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The Flora of Kalabak Basin (Eskişehir, Turkey)

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Abstract: The present study is concerned with the flora of the Kalabak Basin, an area lying to the south-west of the city of Eskişehir that supplies Eskişehir with drinking water. As a result of our evaluation of the plant specimens collected over 3 years (2001 to 2003), 71 families, as well as 575 taxa belonging to 307 genera, were determined to occur in the study area (569 species, 3 subspecies, and 3 varieties). Two of these taxa belong to Pteridophytes, 5 belong to Gymnosperms, and 568 belong to Angiosperms (488 Dicotyledons, 80 Monocotyledons) subdivisions. The largest families are Asteraceae (80), Fabaceae (51), and Brassicaceae (40) in terms of the number of species and subspecies included. Genera represented by the highest number of species are *Allium* L. (13), *Verbascum* L. (9), and *Centaurea* L. (8). The distribution of phytogeographic elements is 95 for Irano-Turanian (16.52%), 82 for Euro-Siberian (14.26%), 51 for Mediterranean (8.86%), and 347 for others (60.34%). The number of endemic taxa within the study area is 80 (13.91%). Ninety-one taxa are new records for the B3 square.

Key Words: Flora, Kalabak Basin, Eskişehir, Turkey

Kalabak Havzası Florası (Eskişehir, Türkiye)

Özet: Bu çalışma, Eskişehir il sınırları içerisinde güneybatı konumda yer alan ve ilin içme suyu ihtiyacının karşılandığı bölge olan Kalabak Havzasının florasını içermektedir. Çalışma alanından 2001-2003 yılları arasında, 3 yıl süresince, toplanan bitki örneklerinin değerlendirilmesi sonucu 71 familya ve 307 cinse ait 575 takson (569 tür, 3 alttür ve 3 varyete) bulunmuştur. Bu taksonlardan ikisi eğreltiler, beşi açık tohumlular, 568'i kapalı tohumlular (488 çift çenekliler, 80 tek çenekliler) alt bölümlerine dahildir. İçerdikleri tür ve tür altı takson sayısı bakımından en büyük familyalar Asteraceae (80), Fabaceae (51) ve Brassicaceae (40) dir. En çok türle temsil edilen cinsler ise *Allium* L. (13), *Verbascum* L. (9) ve *Centaurea* L. (8)'dir. Bitki coğrafyası elementlerinin dağılımı İrano-Turan 95 (% 16,52), Avrupa-Sibirya 82 (% 14,26), Akdeniz 51 (% 8,86) ve diğerleri 347 (% 60,34)'dir. Çalışma alanındaki endemik takson sayısı 80 (% 13,91)'dir. 91 takson B3 karesi için yeni kayıttır.

Anahtar Sözcükler: Flora, Kalabak Havzası, Eskişehir, Türkiye

Introduction

The study area is located south-west of the city of Eskişehir and is in square B3, according to the grid system used in the *Flora of Turkey* (Davis, 1965-1985). The Kalabak Basin is the source of Eskişehir's drinking water. Moreover, this is a transitional region of 3 phytogeographical regions in respect to the vegetation of the Türkmen Mountains (Irano-Turanian, Mediterranean, and Euro-Siberian). Our study area combines with the mountain range of Domaniç in the Aegean region. For this reason, the Kalabak Basin bears interesting characteristics in terms of both flora and phytogeography.

There have been no previous studies on the flora of the Kalabak district. The Kalabak Basin was selected as

the study area in order to determine the flora occurring in this region (vascular flora), which is significant for the city of Eskişehir, to collect possible new records for the B3 square, to revise existing endemic plants in the region, and finally to contribute to our knowledge of the flora of Türkmen Mountains.

The research area is bordered in the north by Uluçayır plateau, in the south by Türkmenbaba hill, in the west by Katrancı hill and Efsunbaba hill, and in the east by Sarısu, Ilıca, and Hızır streams. The altitude of the study area varies between 800 m (Kalabak village) and 1826 m (Türkmenbaba hill). There exist also such small hills as Paşaköşkü (1700 m), Efsunbaba (1600 m), and Bozkuş (1594 m) across the study area (Figure 1).

Kalabak Basin is geologically composed of Early-Middle Miocene age tuff and lava accumulated on Palaeozoic age metamorphic rocks with limited surface area. Tuffs generated by pyroclastic flow are typically white and they contain between centimetre and decimetre pumice particles. Current stream sediments in the region keep accumulating in the vicinity of Uluçayır village in relation to Ilica stream, a branch of Porsuk (Gözler et al., 1997).

The most common soil type in the research area is the brown forest soil. There is also red-brown forest soil, apart from alluvial, colluvial, and non-calcareous brown soil groups.

Although the climate of Eskişehir seems to be a transition climate type between the West Anatolian and the Inner Anatolian climates, there is often a harsh, territorial climate in the city itself. The city is surrounded by mountains to the north and south, as well as by a high

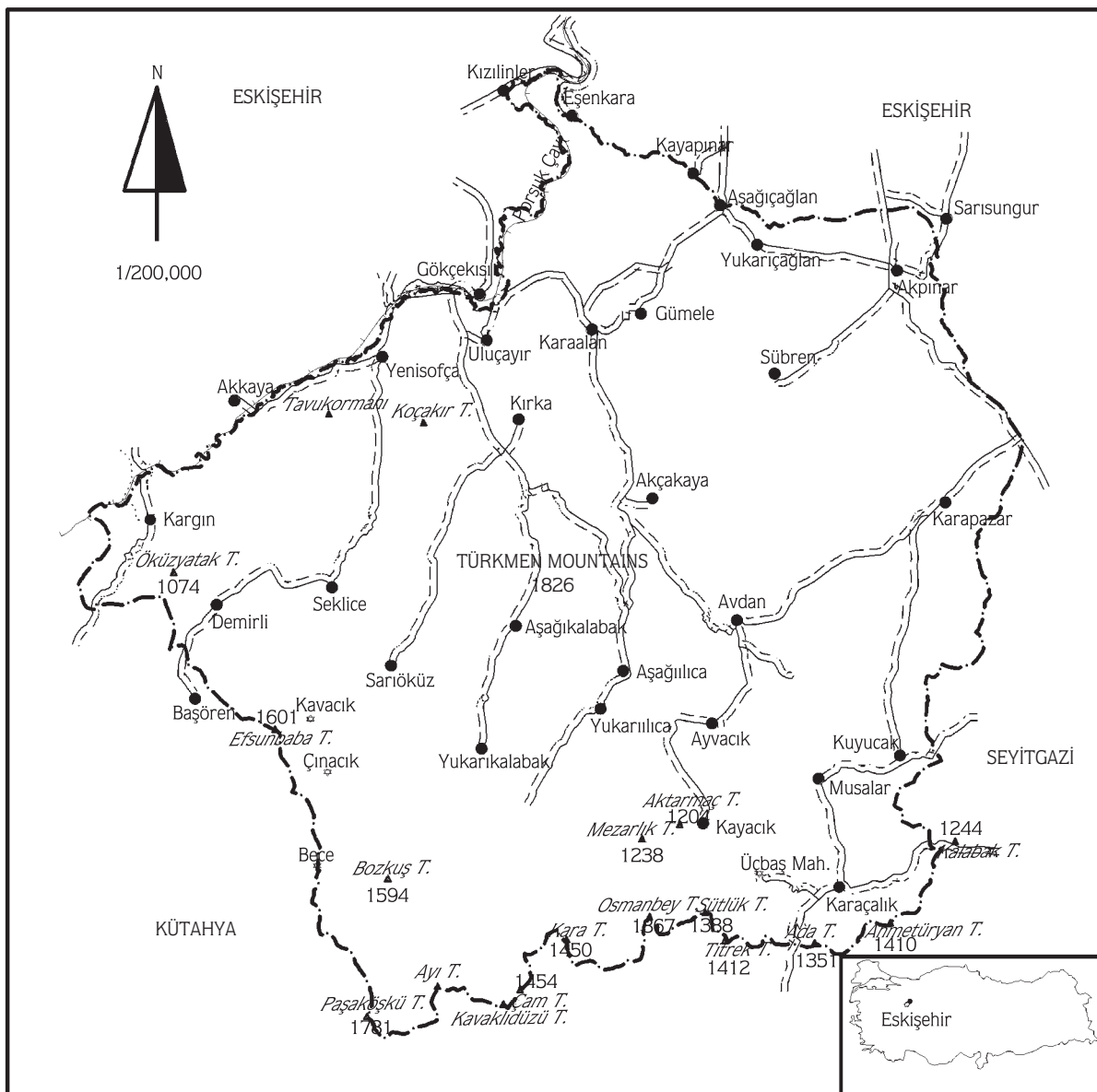


Figure 1. Map of the study area.

plateau to the west. While this hinders the effect of the Mediterranean and Black Sea climates on the city, it allows, albeit slightly, the West Anatolian climate to permeate into the city (Akman, 1990). The ombrothermic diagram of Eskişehir was prepared according to the climatic data obtained from meteorological stations in Eskişehir (Figure 2).

Vegetation

The main vegetation types observed to occur in the Kalabak Basin in the vicinity of the Türkmen Mountains are forest, meadow, subalpine, and steppe. *Pinus nigra* J.F.Arnold subsp. *nigra* var. *caramanica* (Loudon) Rehder and *P. sylvestris* L. subsp. *hamata* Steven forests often cover 28,984 ha of the area of approximately 50,000 ha. Apart from these evergreen plants, there exist also some natural deciduous plants with widespread distribution in the forest vegetation such as *Fagus orientalis* Lipsky, *Quercus cerris* L. var. *cerris*, *Populus tremula* L., *Coryllus avellana* L. var. *avellana*, *Carpinus betulus* L., and *Salix alba* L. Furthermore, some bush-like and tree formations widely exist, such as *Quercus trojana* P.B.Webb., *Q. petraea* (Matt.) Liebl. subsp. *iberica* (Steven ex M.Bieb.) Krassiln., *Q. infectoria* Olivier subsp. *infectoria*, *Q. pubescens* Willd., *Juniperus oxycedrus* L. subsp. *oxycedrus*, *Crataegus monogyna* Jacq. subsp. *monogyna*, and *Cistus laurifolius* L. The research area includes *Thymus longicaulis* C.Presl subsp. *longicaulis* var. *subisophyllus* (Borbás) Jalas, *Astragalus strictispinis*

Boiss., *A. lydius* Boiss., *Acantholimon acerosum* (Willd.) Boiss. var. *acerosum*, *Teucrium polium* L., *Acanthus hirsutus* Boiss., *Globularia orientalis* L., *Salvia aethiopis* L., *S. dichroantha* Stapf, *Convolvulus arvensis* L., *Verbascum glomeratum* Boiss., *Trigonella crassipes* Boiss., and many members of the family Poaceae in secondary steppe areas formed due to human activities.

Materials and Methods

The present study includes 1380 plant specimens collected from the Kalabak Basin in the vicinity of the Türkmen Mountains, Eskişehir, during 2001-2003. The research area lies at latitude 39°28'10"N and longitude 30°19'05"E; grid square B3. The specimens were dried using standard herbarium methods. The majority of the specimens were identified with the help of the *Flora of Turkey and the East Aegean Islands* (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000). Some of the identifications were checked in *Flora Europaea* (Tutin et al., 1964-1980), *Flora Hellenica* (Strid & Tan, 1997), *Flora Iranica* (Rechinger, 1965-1977), *Flora of Iraq* (Townsend & Guest, 1966-1985), and *Flora Palaestina* (Zohary, 1966-1972). The herbaria of ANK, ESSE, GAZI, and HUB were used to check these specimens. All of the plant specimens are kept in the Herbarium of Eskişehir Osmangazi University Sciences and Literature Faculty (OUFE).

The plant taxa of the Kalabak Basin are listed in the appendix. All the taxa in the floristic list are given

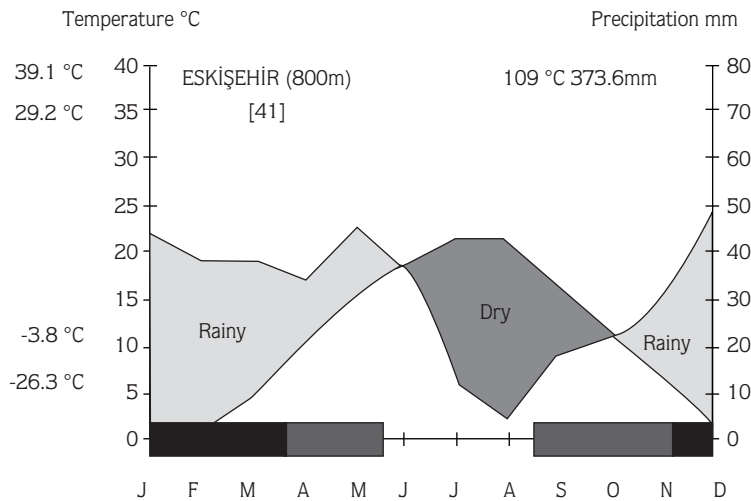


Figure 2. Ombrothermic diagrams of Eskişehir.

according to the order in the *Flora of Turkey and the East Aegean Islands* (Davis, 1965-1985; Davis et al., 1988). The list gives the locality of the taxon first, followed by habitat, altitude, collection date, collector name(s), herbarium number, endemism, phytogeographical region, life form, and IUCN (2001) threat category for endemic taxa. Grid square and city name are not mentioned for each location because the study area is completely within the B3 Eskişehir. An asterisk in front of a plant name indicates a new record for the B3 grid square (Donner, 1990; Duman & Karavelioğulları, 1995; Yıldız & Aytaç 1995; Mutlu & Erik, 1999; Serin & Ertuğrul, 1999; Kargioğlu & Aşçı, 2001; Kaynak & Tarımcılar, 2001; Kaynak et al., 2003; Yıldırım, 1994, 1996a, 1996b, 1997a, 1997b, 1998a, 1998b, 1999a, 1999b, 2000a, 2000b, 2000c, 2001a, 2001b, 2002a, 2002b, 2003a, 2003b).

The data of this study were compared with those of other studies (Ekim, 1978; Ocak & Türe, 2001; Eridir & Türe, 2003; Köse & Ocak, 2004).

The authors of taxa names are written according to Brummitt and Powell (2001).

Abbreviations

The abbreviations used in the text and the appendix are Euxine (Eux.), Euro-Siberian element (Euro-Sib.), Mediterranean element (Medit.), East Mediterranean element (E. Medit.), Irano-Turanian element (Ir.-Tur.), Mesophanerophyte (Msph.), Microphanerophyte (Mcph.), Nanophanerophyte (Nph.), Cryptophyte (Crp.), Hemicryptophyte (Hcrp.), Chamaephyte (Ch.), Therophyte (Th.), Vascular parasite (Vp.)

Results and Discussion

The present study examines the flora of the Kalabak Basin, which is a significant reserve from which the drinking-water supply of the city is provided. It also has an interesting and rich floristic structure as it forms the transition zone of 3 phytogeographical regions. In the studies performed in the region over 3 years, 575 taxa were identified. These taxa belong to 71 families and 307 genera, and they consist of 569 species, 3 subspecies, and 3 varieties. Two of them belong to Pteridophyta and 573 belong to Spermatophyta divisions. The subdivision Gymnospermae has 5 taxa and Angiospermae has 568. Of these, 488 taxa belong to the Dicotyledones while the

other 80 belong to the Monocotyledones. While 80 out of 575 taxa are endemic, 91 taxa are considered new records for the B3 square (Table 1).

The largest families according to the number of species in this study are presented in Table 2. The family Asteraceae is the largest group in the study area, with 80 taxa. The family Fabaceae is the second largest group, with 51 taxa. The family Brassicaceae ranks third, with 40 taxa. A comparison between our results and those reported by others from close and similar regions (Table 3) revealed that the sequence of the 3 largest families in the flora of Kalabak Basin is the same for the flora of Meşelik Campus (Ocak & Türe, 2001). Furthermore, Asteraceae is the largest family and Fabaceae is the second largest family in the *Flora of Turkey* but in our study it ranks fourth. In our study, the third largest family is Brassicaceae. The ordering of the largest families shows identical variations between studies because of geomorphologic, geologic, microclimatic, and edaphic features.

Table 1. The dispersion of taxa into large taxonomic groups.

	Number of Families	Number of Genera	Number of Taxa
Pteridophyta	2	2	2
Spermatophyta	69	305	573
Gymnospermae	3	3	5
Angiospermae	66	302	568
Dicotyledoneae	57	264	488
Monocotyledoneae	9	38	80
Total	71	307	575

Table 2. The families containing the highest number of taxa.

Families	Number of taxa	Rate (%)
Asteraceae	80	13.91
Fabaceae	51	8.86
Brassicaceae	40	6.95
Lamiaceae	39	6.78
Liliaceae	35	6.08
Scrophulariaceae	25	4.34
Rosaceae	24	4.17
Caryophyllaceae	23	4.00
Apiaceae	23	4.00

Table 3. Comparison of large families in the Kalabak Basin and neighbouring areas.

Families (%)	1	2	3	4	5
Asteraceae	13.91	12.00	14.70	13.35	11.10
Fabaceae	8.86	11.10	9.60	7.22	10.10
Brassicaceae	6.95	4.90	8.50	6.13	7.30
Lamiaceae	6.78	7.10	6.80	7.58	8.74
Liliaceae	6.08	4.40	8.24	3.61	4.50
Scrophulariaceae	4.34	3.30	7.01	2.88	3.50
Rosaceae	4.17	5.70	1.90	3.24	3.30
Caryophyllaceae	4.00	4.20	5.70	5.05	6.10
Apiaceae	4.00	5.30	5.70	5.41	3.90

1. Flora of Kalabak Basin, 2. Flora of Türkmen Mountain, 3. Flora of OGÜ Meşelik Campus, 4. Flora of Musaözü, 5. Flora of Emirdağ Mountain.

The genera containing the highest number of species in this study are listed in Table 4. The genus *Allium* L. ranks first, with 13 taxa (2.26%). *Verbascum* L. ranks second, with 9 taxa (1.56%), and *Centaurea* L. ranks third, with 8 taxa (1.39%).

The species of the study area, categorised according to phytogeographical regions, can be listed as follows: Irano-Turanian elements 95 (16.52%), Euro-Siberian elements 82 (14.26%), Mediterranean elements 51 (8.86%), and the remaining 347 (60.34%) taxa are unknown or pluriregional. The results of the studies conducted in close and similar areas, along with phytogeographical distribution, are presented in Table 5. Many specimens belonging to the Irano-Turanian phytogeographical region were determined in this study. Euro-Siberian elements, which rank second, are followed by Mediterranean elements. As the Kalabak Basin is phytogeographically an exact transition zone, the phytogeographical distribution of the collected samples is in line with this situation. A comparison between our study results and those of others carried out in the study area indicates that we can see the

Table 4. The genera containing the highest number of taxa.

Genera	Number of taxa	Rate (%)
<i>Allium</i>	13	2.26
<i>Verbascum</i>	9	1.56
<i>Centaurea</i>	8	1.39
<i>Astragalus</i>	8	1.39
<i>Veronica</i>	8	1.39
<i>Silene</i>	7	1.21
<i>Alyssum</i>	7	1.21
<i>Hypericum</i>	7	1.21
<i>Lathyrus</i>	7	1.21
Total	74	12.86

same phytogeographical sequence in the flora of Musaözü (Erdir & Türe, 2003).

In this study, 80 of the 575 taxa are endemic plants. The rate of endemism is 13.91%. Compared with studies conducted in close and similar regions, the rate of endemism comes second after the flora of Emirdağ (15.90%) (Köse & Ocak, 2004) (Table 5). Threat categories for endemic taxa are listed as follows: *Carduus*

Table 5. A comparison of the phytogeographical elements and endemism.

