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The Flora of Eđerli Mountain (Amasya-Turkey)

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Abstract: The floristical characteristics of Eđerli Mountain (Eđerli Dađı) are given and the vascular plant species growing there are documented. The research was carried out between 1996 and 1998. Approximately 2000 plant specimens were collected from the area. At the end of the study, 650 taxa (at specific and infraspecific ranks) belonging to 70 families and 298 genera were identified. Fifty-five taxa were defined as new records for the A5 square. The largest family was found to be *Asteraceae* (78 species) and the second largest one was *Fabaceae* (77 species). The largest genera were *Astragalus* L. (23 species), *Silene* L. and *Lathyrus* L. (10 species each). The phytogeographic elements are represented in the study area as follows: Irano-Turanian 102 (15.69%), Euro-Siberian 97 (14.92%), Mediterranean 46 (7.07%), and multi-regional or of unknown phytogeographic origin 375 (57.69%). Eighty (12.30%) species collected in the area are endemics.

Key Words: Vascular plants, Flora, Eđerli Mountain, Amasya

Eđerli Dađı'nın (Amasya-Türkiye) Florası

Özet: Bu arařtırmada, Eđerli Dađı ve çevresinin floristik özellikleri ve burada yetiştiđi saptanan damarlı bitki taksonlarının listesi verilmiştir. Arařtırma 1996-1998 yılları arasında yapılmıştır. Yöreden toplanan 2000 bitki örneđinin deđerlendirilmesi ile 70 familyadan 298 cins ve 650 tür ve türaltı seviyede takson saptanmıştır. Bu taksonlardan 55'i A5 karesi için yeni kayıt olarak belirlenmiştir. En büyük familya *Asteraceae* (78 tür), ikinci *Fabaceae* (77 tür)'dir. En büyük cinsler ise 23 türle *Astragalus* L. ve 10'ar türle *Silene* L. ve *Lathyrus* L.'dur. Arařtırma alanında fitocoğrafik elementlerin dađılımı ise şöyledir; İran-Turan 102 (%15.69), Avrupa-Sibirya 97 (%14.92), Akdeniz 46 (%7.07), geniş yayılıřlı veya bilinmeyen 375 (%57.69). Arařtırma alanından toplanan türlerin 80'i (%12.30) endemiktir.

Anahtar Sözcükler: Vasküler bitkiler, Flora, Eđerli Dađı, Amasya

Introduction

The research area is located between Central Anatolia and the Middle Black Sea region. The area contains two phytogeographic regions: the Euro-Siberian and Irano-Turanian. The mountain was selected as a research area as it is little-studied and has some interesting characteristics in terms of both flora and phytogeography as it is a transition region. In addition there are different vegetation types such as steppe, degraded forest and forest on Eđerli Mountain.

Eđerli Mountain is located in the west of Amasya province and within the provincial boundary of Amasya and Çorum. According to the grid square system used in the Flora of Turkey (Davis, 1965-1985), Eđerli Mountain is located in square A5. The research area is bordered in the west by Göçeri village, in the east by Alıcık,

Karacakaya, Ařađı and Yukarı Şamba villages, in the north by Keçiköy and Çetmi villages, and in the south by Karahisar, Büyükdüvenci and Kışladeresi villages (Figure 1). The surface measurement of the study area is 566.10 km² and this measure was found by using a planometer on the map. In the study area one of the most important streams flowing continuously is Köseler Stream (Büyükçay), the flow speed of which is 10.10⁶ m³/year (Anonymous, 1973).

The climate of the research area was examined using data from the meteorology station in Amasya. The climate indicates transition region characteristics in the study area (between the continental climate of the Central Anatolia and the ocean climate of the Black Sea region). It is possible to see the local climatic characteristics of both areas in the research area (Anonymous, 1984).

Table 1. The dispersion of taxa into the large taxonomical groups.

	Number of Families	Number of Genera	Number of taxa in total (sp., subsp., var.)
<i>Pteridophyta</i>	1	1	1
<i>Spermatophyta</i>	69	297	649
<i>Gymnospermae</i>	2	2	4
<i>Dicotyledones</i>	61	258	576
<i>Monocotyledones</i>	6	37	69
Total	70	298	650

The species of the study area, categorized according to phytogeographic region, can be listed as follows: Irano-Turanian elements 102 (15.69%), Euro-Siberian elements 97 (16 Eux., 3 H.Eux.) (14.92%), and Mediterranean elements 46 (7.07%); the remaining 375 (57.69%) species are multi-regional or of unknown phytogeographic origin (Table 2).

Table 2. Distribution of species in research area within phytogeographic regions.

Phytogeographic elements	Number of species	Rates(%)
Irano-Turanian elements	102	15.69
Euro-Siberian elements	97	14.92
Mediterranean elements	46	7.07
Multi-regional or of unknown phytogeographic region	375	57.69

According to these data the research area is located in the transition zone between the Euro-Siberian and Irano-Turanian floristic regions. However, the effect of the Irano-Turanian phytogeographic region is greater.

When the number of taxa is taken into consideration, the family *Asteraceae* ranks first with 78 species. This is related to its being the largest family in the flora of Turkey, having many family members and greater ecological toleration and breaking up seeds easily. Following *Asteraceae*, the family *Fabaceae* is represented by 77 species. The reason why *Fabaceae* is second is that it is the second largest family in the flora of Turkey and involves large genera containing many species. The *Poaceae* family comes next, because the family *Poaceae* is the fifth largest family in the flora of Turkey.

The ten largest families according to number of species are shown in Table 3.

Table 3. Species totals of the largest families found in the area.

Familia	Genera	Species	% Species
<i>Asteraceae</i>	36	78	12.58
<i>Fabaceae</i>	22	77	12.41
<i>Poaceae</i>	23	42	6.77
<i>Lamiaceae</i>	19	40	6.45
<i>Brassicaceae</i>	20	35	5.64
<i>Caryophyllaceae</i>	13	32	5.16
<i>Rosaceae</i>	16	31	5.00
<i>Boraginaceae</i>	13	26	4.19
<i>Scrophulariaceae</i>	9	25	4.03
<i>Apiaceae</i>	20	23	3.70
Other families	107	211	34.03

The species belonging to first ten families form about 65% of the total species number.

The genera with the largest number of species in the study area are shown in Table 4. The richest genera are *Astragalus* L. (23), *Silene* L. and *Lathyrus* L. (10). *Astragalus* has a total of c. 2500 species in the world; it is one of the largest genera of flowering plants. The estimated number of species in Turkey is c. 400. Furthermore, the steppic areas are increasing day by day because of excessive destruction. Therefore, the area contains by far the greatest number of these species. The genera *Silene* and *Lathyrus* rank second. *Silene* is the fifth largest genus in Turkey. The species belonging to the genus *Lathyrus* are spread especially in the shrubbery and forest areas in the study area.

Table 4. Species totals of the largest genera in the study area.

Genus	Number of Species	Genus	Number of Species
<i>Astragalus</i>	23	<i>Ranunculus</i>	7
<i>Silene</i>	10	<i>Alyssum</i>	7
<i>Lathyrus</i>	10	<i>Rumex</i>	7
<i>Trifolium</i>	8	<i>Vicia</i>	7
<i>Galium</i>	8	<i>Centaurea</i>	7
<i>Onosma</i>	8	<i>Verbascum</i>	7
<i>Salvia</i>	8	<i>Veronica</i>	7

Moreover, the six species of *Erysimum* L., *Medicago* L., *Pilosella* Hill, *Convolvulus* L. and *Orobancha* L. and the five species of *Crataegus* L., *Sedum* L., *Inula* L. and *Quercus* L. have been found in the study area.

The number of endemic taxa in the study area is 80 and the endemism rate is 12.30%. Forty of these taxa belong to the Irano-Turanian phytogeographic region. Furthermore, five of the endemic taxa belong to the Mediterranean phytogeographic region and five of these taxa the Euro-Siberian. The pluriregional endemics number 30. The proportion of endemism in the area is low (12.30%), below the average for Turkey (33.5%) (Ekim, 1990). The main reason for this is that the edaphic, climatic and topographic properties of the region do not vary enough.

The distribution of species in the research area (Eđerli Mountain) and of other studies carried out nearby according to the phytogeographic regions and the comparison of endemism ratios are shown in Table 5. In studies performed in adjacent areas the Irano-Turanian elements rank first and the Euro-Siberian elements second except in "Flora of the Area between Amasya Castle and the villages of Vermiş and Yuvacık" (Cansaran & Aydođdu, 1998). This condition is related to the fact that these regions are located in the transition zone

between Central Anatolia and the Black Sea regions or its adjacent areas. The study "Flora of the Area between Amasya Castle and the villages of Vermiş and Yuvacık" (Cansaran & Aydođdu, 1998) was performed in the same transition zone but it contains the Yeşilirmak River. The Mediterranean elements, which are mostly from the tertiary period, grow in the Mediterranean enclaves which occur along the Yeşilirmak Valley. Thus, this valley represents the peculiarities of the Mediterranean region. Additionally, according to endemism ratios the nearby areas are not rich enough like the research area.

The comparison of the first three families in the research area (Eđerli Mountain) and other nearby areas in the region in respect to species richness is shown in Table 6. The families *Asteraceae*, *Fabaceae*, *Lamiaceae*, *Brassicaceae* and *Poaceae* share the first three places in these studies. The family *Asteraceae* ranks first in terms of the number of species. In addition, these five families are also the first five families in the Flora of Turkey (Davis, 1988). *Astragalus* is first according to number of species.

Some of the taxa in the study area have different taxonomic properties from those in the Flora of Turkey. These properties are given in Table 7.

Table 5. The distribution of species in the research area (Eđerli Mountain) and others according to the phytogeographic regions and the comparison of endemism ratios.

The Areas	Irano-Turanian	Euro-Siberian	Mediterranean	Endemism Ratio
Eđerli Mountain	102 (15.69%)	97 (14.92%)	46 (7.07%)	80 (12.30%)
Vermiş-Yuvacık vill.-Amasya Castle (Cansaran & Aydođdu, 1998)	70 (15.71%)	31 (7.38%)	40 (9.52%)	46 (11%)
Amasya-Yozgat-Çorum (Kurt et al., 1998)	100 (18.65%)	71 (13.25%)	41 (7.65%)	38 (7.09%)
Deveci Mountains (Yozgat-Tokat) (İlarslan, 1983)	238 (37.8%)	100 (15.9%)	63 (10.1%)	107 (17.1%)
Çamlıbel Pass and Yıldız Mountain (Civelek, 1992)	245 (25.1%)	159 (16.2%)	32 (3.2%)	138 (14.1%)

Table 6. The comparison of the first three families in the research area (Eđerli Mountain) and other areas in the region in respect to species richness.

The Areas	The largest 3 families	The largest 3 genera
Eđerli Mountain	<i>Asteraceae</i> , <i>Fabaceae</i> , <i>Poaceae</i>	<i>Astragalus</i> , <i>Silene</i> - <i>Lathyrus</i> , <i>Trifolium</i> <i>Galium-Onosma-Salvia</i>
Vermiş-Yuvacık vill.-Amasya Castle (Cansaran & Aydođdu, 1998)	<i>Asteraceae</i> , <i>Lamiaceae</i> , <i>Fabaceae</i>	<i>Astragalus</i> , <i>Salvia</i> , <i>Convolvulus-Euphorbia-Silene-Verbascum</i>
Amasya-Yozgat Çorum (Kurt et al., 1998)	<i>Asteraceae</i> , <i>Fabaceae</i> , <i>Poaceae</i>	<i>Astragalus</i> , <i>Trifolium</i> , <i>Silene</i>
Deveci mountains (Yozgat-Tokat (İlarslan, 1983)	<i>Asteraceae</i> , <i>Fabaceae</i> , <i>Lamiaceae</i>	<i>Astragalus</i> , <i>Silene</i> , <i>Centaurea</i>
Akdağ (Amasya) (Baytop & Alpınar, 1980)	<i>Asteraceae</i> , <i>Fabaceae</i> , <i>Brassicaceae</i>	<i>Astragalus</i> , <i>Trifolium-Silene-Alyssum</i> , <i>Centaurea</i>

Table 7. Some of the taxa in the Eđerli Mountain have different taxonomic properties from those in the Flora of Turkey.

Taxa	Flora of Turkey	Eđerli Mountain
<i>Convolvulus cantabrica</i> L.	Leaves 7-15 mm broad	Also there are leaves 3-4 mm broad
<i>Dorycnium pentaphyllum</i> Scop. subsp. <i>herbaceum</i> (Vill.)Rouy	Leaflets 1-6 mm broad	Leaflets 1-9 mm broad
<i>Inula helenium</i> L. subsp. <i>orgyalis</i>	Capitulum 3.5-5 cm in length	Capitulum 2.5-5 cm in length
<i>Onosma sericeum</i> Willd.	Corolla 15-20 mm in length	Corolla 15-22 mm in length
<i>Rumex caucasicus</i> Rech.	It is known from 3100 m altitude	It is collected from 1050 m altitude

Fifty-five taxa have been defined as new records for the A5 square (Davis, 1965-1985; Davis et al., 1988; Donner, 1985; Donner, 1987; Donner, 1990; Erik, 1995; Korkmaz et al., 1996; Yıldırım, 1994; Yıldırım, 1996; Yıldırım, 1997; Yıldırım, 1999) throughout this study. As a result, various floristic data which contribute to the flora of Turkey were provided.

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Appendix

PTERIDOPHYTA

SPHENOPSISIDA

EQUISETACEAE

Equisetum ramosissimum Desf.

Güllüce village surroundings, N places, stream bank; 1300 m, 05.V.1996, *Cansaran* 1100-B.

SPERMATOPHYTA

GYMNOSPERMAE

PINACEAE

Pinus sylvestris L.

Approx 4 km S of Yemiřen village, forest; 1500 m, 02.VII.1997, *Cansaran* 2725.

P.nigra Arn. subsp. *pallasiana* (Lamb.) Holmboe

Around Köseleler village, N slopes of Saray Mountain, forest; 1320 m, 14. IV.1996, *Cansaran*1040.

CUPRESSACEAE

Juniperus communis L. subsp. *alpina* (Sm.) Celak.

1 km S of Yemiřen village, forest; 1530 m, 04.V.1996, *Cansaran* 1051.

J. oxycedrus L. subsp. *oxycedrus*

Between Ovabaşı and Akpınar village, degraded forest; 1200 m, 02.VIII.1996, *Cansaran* 1902.

ANGIOSPERMAE

DICOTYLEDONES

RANUNCULACEAE

Nigella arvensis L. var. *glauca* Boiss.

