 88 families, 327 genera, 555 species, 14 subspecies and 7 varieties were identified on the collected 1546 specimens during the period October 2001-June 2004. The chorological spectrum of the flora is: E. Medit elements 97 (16.84%), Mediterranean elements 92 (15.97%), Irano-Turanian elements 19 (3.30%), Euro-Siberian elements 12 (2.08%), unknown or cosmopolitans 356 (61.81%). The endemics are 30 and the rate of endemism is 5.20%.

Key words: Urban flora, Muğla, Turkey.

Introduction

The study area is in the western Anatolia region of Turkey. It is surrounded by the Aydın province border in the north, Denizli province border in the north-east, Antalya and Burdur provinces border in the east. The area has a range altitudinal range between 620 and 646 m a.s.l.(Fig. 1).

In the Mugla province the rich flora has strong connection with the diversified geology.

In the area the most common soil formations are reddish Mediterranean soils, Brown forest soils, alluvial soils and colluvial soils (Anonymous 1998).

The study area has a Mediterranean climate with dry summers and warm and rainy winters. Rainfalls are concentrated in winter and spring. This is a typical firs variant of the East Mediterranean climate (Akman 1990). In the research area, the annual mean temperature is 14,9 oC. The maximum mean temperature (M) is 26 oC in July. The minimum mean temperature (m) is 5,4 oC in January. The ombro-thermic diagram of the study area (Fig. 2) was prepared according to climate data obtained from the Mugla meteorological station (Anonymous 2000).

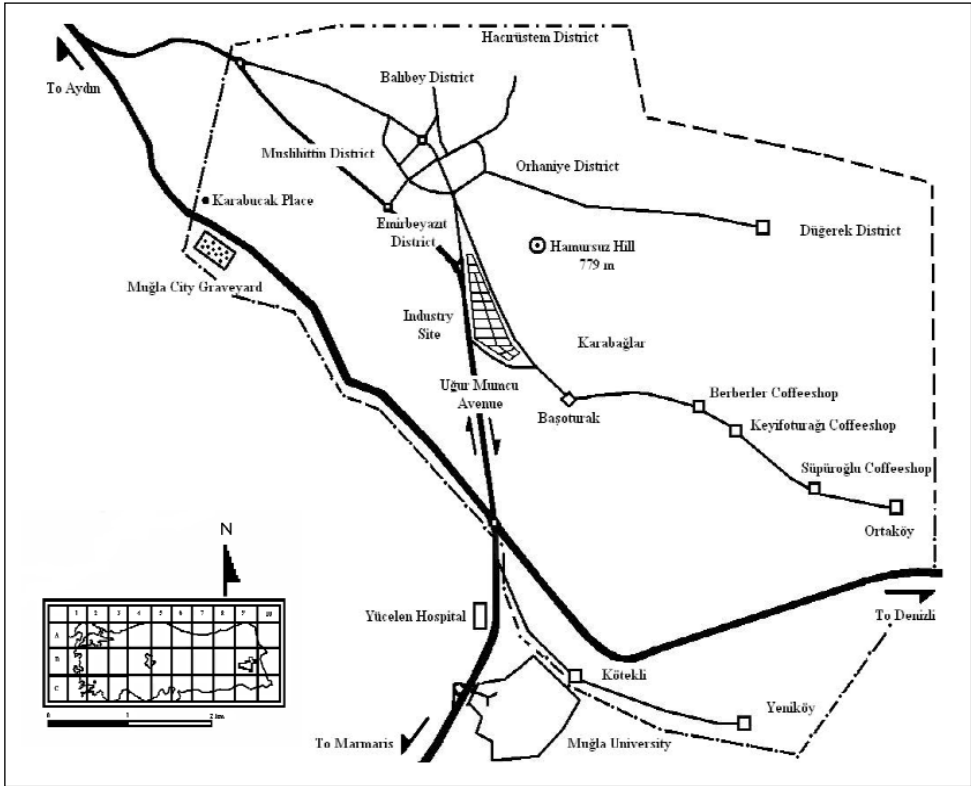


Fig. 1. Map of the study area.

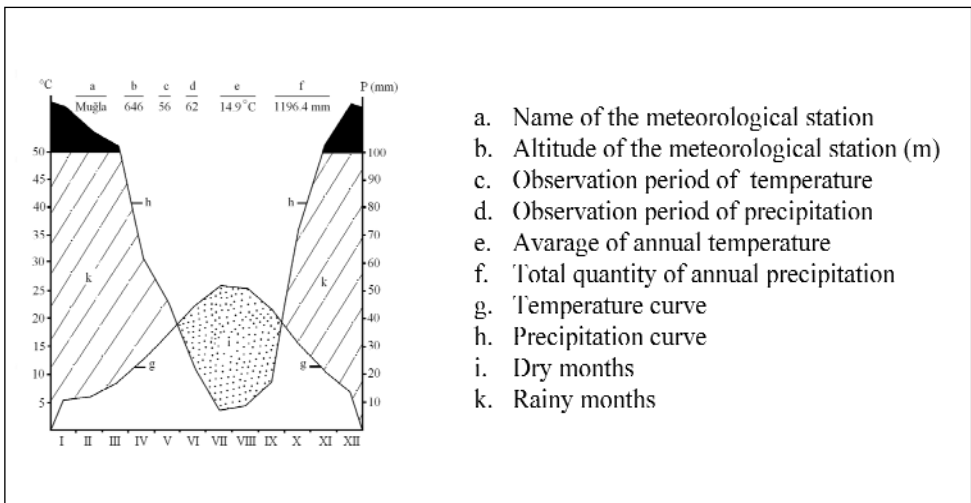


Fig. 2. Ombro-thermic diagram of Muğla.

Material and methods

The study material consists of 1546 specimens collected from Muğla province during a vegetation studies between 2001 and 2004. Specimens were identified using Flora Turkey (Davis 1965-1985, Davis & al. 1988, Güner & al. 2000). Cultivated plants occurring in gardens and graveyards were planted by local government and forest directorship. For their identification also the official registration of local government and forest directorship were examined.

The plants are listed in the appendix 1 and alphabetically ordered. The specimens are housed in the herbarium of Department of Biology, Faculty of Science & Art, Muğla University.

The following abbreviations and symbols are used: Euro-Sib. = Euro-Siberian element, Ir.-Tur. = Irano-Turanian element, Medit. = Mediterranean element, E. Medit. = East Mediterranean element, End. = Endemic, EN = Endangered, VU = Vulnerable, LR (cd) = Lower risk (conservation dependent), LR (nt) = Lower risk (near threatened), * = New record for C2 grid square, E.K.=Ergün Kaya, Cult.=Cultivated.

Collection localities

- (1) =Balıbey District,, from Kavaklı Road to Kızıldağ, on road, 625 m, 15.vi.2003.
- (2) =Between Muğla City Graveyard with Factory Site, Martyr Noncommissioned officer Yıldırım Çeltikoğlu Avenue, near road, 620 m, 06.x.2002.
- (3) =Düğerek District, Hakim Aylin Barut Street, near road, 620 m, 15.viii.2003.
- (4) =Düğerek District, Gazi Street, Zeytin Road, near road, 620 m, 09.vi.2003.
- (5) =Düğerek District, of Graveyard, 620 m, 09.vi.2003.
- (6) =Düğerek District, Hakim Aylin Barut Street, Gelişim Road, near road, 620 m, 15.viii.2003.
- (7) =Düğerek District, Halil Al Street, Şehit Ali Çetin Road, near road, 620 m, 02.xii.2002.
- (8) =Düğerek District, opposite of Municipality Common Bazaar, area of Olea europaea trees, 620 m, 03.iii.2002.
- (9) =Düğerek District, near of Animal Bazaar, near road, 620 m, 27.iv.2002.
- (10)=Düğerek District, Halil Al Avenue, Şehit Ali Çetin Street, near road, 620 m, 02.xii.2002.
- (11)=Düğerek District, Şehit Öğretmen Sezgin Keçecioglu Avenue, Şehit Akif Kadem Street, near road, 620 m, 03.iii.2002.
- (12)=Düğerek District, near of Kamil Aslan and His Wife Mosque, 620 m, 03.iii.2002.
- (13)=Düğerek District, Fuat Ardic Avenue, Aslanlı Street, near road, 620 m, 03.iii.2002.
- (14)=Emirbeyazıt District, Emek Avenue, Umut Street, empty area, 620 m, 03.iii.2002.
- (15)=Emirbeyazıt District, Emek Avenue, Ova Street, near road, 620 m, 24.xi.2002.
- (16)=Emirbeyazıt District, 2. Section Manager of Highways, Marmaris Avenue, near road, 620 m, 24.xi.2002.
- (17)=Emirbeyazıt District, Marmaris Avenue, The Garden of Forest Management, 620 m, 18.x.2003.
- (18)=Emirbeyazıt District, Marmaris Avenue, near road, 620 m, 18.x.2003.