Research area	1	2	3	4	5
Irano-Turanian	16.52	7.90	17.80	14.80	17.90
Euro-Siberian	14.26	9.30	4.80	10.10	5.40
Mediterranean	8.86	4.70	6.10	9.70	8.80
Pluriregional or unknown	60.34	78.10	71.30	65.40	66.70
Endemism	13.91	10.00	9.00	10.10	15.90

1. Flora of Kalabak Basin, 2. Flora of Türkmen Mountain, 3. Flora of OGÜ Meşelik Campus, 4. Flora of Musaözü, 5. Flora of Emirdağ Mountain.

olympicus Boiss. subsp. *olympicus* Endangered (EN). This taxon is restricted to only one locality. The population includes only a few individuals. *Onobrychis pisidica* Boiss., *Ebenus cappadocica* Hausskn. & Siehe ex Bornm., *Verbascum serratifolium* (Hub.-Mor.) Hub.-Mor., and *V. stenostachyum* Hub.-Mor. Near Threatened (NT); *Lathyrus laxiflorus* (Desf.) O.Kuntze subsp. *angustifolius* (Post ex Dinsm.) P.H.Davis, *Hieracium pseudodontotrichum* Hub.-Mor., *Cicerbita boissieri* (Rauy) C.Jeffrey, *Convolvulus phrygius* Bornm., *Verbascum stachydfolium* Boiss. & Heldr. var. *stachyfolium*, and *Thymus leucostomus* Hausskn. & Velen. var. *argillaceus* Jalas Vulnerable (VU); and the other 69 endemic taxa are Least Concern (LC) (IUCN, 2001). The main problem facing the endemic taxa included in the NT, VU, and LC categories is over-grazing.

The life forms of the taxa according to Raunkiaer are given in Table 6; 280 (48.69%) of the taxa are hemicryptophytes, 130 (22.60%) therophytes, 73

Table 6. Life forms in the research area.

Life form	Number of taxa	Rate (%)
Hemicryptophyte	280	48.69
Therophyte	130	22.60
Cryptophyte	73	12.69
Chamaephyte	40	6.95
Microphanerophyte	26	4.52
Mesophanerophyte	10	1.73
Nanophanerophyte	10	1.73
Vascular parasite	6	1.04
Total	575	100

(12.69%) cryptophytes, 40 (6.95%) chamaephytes, 26 (4.52%) microphanerophytes, 10 (1.73%) mesophanerophytes, 10 (1.73%) nanophanerophytes, and 6 (1.04%) vascular parasites. Raunkiaer's life forms spectrum acts as an indicator of the region or climate (Raunkiaer, 1934).

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APPENDIX

THE FLORISTIC LIST

PTERIDOPHYTA

EQUISETACEAE

Equisetum arvense L.

Sarıöküz, wet meadows, 1100 m, 11.06.2001, G.Hüner, OUFE 9060; Gavureyrek hills, wet meadows, 1000 m, 01.06.2002, G.Hüner, OUFE 9061.

Crp.

HYPOLEPIDACEAE

**Pteridium aquilinum* (L.) Kuhn

Efsunbaba hills, northern slopes, 1400 m, 18.06.2002, G.Hüner, OUFE 9062; Taşoluk, slopes, 1350 m, 14.08.2002, G.Hüner, OUFE 9063.

Crp.

SPERMATOPHYTA

GYMNOSPERMAE

PINACEAE

Pinus sylvestris L. subsp. *hamata* Steven

Çilekli, roadsides, 1500 m, 11.06.2001, G.Hüner, OUFE 9064; Yukarı Kalabak, roadsides, 1300 m, 16.06.2002, G.Hüner, OUFE 9065; Kavacık, slopes, 1200-1300 m, 18.08.2002, G.Hüner, OUFE 9066a; Hızır stream, streamsides, 1300 m, 18.08.2002, G.Hüner, OUFE 9066b.

Cultivated. Euro-Sib. Msph.

Pinus nigra J.F.Arnold. subsp. *nigra* var. *caramanica* (Loud.) Rehd.

Kalabak vicinity, roadsides, 1300 m, 18.08.2002, G.Hüner, OUFE 9067; Kavacık, slopes, 1350 m, 18.08.2002, G.Hüner, OUFE 9068; Taşoluk, northern slopes, 1450 m, 18.08.2002, G.Hüner, OUFE 9069.

Msph.

CUPRESSACEAE

Juniperus oxycedrus L. subsp. *oxycedrus*

Kalabak vicinity, slopes, 1300 m, 18.08.2002, G.Hüner, OUFE 9070; Kavacık to Sirt, roadsides, 1200 m, 18.08.2002, G.Hüner, OUFE 9071.

Mcp.

Juniperus foetidissima Willd.

Hızır stream, streamsides, 1300 m, 29.06.2002, G.Hüner, OUFE 9072a; Gavureyrek hill, southern slopes, 1000 m, 29.06.2002, G.Hüner, OUFE 9072b; Aşağı Kalabak, slopes, 900 m, 03.08.2002, G.Hüner, OUFE 9073.

Mcp.

EPHEDRACEAE

Ephedra major Host

Ilica road, roadsides, 1000 m, 14.05.2002, G.Hüner, OUFE 9074; Aşağı Kalabak, streamsides, 950 m, 14.05.2002, G.Hüner, OUFE 9075.

Nph.

ANGIOSPERMAE

DICOTYLEDONEAE

RANUNCULACEAE

Nigella arvensis L. var. *involucrata* Boiss.

Aşağı Kalabak, plantation area, 900 m, 09.06.2002, G.Hüner, OUFE 9076.

Hcrp.

Delphinium fissum Waldst. & Kit subsp. *anatolicum* Chowdhuri & P.H.Davis

Kalabak vicinity, around Kalabak stream, streamsides, 1050 m, 12.07.2003, Ataşlar & Ocak, OUFE 13004.

Endemic. Hcrp. LC

D. venulosum Boiss.

Aşağı Kalabak, Kartalkaya, roadsides, 1200 m, 12.07.2003, Ataşlar & Ocak, OUFE 13005.

Endemic. Ir.-Tur. Hcrp. LC

Consolida thirkeana (Boiss.) Schröd.

Gavureyrek hill, southern slopes, 1000 m, 11.06.2001, G.Hüner, OUFE 9077; Tay Harası, open places, 950 m, 11.06.2001, G.Hüner, OUFE 9078; Aşağı Kalabak, Kartalkaya, roadsides, 1200 m, 13.07.2002, G.Hüner, OUFE 9079.

Endemic. Th. LC

C. orientalis (Gay) Schröd.

Around Sarısu stream, field margin, 800 m, 11.06.2001, G.Hüner, OUFE 9080; Aşağı Kalabak, field margin, 900 m, 11.06.2001,

G.Hüner, OUFE 9081; Seklice village, field margin, 950 m, 01.06.2002, G.Hüner, OUFE 9082.

Th.

C. regalis S.F.Gray. subsp. *regalis*

Tay Harası, steppe, 950 m, 11.06.2001, G.Hüner, OUFE 9083; Evcikdüzü, northern slopes, 1000 m, 21.06.2001, G.Hüner, OUFE 9084; Aşağı Kalabak, steppe, 920 m, 13.07.2002, G.Hüner, OUFE 9085.

Th.

C. raveyi (Boiss.) Schröd.

Seklice village, steppe, 950 m, 11.06.2001, G.Hüner, OUFE 9086; Aşağı Kalabak, steppe, 900 m, 18.06.2001, G.Hüner, OUFE 9087.

Endemic. Ir.-Tur. Th. LC

**Clematis cirrhosa* L.

Aşağı Kalabak, plantation area, on *Quercus*, 1000 m, 16.05.2002, G.Hüner, OUFE 9088.

Medit. Nph.

Adonis aestivalis L. subsp. *aestivalis*

Kalabak Orman İşletme Şefliği, steppe, 1050 m, 09.06.2001, G.Hüner, OUFE 9089.

Th.

A. flammea Jacq.

Aşağı Kalabak, field margin, 900 m, 21.05.2003, Ataşlar & Ocak, OUFE 13006.

Th.

**Ranunculus repens* L.

Kalabak vicinity, around Kalabak stream, streamsides, 1050 m, 12.05.2002, G.Hüner, OUFE 9090; Hızır stream, streamsides, 1100 m, 02.06.2002, G.Hüner, OUFE 9091.

Hcrp.

R. constantinopolitanus (DC.) d'Urv.

Hızır stream, dry streambed, 1300 m, 11.06.2001, G.Hüner, OUFE 9092a; Çavuş stream, streamsides, 1200 m, 13.06.2002, G.Hüner, OUFE 9092b.

Hcrp.

R. damascenus Boiss. & Gaill.

Kalabak stream, steppe, 1100 m, 12.06.2001, G.Hüner, OUFE 9093.

- Ir.-Tur. Hcrp.
R. illyricus L. subsp. *illyricus*
 Sarısu stream, streamsides, 800 m, 11.06.2001, G.Hüner, OUFE 9094; Aşağı Kalabak, plantation area, steppe, 950 m, 09.06.2002, G.Hüner, OUFE 9095.
 Crp.
 ***R. arvensis** L.
 Kalabak vicinity, around Kalabak stream, wet places, 1200 m, 12.05.2002, G.Hüner, OUFE 9096.
 Th.
 ***R. ficaria** L. subsp. *ficariiformis* Rouy & Fouc.
 Seklice village, field margin, 900 m, 29.04.2003, Ataşlar & Ocak, OUFE 13007.
 Th.
 ***Ceratocephalus falcatus** (L.) Pers.
 Kartalkaya, roadsides, 1300 m, 21.05.2003, Ataşlar & Ocak, OUFE 13008.
 Th.
BERBERIDACEAE
 ***Berberis vulgaris** L.
 Around Kalabak, stony places, 1000 m, 21.05.2003, Ataşlar & Ocak, OUFE 13009.
 Nph.
PAPAVERACEAE
Glaucium corniculatum (L.) Rud. subsp. *corniculatum*
 Seklice village, southern slopes, 1100 m, 12.07.2003, Ataşlar & Ocak, OUFE 13010.
 Hcrp.
Roemeria hybrida (L.) DC. subsp. *hybrida*
 Kalabak to Sarıöküz, field margin, 1100 m, 09.06.2003, Ataşlar & Ocak, OUFE 13011.
 Th.
 ***Papaver macrostomum** Boiss & Huet ex Boiss.
 Seklice village, fallow fields, 950 m, 11.06.2001, G.Hüner, OUFE 9097; Aşağı Kalabak, field margin, 900 m, 01.06.2002, G.Hüner, OUFE 9098.
 Ir.-Tur. Th.
P. rhoeas L.
 Tay Harası, steppe, 950 m, 11.06.2001, G.Hüner, OUFE 9099; Kartalkaya, roadsides, 1300 m, 16.06.2002, G.Hüner, OUFE 9100.
 Th.
 ***P. argemone** L. subsp. *argemone*
 Aşağı Kalabak, plantation area, steppe, 950 m, 01.06.2002, G.Hüner, OUFE 9101; Aşağı Kalabak, steppe, 900 m, 23.06.2002, G.Hüner, OUFE 9102.
 Th.
Hypocoum imberbe Sibth. & Sm.
 Kalabak Orman İşletme Şefliği, meadows, 1050 m, 09.06.2002, G.Hüner, OUFE 9103; Seklice village, southern slopes, 1100 m, 16.06.2002, G.Hüner, OUFE 9104.
 Th.
 ***Fumaria cilicica** Hausskn
 Kalabak Orman İşletme Şefliği, steppe, 1050 m, 12.05.2002, G.Hüner, OUFE 9105; Yukarı Ilıca village, steppe, 16.06.2002, G.Hüner, OUFE 9107.
 Ir.-Tur. Th.
CRUCIFERAE (BRASSICACEAE)
Brassica elongata Ehrh. var. *scabra* O.E.Schulz
 Seklice village, field margin, 900 m, 11.06.2001, G.Hüner, OUFE 9108; Tay Harası, roadsides, 950 m, 23.06.2002, G.Hüner, OUFE 9109.
 Ir.-Tur. Hcrp.
 ***Diploaxis tenuifolia** (L.) DC.
 Sarısu stream, roadsides, 800 m, 11.06.2001, G.Hüner, OUFE 9110; Aşağı Kalabak, plantation area, 1000 m, 01.06.2002, G.Hüner, OUFE 9111.
 Hcrp.
Raphanus raphanistrum L. subsp. *raphanistrum*
 Sarıöküz, southern slopes, 1000 m, 11.06.2001, G.Hüner, OUFE 9112; Yukarı Kalabak, streamsides, 1400 m, 16.06.2002, G.Hüner, OUFE 9113.
 Cultivated. Crp.
 ***Crambe orientalis** L. var. *orientalis*
 Around Kalabak, stony steppe, 1000-1200 m, 25.05.2002, G.Hüner, OUFE 9114.
 Ir.-Tur. Hcrp.
Rapistrum rugosum (L.) All.
 Kalabak to Sarıöküz, field margin, 1100 m, 21.05.2003, Ataşlar & Ocak, OUFE 13012.
 Th.
Conringia orientalis (L.) Andrz.
 Yukarı Kalabak, around forest warehouse, stony places, 1200 m, 26.05.2002, G.Hüner, OUFE 9115.
 Th.
 ***C. planisiliqua** Fisch. & C.A.Mey.
 Kartalkaya, roadsides, 1340 m, 13.06.2001, G.Hüner, OUFE 9116; Gebeş hills, roadsides, 1200 m, 15.06.2002, G.Hüner, OUFE 9117.
 Ir.-Tur. Th.
 ***C. perfoliata** (C.A.Mey.) Busch
 Kalabak to Kirazlı, roadsides, 1350 m, 29.04.2003, Ataşlar & Ocak, OUFE 13013.
 Th.
 ***Lepidium campestre** (L.) R.Br.
 Seklice, Şeytan stream, steppe, 950 m, 11.06.2001, G.Hüner, OUFE 9118; Evcikdüzü, steppe, 1000 m, 11.06.2001, G.Hüner, OUFE 9119; Gavureyrek hills, steppe, 1000 m, 26.05.2002, G.Hüner, OUFE 9120.
 Th.
L. perfoliatum L.
 Doğanakaya hills, steppe, 1450 m, 09.06.2003, Ataşlar & Ocak, OUFE 13014.
 Th.
Cardaria draba (L.) Desv. subsp. *draba*
 Aşağı Kalabak, field margin, 900 m, 23.05.2002, G.Hüner, OUFE 9121.
 Ir.-Tur. Hcrp.
Isatis glauca Aucher ex Boiss. subsp. *glauca*
 Tay Harası, roadsides, 950 m, 11.06.2001, G.Hüner, OUFE 9122; Doğanakaya hills, steppe, 1450 m, 29.06.2002, G.Hüner, OUFE 9123.
 Ir.-Tur. Hcrp.
Aethionema arabicum (L.) Andrz. ex DC.

Ören to Gobak, stony places, 1250 m, 25.06.2003, Ataşlar & Ocak, OUFE 13015.

Th.

**Thlaspi arvense* L.

Aşağı Kalabak, field margin, 900 m, 29.04.2003, Ataşlar & Ocak, OUFE 13016.

Th.

T. perfoliatum L.

Kalabak stream, slopes, 1300 m, 26.05.2002, G.Hüner, OUFE 9125.

Th.

**T. alliaceum* L.

Kalabak to Sarıöküz, field margin, 1100 m, 12.05.2002, G.Hüner, OUFE 9124.

Th.

Capsella bursa-pastoris (L.) Medik.

Seklice village, slopes, 950 m, 11.06.2001, G.Hüner, OUFE 9126; Aşağı Kalabak, field margin, 900 m, 13.07.2002, G.Hüner, OUFE 9127.

Cosmopolitan. Th.

Boreava orientalis Jaub. & Spach.

Kalabak vicinity, field margin, 1150 m, 13.06.2001, G.Hüner, OUFE 9128; Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFE 9129; Çimenharmanı, meadows, 1500 m, 25.05.2002, G.Hüner, OUFE 9130.

Th.

**Alyssum alyssoides* (L.) L.

Between Kalabak and Uluçayır, steppe, 850 m, 16.06.2002, G.Hüner, OUFE 9131; Kalabak vicinity, field margin, 1100 m, 29.06.2002, G.Hüner, OUFE 9132.

Th.

A. minutum Schltld. ex DC.

Yukarı Ilica road, rocky places, 1150 m, 11.06.2001, G.Hüner, OUFE 9133; Kalabak vicinity, slopes, 1250 m, 16.06.2002, G.Hüner, OUFE 9134.

Th.

A. minus (L.) Rothm. var. *micranthum* (C.A.Mey.) Dudley

Gavureyrek hills, slopes, 950 m, 11.06.2002, G.Hüner, OUFE 9135; Aşağı Kalabak, plantation area, 920 m, 29.06.2002, G.Hüner, OUFE 9136.

Th.

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

Kavacık, slopes, 1200 m, 11.06.2001, G.Hüner, OUFE 9137; Kartalkaya, roadsides, 1300 m, 09.06.2002, G.Hüner, OUFE 9138.

Th.

A. borzaeanum Nyar.

Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFE 9139; Yukarı Kalabak to Kirazlı, roadsides, 1350 m, 16.06.2002, G.Hüner, OUFE 9140.

Hcrp.

A. sibiricum Willd.

Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFE 9141; Aşağı Kalabak, plantation area, 950 m, 01.06.2002, G.Hüner, OUFE 9142; Seklice village, roadsides, 950 m, 09.06.2002, G.Hüner, OUFE 9143.

Hcrp.

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

Aşağı Kalabak, field margin, 950 m, 01.06.2002, G.Hüner, OUFE 9144.

Hcrp.

Clypeola jonthlaspi L.

Ören to Gobak, rocky places, 1250 m, 21.05.2003, Ataşlar & Ocak, OUFE 13017.

Th.

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

Between Seklice and Sarıöküz, slopes, 1100 m, 25.06.2003, Ataşlar & Ocak, OUFE 13018.

Th.

Arabis caucasica Willd. subsp. *caucasica*

Kalabak vicinity, steppe, 800 m, 29.06.2002, G.Hüner, OUFE 9145; Tay Harası, roadsides, 950 m, 13.07.2002, G.Hüner, OUFE 9146.

Hcrp.

**A. hirsuta* Scop.

Aşağı Kalabak, plantation area, stony slopes, 1000 m, 21.05.2003, Ataşlar & Ocak, OUFE 13019.

Hcrp.

Cardamine hirsuta L.

Seklice village, northern slopes, 850 m, 15.06.2002, G.Hüner, OUFE 9147; Yukarı Kalabak, roadsides, 1250 m, 16.06.2002, G.Hüner, OUFE 9148.

Th.

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

Kalabak hill, steppe, 1500 m, 12.07.2003, Ataşlar & Ocak, OUFE 13020.

Th.

Chorispora syriaca Boiss.

Tay Harası, roadsides, 950 m, 29.04.2003, Ataşlar & Ocak, OUFE 13021.

Ir.-Tur. Th.

**Hesperis balansae* Fourn.

Kalabak vicinity, steppe, 1100 m, 12.07.2003, Ataşlar & Ocak, OUFE 13022.

E. Medit. Hcrp.

Erysimum cuspidatum (M.Bieb.) DC.

Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFE 9149; Kalabak to Üçsaray, northern slopes, 1500 m, 15.06.2002, G.Hüner, OUFE 9150.

Hcrp.

E. lycanicum (Hand.-Mazz.) Hub.-Mor.

Seklice village, steppe, 950 m, 01.06.2002, G.Hüner, OUFE 9151; E of Yukarı Kalabak, steppe, 1000 m, 23.06.2002, G.Hüner, OUFE 9152; Sarıöküz, rocky steppe, 1100 m, 30.06.2002, G.Hüner, OUFE 9153.