Approx 1 km N of Karahisar village, roadsides; 1100 m, 10.VII.1996, *Cansaran* 1566.

Consolida orientalis (Gay) Schröd.

Approx 1 km NE of Küçükçay village, degraded forest; 1500 m, 10.VII.1996, *Cansaran* 1545.

Clematis vitalba L.

Vicinity of Köseleler village, E places, roadsides; 1200 m, 10.VII.1996, *Cansaran* 1592.

Adonis flammea Jacq.

Between Ovabaşı and Köseleler village, roadsides; 950 m; 05.V.1996, *Cansaran* 1118.

Ranunculus brutius Ten.

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2860. Euro-Sib. El.

R. constantinopolitanus (DC.) d'Urv.

Güllüce village surroundings, N places, stream bank; 1300 m, 05.V.1996, *Cansaran* 1100.

R. oxyspermus Willd.

N places of Eđerli Mountain, around Yukarı Kayabaşı village, open areas; 1650 m, 04.V.1996, *Cansaran* 1042.

R. isthmicus Boiss. subsp. *stepporum* P.H.Davis

300 m W of Ovabaşı village, open forests; 1100 m, 05.V.1996, *Cansaran* 1114.

R.arvensis L.

1 km E of Köseleler village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1453.

R. trichophyllus Chaix

Approx 5 km E of Büyükçay village, in the water; 860 m, 19.V.1996, C.1160.

R. ficaria L. subsp. *calthifolius* (Reiche) Archer

S places of Yukarı Kayabaşı village, stream bank, 1530 m, 04.V.1996, *Cansaran* 1071.

Ceratocephalus falcatus (L.) Pers.

Vicinity of Köseleler village, E slopes of Saray Mountain, open areas; 1300 m, 14.IV.1996, *Cansaran* 1023.

BERBERIDACEAE

Berberis vulgaris L.

Approx 5 km E of Karahisar village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1175.

B. crataegina DC.

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2225.

PAPAVERACEAE

Chelidonium majus L.

Approx 7 km SE of Göçeri village, under forest; 1200 m, 01.VII.1997, *Cansaran* 2703. Euro-Sib. El.

**Glaucium grandiflorum* Boiss. & E.Huet var. *grandiflorum*

1 km NE of Küçükçay village, open degraded forest; 1100 m, 08.VI.1997, *Cansaran* 2412. Ir.-Tur. El.

Roemeria hybrida (L.) DC. subsp. *hybrida*

E places of Köseleler village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1452.

Papaver lacerum Popov

Approx 1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2373.

Hypecoum imberbe Sibth. & Sm.

Approx 2 km W of Güvenli village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1216.

Corydalis solida (L.) Sw. subsp. *solida*

N places of Eđerli Mountain, Yukarı Kayabaşı village surroundings, open areas; 1600 m, 04.V.1996, *Cansaran* 1066.

Fumaria officinalis L.

Between Ovabaşı and Köseleler village, roadsides; 1000 m, 05.V.1996, C.1119

F. asepalae Boiss.

W places of Köseleler village, open areas; 1300 m, 26.V.1996, *Cansaran* 1319. Ir.-Tur. El.

BRASSICACEAE/CRUCIFERAE

Sinapis arvensis L.

Approx 1 km NE of Küçükçay village, degraded forest; 1000 m, 20.VII.1996, *Cansaran* 1835.

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

Between Eđmir and Alıcık, roadsides; 1100 m, 05.V.1996, C.1132.

Aethionema arabicum (L.) Andr. ex DC.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1727.

Thlaspi arvense L.

Approx 4 km SW of Köseleler village, open forest; humid places; 1400 m, 25.V.1996, *Cansaran* 1246.

T. perfoliatum L.

App 2 km W of Güvenli village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1229.

Capsella bursa-pastoris (L.) Medik.

E places of Büyükçay village, roadsides; 1050 m, 19.V.1996, *Cansaran* 1158.

**C. rubella* Reut.

S places of Yukarı Kayabaşı village, open areas; 1500 m, 04.V.1996, *Cansaran* 1081. Medit. El.

Boreava orientalis Jaub. & Spach

Between Eđmir and Alicık, roadsides; 1100 m, 05.V.1996, *Cansaran* 1133.

Neslia apiculata Fisch.

Approx 4 km SW of Köseler village, open forest; 1400 m, 25.V.1996, *Cansaran* 1238.

Fibigia eriocarpa (DC.) Boiss.

Approx 3 km NW of Akpınar village, roadsides; 1200 m, 05.V.1996, *Cansaran* 1103.

***Alyssum menioides** Boiss.

300 m W of Ovabaşı village, steppe, 1100 m, 05.V.1996, *Cansaran* 1111. Ir.-Tur. El.

***A. blepharocarpum** Dudley & Hub.-Mor.

Approx 4 km SW of Köseler village, under forest; 1450 m, 25.V.1996, *Cansaran* 1271-A. End. Ir.-Tur. El.

A. desertorum Stapf var. **desertorum**

S places of Yukarı Kayabaşı village, open areas; 1500 m, 04.V.1996, *Cansaran* 1089.

A. minus (L.) Rothm. var. **minus**

300 m W of Ovabaşı village, steppe; 950 m, 03.VIII.1996, *Cansaran* 2043.

A. strigosum Banks & Sol. subsp. **strigosum**

Approx 1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1653.

A. pateri Nyár. subsp. **pateri**

500 m N of Küçükçay village, open degraded forest; 1150 m 15.VI.1996, *Cansaran* 1370. End. Ir.-Tur. El.

A. pateri Nyár. subsp. **prostratum** (Nyár.) Dudley

Approx 1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1481. End. Ir.-Tur. El.

A. murale Waldst. & Kit. var. **murale**

100 m S of Ovabaşı village, under forest, 1200 m, 03.VIII.1996, *Cansaran* 2244.

Clypeola jonthlaspi L.

300 m, W of Ovabaşı village, steppe; 1100 m, 05.V.1996, *Cansaran* 1112.

Erophila verna (L.) Chevall. subsp. **verna**

Around Köseler village, Gökdere, roadsides; 1100 m, 31.III.1996, *Cansaran* 1000.

Arabis sagittata (Bert) DC.

Approx 7 km SE of Göçeri village, open forest; 1200 m, 01.VII.1997, *Cansaran* 2704.

Turritis laxa (Sibth. & Sm.) Hayek

Approx 4 km S of Yemişen village, under forest; 1470 m, 02.VII.1997, *Cansaran* 2770.

Matthiola longipetala (Vent.) DC. subsp. **bicornis** (Sibth. & Sm.) P.W.Ball

W places of Köseler village, 1300 m, 26.V.1996, *Cansaran* 1328.

Malcolmia africana (L.) R.

1 km NE of Küçükçay village, degraded forest, 1100 m, 08.VI.1997, *Cansaran* 2424.

Erysimum cuspidatum (M.Bieb.) DC.

3 km SW of Çetmi village, shrubby, 950 m, 14.VI.1998, *Cansaran* 3011.

E. pulchellum (Willd.) Gay

Approx 2 km S of Köseler village, under forest, 1300 m, 20.VII.1997, *Cansaran* 2931. (det. F. Karaer)

E. leptophyllum (M.Bieb.) Andr.

Approx 9 km SE of Göçeri village, under forest; 1240 m, 01.VII.1997, *Cansaran* 2676.

E. thyrsoideum Boiss. subsp. **thyrsoideum**

Approx 5 km N of Karahisar village, 1100 m, 19.V.1996, *Cansaran* 1188.

E. smyrnaeum Boiss. & Ball

Approx 1 km NE of Küçükçay village, shrubby; 1100 m, 08.VI.1997, *Cansaran* 2380.

E. graecum Boiss. & Heldr.

Approx 3 km S of Yemişen village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2795.

Alliaria petiolata (M.Bieb.) Cav. & Grande

Between Eđmir and Alicık, roadsides; 1100 m, 05.V.1996, *Cansaran* 1134.

Sisymbrium altissimum L.

Between Ovabaşı and Köseler village, roadsides; 950 m, 05.V.199, *Cansaran* 1116.

S. orientale L.

E places of Köseler village, 1270 m, 10.VII.1996, *Cansaran* 1600-B.

Descurainia sophia (L.) Webb ex Prantl

Köseler village surroundings; 1100 m, 25.V.1996, *Cansaran* 1297.

D. kochii (Petri) Schulz

S places of Küçükçay village; 1080 m, 19.V.1996, *Cansaran* 1184.

Camelina rumelica Vell.

1 km E of Köseler village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1425.

RESEDACEAE**Reseda lutea** L. var. **lutea**

1 km E of Alicık, roadsides; 700 m, 19.V.1996, *Cansaran* 1140.

R. lutea L. var. **nutans** Boiss.

1 km E of Köseler village, steppe; 1250 m, 16.VI.1996, *Cansaran* 1423.

R. luteola L.

1 km W of Çitli (Bağlıca) village, roadsides; 1000 m, 08.VI.1997, *Cansaran* 2432.

CISTACEAE**Cistus laurifolius** L.

Approx 3 km W of Çitli (Bağlıca) village, degraded forest; 1100 m, 08.VI.1997, *Cansaran* 2451.

Helianthemum nummularium (L.) Mill. subsp. **nummularium**

1 km NE of Köseler village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1546.

H. nummularium (L.) Mill. subsp. **tomentosum** (Scop.) Schinz & Thell.

Approx 4 km S of Ovabaşı village, open shrubby; 1250 m, 31.V.1998, *Cansaran* 2969.

H. canum (L.) Baumg. (Group D)

W places of Köseler village, Ekinalađı, open areas; 1300 m, 26.V.1996, *Cansaran* 1320.

H. ledifolium (L.) Mill. var. **lasiocarpum** (Willd.) Bornm.

Approx 1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2353.

Fumana procumbens (Dun) Gren. & Godr.

App 1 km NE of Küçükçay village, steppe; 1100 m, 08.VI.1997, *Cansaran* 2386.

VIOLACEAE**Viola odorata** L.

Around Köseler village, S slopes of Saray Mountain, open areas; 1200 m, 14.IV.1996, *Cansaran* 1025.

V. sieheana Becker

S places of Yukarı Kayabaşı village, open areas; 1700 m, 04.V.1996, *Cansaran* 1088.

V. kitaibeliana Roem. & Schult.

E of Köseler castle, Alibađı, open areas; 1180 m, 14.IV.1996, *Cansaran* 1017.

POLYGALACEAE

Polygala supina Schreb.

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2806.

P. pruinosa Boiss. subsp. **pruinosa**

Approx 3 km SW of Çetmi village, under degraded forest; 950 m, 14.VI.1998, *Cansaran* 3003.

CARYOPHYLLACEAE

Arenaria serpyllifolia L.

Approx 3 km S of Köseler village, under forest; 1200 m, 20.VII.1997, *Cansaran* 2938.

A. ledebouriana Fenzl var. **ledebouriana**

500 m W of Güllüce village, steppe; 1470 m, 10.VII.1996, *Cansaran* 1479. End.

M. multinervis (Boiss.) Bornm.

Approx 3 km NE of Çitli (Bađlıca) village, open degraded forest; 1060 m, 20.VI.1997, *Cansaran* 2621.

M. corymbulosa (Boiss. & Ball) McNeil var. **corymbulosa**

300 m W of Ovabaşı village, open shrubbery; 1100 m, 05.V.1996, *Cansaran* 1121. End. Ir.-Tur. El.

M. hybrida (Vill.) Schischk. subsp. **hybrida**

Approx 2 km NE of Çitli (Bađlıca) village, degraded forest; 1020 m, 20.VI.1997, *Cansaran* 2589.

Stellaria media (L.) Vill. subsp. **media**

Between Ovabaşı and Köseler village, roadsides; 950 m, 05.V.1996, *Cansaran* 1120.

S. holostea L.

Approx 8 km SE of Göçeri village, under forest, 1230 m, 01.VII.1997, *Cansaran* 2647. Euro.-Sib. El.

Myosoton aquaticum (L.) Moench

S places of Küçükçay village; 1080 m, 19.V.1996, *Cansaran* 1182. Euro-Sib. El.

Cerastium dichotomum L. subsp. **dichotomum**

Approx 2 km W of Güvenli village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1217.

C. brachypetalum Pers. subsp. **roeseri** (Boiss. & Heldr.) Nyman

500 m NE of Ovabaşı village, open forests; 1000 m, 03.VIII.1996, *Cansaran* 2267.

Holosteum umbellatum L. var. **glutinosum** (M.Bieb.) Gay

E places of Köseler castle, open areas; 1250 m, 14.IV.1996, *Cansaran* 1018.

H. umbellatum L. var. **tenerimum** (Boiss.) Gay

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2372.

Dianthus anatolicus Boiss.

Between Akpınar and Güllüce, village roadsides; 1300 m, 10.VII.1996, *Cansaran* 1456. End.

D. carmelitarum Reut. ex Boiss

Approx 4 km S of Yemişen village, under forest, 1500 m, 02.VII.1997, *Cansaran* 2752. End. Eux. El.

D. calocephalus Boiss.

Approx 2 km NE of Çitli (Bađlıca) village, under shrubbery; 1020 m, 20.VI.1997, *Cansaran* 2588.

Petrorhagia alpina (Hablitz) Ball & Heywood subsp. **alpina**

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2846.

P. alpina (Hablitz) Ball & Heywood subsp. **olympica** (Boiss.) Ball & Heywood

Approx 3 km S of Yemişen village, under forest; 1500 m, 02.VII.1997, *Cansaran* 2711.

Velezia fasciculata Boiss.

Approx 2 km NE of Çitli (Bađlıca) village, degraded forest; 1030 m, 20.VI.1997, *Cansaran* 2609.

V. rigida L.

1 km N of Karahisar village, roadsides, 1100 m, 10.VII.1996, *Cansaran* 1570.

***V. pseudorigida** Hub.-Mor.

1 km W of Çitli (Bađlıca) village, under shrubbery; 1100 m, 27.VI.1998, *Cansaran* 3166. End. E. Medit. El.

Saponaria glutinosa M.Bieb.

1 km NE of Küçükçay village, degraded forest; 1100 m. 20.;VII.1996, *Cansaran* 1663-A.

S. prostrata Willd. subsp. **prostrata**

App 4 km SW of Köseler village, open forests; 1500 m, 25.V.1996, *Cansaran* 1289. End. Ir.-Tur. El.

Vaccaria pyramidata Medik. var. **grandiflora** (Fisch. ex DC.) Cullen

500 m W of Şamba village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1355.

Silene italica (L.) Pers.