- (19)=Emirbeyazıt District, Marmaris Avenue, The Forest Management, near road, 620 m, 24.xi.2002.
- (20)=Emirbeyazıt District, Cumhuriyet Avenue, on Marmaris road, round about Aylin Karaca, near road, 620 m, 8.vi.2002.
- (21)=Emirbeyazıt District, near Anatolian High School, empty area, opposite of Kermekent Site, 620 m, 21.iv.2002.
- (22)=From Düğerek District, to Muğla, on 2. km, right of road, 620 m, 23.iv.2003.
- (23)=From Düğerek District, to Muğla, on 1. km, near road, front of *Q. cocciferae*, 620 m, 23.iv.2003.
- (24)=From Düğerek District to Muğla, on 3. km, right of road, front of *Q. cocciferae*, 620 m, 23.iv.2003.
- (25)= From Düğerek District, to Muğla, on 2. km, right of road, front of *Q. cocciferae*, 620 m, 23.iv.2003.
- (26)=From Düğerek District, to Muğla, on 1. km, right of road, 620 m, 11.v.2003.
- (27)=From Kötekli Village Graveyard to Yeniköy, on 1. km, front of *Q. cocciferae*, 630 m, 23.iv.2003.
- (28)=From Kötekli Village Mosque to Kötekli Village Graveyard, near road , 630 m, 15.iv.2003.
- (29)=From Kötekli Village to Muğla, on 1-2. km, 630m, 31.iii.2004.
- (30)=From Kötekli Village to Muğla, on 1. km, near road, 630 m, 12.viii.2003.
- (31)=From Kötekli Village to Yeni Village on 1. km, near road, 630 m, 12.viii.2003
- (32)=From Kötekli Village Mosque to Kötekli Village Graveyard, right of road, on *Q. cocciferae*, 630 m, 06.iii.2002.
- (33)=From Muğla to Muğla University Campus, on Marmaris road, in the neighbourhood of The Bridge Sıtkı Koçman, 640 m, 06.iii.2002.
- (34)=From Muğla to Kötekli Village, Uğur Mumcu Avenue, opposite of Yücelen Hospital, near field, 620 m, 06.iii.2002.
- (35)=From Ortaköy to Süpüroğlu, on 1. km, near road, 630 m, 11.v.2004.
- (36)=Hacı Rüstem District, Tabakane Avenue, Dere Street, near road, 630 m, 15.vi.2003.
- (37)=Hacı Rüstem District, Tabakane Avenue, Dere Street, near river, 630 m, 15.vi.2003.
- (38)=Hamursuz Hill, north-west slope, limestone mainrock, 760m, 11.v.2004
- (39)=Hamursuz Hill, west slope, limestone mainrock, 700 m, 25.vii.2002.
- (40)=Hamursuz Hill, limestone mainrock, 750 m, 11.v.2004.
- (41)=Hamursuz Hill, south-west slope, limestone mainrock, 735 m, 11.v.2004.
- (42)=In the neighborhood of Yeniköy Primary School, 630 m, 11.v.2004.
- (43)=In the neighbourhood of Kötekli Village Mosque, near field, 630
- (44)=Karabağlar place, from Berberler Coffeeshop to Başoturak, on 1. km, near road, 615 m, 11.v.2004.
- (45)=Karabucak place, to Muğla City Graveyard, 620 m, 11.v.2004.
- (46)=Keramettin District, Kayaaltı Street, Kızıldağ slope, rock areas, 620 m, 15.vi.2003.
- (47)=Keramettin District, Kızıldağ Street, near road, 620 m, 15.vi.2003.
- (48)=Keramettin District, Kızıldağ Street, 620 m, 15.vi.2003.
- (49)=Keramettin District, Kayaaltı Street, near road, 620 m, 15.vi.2003.
- (50)=Keramettin District, Kayaaltı Street, Kızıldağ slope, 630 m, 15.vi.2003.
- (51)=Kötekli Village, Muğla University Campus Boundry, 630 m, 26.iii.2004.

- (52)=Kötekli Village, Muğla Ü University Campus Boundry, near field, in front of *Q. cocciferae*, 635 m, 06.iii.2003.
- (53)=Kötekli Village, Muğla Ü University Campus Boundry, near field, 635 m, 19.iii.2003.
- (54)=Kötekli Village, from Muğla Ü University Campus Boundry to Hoca Market, gardens near road, 630 m, 19.iii.2003.
- (55)=Kötekli Village Graveyard, 630 m, 11.viii.2003.
- (56)=Kötekli Village, Ata Çıkmazı, near road, 630 m, 09.iv.2002.
- (57)=Kötekli Village, on Graveyard road, near road, 630 m, 23.iv.2003.
- (58)=Kötekli Village in the neighbourhood of Primary School, near road, 630 m, 21.v.2002.
- (59)=Kötekli Village, Avcılar Street, near road, 630 m, 15.iv.2003.
- (60)=Kötekli Village, Muğla Ü University Campus Boundry, front of *Q. cocciferae*, 630m, 26.iii.2004
- (61)=Kötekli Village, Ata Çıkmazı, front of *Olea europea*, 630 m, 09.iv.2002.
- (62)=Kötekli Village, from campus to village, *Olea europea* area, 630 m, 19.iii.2003.
- (63)=Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, in the neighborhood of Muğla City Graveyard, near road, 620 m
- (64)=Muğla City Graveyard, 620 m, 25.vii.2002.
- (65)=Muslihittin District, Kadioğlu Street, near road, 620 m, 18.iii.2002.
- (66)=Muslihittin District, in the neighbourhood of old almond orchard, near field, 630 m, 18.iii.2002.
- (67)=Muslihittin District, Abdi İpekci Avenue, Şehnaz Street, near road, 620 m, 28.x.2002.
- (68)=Orhaniye District, in the neighbourhood of Kışla Park, near road, 640 m, 12.x. 2001
- (69)=Orhaniye District, Zihni Derin Avenue, near road, 620 m, 18.iv.2002.
- (70)=Orhaniye District, Zihni Derin Avenue, Papatya Street, near road, 620 m, 10.vi.2002.
- (71)=Orhaniye District, Zihni Derin Avenue, Doğu Street, near road, 620 m, 18.iv.2002.
- (72)=Orhaniye District, Kıbrıs Street, in the neighbourhood of İmam Hatip High School, near road, 625 m, 18.iv.2002.
- (73)=Orhaniye District, Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, the garden of Atatürk Teacher High School, 620 m, 18.iv.2002.
- (74)=Orhaniye District, İskender Alper Avenue, Orkide Street, near road, 620 m, 18.iv.2002.
- (75)=Orhaniye District, İskender Alper Avenue, Özlem Street, near road, 620 m, 10.vi.2002.
- (76)=Orhaniye District, Zihni Derin Avenue, Kıbrıs Street, the garden of İmam Hatip High School, 620 m, 10.vi.2002.
- (77)=Orhaniye District, Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, Industries Site, 125. Street, near road, 620 m, 21.iv.2002
- (78)=Orhaniye District, Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, Hanımeli Street, 620 m, 21.iv.2002
- (79)=Orhaniye District, Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, in the neighborhood of Industries Site, 620 m, 21.iv.2002
- (80)=Orhaniye District, İskender Alper Avenue, Özveren Street, 620 m, 03.v.2002.
- (81)=Orhaniye District, İskender Alper Avenue, Hanımeli Street, 620 m, 03.v.2002.