Endemic. Ir.-Tur. Hcrp. LC

E. smyrnaeum Boiss. & Bal.

Tay Harası, roadsides, 950 m, 16.06.2001, G.Hüner, OUFE 9154; Manastır stream, 1400 m, 29.06.2002, G.Hüner, OUFE 9155.

Hcrp.

**Alliaria petiolata* (M.Bieb.) Cavara & Grande

Kartalkaya, open place, 1300 m, 09.06.2003, Ataşlar & Ocak, OUFE 13023.

Hcrp.

Sisymbrium altissimum L.

Sarıöküz road, stony steppe, 1100 m, 09.06.2001, G.Hüner, OUFE 9156; Aşağı

Kalabak, fallow land, 900 m, 13.06.2001, G.Hüner, OUFÉ 9157; Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFÉ 9158.

Hcrp.

Descurainia sophia (L.) Webb ex Prantl

Between Seklice and Sarıöküz, slopes, 1100 m, 30.05.2001, G.Hüner, OUFÉ 9159; Kartalkaya, roadsides, 1340 m, 13.06.2001, G.Hüner, OUFÉ 9160; Aşağı Kalabak, field margin, 900 m, 09.06.2002, G.Hüner, OUFÉ 9161.

Th.

Camelina rumelica Velen

Seklice village, roadsides, 800 m, 30.05.2001, G.Hüner, OUFÉ 9162; Manastır, streambed, 1650 m, 27.05.2002, G.Hüner, OUFÉ 9163.

Th.

RESEDACEAE

Reseda lutea L. var. *lutea*

Ören to Gobak, rocky places, 1250 m, 13.07.2002, G.Hüner, OUFÉ 9164; Aşağı Ilica road, Elmalık, 1000 m, 13.7.2002, G.Hüner, OUFÉ 9165.

Hcrp.

CISTACEAE

Cistus laurifolius L.

Kalabak Orman Genel İşletme Şefliği, open forest, meadows, 1050 m, 16.06.2002, G.Hüner, OUFÉ 9166.

Mcp.

Helianthemum nummularium (L.) Mill. subsp. *lycaonicum* Coode & Cullen

Kartalkaya, roadsides, 1300 m, 09.06.2003, Ataşlar & Ocak, OUFÉ 13024.

Endemic. Ir.-Tur. Hcrp. LC

H. canum (L.) Baumg.

Sarıöküz, plantation area, steppe, 970 m, 30.05.2001, G.Hüner, OUFÉ 9167; Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFÉ 9168; Aşağı Kalabak, plantation area, steppe, 950 m, 01.06.2002, G.Hüner, OUFÉ 9169.

Ch.

Fumana aciphylla Boiss.

Kalabak to Yukarı Ilica, open places, 1200 m, 13.07.2002, G.Hüner, OUFÉ 9170.

Ir.-Tur. Hcrp.

POLYGALACEAE

Polygala pruinosa Boiss. subsp. *pruinosa*

Gavureyrek, slopes, 880 m, 25.06.2003, Ataşlar & Ocak, OUFÉ 13025.

Hcrp.

P. anatolica Boiss. & Heldr.

Aşağı Kalabak, meadows, 950 m, 16.06.2002, G.Hüner, OUFÉ 9171; NE of Kalabak, steppe, 1050 m, 23.06.2002, G.Hüner, OUFÉ 9172.

Hcrp.

CARYOPHYLLACEAE

Minuartia anatolica (Boiss.) Woron. var. *anatolica*

Kalabak vicinity, steppe, 1200 m, 29.06.2002, G.Hüner, OUFÉ 9173.

Endemic. Hcrp. LC

var. *arachnoidea* McNeil

Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFÉ 9174; Kalabak vicinity, steppe, 1100 m, 01.06.2002, G.Hüner, OUFÉ 9175.

Endemic. Ir.-Tur. Hcrp. LC

**Stellaria holostea* L.

Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFÉ 9176; Hızır stream, under *Fagus orientalis*, 1100 m, 13.07.2002, G.Hüner, OUFÉ 9177.

Euro-Sib. Hcrp.

**Cerastium cerastoides* (L.) Britt.

Kalabak vicinity, open places, 1150 m, 09.06.2002, G.Hüner, OUFÉ 9178; Manastır Burnu, under *Pinus nigra*, 1000 m, 29.06.2002, G.Hüner, OUFÉ 9179.

Hcrp.

Holesteum umbellatum L. var. *umbellatum*

Aslan to Yılmaz, roadsides, 1500 m, 09.06.2003, Ataşlar & Ocak, OUFÉ 13026.

Th.

Moenchia mantica (L.) Bartl. subsp. *mantica*

Aşağı Kalabak, stony steppe, 1100 m, 01.06.2002, G.Hüner, OUFÉ 9180.

Th.

Dianthus crinitus Sm. var. *crinitus*

Gavureyrek, slopes, 880 m, 11.06.2001, G.Hüner, OUFÉ 9181; Aşağı Kalabak, plantation area, under *Quercus*, 950 m, 29.06.2002, G.Hüner, OUFÉ 9182.

Hcrp.

**D. zonatus* Fenzl var. *zonatus*

Kalabak burnt land, steppe, 1100 m, 22.06.2001, G.Hüner, OUFÉ 9183; Kartalkaya, open places, 1300 m, 12.06.2002, G.Hüner, OUFÉ 9184.

Hcrp.

**D. lydus* Boiss.

Aşağı Kalabak, plantation area, 920 m, 09.06.2002, G.Hüner, OUFÉ 9185; Sarıöküz, steppe, 1100 m, 01.07.2002, G.Hüner, OUFÉ 9186.

Endemic. Hcrp. LC

D. cibrarius Clem.

Around Belce, steppe, 1500 m, 24.07.2001, G.Hüner, OUFÉ 9187; Ören to Gobak, forest way, roadsides, 1300 m, 13.07.2002, G.Hüner, OUFÉ 9188.

Hcrp.

Petrorhagia alpina (Habl.) Ball. & Heywood subsp. *olympica* (Boiss.) Ball. & Heywood

Türkmen Baba hill, slopes, 1800 m, 24.07.2001, G.Hüner, OUFÉ 9189a; N of Kalabak, steppe, 1500 m, 23.06.2002, G.Hüner, OUFÉ 9189b; Gobak to Otluk, under *Pinus nigra*, 1250 m, 13.07.2002, G.Hüner, OUFÉ 9189c.

Th.

**Saponaria glutinosa* M.Bieb.

Kalabak to Ilica, roadsides, 1150 m, 16.06.2002, G.Hüner, OUFÉ 9190; Hızır stream, slopes, 1300 m, 24.07.2002, G.Hüner, OUFÉ 9191.

Hcrp.

S. officinalis L.

Aşağı Kalabak, steppe, 900 m, 03.08.2002, G.Hüner, OUFÉ 9192.

Hcrp.

S. chlorifolia Kunze

Kartalkaya, roadsides, 1340 m, 24.07.2001, G.Hüner, OUFÉ 9193; Kalabak

hill, steppe, 1500 m, 01.06.2002, G.Hüner, OUFE 9194.

Endemic. Th. LC

Gypsophila pilosa Huds.

Yukarı Kalabak, roadsides, 1250 m, 25.06.2003, Ataşlar & Ocak, OUFE 13027.

Ir.-Tur. Th.

Silene italica (L.) Pers.

E of Aşağı Kalabak, under *Pinus nigra*, 1200 m, 13.07.2002, G.Hüner, OUFE 9195.

Hcrp.

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

Aşağı Kalabak, field margin, 900 m, 25.06.2003, Ataşlar & Ocak, OUFE 13028.

Hcrp.

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

Aşağı Kalabak, slopes, 900 m, 11.06.2001, G.Hüner, OUFE 9196; Türkmen Baba hill, open places, 1790 m, 09.06.2002, G.Hüner, OUFE 9197.

Hcrp.

S. compacta M.A.Fischer

Ören to Gobak, roadsides, 1300 m, 13.07.2002, G.Hüner, OUFE 9198; Kalabak to Ilica, roadsides, 1200 m, 23.06.2002, G.Hüner, OUFE 9199.

Euro-Sib. Hcrp.

S. alba (Mill.) E.H.L.Krause subsp. *divaricata* (Rchb.) Walters

Koruluk forest way, rocky places, 1400 m, 01.06.2002, G.Hüner, OUFE 9200; NW of Kalabak, field margin, 1100 m, 01.06.2002, G.Hüner, OUFE 9201.

Hcrp.

S. dichotoma Ehrh. subsp. *dichotoma*

Aşağı Kalabak, around village drinking fountain, steppe, 900 m, 09.06.2003, Ataşlar & Ocak, OUFE 13029.

Hcrp.

S. conica L.

Aşağı Kalabak, in *Quercus* forest, 900 m, 01.06.2002, G.Hüner, OUFE 9202.

Th.

Agrostemma githago L.

Sarıöküz, open places, 1000 m, 24.07.2001, G.Hüner, OUFE 9203; Kalabak Orman İşletme Şefliği, streamsides, 1050 m, 09.06.2002, G.Hüner, OUFE 9204.

Th.

ILLECEBRACEAE

Paronychia carica Chaudhri var. *carica*

Kalabak burnt land, steppe, 850 m, 22.06.2001, G.Hüner, OUFE 9205.

Hcrp.

POLYGONACEAE

Polygonum amphibium L.

Aşağı Kalabak, around Kalabak stream, 950 m, 03.08.2002, G.Hüner, OUFE 9206.

Hcrp.

**P. lapathifolium* L.

Çavuş stream, streamsides, 1350 m, 30.8.2003, Ataşlar & Ocak, OUFE 13030.

Th.

P. bellardii All.

Çavuş stream, slopes, 1200 m, 24.07.2001, G.Hüner, OUFE 9207; Aşağı Kalabak, field margin, 900 m, 08.08.2002, G.Hüner, OUFE 9208.

Th.

Rumex acetosella L.

Seklice village, slopes, 850 m, 29.06.2002, G.Hüner, OUFE 9209; Yukarı Kalabak, field margin, 1200 m, 03.08.2002, G.Hüner, OUFE 9210.

Hcrp.

R. patientia L.

Çavuş stream, streamsides, 1350 m, 12.08.2001, G.Hüner, OUFE 9211; Kalabak stream, 1200 m, 13.07.2002, G.Hüner, OUFE 9212.

Hcrp.

R. crispus L.

Aşağı Kalabak, fallow land, 950 m, 23.07.2001, G.Hüner, OUFE 9213; Aşağı Kalabak, field margin, 900 m, 01.06.2002, G.Hüner, OUFE 9214; Aslan to Yılmaz, forest way, roadsides, 1500 m, 03.08.2002, G.Hüner, OUFE 9215.

Hcrp.

R. dentatus L. subsp. *halacsyi* (Rech.) Rech.f.

Taşoluk forest way, roadsides, 1470 m, 14.08.2002, G.Hüner, OUFE 9216.

Th.

CHENOPODIACEAE

Chenopodium botrys L.

Aşağı Kalabak, roadsides, 950 m, 26.07.2001, G.Hüner, OUFE 9217; Kalabak stream, steppe, 1200 m, 03.08.2002, G.Hüner, OUFE 9218.

Th.

C. foliosum (Moench) Asch.

W of Seklice village, roadsides, 820 m, 26.07.2001, G.Hüner, OUFE 9219.

Th.

C. murale L.

Around Belce, open places, 1450 m, 13.07.2002, G.Hüner, OUFE 9220; Kalabak, field margin, 900 m, 13.07.2002, G.Hüner, OUFE 9221.

Th.

C. album L. subsp. *album* var. *album*

Kalabak vicinity, steppe, 1100 m, 01.10.2001, G.Hüner, OUFE 9222; Balıcalık, steppe, 1250 m, 27.09.2002, G.Hüner, OUFE 9223.

Th.

**Atriplex lasiantha* Boiss.

S of Belce, steppe, 1500 m, 25.06.2003, Ataşlar & Ocak, OUFE 13031.

Th.

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

Koruluk, forest way, rocky places, 1400 m, 12.07.2003, Ataşlar & Ocak, OUFE 13032.

Ch.

AMARANTHACEAE

Amaranthus retroflexus L.

Aşağı Kalabak, roadsides, 950 m, 12.07.2003, Ataşlar & Ocak, OUFE 13033.

Th.

HYPERICACEAE

Hypericum linarioides Bosse

Yukarı Çimenharmanı, steppe, 1510 m, 20.07.2002, G.Hüner, OUFE 9224.

Hcrp.

H. montbretii Spach

N of Kalabak, burnt land, steppe, 850 m, 11.06.2001, G.Hüner, OUFE 9225; Kalabak to Ilica, roadsides, 1200 m, 16.06.2002, G.Hüner, OUFE 9227.

Hcrp.

***H. olympicum** L. subsp. *olympicum*

Kalabak to Ilica, roadsides, 1050 m, 16.06.2002, G.Hüner, OUFE 9226; S of Belce, steppe, 1500 m, 29.06.2002, G.Hüner, OUFE 9227.

E. Medit. Hcrp.

H. origanifolium Willd.

Kalabak to Üçsaray, 7 km, stony roadsides, 1550 m, 23.06.2002, G.Hüner, OUFE 9228; Ören to Gobak, forest way, roadsides, 1200 m, 13.07.2002, G.Hüner, OUFE 9229.

Hcrp.

H. aviculariifolium Jaub. & Spach subsp. *depilatum* (Freynt & Bornm.) Robson var. *depilatum*

Ilica, roadsides, 1220 m, 01.06.2002, G.Hüner, OUFE 9230; Kalabak, burnt land, steppe, 850 m, 01.06.2002, G.Hüner, OUFE 9231; Aşağı Kalabak, plantation area, 950 m, 09.06.2002, G.Hüner, OUFE 9232.

Endemic. Hcrp. LC

***H. tetrapterum** Fr.

Türkmen hill, roadsides, 1350-1500 m, 20.07.2002, G.Hüner, OUFE 9233.

Hcrp.

H. perforatum L.

Kalabak, burnt land, steppe, 810 m, 11.06.2001, G.Hüner, OUFE 9234; E of Kalabak, open forest, 1250 m, 23.06.2002, G.Hüner, OUFE 9235.

Hcrp.

MALVACEAE**Malva sylvestris** L.

Türkmen Baba hill, open places, 1500 m, 30.8.2003, Ataşlar & Ocak, OUFE 13034.

Hcrp.

M. neglecta Wallr.

Aşağı Kalabak, field margin, 950 m, 05.05.2001, G.Hüner, OUFE 9236; S of

Seklice village, field margin, 950 m, 29.05.2002, G.Hüner, OUFE 9237; Ballicalık, steppe, 1200 m, 23.06.2002, G.Hüner, OUFE 9238.

Th.

***Alcea apterocarpa** (Fenzl) Boiss.

Sarıöküz, stony places, 1150 m, 30.8.2003, Ataşlar & Ocak, OUFE 13035.

Endemic. Ir.-Tur. Hcrp. LC

A. rosea L.

Çimenharmanı road, steppe, 1500 m, 13.07.2002, G.Hüner, OUFE 9239; Belören to Koruluk, under forest, 1400 m, 13.07.2002, G.Hüner, OUFE 9240.

Hcrp.

TILIACEAE**Tilia rubra** DC.

Belce, northern slopes, 1500 m, 24.07.2001, G.Hüner, OUFE 9241; Efsunbaba hill, slopes, 1400 m, 14.08.2002, G.Hüner, OUFE 9242; Taşoluk forest way, roadsides, 1200 m, 08.09.2002, G.Hüner, OUFE 9243.

Eux. Msph.

LINACEAE

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

Efsunbaba hill, under *Pinus nigra*, 1500 m, 12.07.2003, Ataşlar & Ocak, OUFE 13036.

Endemic. Ir.-Tur. Hcrp. LC

GERANIACEAE**Geranium purpureum** Vill.

S of Kalabak, burnt land, steppe, 850 m, 13.06.2002, G.Hüner, OUFE 9244; Yanıklık to Taşoluk, steppe, 1350 m, 29.06.2002, G.Hüner, OUFE 9245.

Th.

G. rotundifolium L.

Kalabak Orman İşletme Şefliği, steppe, 1050 m, 16.05.2002, G.Hüner, OUFE 9246; Türkmen Baba hill, open places, 1500 m, 23.06.2002, G.Hüner, OUFE 9248.

Th.

G. tuberosum L. subsp. *tuberosum*

Sarıöküz, rocky places, 1150 m, 12.05.2002, G.Hüner, OUFE 9249; Gölcük

plateau, meadows, 1450 m, 22.05.2002, G.Hüner, OUFE 9250.

Crp.

Erodium ciconium (L.) L'Hérit. ex Ait.

Hızır stream, streamsides, 1100 m, 29.04.2003, Ataşlar & Ocak, OUFE 13037.

Th.

E. amanum Boiss. & Kotschy

N of Seklice village, steppe, 1000 m, 12.05.2002, G.Hüner, OUFE 9251; Kalabak vicinity, steppe, 1200 m, 29.05.2002, G.Hüner, OUFE 9252.

Endemic. Hcrp. LC

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

Aşağı Kalabak, field margin, 950 m, 01.06.2002, G.Hüner, OUFE 9253; Kalabak road, slopes, 950 m, 13.07.2002, G.Hüner, OUFE 9254.

Th.

ACERACEAE**Acer platanoides** L.

Gölcük plateau, meadows, 1450 m, 22.05.2002, G.Hüner, OUFE 9255; Hızır stream, streamsides, 1200 m, 08.09.2002, G.Hüner, OUFE 9256.

Euro-Sib. Mcph.

A. campestre L. subsp. *campestre*

Belce, northern slopes, 1500 m, 16.06.2002, G.Hüner, OUFE 9257; Ballicalık, roadsides, 1390 m, 18.08.2002, G.Hüner, OUFE 9258; Kavacık to Sirt, roadsides, 1200 m, 08.09.2002, G.Hüner, OUFE 9259.

Euro-Sib. Msph.

ANACARDIACEAE***Rhus coriaria** L.

Hızır stream, meadows, 1300 m, 13.07.2002, G.Hüner, OUFE 9260.

Medit. Mcph.

CELASTRACEAE

Euonymus latifolius (L.) Mill. subsp. *latifolius*

Kavacık, northern slopes, 1200 m, 13.07.2002, G.Hüner, OUFE 9261; Yukarı Kalabak, around water store, 1300 m, 18.08.2002, G.Hüner, OUFE 9262.

Euro-Sib. Mcph.

