

Flora of the Area between Amasya Castle and the Villages of Vermiş and Yuvacık

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Abstract: This study covers the flora of the area between Amasya Castle and the villages of Vermiş and Yuvacık. In 1994, 670 plant specimens were collected in the study area and examined. At the end of the study, 75 families, 287 genera and 412 species were determined. The total number of taxa was found to be and 412 species were determined. The total number of taxa was found to be 420, 46 (10.95%) of which are endemic. The distribution rates of the specimens into phytogeographical regions are as follows: Irano-Turanian, 15.71%; Mediterranean, 9.52%; and Euro-Siberian, 7.38%.

Key Words: Flora, Amasya

Vermiş - Yuvacık Köyleri ve Amasya Kalesi Arasında Kalan Bölgenin Florası

Özet: Bu araştırma Vermiş-Yuvacık Köyleri ve Amasya Kalesi arasında kalan bölgenin florasını kapsamaktadır. Araştırma alanından toplanan 670 bitki örneğinin değerlendirilmesiyle 75 aile ve 287 cins'e ait toplam takson sayısı 420 olarak bulunmuştur. Tespit edilen bu taksonların 46 tanesi (%10.95) endemiktir. Taksonların fitocoğrafik bölgelere dağılım oranları İran-Turan %15.71, Akdeniz %9.52 ve Avrupa-Sibirya %7.38 şeklindedir.

Anahtar Sözcükler: Flora, Amasya

Introduction

One of the main reasons for studying the area between Amasya Castle and the villages of Vermiş and Yuvacık is that Amasya has an unusual geographical location as the junction between the Irano-Turanian and Euro-Siberian phytogeographic regions. Furthermore, as the research area includes Yeşilirmak Valley, it was possible to collect elements of the Mediterranean phytogeographical region. The presence of endemics and many different kinds of plant species at the border of junction of different phytogeographic regions is another reason for planning a floristic study in this area (1).

This area is completely surrounded by the provincial borders of Amasya. Amasya is a city on the border of Northern and Central Anatolia, and the study area is in the west of Amasya, surrounded by mountains: Kırklar Mountain in the north, Ferhat Mountain in the south, Karaman Mountain in the west and Lokman Mountain in the south-east. Yuvacık Village is in the north-west and Amasya Castle in the north-east of the research area. This area is bounded by Lokman Mountain in the south-east

and Vermiş village and Kirazlıdere, also mentioned in "The Flora of Turkey". In the study area, the Ferhatkaya Formation includes lower cretaceous and the Lokman Formation includes upper cretaceous (2). In this study area, alluvion masses, volcanic facies belonging to the eosen age, metamorphic series from the paleozoic age and calcareous masses belonging to the permian age have rarely been found (3).

The dominant bioclimatic level in Amasya is semi-dry Mediterranean, which is very cold in the winter (4). Although Amasya is a South Black Sea city, it has a harsher climate than other cities of the region and is thus the driest. Rainfall is lower by degrees from the north to the south of the city (5). The study area is composed of bare rock, rubble and four types of soil: chestnut colour, alluvial, colluvial and red-brown (5, 6, 7).

Material and Method

Plant were identified in the herbarium at the Faculty of Arts and Science at Gazi University (8, 9, 10), and

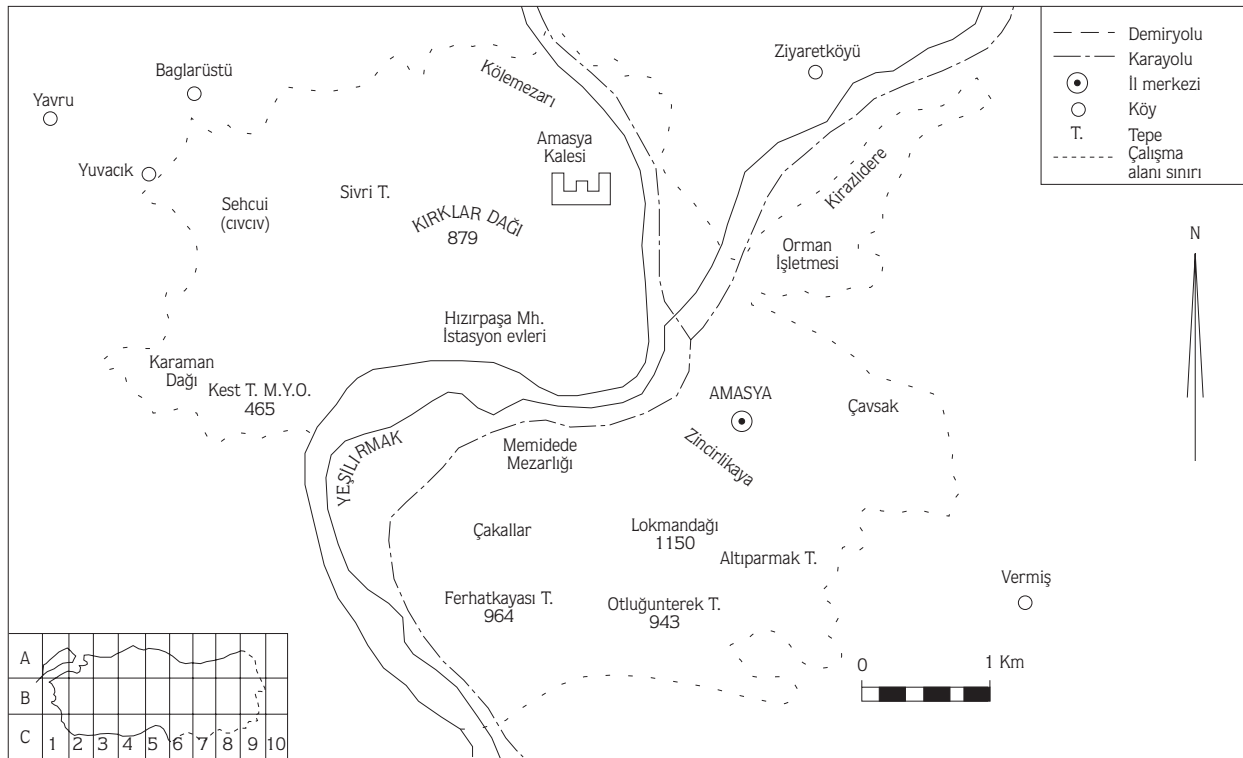


Figure 1. Topographical map of research area

doubtful plant samples were examined in the herbarium at the Faculty of Science at Ankara University (ANK). Samples were preserved in the newly established herbarium at the Amasya Faculty of Education.

Climatic data and the map of the research area were provided by the Meteorology Directorate office of Amasya (11) and Governorship of Amasya, respectively. In formation on the geology (2, 3) and soil structure (4, 6, 7) of this area was obtained from M.T.A., the Directorate of Village Affairs and the Directorate of Soil and Water Affairs.

The Flora is listed in the appendix at the end of the paper.

Taxa in the floristic list are given according to the phylogenetic order in "The Flora of Turkey and the East Aegean Islands" by P.H. Davis. The name of the plant species and the author is followed by locality of the plant specimens, habitat (where it was collected), height, collection date, collector's name and number. Lastly, whether the plant is endemic and which phytogeographical region it belongs to are recorded. "A5 Amasya" is dropped from all localities, because all the stations of the collected samples have it. Not all stations were recorded, in order to avoid repetition.

Abbreviations used in the text and the appendix areas follows:

Medit.: Mediterranean	Ir.-Tur: Irano-Turanian
Euro.-Sib.: Euro-Siberian	M.Y.O.: Meslek Yüksek Okulu
A.Cast.: Amasya Castle	M.T.A.: Maden Tetkik Arama
A.E.F.: Amasya Educational Faculty	Ö.: Euxine
Y.vill: Yuvacık village	H.Ö.: Hirkan -Euxin
El.: Element	
S.S.K.: Sosyal Sigortalar Kurumu	
End.: Endemic	

Discussion

In this study, 670 plants were collected from the study area; a total of 420 taxa were determined, including 75 families and 287 genera. One taxon belongs to Pteridophyta, and all of others are composed of Spermatophyta. Gymnospermae and Angiospermae are represented by 5 and 419 taxa, respectively. The distribution rates of the specimens to floristic regions is given in Table 1, where it can be seen that most of the samples are Irano-Turanian elements. Steppic characters

are dominant because of biotic factors such as agriculture, grazing, recently established picnic areas and forest exploitation. The first ten families with the highest species number are shown in Table 2, and the genera with the highest species number in Table 3.

Table 1. Distribution of the species into the floristic regions and their rates (%).

Irano-Turanian Elements	70	%15.71
Mediterranean Elements	40	%9.52
Euro-Siberian Elements	31	%7.38
Widespread	277	%67.61

Table 2. The largest ten families

Familia	Genera	Species	%Species
Compositae	32	46	11.16
Labiatae	18	38	9.22
Leguminosae	17	33	8.00
Gramineae	23	28	6.79
Cruciferae	20	23	5.58
Umbelliferae	15	16	3.88
Boraginaceae	11	16	3.88
Rosaceae	13	15	3.64
Liliaceae	9	13	3.15
Scrophulariaceae	6	13	3.15
Other families	123	177	42.96

Being the largest family of **Compositae** is related to being the largest family of the flora of Turkey, having many family members and greater ecological toleration and breaking up seeds easily. The **Labiatae** family is the second order, because most members of this family have Irano-Turanian distributions, and the Irano-Turanian phytogeographic region occupies quite large territory in the study area. The reason **Leguminosae** is in the third order, is that it is the second largest family of the flora of Turkey and has wide toleration limits and involves large genera containing many species.

Table 3. Species totals of the large genera in the study area

Genus	Number of Species	Genus	Number of Species
Astragalus	10	Verbascum	5
Salvia	9	Centaurea	4
Convolvulus	5	Linum	4
Euphorbia	5	Scabiosa	4
Silene	5	Sedum	4

The reason **Astragalus** is in the first order, is that it is the largest genus, represented by the most species in Turkey (12). Furthermore, the study area is mostly steppic in character.

These results were compared with other studies carried out on the transition zone according to percentages of distribution of the species in the phytogeographical regions.

Table 4. The percentages of the distribution of the species in the floristic regions are from four floristic studies carried out in Turkey.

	Research Area			
	Dumanlı	Gâvur	Deveci	Between
Phytogeographic Region	Mountain (Çankırı)	Mountains (Erzurum)	Mountains (Yozgat-Tokat)	Vermiş Yuvacık villages and A. Cast.
Iranio-Turanian	15.2	44	37.8	15.71
Euro-Siberian	13.4	38	15.9	7.38
Mediterranean	6.6	2	10.1	9.52

As can be seen in Table 4, Irano-Turanian elements have the highest value at the transition zone between Irano-Turanian and Euro-Siberian, followed by Euro-Siberian elements. The highest values were determined for Irano-Turanian elements, followed by Mediterranean elements, due to the effects of Yeşilirmak. The Mediterranean elements which are mostly from the Tertiary period, grow in the Mediterranean enclaves

which occur along the Yeşilirmak Valley. This valley was the means of Mediterranean penetrations.