- (82)=Orhaniye District, İskender Alper Avenue, Hanımeli Street, in the neighborhood of Elektricitey İnstitution , 620 m, 03.v.2002.
- (83)=Orhaniye District, İskender Alper Avenue, Hayat Street, 620 m, 03.v.2002.
- (84)=Orhaniye District, Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, between graveyard with industries site, near road, 620 m, 03.v.2002.
- (85)=Orhaniye District, Martyr Noncommissioned officier Yıldırım Çeltikoğlu Avenue, Hanımeli Street, 620m, 03.v.2002.
- (86)=Orhaniye District, İskender Alper Avenue, Ortanca Street, near road, 620 m, 03.v.2002.
- (87)=To Kötekli Village Graveyard, in the neighbourhood of 200 m, near field, 630 m, 06.iii.2003.
- (88)=To Kötekli Village Graveyard, in the neighbourhood of 200m, right of road, 630 m, 06.iii.2003.
- (89)=To Kötekli Village Graveyard, in the neighbourhood of 300m, right of road, 630 m, 06.iii.2003.
- (90)=To Kötekli Village Graveyard, in the neighbourhood of 200m, near road, 630 m, 06.iii.2003.
- (91)=To Kötekli Village Graveyard in the neighbourhood of 300 m, near road, 630 m, 06.iii.2003.
- (92)=To Kötekli Village Graveyard, in the neighbourhood of 200 m,front of Q. cocciferae, 630 m, 06.iii.2003.
- (93)=Uğur Mumcu Avenue, from Muğla to Kötekli Village, on 2. km, near road, 620 m, 21.iv.2002.
- (94)=Uğur Mumcu Avenue from Muğla to Kötekli Village, on 1. km, near road, 620 m, 03.v.2002.
- (95)=Uğur Mumcu Avenue, opposite of Yücelen Hospital, near road, 625 m,15.iii.2002
- (96)=Uğur Mumcu Avenue, BP. Petrol Station, near area, 620 m,08.vii.2002

Result and Discussion

This study was carried on 1546 specimens collected over a period of three years. As a result of the identification of the plant specimens.

Eighty-eight families, 327 genera, 555 species, 14 subspecies, 7 varieties were identified. The total number of taxa is 576. Fifty two taxa were collected for the first time from the C2 square (cf. Donner 1990). Thirty species are endemic to Turkey. The red list of endemic plants have been given from Red Data Book of Turkish Plants in the floristic list (Ekim & al. 2000).

Four of the 576 species belong to Pteridophyta, eleven are Gymnospermae and the other 561 are Angiospermae. Of these, 474 Dicotyledones and 87 Monocotyledones.

The species of the study area, categorised according to phytogeographical regions, can be listed as follows: E. Medit elements 97 (16,84%), Mediterranean elements 92 (15,97%), Irano-Turanian elements 19 (3,30%), Euro-Siberian elements 12 (2,08%), and the remaining 356 (48.1%) species are multi-regional and unknown. The results are presented in Table 1.

As expected in this study area, in a city center, nearly one half of the 576 identified have large distribution.

Table 1. Chorological spectrum.

Phytogeographic Distribution	Number	%
E. Medit.	97	16,84
Medit.	92	15,97
Irano-Turanian	19	3,30
Euro-Siberian	12	2,08
Multi regional and unknown	356	61,81
Endemic Species	30	5,20

Table 2 reports the five largest families. Almost everywhere *Fabaceae*, *Asteraceae* and *Brassicaceae* are among the most represented families. The rate of endemism in the research area is very low (5,20%), when compare with the endemism ratio in the total Flora of Turkey (33%). This figure may not seem to be high. But, when we the flora in Turkey is focused on, it is observed that 85% of the endemic species grow between 1000-2000 m. In this case, plains at lower altitudes are poor in terms of endemics.

Table 2. The most represented families.

Family	Number of Species and Subspecies of Taxa	%
<i>Fabaceae</i>	64	11,11
<i>Asteraceae</i>	54	9,37
<i>Brassicaceae</i>	36	6,25
<i>Lamiaceae</i>	33	5,72
<i>Poaceae</i>	33	5,72

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Appendix 1 – The Plant List*ACANTHACEAE*

Acanthus spinosus L.
(7), E.K.383, E. Medit.

ACERACEAE

Acer negundo L.
(78), E.K.1078, (Cult.).

ADIANTACEAE

Adiantum capillus-veneris L.
(46), E.K.1229b.

AIZOACEAE (FICOIDACEAE)

Carpobrotus edulis (L.) N.E. Br.
(19), E.K.1357, (Cult.).

AMARANTHACEAE

**Amaranthus retroflexus* L.
(64), E.K.419.
Celosia argentea var. *cristata* Kuntze
(5), E.K.1338, (Cult.).

AMARYLLIDACEAE

Narcissus tazetta L. subsp. *tazetta*
(5), E.K.1379, (Cult.).
Sternbergia fischeriana (Herb.) Rupr.
(22), E.K.520.
Sternbergia lutea (L.) Ker-Gawl. ex Spreng.
(64), E.K.15, Medit.

ANACARDIACEAE

Cotinus coggyria Scop.
(47), E.K.1210.
Pistacia terebinthus subsp. *palaestina* (Boiss.) Engl.
(55), E.K. 1289, E. Medit.
Pistacia vera L.
(55), E.K.1288, Ir.-Tur. (Cult.).

APIACEAE (UMBELLIFERAE)

Bunium ferulaceum Sm.
(60), E.K.870, Medit.
**Daucus carota* subsp. *major* (Vis.) Arc.
(9), E.K.1329.
Daucus broteri Ten.
(94), E.K.1318, Medit.
Eryngium bourgatii subsp. *heldreichii* (Boiss.)
Davis

(9), E.K.1335, E. Medit.
Eryngium campestre L.
(55), E.K.1307.
Eryngium creticum Lam.
(40), E.K.408, E. Medit.
Eryngium glomeratum Lam.
(9), E.K.1337.
Falcaria vulgaris Bernh.
(64), E.K.993.
**Hippomarathrum crassilobum* Boiss.
(21), E.K.355.
Lagoecia cuminoides L.
(55), E.K.1117, Medit.
**Myrrhoides nodosa* (L.) Cannon
(93), E.K.897a.
Peucedanum arenarium subsp. *neumeyeri* (Vis.)
Stoj. & Stef.
(9), E.K.1327.
Scandix australis subsp. *grandiflora* (L.) Thell.
(64), E.K.610.
Scandix iberica Bieb.
(60), E.K.99.
Scandix pecten-veneris L.
(5), E.K.127.
Smyrniium rotundifolium Mill.
(64), E.K.145, E. Medit.
Tordylium aegaeum Runem.
(60), E.K.244, E. Medit.
Torilis leptophylla (L.) Reichb.
(42), E.K.263.
Torilis ucranica Spreng.
(21), E.K.361.

APOCYNACEAE

Catharantus roseus (L.) G. Don
(19), E.K.1347, (Cult.).
Nerium oleander L.
(5), E.K.1164, Medit.
**Vinca major* L.
(64), E.K.607, Medit.

ARALLACEAE

Hedera helix L.
(35), E.K.1528.

ARACEAE

Dracunculus vulgaris Schott
(42), E.K.269, E. Medit.

ARECACEAE (PALMAE)

Washingtonia filifera (Linden ex Andr.) H.L. Wendl.
(26), E.K.1166, (Cult.).

ASCLEPIADACEAE

Periploca graeca L.
(21), E.K. 358, E. Medit.

ASPLENIACEAE

Ceterach officinarum DC.
(46), E.K. 1170b.

ASTERACEAE (COMPOSITAE)

**Anthemis aciphylla* var. *discoidea* Boiss.

(7), E.K.478, E. Medit., End., LR(lc)
Anthemis cretica subsp. *leucanthemoides* (Boiss.) Grierson
(4), E.K.390.
Anthemis chia L.
(84), E.K.16, Medit.
Anthemis cotula L.
(5), E.K.1161.
Anthemis pseudocotula Boiss.
(84), E.K.271.
Bellis perennis L.
(6), E.K.584, Eu.-Sib.
Calendula arvensis L.
(6), E.K.572.
Calendula officinalis L.
(68), E.K.82.
Cardopatum corymbosum (L.) Pers.
(60), E.K.313, E. Medit.
Carduus pycnocephalus subsp. *albidus* (Bieb.) Kazmi
(73), E.K.174.
Carduus pycnocephalus L. subsp. *pycnocephalus*
(73), E.K.281, Medit.
Carduus rechingeranus Kazmi
(73), E.K.494, E. Medit., End., LR(lc)
Carlina corymbosa L.
(6), E.K.1336, Medit.
Carthamus dentatus Vahl
(66), E.K.28.
Centaurea solstitialis L.
(73), E.K.289.
Centaurea urvillei subsp. *stepposa* Wagenitz
(73), E.K.292, Ir.-Tur.