- E. europaeus** L.
Çavuş stream, northern slopes, 1350 m, 16.06.2002, G.Hüner, OUFE 9263; Hızır stream, streamsides, 1100 m, 08.08.2002, G.Hüner, OUFE 9264.
Euro-Sib. Mcph.
FABACEAE (LEGUMINOSAE)
Chamaecytisus hirsutus (L.) Link
Yukarı Kalabak, open places, 01.06.2002, G.Hüner, OUFE 9265; Efsunbaba hill, under *Pinus nigra*, 1500 m, 13.07.2002, G.Hüner, OUFE 9266.
Ch.
***C. pygmaeus** (Willd.) Rothm.
Türkmen Baba hill, northern slopes, open places, 1500 m, 01.06.2002, G.Hüner, OUFE 9267.
Euro-Sib. Ch.
***Genista lydia** Boiss. var. *lydia*
Türkmen Baba hill, open places, 1500 m, 01.06.2002, G.Hüner, OUFE 9269; Hızır stream, streamsides, 1400 m, 01.06.2002, G.Hüner, OUFE 9270.
Ch.
G. aucheri Boiss.
Around Çavuş stream, under *Fagus orientalis*, 1300 m, 29.06.2002, G.Hüner, OUFE 9271.
Endemic. Ir.-Tur. Ch. LC
Lotononis genistoides (Fenzl) Benth.
Hızır stream, under *Pinus nigra*, 1350 m, 25.07.2001, G.Hüner, OUFE 9272; Kalabak burnt land, 850 m, 13.07.2002, G.Hüner, OUFE 9273.
Ir.-Tur. Ch.
Galega officinalis L.
Kartalkaya, open places, 1350 m, 30.8.2003, Ataşlar & Ocak, OUFE 13038.
Euro-Sib. Hcrp.
Colutea cilicica Boiss & Balansa
Kalabak Orman İşletme Şefliği, streamsides, 1050 m, 16.06.2002, G.Hüner, OUFE 9274.
Nph.
***Astragalus densifolius** Lam. subsp. *densifolius*
Kartalkaya, open places, 1350 m, 29.06.2002, G.Hüner, OUFE 9275.
Ir.-Tur. Hcrp.
A. glycyphyllos L. subsp. *glycyphylloides* (DC.) Matthews
Efsunbaba hill, slopes, 1300 m, 12.07.2003, Ataşlar & Ocak, OUFE 13039.
Euro-Sib. Hcrp.
A. strictispinis Boiss.
Kalabak burnt land, steppe, 1100 m, 07.07.2001, G.Hüner, OUFE 9276.
Endemic. Ch. LC
A. condensatus Ledeb.
NE of Gavureyrek hill, slopes, 1000 m, 11.06.2001, G.Hüner, OUFE 9277; Gölcük forest way, steppe, 1650 m, 13.07.2002, G.Hüner, OUFE 9278.
Endemic. Ir.-Tur. Ch. LC
A. lydius Boiss.
Evcikdüzü, meadows, 1000-1200 m, 26.05.2002, G.Hüner, OUFE 9279; Kalabak burnt land, steppe, 850 m, 13.07.2002, G.Hüner, OUFE 9280.
Endemic. Ir.-Tur. Hcrp. LC
A. campylosema Boiss. subsp. *atropurpureus* (Boiss.) Chamb.
Sarıöküz, plantation area, 1150 m, 28.06.2001, G.Hüner, OUFE 9281.
Endemic. Hcrp. LC
A. angustifolius Lam. subsp. *pungens* (Willd.) Hayek
Kavacık, slopes, 1200 m, 12.07.2003, Ataşlar & Ocak, OUFE 13040.
Ch.
***A. vulnerariae** DC.
Aşağı Kalabak, plantation area, 900 m, 11.06.2001, G.Hüner, OUFE 9282; Evcikdüzü, steppe, 1000 m, 16.06.2002, G.Hüner, OUFE 9283.
Endemic. Ch. LC
Vicia cracca L. subsp. *stenophylla* Velen
Seklice village, field margin, 950 m, 17.06.2001, G.Hüner, OUFE 9284; Aşağı Kalabak, fieldsides, 900-950 m, 01.06.2002, G.Hüner, OUFE 9285.
Hcrp.
V. pannonica Crantz var. *purpurascens* (DC.) Ser.
Between Kalabak and Uluçayır, northern slopes, 930 m, 11.06.2001, G.Hüner, OUFE 9287; Sarıöküz, field margin, 1100 m, 01.06.2002, G.Hüner, OUFE 9288.
Th.
Lathyrus digitatus (M.Bieb.) Fiori
Aşağı Kalabak, meadows, 1100 m, 16.06.2002, G.Hüner, OUFE 9289; Yanıklık, slopes, 1480 m, 28.08.2002, G.Hüner, OUFE 9290.
E. Medit. Hcrp.
L. pratensis L.
Ağılsırtı, slopes, 1340 m, 06.06.2002, G.Hüner, OUFE 9291; Ilica road 3 km, open places, 1320 m, 06.06.2002, G.Hüner, OUFE 9292.
Euro-Sib. Hcrp.
L. laxiflorus (Desf.) O.Kuntze subsp. *laxiflorus*
Kalabak to Ilica, northern slopes, 1150 m, 16.06.2002, G.Hüner, OUFE, 9293.
Hcrp.
subsp. *angustifolius* (Post ex Dinsm.) P.H.Davis
Kartalkaya, open places, 1300 m, 11.06.2001, G.Hüner, OUFE 9294; Kalabak to Üçsaray, 7 km, slopes, 1550 m, 09.06.2002, G.Hüner, OUFE 9295; Efsunbaba hill, slopes, 1300 m, 09.06.2002, G.Hüner, OUFE 9296.
Endemic. E. Medit. Hcrp. VU
***L. saxatilis** (Vent.) Vis.
Aşağı Kalabak, plantation area, open places, 950 m, 01.06.2002, G.Hüner, OUFE 9297.
Medit. Th.
L. sativus L.
Kocasarıtaş, slopes, 1400 m, 13.07.2002, G.Hüner, OUFE 9298.
Th.
L. nissolia L.
Around Çavuş stream, roadsides, 1250 m, 09.06.2002, G.Hüner, OUFE 9299; Kalabak plantation area, rocky places, 950 m, 09.06.2002, G.Hüner, OUFE 9300.
Th.
Pisum sativum L. subsp. *sativum* var. *sativum*
Between Seklice and Kalabak, field margin, 900-1000 m, 01.06.2002, G.Hüner, OUFE 9301.
Th.

Ononis spinosa L. subsp. *antiquorum* (L.) Briq.

Şelale road, under *Pinus nigra*, 1050 m, 23.06.2002, G.Hüner, OUFE 9303.

Medit. Hcrp.

Trifolium repens L. var. *repens*

Around Kalabak stream, streamsides, 1150 m, 08.09.2002, G.Hüner, OUFE 9304.

Ch.

**T. campestre* Schreb.

Kalabak to Sariöküz, roadsides, 1200 m, 09.06.2002, G.Hüner, OUFE 9305; Kalabak stream, meadows, 1000 m, 03.08.2002, G.Hüner, OUFE 9306.

Th.

T. pratense L. var. *pratense*

Yukarı Ilica road, streamsides, 1050 m, 09.06.2002, G.Hüner, OUFE 9307; Kalabak stream, 1000 m, 23.06.2002, G.Hüner, OUFE 9308; Kalabak Orman İşletme Şefliği, streamsides, 1150 m, 23.06.2002, G.Hüner, OUFE 9309.

Hcrp.

T. ochroleucum Huds.

Aşağı Kalabak, plantation area, steppe, 900 m, 11.06.2001, G.Hüner, OUFE 9310; Evcikdüzü, slopes, 1000 m, 09.06.2002, G.Hüner, OUFE 9311.

Hcrp.

T. caudatum Boiss.

Evcikdüzü, under *Pinus nigra*, 1100 m, 09.06.2002, G.Hüner, OUFE 9312.

Endemic. Hcrp. LC

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

Yukarı Kalabak, around forest warehouse, under *Pinus nigra*, 1200 m, 23.06.2002, G.Hüner, OUFE 9313.

Th.

Melilotus officinalis (L.) Desr.

Tay Harası, roadsides, 950 m, 23.06.2002, G.Hüner, OUFE 9314; Şelale road, rocky steppe, 1100-1200 m, 29.06.2002, G.Hüner, OUFE 9315.

Th.

M. alba Desr.

Aşağı Kalabak, plantation area, steppe, 1200 m, 30.8.2003, Ataşlar & Ocak, OUFE 13041.

Th.

Trigonella crassipes Boiss.

Manastır stream, stony places, 1300 m, 16.06.2002, G.Hüner, OUFE 9317.

Ir.-Tur. Th.

Medicago orbicularis (L.) Bartram

Şelale road, 1 km. apple orchard, 1200 m, 23.06.2002, G.Hüner, OUFE 9318.

Medit. Th.

M. lupulina L.

Kalabak stream, streamsides, 950 m, 08.09.2002, G.Hüner, OUFE 9320.

Ch.

M. x varia Martyn

Kalabak to Üçsaray, 7 km, slopes, 1550 m, 23.06.2002, G.Hüner, OUFE 9319.

Hcrp.

Dorycnium graecum (L.) Ser.

Yukarı Kalabak, under *Pinus nigra*, 1400 m, 01.06.2002, G.Hüner, OUFE 9321; Kalabak to Ilica, meadows, 1300 m, 16.06.2002, G.Hüner, OUFE 9322; Türkmen Baba hill, slopes, 1820 m, 23.06.2002, G.Hüner, OUFE 9323.

Eux. Hcrp.

Lotus corniculatus L. var. *corniculatus*

Türkmen Baba hill, slopes, 1820 m, 11.06.2001, G.Hüner, OUFE 9324; Efsunbaba hill, slopes, 1400-1820 m, 11.06.2002, G.Hüner, OUFE 9325; Kalabak to Üçsaray, 7 km, under *Pinus nigra*, 1550 m, 23.06.2002, G.Hüner, OUFE 9326.

Hcrp.

var. *alpinus* Ser.

Kartalkaya, under *Pinus nigra*, 1340 m, 29.06.2002, G.Hüner, OUFE 9327; Kalabak Orman İşletme Şefliği, steppe 1050 m, 13.07.2002, G.Hüner, OUFE 9328.

Euro-Sib. Hcrp.

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

Aşağı Kalabak, *Quercus scrub*, 1100 m, 23.06.2002, G.Hüner, OUFE 9329.

Hcrp.

Coronilla scorpioides (L.) Koch

Aşağı Kalabak, plantation area, steppe, 1200 m, 30.06.2002, G.Hüner, OUFE 9330.

Th.

C. varia L. subsp. *varia*

Kalabak vicinity, open places, 1300-1500 m, 01.06.2002, G.Hüner, OUFE 9331.

Hcrp.

Hedysarum varium Willd.

Koruluk, forest way, open *Quercus* forest, 1350 m, 12.07.2003, Ataşlar & Ocak, OUFE 13042.

Ir.-Tur. Hcrp.

H. cappadocicum Boiss.

Türkmen Baba hill, roadsides, 1750 m, 30.8.2003, Ataşlar & Ocak, OUFE 13043.

Endemic. Ir.-Tur. Hcrp. LC

Onobrychis pisidica Boiss.

Yukarı Kalabak, around forest warehouse, rocky places, 1100 m, 01.06.2002, G.Hüner, OUFE 9333.

Endemic. Ir.-Tur. Hcrp. NT

**O. oxydonta* Boiss.

Bozkuş kule, roadsides, 1500 m, 25.06.2003, Ataşlar & Ocak, OUFE 13044.

Hcrp.

**O. tournefortii* (Willd.) Desv.

Belce, meadows, 1450 m, 21.05.2003, Ataşlar & Ocak, OUFE 13045.

Endemic. Ir.-Tur. Hcrp. LC

**Ebenus cappadocica* Hausskn. & Siehe ex Bornm.

Sariöküz, under *Pinus nigra*, 1150 m, 25.06.2003, Ataşlar & Ocak, OUFE 13046

Endemic. Ir.-Tur. Ch. NT

Alhagi pseudoalhagi (M.Bieb.) Desv.

Aşağı Kalabak, steppe, 1000 m, 12.07.2003, Ataşlar & Ocak, OUFE 13047.

Ir.-Tur. Ch.

ROSACEAE

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

Bozkuş kule, roadsides, 1500 m, 11.06.2001, G.Hüner, OUFE 9334; Kalabak vicinity, field margin, 1200-1400 m, 29.06.2002, G.Hüner, OUFE 9335; Kavacık, meadows, 1200 m, 08.08.2002, G.Hüner, OUFE 9336.

Euro-Sib. Mcph.

- P. divaricata* Ledeb. subsp. *divaricata*
Kalabak vicinity, open area in forest, 1200 m, 11.06.2001, G.Hüner, OUFE 9337; Kavacık to Sirt, roadsides, 1200 m, 08.09.2002, G.Hüner, OUFE 9338.
Mcp.
Filipendula vulgaris Moench
Evcikdüzü, slopes, 1000 m, 09.06.2002, G.Hüner, OUFE 9339; Aşağı Kalabak, plantation area, steppe, 950 m, 16.06.2002, G.Hüner, OUFE 9340.
Euro-Sib. Hcrp.
Rubus caesius L.
Yukarı Hızar stream, streamsides, 1340 m, 24.07.2001, G.Hüner, OUFE 9341; Gobak to Otluk, streamsides, 13.07.2002, G.Hüner, OUFE 9342.
Ch.
R. sanctus Schreber
Hızar stream, streamsides, 1300 m, 13.07.2002, G.Hüner, OUFE 9343; Manastr stream, streamsides, 1100 m, 28.07.2002, G.Hüner, OUFE 9344.
Ch.
R. canescens DC. var. *canescens*
Kocasarıtaş, roadsides, 1400 m, 01.06.2002, G.Hüner, OUFE 9345; Taşoluk forest way, roadsides, 1350 m, 07.07.2002, G.Hüner, OUFE 9346; Efsunbaba hill, under *Fagus orientalis*, 1300 m, 14.08.2002, G.Hüner, OUFE 9347.
Ch.
**Potentilla argentea* L.
Kalabak Orman İşletme Şefliği, steppe, 1050 m, 09.06.2002, G.Hüner, OUFE 9348; Paşaköşkü, open places, 1320 m, 14.08.2002, G.Hüner, OUFE 9349.
Hcrp.
P. recta L.
Aşağı Kalabak, field margin, 900 m, 01.06.2002, G.Hüner, OUFE 9350; Aşağı Kalabak, plantation area, 950 m, 09.06.2002, G.Hüner, OUFE 9351; Aşağı Kalabak, steppe, 1000 m, 16.06.2002, G.Hüner, OUFE 9352.
Hcrp.
P. anatolica Peşmen
Koruluk, forest way, steppe, 1220 m, 23.06.2002, G.Hüner, OUFE 9353;
Sarıöküz, steppe, 1150 m, 13.07.2002, G.Hüner, OUFE 9354.
Endemic. Ir.-Tur. Hcrp. LC
P. reptans L.
Aşağı Kalabak, around village drinking fountain, slopes, 1000-1200 m, 23.06.2002, G.Hüner, OUFE 9355; Aşağı Kalabak, streamsides, 1000 m, 13.07.2002, G.Hüner, OUFE 9356.
Hcrp.
Fragaria vesca L.
Koruluk, forest way, steppe, 1220 m, 23.06.2002, G.Hüner, OUFE 9357; Çilekli, slopes, 1640 m, 13.07.2002, G.Hüner, OUFE 9358.
Hcrp.
Agrimonia eupatoria L.
Seklice, Şeytan stream, streamsides 1100 m, 11.06.2001, G.Hüner, OUFE 9359; Yukarı Kalabak, roadsides, 1150 m, 29.06.2002, G.Hüner, OUFE 9360.
Hcrp.
Rosa pulverulenta M.Bieb.
Çavuş stream, slopes, 1350 m, 23.06.2002, G.Hüner, OUFE 9361; Koruluk, forest way, northern slopes, 1400 m, 23.06.2002, G.Hüner, OUFE 9362.
Nph.
R. canina L.
Aşağı Kalabak, field margin, 900 m, 01.06.2002, G.Hüner, OUFE 9363; Kocasarıtaş, slopes, 1470 m, 09.06.2002, G.Hüner, OUFE 9364; Bozkuş kule, slopes, 1641 m, 03.08.2002, G.Hüner, OUFE 9365.
Nph.
R. damascena Mill.
Aşağı Kalabak, plantation area, 900 m, 09.06.2002, G.Hüner, OUFE 9366.
Cultivated. Nph.
Cotoneaster nummularia Fisch. & C.A.Mey.
S of Paşaköşkü, steppe, 1700 m, 01.06.2002, G.Hüner, OUFE 9367; Doğankaya hill, slopes, 1650 m, 29.06.2002, G.Hüner, OUFE 9368.
Nph.
Pyracantha coccinea Roem.
Kalabak vicinity, in forest, 1300 m, 01.06.2002, G.Hüner, OUFE 9369.
Nph.
Crataegus orientalis Pall. ex M.Bieb. var. *orientalis*
Bozkuş kule, slopes, 1550 m, 03.08.2002, G.Hüner, OUFE 9370; Yukarı Kalabak, fieldsides, 1200 m, 14.08.2002, G.Hüner, OUFE 9371.
Mcp.
C. monogyna Jacq. subsp. *monogyna*
Koruluk, forest way, 1100 m, 23.06.2002, G.Hüner, OUFE 9372; Kalabak vicinity, field margin, 1200 m, 13.07.2002, G.Hüner, OUFE 9373; Kalabak, open places, 1400 m, 13.07.2002, G.Hüner, OUFE 9374; Taşoluk, slopes, 1450 m, 08.09.2002, G.Hüner, OUFE 9375.
Mcp.
Sorbus umbellata (Desf.) Fritsch var. *cretica* (Lindl.) C.K.Schneid.
Kartalkaya, streambed, 1300 m, 01.06.2002, G.Hüner, OUFE 9376; Doğankaya, slopes, 1650 m, 01.06.2002, G.Hüner, OUFE 9377.
Mcp.
S. torminalis (L.) Crantz var. *torminalis*
N of Bozkuş kule, meadows, 1450-1550 m, 18.08.2002, G.Hüner, OUFE 9378.
Euro-Sib. Mcph.
Malus sylvestris Mill. subsp. *orientalis* (Uglitzk.) Browicz var. *orientalis*
Around Hızar stream, rocky places, 1750 m, 01.05.2002, G.Hüner, OUFE 9380.
Mcp.
Pyrus communis L. subsp. *communis*
Belce, slopes, 1500 m, 14.08.2002, G.Hüner, OUFE 9381; Çobanlar plateau, meadows, 1400 m, 14.08.2002, G.Hüner, OUFE 9382.
Mcp.
P. elaeagnifolia Pall. subsp. *elaeagnifolia*
Kavacık to Sirt, roadsides, 1200 m, 29.06.2002, G.Hüner, OUFE 9383; Koruluk, forest way, 1100 m, 14.08.2002, G.Hüner, OUFE 9384.
Mcp.
LYTHRACEAE
Lythrum salicaria L.
Aşağı Kalabak, around Kalabak stream, 1000 m, 29.06.2002, G.Hüner, OUFE 9358.