Approx 4 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2849.

S. chlorifolia Sm.

1 km E of Köseler village, steppe; 1260, 16.VI.1996, *Cansaran* 1427. Ir.-Tur. El.

S. otites (L.) Wibel

500 m W of Güllüce village, steppe; 1470 m, 10.VII.1996, *Cansaran* 1472.

S. spergulifolia (Desf.) M.Bieb.

Approx 4 km W of Küçükçay village, steppe; 1060 m, 19.V.1996, *Cansaran* 1146. Ir.-Tur. El.

S. supina M.Bieb. subsp. **pruinosa** (Boiss.) Chowdhuri

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1480.

S. vulgaris (Moench) Garcke var. **vulgaris**

1 km E of Alıcık, roadsides; 700 m, 19.V.1996, *Cansaran* 1141.

S. compacta Fisch.

Approx 7 km SE of Göçeri village, open forests; 1200 m, 01.VII.1997, *Cansaran* 2708.

S. alba (Mill.) Krause subsp. **divaricata** (Reiche) Walters

Approx 3 km S of Köseler village, under forest; 1350 m, 27.VI.1998, *Cansaran* 1300.

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

Approx 2 km SW of Çetmi village, degraded forest; 950 m, 14.VI.1998, *Cansaran* 3015.

S. dichotoma Ehrh. subsp. *euxina* (Rupr.) Coode & Cullen

1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1627. Eux. El.

S. conica L.

Approx 2 km W of Çitli (Bağlıca) village, under shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2455.

Agrostemma githago L.

1 km S of Güvenli village, open degraded forest; 1160 m, 15.VI.1996, *Cansaran* 1376.

ILLECEBRACEAE

Herniaria incana Lam.

300 m SE of Karahisar village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1409.

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

W places of Köselers village, Ekinalağı, steppe; 1300 m, 26.V.1996, *Cansaran* 1308.

**Scleranthus annuus* L. subsp. *annuus*

Approx 4 km SW of Köselers village, open forest; 1400 m, 25.V.1996, *Cansaran* 1274.

POLYGONACEAE

Polygonum cognatum Meisn.

Approx 4 km S of Yemişen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2782.

P. aviculare L.

Between Akpınar and Güllüce village, roadsides; 1470 m, 10.VII.1996, *Cansaran* 1557.

**P. equisetiforme* Sibth. & Sm.

Between Ovabaşı and Akpınar village, shrubbery; 1250 m, 02.VIII.1996, *Cansaran* 2002.

P. convolvulus L.

1 km E of Köselers village, steppe; 1250 m, 16.VI.1996, *Cansaran* 1434.

Rumex acetosella L.

Approx 5 km N of Karahisar village, open areas; 1100 m, 19.V.1996, *Cansaran* 1187.

R. scutatus L.

1 km W of Köselers village, roadsides, steppe areas; 1100 m, 10.VII.1996, *Cansaran* 1577.

R. patientia L.

1 km SW of Köselers village, forest; 1250 m, 04.VIII.1996, *Cansaran* 2127.

**R. caucasicus* Rech.

500 m W of Şamba village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1356. Eux. El.

R. crispus L.

Approx 3 km S of Yemişen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2783.

R. obtusifolius L. subsp. *subalpinus* (Schur) Celak.

1 km W of Çitli (Bağlıca) village, open shrubbery; 1100 m, 27.VI.1998, *Cansaran* 3167.

**R. nepalensis* Spreng.

Approx 4 km S of Yemişen village, open forest; 1450 m, 02.VII.1997, *Cansaran* 2780.

CHENOPODIACEAE

Chenopodium botrys L.

Between Ovabaşı and Akpınar village, degraded forest; 1180 m, 02.VIII.1996, *Cansaran* 1987.

C. foliosum (Moench) Archer

Vicinity of Köselers village, roadsides; 1200 m, 10.VII.1996, *Cansaran* 1595.

TAMARICACEAE

Myricaria germanica (L.) Desv.

1 km W of Köselers village, open degraded forest, humid places; 1200 m, 04.VIII.1996, *Cansaran* 2172. (det. H. Duman)

HYPERICACEAE / GUTTIFERAE

Hypericum perforatum L.

Approx 7 km SE of Göçeri village, open forests; 1200 m, 01.VII.1997, *Cansaran* 2699. Medit. El. (det. F. Karaer)

H. origanifolium Willd.

Approx 3 km SW of Çetmi village, shrubbery, 970 m, 14.VI.1998, *Cansaran* 3045.

H. aviculariifolium Jaub. & Spach subsp. *aviculariifolium* var. *aviculariifolium*

Approx 4 km SW of Köselers village, open forest; 1400 m, 25.V.1996, *Cansaran* 1291. End. E. Medit. El.

H. perforatum L.

300 m SE of Karahisar village, steppe; 1050 m, 15.VI.1996, *Cansaran* 1400.

MALVACEAE

Malva neglecta Wallr.

Approx 4 km SW of Köselers village, open forests, 1400 m, 25.V.1996, *Cansaran* 1241.

Alcea apterocarpa (Fenzl) Boiss.

1 km W of Köselers village, roadsides, steppe areas; 1100 m, 10.VII.1996, *Cansaran* 1582. End. Ir.-Tur. El.

LINACEAE

Linum nodiflorum L.

1 km E of Köselers village, steppe; 1000 m, 24.V.1997, *Cansaran* 2327. Medit. El.

L. olympicum Boiss.

SE places of Karahisar village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1408, End.

L. hirsutum L. subsp. *pseudoanatolicum* P.H.Davis

1 km NE of Küçükçay village, open shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2420. End. Ir.-Tur. El.

L. tenuifolium L.

1 km W of Köselers village, Gökdere, open areas; 1100 m, 15.VI.1997, *Cansaran* 2502.

GERANIACEAE

Geranium robertianum L.

Approx 4 km SW of Köselers village, under forest; 1400 m, 25.V.1996, *Cansaran* 1273.

G. pusillum Burm.

Between Akpınar and Güllüce village, degraded forest; 1400 m, 10.VII.1996, *Cansaran* 1550.

G. tuberosum L. subsp. *tuberosum*

Between Eğmir and Alıcık, roadsides; 1100 m, 05.V.1996, *Cansaran* 1122.

G. macrostylum Boiss.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2304. E. Medit. El.

Erodium ciconium (L.) L'Hér.

Approx 3 km NW of Akpınar village, roadsides; 1150 m, 05.V.1996, *Cansaran* 1107.

E. cicutarium (L.) L'Hér. subsp. *cicutarium*

Approx 2 km SW of Çetmi village, under shrubbery; 930 m, 14.VI.1998, *Cansaran* 3020.

E. acaule (L.) Bech. & Thell.

Köseler village surroundings, S slopes of Saray Mountain, open areas; 1400 m, 14.IV.1996, *Cansaran* 1029. *Medit El.*

ACERACEAE

Acer campestre L. subsp. **campestre**

Between Ovabaşı and Akpınar village, degraded forest; 1230 m, 02.VIII.1996, *Cansaran* 1894.

RHAMNACEAE

Rhamnus catharticus L.

Approx 3 km SW of Çetmi village, shrubby, 950 m, 14.VI.1998, *Cansaran* 3007. *Euro-Sib. El.*

R. petiolaris Boiss.

1 km NE of Küçükçay village, degraded forest; 1100 m, 20.VII.1996, *Cansaran* 1667. *End.?*

ANACARDIACEAE

Cotinus coggyria Scop.

Approx 2 km SW of Çetmi village, degraded forest; 930 m, 14.VI.1998, *Cansaran* 3024.

Rhus coriaria L.

Between Ovabaşı and Akpınar village, shrubby; 1100m, 02.VIII.1996, *Cansaran* 1898.

CELASTRACEAE

Euonymus verrucosus Scop.

1 km NE of Küçükçay village, degraded forest; 1200 m, 20.VII.1996, *Cansaran* 1682.

FABACEAE / LEGUMINOSAE

Cytisus procumbens (Waldst. & Kit. ex Willd.) Spreng.

Approx 5 km E of Karahisar village; 1100 m, 19.V.1996, *Cansaran* 1177.

Chamaecytisus pygmaeus (Willd.) Rothm.

500 m W of Güllüce village, shrubby; 1470 m, 10.VIII.1996, *Cansaran* 1475. *Euro-Sib. El.*

***Gonocytisus pterocladus** (Boiss.) Spach

Approx 8 km SE of Göçeri village, under forest; 1230 m, 01.VII.1997, *Cansaran* 2643. *E. Medit. El.*

Genista tinctoria L.

100 m S of Ovabaşı village, open forest; 1200 m, 03.VIII.1996, *Cansaran* 2220. *Euro-Sib. El.*

Argyrolobium biebersteinii Ball

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2807.

Galega officinalis L.

Between Akpınar and Güllüce village, roadsides; 1400 m, 10.VII.1996, *Cansaran* 1549. *Euro.-Sib. El.*

Colutea cilicica Boiss. & Ball

Approx 3 km SW of Çetmi village, degraded forest; 950 m, 14.VI.1998, *Cansaran* 3023.

Astragalus leucothrix Freyn & Bornm.

1 km W of Köseler village, Gökdere, steppe; 1100 m, 15.VI.1997, *Cansaran* 2503. *End. Ir.-Tur. El.*

A. glycyphyllos L. subsp. **glycyphyllos**

Approx 10 km SE of Göçeri village, under forest; 1250 m, 01.VII.1997, *Cansaran* 2682. *Euro-Sib. El.*

***A. melanophrurius** Boiss.

Approx 3 km N of Karahisar village, roadsides; 1050 m, 19.V.1996, *Cansaran* 1197. *End. Ir.-Tur. El.*

A. pinetorum Boiss.

Approx 4 km NW of Büyükçay village, steppe; 1200 m, 12.VII.1998, *Cansaran* 3170. *End. Ir.-Tur. El.*

A. pseudocaspicus Fisch.

300 m W of Büyükçay village, steppe; 1050 m, 21.VII.1996, *Cansaran* 1837. *End.*

A. microcephalus Willd.

Approx 3 km N of Büyükçay village, steppe; 1200 m, 15.VI.1996, *Cansaran* 1395. *Ir.-Tur. El.*

***A. tokatensis** Fisch.

1 km NE of Küçükçay village, steppe; 1060 m, 20.VII.1996, *Cansaran* 1769. *End. Ir.-Tur. El.*

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

Between Ovabaşı and Akpınar village, degraded forest; 1250 m, 02.VIII.1996, *Cansaran* 2013. *End. Ir.-Tur. El.*

A. plumosus Willd. var. **plumosus**

1 km W of Küçükçay village, steppe; 1050 m, 20.VII.1996, *Cansaran* 1880.

A. schottianus Boiss.

Approx 4 km NW of Kışladeresi village, forest; 1450 m, 19.VII.1997, *Cansaran* 2848. *End.*

A. micropterus Fisch.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1741. *End. Ir.-Tur. El.*

A. albifolius Freyn & Sint.

1 km N of Karahisar village, roadsides; 1100 m, 10.VII.1996, *Cansaran* 1567. *End. Ir.-Tur. El.*

A. andrachneifolius Fenzl

Approx 2 km W of Çitli (Bağlıca) village, shrubby; 1100 m, 08.VI.1997, *Cansaran* 2438.

***A. cephalotes** Banks & Sol. var. **brevicalyx** Eig

1 km W of Köseler village, degraded forest; 1200 m, 04.VIII.1996, *Cansaran* 2139 *End.*

***A. strictispinis** Boiss.

300 m SW of Ovabaşı village, steppe; 960 m, 03.VIII.1996, *Cansaran* 2072. *End.*

***A. podperae** Sirj.

500 m W of Güllüce village, stony places; 1470 m, 10.VII.1996, *Cansaran* 1470. *End. Ir.-Tur. El.*

A. brachypterus Fisch.

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1515. *End. Ir.-Tur. El.*

A ponticus Pall.

300 m SE of Karahisar village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1413.

A. karamasicus Boiss. & Ball

Approx 4 km SW of Köseler village, open forests; 1500 m, 25.V.1996, *Cansaran* 1295. *End. Ir.-Tur. El.*

A. lycius Boiss.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2348. *End.*

***A. acmonotrichus** Fenzl

Approx 4 km SW of Köseler village, under forest; 1400 m, 25.V.1996, *Cansaran* 1259. *End. E. Medit. El.*

A. elongatus Willd. subsp. **elongatus**

1 km NE of Küçükçay village, steppe; 1100 m, 08.VI.1997, *Cansaran* 2390.

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

Approx 3 km S of Yemişen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2784.

Psoralea bituminosa L.

500 m N of Küçükçay village, open degraded forests, 1130, 15.VI.1996, *Cansaran* 1368.

Vicia cracca L. subsp. **cracca**

1 km E of Köseles village, steppe; 1000 m, 24.V.1997, *Cansaran* 2332. Euro.-Sib. El.

V. cracca L. subsp. **tenuifolia** (Roth) Gaudin

500 m N of Küçükçay village, open degraded forest; 1130 m, 15.VI.1996, *Cansaran* 1367.

V. cracca L. subsp. **stenophylla** Vell.

Approx 2 km W of Güvenli village; 1100 m, 19.V.1996, *Cansaran* 1236.

V. hirsuta (L.) S.F.Gray

1 km NE of Çitli (Bağlıca) village, shrubbery, 1030 m, 20.VI.1997, *Cansaran* 2577.

V. anatolica Turricill

Between Eğmir and Alicık, roadsides; 1050 m, 05.V.1996, *Cansaran* 1130. Ir.-Tur. El.

V. grandiflora Scop. var. **grandiflora**

1 km NE of Çitli (Bağlıca) village, degraded forest, 1030 m, 20.VI.1997, *Cansaran* 2571. E. Medit-Euro-Sib. El.

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

Approx 2 km E of Küçükçay village, steppe; 1050 m, 19.V.1996, *Cansaran* 1165.

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

Approx 2 km W of Çitli (Bağlıca) village, shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2439.

V. bithynica L.

Between Eğmir and Alicık, roadsides; 1000 m, 05.V.1996, *Cansaran* 1131.

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

500 m W of Şamba village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1354.

Lathyrus aureus (Stev.) D.Brândză

Approx 8 km SE of Göçeri village, under forest; 1230 m, 01.VII.1997, *Cansaran* 2650. Eux. El.

L. tukhtensis Czeccott

Approx 3 km S of Yemişen village, under forest; 1500 m, 02.VII.1997, *Cansaran* 2742. End.

***L. elongatus** (Bornm.) Sirj.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2306. End.

L. pratensis L.

1 km NE of Küçükçay village, shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2406. Euro-Sib. El.