In the research area, it was determined that 46 (11%) of the plant specimens are endemic and 28 are Irano-Turanian. Furthermore, three of the endemic species are Mediterranean and one is a Euro-Siberian element. The phytogeographic region of the 14 endemic taxa is unknown. Only three species were found to be endemic to Amasya; *Erysimum amasianum* Alkanna haussknechtii and *Scorzonera amasiana* Hausskn & Bornm. In regard to the Flora of Turkey, there are 14 species known from Amasya, only three of which were collected. The main reason for this is probably excessive deformation and the altitude of the area mostly lower than 800 m., since these species are commonly distributed between 1500-2000 m of altitude.

No significant differences in the characteristics of

identified samples were recorded when they were compared with the descriptions in "Flora of Turkey and the East Aegean Islands". However, single-flowered stems were determined in "*Scorzonera amasiana*", contrary to the 2-3 flowered stems recorded in Flora of Turkey.

Except for the article published on the medical uses of plants, by Alpınar, K. (16), there are no published scientific studies on the immediate region.

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References

1. Baytop, A., Alpınar, K. Amasya ve Akdağ Florası Üzerinde Yeni Gözlemler, TÜBİTAK, Doğa Bilim Dergisi, (1): 6-9, (1980).
2. Özcan, A., Erkan, A. Keskin, A ve diğerleri, Kuzey Anadolu Fayı - Kırşehir Masifi Arasının Temel Jeolojisi, M.T.A. Temel Araştırmalar Dairesi, 6722, (1980).
3. VII. Bölge Müdürlüğü Samsun, Amasya Projesi Planlama Raporu, D.S.I., Enerji ve Tabii Kaynaklar Bakanlığı, Devlet Su İşleri Genel Müdürlüğü, Ankara, (1971).
4. Akman, Y., İklim ve Biyoiklim, Palme Yayıncılık, Ankara, (1990).
5. Tarım Orman ve Köyişleri Bakanlığı, Amasya İli Arazi Varlığı, Köy Hizmetleri Genel Müdürlüğü, II Rapor No: 05, Tarım Orman ve Köyişleri Bakanlığı, Ankara, (1991).
6. Köyişleri Bakanlığı, Yeşilirmak Havzası Toprakları, Toprak Su Müd.lüğü, 29, Köyişleri Bakanlığı, Ankara, (1975).
7. Toprak Etüdleri ve Haritalama Dairesi Başkanlığı, Amasya İli Verimlilik Envanteri ve Gübre İhtiyaç Raporu, T.C. Tarım Orman ve Köyişleri Bakanlığı, Toprak Su Gn.Md.lüğü, tovep No: 21, Gn. yayın no: 753, (1984).
8. Davis, P. H., Flora of Turkey and the East Aegean Islands, Vol. 1-9, Edinburgh Univ. Press., (1965-1985).
9. Boissier, E., Flora Orientalis, Vol., I-V, Geneva, 1867-1888.
10. Heywood, V.H. & Tutin, G.T., Flora Europea, Vol I-V, Cambridge, 1964-1980.
11. Ortalama Ekstrem ve Yağış Değerleri Bülteni, Devlet Meteoroloji İşl. Gn. Müd. Yayını, Ankara (1984).
12. Davis, P.H., Mill, R.R., Tan, Kit, Flora of Turkey and the East Aegean Islands, Vol. 10, Edinburgh Univ. Press., 1988.
13. Duran, A., Duman, H., Dumanlı Dağı (Çankırı) Florası, TÜBİTAK, Doğa Bilim Dergisi, (20) Ek Sayı: 143-161, (1996).
14. Tatlı, A., Gâvur Dağları (Erzurum) Florasına Katkıları, TÜBİTAK, Doğa T. Botanik Dergisi, (13): 337-354, (1989).
15. İllarlan, R. Deveci Dağlarının (Yozgat-Tokat) Florasına Katkı, TÜBİTAK, Doğa Bilim Dergisi, (18): 337-366, (1994).
16. Alpınar, K., "Amasya Yöresi Bitkilerinin Yerli Ad ve Tıbbi Kullanılışları", Bitki, 6 (3-4): 243-249, (1979).

Appendix

PTERIDOPHYTA

ASPIDACEAE

Dryopteris filix-mas (L.) Schott

Ferhat Dağı, N slopes; 700 m.,

25.VI.1994, *Cansaran* 506.

SPERMATOPHYTA

GYMNOSPERMAE

PINACEAE

Pinus nigra Arn. subsp. *pallasiana*

(Lamb.) Holmboe

Ferhat Dağı, N slopes; 600 m.,

27.II.1994, *Cansaran* 21.

CUPRESSACEAE

Cupressus sempervirens L.

Ferhat Dağı, N slopes, Memidede

Cemetery surroundings; 400 m. 27.II.1994, *Cansaran* 26.

Juniperus oxycedrus L. subsp.

macrocarpa (Sibth. & Sm) Ball

Lokman Dağı, S slopes; 640 m.,

27.II.1994, *Cansaran* 20. Medit. El.

Juniperus excelsa Bieb.

Ferhat Dağı, NW slopes; 650 m.,

27.II.1994, *Cansaran* 23.

EPHEDRACEAE

Ephedra major Host

Ferhat Dağı, NW slopes; 640 m.

27.II.1994, *Cansaran* 22.

ANGIOSPERMAE

DICOTYLEDONES

RANUNCULACEAE

Nigella arvensis L. var. *glauca* Boiss.

Karaman Dağı, E slopes; 500 m.,

10.VII.1994, *Cansaran* 569.

Consolida orientalis (Gay) Schröd.

Kırklar Dağı, N slopes, vicinity of

Tekirdede Mezarlığı, steppe; 400 m.,

22.V.1994, *Cansaran* 322.

Anemone blanda Schoot & Kotschy

Kırklar Dağı, W slopes; 705 m.,

14.III.1994, *Cansaran* 55.

Clematis vitalba L.

2 km SW of Y. vill., stream bank; 820 m.,

19.VI.1994, *Cansaran* 470.

Adonis aestivalis L. subsp. *aestivalis*

Karaman Dağı, N slopes, S of Y. vill. 840

m., 24.IV.1994, *Cansaran* 183.

Ranunculus oxyspermus Willd.

Lokman Dağı, NE slopes, Çakallar

surroundings; 570 m., 18.IV.1994, *Cansaran*

141-B.

R. argyurus Boiss.

Karaman Dağı, N slopes, S of Y. vill., 820

m., 24.IV.1994, *Cansaran* 189.

R. arvensis L.

Lokman Dağı, N slopes, 2 km SW of

Vermiş village, 610 m., 05.VI.1994,

Cansaran 403.

Ceratocephalus falcatus (L.) Pers.

Kırklar Dağı, SW slopes; 650 m.,

03.IV.1994, *Cansaran* 89.

BERBERIDACEAE

Berberis vulgaris L.

Ferhat Dağı, NW slopes; 710 m.,

18.IV.1994, *Cansaran* 135.

PAPAVERACEAE

Glaucium corniculatum (L.) Rud. subsp.

refractum (Nab.) Cullen

Ferhat Dağı, N slopes, Medidede

Cemetery surroundings, roadsides; 460 m.,

25.VI.1994, *Cansaran* 492.

Papaver rhoeas L.

Ferhat Dağı, N slopes, Memidede

Cemetery surroundings meadows; 430 m.,

25.VI.1994, *Cansaran* 485.

P. lacerum Popov

Kırklar Dağı, N slopes, Tekirdede

Cemetery surroundings, roadsides; 400 m.,

10.IV.1994, *Cansaran* 119.

Hypocoum procumbens L.

A.E.F. Garden; 400 m., 04.IV.1994,

Cansaran 110. *Medit. El.*

H. imberbe Sibth. & Sm.

Kırklar Dağı, N slopes, Tekirdede

Cemetery surroundings, roadsides; 400 m.,

10.IV.1994, *Cansaran* 128.

Fumaria vaillantii Lois.

Kırklar Dağı, S slopes, vicinity of S.S.K.

Hospital, 450 m., 03.IV.1994, *Cansaran* 88.

F. asepala Boiss.

Lokman Dağı, N slopes, 2 km. SW of

Vermiş village; 610 m., 05.VI.1994,

Cansaran 402. *Ir.-Tur. El.*

CRUCIFERAE (BRASSICACEAE)

Sinapis arvensis L.

Meydanbağları surroundings; road sides,

400 m., 29.V.1994, *Cansaran* 399.

Calepina irregularis (Asso) Thellung

Kırklar Dağı, N slopes, Tekirdede

Cemetery surroundings, roadsides; 400 m.,

10.IV.1994, *Cansaran* 127.

Lepidium perfoliatum L.

Kırklar Dağı, N slopes, Tekirdede

Cemetery surroundings, steppe; 500 m.,

10.IV.1994, *Cansaran* 116.

Cardaria draba (L.) Devs. subsp. *draba*

Kırklar Dağı, N slopes, Tekirdede

Cemetery surroundings; roadsides; 450 m.,

10.IV.1994, *Cansaran* 117.

Iberis taurica DC.

Karaman Dağı, N slopes, S of Y. vill.,

steppe; 820 m., 24.IV.1994, *Cansaran* 188.

Aethionema arabicum (L.) Andr. ex DC.

Kırklar Dağı, SW slopes, 490 m.,

20.V.1994, *Cansaran* 308.

Ae. armenum Boiss.

Kırklar Dağı, E slopes, NW of A. Cast;

740 m., 22.V.1994, *Cansaran* 328. *Ir.-Tur.El.*

Thlaspi perfoliatum L.

Ferhat Dağı, NW slopes, stony places,

730 m., 20.III.1994, *Cansaran* 62.

Capsella bursa-pastoris (L.) Medik.

Meydanbağları surroundings, cultivated

land; 400 m., 14.V.1994, *Cansaran* 254.

Boreava orientalis Jaub. & Spach

Karaman Dağı, N slopes, S of Y. vill.; 890

m., 24.IV.1994, *Cansaran* 176. (det. H.

Duman)

Fibigia eriocarpa (DC.) Boiss.

Lokman Dağı, N slopes; 690 m.,

10.IV.1994, *Cansaran* 134.

Alyssum desertorum Stapf. var.

desertorum

Kırklar Dağı, N slopes; 440 m.,

08.V.1994, *Cansaran* 244.

A. strigosum Banks & Sol. subsp.

cedrorum (Schoot & Kotschy) Dudley

Kırklar Dağı, SW slopes; 490 m.,

20.V.1994, *Cansaran* 309.

A. pateri Nyar subsp. *pateri*

Ferhat Dağı, N slopes, 740 m.,

18.IV.1994, *Cansaran* 154. *End. Ir.-Tur.El.*

A. pateri Nyar subsp. *prostratum*

(Nyar.) Dudley

Ferhat Dağı, NW slopes; 660 m.,

18.IV.1994, *Cansaran* 151.

Draba bruniifolia Stev. subsp.

heterocoma (Fenzl) Coode & Cullen var.

heterocoma

Kırklar Dağı, vicinity of A. Cast., stony

places; 690 m., 14.III.1994 *Cansaran* 52.