Centaurea virgata Lam. Grup A
(47), E.K.1216.
Chamaemelum mixtum (L.) All.
(72), E.K.317, Medit.
Chondrilla juncea L. var. *juncea*
(67), E.K.23.
Cichorium intybus L.
(84), E.K.288.
Cnicus benedictus var. *kotschyi* Boiss.
(21), E.K.372.
Conyza canadensis (L.) Cronquist
(7), E.K.484.
Crepis foetida subsp. *rhoeadifolia* (Bieb.) Celak.
(60), E.K.300.
Crepis reuterana Boiss. subsp. *reuterana*
(21), E.K.369, E.Medit.
Crepis sancta (L.) Babç.
(84), E.K.61.
Crupina crupinastrum (Moris) Vis.
(26), E.K. 954.
Doronicum orientale Hoffm.
(55), E.K.675.
Echinops viscosus subsp. *bithynicus* (Boiss.)
(5), E.K. 386.
Filago vulgaris Lam.
(73), E.K.323.
Helichrysum orientale (L.) DC.
(64), E.K.977, Medit.
Inula viscosa (L.) Aiton
(84), E.K. 20, Medit.
Jurinea mollis (L.) Reichb.
(47), E.K.1212, E. Medit.
Lactuca saligna L.
(21), E.K.452.
**Lapsana communis* subsp. *intermedia* (Bieb.) Hayek
(55), E.K.665.
Leontodon tuberosus L.
(55), E.K.669, Medit.
Matricaria chamomilla var. *recutita* (L.) Grierson
(5), E.K.189.
Onopordum bracteatum Boiss. & Heldr.
(55), E.K.1310, E. Medit.
Pallenis spinosa (L.) Cass.
(60), E.K.308, Medit.
Picnomon acarna (L.) Cass.
(66), E.K.27, Medit.

Ptilostemon chamaepeuce (L.) Less.

(26), E.K.1167, E. Medit.

Scorzonera cana (C.A. Mey.) Hoffm. var. *cana*

(60), E.K.1454.

**Scorzonera cana* var. *jacquiniana* (W. Koch)
Chamb.

(81), E.K.140.

Senecio bicolor (Willd.) Tod.

(55), E.K.1258, (Cult.).

Senecio vernalis Waldst. & Kit.

(84), E.K.44.

Senecio vulgaris L.

(21), E.K.496.

Scorzonera sublanata Lipsch.

(64), E.K.171, E. Medit.

Sonchus asper subsp. *glaucescens* (Jordan) Ball

(84), E.K.160.

Tagetes erecta L.

(5), E.K. 1135, (Cult.).

**Tagetes minuta* L.

(68), E.K.2.

Tagetes patula L.

(19), E.K. 1350, (Cult.).

Taraxacum macrolepium Schisch.

(66), E.K.31.

Taraxacum serotinum (Waldst. & Kit.) Poir.

(66), E.K.29.

Tragopogon longirostris Bisch. ex Schultz Bip.

(60), E.K.796.

Tragopogon pterodes Panc.

(60), E.K.791.

Xanthium strumarium subsp. *cavanillesii*

(Schouw) D. Löve & P. Dans.

(21), E.K.499.

BALSAMINACEAE

Impatiens balsamina L.

(19), E.K.1349, (Cult.).

BERBERIDACEAE

Leontice leontopetalum L.

(65), E.K. 84.

BIGNONIACEAE

Catalpa bignonioides L.

(81), E.K.1093, (Cult.).

BORAGINACEAE

Anchusa undulata subsp. *hybrida* (Ten.) Cout.

(66), E.K.94b, Medit.

Anchusa azurea Mill.

(60), E.K.96.

Alkanna tinctoria (L.) Tausch

(64), E.K.824, Medit.

Buglossoides arvensis (L.) Johnst.

(6), E.K. 471.

Echium italicum L.

(78), E.K.333, Medit.?

**Heliotropium europaeum* L.

(68), E.K.6, Medit.?

**Heliotropium lasiocarpum* Fisch. & Mey.

(64), E.K.420, Ir.-Tur.

Myosotis minutiflora Boiss. & Reut.

(94), E.K.40, Medit.

Myosotis ramosissima Rochel ex Schult.

(5), E.K.133.

Myosotis speluncicola (Boiss.) Rouy

(93), E.K.53, Medit.?

Neotostema apulum (L.) Johnst.

(60), E.K.873, Medit.

Onosma frutescens Lam.

(26), E.K.735, E. Medit.

Onosma mite Boiss. & Heldr.

(47), E.K.1219, E. Medit.

Paracaryum aucheri (A.DC.) Boiss.

(64), E.K.999, E. Medit., End., LR(cd)

BRASSICACEAE (CRUCIFERAE)

Alyssum fulvescens Sibth. & Sm.

(60), E.K.539, E. Medit.

Alyssum hirsutum Bieb.

(20), E.K.67.

Alyssum minus (L.) Rothm.

(72), E.K.318.

Alliaria petiolata (Bieb.) Cavara & Grande

(31), E.K.638.

Alyssum smyrnaeum Meyer

(64), E.K.71, E. Medit.

Arabis verna (L.) DC.

(64), E.K.73, Medit.

Biscutella didyma L.

(22), E.K.768.

Brassica cretica Lam.

(93), E.K.233, E. Medit.

**Brassica tournefortii* Gouan

(94), E.K.209.

Calepina irregularis (Asso) Thell.
(5), E.K.601.
Camelina rumelica Vel.
(27), E.K.550.
Capsella bursa-pastoris (L.) Medik.
(5), E.K.566.
Cardamine hirsuta L.
(59), E.K.654.
Cardaria draba (L.) Desv.
(89), E.K.1011.
Cheiranthus cheiri L.
(5), E.K.1151, (Cult.).
Diplotaxis tenuifolia (L.) DC.
(68), E.K.1.
Erophila verna (L.) Chevall. subsp. *verna*
(5), E.K.560.
Erophila verna subsp. *praecox* (Stev.) Walters
(53), E.K.518.
Eruca sativa Mill.
(70), E.K.319.
Hirschfeldia incana (L.) Lag.-Foss.
(42), E.K.268.
Iberis carica Bornm.
(47), E.K.1227, E. Medit.
Isatis glauca Aucher ex Boiss.
(49), E.K.1208, Ir.-Tur.
Isatis tinctoria subsp. *corymbosa* (Boiss.) Davis
(55), E.K.691.
**Lepidium hirtum* (L.) Sm.
(49), E.K.1201.
**Lobularia maritima* (L.) Desv.
(20), E.K.297.
**Matthiola incana* (L.) R. Br.
(23), E.K.741.
Neslia apiculata Fisch.
(63), E.K.158.
Raphanus raphanistrum L.
(55), E.K.528.
Raphanus sativus L.
(43), E.K.1408, (Cult.).
**Rorippa amphibia* (L.) Bess.
(63), E.K.157.
**Sinapis alba* L.
(55), E.K.694.
Sinapis arvensis L.
(5), E.K.1124.
Sisymbrium altissimum L.
(20), E.K.212.

Sisymbrium officinale (L.) Scop.
(48), E.K.1171b.
Sisymbrium orientale L.
(20), E.K.208.
Thlaspi perfoliatum L.
(53), E.K.540.

CAESALPINIACEAE

**Caesalpinia gilliesii* Wall. ex Hook.
(19), E.K. 1095.
Cercis siliquastrum L.
(93), E.K.1423, (Cult.).

CAMPANULACEAE

Campanula drabifolia Sm.
(26), E.K.194, E. Medit.
Campanula lyrata Lam.
(5), E.K.958, End., LR(lc)
Legousia falcata (Ten.) Fritsch
(45), E.K.916a, Medit.
Legousia hybrida (L.) Delarbre
(45), E.K.916b, Medit.?
Legousia pentagonia (L.) Thell.
(60), E.K.311, E. Medit.
Legousia speculum-veneris (L.) Chaix
(60), E.K.795, Medit.

CAPRIFOLIACEAE

Lonicera periclymenum L.
(55), E.K.1064, (Cult.).

CARYOPHYLLACEAE

Agrostemma githago L.
(35), E.K.1539.
**Cerastium anomalum* Waldst. & Kit.
(6), E.K.596.
Cerastium glomeratum Thuill.
(55), E.K.671.
Cerastium illyricum subsp. *comatum* (Desv.)
P.D. Sell & Whitehead
(5), E.K.568, E. Medit.
Cerastium tomentosum L.
(19), E.K.1168, (Cult.).
Dianthus barbatus L.
(5), E.K.1134, (Cult.).
Dianthus caryophyllus L.
(5), E.K.1133, (Cult.).
Dianthus elegans var. *actinopetalus* (Fenzl) Reeve
(40), E.K.405.