L. laxiflorus (Desf.) O.Kuntze subsp. **laxiflorus**

Approx 4 km S of Yemişen village, forest; 1450 m, 02.VII.1997, *Cansaran* 2777.

L. czeccottianus Bässler

Between Ovabaşı and Akpınar village, degraded forest; 1300 m, 24.V.1996, *Cansaran* 2320. End.

***L. sphaericus** Retz.

Approx 2 km W of Çitli (Bağlıca) village, shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2445.

L. cicera L.

1 km E of Köseles village, steppe; 1000 m, 24.V.1997, *Cansaran* 2328.

L. sativus L.

Between Eğmir and Alicık, roadsides; 1000 m, 05.V.1996, *Cansaran* 1124.

L. nissolia L.

Between Ovabaşı and Akpınar village, degraded forest; 1300 m, 24.V.1997, *Cansaran* 2314.

Ononis pusilla L.

300 m W of Büyükçay village, steppe; 1060 m, 21.VII.1996, *Cansaran* 1754. Medit. El.

O. spinosa L. subsp. **leiosperma** (Boiss.) _irj.

100 m S of Ovabaşı village, open forests; 1000 m, 03.VIII.1996, *Cansaran* 2213.

Trifolium repens L. var. **repens**

W places of Köseles village, open forest; 1300 m, 26.V.1996, *Cansaran* 1317.

T. campestre Schreb.

1 km W of Köseles village, degraded forest; 1200 m, 04.VIII.1996, *Cansaran* 2143.

T. physodes Stev. ex M.Bieb. var. **physodes**

Approx 3 km W of Çitli (Bağlıca) village, shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2449. Medit. El.

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

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2804.

T. medium L. var. **medium**

Approx 8 km SE of Göçeri village, under forest; 1230 m, 01.VII.1997, *Cansaran* 2644.

T. pannonicum Jacq. subsp. **elongatum** (Willd.) Zohary

Approx 4 km S of Yemişen village, under forest; 1500 m, 02.VI.1997, *Cansaran* 2728. End.

T. hirtum All.

Approx 2 km W of Çitli (Bağlıca) village, under shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2448. Medit. El.

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

1 km E of Köseles village, roadsides; 1000 m, 19.V.1996, *Cansaran* 1198-B.

Melilotus officinalis (L.) Desr.

Approx 2 km E of Küçükçay village, roadsides; 1000 m, 19.V.1996, *Cansaran* 1167.

M. alba Desr.

Köseles village surroundings, E places; 1200 m, 10.VII.1996, *Cansaran* 1586-B.

Trigonella fischeriana Ser.

Around Alicık, roadsides; 1100 m, 24.V.1997, *Cansaran* 2299. Ir.-Tur. El.

***T. foenum-graecum** L.

1 km NE of Küçükçay village, cultivated land; 1000 m, 20.VII.1996, *Cansaran* 1834. cultivated plant.

Medicago lupulina L.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1720.

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

1 km E of Köseles village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1433.

M. x varia Martyn

1 km NE of Küçükçay village, degraded forest; 1200 m, 10.VII.1996, *Cansaran* 1541.

M. coronata (L.) Bartal.

1 km NE of Çitli (Bağlıca) village, under shrubbery; 1030 m, 20.VI.1997, *Cansaran* 2578. *Medit. El.*

M. minima (L.) Bartal. var. *minima*

300 m SE of Karahisar village, steppe; 1050 m, 15.VI.1996, *Cansaran* 1403.

M. rigidula (L.) All. var. *rigidula*

1 km E of Köseleler village, steppe; 1000 m, 24.V.1997, *Cansaran* 2323.

M. rigidula (L.) All. var. *cinerascens* (Jord.) Rouy

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2345.

Dorycnium graecum (L.) Ser.

Between Ovabaşı and Akpınar village, degraded forest; 1250 m, 02.VIII.1996, *Cansaran* 1938. *Eux. El.*

D. pentaphyllum Scop. subsp. *herbaceum* (Vill.) Rouy

Approx 3 km SW of Çetmi village, under degraded forest; 950 m, 14.VI.1998, *Cansaran* 3028.

D. pentaphyllum Scop. subsp. *anatolicum* (Boiss.) Gams

Approx 5 km S of Köseleler village, under forest; 1330 m, 27.VI.1998, *Cansaran* 3069.

Lotus corniculatus L. var. *corniculatus*

Approx 4 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2855.

Anthyllis vulneraria L. subsp. *boissieri* (Sagorski) Bornm.

Approx 10 km SE of Göçeri village, under forest; 1250 m, 01.VII.1997, *Cansaran* 2685.

Coronilla scorpioides (L.) Koch

1 km E of Köseleler village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1454.

C. orientalis Mill. var. *orientalis*

Approx 3 km N of Büyükçay village, steppe; 1200 m, 15.VI.1996, *Cansaran* 1391.

C. varia L. subsp. *varia*

Approx 4 km S of Yemişen village, under forest; 1500 m, 02.VII.1997, *Cansaran* 2735.

Hedysarum varium Willd.

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1505. *Ir.-Tur. El.*

Onobrychis armena Boiss. & E.Huet

1 km NE of Küçükçay village, steppe, 1150 m, 10.VII.1996, *Cansaran* 1507. *End.*

ROSACEAE

Prunus spinosa L. subsp. *dasyphylla* (Schur) Domin

1 km NE of Küçükçay village, degraded forest; 1200 m, 20.VII.1996, *Cansaran* 1658. *Euro-Sib. El.*

P. x domestica L.

Approx 10 km SE of Göçeri village, forest; 1250 m, 01.VII.1997, *Cansaran* 2689.

P. divaricata Ledeb. subsp. *ursina* (Kotschy) Browicz

Approx 5 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2831.

***Cerasus microcarpa** (C.A.Mey.) Boiss. subsp. *tortuosa* (Boiss. & Hausskn.) Browicz

Approx 4 km SW of Köseleler village, shrubbery; 1500 m, 25.V.1996, *Cansaran* 1280. *Ir.-Tur. El.*

Filipendula vulgaris Moench

Approx 3 km SW of Çetmi village, degraded forest; 950 m, 14.VI.1998, *Cansaran* 2988. *Euro-Sib. El.*

Rubus idaeus L.

Approx 2 km S of Köseleler village, forest; 1160 m, 20.VII.1997, *Cansaran* 2899.

R. sanctus Schreb.

Approx 4 km NW of Büyükçay village, damp places; 1200 m, 12.VII.1998, *Cansaran* 3173.

R. discolor Weihe & Nees

1 km W of Çitli (Bağlıca) village, open degraded forest; 1100 m, 27.VI.1998, *Cansaran* 3168.

R. canescens DC. var. *canescens*

Approx 3 km S of Yemişen village, under forest; 1470 m, 02.VII.1997, *Cansaran* 2747.

R. hirtus Waldst. & Kit.

Vicinity of Köseleler village, E places; 1200 m, 10.VII.1996, *Cansaran* 1594. *Euro-Sib. El.*

Potentilla recta L.

Approx 2 km SW of Çetmi village, shrubbery; 950 m, 14.VI.1998, *Cansaran* 2999. (**Group A**)

Between Ovabaşı and Akpınar village, degraded forest; 1200 m, 02.VIII.1996, *Cansaran* 1968. (**Group B**)

S places of Köseleler village; 1300 m, 27.VI.1998, *Cansaran* 3143. (**Group C**)

P. micrantha Ramond ex DC.

S places of Yukarı Kayabaşı village, open areas; 1600 m, 04.V.1996, *Cansaran* 1084.

Geum urbanum L.

Approx 3 km W of Küçükçay village, roadsides; 1020 m, 19.V.1996, *Cansaran* 1142. *Euro-Sib. El.*

Agrimonia eupatoria L.

Köseleler village surroundings, E places; 1200 m, 10.VII.1996, *Cansaran* 1590.

A. repens L.

Köseleler village surroundings, NE places; 1300 m, 10.VII.1996, *Cansaran* 1591.

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

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1713.

Alchemilla mollis (Buser) Rothm.

Approx 2 km S of Köseleler village, stream bank; 1100 m, 20.VII.1997, *Cansaran* 2959.

Rosa foetida Herrm.

Approx 5 km E of Büyükçay village, roadsides; 900 m, 19.V.1996, *Cansaran* 1164. *Ir.-Tur. El.*

R. canina L.

Approx 4 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2800.

Cotoneaster nummularia Fisch. & C.A.Mey.

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2216.

Pyracantha coccinea Roem.

1 km NE of Küçükçay village, shrubbery; 1000 m, 20.VII.1996, *Cansaran* 1817.

***Crataegus x bornmuelleri** Zabel

500 m W of Güllüce village, roadsides; 1470 m, 10.VII.1996, *Cansaran* 1468. End.

C. orientalis Pall. ex M.Bieb. var. **orientalis**

1 km NE of Küçükçay village, degraded forest; 1200 m, 10.VIII.1996, *Cansaran* 1525.

***C. szovitsii** Pojark.

Approx 3 km W of Çitli (Bağlıca) village, shrubby; 1100 m, 08.VI.1997, *Cansaran* 2444. Ir.-Tur. El.?

C. monogyna Jacq. subsp. **monogyna**

Approx 8 km SE of Göçeri village, forest; 1250 m, 01.VII.1997, *Cansaran* 2668.

C. microphylla C.Koch

Approx 3 km NW of Akpınar village, roadsides; 1150 m, 05.V.1996, *Cansaran* 1109. H. Eux. El.

Sorbus umbellata (Desf.) Fritsch var. **umbellata**

Approx 3 km SW of Köseleler village, degraded forest; 1500 m, 25.V.1996, *Cansaran* 1280.

S. torminalis (L.) Crantz var. **torminalis**

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2224. Euro-Sib. El.?

Malus sylvestris Mill. subsp. **orientalis** (Uglitzk.) Browicz var. **orientalis**

Around Güllüce village, N places; 1300 m, 05.V.1996, *Cansaran* 1101-B.

Pyrus communis L. subsp. **communis**

Approx 2 km S of Köseleler village, open forests; 1300 m, 20.VII.1997, *Cansaran* 2945.

P. elaeagnifolia Pall. subsp. **elaeagnifolia**

Between Ovabaşı and Akpınar village, shrubby; 1200 m, 02.VIII.1996, *Cansaran* 1916.

LYTHRACEAE**Lythrum salicaria** L.

1 km E of Köseleler village, stream bank; 1000 m, 21.VII.1996, *Cansaran* 1863. Euro-Sib. El.

ONAGRACACEAE**Epilobium angustifolium** L.

App 2 km S of Köseleler village, under forest; 1200 m, 20.VII.1997, *Cansaran* 2918.

E. hirsutum L.

1 km W of Köseleler village, roadsides, humid places; 1100 m, 10.VII.1996, *Cansaran* 1580.

E. montanum L.

Approx 3 km N of Büyükçay village, damp places; 1200 m, 15.VI.1996, *Cansaran* 1388. Euro-Sib. El.

CUCURBITACEAE**Bryonia alba** L.

Vicinity of Köseleler village, humid places; 1170 m, 26.V.1996, *Cansaran* 1305. Euro-Sib. El.

DATISCAECEAE**Datisca cannabina** L.

1 km W of Köseleler village, degraded forest; 1200 m, 04.VIII.1996, *Cansaran* 2170.

CRASSULACEAE**Sedum obtusifolium** C.A.Mey.

Between Akpınar and Güllüce village, shrubby; 1470 m, 10.VII.1996, *Cansaran* 1551.

S. acre L.

Between Akpınar and Güllüce village, roadsides, stony places; 1300 m, 10.VII.1996, *Cansaran* 1463.

S. album L.

100 m S of Ovabaşı village, open forests; 1200 m, 03.VIII.1996, *Cansaran* 2222.

S. hispanicum L. var. **hispanicum**

1 km E of Köseleler village, steppe; 1260 m, 16.VI.1996, *Cansaran* 1424.

S. pallidum M.Bieb. var. **pallidum**

Approx 3 km W of Çitli (Bağlıca) village, degraded forest; 1030 m, 20.VI.1997, *Cansaran* 2579.

S. pallidum M.Bieb. var. **bithynicum** (Boiss.) Chamb.

500 m W of Güllüce village, rocky areas; 1470 m, 10.VII.1996, *Cansaran* 1469. Eux. El.

Sempervivum brevipilum Muirhead

1 km N of Karahisar village, steppe; 1100 m, 10.VII.1996, *Cansaran* 1572. End.

APIACEAE / UMBELLIFERAE**Eryngium campestre** L. var. **virens** Link

300 m SW of Ovabaşı village, steppe; 950 m, 03.VIII.1996, *Cansaran* 2036.

Chaerophyllum aureum L.

Approx 4 km S of Yemişen village, under forest; 1480 m, 02.VII.1997, *Cansaran* 2767.

Scandix stellata Banks & Sol.

Güllüce village surroundings, N places, open areas; 1300 m, 05.V.1996, *Cansaran* 1097.

S. iberica M.Bieb.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2344.

S. pecten – veneris L.

Between Eğmir and Alıcık, roadsides; 1100 m, 05.V.1996, *Cansaran* 1128.

Bifora radians M.Bieb.

1 km E of Köseleler village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1415.

Seseli tortuosum L.

1 km NE of Güllüce village, rocky areas; 1400 m, 02.VIII.1996, *Cansaran* 1981.

Conium maculatum L.

Between Akpınar and Güllüce village, roadsides; 1300 m, 10.VII.1996, *Cansaran* 1461.

Bupleurum rotundifolium L.

500 m N of Küçükçay village, open degraded forest; 1150 m, 15.VI.1996, *Cansaran* 1371.

B. gerardii All.

Approx 2 km W of Çitli (Bağlıca) village, open shrubby; 1100 m, 08.VI.1997, *Cansaran* 2450.

Falcaria vulgaris Bernh.

Approx 3 km S of Yemişen village, open forest; 1500 m, 02.VII.1997, *Cansaran* 2718.

Peucedanum palimbioides Boiss.

300 m W of Büyükçay village, steppe; 1100 m, 21.VI.1996, *Cansaran* 1733. End. Ir.-Tur. El.

Pastinaca sativa L. subsp. **urens** (Req. ex Godr.) Celak.

Between Ovabaşı and Akpınar village, shrubby; 130 m, 02.VIII.1996, *Cansaran* 1897.

Malabaila secacul Banks & Sol. (Group A)

Approx 2 km SW of Çetmi village, degraded forest; 970 m, 14.VI.1998, *Cansaran* 3052.