- Euro-Sib. Hcrp.
ONAGRACEAE
Epilobium angustifolium L. subsp. *angustifolium*
 Koruluk, forest way, open *Quercus* forest, 1350 m, 23.06.2002, G.Hüner, OUFÉ 9386; Türkmen Baba hill, roadsides, 1750 m, 23.06.2002, G.Hüner, OUFÉ 9387; Bozkuş kule, steppe, 1500 m, 29.06.2002, G.Hüner, OUFÉ 9388; Çavuş stream, field margin, 1300 m, 29.06.2002, G.Hüner, OUFÉ 9389.
 Crp.
E. parviflorum Schreber
 Yanıklık to Taşoluk, steppe, 1300 m, 29.06.2002, G.Hüner, OUFÉ 9390.
 Hcrp.
E. montanum L.
 Türkmen Baba hill, roadsides, 1800 m, 20.07.2002, G.Hüner, OUFÉ 9391.
 Euro-Sib. Crp.
E. lanceolatum Sebast. & Mauri
 Gobak to Otluk, roadsides, 1300 m, 13.07.2002, G.Hüner, OUFÉ 9392.
 Hcrp.
CRASSULACEAE
***Sedum spurium** M.Bieb.
 Taşoluk, meadows, 1450 m, 13.07.2002, G.Hüner, OUFÉ 9393; Gölcük plateau, rocky places, 1640 m, 03.08.2002, G.Hüner, OUFÉ 9394.
 Eux. Ch.
S. amplexicaule DC.
 Sarıöküz, rocky places, 1150 m, 16.06.2002, G.Hüner, OUFÉ 9395; Çatalca hill, stony steppe, 1056 m, 23.06.2002, G.Hüner, OUFÉ 9396.
 Medit. Ch.
S. acre L.
 NE of Kalabak, plantation area, 1150 m, 23.06.2002, G.Hüner, OUFÉ 9397.
 Ch.
S. album L.
 Hızar stream, meadows, 1400 m, 16.06.2001, G.Hüner, OUFÉ 9398; Kalabak vicinity, under *Quercus*, 1100 m, 13.07.2002, G.Hüner, OUFÉ 9399; Kışla, rocky places, 1300 m, 13.07.2002, OUFÉ 9400.
 Ch.
***S. sempervivoides** M.Bieb.
 Çimenharmanı, rocky places, 1150 m, 03.08.2002, G.Hüner, OUFÉ 9401.
 Hcrp.
S. pallidum M.Bieb. var. *pallidum*
 Kalabak vicinity, under *Juniperus*, 1150 m, 29.06.2002, G.Hüner, OUFÉ 9402.
 Hcrp.
APIACEAE (UMBELLIFERAE)
Astrantia maxima Pall. subsp. *haradjianii* (Grintz.) Rech.f.
 Paşaköşkü to Belören, roadsides, 1450 m, 24.07.2001, G.Hüner, OUFÉ 9403; Belören to Koruluk, roadsides, 1550 m, 13.07.2002, G.Hüner, OUFÉ 9404.
 Endemic. Hcrp. LC
Eryngium campestre L. var. *virens* Link
 Bozkuş kule, roadsides, 1410 m, 03.08.2002, G.Hüner, OUFÉ 9405.
 Hcrp.
Chaerophyllum byzantium Boiss.
 Koruluk to Belören, forest way, 1250 m, 09.06.2002, G.Hüner, OUFÉ 9406; Hızar stream, roadsides, 1350 m, 23.06.2002, G.Hüner, OUFÉ 9407; Çimenharmanı, roadsides, 1350 m, 13.07.2002, G.Hüner, OUFÉ 9408.
 Eux. Hcrp.
Scandix macrorhyncha C.A.Mey.
 Çavuş stream, rocky slopes, 1440 m, 07.08.2002, G.Hüner, OUFÉ 9409.
 Th.
Bifora radians M.Bieb.
 Aşağı Kalabak, field margin, 950 m, 11.06.2001, G.Hüner, OUFÉ 9410; Kalabak vicinity, steppe, 1000-1150 m, 01.06.2002, G.Hüner, OUFÉ 9411.
 Th.
Smyrniium perfoliatum L.
 Belce, meadows, 1450 m, 26.06.2001, G.Hüner, OUFÉ 9412; Koruluk to Belören, 3 km, open places, 1350 m, 13.07.2002, G.Hüner, OUFÉ 9413.
 Hcrp.
***Smyrniopsis aucheri** Boiss.
 Aşağı Kalabak, rocky places, 1000 m, 25.06.2003, Ataşlar & Ocak, OUFÉ 13048.
 Ir.-Tur. Hcrp.
***Aegopodium podagraria** L.
 Aşağı Kalabak, plantation area, 950 m, 09.06.2002, G.Hüner, OUFÉ 9414.
 Euro-Sib. Hcrp.
Berula erecta (Huds.) Coville
 Manastır stream, streamsides, 1000 m, 12.07.2003, Ataşlar & Ocak, OUFÉ 13049.
 Hcrp.
Seseli peucedanoides (M.Bieb.) Koso-Pol.
 Türkmen Baba hill, under *Pinus nigra*, 1500 m, 09.06.2002, G.Hüner, OUFÉ 9415.
 Euro-Sib. Hcrp.
***S. tortuosum** L.
 Aşağı Kalabak, plantation area, rocky slopes, 1000 m, 30.8.2003, Ataşlar & Ocak, OUFÉ 13050.
 Hcrp.
***Oenanthe fistulosa** L.
 Kalabak stream, streamsides, 1100 m, 30.8.2003, Ataşlar & Ocak, OUFÉ 13051.
 Ch.
O. silaifolia M.Bieb.
 Koruluk, forest way, roadsides, 1420 m, 23.06.2002, G.Hüner, OUFÉ 9416; Belce, meadows, 1660 m, 23.06.2002, G.Hüner, OUFÉ 9417.
 Ch.
Physospermum cornubiense (L.) DC.
 Çavuş stream, slopes, 1350 m, 24.07.2001, G.Hüner, OUFÉ 9418; Gobak to Otluk, streamsides, 1250 m, 13.07.2002, G.Hüner, OUFÉ 9419.
 Hcrp.
Bupleurum croceum Fenzl
 Taşoluk, forest way, steppe, 1370 m, 14.08.2002, G.Hüner, OUFÉ 9420.
 Ir.-Tur. Th.
Falcaria vulgaris Bernh.
 Kartalkaya, roadsides, 1340 m, 26.06.2001, G.Hüner, OUFÉ 9421; Koruluk

to Belören, 3 km, slopes, 1350 m, 13.07.2002, G.Hüner, OUFÉ 9422.

Hcrp.

Peucedanum chryseum (Boiss. & Held.) Chamb.

Çavuş stream, streamsides, 1200 m, 09.06.2002, G.Hüner, OUFÉ 9423.

Endemic. Hcrp. LC

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

Harmankaya, open area, 1320 m, 23.06.2002, G.Hüner, OUFÉ 9424; Çimenharmanı stream, roadsides, 1400 m, 23.06.2002, G.Hüner, OUFÉ 9425; E of Kalabak, plantation area, 920 m, 29.06.2002, G.Hüner, OUFÉ 9426; Efsunbaba hill, slopes, 1300-1400 m, 14.08.2002, G.Hüner, OUFÉ 9427.

Hcrp.

Heracleum sphondylium L. subsp. *ternatum* (Velen.) Brummitt

Türkmen hill, roadsides, 1820 m, 09.06.2002, G.Hüner, OUFÉ 9428.

Euro-Sib. Hcrp.

Turgenia latifolia (L.) Hoffm.

N of Seklice village, field margins, 1000 m, 11.06.2001, G.Hüner, OUFÉ 9430; Kalabak, field margin, 900 m, 01.06.2002, G.Hüner, OUFÉ 9431.

Th.

Astrodaucus orientalis (L.) Drude

Taşoluk, roadsides, 1300 m, 25.06.2003, Ataşlar & Ocak, OUFÉ 13052.

Ir.-Tur. Th.

Daucus carota L.

Yanıklık, steppe, 1300 m, 18.08.2002, G.Hüner, OUFÉ 9432.

Hcrp.

**D. guttatus* Sm.

Evcikdüzü, slopes, 1000 m, 25.06.2003, Ataşlar & Ocak, OUFÉ 13053.

Hcrp.

ARALIACEAE

**Hedera helix* L.

Kartalkaya, *Quercus* forest, 1300 m, 30.8.2003, Ataşlar & Ocak, OUFÉ 13054.

Ch.

CORNACEAE

Cornus mas L.

Belce, mixed forest, 1600 m, 24.07.2001, G.Hüner, OUFÉ 9433; Taşoluk, open forest, 1200 m, 08.09.2002, G.Hüner, OUFÉ 9434.

Euro-Sib. Mcph.

CAPRIFOLIACEAE

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

Paşaköşkü hill, slopes, 1600 m, 29.06.2002, G.Hüner, OUFÉ 9435; Türkmen Baba hill, northern slopes, 1800 m, 13.07.2002, G.Hüner, OUFÉ 9436; Çavuş stream, streamsides, 1350 m, 13.07.2002, G.Hüner, OUFÉ 9437.

Endemic. Mcph. LC

L. etrusca Santi var. *etrusca*

Kalabak vicinity, *Quercus* scrub, 1100 m, 09.06.2003, Ataşlar & Ocak, OUFÉ 13055.

Medit. Mcph.

VALERIANACEAE

Centranthus longiflorus Stev. subsp. *longiflorus*

Türkmen Baba hill, northern slopes, 1800 m, 09.06.2003, Ataşlar & Ocak, OUFÉ 13056.

Ir.-Tur. Hcrp.

Valerianella coronata (L.) DC.

S of Evcikdüzü, steppe, 1000 m, 11.06.2001, G.Hüner, OUFÉ 9438; Aşağı Kalabak, rocky places, 1000 m, 01.06.2002, G.Hüner, OUFÉ 9439.

Th.

MORINACEAE

Morina persica L. var. *persica*

Kartalkaya, roadsides, 1350 m, 12.07.2003, Ataşlar & Ocak, OUFÉ 13057.

Ir.-Tur. Hcrp.

DIPSACACEAE

Dipsacus laciniatus L.

Manastır stream, 1000 m, 27.06.2002, G.Hüner, OUFÉ 9440; Türkmen hill, steppe, 1800 m, 13.07.2002, G.Hüner, OUFÉ 9441.

Hcrp.

Cephalaria transsylvanica (L.) Schrader

Kalabak, fieldsides, 900 m, 30.8.2003, Ataşlar & Ocak, OUFÉ 13058.

Th.

**Knautia integrifolia* (L.) Bert var. *bidens* (Sm.) Borbás

Evcikdüzü, slopes, 1000 m, 13.07.2002, G.Hüner, OUFÉ 9442; Aşağı Kalabak, plantation area, 1000-1100 m, 03.08.2002, G.Hüner, OUFÉ 9443.

E. Medit. Th.

K. involucrata Somm. & Lev.

Kalabak to Sarıöküz, fieldsides, 1100-1200 m, 09.06.2002, G.Hüner, OUFÉ 9444; Kalabak, burnt land, steppe, 850 m, 29.06.2002, G.Hüner, OUFÉ 9446.

Hcrp.

Scabiosa argentea L.

Sarıöküz, under *Pinus nigra*, 1150 m, 24.07.2001, G.Hüner, OUFÉ 9447; Aşağı Kalabak, plantation area, stony slopes, 1000 m, 27.06.2002, G.Hüner, OUFÉ 9448; Kalabak, burnt land, steppe, 850 m, 13.07.2002, G.Hüner, OUFÉ 9449.

Hcrp.

**S. calocephala* Boiss.

Belce, roadsides, 1600 m, 09.06.2003, Ataşlar & Ocak, OUFÉ 13059.

Ir.-Tur. Th.

ASTERACEAE (COMPOSITAE)

Helianthus tuberosus L.

Seklice village, fieldsides, 950 m, 26.09.2002, G.Hüner, OUFÉ 9450.

Cultivated. Crp.

Xanthium spinosum L.

Evcikdüzü, steppe, 1000 m, 19.06.2001, G.Hüner, OUFÉ 9451.

Th.

**X. strumarium* L. subsp. *strumarium*

Ilica, open places, 1100 m, 30.8.2003, Ataşlar & Ocak, OUFÉ 13060.

Th.

Inula ensifolia L.

N of Aşağı Kalabak, under *Quercus*, 950 m, 29.06.2002, G.Hüner, OUFÉ 9452; Kalabak stream, slopes, 1150 m, 29.06.2002, G.Hüner, OUFÉ 9453.

- Euro-Sib. Crp.
I. oculus-christi L.
Çavuş stream, steppe, 1200 m, 18.08.2002, G.Hüner, OUFE 9454.
- Euro-Sib. Crp.
I. montbretiana DC.
Evcikdüzü, open *Quercus* forest, 1000 m, 23.06.2002, G.Hüner, OUFE 9455.
- Ir.-Tur. Crp.
Pulicaria dysenterica (L.) Bernh.
Hızar stream, wet places, 1500 m, 30.8.2003, Ataşlar & Ocak, OUFE 13061.
Hcrp.
- Helichrysum plicatum** (DC.) subsp. **plicatum**
Aşağı Kalabak, plantation area, 900 m, 07.07.2002, G.Hüner, OUFE 9456.
Hcrp.
- H. graveolens** (M.Bieb.) Sweet
Taşoluk, roadsides, 1300 m, 14.08.2002, G.Hüner, OUFE 9457; Efsunbaba hill, northern slopes, 1400 m, 14.08.2002, G.Hüner, OUFE 9458.
Hcrp.
- H. arenarium** (L.) Moench subsp. **aucheri** (Boiss.) P.H.Davis & Kupicha
N of Aşağı Kalabak, steppe, 950 m, 25.06.2003, Ataşlar & Ocak, OUFE 13062.
Endemic. Ir.-Tur. Hcrp. LC
- Filago pyramidata** L.
Kalabak vicinity, steppe, 1100 m, 03.08.2002, G.Hüner, OUFE 9459.
Th.
- Logfia arvensis** (L.) Holub
Kartalkaya, roadsides, 1350 m, 11.06.2001, G.Hüner, OUFE 9460; Saniöküz, roadsides, 1000 m, 16.06.2002, G.Hüner, OUFE 9461.
Th.
- *Solidago virgaurea** L. subsp. **virgaurea**
Kalabak stream, streamsides, 930 m, 30.8.2003, Ataşlar & Ocak, OUFE 13063.
Euro-Sib. Hcrp.
- Erigeron acer** L. subsp. **acer**
Gobak to Otluk, open *Pinus nigra*, 1350 m, 13.07.2002, G.Hüner, OUFE 9462.
- Hcrp.
Senecio mollis Willd.
Gölcük plateau, meadows, 1640 m, 30.8.2003, Ataşlar & Ocak, OUFE 13064.
Ir.-Tur. Hcrp.
- S. pseudo-orientalis** Schischk.
Aşağı Kalabak, plantation area, steppe, 930 m, 09.06.2002, G.Hüner, OUFE 9463.
Ir.-Tur. Hcrp.
- *S. integrifolius** (L.) Clairv. subsp. **aucheri** (DC.) Matthews
Kışla, rocky places, 1300 m, 13.07.2002, G.Hüner, OUFE 9464.
Euro-Sib. Hcrp.
- S. vernalis** Waldst. & Kit.
Yukarı Kalabak, rocky slopes, 1660 m, 29.04.2003, Ataşlar & Ocak, OUFE 13065.
Th.
- Tussilago farfara** L.
Kartalkaya, waste places, 1340 m, 01.06.2002, G.Hüner, OUFE 9465.
Euro-Sib. Crp.
- Anthemis aciphylla** Boiss. var. **aciphylla**
Çavuş stream, open places, 1200 m, 29.06.2001, G.Hüner, OUFE 9466; Gobak to Otluk, slopes, 1350 m, 13.07.2002, G.Hüner, OUFE 9467.
Endemic. E. Medit. Hcrp. LC
- A. tinctoria** L. var. **tinctoria**
Hızar stream, under *Pinus nigra*, 1250 m, 25.07.2002, G.Hüner, OUFE 9468.
Hcrp.
- var. **pallida** DC.
Belce, open forest, 1600 m, 11.06.2001, G.Hüner, OUFE 9469; N of Yukarı Kalabak, fieldsides, 1200 m, 01.06.2002, G.Hüner, OUFE 9470.
Hcrp.
- A. wiedemanniana** Fisch. & C.A.Mey.
Bozkuş kule road, steppe, 1650 m, 09.06.2002, G.Hüner, OUFE 9471.
Endemic. Th. LC
- Achillea wilhelmsii** C.Koch
Kalabak, burnt land, steppe, 840 m, 25.06.2003, Ataşlar & Ocak, OUFE 13066.
- Ir.-Tur. Hcrp.
A. teretifolia Willd.
Taşoluk, steppe, 1450 m, 24.07.2001, G.Hüner, OUFE 9472; Gölcük plateau, meadows, 1640 m, 13.07.2002, G.Hüner, OUFE 9473.
Endemic. Ir.-Tur. Hcrp. LC
- A. setacea** Waldst. & Kit.
N of Kavacık, steppe, 1200 m, 18.08.2002, G.Hüner, OUFE 9474.
Euro-Sib. Hcrp.
- A. Biebersteinii** Afan.
Aşağı Kalabak, steppe, 850 m, 19.09.2001, G.Hüner, OUFE 9475; Manastır, roadsides, 1100 m, 18.08.2002, G.Hüner, OUFE 9476; Kavacık, meadows, 1000 m, 18.08.2002, G.Hüner, OUFE 9477.
Ir.-Tur. Hcrp.
- Tanacetum poteriifolium** (Ledeb.) Grierson
Gobak to Otluk, forest way, under *Pinus nigra*, 1250 m, 29.04.2003, Ataşlar & Ocak, OUFE 13067.
Euro-Sib. Hcrp.
- *T. parthenium** (L.) Schultz & Bip.
Ilica road, roadsides, 1200 m, 29.06.2002, G.Hüner, OUFE 9478; Çavuş stream, waste places, 1100 m, 13.07.2002, G.Hüner, OUFE 9479.
Hcrp.
- *Tripleurospermum rosellum** (Boiss. & Orph.) Hayek var. **rosellum**
Yukarı Kalabak to Yukarı Ilica, *Quercus* scrub, 1100-1200 m, 16.06.2002, G.Hüner, OUFE 9480; Manastır forest way, steppe, 1400 m, 18.08.2002, G.Hüner, OUFE 9481.
Euro-Sib. Hcrp.
- Artemisia campestris** L.
Kartalkaya, slopes, 1340 m, 30.8.2003, Ataşlar & Ocak, OUFE 13068.
Hcrp.
- A. scoparia** Waldst. & Kit.
Kartalkaya, roadsides, 1340 m, 30.8.2003, Ataşlar & Ocak, OUFE 13069.
Hcrp.
- Arctium minus** (Hill) Bernh. subsp. **pubens** (Bab.) Arènes
Manastır forest way, slopes, 1200 m, 16.06.2002, G.Hüner, OUFE 9482.