Erophila verna (L.) Chevall.

Ferhat Dağı, SW slopes; 740 m.,

14.III.1994, *Cansaran* 63.

Arabis caucasica Willd. subsp.

caucasica

Ferhat Dağı, SW slopes, stony places,

650 m., 20.III.1994, *Cansaran* 65.

Barbarea plantaginea DC.

Kırklar Dağı, N slopes, Tekirdede

Cemetery surroundings, roadsides; 450 m.,

10.IV.1994, *Cansaran* 125.

Matthiola longipetala (Vent.) DC. subsp.

bicornis (Sibth. & Smith) P.W.Ball

Karaman Dağı, NE slopes; 580 m.,

01.III.1994, *Cansaran* 44.

Hesperis bicuspidata (Willd.) Poir.

Ferhat Dağı, N slopes; 710 m., 18.IV.1994, *Cansaran* 156.

Erysimum amasianum Hausskn. & Bornm.

Vicinity of A. Cast.; 600 m., 14.V.1994, *Cansaran* 669. End.

Alliaria petiolata (Bieb.) Cavara & Grande

Lokman Dağı, Çakallar surroundings; 550 m., 18.IV.1994, *Cansaran* 143. (det. Z. Aytaç)

Sobolewsia clavata (Boiss.) Fenzl

Ferhat Dağı, N slopes, 740 m., 18.IV.1994, *Cansaran* 160. (det.H.Duman)

CAPPARACEAE

Capparis ovata Desf. var. *herbacea* (Willd.) Zoh.

Karaman Dağı, E slopes, forest; 590 m., 29.V.1994, *Cansaran* 396.

RESEDACEAE

Reseda lutea L. var. *lutea*

Ferhat Dağı, N slopes, Memidede Cemetery surroundings, 440 m., 25.VI.1994, *Cansaran* 494.

CISTACEAE

Cistus creticus L.

Kırklar Dağı, E slopes, NW of A. Cast.; 690 m., 22.V.1994 *Cansaran* 333.

Helianthemum nummularium (L.)

Miller subsp. *tomentosum* (Scop.) Schinz & Thellung

Vicinity of A. Cast., NW slopes; 530 m., 22.V.1994, *Cansaran* 335.

H. canum (L.) Baumg. Grup a

Ferhat Dağı, N slopes; 430 m., 15.V.1994, *Cansaran* 278.

VIOLACEAE

Viola sieheana Becker

Lokman Dağı, NE slopes, Çakallar surroundings; 570 m., 18.IV.1994 *Cansaran* 141-A.

V. kitaibeliana Roem. & Schult

Kırklar Dağı, E slopes, Vicinity of A. Cast.; 640 m., 14.III.1994, *Cansaran* 59.

POLYGALACEAE

Polygala supina Schreb.

Kırklar Dağı, N slopes; 440 m., 08.V.1994, *Cansaran* 234.

P. monspeliaca L.

Karaman Dağ, N slopes, SW of Y. vill.; 840 m., 24.IV.1994, *Cansaran* 184. *Medit. El.*

PORTULACACEAE

Portulaca oleracea L. subsp. *oleracea*

Meydanbağları surroundings, cultivated land, 400 m., 07.VI.1994 *Cansaran* 556.

CARYOPHYLLACEAE

Minuartia corymbulosa (Boiss. & Bal.)

McNeill var. *corymbulosa*

Kırklar Dağı, N slopes; 530 m., 08.V.1994, *Cansaran* 224. *End. Ir.-Tur. El.*

M. mesogitana (Boiss.) Hand.-Mazz.

subsp. *lydia* (Boiss.) McNeill

Kırklar Dağı, SW slopes; 470 m., 20.V.1994, *Cansaran* 291-B, *End. E. Medit. El.*

Cerastium anomalum Waldst. & Kit.

Lokman Dağı, N slopes, Çakallar surroundings; 680 m., 18.IV.1994, *Cansaran* 137.

Holosteum umbellatum L. var. *tenerrimum* (Boiss.) Gay

Ferhat Dağı, N slopes; 460 m., 20.III.1994, *Cansaran* 69.

Dianthus zonatus Fenzl var. *zonatus*

Kırklar Dağı, N slopes; 630 m., 19.VI.1994, *Cansaran* 455.

Saponaria officinalis L.

Vicinity of Amasya Stadium, 400 m., 10.VII.1994, *Cansaran* 599.

Silene chlorifolia Sm.

Ferhat Dağı, N slopes; 570 m., 05.VI.1994, *Cansaran* 413. *Ir.-Tur. El.* (det. H. Duman).

S. otites (L.) Wibel

Ferhat Dağı, N slopes; 600 m., 25.VI.1994, *Cansaran* 496.

S. spergulifolia (Desf.) Bieb.

Kırklar Dağı, N slopes; 530 m., 08.V.1994, *Cansaran* 221. (det. H. Duman)

S. caryophylloides (Poir.) Othth subsp. *subulata* (Boiss.) Coode & Cullen

Ferhat Dağı, N slopes, Memidede surroundings; 510 m., 15.V.1994, *Cansaran* 280. (det. H. Duman)

S. alba (Miller) Krause subsp. *ericalycina* (Boiss.) Walters

Ferhat Dağı, NW slopes, forest, 420 m., 18.IV.1994, *Cansaran* 131.

Agrostemma githago L.

Ferhat Dağı, N slopes; 420 m., 15.V.1994, *Cansaran* 282.

ILLECEBRACEAE

Herniaria micrantha A.K.Jackson & Turrill

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings; 1200 m., 03.VII.1994, *Cansaran* 532. *E. Medit. El.* (det. H. Duman)

Paronychia kurdica Boiss. subsp. *kurdica* var. *kurdica*

Kırklar Dağı, E slopes; NW of A. Cast.; 720 m., 22.V.1994 *Cansaran* 332.

POLYGONACEAE

Polygonum salicifolium Brouss. ex Willd.

Karaman Dağı, S slopes; 500 m., 10.VII.1994, *Cansaran* 584.

P. lapathifolium L.

Vicinity of Kurtboğan bridge, watery area; 400 m., 11.IX.1994, *Cansaran* 634.

P. arenastrum Bor.

Karaman Dağı, S slopes; 500 m., 10.VII.1994, *Cansaran* 583.

Rumex patientia L.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 500 m., 16.V.1994, *Cansaran* 670.

CHENOPODIACEAE

Chenopodium botrys L.

Karaman Dağı, S slopes, open forests, 500m., 10.VII.1994, *Cansaran* 581.

C. murale L.

Meydanbağları place, cultivated land; 400 m., 09.VIII.1994, *Cansaran* 610.

Salsola ruthenica Iljin

Şehcui place, vicinity of M.Y.O.; 480 m., 11.IX.1994, *Cansaran* 638.

Noaea mucronata (Forssk.) Aschers. & Schweinf. subsp. *mucronata*

Ferhat Dağı, N slopes, steppe; 500 m., 02.X.1994, *Cansaran* 655.

AMARANTHACEAE

Amaranthus retroflexus L.

Vicinity of Amasya Stadium, edge of

Yeşilirmak River; 400 m., 11.IX.1994, *Cansaran* 635.

A. blitoides S. Wats.

Vicinity of Amasya Stadium, edge of Yeşilirmak River; 400 m., 11.IX.1994, *Cansaran* 639-B.

A. albus L.

Vicinity of Amasya Stadium, edge of Yeşilirmak River; 400 m., 11.IX.1994, *Cansaran* 639-A.

TAMARICACEAE

Tamarix parviflora DC.

Meydanbağları surroundings, roadsides; 400 m., 05.VII.1994, *Cansaran* 547.

HYPERICACEAE (GUTTIFERAE)

Hypericum pseudolaeve Robson

Kırklar Dağı, E slopes, vicinity of A. Cast.; 730 m., 22.V.1994, *Cansaran* 329. End. Ir.-Tur.El.

MALVACEAE

Hibiscus trionum L.

Karaman Dağı, E slopes, open forests; 500 m., 10.VII.1994, *Cansaran* 572.

Malva sylvestris L.

Meydanbağları surroundings, roadsides; 400 m., 29.V.1994, *Cansaran* 400.

M. neglecta Wallr.

Lokman Dağı, N slopes, 2 km. SW of Vermiş village; steppe, 860 m., 05.VI.1994, *Cansaran* 426.

Lavatera punctata All.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings, 450 m., 25.VI.1994, *Cansaran* 495.

Alcea pallida Waldst. & Kit.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings, roadsides; 420 m., 15.VI.1994, *Cansaran* 433.

LINACEAE

Linum nodiflorum L.

Kırklar Dağı, SW slopes; 610 m., 20.V.1994, *Cansaran* 294. Medit. El.

L. olympicum Boiss.

Karaman Dağı, N slopes, 2 km. SW of Y. vill., 830 m., 19.VI.1994, *Cansaran* 473. End.

L. tenuifolium L.

Kırklar Dağı, SW slopes; 550 m.,

20.V.1994, *Cansaran* 296.

L. austriacum L. subsp. *austriacum*

Kırklar Dağı, E slopes, NW of A. Cast.; 650 m., 22.V.1994, *Cansaran* 338.

GERANIACEAE

Geranium rotundifolium L.

Kırklar Dağı, N slopes; 420 m., 08.V.1994, *Cansaran* 242.

G. molle L. subsp. *molle*

Ferhat Dağı, N slopes, Memidede Cemetery surroundings, 550 m., 15.V.1994, *Cansaran* 265.

G. macrostylum Boiss.

Karaman Dağı, N slopes, S of Y. vill.; 830 m., 24.IV.1994, *Cansaran* 181. E. Medit. El.

Erodium ciconium (L.) L. Herit.

Kırklar Dağı, E slopes, NW of A. Cast.; 500 m., 22.V.1994, *Cansaran* 626.

E. cicutarium (L.) L. Herit. subsp. *cicutarium*

Karaman Dağı, E slopes; 500 m., 10.VII.1994, *Cansaran* 561.

ZYGOPHYLLACEAE

Zygophyllum fabago L.

Kırklar Dağı, N slopes, vicinity of Tekirdede Cemetery, roadsides; 460 m., 22.V.1994, *Cansaran* 323. Ir.-Tur. El.

Tribulus terrestris L.

Vicinity of A.E.F., edge of railways; 400 m., 02.X.1994, *Cansaran* 657.

Peganum harmala L.

Karaman Dağı, E slopes; 520 m., 29.V.1994, *Cansaran* 372.

RUTACEAE

Ruta montana (L.) L.

Karaman Dağı, N slopes, 2 km. SW of Y. vill., stony places; 900 m., 19.VI.1994, *Cansaran* 445.

Haplophyllum armenum Spach

Karaman Dağı, N slopes, 1 km. SW of Y. vill., stony places; 825 m., 24.IV.1994, *Cansaran* 195. End.

SIMAROUBACEAE

Ailanthus altissima (Miller) Swingle

Meydanbağları surroundings, vicinity of Yeşilirmak River; 400 m., 23.V.1994, *Cansaran* 349.