Heracleum platytaenium Boiss.

500 m W of Şamba village, steppe; 1050 m, 15.VI.1996, *Cansaran* 1358, End. Eux. El.?

Zosima absinthifolia (Vent.) Link

1 km W of Küçükçay village, open shrubbery; 1000 m, 08.VI.1997, *Cansaran* 2465.

Laser trilobum (L.) Borkh.

1 km SW of Köselers village, under forest; 1250 m, 04.VIII.1996, *Cansaran* 2101.

Laserpitium hispidum M.Bieb.

Between Ovabaşı and Akpınar village, degraded forest; 1180 m, 02.VIII.1996, *Cansaran* 1988. Euro-Sib. El.

Torilis leptophylla (L.) Reiche

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1721.

Astrodaucus orientalis (L.) Drude

1 km N of Karahisar village, roadsides, steppe areas; 1100 m, 10.VII.1996, *Cansaran* 1564. Ir.-Tur. El.?

Caucalis platycarpus L.

Approx 4 km SW of Köselers village, forest; 1400 m, 25.V.1996, *Cansaran* 1242.

Turgenia latifolia (L.) H.Hoffm.

1 km E of Alicık, roadsides; 670 m, 19.V.1996, *Cansaran* 1139.

Artemisia squamata L.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2336.

ARALICACEAE

Hedera helix L.

1 km W of Köselers village, degraded forest; 1200 m, 04.VIII.1996, *Cansaran* 2166.

CORNACEAE

Cornus sanguinea L. subsp. **australis** (C.A.Mey.) Jáv.

1 km E of Köselers village, humid places; 1200 m, 16.VI.1996, *Cansaran* 1431. Euro-Sib. El.

C. mas L.

1 km NE of Küçükçay village, shrubbery; 1200 m., 20.VII.1996, *Cansaran* 1677. Euro-Sib. El.?

CAPRIFOLIACEAE

Sambucus ebulus L.

1 km E of Köselers village, steppe; 1200 m, 16.VI.1996, *Cansaran* 1448. Euro-Sib. El.

S. nigra L.

1 km S of Yemişen village, open forests; 1530 m, 04.V.1996, *Cansaran* 1052. Euro-Sib. El.

Viburnum lantana L.

W places of Köselers village, roadsides; 1220 m, 26.V.1996, *Cansaran* 1346. Euro-Sib. El.

Lonicera caucasica Pall. subsp. **orientalis** (Lam.) Chamb. & Long

Approx 2 km E of Büyükçay village, degraded forest; 1250 m, 10.VII.1996, *Cansaran* 1604. End.

L. etrusca Santi var. **etrusca**

1 km W of Köselers village, roadsides; 1100 m, 10.VII.1996, *Cansaran* 1574. Medit. El.

RUBIACEAE

Crucianella bithynica Boiss.

Approx 2 km NE of Çitli (Bağlıca) village, shrubbery; 1030 m, 20.VI.1997, *Cansaran* 2604. E. Medit. El.

***C. disticha** Boiss.

1 km W of Çitli (Bağlıca) village, shrubbery; 1100 m, 27.VI.1998., *Cansaran* 3161. End. Ir.-Tur. El.

***C. exasperata** Fisch. & C.A.Mey.

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2838. Ir.-Tur. El.

Asperula lilaciflora Boiss. subsp. **phrygia** (Bornm.) Schönb.-Tem.

1 km W of Küçükçay village, steppe; 1050 m, 20.VII.1996, *Cansaran* 1882. End.

A. involucrata Wahlenb.

Approx 3 km S of Yemişen village, under forest; 1500 m, 02.VII.1997, *Cansaran* 2710. Eux. El.

A. arvensis L.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2357. Medit. El.

Galium verum L. subsp. **verum**.

500 m W of Küçükçay village, open shrubbery; 1130 m, 15.VI.1996, *Cansaran* 1366. Euro-Sib. El.

G. margaceum Ehrend. & Schönb.-Tem.

Between Ovabaşı and Akpınar village, degraded forest; 1250 m, 02.VIII.1996, *Cansaran* 1949. End. (det. F. Karaer)

***G. consanguineum** Boiss.

500 m W of Köselers village, steppe; 1160 m, 04.VIII.1996, *Cansaran* 2202. Ir.-Tur. El. (det. F. Karaer)

G. album Mill. subsp. **prusense** (C.Koch) Ehrend. & Krendl

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2215.

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

1 km E of Köselers village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1202. Ir.-Tur. El.

G. spurium L. subsp. **spurium**

1 km NE of Çitli (Bağlıca) village, degraded forest; 1030 m, 20.VI.1997, *Cansaran* 2562. Euro-Sib. El.

G. tricornutum Dandy

Approx 4 km SW of Köselers village, forest; 1400 m, 25.V.1996, *Cansaran* 1240. Medit. El.

G. tenuissimum M.Bieb. subsp. **trichophorum** (Kar. & Kir.) Ehrend.

App 2 km NE of Çitli (Bağlıca) village, shrubbery; 1060 m, 20.VI.1997, *Cansaran* 2614. Ir.-Tur. El.

Cruciata taurica (Pall. ex Willd.) Ehrend.

E places of Köselers castle, open areas; 1280 m, 14.IV.1996, *Cansaran* 1012. Ir.-Tur. El.

VALERIANACEAE

Centranthus longiflorus Stev. subsp. **longiflorus**

Approx 5 km N of Karahisar village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1195. Ir.-Tur. El.

Valerianella pumila (L.) DC.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2366.

V. vesicaria (L.) Moench

300 m W of Ovabaşı village, open shrubbery; 1100 m, 05.V.1996, *Cansaran* 1115.

MORINACEAE

Morina persica L.

Approx 3 km N of Büyükçay village, steppe; 1200 m, 15.VI.1996, *Cansaran* 1396. Ir.-Tur. El.

DIPSACACEAE

Dipsacus laciniatus L.

1 km E of Kösele village, roadsides, damp places; 1000 m, 21.VII.1996, *Cansaran* 1864.

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

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2239.

S. argentea L.

500 m W of Güllüce village, steppe; 1470 m, 10.VII.1996, *Cansaran* 1473.

S. micrantha Desf.

Approx 2 km NE of Çitli (Bağlıca) village, degraded forest; 1030 m, 20.VI.1997, *Cansaran* 2596.

S. rotata M.Bieb.

App 3 km N of Büyükçay village, steppe; 1200 m, 15.VI.1996, *Cansaran* 1389. Ir.-Tur. El.

ASTERACEAE / COMPOSITAE

**Inula helenium* L. subsp. *orgyalis* (Boiss.) Grierson

1 km NE of Güllüce village, stony areas; 1400 m, 02.VIII.1996, *Cansaran* 1979. End. Eux. El.

I. salicina L.

Between Ovabaşı and Akpınar village, degraded forest; 1100 m, 02.VIII.1996, *Cansaran* 1918. Euro-Sib. El.

I. ensifolia L.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1711. Euro-Sib. El.

I. oculus-christi L.

1 km NE of Küçükçay village, under shrubbery; 1100 m, 20.VII.1996, *Cansaran* 1670. Euro-Sib. El.?

I. montbretiana DC.

500 m W of Güllüce village, rocky areas; 1470 m, 10.VII.1996, *Cansaran* 1474. Ir.-Tur. El.

Helichrysum plicatum DC. subsp. *plicatum*

300 m W of Büyükçay village, steppe; 1050 m, 21.VII.1996, *Cansaran* 1752.

Filago eriocephala Guss.

Approx 2 km NE of Çitli (Bağlıca) village, open shrubbery; 1040 m, 20.VI.1997, *Cansaran* 2610. E. Medit. El.

F. pyramidata L.

Approx 4 km S of Kösele village, under forest; 1330 m, 27.VI.1998, *Cansaran* 3067. (det. F. Karaer)

Bellis perennis L.

E places of Kösele castle, Dereci village, stream bank; 1300 m, 14.IV.1996, *Cansaran* 1009. Euro-Sib. El.

Doronicum orientale H.Hoffm.

Approx 8 km SE of Göçeri village, forest; 1230 m, 01.VII.1997, *Cansaran* 2649.

Senecio vernalis Waldst. & Kit.

1 km E of Kösele village, steppe; 1260 m, 16.VI.1996, *Cansaran* 1442.

Tussilago farfara L.

Kösele village surroundings, roadsides; 1170 m, 31.III.1996, *Cansaran* 1005. Euro-Sib. El.

Petasites hybridus (L.) Gaertn.

S of Yukarı Kayabaşı village, NE places of Eğerci hill, humid places; 1600 m, 04.V.1996, *Cansaran* 1091, Euro-Sib. El.

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

Approx 2 km W of Güvenli village, steppe; 1100 m, 19.V.1996, *Cansaran* 1237.

A. cretica L. subsp. *tenuiloba* (DC.) Grierson

Approx 2 km W of Çitli (Bağlıca) village, degraded forest; 1100 m, 08.VI.1997, *Cansaran* 2443.

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

Approx 5 km N of Karahisar village, steppe; 1100 m, 19.V.1996, *Cansaran* 1192.

A. cretica L. subsp. *umbilicata* (Boiss. & E.Huet) Grierson

1 km E of Kösele village, steppe; 1280 m, 16.VI.1996, *Cansaran* 1455.

**A. cretica* L. subsp. *argaea* (Boiss. & Ball) Grierson

1 km E of Güllüce village, steppe; 1400 m, 24.V.1996, *Cansaran* 2369. End. Ir.-Tur. El.

A. tinctoria L. var. *tinctoria*

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2249.

**Achillea phrygia* Boiss. & Ball

Around Alicık, roadsides; 700 m, 24.V.1997, *Cansaran* 2292. End. Ir.-Tur. El.

**A. teretifolia* Willd.

Between Ovabaşı and Akpınar village, roadsides; 1100 m, 02.VIII.1996, *Cansaran* 1935-A. End. Ir.-Tur. El.

A. millefolium L. subsp. *pannonica* (Scheele) Hayek

Approx 3 km S of Yemişen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2785. Euro-Sib. El.

A. biebersteinii Afan.

300 m SE of Karahisar village, steppe; 1050 m, 15.VI.1996, *Cansaran* 1398. Ir.-Tur. El.

Tanacetum poteriifolium (Ledeb.) Grierson

Approx 8 km SE of Göçeri village, under forest; 1230 m, 01.VII.1997, *Cansaran* 2660. Eux. El.

T. parthenium (L.) Sch. Bip.

Approx 8 km S of Göçeri village, forest; 1230 m, 01.VII.1997, *Cansaran* 2636.

T. vulgare L.

Approx 2 km S of Kösele village, open forest; 1100 m, 20.VII.1997, *Cansaran* 2958.

Tripleurospermum callosum (Boiss. & Heldr.) E.Hossain

1 km E of Kösele village, roadsides; 1100 m, 21.VII.1996, *Cansaran* 1868. End.

Artemisia absinthium L.

Approx 2 km S of Kösele village, open forests, damp places; 1200 m, 20.VII.1997, *Cansaran* 2947.

**A. caucasica* Willd.

300 m SE of Karahisar village, stony places; 1050 m, 15.VI.1996, *Cansaran* 1397.

**Cirsium osseticum* (Adams) Petr.

Approx 5 km NW of Kışladeresi village, forest; 1450 m, 19.VII.1997, *Cansaran* 2842.

C. hypoleucum DC.

Approx 7 km SE of Göçeri village, open forests; 1200 m, 01.VII.1997, *Cansaran* 2701. Eux. El.

C. pseudopersonata Boiss. & Ball subsp. *pseudopersonata*

Approx 4 km S of Yemişen village, under forest; 1470 m, 02.VII.1997, *Cansaran* 2775. End. Eux. El.

C. arvensis (L.) Scop. subsp. *vestitum* (Wimm. & Grab.) Petr.

500 m W of Şamba village, roadsides, steppe; 1050 m, 15.VI.1996, *Cansaran* 1357.

Ptilostemon afer (Jacq.) Greuter subsp. *eburneus* Greuter

Approx 2 km E of Büyükçay village, steppe; 1350 m, 10.VII.1996, *Cansaran* 1611. End.

Carduus nutans L. sensu lato

1 km E of Köselers village, roadsides; 1000 m, 19.V.1996, *Cansaran* 1211.

**C. acanthoides* L. subsp. *acanthoides*

1 km N of Karahisar village, open areas; 1100 m, 10.VII.1996, *Cansaran* 1560. Euro-Sib. El.

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

Approx 5 km E of Büyükçay village, roadsides; 860 m, 19.V.1996, *Cansaran* 1163.

Centaurea virgata Lam.

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1502. (Group A)

1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1624-A. (Group C)

C. solstitialis L. subsp. *solstitialis*

1 km N of Karahisar village, eroded places; 1100 m, 10.VII.1996, *Cansaran* 1565-B

C. urvillei DC. subsp. *stepposa* Wagenitz

Approx 2 km E of Büyükçay village, steppe; 1350 m, 10.VII.1996, *Cansaran* 1612. Ir.-Tur. El.

C. carduiformis DC. subsp. *carduiformis* var. *carduiformis*.

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1490.

**C. pichleri* Boiss. subsp. *pichleri*

Approx 2 km W of Güvenli village, steppe; 1100 m, 19.V.1996, *Cansaran* 1221.

C. pichleri Boiss. subsp. *extrarosularis* (Hayek & Siehe) Wagenitz

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2355.

C. triumfetti All. (Group B)

1 km E of Alicık, roadsides; 650 m, 19.V.1996, *Cansaran* 1138.

C. depressa M.Bieb.

1 km E of Büyükçay village, roadsides; 1140 m, 08.VI.1997, *Cansaran* 2474.

Crupina vulgaris Cass.

1 km E of Köselers village, steppe; 1000 m, 24.V.1997, *Cansaran* 2325.

C. crupinastrum (Moris) Vis.

Approx 3 km SW of Çetmi village, edge of fields; 900 m, 14.VI.1998, *Cansaran* 3042.

Cnicus benedictus L. var. *benedictus*

1 km N of Karahisar village, eroded places; 1100, 10.VII.1996, *Cansaran* 1565-A.

Carthamus dentatus Vahl

300 m SW of Ovabaşı village, steppe; 950 m, 03.VIII.1996, *Cansaran* 2056.

Carlina oligocephala Boiss. & Kotschy subsp. *oligocephala*

500 m W of Köselers village, steppe; 1160 m, 04.VIII.1996, *Cansaran* 2179.

C. lanata L.

Approx 5 km NW of Kışladeresi village, forest; 1450 m, 19.VII.1997, *Cansaran* 2845. Medit. El.