- Euro-Sib. Hcrp.
Cirsium vulgare (Savi) Ten.
 Aşağı Kalabak, Kalabak stream, streamsides, 1000 m, 30.8.2003, Ataşlar & Ocak, OUFE 13070.
 Hcrp.
 ***C. hypoleucum** DC.
 Gölcük to Eğrek, open forest, 1450 m, 12.07.2003, Ataşlar & Ocak, OUFE 13071.
 Euro-Sib. Hcrp.
C. arvense (L.) Scop. subsp. **vestitum** (Wimmer & Grab.) Petrak
 E of Kalabak, open places, 1250 m, 23.06.2002, G.Hüner, OUFE 9483; Yukarı Kalabak to Yukarı Ilica, rocky places, 1150 m, 23.06.2002, G.Hüner, OUFE 9484.
 Hcrp.
Picnemon acarna (L.) Cass.
 Evcikdüzü, open *Quercus* forest, 1000 m, 30.8.2003, Ataşlar & Ocak, OUFE 13072.
 Medit. Th.
 ***Carduus olympicus** Boiss. subsp. **olympicus**
 Koruluk forest, roadsides, 1250 m, 23.06.2002, G.Hüner, OUFE 9485.
 Endemic. Hcrp. EN
C. nutans L. subsp. **nutans** sensu lato
 Aşağı Kalabak, stony steppe, 1100 m, 16.06.2001, G.Hüner, OUFE 9486; Gölcük plateau, steppe, 1600 m, 02.06.2002, G.Hüner, OUFE 9487.
 Hcrp.
 ***Jurinea consanguinea** DC.
 Evcikdüzü, steppe, 1000 m, 09.06.2003, Ataşlar & Ocak, OUFE 13073.
 Hcrp.
Acroptilon repens (L.) DC.
 Çavuş stream, stony steppe, 1200 m, 09.06.2003, Ataşlar & Ocak, OUFE 13074.
 Ir.-Tur. Hcrp.
Centaurea virgata Lam.
 Tay Harası, roadsides, 900 m, 11.06.2001, G.Hüner, OUFE 9488; Aşağı Kalabak, stony slopes, 950 m, 13.07.2002, G.Hüner, OUFE 9489.
 Ch.
C. patula DC.
 Gölcük plateau, steppe, 1600 m, 13.07.2002, G.Hüner, OUFE 9490; Kavacık, open forest, 1200 m, 18.08.2002, G.Hüner, OUFE 9491.
 Ir.-Tur. Hcrp.
C. thracica (Janka) Hayek
 Aşağı Kalabak to Ilica, open *Quercus* forest, 1100 m, 13.07.2002, G.Hüner, OUFE 9492; Sarıöküz village, steppe, 1100 m, 08.08.2002, G.Hüner, OUFE 9493.
 Hcrp.
C. solstitialis L. subsp. **solstitialis**
 Seklice village, field margins, 1000 m, 29.07.2001, G.Hüner, OUFE 9494; Aşağı Kalabak, field margins, 950 m, 03.08.2002, G.Hüner, OUFE 9495.
 Th.
C. iberica Trev. ex Spreng.
 Kartalkaya, slopes, 1340 m, 12.07.2003, Ataşlar & Ocak, OUFE 13075.
 Hcrp.
C. urvillei DC. subsp. **stepposa** Wagenitz
 Aşağı Kalabak, northern slopes, 900 m, 29.06.2002, G.Hüner, OUFE 9496.
 Endemic. Ir.-Tur. Hcrp. LC
 ***C. triumfettii** All.
 Gölcük to Eğrek, forest way, roadsides, 1450 m, 18.06.2001, G.Hüner, OUFE 9497; Aşağı Kalabak, field margins, 950 m, 23.06.2002, G.Hüner, OUFE 9499.
 Hcrp.
C. depressa M.Bieb.
 Aşağı Kalabak, northern slopes, 1000 m, 01.06.2002, G.Hüner, OUFE 9500; Aşağı Kalabak, plantation area, 1100 m, 09.06.2002, G.Hüner, OUFE 9501; Gölcük to Eğrek, forest way, under *Pinus nigra*, 1450 m, 23.06.2002, G.Hüner, OUFE 9502.
 Th.
Crupina crupinastrum (Moris) Vis.
 Yukarı Kalabak to Ilica, streambed, 1100-1300 m, 23.06.2002, G.Hüner, OUFE 9503.
 Th.
 ***Carthamus lanatus** L.
 Kalabak vicinity, steppe, 1150 m, 14.08.2001, G.Hüner, OUFE 9505; Kartalkaya, northern slopes, 1340 m, 08.09.2002, G.Hüner, OUFE 9506.
 Th.
C. dentatus Vahl.
 Seklice village, roadsides, 950 m, 13.07.2002, G.Hüner, OUFE 9507; Evcikdüzü, steppe, 1000 m, 03.08.2002, G.Hüner, OUFE 9508.
 Th.
Carlina oligocephala Boiss. & Kotschy subsp. **oligocephala**
 Kartalkaya, slopes, 1340 m, 29.06.2002, G.Hüner, OUFE 9510; Hızır stream, under *Pinus nigra*, slopes, 1250 m, 25.07.2002, G.Hüner, OUFE 9511.
 Hcrp.
Xeranthemum inapertum (L.) Mill.
 Gavureyrek hill, under *Quercus*, 1000 m, 13.07.2002, G.Hüner, OUFE 9509.
 Th.
Echinops ritro L.
 Sarıöküz, plantation area, steppe, 1150m, 18.08.2002, G.Hüner, OUFE 9512.
 Hcrp.
E. viscosus DC. subsp. **bithynicus** (Boiss.) Rech.f.
 Aşağı Kalabak, fieldsides, 900-1000 m, 13.07.2002, G.Hüner, OUFE 9513.
 Ir.-Tur. Hcrp.
Scolymus hispanicus L.
 Kalabak to Ilica, open forest, 1200 m, 13.07.2002, G.Hüner, OUFE 13076.
 Medit. Hcrp.
Cichorium intybus L. subsp. **intybus**
 Seklice village, roadsides, 950 m, 17.06.2001, G.Hüner, OUFE 9514; Evcikdüzü, plantation area, 1000 m, 23.06.2002, G.Hüner, OUFE 9515.
 Hcrp.
Scorzonera suberosa C.Koch subsp. **suberosa**
 NE of Kalabak, limestone rocky places, 1100 m, 09.06.2003, Ataşlar & Ocak, OUFE 13077.
 Ir.-Tur. Crp.
S. eriophora DC.
 NE of Kalabak, limestone rocky places, 1100 m, 09.06.2003, Ataşlar & Ocak, OUFE 13078.
 Endemic. Hcrp. LC

Tragopogon buphthalmoides (DC.)
Boiss. var. *buphthalmoides*

Around Kalabak stream, steppe, 1000 m,
29.06.2002, G.Hüner, OUFE 9518; Aşağı
Kalabak, plantation area, steppe, 950 m,
03.08.2002, G.Hüner, OUFE 9519.

Hcrp.

Leontodon crispus Vill. subsp. *asper*
(Waldst. & Kit.) Rohlens var. *asper*

Çavuş stream, streamsides, 1100 m,
26.05.2001, G.Hüner, OUFE 9520;
Evcikdüzü, slopes, 1000 m, 16.06.2002,
G.Hüner, OUFE 9521.

Hcrp.

**Picris hieracioides* L.

Bozkuş kule, meadows, 1400 m,
30.8.2003, Ataşlar & Ocak, OUFE 13079.

Euro-Sib. Hcrp.

P. strigosa M.Bieb. subsp. *strigosa*

Seklice village, steppe, 950 m,
12.07.2003, Ataşlar & Ocak, OUFE 13080.

Ir.-Tur. Hcrp.

Sonchus asper (L.) Hill subsp.
glaucescens (Jordan) Ball

Aşağı Kalabak, plantation area, 1000 m,
21.05.2003, Ataşlar & Ocak, OUFE 13081.

Hcrp.

Hieracium pseudodontotrichum Hub.-
Mor.

Kalabak vicinity, roadsides, 1300 m,
25.06.2003, Ataşlar & Ocak, OUFE 13082.

Endemic. Hcrp. VU

H. pannosum Boiss.

Çimenharmanı, rocky places, 1150 m,
20.07.2001, G.Hüner, OUFE 9522; NE of
Kalabak, plantation area, 1100 m,
23.06.2002, G.Hüner, OUFE 9523.

E. Medit. Hcrp.

H. reductum Freyn & Sint.

Hızar stream, under *Pinus nigra*, 1400
m, 20.07.2001, G.Hüner, OUFE 9524; Aşağı
Kalabak, plantation area, 970 m,
13.07.2002, G.Hüner, OUFE 9525.

Endemic. Hcrp. LC

Pilosella hoppeana (Schult.) C.H. &
F.W.Schultz subsp. *pilisquama* (Nag & Pet.)
P.D.Sell & C.West

S of Türkmen hill, stony places, 1800 m,
23.06.2002, G.Hüner, OUFE 9526.

Hcrp.

P. piloselloides (Vill.) Sojak subsp.
piloselloides

Çimenharmanı, meadows, 1550 m,
20.07.2002, G.Hüner, OUFE 9527;
Manastır, open forest, 1100 m, 14.08.2002,
G.Hüner, OUFE 9528; Efsunbaba, roadsides,
1400 m, 18.08.2002, G.Hüner, OUFE 9529.

Hcrp.

subsp. *megalomastix* (Nag & Pet.)
P.D.Sell & C.West

Hızar stream, under *Pinus nigra*, 1200
m, 29.05.2001, G.Hüner, OUFE 9530;
Kalabak to Ilica, open forest, 1200 m,
13.07.2002, G.Hüner, OUFE 9531.

Hcrp.

**Cicerbita boissieri* (Rauy) C.Jeffrey

Taşoluk, open *Quercus* forest, 1300 m,
14.08.2002, G.Hüner, OUFE 9532.

Endemic. Eux. Hcrp. VU

Lactuca serriola L.

Aslan to Yılmaz, roadsides, 1500 m,
03.08.2002, G.Hüner, OUFE 9533.

Euro-Sib. Hcrp.

**Scariola viminea* (L.) F.W.Schmidt

Aşağı Kalabak, streambed, 1000 m,
03.08.2002, G.Hüner, OUFE 9534.

Hcrp.

**Mycelis muralis* (L.) Dum.

Hızar stream, southern slopes, 1400 m,
14.08.2002, G.Hüner, OUFE 9535.

Euro-Sib. Hcrp.

Lapsana communis L. subsp.
adenophora (Boiss.) Rech.f.

Çavuş stream, meadows, 1100 m,
09.06.2002, G.Hüner, OUFE 9536.

Hcrp.

**Taraxacum officinale* Weber

Gavureyrek hill, steppe, 950 m,
01.06.2001, G.Hüner, OUFE 9537; Aşağı
Kalabak, field margins, 950-1000m,
26.05.2002, G.Hüner, OUFE 9538.

Hcrp.

Chondrilla juncea L. var. *acantholepis*
(Boiss.) Boiss.

Aşağı Kalabak, stony steppe, 1000-1200
m, 30.8.2003, Ataşlar & Ocak, OUFE 13083.

Hcrp.

Crepis pulchra L.

Tay Harası, steppe, 950 m, 09.06.2003,
Ataşlar & Ocak, OUFE 13084.

Th.

C. foetida L. subsp. *rhoeadifolia*
(M.Bieb.) Çelak.

Çavuş stream, slopes, 1150 m,
16.06.2001, G.Hüner, OUFE 9539;
Evcikdüzü, steppe, 1000 m, 25.06.2002,
G.Hüner, OUFE 9540.

Th.

CAMPANULACEAE

Campanula lyrata Lam. subsp. *lyrata*

Kartalkaya, slopes, 1500 m,
03.06.2001, G.Hüner, OUFE 9541; Yukarı
Kalabak, rocky slopes, 1660 m, 01.06.2002,
G.Hüner, OUFE 9542.

Endemic. Hcrp. LC

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

Koruluk to Belören, steppe, 1400 m,
07.07.2002, G.Hüner, OUFE 9543; Hızar
stream, streamsides, 1500 m, 13.07.2002,
G.Hüner, OUFE 9544.

Euro-Sib. Hcrp.

C. argaea Boiss. & Balansa

S of Yukarı Kalabak, rocky places, 1250-
1300 m, 23.06.2002, G.Hüner, OUFE 9545;
Aslan to Yılmaz, rocky places, 1450 m,
03.08.2002, G.Hüner, OUFE 9546.

Endemic. Ir.-Tur. Hcrp. LC

C. cymbalaria Sm.

Taşoluk, rocky slopes, 1400 m,
29.06.2002, G.Hüner, OUFE 9547; Aslan to
Yılmaz, rocky places, 1500 m, 03.08.2002,
G.Hüner, OUFE 9548.

E. Medit. Hcrp.

Asyneuma limonifolium (L.) Janch.
subsp. *limonifolium*

Yukarı Kalabak to Sariöküz, open *Pinus*
nigra, 1250 m, 09.06.2002, G.Hüner, OUFE
9549.

Hcrp.

**A. lobelioides* (Willd.) Hand.-Mazz.

Ilica, around stream, under forest, 1250
m, 16.06.2002, G.Hüner, OUFE 9550.

Ir.-Tur. Hcrp.

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

Hızar stream, meadows, 1440 m, 19.06.2001, G.Hüner, OUFE 9551; Koruluk to Belören, steppe, 1350 m, 13.07.2002, G.Hüner, OUFE 9552.

Ir.-Tur. Hcrp.

Legousia speculum-veneris (L.) Chaix

Ilıca, open places, 1100 m, 02.06.2001, G.Hüner, OUFE 9553; Kalabak vicinity, steppe, 1100-1300 m, 01.06.2002, G.Hüner, OUFE 9554.

Medit. Th.

PRIMULACEAE

Lysimachia vulgaris L.

Çimenharmanı, around drinking fountain, meadows, 1540 m, 01.06.2002, G.Hüner, OUFE 9555; N of Hızar, streamsides, 1400 m, 13.07.2002, G.Hüner, OUFE 9556.

Hcrp.

L. atropurpurea L.

Türkmen Baba hill, slopes, 1800 m, 01.06.2002, G.Hüner, OUFE 9557; Ilıca to Şelale, roadsides, 1250 m, 29.06.2002, G.Hüner, OUFE 9558; Ören to Gobak, roadsides, 1300 m, 13.07.2002, G.Hüner, OUFE 9559; Kavacık, steppe, 1000 m, 18.08.2002, G.Hüner, OUFE 9560.

E. Medit. Hcrp.

Anagallis arvensis L. var. **arvensis**

Ilıca, roadsides, 1050 m, 23.06.2002, G.Hüner, OUFE 9561.

Th.

ASCLEPIADACEAE

Cynanchum acutum L. subsp. **acutum**

Aşağı Kalabak, streamsides, 950 m, 12.07.2003, Ataşlar & Ocak, OUFE 13085.

Hcrp.

GENTIANACEAE

***Centaurium erythraea** Rafn subsp. **erythraea**

Türkmen Baba hill, slopes, 1800 m, 08.06.2001, G.Hüner, OUFE 9562; Kalabak to Üçsaray, 7 km, roadsides, 1550 m, 20.07.2002, G.Hüner, OUFE 9563.

Euro-Sib. Hcrp.

CONVOLVULACEAE

***Convolvulus cantabrica** L.

Gavureyrek hill, steppe, 950 m, 01.06.2001, G.Hüner, OUFE 9564; Aşağı Kalabak, slopes, 950 m, 29.06.2002, G.Hüner, OUFE 9565.

Ch.

C. phrygius Bornm.

Evcikdüzü, open *Quercus* forest, 1000 m, 09.06.2002, G.Hüner, OUFE 9566; Aşağı Kalabak, plantation area, steppe, 1000 m, 16.06.2002, G.Hüner, OUFE 9567.

Endemic. Ir.-Tur. Ch. VU

C. arvensis L.

N of Kalabak, plantation area, steppe, 1000 m, 15.07.2002, G.Hüner, OUFE 9568.

Hcrp.

C. galaticus Rostan ex Choisy

Aşağı Kalabak, field margins, 910 m, 23.06.2002, G.Hüner, OUFE 9569.

Endemic. Ir.-Tur. Crp. LC

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

Türkmen hill, roadsides, 1350 m, 25.06.2003, Ataşlar & Ocak, OUFE 13086.

Hcrp.

Calystegia sepium (L.) R.Br. subsp. **sepium**

Aşağı Kalabak, streamsides, 950 m, 12.07.2003, Ataşlar & Ocak, OUFE 13087.

Hcrp.

CUSCUTACEAE

Cuscuta campestris Yunk.

Hızar stream, streamsides, 1300 m, 30.8.2003, on *Ranunculus* sp., Ataşlar & Ocak, OUFE 13088.

Vp.

BORAGINACEAE

Heliotropium europaeum L.

Aşağı Kalabak, around Kalabak stream, 1000 m, 03.08.2002, G.Hüner, OUFE 9570.

Th.

Lappula barbata (M.Bieb.) Gürke

Belören to Koruluk, steppe, 1350 m, 09.06.2003, Ataşlar & Ocak, OUFE 13089.

Ir.-Tur. Hcrp.

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

Manastır, forest way, rocky slopes, 1450 m, 29.04.2003, Ataşlar & Ocak, OUFE 13090.

Th.

Asperugo procumbens L.

Çimenharmanı, streamsides, 1540 m, 12.05.2002, G.Hüner, OUFE 9571; N of Kalabak, 7 km, roadsides, 1200 m, 23.06.2002, G.Hüner, OUFE 9572.

Euro-Sib. Th.

Myosotis ramosissima Rochel ex Schult. subsp. **ramosissima**

Kartalkaya, roadsides, 1200 m, 21.05.2003, Ataşlar & Ocak, OUFE 13091.

Th.

Cynoglossum creticum Mill.

Kartalkaya, roadsides, 1340 m, 09.06.2002, G.Hüner, OUFE 9573; Çavuş stream, southern slopes, 1200 m, 13.07.2002, G.Hüner, OUFE 9574.

Hcrp.

Buglossoides arvensis (L.) Johnst.

Çavuş stream, rocky slopes, 1440 m, 29.04.2003, Ataşlar & Ocak, OUFE 13092.

Th.

***Echium orientale** L.

Aşağı Kalabak, plantation area, steppe, 950 m, 25.06.2003, Ataşlar & Ocak, OUFE 13093.

Endemic. Euro-Sib. Hcrp. LC

E. italicum L.

Kalabak vicinity, roadsides, 1000 m, 01.06.2001, G.Hüner, OUFE 9575; Seklice village, roadsides, 950 m, 11.06.2001, G.Hüner, OUFE 9576; E of Kalabak, roadsides, 910 m, 23.06.2002, G.Hüner, OUFE 9577.

Medit. Hcrp.

Moltkia coerulea (Willd.) Lehm.

Sarısu, field margins, 800 m, 21.05.2003, Ataşlar & Ocak, OUFE 13094.

Ir.-Tur. Hcrp.

M. aurea Boiss.

Sarıöküz, steppe, 1200 m, 12.05.2002, G.Hüner, OUFE 9578; Gölcük, stony places, 1450 m, 12.05.2002, G.Hüner, OUFE 9579.

- Endemic. Ir.-Tur. Hcrp. LC
- *Onosma bracteosum** Hausskn. & Bornm.
Aşağı Kalabak, plantation area, 1050 m, 25.06.2003, Ataşlar & Ocak, OUFE 13095.
- Endemic. Ir.-Tur. Hcrp. LC
- O. tauricum** Pallas ex Willd. var. **tauricum**
Şelale road, under *Pinus nigra*, 1050 m, 29.04.2003, Ataşlar & Ocak, OUFE 13096.
- Hcrp.
- O. aucheranum** DC.
Evcikdüzü, open *Quercus* forest, 1000 m, 16.06.2002, G.Hüner, OUFE 9580.
- E. Medit. Hcrp.
- Cerintho minor** L. subsp. **auriculata** (Ten.) Domac
Taşoluk, slopes, 1350 m, 25.06.2003, Ataşlar & Ocak, OUFE 13097.
- Hcrp.
- Symphytum orientale** L.
Aslan to Yılmaz, 3 km, northern slopes, 1350 m, 01.06.2002, G.Hüner, OUFE 9581; Türkmen Baba hill, northern slopes, 1500 m, 23.06.2002, G.Hüner, OUFE 9582.
- Euro-Sib. Hcrp.
- *S. bornmuelleri** Bucknall
Aslan to Yılmaz, 3 km, northern slopes, 1450 m, 03.08.2002, G.Hüner, OUFE 9583.
- Eux. Hcrp.
- Brunnera orientalis** (Schenk) Johnston
Efsunbaba hill, under *Pinus nigra*, 1500 m, 21.05.2003, Ataşlar & Ocak, OUFE 13098.
- Hcrp.
- Anchusa leptophylla** Roem. & Schult. subsp. **leptophylla**
Aşağı Kalabak, field margins and rocky places, 900 m, 01.06.2002, G.Hüner, OUFE 9584.
- Hcrp.
- A. azurea** Mill. var. **azurea**
Yukarı Kalabak, Orman İşletme Şefliği, steppe, 1050 m, 12.05.2002, G.Hüner, OUFE 9585; Aşağı Kalabak, fallow land, 950 m, 29.06.2002, G.Hüner, OUFE 9587.
- Hcrp.
- Nonea caspica** (Willd.) G.Don
Manastır, forest way, rocky slopes, 1450 m, 21.05.2003, Ataşlar & Ocak, OUFE 13099.
- Ir.-Tur. Th.
- Alkanna orientalis** (L.) Boiss. var. **leucantha** (Bornm.) Hub.-Mor.
Kalabak stream, slopes, 1150 m, 01.06.2001, G.Hüner, OUFE 9588; Evcikdüzü, steppe, 1100 m, 09.06.2002, G.Hüner, OUFE 9589.
- Ir.-Tur. Hcrp.
- *A. cordifolia** C.Koch.
NE of Kalabak, streamsides, 1100 m, 23.06.2002, G.Hüner, OUFE 9590.
- Ir.-Tur. Hcrp.
- SOLANACEAE**
- Solanum nigrum** L. subsp. **nigrum**
Kalabak vicinity, roadsides, 1300 m, 12.07.2003, Ataşlar & Ocak, OUFE 13100.
- Th.
- S. dulcamara** L.
Sarısu stream, streamsides, 800 m, 09.06.2003, Ataşlar & Ocak, OUFE 13101.
- Euro-Sib. Hcrp.
- Lycium barbarum** L.
Seklice village, field margins, 950 m, 21.05.2003, Ataşlar & Ocak, OUFE 13102.
- Nph.
- *Atropa belladonna** L.
Çavuş stream, under *Fagus orientalis*, 1300 m, 01.06.2001, G.Hüner, OUFE 9591.
- Euro-Sib. Ch.
- Hyoscyamus niger** L.
Çavuş stream, southern slopes, *Quercus* scrub, 1000-1200 m, 01.06.2001, G.Hüner, OUFE 9592.
- Ch.
- SCROPHULARIACEAE**
- Verbascum serratifolium** (Hub.-Mor.) Hub.-Mor.
Manastır, roadsides, 1300 m, 21.05.2003, Ataşlar & Ocak, OUFE 13103.
- Endemic. Ir.-Tur. Hcrp. NT
- V. flavidum** (Boiss.) Freyn & Bornm.
Evcikdüzü, under *Pinus nigra*, 1100 m, 21.05.2003, Ataşlar & Ocak, OUFE 13104.
- Euro-Sib. Hcrp.
- *V. bombyciferum** Boiss.
Evcikdüzü, under *Pinus nigra*, 1100 m, 21.05.2003, Ataşlar & Ocak, OUFE 13105.
- Endemic. Euro-Sib. Hcrp. LC
- *V. caudatum** Freyn & Bornm.
Gobak to Otluk, roadsides, 1350 m, 13.07.2001, G.Hüner, OUFE 9593; Yukarı Kalabak, around warehouse, rocky places, 1200 m, 01.06.2002, G.Hüner, OUFE 9594.
- Endemic. Ir.-Tur. Hcrp. LC
- *V. stachydifolium** Boiss. & Heldr. var. **stachydifolium**
Manastır, roadsides, 1300 m, 01.06.2002, G.Hüner, OUFE 9595; Yukarı Kalabak, steppe, 1550 m, 01.06.2002, G.Hüner, OUFE 9596; Kalabak vicinity, meadows, 1100 m, 23.06.2002, G.Hüner, OUFE 9597; Ilıca, roadsides, 1100 m, 23.06.2002, G.Hüner, OUFE 9598.
- Endemic. Ir.-Tur. Hcrp. VU
- V. stenostachyum** Hub.-Mor.
Aşağı Kalabak, plantation area, 900 m, 12.07.2003, Ataşlar & Ocak, OUFE 13106.
- Endemic. Ir.-Tur. Hcrp. NT
- V. glomeratum** Boiss.
Around Kalabak, stony steppe, 1000 m, 25.06.2003, Ataşlar & Ocak, OUFE 13107.
- Ir.-Tur. Hcrp.
- V. lasianthum** Boiss. ex Benth.
Around Kalabak stream, roadsides, 1000 m, 20.06.2001, G.Hüner, OUFE 9599; Koruluk, roadsides, 1300 m, 23.06.2002, G.Hüner, OUFE 9600.
- Hcrp.
- V. cheiranthifolium** Boiss. var. **cheiranthifolium**
Gavureyrek hill, slopes, 950 m, 01.06.2001, G.Hüner, OUFE 9601; Aşağı Kalabak, steppe, 950 m, 23.06.2002, G.Hüner, OUFE 9602.
- Hcrp.