ACERACEAE

Acer negundo L.

Vicinity of A.E.F., edge of railways; 400 m., 21.IV.1994, *Cansaran* 172. culture.

RHAMNACEAE

Paliurus spina - chirsti Miller

Ferhat Dağı, NW slopes; 700 m., 18.IV.1994, *Cansaran* 153.

Rhamnus petiolaris Boiss.

Ferhat Dağı, N slopes; 750 m., 25.VI.1994, *Cansaran* 500. End.

ANACARDIACEAE

Pistacia vera L.

Karaman Dağı, N slopes, S of Y. vill.; 570 m., 24.IV.1994, *Cansaran* 197. Ir.-Tur.El.

P. terebinthus L. subsp. *palaestina* (Boiss.) Engler

2 Km. NW of Y. vill., 850 m., stony places; 09.VIII.1994, *Cansaran* 616. E. Medit. El.

FABACEAE (LEGUMINOSAE)

Gleditsia triacanthos L.

Vicinity of Amasya Stadium, damp places; 400 m., 10.VII.1994, *Cansaran* 587.

Sophora alopecuroides L. var. *alopecuroides*

Vicinity of A.E.F., edge of railways; 400 m., 06.VI.1994, *Cansaran* 428.

Genista albida Willd.

Karaman Dağı, W slopes, S of Y. vill.; 825 m., 24.IV.1994, *Cansaran* 191.

Colutea cilicica Boiss. & Bal.

Kırklar Dağı, N slopes; 800 m., 22.V.1994, *Cansaran* 331.

Astragalus leucothrix Freyn & Bornm.

Kırklar Dağı, N slopes, Tekirdede Cemetery surroundings; 550 m., *Cansaran* 325. End. Ir.-Tur. El.

A. pseudocaspius Fischer

2 km. S of Bağlarüstü village, steppe, 880 m., 19.VI.1994, *Cansaran* 479. End.

A. barba - jovis DC. var. *barba - jovis*

Lokman Dağı, E slopes, vicinity of Kirazlıdere place; 1380 m., 03.VII.1994, *Cansaran* 545. End. Ir.-Tur. El.

A. albilfolius Freyn & Sint.

Ferhat Dağı, N slopes; 500 m., 25.VI.1994, *Cansaran* 515. End. Ir.-Tur. El.

A. andrachneifolius Fenzl

Karaman Dağı, vicinity of M.Y.O., forest, 550 m., 29.V.1994, *Cansaran* 384.

A. podperae Sirj.

E of Karaman Dağı; 500 m., 29.V.1994, *Cansaran* 394. End. Ir.-Tur. El.

A. brachypterus Fischer

Kırklar Dağı, E slopes, steppe; 700 m., 22.V.1994, *Cansaran* 343-A. End. Ir.-Tur. El.

A. karamasicus Boiss. & Bal.

E of Karaman Dağı; 630 m., 29.V.1994, *Cansaran* 363. End. Ir.-Tur. El.

A. sigmoideus Bunge

Ferhat Dağı, N slopes, Memidede Cemetery surroundings, 420 m., 15.V.1994, *Cansaran* 257. End.

A. angustifolius Lam. subsp. **pungens** (Willd.) Hayek

Karaman Dağı, E slopes; vicinity of M.Y.O., forest; 550 m., 29.V.1994, *Cansaran* 392. (det. Z. Aytaç).

Psoralea bituminosa L.

Karaman Dağı, E slopes, steppe; 490 m., 29.V.1994, *Cansaran* 381. Medit. El.

Cicer arietinum L.

Kırklar Dağı, N slopes, vicinity of Tekirdede Cemetery, field margins, 450 m., 13.VII.1994, *Cansaran* 602. cultivated plant.

Vicia cracca L. subsp. **stenophylla** Vel.

Ferhat Dağı, K slopes; 700 m., 25.VI.1994, *Cansaran* 497.

V. sativa L. subsp. **sativa**

Kırklar Dağı, N slopes, Tekirdede Cemetery surroundings, roadsides; 400 m., 10.IV.1994, *Cansaran* 124.

V. sativa L. subsp. **incisa** (Bieb.) Arc. var. **cordata** (Wulfen ex Hoppe) Arc.

Kırklar Dağı, N slopes, Tekirdede Cemetery surroundings, roadsides; 400 m., 10.IV.1994, *Cansaran* 123.

V. narbonensis L. var. **narbonensis**

Karaman Dağı, N slopes, S of Y. vill.; 900 m., 24.IV.1994, *Cansaran* 177.

Lathyrus setifolius L.

Ferhat Dağı, N slopes; Memidede Cemetery surroundings, 490 m., 15.V.1994, *Cansaran* 262. Medit. El.

Ononis spinosa L. subsp. **leiosperma**

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings; 1400 m.,

03.VII.1994, *Cansaran* 540.

Trifolium repens L. var. **repens**

Karaman Dağı, N slopes, S of Y. vill.; 410 m., 24.IV.1994, *Cansaran* 199.

T. pratense L. var. **pratense**

A.E.F. Garden; 400 m., 06.V.1994, *Cansaran* 219.

T. arvense L. var. **arvense**

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings, 1140 m., 03.VII.1994, *Cansaran* 526.

Melilotus officinalis (L.) Desr.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 450 m., 15.V.1994, *Cansaran* 290.

M. alba Desr.

Lokman Dağı, E Slopes, vicinity of Kirazlıdere surroundings; 980 m., 03.VII.1994, *Cansaran* 524.

Trigonella filipes Boiss.

Kırklar Dağı, SW slopes; 500 m., 20.V.1994, *Cansaran* 305. Ir.-Tur.El.

Medicago lupulina L.

Kırklar Dağı, N slopes, Tekirdede Cemetery surroundings, road sides; 450 m., 10.IV.1994, *Cansaran* 122.

M. sativa L. subsp. **sativa**

E of Karaman Dağı; 520 m., 29.V.1994, *Cansaran* 369.

Coronilla emerus L. subsp. **emeroides** (Boiss. & Sprun.) Uhrova

Ferhat Dağı, NW slopes, steppe; 710 m., 18.IV.1994, *Cansaran* 163.

C. varia L. subsp. **varia**

E of Karaman Dağı, 500 m., 29.V.1994, *Cansaran* 391.

Hedysarum varium Billd.

E of Karaman Dağı; 600 m., 29.V.1994, *Cansaran* 370. Ir.-Tur.El.

Onobrychis montana DC., subsp. **cadmea** (Boiss.) P.W. Ball

Ferhat Dağı, N slopes; 500 m., 15.V.1994, *Cansaran* 281.

ROSACEAE

Cerasus prostrata (Lab.) Ser. var. **prostrata**

Kırklar Dağı, S slopes, steppe; 540 m., 03.IV.1994, *Cansaran* 94.

C. mahaleb (L.) Miller var. **mahaleb**

E of Karaman Dağı, 500 m., 10.VII.1994, *Cansaran* 589.

Amygdalus communis L.

Ferhat Dağı, N slopes; 540 m., 20.III.1994, *Cansaran* 75.

Rubus sanctus Schreber

Vicinity of Amasya Stadium, humid places; 400 m., 15.VI.1994, *Cansaran* 431.

R. canescens DC. var. **canescens**

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings, 1430 m., 03.VII.1994, *Cansaran* 542.

Potentilla recta L. **Grup B**

Karaman Dağı, E slopes, vicinity of M.Y.O., open forests; 550 m., 29.V.1994, *Cansaran* 395.

Fragaria vesca L.

Karaman Dağı, vicinity of Y. vill., field margins; 600 m., 10.VII.1994, *Cansaran* 563. cultivated plant.

Agrimonia eupatoria L.

E of Karaman Dağı, watery places; 500 m., 10.VII.1994, *Cansaran* 590.

Sanguisorba minor Scop. subsp. **muricata** (Spach) Briq.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 510 m. 15.V.1994, *Cansaran* 269.

Rosa canina L.

Lokman Dağı, N slopes, Çakallar surroundings; 650 m., 18.IV.1994, *Cansaran* 136.

Pyracantha coccinea Roemer

Istasyon street, vicinity of National Domination Park; 400 m., 09.VIII.1994, *Cansaran* 612. cultivated plant.

Crataegus monogyna Jacq. subsp. **monogyna**

Lokman Dağı, NE slopes, Çakallar surroundings; 560 m., 18.IV.1994, *Cansaran* 142.

Sorbus domestica L.

Karaman Dağı, N slopes, 2 km. SW of Y. vill., 840 m., 19.VI.1994, *Cansaran* 460. Euro.-Sib. El.

Pyrus elaeagnifolia Pallas subsp. **elaeagnifolia**

Ferhat Dağı, N slopes, Çakallar

surroundings; 750 m., *Cansaran* 108.

Amelanchier rotundifolia (Lam.) Dum.-
Courset subsp. *rotundifolia*

Lokman Dağı, N slopes; 690 m.,
18.IV.1994, *Cansaran* 147. E. Medit. El.

LYTHRACEAE

Lythrum salicaria L.

Vicinity of Kurtboğan bridge, edge of
Yeşilirmak River, watery place; 400 m.,
11.IX.1994, *Cansaran* 631. Euro.-Sib. El.

ONAGRACEAE

Epilobium montanum L.

Vicinity of Kurtboğan bridge, edge of
Yeşilirmak River, watery place; 400 m.,
11.IX.1994, *Cansaran* 632. Euro.-Sib.El.

CUCURBITACEAE

Ecballium elaterium (L.) A. Rich.

Vicinity of Kurtboğan birdge, edge of
Yeşilirmak River; 400 m., 23.V.1994,
Cansaran 350, Medit. El.

CRASSULACEAE

Sedum acre L.

Ferhat Dağı, N slopes, stony places; 650
m., 05.VII.1994, *Cansaran* 549.

S. album L.

Kırklar Dağı, N slopes, stony places; 600
m., 19.VI.1994, *Cansaran* 448. (det. Ö.
Eyüboğlu)

S. hispanicum L. var. *hispanicum*

Ferhat Dağı, N slopes, stony places; 710
m., 25.VI.1994, *Cansaran* 511. (det. Ö.
Eyüboğlu)

S. pallidum Bieb var. *pallidum*

E of Karaman Dağı, stony places; 670 m.,
29.V.1994, *Cansaran* 364. (det. Ö. Eyüboğlu)

APIACEAE (UMBELLIFERAE)

Eryngium campestre L. var. *virens* Link

Karaman Dağı, E slopes; 500 m.,
07.VII.1994, *Cansaran* 603.

Scandix iberica Bieb.

Ferhat Dağı, N slopes; 460 m.,
05.VI.1994, *Cansaran* 415.

Bifora radians Bieb.

Vicinity of A.E.F., edge of railways; 400
m., 05.V.1994, *Cansaran* 212.

Bunium microcarpum (Boiss.) Freyn
subsp. *bourgaei* (Boiss.) Hedge & Lamond

Kırklar Dağı, N slopes; 530 m.,

08.V.1994, *Cansaran* 223-B.Ir.-Tur.El.?