Dianthus elegans d'Urv. var. *elegans*
(1), E.K.1179.
**Dianthus strictus* Banks & Sol. var. *axilliflorus*
(Fenzl) Reeve
(14), E.K.175.
Dianthus tripunctatus Sibth. & Sm. (60),
E.K.303, E. Medit.?
Dianthus zonatus Fenzl var. *zonatus*
(74), E.K.352.
Minuartia hybrida (Vill.) Schischk. subsp.
hybrida
(73), E.K.324.
Minuartia hybrida subsp. *turcica* McNeill
(31), E.K.898.
Petrorhagia lycica (Davis) Ball & Heywood
(75), E.K.344, E. Medit.
Silene behen L.
(93), E.K.896.
**Silene conica* L.
(42), E.K.267.
Silene cariensis Boiss.
(55), E.K.1270, E. Medit., End., LR(cd)
Silene dichotoma subsp. *sibthorpiana* (Reichb.)
Rech.
(7), E.K.467.
Silene echinospermoides Hub.-Mor.
(40), E.K.404, E. Medit., End., LR(cd)
Silene leptoclada Boiss.
(49), E.K.1197, E. Medit., End., LR(nt)
Silene macrodonta Boiss.
(24), E.K.784.
Stellaria media subsp. *pallida* (Dumort.)
Aschers & Graebn.
(31), E.K.547.
Silene odontopetala Fenzl
(49), E.K.1218.
Silene subconica Friv.
(45), E.K.918.
Silene vulgaris (Moench) Garcke
(60), E.K.124.
Telephium imperati subsp. *orientale* (Boiss.)
Nyman
(5), E.K.1119.
Vaccaria pyramidata var. *grandiflora* (Fisch. ex
DC.) Cullen
(42), E.K.261.
Velezia rigida L.
(60), E.K.309.

CHENOPODIACEAE

**Chenopodium album* L.
(21), E.K.451.
Chenopodium pulifolium Schrad.
(21), E.K.446.
Chenopodium vulvaria L.
(21), E.K.442.
CISTACEAE
Cistus creticus L.
(55), E.K.1062, Medit.
Helianthemum aegyptiacum (L.) Mill.
(55), E.K.1055.
Helianthemum salicifolium (L.) Mill.
(21), E.K.178.
Tuberaria guttata var. *inconspicua* (Thib.) Batt.
& Trab.
(66), E.K.1168.

COMMELINACEAE

Tradescantia pallida (Rose) D.R. Hunt
(5), E.K.1141, (Cult.).

CONVOLVULACEAE

Convolvulus arvensis L.
(84), E.K.285.
Convolvulus betonicifolius Mill.
(84), E.K.280, Ir.-Tur.
Convolvulus lineatus L.
(21), E.K.345.
Ipomoea purpurea (L.) Roth
(21), E.K.458, (Cult.).

CRASSULACEAE

Sedum album L.
(26), E.K.966.
Sedum caespitosum (Cav.) DC.
(60), E.K. 858, Medit.?
**Sedum ochroleucum* Chaix
(47), E.K.1196.
Umbilicus horizontalis (Guss.) DC.
(35), E.K.1545, E. Medit.

CUCURBITACEAE

Ecballium elaterium (L.) A. Rich.
(68), E.K.8, Medit.

CUPRESSACEAE

Cupressus arizonica Grene

(29), E.K. 1406, (Cult.).
Cupressus macrocarpa L.
 (29), E.K. 1425, (Cult.).
Cupressus sempervirens var. *horizontalis* L.
 (55), E.K.708, (Cult.).
Cupressus sempervirens var. *pyramidalis* L.
 (30), E.K. 1404, (Cult.).
Juniperus excelsa Bieb.
 (5), E.K. 1160.
Thuja orientalis L.
 (5), E.K. 1159, (Cult.).
Juniperus oxycedrus L.
 (51), E.K. 1394.
Juniperus sabina L.
 (51), E.K. 393, (Cult.).

CUSCUTACEAE
Cuscuta campestris Yunck.
 (6), E.K.483.

CYPERACEAE
Cyperus longus L.
 (84), E.K.432.
Cyperus rotundus L.
 (9), E.K.486.

DIPSACACEAE
Knautia integrifolia var. *bidens* (Sm.) Borbas
 (70), E.K.374, E. Medit.
Pterocephalus plumosus (L.) Coult.
 (9), E.K.1233.
Scabiosa argentea L.
 (83), E.K.350.
Scabiosa reuteriana Boiss.
 (21), E.K.366, E. Medit., End., LR(lc)

ELAEAGNACEAE
Elaeagnus angustifolia L.
 (78), E.K.1089, (Cult.).

EQUISETACEAE
 **Equisetum hyemale* L.
 (68), E.K.5.

EUPHORBIACEAE
Euphorbia dendroides L.
 (22), E.K.752, Medit.
Euphorbia falcata subsp. *macrostegia* (Bornm.)
 O. Schwarz

(5), E.K.1129, E. Medit., End., LR(lc)
Euphorbia helioscopia L.
 (11), E.K.34.
Euphorbia rigida Bieb.
 (60), E.K.543, Medit.
Ricinus communis L.
 (19), E.K.1343, (Cult.).

FABACEAE (LEGUMINOSAE)
Anagyris foetida L.
 (34), E.K.68, Medit.
Anthyllis vulneraria subsp. *praepropera* (Kern.)
 Bornm.
 (47), E.K.1194, Medit.
Astragalus hamosus L.
 (93), E.K.892.
Astragalus stella Gouan
 (26), E.K.750, Medit.
Colutea melanocalyx subsp. *davisiana*
 (Browicz) Chamb.
 (88), E.K.1003, E. Medit., End., LR(lc)
Coronilla cretica L.
 (9), E.K.191, E. Medit.
Coronilla varia L. subsp. *varia*
 (26), E.K.734a.
Ebenus barbigera Boiss.
 (47), E.K.1217, E. Medit., End., LR(cd)
Genista acanthoclada DC.
 (22), E.K.753, E. Medit.
 **Hippocrepis unisiliquosa* subsp. *bisiliqua*
 (Forssk.) Bornm.
 (60), E.K.876.
Hymenocarpus circinnatus (L.) Savi
 (24), E.K.778, Medit.
Lathyrus aphaca L. var. *affinis* (Guss.) Arc.
 (59), E.K.1416.
Lathyrus cicera L.
 (59), E.K.652.
Lathyrus setifolius L.
 (59), E.K. 864, Medit.
Lotus corniculatus var. *tenuifolius* L.
 (93), E.K.413.
Lupinus angustifolius L.
 (60), E.K.875.
 **Lupinus micranthus* Guss.
 (55), E.K.1027.
Medicago disciformis DC.
 (64), E.K.173, Medit.

- Medicago littoralis* Rohde ex Lois.
(90), E.K.799a.
- Medicago minima* (L.) Bart.
(73), E.K.327.
- Medicago orbicularis* (L.) Bart.
(35), E.K.1535.
- Medicago polymorpha* var. *vulgaris* (Benth.)
Shinners
(22), E.K.744.
- Medicago sativa* L.
(5), E.K.396.
- Melilotus indica* (L.) All.
(96), E.K.283.
- Melilotus officinalis* (L.) Desr.
(96), E.K.32.
- Onobrychis aequidentata* (Sibth. & Sm.) d'Urv.
(64), E.K.165.
- Onobrychis caput-galli* (L.) Lam.
(53), E.K.310, Medit.
- Ononis pusilla* L.
(47), E.K.1214, Medit.
- Ononis spinosa* subsp. *antiquorum* (L.) Briq.
(24), E.K.380.
- Ornithopus compressus* L.
(55), E.K.1036.
- Pisum sativum* subsp. *elatius* (Bieb.) Aschers. &
Graebn.
(60), E.K.803, Medit.?
- Robinia pseudoacacia* L.
(81), E.K.1082, (Cult.).
- Scorpiurus muricatus* var. *subvillosus* (L.) Fiori
(60), E.K.789, Medit.
- Securigera securidaca* (L.) Degen & Dörf.
(47), E.K.1202.
- Spartium junceum* L.
(47), E.K.1192, Medit.
- Trifolium angustifolium* L.
(55), E.K.1032.
- Trifolium arvense* L.
(55), E.K.1034.
- Trifolium campestre* Schreb.
(60), E.K.241.
- Trifolium cherleri* L.
(52), E.K.853, Medit.
- **Trifolium pauciflorum* d'Urv.
(55), E.K.1054, E. Medit.
- Trifolium physodes* Stev. ex Bieb.
(55), E.K.661, Medit.
- Trifolium repens* L.
(81), E.K.135.
- **Trifolium resupinatum* var. *microcephalum*
Zoh.
(73), E.K.320.
- Trifolium resupinatum* L. var. *resupinatum*
(72), E.K.382.
- Trifolium speciosum* Willd.
(60), E.K.857.
- Trifolium stellatum* L.
(26), E.K.743.
- Trifolium tomentosum* L.
(45), E.K.912.
- Trigonella cariensis* Boiss.
(22), E.K.759, E. Medit.
- Trigonella coerulescens* (Bieb.) Hal.
(45), E.K.913, Ir.-Tur.
- Trigonella monspeliaca* L.
(26), E.K.197c, Medit.
- Trigonella spicata* Sibth. & Sm.
(26), E.K.951, E. Medit.
- Vicia cassia* Boiss.
(89), E.K.806, E. Medit.
- Vicia ervilia* (L.) Willd.
(93), E.K.231.
- Vicia faba* L.
(51), E.K.1409, (Cult.).
- Vicia hybrida* L.
(9), E.K.190.
- Vicia lathyroides* L.
(26), E.K.199.
- Vicia lunata* (Boiss. & Bal.) Boiss.
(55), E.K.1052.
- **Vicia palaestina* Boiss.
(79), E.K.427, E. Medit.
- Vicia peregrina* L.
(80), E.K.138.
- Vicia sativa* subsp. *incisa* var. *cordata* (Wulfen
ex Hoppe) Arc.
(45), E.K.915.
- Vicia sativa* L. subsp. *sativa*
(22), E.K.788.
- Vicia villosa* subsp. *eriocarpa* (Hausskn.) P. W.
Ball
(79), E.K.161.
- Vicia villosa* Roth subsp. *villosa*
(22), E.K.766.
- Wisteria sinensis* Sweet
(5), E.K.1173, (Cult.).