Xeranthemum annuum L.

300 m SW of Ovabaşı village, steppe; 950 m, 03.VIII.1996, *Cansaran* 2054-B.

Echinops ritro L.

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1501.

E. galaticus Freyn

Between Ovabaşı and Akpınar village, shrubby; 1100 m, 02.VIII.1996, *Cansaran* 1966. Eux. El.

Cichorium intybus L.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1708.

Scorzonera cana (C.A.Mey.) H.Hoffm. var. *jacquiniana* (W.Koch) Chamb.

Approx 2 km W of Güvenli village, steppe; 1100 m, 19.V.1996, *Cansaran* 1227.

**S. eriophora* DC.

1 km NE of Güllüce village, rocky areas; 1400 m, 02.VIII.1996, *Cansaran* 1980. End.

S. tomentosa L.

1 km. SW of Köselers village, open degraded forests; 1250 m, 04.VIII.1996, *Cansaran* 2097. End. Ir.-Tur. El.

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

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2350.

T. coloratus C.A.Mey.

1 km E of Köselers village, steppe; 1280 m, 16.VI.1996, *Cansaran* 1421. Ir.-Tur. El.

T. dubius Scop.

1 km E of Alicık, roadsides; 650 m, 19.V.1996, *Cansaran* 1137.

T. aureus Boiss.

1 km N of Karahisar village, eroded places; 1100 m, 10.VII.1996, *Cansaran* 1569. End.

Leontodon hispidus L. var. *hispidus*

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2799.

L. asperrimus (Willd.) Ball

App 2 km W of Çitli (Bağlıca) village, degraded forest; 1100 m, 08.VI.1997, *Cansaran* 2443. Ir.-Tur. El.

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

Approx 3 km S of Çetmi village, shrubby; 950 m, 14.VI.1998, *Cansaran* 2995.

Picris strigosa M.Bieb.

500 m W of Köselers village, steppe; 1160 m, 04.VIII.1996, *Cansaran* 2194. Ir.-Tur. El.

Sonchus asper (L.) Hill subsp. *glaucescens* (Jord.) Ball

1 km NE of Küçükçay village, shrubby; 1100 m, 08.VI.1997, *Cansaran* 2427.

Reichardia glauca Matthews

Approx 4 km NW of Büyükçay village, steppe; 1200 m, 12.VII.1998, *Cansaran* 3187, Ir.-Tur. El.

Hieracium medianiforme (Litv. & Zahn) Juxip

App 3 km S of Yemişen village, forest; 1470 m, 02.VII.1997, *Cansaran* 2762. Eux. El.

H. labillardierei Arv.-Touv.

S places of Köselers village, under forest; 1300 m, 27.VI.1998, *Cansaran* 3111.

H. bornmuelleri Freyn

1 km NE of Küçükçay village, shrubby; 1100 m, 20.VII.1996, *Cansaran* 1669. End.

Pilosella hoppeana (Schultes) C.H. & F.W.Schultz subsp. *testimonialis* (Nägeli ex Peter) P.D.Sell & West

500 m NE of Ovabaşı village, forest; 1000 m, 03.VIII.1996, *Cansaran* 2262. Euro-Sib. El.

P. hoppeana (Schultes) C.H. & F.W.Schultz subsp. *troica* (Zahn) P.D.Sell & West

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2794-B.

P. x ruprechtii (Boiss.) P.D.Sell & West

1 km NE of Küçükçay village, degraded forest; 1000 m, 20.VII.1996, *Cansaran* 1813.

P. piloselloides (Vill.) Soják subsp. *piloselloides*

Approx 2 km S of Köselers village, forest; 1200 m, 20.VII.1997, *Cansaran* 2908.

P. piloselloides (Vill.) Soják subsp. *megalomastix* P.D.Sell & West

Approx 8 km SE of Göçeri village, forest; 1230 m, 01.VII.1997, *Cansaran* 2657-A.

P. x fallax (Willd.) Arv.-Touv.

App 8 km SE of Göçeri village, forest; 1230 m, 01.VII.1997, *Cansaran* 2657-B.

P. echioides (Lum.) C.H. & F.W.Schultz subsp. *procera* (Friese) P.D.Sell & West

Approx 4 km SW of Köselers village, forest; 1500 m, 25.V.1996, *Cansaran* 1286.

P. x auriculoides (F.A.Láng) P.D.Sell & West

Approx 2 km W of Çitli (Bağlıca) village, shrubby; 1100 m, 08.VI.1997, *Cansaran* 2443.

Scariola viminea (L.) F.W.Schmidt

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1714.

S. orientalis (Boiss.) Soják

300 m W of Büyükçay village, steppe; 1050 m, 21.VII.1996, *Cansaran* 1751. Ir.-Tur. El.

Lapsana communis L. subsp. *alpina* (Boiss. & Ball) P.D.Sell

Approx 4 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2801. Eux. El.

L. communis L. subsp. *intermedia* (M.Bieb.) Hayek

Between Ovabaşı and Akpınar village, shrubby; 1230 m, 02.VIII.1996, *Cansaran* 1890.

**L. communis* L. subsp. *grandiflora* (M.Bieb.) P.D.Sell

Approx 3 km S of Ovabaşı village, open degraded forest; 1250 m, 31.V.1998, *Cansaran* 2965. Eux. El.

Chondrilla juncea L. var. *juncea*

App 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1722.

Crepis foetida L. subsp. *rhoeadifolia* (M.Bieb.) Celak.

Approx 2 km E of Büyükçay village, steppe; 1350 m, 10.VII.1996, *Cansaran* 1615.

C. sancta (L.) Babcock

Vicinity of Güllüce village, N slopes, steppe; 1300 m, 05.V.1996, *Cansaran* 1099.

CAMPANULACEAE

Campanula rapunculoides L. subsp. *rapunculoides*

Between Akpınar and Güllüce village, degraded forest; 1300 m, 10.VII.1996, *Cansaran* 1460. Euro-Sib. El.

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

Approx 4 km S of Yemişen village, under forest; 1470 m, 02.VII.1997, *Cansaran* 2758.

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

1 km NE of Küçükçay village, shrub; 1150 m, 10.VII.1996, *Cansaran* 1540. Euro-Sib. El.

C. involucrata Aucher ex A.DC.

100 m S of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2221. Ir.-Tur. El.

**C. rapunculus* L. var. *rapunculus*

Approx 3 km SW of Çetmi village, shrub; 950 m, 14.VI.1998, *Cansaran* 3005.

C. rapunculus L. var. *lambertiana* (A.DC.) Boiss.

1 km E of Köselers village, steppe; 1260 m, 16.VI.1996, *Cansaran* 1438. Euro-Sib. El.

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

App 3 km S of Köselers village, open forest; 1230 m, 20.VII.1997, *Cansaran* 2929. End.

A. rigidum (Willd.) Grossh. subsp. *rigidum*

1 km NE of Küçükçay village, degraded forest; 1150 m, 10.VII.1996, *Cansaran* 1519. Ir.-Tur. El.

Legousia falcata (Ten.) Fritsch

Approx 3 km W of Köselers village, Gökdere, shrubby; 1325 m, 15.VI.1997, *Cansaran* 2532. Medit. El.

L. speculum-veneris (L.) Chaix

1 km S of Güvenli village, roadsides; 1160 m, 15.VI.1996, *Cansaran* 1377. Medit. El.

L. pentagonia (L.) Thell.

Approx 2 km W of Çitli (Bağlıca) village, open shrubby; 1100 m, 08.VI.1997, *Cansaran* 2436. E. Medit. El.

ERICACEAE

Orthilia secunda (L.) House

Approx 8 km SE of Göçeri village, under forest; 1250 m, 01.VII.1997, *Cansaran* 2672 (det. H. Duman)

PRIMULACEAE

Primula vulgaris Huds. subsp. *vulgaris*

Around Yukarı Kayabaşı village, stream bank; 1700 m, 04.V.1996, *Cansaran* 1061. Euro-Sib. El.

Androsace maxima L.

Vicinity of Köselers village, S places of Saray Mountain, open areas; 1320 m, 14.IV.1996, *Cansaran* 1027.

Cyclamen coum Mill. var. *coum*

Köselers village surroundings, Gökdere, damp places; 1170 m, 31.VIII.1996, *Cansaran* 1006.

Lysimachia verticillaris Spreng.

Between Ovabaşı and Akpınar village, degraded forest; humid places; 1200 m, 02.VIII.1996, *Cansaran* 1952. H. Eux. El.

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

500 m W of Şamba village, roadsides, eroded places; 1050 m, 15.VI.1996, *Cansaran* 1353.

OLEACEAE

Jasminum fruticans L.

Approx 5 km N of Karahisar village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1190. Medit. El.

Ligustrum vulgare L.

Approx 3 km N of Büyükçay village, open areas; 1200 m, 15.VI.1996, *Cansaran* 1392. Euro-Sib. El.

CONVOLVULACEAE

Convolvulus cantabrica L.

Approx 3 km N of Büyükçay village, steppe; 1200 m, 15.VI.1996, *Cansaran* 1394.

C. holosericeus M.Bieb. subsp. **holosericeus**

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1716.

C. holosericeus M.Bieb. subsp. **macrocalycinus** Hausskn. & Bornm. ex Bornm.

1 km W of Küçükçay village, steppe; 1050 m, 20.VII.1996, *Cansaran* 1885. End. Ir.-Tur. El.

C. assyricus Griseb.

1 km N of Karahisar village, open areas; 1060 m, 19.V.1996, *Cansaran* 1152. End. Ir.-Tur. El.

C. arvensis L.

1 km N of Karahisar village, roadsides; 1050 m, 19.V.1996, *Cansaran* 1161.

C. galaticus Rostan ex Choisy

1 m S of Güvenli village, roadsides; 1160 m, 15.VI.1996, *Cansaran* 1380. End. Ir.-Tur. El.

C. betonicifolius Mill. subsp. **betonicifolius**

500 m N of Küçükçay village, open degraded forest; 1130 m, 15.VI.1996, *Cansaran* 1362.

CUSCUTACEAE

***Cuscuta kotschyana** Boiss. subsp. **caudata** Bornm. & Schwarz

Approx 5 km NW of Kışladeresi village, forest, on *Fabaceae*; 1400 m, 19.VII.1997, *Cansaran* 2809. Ir.-Tur. El

***C. palaestina** Boiss. subsp. **balansae** (Yunck.) Plitmann

1 km W of Kösele village, roadsides, on *Salvia*; 1100 m, 10.VII.1996, *Cansaran* 1583.

***C. planiflora** Ten.

Around Kösele village, E places, roadsides; on *Veronica*; 1200 m, 10.VII.1996, *Cansaran* 1598.

BORAGINACEAE

Heliotropium suaveolens M.Bieb.

1 km E of Kösele village, roadsides; 1000 m, 21.VII.1996, *Cansaran* 1867. E. Medit. El.?

Lappula barbata (M.Bieb.) Gürke

Approx 5 km N of Karahisar village, steppe; 1100 m, 19.V.1996, *Cansaran* 1189. Ir.-Tur. El.

Rochelia disperma (L.f.) C.Koch var. **disperma**

Approx 3 km S of Ovabaşı village, open shrubbery; 1250 m, 31.V.1998, *Cansaran* 2966.

Myosotis ramosissima Rochel ex Schultes subsp. **ramosissima**

S places of Yukarı Kayabaşı village, steppe areas; 1600 m, 04.V.1996, *Cansaran* 1072.

M. stricta Link ex Roem. & Schultes

Approx 2 km W of Güvenli village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1231. Euro-Sib. El.

M. arvensis (L.) Hill subsp. **arvensis**

Approx 3 km SW of Çetmi village, degraded forest; 1000 m, 14.VI.1998, *Cansaran* 2996. Euro-Sib. El.

M. lithospermifolia (Willd.) Hornem.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2303.

Paracaryum ancyritanum Boiss.

Approx 3 km W of Çitli (Bağlıca) village, shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2459. End. Ir.-Tur. El.

Cynoglossum creticum Mill.

1 km NE of Küçükçay village, open degraded forest; 1100 m, 08.VI.1997, *Cansaran* 2426.

C. montanum L.

App 4 km SW of Kösele village, shrubbery; 1400 m, 25.V.1996, *Cansaran* 1284. Euro-Sib. El.

Lithospermum officinale L.

S places of Kösele village, 1200 m, 27.VI.1998, *Cansaran* 3141. Euro-Sib. El.

L. purpureoeruleum L.

Approx 2 km SW of Çetmi village, degraded forest; 950 m, 14.VI.1998, *Cansaran* 3030. Euro-Sib. El.

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

E places of Kösele castle, open areas; 1200 m, 14.V.1996, *Cansaran* 1016.

Neatostema apulum (L.) I.M.Johnst.

N slopes of Eđerli Mountain, Yukarı Kayabaşı village surroundings, open areas; 1600 m, 04.V.1996, *Cansaran* 1044. Medit. El.

Onosma sericeum Willd.

1 km NE of Küçükçay village steppe; 1150 m, 10.VII.1996, *Cansaran* 1512. Ir.-Tur. El.

O. isauricum Boiss. & Heldr.

Approx 7 km SE of Göçeri village, open forests; 1200 m, 01.VII.1997, *Cansaran* 2694. End. Ir.-Tur. El.

O. bracteosum Hausskn. & Bornm.

Approx 4 km W of Küçükçay village, stony places; 1060 m, 19.V.1996, *Cansaran* 1147. End. Ir.-Tur. El.

O. bourgaei Boiss.

App 3 km S of Ovabaşı village, open degraded forest; 1250 m, 31.V.1998, *Cansaran* 2977. Ir.-Tur. El.

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

1 km E of Kösele village, roadsides, rocky areas; 1000 m, 05.V.1996, *Cansaran* 1110. Ir.-Tur. El.

O. angustissimum Hausskn. & Bornm.

Approx 4 km S of Ovabaşı village, steppe areas; 1140 m, 31.V.1998, *Cansaran* 2979. End. Ir.-Tur. El.

O. aucheranum DC.

300 m SE of Karahisar village, roadsides; 1050 m, 15.VI.1996, *Cansaran* 1414. E. Medit. El.

O. roussaei DC.

Approx 3 km S of Ovabaşı village, open degraded forests; 1150 m, 24.V.1997, *Cansaran* 2293. Ir.-Tur. El.

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

Approx 2 km W of Güvenli village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1222.

Anchusa leptophylla Roem. & Schultes subsp. **leptophylla**

1 km E of Kösele village, open forests; 1100 m, 19.V.1996, *Cansaran* 1208.