Pimpinella tragiium Vill. subsp.
pseudotragium (DC.) Matthews

Ferhat Dağı, N slopes, stony places; 500
m., 25.VI.1994, *Cansaran* 502. Ir.-Tur.El.

Seseli tortuosum L.

Ferhat Dağı, N slopes; 500 m.,
02.X.1994, *Cansaran* 654.

Foeniculum vulgare Miller

Karaman Dağı, E slopes; 500 m.,
10.VII.1994, *Cansaran* 579.

Conium maculatum L.

Vicinity of A.E.F.; 400 m., 27.VI.1994,
Cansaran 517.

Bupleurum croceum Fenzl

Hacılar Areas place, roadsides; 400 m.,
15.V.1994, *Cansaran* 256. Ir.-Tur. El.

B. sulphureum Boiss. & Bal.

Karaman Dağı, N slopes, 2 km. SW of Y.
vill., 820 m., 19.VI.1994, *Cansaran* 477.
End. Ir. Tur. El.

Malabaila secacul Banks & Sol.

Kırklar Dağı, N slopes; 440 m.,
08.V.1994, *Cansaran* 238. (det. H. Duman)

Heracleum platytaenium Boiss.

Ferhat Dağı, N slopes; 700 m.,
09.VIII.1994, *Cansaran* 613. End. Ö. El.

Tordylium syriacum L.

Kırklar Dağı, SW slopes; 490 m.,
20.V.1994, *Cansaran* 310-A; E. Medit. El.
(det. H. Duman).

Torilis leptophylla (L.) Reichb.

Kırklar Dağı, SW slopes; 490 m.,
20.V.1994, *Cansaran* 300. (det. H. Duman)

Caucalis platycarpos L.

Kırklar Dağı, N slopes, 530 m.,
08.V.1994, *Cansaran* 223-C. (det. H. Duman)

Artemisia squamata L.

Kırklar Dağı, N slopes, steppe; 600 m.,
19.VI.1994, *Cansaran* 446.

RUBIACEAE

Crucianella bithynica Boiss.

Karaman Dağı, E slopes, open forests,
500 m., 10.VII.1994, *Cansaran* 575. E.
Medit. El.

Asperula lilaciflora Boiss. subsp.
phrygia (Bornm.) Schönbn.-Tem.

Lokman Dağı, E slopes, vicinity of

Kirazlıdere place; 1360 m., 03.VII.1994,
Cansaran 534. End.

Galium verum L. subsp. *verum*

Ferhat Dağı, N slopes, 430 m.,
05.VI.1994, *Cansaran* 417. Euro.-Sib.El.

G. incanum Sm. subsp. *elatius* (Boiss.)
Ehrend.

Karaman Dağı, E slopes; 700 m.,
25.VI.1994, *Cansaran* 512. Ir.-Tur.El.

G. spurium L. subsp. *spurium*

Meydanbağları surroundings, cultivated
land; 400 m., 01.V.1994, *Cansaran* 204.
Euro.-Sib.El.

Cruciata taurica (Pallas ex Willd.)
Ehrend.

Ferhat Dağı, N slopes; 490 m.,
15.V.1994, *Cansaran* 263. Ir.-Tur.El.

Rubia tenuifolia d'Urv. subsp.
brachypoda (Boiss.) Ehrend. & Schönbn.-Tem.

Ferhat Dağı, N slopes; 420 m.,
15.V.1994, *Cansaran* 260. E. Medit. El. (det.
M. Vural)

ARALIACEAE

Hedera helix L.

Ferhat Dağı, N slopes, stony place; 750
m., 27.II.1994, *Cansaran* 24.

H. colchica (C. Koch) C. Koch

Lokman Dağı, N slopes, stony place; 700
m., 05.VI.1994, *Cansaran* 408. Ö.El.

CAPRIFOLIACEAE

Lonicera etrusca Santi var. *etrusca*

Lokman Dağı, Çakallar surroundings,
750 m., 05.VI.1994, *Cansaran* 409. Medit.
El.

VALERIANACEAE

Valeriana dioscoridis Sm.

Ferhat Dağı, N slopes, 500 m.,
18.IV.1994, *Cansaran* 159. E. Medit. El.

Centranthus longiflorus Stev. subsp.
longiflorus

Kırklar Dağı, E slopes, NW of A. Cast.;
530 m., 22.V.1994, *Cansaran* 342. Ir.-Tur.
El.

Valeriana vesicaria (L.) Moench

Karaman Dağı, N slopes, S of Y. vill.; 820
m., 24.IV.1994, *Cansaran* 178.

MORINACEAE

Morina persica L.

Karaman Dağı; 1 km S of Y. vill., stony hillsides; 650 m., 29.V.1994, *Cansaran* 375. Ir.-Tur. El.

DIPSACAEEAE

Scabiosa columbaria L. subsp. *ochroleuca* (L.) Celak. var. *ochroleuca* (L.) Coulter

Ferhat Dağı, N slopes; 660 m., 25.VI.1994, *Cansaran* 508.

S. argentea L.

Kırklar Dağı, N slopes; 580 m., 19.VI.1994, *Cansaran* 452.

S. micrantha Desf.

Karaman Dağı, E slopes; 500 m., 10.VII.1994, *Cansaran* 560.

S. rotata Bieb.

Kırklar Dağı, SW slopes, steppe; 540 m., 20.V.1994, *Cansaran* 316. Ir.-Tur. El.

Pterocephalus plumosus (L.) Coulter

Kırklar Dağı, SW slopes; 490 m., 20.V.1994, *Cansaran* 310-B.

ASTERACEAE (COMPOSITAE)

Xanthium spinosum L.

Vicinity of Amasya Stadium, eroded places; 400 m., 11.IX.1994, *Cansaran* 642 B.

X. strumarium L. subsp. *cavanillesii* (Schouw) D. Löve & P. Dansereau

Meydanbağları surroundings, edge of Yeşilirmak River, roadsides; 400 m., 11.IX.1994, *Cansaran* 642-A.

Asteriscus aquaticus (L.) Less.

Karaman Dağı, E slopes; 440 m., 10.VII.1994, *Cansaran* 596. *Medit. El.*

Inula salicina L.

Ferhat Dağı, N slopes; 680 m., 25.VI.1994, *Cansaran* 509. *Euro.-Sib.El.*

I. heterolepis Boiss.

Karaman Dağı, N slopes, S of Y vill., stony slopes; 880 m., 19.VI.1994, *Cansaran* 461. *E. Medit. El.*

Conyza canadensis (L.) Cronquist

Meydanbağları surroundings, cultivated land; 400 m., 03.XI.1994, *Cansaran* 659.

Senecio vernalis Walds. & Kit.

Kırklar Dağı, S slopes, road sides; 420 m., 07.IV.1994, *Cansaran* 114.

Calendula arvensis L.

Vicinity of A. Cast., 480 m., 09.IV.1994,

Cansaran 665.

Anthemis cretica L. subsp. *anatolica* (Boiss.) Grierson

E of Karaman Dağı, open forests; 480 m., 29.V.1994, *Cansaran* 386.

A. tinctoria L. var. *tinctoria*

E of Karaman Dağı, open forests; 550 m., 29.V.1994, *Cansaran* 387.

Achillea setacea Waldst. & Kit.

Vicinity of A.E.F.; 400 m., 15.VI.1994, *Cansaran* 432. *Euro.-Sib.El.*

A. biebersteinii Afan.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 410 m., 15.V.1994, *Cansaran* 268. *Ir.-Tur. El.*

Tanacetum poteriifolium (Ledeb.) Grierson

Lokman Dağı, E slopes, vicinity of Kirazlıdere place; 1350 m., 03.VII.1994, *Cansaran* 530. *Ö. El.*

T. aucheranum (DC.) Schultz Bip.

Ferhat Dağı, N slopes; 720 m., 05.VI.1994, *Cansaran* 425. *Ir.-Tur.El.*

T. argenteum (Lam.) Willd. subsp. *canum* (C. Koch) Grierson var. *canum*

Ferhat Dağı, N slopes, stony places; 780 m., 25.VI.1994, *Cansaran* 504.

Tripleurospermum parviflorum (Billd.) Pobed.

Kırklar Dağı, S slopes; 440 m., 03.IV.1994, *Cansaran* 104.

Cirsium vulgare (Savi) Ten.

Karaman Dağı, 2 km. NW of Y. vill.; 850 m., 09.VIII.1994, *Cansaran* 617.

C. arvense (L.) Scop. subsp. *arvense*

Vicinity of Kurtboğan bridge, roadsides; 400 m., 11.IX.1994, *Cansaran* 633.

C. arvense (L.) Scop. subsp. *vestitum* (Wimmer & Grab.) Petrak

Lokman Dağı, E slopes, vicinity of Kirazlıdere place; 780 m., 03.VII.1994, *Cansaran* 520.

Carduus nutans L. *nutans*

Kırklar Dağı, N slopes; 440 m., 08.V.1994, *Cansaran* 233.

C. pycnocephalus L. subsp. *albidus* (Bieb.) Kazmi

Karaman Dağı, E slopes; 500 m., 29.V.1994, *Cansaran* 374.

Jurinea pontica Hausskn. & Freyn ex Hausskn.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 550 m., 15.V.1994, *Cansaran* 267; *End. Ir.-Tur. El.*

Centaurea virgata Lam. **Grup A**

Karaman Dağı, N slopes; 2 km. SW of Y. vill., 850 m., 19.VI.1994, *Cansaran* 462.

C. solstitialis L. subsp. *solstitialis*

Kırklar Dağı, N slopes, roadsides; 600 m., 19.VI.1994, *Cansaran* 457.

C. iberica Trev. ex Sprengel

A.E.F. Garden; 400 m., 27.VI.1994, *Cansaran* 518.

C. urvillei DC. subsp. *stepposa* Wagenitz

Karaman Dağı, N slopes, 2 km. SW of Y. vill.; 840 m., 19.VI.1994, *Cansaran* 464. *Ir.-Tur. El.*

Crupina crupinastrum (Moris) Vis.

Kırklar Dağı, E slopes, NW of A. Cast.; 510 m., 22.V.1994, *Cansaran* 627.

Carthamus dentatus Vahl

Ferhat Dağı, N slopes; Memidede Cemetery surroundings, 450 m., 17.VII.1994, *Cansaran* 606.

C. glaucus Bieb. subsp. *glaucus*

Karaman Dağı, E slopes; 500 m., 10.VII.1994, *Cansaran* 600.

Carlina oligocephala Boiss. & Kotschy subsp. *oligocephala*

Karaman Dağı, 2 km. NW of Y. vill.; 800 m., 09.VIII.1994, *Cansaran* 614.

Xeranthemum annuum L.

Kırklar Dağı, N slopes, steppe; 600 m., 09.VI.1994, *Cansaran* 449.

Chardinia orientalis (L.) O. Kuntze

Ferhat Dağı, N slopes; W of Memidede Cemetery; 440 m., 15.V.1994 *Cansaran* 259, *Ir.-Tur.El.*

Echinops ritro L.

Karaman Dağı, N slopes; 2 km. SW of Y. vill.; 700 m., 03.VII.1994, *Cansaran* 552.