FAGACEAE

- Castanea sativa* Mill.
(93), E.K.1313, (Cult.).
Quercus cerris L.
(55), E.K.1280, Medit.
Quercus coccifera L.
(55), E.K.1290, Medit.
Quercus infectoria subsp. *boissieri* (Reut.) O. Schwarz
(55), E.K.1281.
**Quercus robur* subsp. *pedunculiflora* (C. Koch) Menitsky
(55), E.K.1358, Ir.-Tur.

GENTIANACEAE

- Centaurium erythraea* subsp. *rhodense* (Boiss. & Reut.) Melderis
(26), E.K.1267, Medit.

GERANIACEAE

- Geranium lucidum* L.
(6), E.K.582.
Geranium molle L.
(6), E.K.588.
Geranium purpureum Vill.
(59), E.K.655.
**Geranium tuberosum* L.
(60), E.K.854.
Erodium acaule (L.) Bech. & Thell.
(8), E.K.480, Medit.
**Erodium botrys* (Cav.) Bertol.
(60), E.K.1417.
**Erodium ciconium* (L.) L'Herit.
(60), E.K.790, Medit.
Erodium cicutarium subsp. *bipinnatum* (Cav.) Tourlet
(95), E.K.54.
Erodium cicutarium (L.) L'Herit. subsp. *cuticarium*
(73), E.K.325.
Erodium malacoides (L.) L'Herit.
(21), E.K.357, E. Medit.
Erodium moschatum (L.) L'Herit.
(60), E.K.622, Medit.
Pelargonium peltatum L' Herit.
(5), E.K. 1153, (Cult.).
Pelargonium zonale L' Herit.
(5), E.K. 1139, (Cult.).

GUTTIFERAE (HYPERICACEAE)

- Hypericum perforatum* L.
(64), E.K.399.
Hypericum triquetrifolium Turra
(25), E.K.376.

IRIDACEAE

- Crocus cancellatus* subsp. *lycius* Mathew
(64), E.K.1359, E. Medit., End., LR(nt)
Crocus cancellatus subsp. *mazziaricus* (Herb.) Mathew
(60), E.K.438, E. Medit.
Crocus fleischeri Gay
(55), E.K.530, E. Medit., End., EN.
**Hermodactylus tuberosus* (L.) Mill.
(61), E.K.109, E. Medit.
Gladiolus illyricus W. Koch
(60), E.K.1458.
Gladiolus italicus Mill.
(45), E.K.904.
Gynandrisis sisyrinchium (L.) Parl.
(60), E.K.110.
**Iris albicans* Lange
(6), E.K.188.
Iris germanica L.
(6), E.K.922.
Romulea ramiflora Ten.
(5), E.K.558, Medit.

JUGLANDACEAE

- Juglans regia* L.
(81), E.K.1079, (Cult.).

JUNCACEAE

- Juncus acutus* L.
(55), E.K.1029.

LAMIACEAE (LABIATAE)

- Acinos rotundifolius* Pers.
(60), E.K.867.
Ajuga chamaepitys subsp. *chia* (Schreb.) Arc.
(94), E.K.232.
Ajuga orientalis L.
(89), E.K.810.
Ballota acetabulosa (L.) Bent.
(41), E.K.403, E. Medit.
Ballota nigra subsp. *foetida* Hayek
(78), E.K.353, Euro-Sib.

- Calamintha nepeta* subsp. *glandulosa* (Req.) P.W. Ball
(67), E.K.24.
Clinopodium vulgare L.
(55), E.K.1274.
Lamium amplexicaule L.
(60), E.K.624, Euro-Sib.
Lamium moschatum Mill.
(5), E.K.565, E. Medit.
Marrubium vulgare L.
(47), E.K.1186.
Marrubium parviflorum Fisch. & Mey.
(9), E.K.1235, Ir.-Tur.
**Mentha longifolia* (L.) Huds.
(55), E.K.1276b, Euro-Sib.
Micromeria juliana (L.) Benth. ex Reichb.
(26), E.K.1254, Medit.
Nepeta cadmea Boiss.
(47), E.K.1204, E. Medit., End., LR(lc)
Origanum hypericifolium O.Schwarz & P.H. Davis
(22), E.K.378, E. Medit., End., LR(cd)
Origanum onites L.
(50), E.K.1222, E. Medit.
Phlomis fruticosa L.
(47), E.K.1220, Medit.
Phlomis lycia D. Don
(39), E.K.1443, E. Medit., End., LR(lc)
**Prunella orientalis* Bornm.
(45), E.K.1072b.
Prunella vulgaris L.
(60), E.K.862, Euro-Sib.
Rosmarinus officinalis L.
(5), E.K.489, Medit.
Salvia fruticosa Mill.
(28), E.K.1008, E. Medit.
Salvia candidissima subsp. *occidentalis* Hedge
(89), E.K.1069, Ir.-Tur.?
**Salvia nutans* L.
(21), E.K.415, Euro-Sib.
Salvia verbenaca L.
(5), E.K.129, Medit.
Satureja thymbra L.
(50), E.K.1215, E. Medit.
Stachys annua var. *lycaonica* Bhattacharjee
(47), E.K.1188, Ir.-Tur.
Stachys cretica subsp. *smyrnaea* Rech. fil.
(6), E.K.922, E. Medit., End., LR(lc).
Teucrium chamaedrys L. subsp. *chamaedrys*
(60), E.K.298, E. Medit.
- Teucrium chamaedrys* subsp. *lydium* O. Schwarz
(5), E.K.1120, Euro-Sib.
Thymbra spicata var. *intricata* P.H. Davis
(64), E.K.400, E. Medit., End., LR(cd)
Thymus cilicicus Boiss. & Bal.
(33), E.K.1548, E. Medit., End., LR(lc)
Ziziphora capitata L.
(28), E.K.1012, Ir.-Tur.
Ziziphora tenuior L.
(47), E.K.1193, Ir.-Tur.
- LAURACEAE**
Laurus nobilis L.
(19), E.K.1342, Medit., (Cult.).
- LILIACEAE**
Allium amethystinum Tasch
(60), E.K.304, Medit.
Allium ampeloprasum L.
(22), E.K.1333, Medit.?
Allium flavum subsp. *tauricum* (Besser ex Reichb.) Stearn
(47), E.K.1187, Medit.
Allium hirtovaginum Cand.
(60), E.K.307, E. Medit.
Allium paniculatum L.
(9), E.K.1330, Medit.
Allium sativum L.
(55), E.K.1260, (Cult.).
Asparagus acutifolius L.
(64), E.K.976, Medit.
Colchicum balansae Planch.
(60), E.K.436, E. Medit., End., LR(lc)
Fritillaria bithynica Baker
(60), E.K.121, E. Medit., End., LR(cd)
Gagea fibrosa (Desf.) Schult. & Schult. fil.
(43), E.K.122.
Gagea peduncularis (J. & C. Presl) Pasch.
(64), E.K.77, Medit.
**Hyacinthus orientalis* L.
(5), E.K.556, E. Medit.
Merendera attica (Spruner) Boiss. & Spruner
(5), E.K.492, E. Medit.
Muscari comosum (L.) Mill.
(60), E.K.116, Medit.
Muscari neglectum Guss.
(64), E.K.606.