Scrophularia scopolii [Hoppe ex] Pers.
var. *scopolii*

Hızar stream, steppe, 1200-1300 m,
01.06.2001, G.Hüner, OUFE 9603; Çavuş
stream, steppe, 1300 m, 07.06.2001,
G.Hüner, OUFE 9604.

Hcrp.

Linaria genistifolia (L.) Mill. subsp.
genistifolia

Aşağı Kalabak, around village drinking
fountain, rocky slopes, 1000 m, 01.06.2001,
G.Hüner, OUFE 9605; Harmankaya, rocky
places, 1420 m, 09.06.2002, G.Hüner, OUFE
9606.

Euro-Sib. Hcrp.

L. corifolia Desf.

Aşağı Kalabak, Kartalkaya, roadsides,
1200 m, 25.06.2003, Ataşlar & Ocak, OUFE
13108.

Endemic. Ir.-Tur. Hcrp. LC

Digitalis ferruginea L. subsp. *ferruginea*

Taşluk to Gölcük, open places, 1400-
1500 m, 03.08.2002, G.Hüner, OUFE 9607.

Euro-Sib. Hcrp.

Veronica serpyllifolia L.

Hızar stream, streamsides, 1300 m,
09.06.2003, Ataşlar & Ocak, OUFE 13109.

Ch.

V. grisebachii S.M.Walters

Sarıöküz, meadows, 1100 m,
21.05.2003, Ataşlar & Ocak, OUFE 13110.

E. Medit. Th.

V. pontica Velen

Çilekli, roadsides, 1500 m, 29.04.2003,
Ataşlar & Ocak, OUFE 13111.

Th.

V. anagallis-aquatica L. subsp.
anagallis-aquatica

Çavuş stream, streamsides, 1200 m,
06.07.2001, G.Hüner, OUFE 9608; Gölcük,
meadows, 1450 m, 24.07.2001, G.Hüner,
OUFE 9609.

Hcrp.

V. chamaedrys L.

Kalabak vicinity, open places, 1050 m,
12.05.2002, G.Hüner, OUFE 9610.

Euro-Sib. Hcrp.

V. pectinata L. var. *pectinata*

Ilıca, meadows, 1150 m, 01.06.2001,
G.Hüner, OUFE 9611.

Hcrp.

V. multifida L.

Kartalkaya, northern slopes, 1250 m,
01.06.2001, G.Hüner, OUFE 9612;
Gavureyrek hill, slopes, 950 m, 01.06.2001,
G.Hüner, OUFE 9613.

Endemic. Ir.-Tur. Ch. LC

V. officinalis L.

Kalabak vicinity, roadsides, 1300 m,
25.06.2003, Ataşlar & Ocak, OUFE 13112.

Euro-Sib. Hcrp.

Odontites aucheri Boiss.

Taşluk, slopes, 1350 m, 30.8.2003,
Ataşlar & Ocak, OUFE 13113.

Ir.-Tur. Th.

O. verna (Bellardi) Dumort. subsp.
serotina (Dumort.) Corb.

Kartalkaya, meadows, 1400 m,
01.06.2001, G.Hüner, OUFE 9614; Gölcük,
open places, 1640 m, 20.07.2002, G.Hüner,
OUFE 9615.

Euro-Sib. Th.

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

Bozkuş kule, meadows, 1400 m,
01.06.2001, G.Hüner, OUFE 9616; Koruluk,
open forest, meadows, 1350 m, 23.06.2002,
G.Hüner, OUFE 9617.

Hcrp.

Rhinanthus angustifolius C.C.Gmelin
subsp. *grandiflorus* (Wallr.) D.A.Webb

Gavureyrek hills, meadows, 1000 m,
12.07.2003, Ataşlar & Ocak, OUFE 13114.

Th.

OROBANCHACEAE

Orobanche ramosa L.

Kalabak vicinity, roadsides, 1300 m,
25.06.2003, on *Chenopodium* sp., Ataşlar &
Ocak, OUFE 13115.

Vp.

O. cernua Loefl.

Koruluk, steppe, 1350 m, 23.06.2002,
on *Potentilla* sp., G.Hüner, OUFE 9618.

Vp.

O. minor Sm.

Around Sarısu stream, field margins, 800
m, 21.05.2003, on *Solanum* sp., Ataşlar &
Ocak, OUFE 13116.

Vp.

O. anatolica Boiss. & Reut.

N of Paşaköşkü, meadows, 1400 m,
01.06.2001, on *Salvia* sp., G.Hüner, OUFE
9619.

Vp.

ACANTHACEAE

Acanthus hirsutus Boiss.

Belce, northern slopes, 1500 m,
01.06.2002, G.Hüner, OUFE 9620; Kalabak
vicinity, *Quercus* scrub, 1100 m,
29.06.2002, G.Hüner, OUFE 9621.

Endemic. Ir.-Tur. Hcrp. LC

GLOBULARIACEAE

Globularia orientalis L.

Gavureyrek hill, northern slopes, 950 m,
01.06.2001, G.Hüner, OUFE 9622; Aşağı
Kalabak, plantation area, steppe, 1100 m,
09.06.2002, G.Hüner, OUFE 9623.

Ir.-Tur. Ch.

G. trichosantha Fisch. & C.A.Mey. subsp.
trichosantha

Gölcük, roadsides, 1640 m, 01.06.2001,
G.Hüner, OUFE 9624; Taşluk, steppe, 1320
m, 14.08.2002, G.Hüner, OUFE 9625.

Ir.-Tur. Hcrp.

LAMIACEAE (LABIATAE)

Ajuga salicifolia (L.) Schrb.

Yukarı Kalabak, rocky slopes, 1660 m,
25.06.2003, Ataşlar & Ocak, OUFE 13117.

Ir.-Tur. Hcrp.

A. chamaepitys (L.) Schrb. subsp. *chia*
(Schr.) Arcang. var. *chia*

Manastır, stony slopes, 1450 m,
09.06.2003, Ataşlar & Ocak, OUFE 13118.

Hcrp.

Teucrium orientale L. var. *orientale*

Aşağı Kalabak, north of village drinking
fountain, stony slopes, 950 m, 29.06.2002,
G.Hüner, OUFE 9626; Aşağı Kalabak, slopes,
950 m, 13.07.2002, G.Hüner, OUFE 9627.

Ir.-Tur. Hcrp.

- T. chamaedrys* L. subsp. *chamaedrys*
Belören to Koruluk, steppe, 1350 m, 13.06.2002, G.Hüner, OUFÉ 9628; Yukarı Kalabak, field margins, 1100 m, 23.06.2002, G.Hüner, OUFÉ 9629; NE of Kalabak, steppe, 950 m, 29.06.2002, G.Hüner, OUFÉ 9630.
Euro-Sib. Ch.
- T. polium* L.
Gavureyrek hill, steppe, 950 m, 01.06.2001, G.Hüner, OUFÉ 9631; Evcikdüzü, slopes, 1000 m, 29.06.2002, G.Hüner, OUFÉ 9632.
Ch.
- Scutellaria velenovskyi* Rech.f.
Manastır, streamsides, 1550 m, 18.08.2002, G.Hüner, OUFÉ 9633.
E. Medit. Hcrp.
- S. orientalis* L. subsp. *alpina* (Boiss.) O.Schwarz var. *alpina*
Gavureyrek hill, slopes, 950 m, 01.06.2001, G.Hüner, OUFÉ 9634; Kalabak vicinity, steppe, 1100 m, 26.05.2002, G.Hüner, OUFÉ 9635.
Hcrp.
- Phlomis pungens* Willd. var. *hirta* Velen
Sarıöküz road, 2 km, meadows, 1000 m, 16.06.2002, G.Hüner, OUFÉ 9636.
Hcrp.
- **P. russeliana* (Sims) Benth.
Seklice village, steppe, 950 m, 25.06.2003, Ataşlar & Ocak, OUFÉ 13119.
Endemic. Euro-Sib. Hcrp. LC
- Lamium amplexicaule* L.
Gebeş, roadsides, 1200 m, 21.05.2003, Ataşlar & Ocak, OUFÉ 13120.
Euro-Sib. Th.
- L. purpureum* L. var. *purpureum*
Kalabak to Ilica, steppe, 1000-1100 m, 26.05.2002, G.Hüner, OUFÉ 9637; N of Şelale, steppe, 1250 m, 13.06.2002, G.Hüner, OUFÉ 9638.
Euro-Sib. Th.
- Wiedemannia orientalis* Fisch. & C.A.Mey.
Tay Harası, fieldsides, 950 m, 11.06.2001, G.Hüner, OUFÉ 9639; Aşağı Kalabak, fieldsides, 900 m, 01.06.2002, G.Hüner, OUFÉ 9640.
Endemic. Ir.-Tur. Th. LC
- Ballota nigra* L. subsp. *anatolica* P.H.Davis
Kalabak vicinity, around Kalabak stream, streamsides, 1050 m, 25.06.2003, Ataşlar & Ocak, OUFÉ 13121.
Endemic. Ir.-Tur. Hcrp. LC
- Marrubium parviflorum* Fisch. & C.A.Mey. subsp. *parviflorum*
Evcikdüzü, *Quercus* scrub, 1000 m, 26.07.2001, G.Hüner, OUFÉ 9641; Aşağı Kalabak, slopes, 1000 m, 13.07.2002, G.Hüner, OUFÉ 9642.
Ir.-Tur. Hcrp.
- M. astracanicum* Jacq. subsp. *astracanicum*
Kalabak to Kirazlı, 5 km, slopes, 1000-1100 m, 16.06.2002, G.Hüner, OUFÉ 9643; Gobak to Otlak, roadsides, 1200 m, 13.07.2002, G.Hüner, OUFÉ 9644.
Hcrp.
- Sideritis montana* L. subsp. *montana*
Kalabak, burnt land, 850 m, 22.06.2001, G.Hüner, OUFÉ 9646.
Medit. Th.
- S. germanicopolitana* Bornm. subsp. *viridis* Hausskn. ex Bornm.
Manastır Burnu, under *Pinus nigra*, 1000 m, 12.07.2003, Ataşlar & Ocak, OUFÉ 13122.
Endemic. Hcrp. LC
- Stachys tmolea* Boiss.
Evcikdüzü, steppe, 1000 m, 13.07.2002, G.Hüner, OUFÉ 9650.
Endemic. E. Medit. Hcrp. LC
- S. cretica* L. subsp. *anatolica* Rech.f.
Kalabak, burnt land, steppe, 850 m, 01.06.2002, G.Hüner, OUFÉ 9651; Aşağı Kalabak, steppe, 900 m, 18.06.2002, G.Hüner, OUFÉ 9652.
Endemic. Ir.-Tur. Hcrp. LC
- S. byzantina* C.Koch
Yukarı Kalabak to Sarıöküz, fieldsides, 1100 m, 30.8.2003, Ataşlar & Ocak, OUFÉ 13123.
Euro-Sib. Hcrp.
- S. iberica* M.Bieb. subsp. *iberica* var. *densipilosa* Bhattacharjee
Gavureyrek hill, slopes, 950 m, 01.06.2001, G.Hüner, OUFÉ 9647; Bozkuş kule, under *Pinus nigra*, 1450-1500 m, 08.09.2001, G.Hüner, OUFÉ 9648.
Endemic. Ir.-Tur. Hcrp. LC
- Nepeta nuda* L. subsp. *nuda*
Çavuş stream, roadsides, 1350 m, 07.07.2001, G.Hüner, OUFÉ 9653; Paşaköşkü, southern slopes, 1550 m, 23.06.2002, G.Hüner, OUFÉ 9654.
Hcrp.
- Prunella vulgaris* L.
Sarıöküz, field margins, 1100 m, 29.06.2002, G.Hüner, OUFÉ 9655.
Euro-Sib. Hcrp.
- P. laciniata* (L.) L.
Kalabak stream, stony places, 1000 m, 29.05.2002, G.Hüner, OUFÉ 9656; Aşağı Kalabak, steppe, 950 m, 16.06.2002, G.Hüner, OUFÉ 9657.
Euro-Sib. Hcrp.
- Calamintha grandiflora* (L.) Moench
Manastır, under *Pinus nigra*, 1450 m, 23.06.2002, G.Hüner, OUFÉ 9658; Çimenharmanı, under *Pinus sylvestris*, 1500 m, 20.07.2002, G.Hüner, OUFÉ 9659.
Euro-Sib. Hcrp.
- Clinopodium vulgare* L. subsp. *vulgare*
Çavuş stream, steppe, 1350 m, 11.06.2001, G.Hüner, OUFÉ 9660; Ören to Gobak, roadsides, 1400 m, 13.07.2002, G.Hüner, OUFÉ 9661.
Hcrp.
- Acinos rotundifolius* Pers.
Evcikdüzü, slopes, 1000 m, 11.06.2001, G.Hüner, OUFÉ 9662; Aşağı Kalabak, plantation area, steppe, 900 m, 09.06.2002, G.Hüner, OUFÉ 9663.
Th.
- Thymus leucostomus* Hausskn. & Velen. var. *argillaceus* Jalas
Gölcük plateau, meadows, 1640 m, 01.06.2001, G.Hüner, OUFÉ 9664; Evcikdüzü, slopes, 1000 m, 29.06.2002, G.Hüner, OUFÉ 9665.
Endemic. Ir.-Tur. Ch. VU

T. longicaulis C.Presl subsp. *longicaulis*
var. *subisophyllus* (Borbás) Jalas

Aşağı Kalabak, steppe, 950 m,
01.06.2002, G.Hüner, OUFE 9666; Aşağı
Kalabak, steppe, 950 m, 16.06.2002,
G.Hüner, OUFE 9667; Yukarı Ilıca, steppe,
1100 m, 23.06.2002, G.Hüner, OUFE 9668.

Hcrp.

Mentha spicata L. subsp. *tomentosa*
(Briq.) Harley

Çavuş stream, streamsides, 1200 m,
23.06.2002, G.Hüner, OUFE 9669; Yukarı
Kalabak, Orman İşletme Şefliği, steppe, 1050
m, 03.08.2002, G.Hüner, OUFE 9670.

Hcrp.

Lycopus europaeus L.

Çimenharmanı, meadows, 1550 m,
30.8.2003, Ataşlar & Ocak, OUFE 13124.

Euro-Sib. Hcrp.

Ziziphora capitata L.

Aşağı Kalabak, plantation area, slopes,
950 m, 16.06.2002, G.Hüner, OUFE 9671.

Ir.-Tur. Th.

Z. taurica M.Bieb. subsp. *taurica*

Sarıöküz, steppe, 1100 m, 01.06.2002,
G.Hüner, OUFE 9672; Evcikdüzü, *Quercus*
scrub, 1000 m, 09.06.2002, G.Hüner, OUFE
9673.

Ir.-Tur. Th.

Salvia tomentosa Mill.

Paşaköşkü, steppe, 1660 m,
11.06.2001, G.Hüner, OUFE 9674;
Sarıöküz, meadows, 1150 m, 16.06.2002,
G.Hüner, OUFE 9675.

Hcrp.

S. wiedemannii Boiss.

Yukarı Kalabak, Manastır forest way,
roadsides, 1450 m, 25.06.2003, Ataşlar &
Ocak, OUFE 13125.

Endemic. Ir.-Tur. Ch. LC

S. cryptantha Montbret & Aucher ex
Benth.

Tay Harası, steppe, 900 m, 11.06.2001,
G.Hüner, OUFE 9676; N of Kalabak, slopes,
900 m, 16.06.2002, G.Hüner, OUFE 9677.

Endemic. Ir.-Tur. Hcrp. LC

S. sclarea L.

Seklice village, roadsides, 950 m,
01.06.2001, G.Hüner, OUFE 9678; Aşağı
Kalabak, field margins, 950 m, 11.06.2001,

G.Hüner, OUFE 9679; Sarıöküz, steppe,
1100 m, 16.06.2002, G.Hüner, OUFE 9680.

Hcrp.

S. aethiopsis L.

Gavureyrek hill, steppe, 950 m,
01.06.2001, G.Hüner, OUFE 9681;
Sarıöküz, open places, 1100 m, 16.06.2002,
G.Hüner, OUFE 9682.

Hcrp.

S. dichroantha Stapf

Kalabak vicinity, steppe, 1000 m,
11.06.2001, G.Hüner, OUFE 9683; N of
Taşoluk, open places, 1450 m, 29.06.2002,
G.Hüner, OUFE 9684.

Endemic. Ir.-Tur. Hcrp. LC

PLUMBAGINACEAE

Plumbago europaea L.

Kalabak, Kartalkaya, roadsides, 1200 m,
30.8.2003, Ataşlar & Ocak, OUFE 13126.

Euro-Sib. Hcrp.