Scolymus hispanicus L.

Vicinity of A.E.F.; 400 m., 15.VI.1994, *Cansaran* 437. *Medit. El.*

Cichorium intybus L.

Ferhat Dağı, Memidede Cemetery surroundings, road sides; 450 m.,

25.VI.1994, *Cansaran* 484.

Scorzonera cana (C.A. Meyer) Hoffm.
var. *radicosa* (Boiss.) Chamberlain

Karaman Dağı, N slopes, S of Y. vill.; 830 m., 24.IV.1994, *Cansaran* 182.

S. amasiana Hausskn. & Bornm.

Kırklar Dağı, SW slopes; 590 m., 20.V.1994, *Cansaran* 293. End.

Tragopogon longirostris Bisch. ex
Schultz Bip. var. *abbreviatus* Boiss.

Ferhat Dağı, N slopes; 490 m., 15.V.1994, *Cansaran* 261.

Leontodon asperimus (Willd.) J. Ball

Kırklar Dağı, E slopes, NW of A. Cast.,
steppe; 500 m., 22.V.1994, *Cansaran* 624.
Ir.-Tur.El.

L. crispus Vill. subsp. *asper* (Waldst. &
Kit.) Rohl. var. *asper*

Ferhat Dağı, N slopes, Memidede
Cemetery surroundings; 550 m., 15.V.1994,
Cansaran 266.

Reichardia glauca Matthews

Lokman Dağı, E slopes, vicinity of
Kırazlıdere surroundings; 840 m.,
03.VII.1994, *Cansaran* 522. Ir.-Tur. El.

Hieracium paphlagonicum Freyn &
Sint.

Lokman Dağı, E slopes, vicinity of
Kırazlıdere surroundings; 830 m.,
03.VII.1994, *Cansaran* 521. End.

Pilosella x ruprechtii (Boiss.) Sell & West

Karaman Dağı, N slopes, S of Y. vill.; 840 m., 24.IV.1994, *Cansaran* 185.

Mulgedium quercinum (L.) C. Jeffrey

Kırklar Dağı, E slopes, NW of A. Cast.;
580 m., 22.V.1994, *Cansaran* 334. Euro.-
Sib.El.

Lactuca serriola L.

Ferhat Dağı, N slopes; 500 m.,
10.VII.1994, *Cansaran* 605-B. Euro.-Sib. El.

Chondrilla juncea L. var. *juncea*

E of Karaman Dağı, roadsides; 450 m.,
11.IX.1994, *Cansaran* 637.

Crepis sancta (L.) Babcock

Kırklar Dağı, S slopes; 450 m.,
03.IV.1994, *Cansaran* 106.

CAMPANULACEAE

Campanula rapunculoides L. subsp.
cordifolia (C. Koch) Damboldt

Lokman Dağı, E slopes, vicinity of
Kırazlıdere surroundings, forest; 1350 m.,
03.VII.1994, *Cansaran* 529.

C. glomerata L. subsp. *hispida*
(Witasek) Hayek

Lokman Dağı, E slopes, vicinity of
Kırazlıdere forest; 1400 m., 03.VII.1994,
Cansaran 537. Euro.-Sib. El.

C. involucrata Aucher ex A. DC.

Ferhat Dağı, N slopes; 510 m.,
15.V.1994, *Cansaran* 270. Ir.-Tur. El.

Asyneuma limonifolium (L.) Janchen
subsp. *pestalozzae* (Boiss.) Damboldt

Kırklar Dağı, N slopes; 440 m.,
08.V.1994, *Cansaran* 235. End.

PRIMULACEAE

Cyclamen coum Miller var. *coum*

Ferhat Dağı, N slopes, stony place; 730 m., 27.II.1994, *Cansaran* 28.

C. coum Miller var. *caucasicum* (C.
Koch) Meikle

Ferhat Dağı, N slopes, stony area, 730 m., 27.II.1994, *Cansaran* 27.

Lysimachia verticillaris Sprengel

Lokman Dağı, E slopes, vicinity of
Kırazlıdere surroundings, 1400 m.,
03.VII.1994, *Cansaran* 538. H.Ö.El.

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

E of Karaman Dağı, open forests, eroded
places; 550 m., 29.V.1994, *Cansaran* 388.

OLEACEAE

Jasminum fruticans L.

Ferhat Dağı, N slopes; 550 m.;
18.IV.1994, *Cansaran* 158. Medit. El.

APOCYNACEAE

Vinca herbacea Waldst. & Kit

Ferhat Dağı, N slopes; 450 m.,
18.IV.1994, *Cansaran* 149.

V. major L. subsp. *hirsuta* (Boiss.)
Stearn

A.E.F. Garden; 400 m., 20.IV.1994,
Cansaran 666. Ö.El.

ASCLEPIADACEAE

Periploca graeca L. var. *vestita* Rohlén

Ferhat Dağı, N slopes, Memidede
Cemetery surroundings; 450 m., 02.X.1994,
Cansaran 648. E. Medit. El.

Cynanchum acutum L. subsp. *acutum*

A.E.F. Garden; 400 m., 03.IX.1994,
Cansaran 629.

Vincetoxicum fuscum (Hornem.)

Reichb. subsp. *boissieri* (Kusn.) Browicz

Ferhat Dağı, N slopes; Memidede
Cemetery surroundings; 460 m., 15.V.1994,
Cansaran 276. End. Ir.-Tur. El.

Cionura arecta (L.) Griseb.

Kırklar Dağı, E slopes, NW of A. Cast.;
610 m., 22.V.1994, *Cansaran* 339. E. Medit.
El.

GENTIANACEAE

Centaurium erythraea Rafn (Valen)

Melderis subsp. *turcicum* (Velen) Melderis

Karaman Dağı, 2 km. SW of Y. Vill.; 830 m., 19.VI.1994, *Cansaran* 474.

CONVOLVULACEAE

Convolvulus cantabrica L.

Kırklar Dağı, N slopes, steppe; 440 m.,
08.V.1994, *Cansaran* 236.

C. lineatus L.

Ferhat Dağı, N slopes; 630 m.,
05.VI.1994, *Cansaran* 420.

C. holosericeus Bieb. subsp.
holosericeus

Kırklar Dağı, SW slopes, steppe; 610 m.,
20.V.1994, *Cansaran* 295.

C. assyricus Griseb.

Karaman Dağı, N slopes, 1 km. SW of Y.
vill.; 840 m., 24.IV.1994, *Cansaran* 196.
End. Ir.-Tur. El.

C. arvensis L.

Lokman Dağı, N slopes, 2 km. NW of
Vermiş village, 830 m., 05.VI.1994,
Cansaran 406.

Ipomoea purpurea (L.) Roth

Meydanbağları surroundings, cultivated
land; 400 m., 01.X.1994, *Cansaran* 646.

CUSCUTACEAE

Cuscuta planiflora (Boiss. & Sprun)
Uhrova

Ferhat Dağı, N slopes, on *Coronilla
emerus* L. ssp. *emeroides*; 630 m.,
04.VIII.1994, *Cansaran* 663.

BORAGINACEAE

Heliotropium europaeum L.

Vicinity of Amasya Stadium, edge of

Yeşilirmak River; 400 m., 19.VI.1994, *Cansaran* 483. *Medit. El.?*

Lappula barbata (Bieb.) Gürke

Kırklar Dağı, N slopes; 450 m., 08.V.1994, *Cansaran* 231. Ir.-Tur. El.

Myosotis ramosissima Rochel ex Schultes subsp. *ramosissima*

Kırklar Dağı, N slopes, Tekirdede Cemetery surroundings; 450 m.; 10.IV.1994, *Cansaran* 120.

Paracaryum ancyritanum Boiss.

Vicinity of A.E.F., edge of railways; 400 m., 05.V.1994, *Cansaran* 216. End. Ir.-Tur. El.

Cynoglossum creticum Miller

Kırklar Dağı, N slopes, vicinity of Tekirdede Cemetery 450 m., 22.V.1994, *Cansaran* 324.

Echium italicum L.

Kırklar Dağı, SW slopes, steppe; 490 m., 20.V.1994, *Cansaran* 317. *Medit. El.*

E. angustifolium Miller

Vicinity of Karaman Dağı, E slopes; 470 m., 29.V.1994, *Cansaran* 380. E. *Medit. El.*

Moltkia coerulea (Willd.) Lehm.

Ferhat Dağı, N slopes; 700 m., 30.IV.1994, *Cansaran* 667. Ir.-Tur. El.

Onosma sericeum Willd.

Karaman Dağı, E slopes, stony places; 600 m., 29.V.1994, *Cansaran* 359. Ir.-Tur. El.

O. albo-roseum Fisch. & Mey. subsp. *albo-roseum*

Kırklar Dağı, S slopes, stony places; 500 m., 03.IV.1994, *Cansaran* 96. Ir.-Tur. El.

O. tauricum Pallas ex Willd. var. *brevifolium* DC.

Karaman Dağı, N slopes, S of Y. vill.; 810 m., 24.IV.1994, *Cansaran* 194. End.

Cerintho minor L. subsp. *auriculata* (Ten.) Domac

Lokman Dağı, N slopes, 2 km. NW of Vermiş village; 560 m., 05.V.1994, *Cansaran* 407.

Anchusa leptophylla Roemer & Schultes subsp. *leptophylla*

Lokman Dağı, N slopes, NW of Çakallar surroundings, 500 m., 02.X.1994, *Cansaran* 651.

A. undulata L. subsp. *hybrida* (Ten.) Coutinho

Karaman Dağı, E slopes; 500 m., 10.VII.1994, *Cansaran* 565. *Medit. El.*

A. strigosa Labill.

Kırklar Dağı, N slopes; 500 m., 08.V.1994, *Cansaran* 230.

Alkanna haussknechtii Bornm.

E of Karaman Dağı, open forests; 500 m., 29.V.1994, *Cansaran* 389. End. Ir.-Tur. El.

SOLANACEAE

Solanum nigrum L. subsp. *schultesii* (Opiz) Wessely

Meydanbağları surroundings, vicinity of Kurtboğan bridge, roadsides; 400 m., 09.VIII.1994, *Cansaran* 611.

S. dulcamara L.

Meydanbağları surroundings, cultivated land; 400 m., 23.V.1994, *Cansaran* 353. Euro.-Sib. El.

Physalis alkekengi L.

A.E.F. Garden; 400 m., 27.X.1994, *Cansaran* 660.

Datura stramonium L.

Karaman Dağı, E slopes, vicinity of Y. vill., roadsides, 600 m., 29.V.1994, *Cansaran* 383.

Hyoscyamus niger L.

Lokman Dağı, N slopes, 2 km. NW of Vermiş village, roadsides; 590 m., 05.VI.1994, *Cansaran* 404.

SCROPHULARIACEAE

Verbascum caudatum Fryen & Bornm.