Ornithogalum armeniacum Baker
(55), E.K.673, E. Medit.
Ornithogalum comosum L.
(22), E.K.198.
Ornithogalum montanum Cyr.
(60), E.K.884, E. Medit.
Ornithogalum narbonense L.
(60), E.K.920, Medit.
Ornithogalum nutans L.
(56), E.K.112, E. Medit.
Ornithogalum umbellatum L.
(84), E.K.79.
Ruscus aculeatus var. *angustifolius* Boiss.
(35), E.K.1546.
Scilla autumnalis L.
(64), E.K.417, Medit.

LINACEAE

Linum bienne Mill.
(55), E.K.1049, Medit.

LORANTHACEAE

Viscum album subsp. *austriacum* (Wiesb.)
Vollm.
(32), E.K.535.

LYTHRACEAE

Lagerstroemia indica L.
(19), E.K.1348, (Cult.).

MALVACEAE

Alcea pallida Waldst. & Kit.
(68), E.K.3.
Malva sylvestris L.
(72), E.K.10.

MYRTACEAE

Eucalyptus camaldulensis Dehnh.
(55), E.K.1282, (Cult.).

MIMOSACEAE

Albizia julibrissin Durazz.
(26), E.K.1250, (Cult.).

MORACEAE

Ficus carica L.
(81), E.K.1086, (Cult.).
Morus alba L.
(81), E.K.1077, (Cult.).

NYCTAGINACEAE

Bougainvillea glabra L.
(55), E.K.1169, (Cult.).
Mirabilis jalapa L.
(19), E.K.1341, (Cult.).

OLEACEAE

Jasminum fruticans L.
(5), E.K.184, Medit.
Ligustrum japonicum L.
(55), E.K.1074, (Cult.).
Phillyrea latifolia L.
(5), E.K.1154, (Cult.).
Olea europaea L. var. *europaea*
(81), E.K.1073, Euro-Sib., (Cult.).

ORCHIDACEAE

Anacamptis pyramidalis (L.) L.C.M. Richard
(28), E.K.1002.
Cephalanthera epipactoides Fisch. & Mey.
(64), E.K.991, E. Medit.
Comperia comperiana (Steven) Aschers. &
Graebn.
(5), E.K.934, Ir.-Tur.
Ophrys mammosa Desf.
(60), E.K.888, E. Medit.
**Ophrys lutea* subsp. *minor* (Guss.) O. & E.
Danesch
(64), E.K.70, Medit.
Ophrys reinholdii Sprun. ex Fleischm.
(59), E.K.658, E. Medit.
Ophrys vernixia Brot.
(5), E.K.600, Medit.
Orchis anatolica Boiss.
(60), E.K.629, E. Medit.
**Orchis morio* L. subsp. *morio*
(55), E.K.688, Medit.
Orchis tridentata Scop.
(62), E.K.889, Medit.
**Serapias parviflora* Parl.
(28), E.K.1004, Medit.

OROBANCHACEAE

Orobanche nana Noe ex G. Beck
(5), E.K.941.
Orobanche minor Sm.
(55), E.K.1044.

*OXALIDACEAE**Oxalis corniculata* L.

(19), E.K.9.

Oxalis floribunda L.

(5), E.K.1138, (Cult.).

*PAPAVERACEAE**Hypecoum imberbe* Sibth. & Sm.

(64), E.K.72.

Hypecoum procumbens L.

(35), E.K.1526, Medit.

Fumaria densiflora DC.

(71), E.K.150.

Fumaria parviflora Lam.

(52), E.K.1391.

Fumaria petteri Reichb.

(4), E.K.1162, E. Medit.

Fumaria officinalis L.

(58), E.K.253.

Fumaria vaillantii Lois.

(44), E.K.1523.

Glaucium flavum Crantz

(68), E.K.4.

Papaver rhoeas L.

(64), E.K.137.

*PINACEAE**Cedrus libani* A. Rich.

(17), E.K. 1340, (Cult.).

Pinus brutia Ten.

(51), E.K. 1389.

Pinus pinea L.

(18), E.K. 1340b, (Cult.).

*PUNICACEAE**Punica granatum* L.

(82), E.K.1075, (Cult.).

*PLANTAGINACEAE**Plantago afra* L.

(26), E.K.747.

Plantago bellardii All.

(55), E.K.1031, E. Medit.

Plantago coronopus subsp. *commutata* (Guss.)

Pilg.

(26), E.K.1248, E. Medit.

Plantago lagopus L.

(55), E.K.698, Medit.

Plantago lanceolata L.

(55), E.K.660.

*PLATANACEAE**Platanus orientalis* L.

(81), E.K.1081, (Cult.).

*POACEAE (GRAMINEAE)**Aegilops cylindrica* Host

(42), E.K.266.

Aegilops geniculata Roth

(64), E.K.822, Medit.

Aegilops markgrafii (Greut.) Hammer

(94), E.K.230, E. Medit.

Aegilops triuncialis L.

(47), E.K. 1184.

Aegilops umbellulata Zhuk.

(22), E.K.782, Ir.-Tur.

Avena barbata Pott ex Link

(26), E.K.739, Medit.

Avena sterilis L.

(64), E.K.226.

Briza humilis Bieb.

(13), E.K.715.

Briza maxima L.

(64), E.K.979.

**Bromus arvensis* L.

(84), E.K.276.

Bromus lanceolatus Roth

(89), E.K.1013.

Bromus sterilis L.

(84), E.K.219.

Bromus tectorum L.

(84), E.K.211.

Cynodon dactylon (L.) Pers. var. *dactylon*

(21), E.K.370.

Cynodon dactylon var. *villosus* Regel

(93), E.K.430.

Cynosurus echinatus L.

(55), E.K.1267b, Medit.

Dactylis glomerata L. subsp. *hispanica* (Roth)

Nyman

(5), E.K.946.

Echinochloa crus-galli (L.) P. Beauv.

(93), E.K.429.

Eremopoa persica (Trin.) Roshev.

(84), E.K.284.

Hordeum bulbosum L.

(59), E.K.256.

Hordeum murinum subsp. *leporinum* (Link) Arc.
(93), E.K.207.

Lolium perenne L.

(6), E.K.1154b.

**Lolium multiflorum* Lam.

(86), E.K.341.

Lolium rigidum Gaudin

(6), E.K.928.

Melica ciliata L. subsp. *ciliata*

(26), E.K.1246.

Melica ciliata subsp. *magnolii* (Gren. & Godr.)

Husnot

(47), E.K.1181, Medit.

Milium pedicellare (Borrm.) Roshev.

(21), E.K.364, Ir.-Tur.

Milium vernale Bieb.

(12), E.K.1418, Medit.?

Phleum boissieri Borrm.

(84), E.K.218, Ir.-Tur.

Poa bulbosa L.

(84), E.K.220.

Setaria viridis (L.) P.Beauv.

(93), E.K.206.

Sorghum halepense var. *muticum* (Hackel)
Grossh.

(94), E.K.1311.

Triticum aestivum L.

(87), E.K.1026. (Cult.).

Zea mays L.

(94), E.K.1317, (Cult.).

POLYGONACEAE

Polygonum amphibium L.

(49), E.K.1209b.

Polygonum aviculare L.

(2), E.K.425.

Polygonum bellardii All.

(73), E.K.322.

**Polygonum bistorta* L.

(55), E.K.1286, Euro.-Sib.

Polygonum cognatum Meissn.

(15), E.K.447.

Polygonum salebrosum Coode & Cullen

(5), E.K.386b, End., LR(cd)

**Polygonum setosum* Jacq.

(15), E.K.443, Ir.-Tur.

Rumex bucephalophorus L.

(55), E.K.1046, Medit.

Rumex cristatus DC.

(49), E.K.1176.

Rumex pulcher L.

(6), E.K.931.

Rumex tuberosus L.

(55), E.K.1053.

PORTULACACEAE

Portulaca oleracea L.

(36), E.K.1298.