A. strigosa Labill.

Approx 2 km E of Küçükçay village, roadsides; 1000 m, 19.V.1996, *Cansaran* 1168.

Alkanna orientalis (L.) Boiss. var. **orientalis**

E places of Çitli (Bağlıca) village, roadsides; 1000 m, 14.IV.1996, *Cansaran* 1019. Ir.-Tur. El.

SOLANACEAE

Hyoscyamus niger L.

Approx 3 km W of Küçükçay village, roadsides; 1000 m, 08.VI.1997, *Cansaran* 2479.

SCROPHULARIACEAE

Verbascum wiedemannianum Fisch. & C.A.Mey.

Approx 2 km SW of Çetmi village, shrubbery; 970 m, 14.VI.1998, *Cansaran* 3055. End. Ir.-Tur. El.

V. pyramidatum M.Bieb.

Approx 7 km SE of Göçeri village, open forest; 1200 m, 01.VII.1997, *Cansaran* 2695. H. Eux. El.

V. caudatum Freyn & Bornm.

Between Akpınar and Güllüce village, roadsides; 1300 m, 10.VII.1996, *Cansaran* 1464. End. Ir.-Tur. El.

**V. bellum* Hub.-Mor.

1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1655-A. End. E. Medit. El.

V. lasianthum Boiss. ex Benth.

1 km SW of Köseleler village, under forest; 1250 m, 04.VIII.1996, *Cansaran* 2090.

**V. songaricum* Schrenk ex Fisch. & C.A.Mey. subsp. *subdecurrens* Hub.-Mor.

Approx 5 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2816. End. Ir.-Tur. El.

V. cherianthifolium Boiss. var. *cherianthifolium*

300 m W of Büyükçay village, steppe; 1060 m, 21.VII.1996, *Cansaran* 1765.

V. cherianthifolium Boiss. var. *asperulum* (Boiss.) Murb.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1717. End.

Scrophularia scopolii [Hoppe ex] Pers. var. *adenocalyx* Sommer & Lev.

S places of Eđerli Mountain, vicinity of Boğacık village; 1200 m, 15.VI.1996, *Cansaran* 1373. Eux. El.

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

Approx 2 km N of Karahisar village, humid places; 1080 m, 19.V.1996, *Cansaran* 1149. Ir.-Tur. El.

S. striata Boiss.

1 km W of Çitli (Bağlıca) village, roadsides; 980 m, 08.VI.1997, *Cansaran* 2433. Ir.-Tur. El.

S. canina L. subsp. *bicolor* (Sm.) Greuter

W places of Köseleler village; 1300 m, 26.V.1996, *Cansaran* 1323. E. Medit. El.

Anarrhinum orientale Benth.

1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1625. Ir.-Tur. El.

Linaria corifolia Desf.

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1509. End. Ir.-Tur. El.

Digitalis ferruginea L. subsp. *ferruginea*

1 km SW of Köseleler village, forest; 1250 m, 04.VIII.1996, *Cansaran* 2124. Euro-Sib. El.

D. lamarckii Ivan.

Between Ovabaşı and Akpınar village, degraded forest; 1100 m, 02.VIII.1996, *Cansaran* 1911. End. Ir.-Tur. El.

Veronica reuterana Boiss.

E places of Köseleler castle, open areas; 1170 m, 14.IV.1996, *Cansaran* 1007. Ir.-Tur. El.

**V. hispidula* Boiss. & E.Huet subsp. *hispidula*

1 km NE of Çitli (Bağlıca) village, shrubbery; 1030 m, 20.VI.1997, *Cansaran* 2566. Ir.-Tur. El.

V. arvensis L.

Approx 4 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2821. Euro-Sib. El.

V. anagallis-aquatica L.

Approx 4 km SW of Köseleler village, stream bank; 1400 m, 25.V.1996, *Cansaran* 1244.

V. jacquinii Baumg.

N places of Güllüce village, steppe; 1300 m, 05.V.1996, *Cansaran* 1094. Euro-Sib. El.

V. multifida L.

1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1631. End. Ir.-Tur. El.

V. officinalis L.

Approx 8 km SE of Göçeri village, under forest; 1260 m, 01.VII.1997, *Cansaran* 2663-A. Euro-Sib. El.

Melampyrum arvense L. var. *arvense*

W places of Köseleler village, roadsides; 1250 m, 26.V.1996, *Cansaran* 1350. Euro-Sib. El.

Euphrasia pectinata Ten.

Approx 4 km S of Yemişen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2789. Euro-Sib. El.

Pedicularis comosa L. var. *sibthorpii* (Boiss.) Boiss.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2309.

OROBANCHACEAE

Orobanche nana Noë ex G.Becker

1 km E of Köseleler village, steppe; 1250 m, 16.VI.1996, *Cansaran* 1445.

O. cernua Loeffl.

1 km SW of Köseleler village, forest; 1250 m, 04.VIII.1996, *Cansaran* 2134.

O. alba Stephan

W places of Köseleler village, Ekinalağı; 1170 m, 26.V.1996, *Cansaran* 1351.

O. minor Sm.

App 3 km E of Küçükçay village, damp places; 1000 m, 21.VII.1996, *Cansaran* 1869.

O. caryophyllacea Sm.

Around Köseleler village, E places, roadsides; 1200 m, 10.VII.1996, *Cansaran* 1585.

**O. anatolica* Boiss. & Reuter

App 2 km SW of Çetmi village, degraded forest; 970 m, 14.VI.1998, *Cansaran* 3038.

ACANTHACEAE

Acanthus hirsutus Boiss.

Approx 5 km NW of Büyükçay village, steppe areas; 1200 m, 12.VII.1998, *Cansaran* 3189. End.

GLOBULARIACEAE

Globularia trichosantha Fisch. & C.A.Mey.

1 km S of Yemişen village, open forest; 1530 m, 13.IV.1996, *Cansaran* 1048.

LAMIACEAE / LABIATAE

Ajuga orientalis L.

Vicinity of Güllüce village, open areas; 1300 m, 05.V.1996, *Cansaran* 1101-A.

A. chamaepitys (L.) Schreb. subsp. *chia* (Schreber) Arcang. var. *chia*

Around Köseleler village, S places of Saray Mountain, open areas; 1350 m, 14.IV.1996, *Cansaran* 1032.

Teucrium orientale L. var. **orientale**

1 km W of itli (Baęlıca), open shrubbery; 1100 m, 27.VI.1998, *Cansaran* 3162. Ir.-Tur. El.

T. orientale L. var. **puberulens** Ekim

Approx 3 km S of Yemiřen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2781. Ir.-Tur. El.

T. chamaedrys L. subsp. **chamaedrys**

Approx 5 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2827. Euro-Sib. El.

T. polium L.

1 km NE of Kçükay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1513-A.

Scutellaria velenovskyi Rech.

App 7 km SE of Gçeri village, open forest; 1200 m, 01.VII.1997, *Cansaran* 2698. E. Medit. El.

S. salviifolia Benth.

App 3 km S of Ovabaşı village, roadsides; 1250 m, 31.V.1998, *Cansaran* 2972. End.

S. orientalis L. subsp. **pinnatifida** Edmondston

1 km NE of Kçükay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1497.

Phlomis pungens Willd. var. **pungens**

Between Akpınar and Gllce, roadsides; 1300 m, 10.VII.1996, *Cansaran* 1457.

P. armeniaca Willd.

Approx 2 km E of Bykay village, steppe; 1350 m, 10.VII.1996, *Cansaran* 1606. End. Ir.-Tur. El.

Lamium amplexicaule L.

Gllce village surroundings, steppe; 1300 m, 05.V.1996, *Cansaran* 1098. Euro-Sib. El.

L. purpureum L. var. **purpureum**

N places of Eđerli Mountain, vicinity of Yukarı Kayabaşı village, steppe areas; 1500 m, 04.V.1996, *Cansaran* 1060. Euro-Sib. El.

L. album L.

Approx 4 km SW of Kseler village, open forest; 1500 m, 25.V.1996, *Cansaran* 1275. Euro-Sib. El.

Wiedemannia orientalis Fisch. & C.A.Mey.

Between Alıcık-Eęmir village, roadsides; 1100 m, 05.V.1996, *Cansaran* 1126. End. Ir.-Tur. El.

Marrubium parviflorum Fisch. & C.A.Mey. subsp. **parviflorum**

1 km N of Karahisar village, steppe; 1100 m, 10.VII.1996, *Cansaran* 1559. Ir.-Tur. El.

M. globosum Montbret & Aucher ex Benth. subsp. **globosum**

1 km N of Karahisar village, roadsides; 1060 m, 19.V.1996, *Cansaran* 1154. End. Ir.-Tur. El.

Sideritis montana L. subsp. **remota** (d'Urv.) P.W.Ball ex Heywood

1 km E of Kseler village, steppe; 1000 m, 24.V.1997, *Cansaran* 2329. E. Medit. El.

S. amasiaca Bornm.

1 km SW of Kseler village, under forest; 1250 m, 04.VIII.1996, *Cansaran* 2083. End.

Stachys byzantina C.Koch

1 km W of itli (Baęlıca) village, roadsides; 980 m, 08.VI.1997, *Cansaran* 2429. Euro-Sib. El.

S. iberica M.Bieb. subsp. **stenostachya** (Boiss.) Rech.

1 km NE of Kçükay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1488. Ir.-Tur. El.

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

Approx 4 km S of Ovabaşı village, open degraded forest; 1250 m, 31.V.1998, *Cansaran* 2968.

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

App 5 km N of Karahisar village, steppe; 1100 m, 19.V.1996, *Cansaran* 1191. Ir.-Tur. El.

Nepeta italica L.

1 km W of Kseler village, roadsides; 1100 m, 10.VII.1996, *Cansaran* 1579.

N. nuda L. subsp. **albiflora** (Boiss.) Gams

Approx 5 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2825.

Prunella vulgaris L.

Between Akpınar and Gllce, roadsides, damp places; 1470 m, 10.VII.1996, *Cansaran* 1558. Euro-Sib. El.

P. laciniata (L.) L.

Approx 3 km SW of etmi village, degraded forest; 950 m, 14.VI.1998, *Cansaran* 3040. Euro-Sib. El.

***Origanum vulgare** L. subsp. **hirtum** (Link) letsw.

Approx 4 km NW of Bykay village, open areas; 1200 m, 12.VII.1998, *Cansaran* 3179. E. Medit. El.

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

E places of Kseler village, open forests; 1270 m, 10.VIII.1996, *Cansaran* 1600-A.

Satureja wiedemanniana (Lallem.) Velen.

1 km SW of Kseler village, open forests; 1250 m, 04.VIII.1996, *Cansaran* 2096-A. End.

Clinopodium vulgare L. subsp. **vulgare**

500 m N of Kçükay village, steppe; 1130 m, 15.VI.1996, *Cansaran* 1372.

Cansaran vulgare L. subsp. **arundanum** (Boiss.) Nyman

Approx 2 km S of Kseler village, forest; 1130 m, 20.VII.1997, *Cansaran* 2891.

Acinos rotundifolius Pers.

Approx 4 km S of Ovabaşı village, roadsides; 1250 m, 31.V.1998, *Cansaran* 2973.

Thymus sipyleus Boiss. subsp. **rosulans** (Borbás) J alas

1 km NE of Kçükay village, steppe; 1100 m, 08.VI.1997, *Cansaran* 2394.

Mentha longifolia (L.) Huds. subsp. **longifolia**

1 km E of Kseler village, stream bank; 1000 m, 21.VII.1996, *Cansaran* 1866.

Ziziphora capitata L.

500 m N of Kçükay village, steppe; 1130 m, 15.VI.1996, *Cansaran* 1364. Ir.-Tur. El.

Salvia tomentosa Mill.

Between Ovabaşı and Akpınar, degraded forest; 1100 m, 02.VIII.1996, *Cansaran* 1904. Medit. El.

S. bracteata Banks & Sol.

300 m SE of Karahisar village, steppe; 1050 m, 15.VI.1996, *Cansaran* 1411. Ir.-Tur. El.

S. syriaca L.

1 km N of Karahisar village, roadsides; 1100 m, 10.VII.1996, *Cansaran* 1562. Ir.-Tur. El.

S. viridis L.

1 km E of Kseler village, steppe; 1000 m, 24.V.1997, *Cansaran* 2334. Medit. El.

S. sclarea L.

Between Akpınar and Güllüce roadsides; 1300 m, 10.VII.1996, *Cansaran* 1458.

S. aethiopsis L.

App 2 km N of Güvenli village, steppe; 1170 m, 15.VI.1996, *Cansaran* 1359.

S. virgata Jacq.

100 m S of Ovabaşı village, open forests; 1000 m, 03.VIII.1996, *Cansaran* 2211. Ir.-Tur. El.?

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

Approx 3 km S of Yemişen village, open forests; 1450 m, 02.VII.1997, *Cansaran* 2788. Ir.-Tur. El.

PLUMBAGINACEAE**Plumbago europaea** L.

100 m S of Ovabaşı village, open forest; 1000 m, 03.VIII.1996, *Cansaran* 2212. Euro-Sib. El.

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

App 2 km E of Büyükçay village, steppe; 1300 m, 10.VII.1996, *Cansaran* 1614. Ir.-Tur. El.

A. glumaceum (Jaub. & Spach) Boiss.

Approx 4 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, *Cansaran* 2862. Ir.-Tur. El.

PLANTAGINACEAE**Plantago lanceolata** L.

W places of Köseles village, roadsides; 1300 m, 26.V.1996, *Cansaran* 1339.

ELAEAGNACEAE

Hippophae rhamnoides L. subsp. *caucasica* Rousi

Approx 3 km W of Küçükçay village, roadside; 1000 m, 08.VI.1997, *Cansaran* 2478.

Elaeagnus angustifolia L.

100 m S of Ovabaşı village, open forests; 1000 m, 03.VIII.1996, *Cansaran* 2214.

SANTALACEAE***Thesium bergeri** Zucc.

Approx 2 km NE of Çitli (Bağlıca) village, degraded forest; 1030 m, 20.VI.1997, *Cansaran* 2587. E. Medit. El.

T. billardieri Boiss.

S places of Yukarı Kayabaşı village, open areas; 1550 m, 04.V.1996, *Cansaran* 1075. Ir.-Tur. El.

LORANTHACEAE**Viscum album** L. subsp. *album*

S places of Köseles village, in forest on trees; 1300 m, 27.VI.1998, *Cansaran* 3149.

EUPHORBIACEAE**Andrachne telephioides** L.

Approx 3 km S of Ovabaşı village, open shrubbery; 1140 m, 31.V.1998, *Cansaran* 2981.