Ferhat Dağı, N slopes; 650 m., 05.VII.1994, *Cansaran* 550. End. Ir. Tur. El. (det. Ö. Eyüboğlu & E. Hamzaoğlu)

V. armenum Boiss. & Kotschy var. *armenum*

Kırklar Dağı, N slopes; 530 m., 19.VI.1994, *Cansaran* 478. (det. Ö. Eyüboğlu & E. Hamzaoğlu)

V. armenum Boiss. & Kotschy var. *occidentale* Hub.-Mor.

Karaman Dağı, 2 km. NW of Y. vill.; 830 m., 19.VI.1994, *Cansaran* 472. End. Ir.-Tur. El.

V. hadschinense Freyn

Ferhat Dağı, N slopes; 650 m.,

05.VII.1994, *Cansaran* 551. End. Ir.-Tur. El.? (det. Ö. Eyüboğlu & E. Hamzaoğlu)

V. sinuatum L. var. *sinuatum*

Karaman Dağı, 2 km. SW of Y. vill., 700 m., 05.VII.1994, *Cansaran* 548. *Medit. El.*

V. cheiranthifolium Boiss. var. *cherianthifolium*

Lokman Dağı, E slopes, vicinity of Kirazlıdere; 1430 m., 03.VII.1994, *Cansaran* 543.

Scrophularia lucida L.

Karaman Dağı, N slopes, SE of Bağlarüstü village, 850 m., 24.IV.1994, *Cansaran* 200. *Medit. El.?*

S. xanthoglossa Boiss. var. *deciapiens* (Boiss. & Kotschy) Boiss.

Kırklar Dağı, N slopes; 440 m., 08.V.1994, *Cansaran* 241. Ir.-Tur. El.

Anarrhinum orientale Benth

Kırklar Dağı, N slopes; 450 m., 08.V.1994, *Cansaran* 243. Ir.-Tur. El.

Linaria corifolia Desf.

Kırklar Dağı, N slopes; 530 m., 08.V.1994, *Cansaran* 222. End. Ir.-Tur. El.

Digitalis lamarckii Ivan.

Karaman Dağı, E slopes; 630 m., 29.V.1994, *Cansaran* 368. End. Ir.-Tur. El.

Veronica polita Fries

Meydanbağları surroundings, cultured land; 400 m., 28.II.1994, *Cansaran* 33.

V. anagallis-aquatica L.

Karaman Dağı, vicinity of Y. vill., wet areas; 610 m., 29.V.1994, *Cansaran* 376.

V. multifida L.

Lokman Dağı, Çakallar place, N slopes; 650 m., 18.IV.1994, *Cansaran* 138. End. Ir.-Tur. El.

OROBANCHACEAE

Orobanche nana Noe ex G. Beck

Ferhat Dağı, N slopes; 750 m., 25.VI.1994, *Cansaran* 498.

O. minör Sm.

Meydanbağları, on *Phaseolus vulgaris* roots; 01.X.1994, *Cansaran* 644.

GLOBULARIACEAE

Globularia trichosantha Fisch. & Mey.

Kırklar Dağı, S slopes, stony places, 640 m., 03.IV.1994, *Cansaran* 97.

LAMIACEAE (LABIATAE)

Ajuga chamaepitys (L.) Schreber subsp. *chia* (Schreber) Arcangeli var. *chia*

Karaman Dağı, N slopes, S of Y. vill.; 890 m., 24.IV.1994, *Cansaran* 180.

Teucrium chamaedrys L. subsp. *chamaedrys*

Kırklar Dağı, SW slopes, steppe; 520 m., 20.V.1994, *Cansaran* 304; Euro.-Sib. El.

T. polium L.

Kırklar Dağı, N slopes; 600 m., 19.VI.1994, *Cansaran* 458.

Scutellaria rubicunda Hornem. subsp. *brevibracteata* (Stapf) Edmondson

Ferhat Dağı, N slopes; 600 m., 25.VI.1994, *Cansaran* 501. End. E. Medit. El.

S. salviifolia Bentham

E of Karaman Dağı, open forests, 500 m., 29.V.1994, *Cansaran* 358. End.

S. orientalis L. subsp. *pinnatifida* Edmondson

Ferhat Dağı, N slopes; 550 m., 25.VI.1994, *Cansaran* 514.

Phlomis armeniaca Willd.

E of Karaman Dağı; 520 m., 29.V.1994, *Cansaran* 371. End. Ir.-Tur. El.

Lamium garganicum L. subsp. *rectum* (Schenk) R. Mill

Ferhat Dağı, N slopes, stony places; 740 m., 18.IV.1994, *Cansaran* 161.

L. amplexicaule L.

Kırklar Dağı, S slopes; 450 m., *Cansaran* 87. Euro.Sib. El.

L. purpureum L. var. *purpureum*

Kırklar Dağı, S slopes; 630 m., 03.IV.1994, *Cansaran* 86. Euro. Sib. El.

Ballota nigra L. subsp. *anatolica* P.H. Davis

Meydanbağları surroundings, roadsides; 400 m., 15.VI.1994, *Cansaran* 435. End. Ir.-Tur. El.

Marrubium vulgare L.

Vicinity of A.E.F., edge of railways; 400 m., 05.V.1994, *Cansaran* 211.

M. anisodon C. Koch

Karaman Dağı, E slopes; 550 m., 29.V.1994, *Cansaran* 362.

Sideritis montana L. subsp. *remota* (d'

Urv.) P.W. Ball ex Heywood

Kırklar Dağı, SW slopes, 470 m., 20.V.1994, *Cansaran* 303. E. Medit. El.

S. dichotoma Huter

Ferhat Dağı, N slopes; 630 m., 05.VI.1994, *Cansaran* 421. End.

Stachys byzantina C. Koch

Karaman Dağı, E slopes; 520 m., 29.V.1994, *Cansaran* 373. Euro.-Sib. El.

S. lavandulifolia Vahl var. *lavandulifolia*

Kırklar Dağı, N slopes, vicinity of Tekirdede Mezarlığı; 470 m., 22.V.1994, *Cansaran* 319. Ir.-Tur. El.

S. annua (L.) L. subsp. *annua* var. *annua*

Karaman Dağı, N slopes, S of Y. vill.; 810 m., 24.IV.1994, *Cansaran* 193.

S. annua (L.) L. subsp. *annua* var. *lycaonica* Bhattacharjee

Karaman Dağı, N slopes, SW of Y. vill.; 880 m., 19.VI.1994, *Cansaran* 439. Ir.-Tur. El.

Melissa officinalis L. subsp. *officinalis*

Karaman Dağı, E slopes, 500 m., 10.VII.1994, *Cansaran* 591.

Nepeta italica L.

Kırklar Dağı, N slopes, steppe; 650 m., 09.VI.1994, *Cansaran* 456.

Prunella vulgaris L.

Karaman Dağı, E slopes, wet areas; 550 m., 10.VII.1994, *Cansaran* 593. Euro.-Sib. El.

P. laciniata (L.) L.

Ferhat Dağı, N slopes; 700 m., 05.VII.1994, *Cansaran* 424. Euro.-Sib. El.

Origanum vulgare L. subsp. *viride* (Boiss.) Hayek

Ferhat Dağı, N slopes; 600 m., 25.VI.1994, *Cansaran* 499.

Thymus sipyleus Boiss. subsp. *rosulans* (Borbás) Jalas

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings, 1300 m., 03.VII.1994, *Cansaran* 535.

Thymbra spicata L. var. *spicata*

Lokman Dağı, NE slopes, vicinity of Kirazlıdere surroundings, stony places, 800 m., 03.VII.1994, *Cansaran* 536. E. Medit. El.

Mendha longifolia (L.) Hudson subsp. *longifolia*

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings, wet areas, 1400 m., 03.VII.1994, *Cansaran* 531.

M. longifolia (L.) Hudson subsp. *noeana* (Boiss. ex Briq.) Briq.

Vicinity of Amasya Stadium, edge of Yeşilirmak River, wet areas; 400 m., 11.IX.1994, *Cansaran* 630.

Ziziphora capitata L.

Kırklar Dağı, SW slopes; 490 m., 20.V.1994, *Cansaran* 307. Ir.-Tur. El.

Z. taurica Bieb subsp. *taurica*

Karaman Dağı, E slopes, 1 km. S of Y. vill.; 650 m., 20.V.1994, *Cansaran* 366. Ir.-Tur. El.?

Salvia tomentosa Miller

Kırklar Dağı, N slopes, vicinity of Tekirdede Cemetery, 450 m., 22.V.1994, *Cansaran* 320. Medit. El.

S. bracteata Banks & Sol.

Karaman Dağı, E slopes; 540 m., 29.V.1994, *Cansaran* 367. Ir.-Tur. El.?

S. viridis L.

N of A. Cast.; 650 m., 22.V.1994, *Cansaran* 336. Medit. El.

S. hypargeia Fisch. & Mey.

Karaman Dağı, E slopes, open forests; 590 m., 29.V.1994, *Cansaran* 385. End. Ir.-Tur. El.

S. sclarea L.

Karaman Dağı, E slopes, open forests; 500 m., 10.VII.1994, *Cansaran* 558.

S. aethiopsis L.

Kırklar Dağı, SW slopes; 470 m., 20.V.1994, *Cansaran* 313.

S. candidissima Vahl subsp. *occidentalis* Hedge

Ferhat Dağı, N slopes; 550 m., 25.VI.1994, *Cansaran* 510. Ir.Tur. El.?

S. virgata Jacq.

Ferhat Dağı, N slopes; 460 m., 05.VI.1994, *Cansaran* 416. Ir.-Tur. El.?

S. verticillata L. subsp. *amasiaca* (Freynt & Bornm.) Bornm.

Lokman Dağı, N slopes, 2 km. of Vermiş village; 600 m., 05.VI.1994, *Cansaran* 414. Ir.-Tur. El.?

PLUMBAGINACEAE

Plumbago europaea L.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 520 m., 25.VI.1994, *Cansaran* 513. Euro.-Sib. El.

Acantholimon acerosum (Willd.) Boiss. var. *acerosum*

Ferhat Dağı, N slopes; 550 m., 25.VI.1994, *Cansaran* 488; Ir.-Tur. El.

PLANTAGINACEAE

Plantago major L. subsp. *major*

Karaman Dağı, E slopes, wet areas; 500 m.; 10.VII.1994, *Cansaran* 588.

P. lanceolata L.

Karaman Dağı, E slopes; 500 m., 10.VII.1994, *Cansaran* 574.

ELAEAGNACEAE

Elaeagnus angustifolia L.

Kırklar Dağı, N slopes; 650 m., 22.V.1994, *Cansaran* 345.

LORANTHACEAE

Viscum album L. subsp. *album*

Meydanbağları place, on cultured trees, 400 m., 27.II.1994, *Cansaran* 46.

EUPHORBIACEAE

Andrachne telephioides L.

Karaman Dağı, E slopes, open forests; 500 m., 10.VII.1994, *Cansaran* 570.

Chrozophora tinctoria (L.) Rafin.

Karaman Dağı, E slopes, stony places; 500 m., 10.VII.1994, *Cansaran* 594. (det. H. Duman)

Mercurialis annua L.

Ferhat Dağı, N slopes, NW of Çakallar surroundings; 550 m., 02.X.1994, *Cansaran* 652.