PRIMULACEAE

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

(73), E.K.326.

Cyclamen trochopteranthum O. Schwarz

(5), E.K.525, E. Medit., End., LR(lc)

Lysimachia atropurpurea L.

(22), E.K.962, E. Medit.

RANUNCULACEAE

Anemone blanda Schott & Kotschy

(27), E.K. 548.

Anemone coronaria L.

(64), E.K. 76, Medit.

Delphinium peregrinum L.

(39), E.K. 402.

Delphinium polarnacht L.

(5), E.K. 1150, (Cult.).

Clematis cirrhosa L.

(51), E.K. 1383, Medit.

Nigella arvensis var. *glauca* Boiss.

(64), E.K. 406.

Nigella arvensis var. *involuta* Boiss.

(6), E.K.1328.

Ranunculus arvensis L.

(30), E.K.235.

**Ranunculus cornutus* DC.

(69), E.K.146.

**Ranunculus cuneatus* Boiss.

(5), E.K.118.

Ranunculus ficaria subsp. *ficariiformis* Rouy & Fouc.

(64), E.K.75.

**Ranunculus illyricus* L.

(5), E.K.119.

Ranunculus isthmicus Boiss.

(87), E.K.108.

**Ranunculus isthmicus* subsp. *stepporum* Davis

(21), E.K.180.

Ranunculus muricatus L.
(57), E.K.804.

Ranunculus neapolitanus Ten.
(55), E.K. 676.

Ranunculus paludosus Poir.
(56), E.K. 113.

Ranunculus sprunerianus Boiss.
(56), E.K. 116, E. Medit.

RESEDACEAE

Reseda lutea L.
(80), E.K.221.

RHAMNACEAE

Paliurus spina-christi Mill.
(22), E.K.379.

ROSACEAE

Amygdalus communis L.
(55), E.K.1300, (Cult.).

Armeniaca vulgaris Lam.
(54), E.K.1413, (Cult.).

Cerasus avium (L.) Moench
(54), E.K.1412b, (Cult.).

Cerasus vulgaris Mill.
(54), E.K.1411, (Cult.).

Cotoneaster nummularia Fisch. & Mey.
(19), E.K.1355, (Cult.).

Cotoneaster salicifolia L.
(94), E.K.1398, (Cult.).

Crataegus aronia (L.) Bosc. ex DC.
(64), E.K. 997.

Crataegus monogyna subsp. *azarella* (Gris.)
Franco
(26), E.K.963.

Crataegus monogyna Jacq.
(19), E.K.1345.

Cydonia oblonga Mill.
(55), E.K.1305, (Cult.).

Cydonia japonica L.
(93), E.K.1397, (Cult.).

Eriobotrya japonica (Thunb.) Lindl.
(19), E.K.1353, (Cult.).

Fragaria vesca L.
(54), E.K.1410, (Cult.).

Persica vulgaris Mill.
(54), E.K.1412a, (Cult.).

Potentilla recta var. *pedata* (Nestl.) C.Koch
(89), E.K. 1068.

Prunus domestica L.
(54), E.K. 1414, (Cult.).

Rosa canina L.
(35), E.K.1543.

Rubus sanctus Schreb.
(5), E.K.1225.

Sanguisorba minor Scop. subsp. *minor*
(64), E.K.823.

Sanguisorba minor subsp. *magnolii* (Spach)
Briq
(64), E.K.980.

Pyracantha coccinea Roem.
(94), E.K.1403, (Cult.).

Malus sylvestris subsp. *mitis* (Wallr.) Mansf.
(5), E.K.1156, (Cult.).

Malus sylvestris subsp. *orientalis* (A. Uglitzk.)
Browicz
(54), E.K.1415, (Cult.).

Pyrus amygdaliformis Vill. var. *amygdaliformis*
(55), E.K. 1303.

**Pyrus amygdaliformis* var. *lanceolata* Diap.
(93), E.K.286, E. Medit.

Pyrus communis subsp. *caucasica* (Fed.)
Browicz
(54), E.K.1416, (Cult.).

Pyrus communis subsp. *sativa* (DC.) Hegi
(5), E.K.1157, (Cult.).

RUBIACEAE

Asperula arvensis L.
(60), E.K.871, Medit.

Galium asparagifolium Boiss. & Heldr.
(5), E.K.1122, E. Medit.

Galium brevifolium subsp. *insulare* Ehrend. &
Schönb.-Tem.
(6), E.K.583, E. Medit.

Galium canum subsp. *ovatum* Ehrend.
(47), E.K.1198, E. Medit.

Galium heldreichii Hal.
(93), E.K.902, E. Medit.

Galium spurium L. subsp. *spurium*
(64), E.K.827, Euro-Sib.

Galium tricornerutum Dandy
(5), E.K.1114, Medit.

Galium verum L. subsp. *verum*
(26), E.K.375, Euro-Sib.

Sherardia arvensis L.
(55), E.K.692, Medit.?

Valantia hispida L.

(60), E.K.542, Medit.

SALICACEAE

Populus nigra L.

(37), E.K.1182, (Cult.).

Salix babylonica L.

(37), E.K.1178, (Cult.).

SAPINDACEAE

Koelreuteria formosana L.

(60), E.K.1322, (Cult.).

SCROPHULARIACEAE

Antirrhinum majus L.

(7), E.K.1137, Medit. , (Cult.).

Cymbalaria longipes (Boiss. & Heldr.) Cheval.

(55), E.K.1063, E. Medit.

Verbascum bellum Hub.-Mor.

(5), E.K.388. E. Medit., End., LR(cd)

Verbascum cariense Hub.-Mor.

(64), E.K.1000, E. Medit., End., LR(nt)

Verbascum glomeratum Boiss.

(21), E.K.354, Ir.-Tur.

Verbascum latisepalum Hub.-Mor.

(5), E.K.394a, Ir.-Tur., End., EN.

Verbascum lydiium var. *heterandrum* Murb.

(5), E.K. 394b, E. Medit., End., LR(cd)

Verbascum mucronatum Lam.

(93), E.K.18, E. Medit.

Verbascum pinardii Boiss

(22), E.K.200, E. Medit., End., LR(cd)

Verbascum splendendum Boiss.

(21), E.K.371, E. Medit., End., LR(lc)

Linaria chalepensis (L.) Mill.

(26), E.K.196, E.Medit.

**Melampyrum arvense* L.

(47), E.K.1221, Euro-Sib.

Misopates orontium (L.) Rafin.

(7), E.K.491.

Parentucellia latifolia (L.) Caruel

(64), E.K.831, Medit.

Scrophularia floribunda Boiss. & Bal.

(89), E.K.809.

Veronica cymbalaria Bodard

(5), E.K 569, Medit.

Veronica grisebachii Walters

(21), E.K.179, E. Medit.

Veronica lycica E. Lehm.

(16), E.K.35, E. Medit., End., LR(cd)

Veronica praecox All.

(60), E.K.519a.

Veronica triphyllos L.

(60), E.K.519b.

SOLANACEAE

Datura stramonium L.

(68), E.K.7.

Petunia hybrida Juss.

(5), E.K.1140, (Cult.).

Solanum nigrum L.

(47), E.K.1191.

SINOPTERIDACEAE

Cheilanthes fragrans (L. fil.) Sw.

(38), E.K.1511.

STYRACACEAE

Styrax officinalis L.

(35), E.K.1517.

THYMELAEACEAE

Daphne sericea Vahl

(60), E.K.887, E. Medit.

TILIACEAE

Tilia cordata Mill.

(20), E.K.1085, (Cult.).

URTICACEAE

Urtica pilulifera L.

(55), E.K.1407, Medit.

VALERIANACEAE

Valerianella balanse Matthews

(5), E.K.128, E. Medit.

Valerianella carinata Lois.

(73), E.K.162.

Valeriana dioscoridis Sm.

(64), E.K.615, E. Medit.

Valerianella vesicaria (L.) Moench

(55), E.K.688.

VERBENACEAE

Verbena hortensis L.

(5), E.K.1136, (Cult.).

Verbena speciosa L.

(5), E.K.1165, (Cult.).

Vitex agnus-castus L.
(21), E.K.11, Medit.

VIOLACEAE

Viola odorata L.
(5), E.K.597 (Cult.).
Viola vitrockiana L.
(5), E.K. 1158, (Cult.).

VITACEAE (AMPELIDACEAE)

Vitis sylvestris Gmelin
(5), E.K.1131, (Cult.).

ZYGOPHYLLACEAE

Tribulus terrestris L.
(77), E.K.19.