Euphorbia cardiophylla Boiss. & Heldr.

1 km NE of Küçükçay village, open shrubbery; 1100 m, 08.VI.1998, *Cansaran* 2404. End.

E. szovitsii Fisch. & C.A.Mey. var. *szovitsii*

App 2 km S of Köseles village, stony places; 1200 m, 20.VII.1997, *Cansaran* 2957. Ir.-Tur. El.

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

1 km N of Karahisar village, open areas; 1100 m, 10.VII.1996, *Cansaran* 1571.

E. myrsinites L.

E places of Köseles castle, Alibağı, open areas; 1200 m, 14.IV.1996, *Cansaran* 1015.

URTICACEAE**Urtica dioica** L.

Köseles village surroundings, humid places; 1170 m, 26.V.1996, *Cansaran* 1302. Euro-Sib. El.

MORACEAE**Morus rubra** L.

1 km W of Köseles village, degraded forest; 1200 m, 04.VIII.1996, *Cansaran* 2164.

FAGACEAE**Quercus robur** L. subsp. *robur*

Approx 3 km W of Köseles village, Gökdere, degraded forest; 1275 m, 15.VI.1997, *Cansaran* 2541. Euro-Sib. El.

Q. hartwissiana Steven

Between Ovabaşı and Akpınar village, degraded forest; 1230 m, 02.VIII.1996, *Cansaran* 1893.

Q. macranthera Fisch. & C.A.Mey. ex Hohen. subsp. *sypsiensis* (C.Koch) Menitsky

Approx 3 km W of Köseles village, Gökdere, shrubbery, 1300 m, 15.VI.1997, *Cansaran* 2481. End.

Q pubescens Willd.

Approx 2 km SW of Çetmi village, degraded forest; 950 m, 14.VI.1998, *Cansaran* 2987.

Q. cerris L. var. *cerris*

1 km NE of Küçükçay village, shrubbery; 1250 m, 20.VII.1996, *Cansaran* 1689.

CORYLACEAE**Carpinus betulus** L.

W places of Köseles village, degraded forest; 1250 m, 26.V.1996, *Cansaran* 1348. Euro-Sib. El.

Corylus avellana L. var. *avellana*

Approx 8 km SE of Göçeri village, forest; 1250 m, 01.VII.1997, *Cansaran* 2670. Euro-Sib. El.

SALICACEAE**Populus tremula** L.

Approx 4 km SW of Köseles village, forest; 1400 m, 25.V.1996, *Cansaran* 1269. Euro-Sib. El.

MONOCOTYLEDONES**LILIACEAE****Allium paniculatum** L. subsp. *paniculatum*

1 km NE of Küçükçay village, steppe; 1060 m, 20.VII.1996, *Cansaran* 1766. Medit. El. (det. M. Koyuncu)

A. atroviolaceum Boiss.

1 km NE of Küçükçay village, open shrubbery; 1100 m, 08.VI.1997, *Cansaran* 2421.

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

1 km W of Köseles village, steppe; 1100 m, 10.VII.1996, *Cansaran* 1578. Medit. El.

Ornithogalum oligophyllum E.D.Clarke

N places of Eğerli Mountain, around Yukarı Kayabaşı village, open areas; 1430 m, 04.V.1996, *Cansaran* 1057.

O. armeniacum Baker

Approx 2 km W of Güvenli village, open areas; 1100 m, 19.V.1996, *Cansaran* 1223. E. Medit. El.

Muscari armeniacum Leichtlin ex Baker

Between Ovabaşı and Akpınar, shrubby; 1300 m, 24.V.1997, *Cansaran* 2317.

M. bourgaei Baker

N places of Eđerli Mountain, vicinity of Yukarı Kayabaşı village, open areas; 1700 m, 04.V.1996, *Cansaran* 1041. End. Medit. El. (det. M. Koyuncu)

Gagea villosa (M.Bieb.) Duby var. *villosa*

E places of Köseler castle, open areas; 1280 m, 14.IV.1996, *Cansaran* 1020. Medit. El.? (det. M. Koyuncu)

IRIDACEAE

Iris kerneriana Asch. & Sint. ex Baker

Between Ovabaşı and Akpınar village, degraded forest; 1200 m, 02.VIII.1996, *Cansaran* 1965. End. Euro-Sib. El.? (det. M. Koyuncu)

Crocus ancycensis (Herbert) Maw

Köseler village surroundings, roadsides; 1260 m, 31.III.1996, *Cansaran* 1002. End. Ir.-Tur. El.

ORCHIDACEAE

Cephalanthera rubra (L.) Rich.

Approx 8 km SE of Göçeri village, forest; 1230 m, 01.VII.1997, *Cansaran* 2634. (det. E. Sezik)

C. longifolia (L.) Fritsch

W places of Köseler village, Ekinalađı, open areas; 1350 m, 26.V.1996, *Cansaran* 1341. Euro-Sib. El. (det. E.Sezik)

C. damasonium (Mill.) Druce

Approx 4 km SW of Köseler village, under forest; 1500 m, 25.V.1996, *Cansaran* 1290. Euro-Sib. El. (det. E. Sezik)

Epipactis helleborine (L.) Crantz

Approx 3 km S of Yemişen village, forest; 1470 m, 02.VII.1997, *Cansaran* 2759. (det. E. Sezik)

Orchis tridentata Scop.

W places of Köseler village, Ekinalađı, open areas; 1300 m, 26.V.1996, *Cansaran* 1324. Medit. El. (det. E. Sezik)

O. purpurea Huds.

W places of Köseler village, Ekinalađı location; open areas; 1300 m, 26.V.1996, *Cansaran* 1340. Euro-Sib. El. (det. E.Sezik).

O. mascula (L.) L. subsp. *pinetorum* (Boiss. & Kotschy) E.G.Camus

Approx 4 km SW of Köseler village, under forest; 1400 m, 25.V.1996, *Cansaran* 1268. E. Medit. El. (det. E. Sezik)

Dactylorhiza romana (Seb.) Soó subsp. *romana*

1 km S places of Yemişen village, forest; 1500 m, 04.V.1996, *Cansaran* 1047. Medit. El. (det. E.Sezik)

D. romana (Seb.) Soó subsp. *georgica* (Klán) Soó ex Renz & Taub.

1 km S places of Yemişen village, forest; 1530 m, 04.V.1996, *Cansaran* 1046. Eux. El. (det. E. Sezik)

D. osmanica (Kl.) Soó var. *osmanica*

1 km S of Güvenli village; 1160 m, 15.VI.1996, *Cansaran* 1383. End. Ir.-Tur. El. (det. E. Sezik)

JUNCACEAE

Juncus heldreichianus T.Marsson ex Parl. subsp. *heldreichianus*

1 km NE of Küçükçay village, wet areas; 1100 m, 08.VI.1997, *Cansaran* 2403. E. Medit. El.

Luzula forsteri (Sm.) DC.

App 4-5 km NW of Kışladeresi village, under forest; 1450 m, 19.VII.1997, *Cansaran* 2843. Euro-Sib. El.

CYPERACEAE

Eleocharis uniglumis (Link) Schultes

App 5 km E of Büyükçay village, watery places, 900 m, 19.V.1996, *Cansaran* 1159.

Carex otrubae Podp.

1 km NE of Küçükçay village, shrubby; 1200 m, 20.VII.1996, *Cansaran* 1683. Euro-Sib. El.? (det. E.Hamzaođlu)

C. ovalis Good

Approx 4 km NW of Kışladeresi village, under forest; 1400 m, 19.VII.1997, *Cansaran* 2859. Euro-Sib. El.

C. distans L.

Between Ovabaşı and Akpınar village, degraded forest; 1200 m, 02.VIII.1996, *Cansaran* 1961. Euro-Sib. El.

POACEAE / GRAMINEAE

Brachypodium sylvaticum (Huds.) P.Beauv.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1719. Euro-Sib. El.

***Elymus repens** (L.) Gould subsp. *elongatiformis* (Drobow) Melderis

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1495. Ir.-Tur. El.

***E. hispidus** (Opiz) Melderis subsp. *hispidus*

1 km NE of Küçükçay village, steppe; 1100 m, 20.VII.1996, *Cansaran* 1623.

***E. hispidus** (Opiz) Melderis subsp. *barbulatus* (Schur) Melderis

500 m W of Köseler village, steppe; 1160 m, 04.VIII.1996, *Cansaran* 2190.

Aegilops triuncialis L. subsp. *triuncialis*

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1704.

Ae. biuncialis Vis.

1 km W of Küçükçay village, steppe; 1050 m, 20.VII.1996, *Cansaran* 1884.

Hordeum bulbosum L.

1 km E of Güllüce village, steppe; 1400 m, 24.V.1997, *Cansaran* 2361.

Taeniatherum caput-medusae (L.) Nevski subsp. *crinitum* (Schreb.) Melderis

1 km W of Çitli (Bađlıca) village, open shrubby; 1100 m, 27.VI.1998, *Cansaran* 3159. Ir.-Tur. El.?

Bromus arvensis L.

S places of Köseler village, under forest; 1290 m, 27.VI.1998, *Cansaran* 3107.

B. japonicus Thunb. subsp. *japonicus*

1 km NE of Küçükçay village, steppe; 1150 m, 10.VII.1996, *Cansaran* 1496.

B. tectorum L.

Approx 2 km W of Güvenli village, 1100 m, 19.V.1996, *Cansaran* 1214.

B. tomentellus Boiss.

300 m, W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1694. Ir.-Tur. El.

Trisetum flavescens (L.) P.Beauv.

App 5 km NW of Kışladeresi village, under forest; 1450 m, 19.VII.1997, *Cansaran* 2841. Euro-Sib. El.

Koeleria cristata (L.) Pers.

1 km NE of Çitli (Bağlıca) village, shrubbery; 1030 m, 20.VI.1997, *Cansaran* 2590.

***Miliium vernale** M.Bieb. subsp. **montianum** (Parl.) Al.Jahn & Maire

Approx 8 km SE of Göçeri village, forest; 1260 m, 01.VII.1997, *Cansaran* 2658. *Medit. El.*

Alopecurus arundinaceus Poir.

E places of Büyükçay village, roadsides; 1060 m, 19.V.1996, *Cansaran* 1155. *Euro-Sib. El.*

A. myosuroides Huds. var. **myosuroides**

App 2 km W of Güvenli village, open areas; 1100 m, 19.V.1996, *Cansaran* 1234. *Euro-Sib. El.*

***Phleum alpinum** L.

Between Ovabaşı and Akpınar, shrubbery; 1300 m, 02.VIII.1996, *Cansaran* 2000. *Euro-Sib. El.*

P. bertolonii DC.

1 km NE of Küçükçay village, steppe; 1100 m, 08.VI.1997, *Cansaran* 2381.

P. subulatum (Savi) Asch. & Graebn. subsp. **subulatum**

Approx 3 km W of Köselers village, degraded forest; 1275 m, 15.VI.1997, *Cansaran* 2506.

P. montanum C.Koch subsp. **montanum**

300 m E of Ovabaşı village, forest; 1200 m, 03.VIII.1996, *Cansaran* 2252.

P. exaratum Hochst. ex Griseb. subsp. **exaratum**

300 m W of Büyükçay village, steppe; 1050 m, 21.VII.1996, *Cansaran* 1839.

Festuca jeanpertii (St.-Yves) Markgr. apud Hayek subsp. **jeanpertii**

8 km SE of Göçeri village, under forest; 1230 m, 01.VII.1997, *Cansaran* 2635. *E. Medit. El.*

F. valesiaca Schleid. ex Gaudin

300 m W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1748.

F. callieri (Hackel ex St.-Yves) Markgr. apud Hayek subsp. **callieri**

Approx 4 km SW of Köselers village, forest; 1400 m, 25.V.1996, *Cansaran* 1252.

Lolium perenne L.

Approx 5 km NW of Kışladeresi village, forest; 1400 m, 19.VII.1997, C.2824. *Euro-Sib. El.*

L. rigidum Gaudin var. **rigidum**

1 km SW of Köselers village, forest; 1250 m, 04.VIII.1996, *Cansaran* 2133. *E. Medit. El.*

Poa annua L.

S places of Yukarı Kayabaşı village, open areas; 1500 m, 04.V.1996, *Cansaran* 1079.

P. trivialis L.

Approx 2 km W of Güvenli village, 1100 m, 19.V.1996, *Cansaran* 1215.

P. pratensis L.

Approx 4 km SW of Köselers village, open forests; 1500 m, 25.V.1996, *Cansaran* 1279.

P. bulbosa L.

Approx 2 km W of Güvenli village, roadsides; 1100 m, 19.V.1996, *Cansaran* 1213.

***Eremopoa persica** (Trin.) Roshev.

1 km NE of Çitli (Bağlıca) village, shrubbery; 1050 m, 20.VI.1997, *Cansaran* 2565. *Ir.-Tur. El.*

Catabrosa aquatica (L.) P.Beauv.

Approx 4 km SW of Köselers village, watery places; 1400 m, 25.V.1996, *Cansaran* 1245.

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

Approx 8 km SE of Göçeri village, forest; 1260 m, 01.VII.1997, *Cansaran* 2655.

Briza media L.

App 3 km S of Yemişen village, under forest; 1460 m, 02.VII.1997, *Cansaran* 2737.

B. humilis L.

Between Akpınar and Güllüce village, roadsides; 1300 m, 10.VII.1996, *Cansaran* 1467.

Echinaria capitata (L.) Desf.

500 m W of Köselers village, steppe; 1160 mm, 04.VIII.1996, *Cansaran* 2198.

Melica uniflora Retz.

Approx 8 km SE of Göçeri village, under forest; 1260 m, 01.VII.1997, *Cansaran* 2662. *Euro-Sib. El.*

M. ciliata L. subsp. **ciliata**

1 km W of Köselers village, roadsides; 1100 m, 10.VII.1996, *Cansaran* 1581.

Stipa holosericea Trin.

Approx 2 km W of Güvenli village, open areas; 1100 m, 19.V.1996, *Cansaran* 1226. *Ir.-Tur. El.*

S. ehrenbergiana Trin. & Rupr.

Approx 2 km W of Büyükçay village, steppe; 1100 m, 21.VII.1996, *Cansaran* 1730. *Ir.-Tur. El.*

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

1 km W of Çitli (Bağlıca) village, shrubbery; 1100 m, 27.VI.1998, *Cansaran* 3160.

Bothriochloa ischaemum (L.) Keng

1 km W of Küçükçay village, steppe; 1060 m, 20.VII.1996, *Cansaran* 1844-B.