Euphorbia cardiophylla Boiss. Dt. Helder.

Kırklar Dağı, S slopes; 550 m., 03.IV.1994, *Cansaran* 91. End.

E. aleppica L.

E of Karaman Dağı, open forests; 500 m., 10.VII.1994, *Cansaran* 568.

E. falcata L. subsp. *falcata* var. *falcata*

E of Karaman Dağı, open forests; 500 m., 10.VII.1994, *Cansaran* 566.

E. falcata L. subsp. *falcata* var. *galilaea* (Boiss.) Boiss.

Ferhat Dağı, N slopes; 500 m., 17.VII.1994, *Cansaran* 605-A.

E. rigida Bieb.

Ferhat Dağı, NW slopes; 650 m., 20.III.1994, *Cansaran* 73. Medit. El.

E. lathyris L.

Ferhat Dağı, N slopes; 500 m., 17.VII.1994, *Cansaran* 605-C.

URTICACEAE

Urtica dioica L.

Meydanbağları surroundings, roadsides; 400 m., 07.VII.1994, *Cansaran* 555. Euro.-Sib. El.

ULMACEAE

Celtis caucassica Willd.

E of Karaman Dağı; 500 m., 11.IX.1994, *Cansaran* 640.

PLATANACEAE

Platanus orientalis L.

A.E.F. Garden and edge of streets in Amasya; 400 m., 06.V.1994, *Cansaran* 220.

FAGACEAE

Quercus pubescens Willd.

Ferhat Dağı, NW slopes, forest; 680 m., 18.IV.1994, *Cansaran* 152.

Q. cerris L. var. *cerris*

Lokman Dağı, N slopes, 2 km. SW of Vermiş village, forest; 610 m., 05.VI.1994, *Cansaran* 401.

CORYLACEAE

Carpinus orientalis Miller subsp. *orientalis*

Lokman Dağı, N slopes; 590 m., 05.VI.1994, *Cansaran* 410.

Corylus colurna L.

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings, forest; 1400 m., 03.VII.1994, *Cansaran* 541. Euro.-Sib. El.

SALICAEAE

Salix alba L.

Vicinity of Amasya Stadium, edge of Yeşilirmak River; 400 m., 05.VII.1994, *Cansaran* 553. Euro.-Sib. El.

Populus tremula L.

Vicinity of Y. vill., humid places; 610 m., 29.V.1994, *Cansaran* 365. Euro.-Sib. El.

P. nigra L. subsp. *nigra*

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 450 m., 29.V.1994, *Cansaran* 382.

MONOCOTYLEDONES

LILIACEAE

Ruscus aculeatus L. var. *angustifolius* Boiss.

Ferhat Dağı, NW slopes; 630 m., 20.III.1994, *Cansaran* 74.

Asparagus officinalis L.

Ferhat Dağı, N slopes, 450 m., 02.X.1994, *Cansaran* 653.

Allium callidictyon C.A.Meyer ex Kunth

Karaman Dağı, N slopes, 2 km SW of Y. vill.; 850 m., 19.VI.1994, *Cansaran* 467. Ir.-Tur. El. (det. H. Duman)

A. scorodoprasum L. subsp. *rotundum* (L.) Stearn

Kırklar Dağı, N slopes, steppe; 580 m., 08.V.1994, *Cansaran* 227. Medit. El. (det. H. Duman)

Ornithogalum sphaerocarpum Kerner

Kırklar Dağı, N slopes; 550 m., 08.V.1994, *Cansaran* 249.

O. oligophyllum E.D.Clarke

Kırklar Dağı, SW slopes; 630 m., 03.IV.1994, *Cansaran* 84.

Muscari armeniacum Leichtlim ex Baker

Lokman Dağı, NE slopes; 700 m., 18.IV.1994, *Cansaran* 145. (det. M. Koyuncu)

M. neglectum Guss.

Ferhat Dağı, N slopes; 590 m., 20.III.1994, *Cansaran* 68. (det. M. Koyuncu)

M. bourgaei Baker

Kırklar Dağı, W slopes; 700 m., 14.III.1994, *Cansaran* 58. End. Medit. El. (det. M. Koyuncu)

Hyacinthella micrantha (Boiss.)

Chouard

Karaman Dağı, W slopes, forest, 580 m., 01.III.1994, *Cansaran* 41. End. Ir.-Tur. El.? (det. H. Duman)

Tulipa armena Boiss. var. *armena*

Ferhat Dağı, N slopes, 800 m., 30.IV.1994, *Cansaran* 668. Ir.-Tur. El.

Gagea granatelli (Parl.) Parl.

Kırklar Dağı, S slopes; 520 m., 03.IV.1994, *Cansaran* 82. Medit. El.

Colchicum triphyllum G. Kunze

Ferhat Dağı, N slopes; 550 m., 27.II.1994, *Cansaran* 8. Medit. El.

IRIDACEAE

Ins galatica Siehe

Ferhat Dağı, N slopes, scrub; 480 m., 27.II.1994, *Cansaran* 9. End. Ir.-Tur. El.

Crocus reticulatus Steven ex Adams subsp. *reticulatus*

Ferhat Dağı, NE slopes; 640 m., 27.II.1994, *Cansaran* 16.

C. ancyransis (Herbert) Maw

Kırklar Dağı, SW slopes; 710 m., 14.III.1994, *Cansaran* 57. End. Ir.-Tur. El.

ORCHIDACEAE

Cephalanthera rubra (L.) L.C.M. Richard

Lokman Dağı, N slopes, 2 km. SW of Vermiş village, forest; 830 m., 05.VI.1994, *Cansaran* 405.

Orchis palustris Jacq.

Lokman Dağı, N slopes, 2 km. SW of Vermiş village; 860 m., 05.VI.1994, *Cansaran* 427.

JUNCAEAE

Juncus littoralis C.A. Meyer

Karaman Dağı, N slopes, 1 km. SW of Y. vill., wet areas; 730 m., 19.VI.1994, *Cansaran* 453. *Medit. El.*

CYPERACEAE

Cyperus rotundus L.

Meydanbağları place, cultivated land, damp places; 400 m., 11.IX.1994, *Cansaran* 643.

POACEAE (GRAMINEAE)

Brachypodium sylvaticum (Hudson) P. Beauv.

Lokman Dağı, NE slopes, vicinity of Kirazlıdere surroundings, 830 m., 03.VII.1994, *Cansaran* 523. *Euro.-Sib. El.*

Elymus repens (L.) Gould subsp. *repens*

Vicinity of Amasya Stadium; 400 m., 12.VI.1994, *Cansaran* 429.

Aegilops triuncialis L. subsp. *triuncialis*

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 430 m., 15.V.1994, *Cansaran* 258.

Triticum aestivum L.

Karaman Dağı, E slopes, 2 km. S of Y. vill.; 29.V.1994, *Cansaran* 361. *culture*

Hordeum murinum L. subsp. *glaucum* (Steudel) Tzvelev

Meydanbağları surroundings, roadsides; 400 m., 01.V.1994, *Cansaran* 201.

H. bulbosum L.

Meydanbağları surroundings, cultivated land; 400 m., 14.V.1994, *Cansaran* 255.

H. vulgare L.

Karaman Dağı, E slopes, vicinity of Y. vill., fields; 600 m., 29.V.1994, *Cansaran* 360. *culture plant*

Bromus tectorum L.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 440 m., 15.V.1994, *Cansaran* 289.

B. tomentellus Boiss.

Kırklar Dağı, E slopes, NW of A. Cast.; 730 m., 22.V.1994, *Cansaran* 330. *Ir.-Tur. El.*

Koeleria cristata (L.) Pers.

Ferhat Dağı, N slopes; 530 m., 05.VI.1994, *Cansaran* 422.

Alopecurus myosuroides Hudson var. *myosuroides*

Meydanbağları surroundings, cultivated land; 400 m., 01.V.1994, *Cansaran* 203. *Euro.-Sib. El.* (det. H. Duman)

Phleum exaratum Hochst. ex Griseb. subsp. *exaratum*

Kırklar Dağı, SW slopes; 490 m., 20.V.1994, *Cansaran* 312.

Lolium rigidum Gaudin var. *rigidum*

Karaman Dağı, E slopes; 550 m., 10.VII.1994, *Cansaran* 592.

Poa trivialis L.

Meydanbağları place, cultured area; 400 m., 01.V.1994, *Cansaran* 202.

P. bulbosa L.

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 420 m., 15.V.1994, *Cansaran* 287.

Dactylis glomerata L. subsp. *glomerata*

Lokman Dağı, E slopes, vicinity of Kirazlıdere surroundings; 1140 m., 03.VII.1994, *Cansaran* 527. *Euro.-Sib. El.*

D. glomerata L. subsp. *hispanica* (Roth) Nyman

Kırklar Dağı, N slopes, Tekirdede Cemetery surroundings; 460 m., 22.V.1994, *Cansaran* 321.

Echinaria capitata (L.) Desf.

Ferhat Dağı, N slopes; 500 m., 20.V.1994, *Cansaran* 311. (det. E. Hamzaoğlu)

Melica ciliata L. subsp. *ciliata*

Ferhat Dağı, N slopes, Memidede Cemetery surroundings; 430 m., 25.VI.1994, *Cansaran* 493.

Stipa bromoides (L.) Dörfler

Karaman Dağı, E slopes; 500 m., 10.VII.1994, *Cansaran* 595. *Medit. El.*

Piptatherum holciforme (Bieb.) Roemer & Schultes subsp. *holciforme* var. *holciforme*

Ferhat Dağı, N slopes; 530 m., 15.VI.1994, *Cansaran* 423. (det. H. Duman)

Phragmites australis (Cav.) Trin. ex Steudel

Vicinity of Amasya Stadium, edge of Yeşilirmak River, moist place; 400 m., 11.IX.1994, *Cansaran* 636. *Euro.-Sib. El.*

Digitaria sanguinalis (L.) Scop.

Meydanbağları surroundings, roadsides; 400 m., 09.VIII.1994, *Cansaran* 609.

Setaria viridis (L.) P. Beauv.

Meydanbağları surroundings, roadsides; 400 m., 09.VIII.1994, *Cansaran* 608.

S. verticillata (L.) P. Beauv. var. *verticillata*

Meydanbağları place, road sides; 400 m., 09.VIII.1994, *Cansaran* 607.

Pennisetum orientale L.C.M. Richard

Kırklar Dağı, N slopes; 580 m., 19.VI.1994, *Cansaran* 417. *Ir.-Tur. El.*

Sorghum halepense (L.) Pers. var. *halepense*

Karaman Dağı, S slopes; 500 m., 10.VII.1994, *Cansaran* 586. (det. H. Duman)

Chrysopogon gryllus (L.) Trin. subsp. *gryllus*

Kırklar Dağı, E slopes, NW of A. Cast.; 530 m., 22.V.1994, *Cansaran* 341.

Bothriochloa ischaemum (L.) Keng

Karaman Dağı, N slopes, 2 km. SW of Y. vill.; 820 m., 19.VI.1994, *Cansaran* 471. (det. H. Duman)