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

Gavureyrek hill, slopes, 950 m,
01.06.2001, G.Hüner, OUFE 9685;
Evcikdüzü, slopes, open *Quercus* forest, 1000
m, 13.07.2002, G.Hüner, OUFE 9686.

Ir.-Tur. Ch.

PLANTAGINACEAE

Plantago major L. subsp. *intermedia*
(Gilib.) Lange

Yukarı Kalabak, slopes, 980 m,
23.06.2002, G.Hüner, OUFE 9687;
Efsunbaba hill, roadsides, 1460 m,
14.08.2002, G.Hüner, OUFE 9688; Kalabak,
Kalabak stream, streamsides, 980 m,
08.09.2002, G.Hüner, OUFE 9689.

Hcrp.

P. maritima L.

Gölcük plateau, meadows, 1640 m,
01.06.2001, G.Hüner, OUFE 9690;
Paşaköşkü to Ballica, 3 km, roadsides, 1700
m, 20.07.2002, G.Hüner, OUFE 9691.

Hcrp.

P. lanceolata L.

Gölcük plateau, meadows, 1640 m,
01.06.2001, G.Hüner, OUFE 9692; N of
Kalabak, steppe, 950 m, 20.05.2002,
G.Hüner, OUFE 9693.

Hcrp.

ELAEAGNACEAE

Elaeagnus angustifolia L.

Hızır stream, streamsides, 1300 m,
29.04.2003, Ataşlar & Ocak, OUFE 13127.

Mcp.

LORANTHACEAE

Viscum album L. subsp. *album*

Koruluk, forest way, on *Pinus nigra*,
1350 m, 08.09.2002, G.Hüner, OUFE 9694.

Vp.

EUPHORBIACEAE

Euphorbia chamaesyce L.

Aşağı Kalabak, streamsides, 950 m,
25.06.2003, Ataşlar & Ocak, OUFE 13128.

Th.

E. stricta L.

Manastır, stony slopes, 1450 m,
13.07.2002, G.Hüner, OUFE 9695.

Euro-Sib. Th.

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

Taşoluk, open places, 1350 m,
13.07.2002, G.Hüner, OUFE 9696; Ören to
Gobak, forest way, under *Pinus nigra*, 1250
m, 18.08.2002, G.Hüner, OUFE 9697.

Th.

E. anacampseros Boiss. var.
anacampseros

Kalabak stream, stony places, 1000 m,
12.05.2001, G.Hüner, OUFE 9698.

Endemic. Hcrp. LC

URTICACEAE

Urtica dioica L.

Kalabak stream, streamsides, 1050 m,
01.06.2001, G.Hüner, OUFE 9700; Seklice,
Şeytan stream, steppe, 950 m, 11.06.2001,
G.Hüner, OUFE 9701; Çimenharmanı, stony
places, 1600 m, 20.07.2002, G.Hüner, OUFE
9702.

Euro-Sib. Hcrp.

ULMACEAE

Ulmus glabra Huds.

Gölcük plateau, open places, 1500 m,
29.06.2002, G.Hüner, OUFE 9703;
Efsunbaba hill, southern slopes, 1400 m,
13.07.2002, G.Hüner, OUFE 9704.

Euro-Sib. Msph.

FAGACEAE

Fagus orientalis Lipsky

Aşağı Kalabak, Kalabak stream, streamsides, 1200 m, 03.08.2002, G.Hüner, OUFE 9705; Efsunbaba hill, mixed forest, 1420 m, 14.08.2002, G.Hüner, OUFE 9706; Bozkuş kule, northern slopes, 1500 m, 14.08.2002, G.Hüner, OUFE 9707; Paşaköşkü, 2 km, mixed forest, 1600 m, 08.09.2002, G.Hüner, OUFE 9708.

Euro-Sib. Msph.

Quercus robur L. subsp. *robur*

Uluçayır to Kalabak, meadows, 900 m, 14.08.2002, G.Hüner, OUFE 9709.

Mcph.

Q. infectoria Olivier subsp. *infectoria*

Efsunbaba hill, northern slopes, 1300 m, 14.08.2002, G.Hüner, OUFE 9710.

Euro-Sib. Mcph.

subsp. *boissieri* (Reuter) O.Schwarz

Evcikdüzü, open places, 1000 m, 30.8.2003, Ataşlar & Ocak, OUFE 13129.

Mcph.

Q. pubescens Willd.

Aslan to Yılmaz, slopes, 1400 m, 08.08.2002, G.Hüner, OUFE 9711; Bozkuş kule, northern slopes, 1400 m, 14.08.2002, G.Hüner, OUFE 9712.

Mcph.

Q. cerris L. var. *cerris*

Yukarı Kalabak to Yukarı Ilica, roadsides, 1200 m, 01.06.2002, G.Hüner, OUFE 9713; Hızar stream, roadsides, 1300 m, 03.08.2002, G.Hüner, OUFE 9714.

Msph.

Q. trojana P.B.Webb.

Evcikdüzü, open places, 1000 m, 30.8.2003, Ataşlar & Ocak, OUFE 13130.

E. Medit. Mcph.

CORYLACEAE

Carpinus betulus L.

Kalabak vicinity, Kalabak stream, 1200 m, 18.08.2002, G.Hüner, OUFE 9715; Çavuş stream, with *Fagus orientalis*, 1300 m, 08.09.2002, G.Hüner, OUFE 9716.

Euro-Sib. Msph.

Corylus avellana L. var. *avellana*

Belce, southern slopes, 1500 m, 18.08.2002, G.Hüner, OUFE 9717; Çavuş stream, streamsides, 1300 m, 18.08.2002, G.Hüner, OUFE 9718.

Euro-Sib. Msph.

SALICACEAE

Salix alba L.

Hızar stream, streamsides, 1300 m, 08.08.2002, G.Hüner, OUFE 9719; Kalabak vicinity, streamsides, 1100-1300 m, 08.09.2002, G.Hüner, OUFE 9720.

Euro-Sib. Msph.

Populus tremula L.

Kartalkaya, with *Fagus orientalis*, 1300 m, 14.08.2002, G.Hüner, OUFE 9721; Efsunbaba, northern slopes, 1300 m, 08.09.2002, G.Hüner, OUFE 9722.

Euro-Sib. Mcph.

RUBIACEAE

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

Aşağı Kalabak, plantation area, 950 m, 16.06.2002, G.Hüner, OUFE 9723; NE of Kalabak, under forest, 1100 m, 23.06.2002, G.Hüner, OUFE 9724.

Endemic. Ch. LC

A. involucrata Wahlenb.

Evcikdüzü, open *Quercus* forest, 1000 m, 01.06.2001, G.Hüner, OUFE 9725; Gavureyrek hill, under *Quercus*, 950 m, 01.06.2001, G.Hüner, OUFE 9726.

Eux. Hcrp.

Galium odoratum (L.) Scop.

Aşağı Kalabak, plantation area, 1000 m, 25.06.2003, Ataşlar & Ocak, OUFE 13131.

Euro-Sib. Hcrp.

**G. palustre* L.

Uluçayır to Aşağı Kalabak, streamsides, 850 m, 25.06.2003, Ataşlar & Ocak, OUFE 13132.

Euro-Sib. Hcrp.

G. verum L. subsp. *verum*

Evcikdüzü, slopes, 1000 m, 01.06.2001, G.Hüner, OUFE 9727; Kartalkaya, open *Quercus* forest, field margins, 1340 m, 29.06.2002, G.Hüner, OUFE 9728.

Euro-Sib. Hcrp.

G. spurium L. subsp. *spurium*

Gavureyrek hill, slopes, 950 m, 01.06.2001, G.Hüner, OUFE 9729; Koruluk to Belören, steppe, 1300 m, 13.07.2002, G.Hüner, OUFE 9730.

Euro-Sib. Th.

G. tricornutum Dandy

Taşoluk, meadows, 1350 m, 13.07.2002, G.Hüner, OUFE 9731.

Medit. Th.

Cruciata taurica (Pallas ex Willd.) Ehrend.

Tay Harası, steppe, 950 m, 29.04.2003, Ataşlar & Ocak, OUFE 13133.

Ir.-Tur. Ch.

Rubia peregrina L.

Gobak to Otluç, under *Pinus nigra*, 1250 m, 13.07.2002, G.Hüner, OUFE 9732.

Ir.-Tur. Hcrp.

MONOCOTYLEDONEAE

LILIACEAE

Asparagus officinalis L.

Yukarı Ilica, steppe, 1150 m, 08.08.2002, G.Hüner, OUFE 9733; Taşoluk, forest way, slopes, 1400 m, 14.08.2002, G.Hüner, OUFE 9734.

Crp.

A. tenuifolius Lam.

N of Mestan pınarı, under *Quercus*, 1100 m, 14.08.2002, G.Hüner, OUFE 9735.

Euro-Sib. Crp.

Allium cupani Rafin subsp. *hirtovaginatatum* (Kunth) Stearn

Gölcük, stony places, 1620 m, 03.08.2002, G.Hüner, OUFE 9736.

Medit. Crp.

A. sieheanum [Hauskn. ex] Kollmann

Yukarı Kalabak, stony places, 1100 m, 23.06.2002, G.Hüner, OUFE 9737; NE of Kalabak, plantation area, 950 m, 29.06.2002, G.Hüner, OUFE 9738.

Endemic. Ir.-Tur. Crp. LC

A. paniculatum L. subsp. *paniculatum*

Taşoluk, steppe, 1350 m, 13.07.2001, G.Hüner, OUFE 9739; Gölcük plateau, steppe, 1640 m, 03.08.2002, G.Hüner, OUFE 9740.

- Medit. Crp.
- ***A. flavum** L. subsp. **tauricum** (Besser ex Reichb.) Stearn var. **tauricum**
- Türkmen hill, open places, 1500 m, 27.05.2003, Ataşlar & Ocak, OUFE 13134.
- Medit. Crp.
- ***A. deciduum** N.Özhatay & Kollmann subsp. **deciduum**
- Gavureyrek hill, steppe, 950 m, 01.06.2001, G.Hüner, OUFE 9740; Evcikdüzü, *Quercus* scrub, steppe, 1000 m, 23.06.2002, G.Hüner, OUFE 9741.
- Endemic. E. Medit. Crp. LC
- A. olympicum** Boiss.
- Kaplan stream, under *Pinus nigra*, 1300 m, 13.07.2001, G.Hüner, OUFE 9742; Çimenharmanı, meadows, 1550 m, 14.08.2002, G.Hüner, OUFE 9743.
- Endemic. Eux. Crp. LC
- A. myrianthum** Boiss.
- Efsunbaba hill, open places, 1400 m, 30.06.2001, G.Hüner, OUFE 13135.
- Ir.-Tur. Crp.
- A. sativum** L.
- Evcikdüzü, steppe, 1000 m, 01.06.2002, G.Hüner, OUFE 9744.
- Crp.
- ***A. ampeloprasum** L.
- Aşağı Kalabak, plantation area, 1050 m, 23.06.2001, G.Hüner, OUFE 13136.
- Medit. Crp.
- A. atroviolaceum** Boiss.
- Koruluk to Belören, meadows, field margins, 1350 m, 13.07.2002, G.Hüner, OUFE 9745.
- Crp.
- A. scorodoprasum** L. subsp. **rotundum** (L.) Stearn
- Gavureyrek hill, slopes, 950 m, 01.06.2001, G.Hüner, OUFE 9746; Kalabak, plantation area, steppe, 950 m, 16.05.2002, G.Hüner, OUFE 9747; Evcikdüzü, steppe, 1000 m, 01.06.2002, G.Hüner, OUFE 9748.
- Medit. Crp.
- A. guttatum** Stev. subsp. **guttatum**
- Gölcük plateau, stony places, 1630 m, 03.08.2002, G.Hüner, OUFE 9749; Hızır stream, stony places, 1200 m, 03.08.2002, G.Hüner, OUFE 9750.
- Crp.
- A. lycanicum** Siehe ex Hayek
- Gavureyrek hill, under *Pinus nigra*, 950 m, 08.06.2003, Ataşlar & Ocak, OUFE 13137.
- Crp.
- Scilla bifolia** L.
- Taşoluk, meadows, 1350 m, 08.08.2001, G.Hüner, OUFE 9751; Bozkuş kule, meadows, 1600 m, 14.08.2002, G.Hüner, OUFE 9752.
- Medit. Crp.
- ***S. autumnalis** L.
- Kalabak burnt land, steppe, 840 m, 11.09.2001, G.Hüner, OUFE 9753; Gölcük plateau, steppe, 1640 m, 08.09.2002, G.Hüner, OUFE 9754.
- Medit. Crp.
- Ornithogalum pyrenaicum** L.
- Kalabak, plantation area, steppe, 950 m, 16.05.2002, G.Hüner, OUFE 9755; Evcikdüzü, slopes, 1000 m, 01.06.2002, G.Hüner, OUFE 9756.
- Crp.
- O. sphaerocarpon** Kerner
- Aşağı Kalabak, plantation area, 900 m, 08.06.2003, Ataşlar & Ocak, OUFE 13138.
- Crp.
- O. comosum** L.
- Kalabak burnt land, steppe, 840 m, 10.05.2001, G.Hüner, OUFE 9757; Tay Harası, northern slopes, 900 m, 29.05.2002, G.Hüner, OUFE 9758.
- Crp.
- O. alpingenum** Stapf
- Kalabak, plantation area, 1000 m, 15.06.2003, Ataşlar & Ocak, OUFE 13139.
- Endemic. E. Medit. Crp. LC
- O. armeniacum** Baker
- Gavureyrek hill, steppe, 950 m, 09.06.2002, G.Hüner, OUFE 9759; Sarıöküz, slopes, 1150 m, 09.06.2002, G.Hüner, OUFE 9760.
- E. Medit. Crp.
- O. nutans** L.
- Gavureyrek hill, under *Pinus nigra*, 950 m, 16.05.2002, G.Hüner, OUFE 9761; Kalabak, plantation area, steppe, 950 m, 29.05.2002, G.Hüner, OUFE 9762.
- E. Medit. Crp.
- Muscari comosum** (L.) Mill.
- Kalabak, open *Quercus* forest, 900 m, 01.06.2002, G.Hüner, OUFE 9763.
- Medit. Crp.
- M. tenuiflorum** Tausch
- Gavureyrek hill, under *Pinus nigra*, 950 m, 22.05.2001, G.Hüner, OUFE 9764; Kalabak stream, steppe, 1000 m, 01.06.2001, G.Hüner, OUFE 9765.
- Crp.
- M. neglectum** Guss.
- Manastır, forest way, under *Pinus nigra*, 1450 m, 01.06.2001, G.Hüner, OUFE 9766; Kalabak, meadows, 1000 m, 01.06.2002, G.Hüner, OUFE 9767.
- Crp.
- M. latifolium** Kirk
- Taşoluk plateau, meadows, 1350 m, 01.06.2001, G.Hüner, OUFE 9768; Kalabak burnt land, stony places, 850 m, 16.05.2002, G.Hüner, OUFE 9769.
- Endemic. E. Medit. Crp. LC
- Hyacinthella lineata** (Steudel) Chouard
- S of Kalabak burnt land, steppe, 850 m, 01.05.2001, G.Hüner, OUFE 9770; Evcikdüzü, steppe, 1000 m, 29.05.2002, G.Hüner, OUFE 9771.
- Endemic. E. Medit. Crp. LC
- Fritillaria fleischeriana** Steudel & Hochst. ex Schult. & Schult.f.
- Kalabak burnt land, stony places, 840 m, 20.05.2001, G.Hüner, OUFE 9772; Gavureyrek hill, steppe, 950 m, 01.06.2001, G.Hüner, OUFE 9773.
- Endemic. Ir.-Tur. Crp. LC
- Gagea bithynica** Pascher
- Kalabak burnt land, steppe, 850 m, 10.04.2001, G.Hüner, OUFE 9774; Çimenharmanı, meadows, 1500 m, 06.05.2001, G.Hüner, OUFE 9775.
- Endemic. E. Medit. Crp. LC

G. bohemica (Zauschn.) Schult. & Schult.f.

Kalabak, forest warehouse, 1300 m, 10.05.2001, G.Hüner, OUFE 9776; Evcikdüzü, *Quercus* scrub, 1000 m, 01.06.2001, G.Hüner, OUFE 9777.

Crp.

**G. peduncularis* (J. & C.Presl) Pascher

Kalabak, camping area, under *Pinus sylvestris*, 1300 m, 01.04.2001, G.Hüner, OUFE 13140; Kalabak, south of forest warehouse, 5 km, open places, 1300 m, 01.04.2001, G.Hüner, OUFE 13141; Türkmen Baba hill, open places, 1750 m, 01.04.2001, G.Hüner, OUFE 13142.

Medit. Crp.

G. granatellii (Parl.) Parl.

Kalabak burnt land, stony places, 850 m, 20.04.2001, G.Hüner, OUFE 9778; Manastır hill, under *Pinus nigra*, 1350 m, 29.05.2002, G.Hüner, OUFE 9779.

Medit. Crp.

Colchicum bornmuelleri Freyn

Doğankaya hill, under *Pinus nigra*, 1550 m, 14.08.2002, G.Hüner, OUFE 9781; Aslan to Yılmaz, forest way, slopes, 1500 m, 08.09.2002, G.Hüner, OUFE 9782.

Endemic. Eux. Crp. LC

Merendera attica (Spruner) Boiss. & Spruner

Gavureyrek hill, under *Pinus nigra*, 950 m, 10.11.2002, G.Hüner, OUFE 9783; Kalabak, plantation area, open places, 900 m, 25.03.2003, Ataşlar & OcaK, OUFE 13143.

E. Medit. Crp.

AMARYLLIDACEAE

Galanthus gracilis Çelak.

Türkmen Baba hill, rocky places, 1810 m, 18.02.2001, G.Hüner, OUFE 9784.

E. Medit. Crp.

IRIDACEAE

Iris pseudacorus L.

N of Kartalkaya, slopes, under *Pinus nigra*, 1340 m, 09.06.2002, G.Hüner, OUFE 9785.

Crp.

I. orientalis Mill.

S of Kartalkaya, steppe, 1400 m, 01.06.2002, G.Hüner, OUFE 9786.

E. Medit. Crp.

Crocus ancyrensis (Herb.) Maw

Doğankaya hill, open *Pinus nigra*, 1550 m, 29.05.2002, G.Hüner, OUFE 9789; Evcikdüzü, steppe, 1000 m, 10.05.2001, G.Hüner, OUFE 9790.

Endemic. Ir.-Tur. Crp. LC

C. danfordiae Maw

Kalabak, plantation area, meadows, 1000 m, 17.05.2002, G.Hüner, OUFE 9791.

Endemic. Crp. LC

C. pallasii Goldb. subsp. *pallasii*

Çimenharmanı, meadows, 1550 m, 10.10.2002, G.Hüner, OUFE 9792.

Crp.

Gladiolus illyricus W.Koch

Sarıöküz, stony steppe, 1150 m, 16.05.2002, G.Hüner, OUFE 9793.

Crp.

G. atrovioleaceus Boiss.

Yukarı Kalabak, Manastır forest way, roadsides, 1450 m, 27.05.2001, G.Hüner, OUFE 9794.

Ir.-Tur. Crp.

ORCHIDACEAE

Cephalanthera rubra (L.) Rich.

Kalabak burnt land, steppe, 840 m, 11.06.2001, G.Hüner, OUFE 9795; Hızır stream, streamsides, 1300 m, 01.06.2001, G.Hüner, OUFE 9796.

Crp.

Limodorum abortivum (L.) Swartz

Sarıöküz, open places, 1150 m, 09.06.2002, G.Hüner, OUFE 9797.

Crp.

**Orchis anatolica* Boiss.

Gobak to Otluk, streamsides, 1250 m, 13.07.2002, G.Hüner, OUFE 9798.

E. Medit. Crp.

O. laxiflora Lam. subsp. *laxiflora*

Türkmen Baba hill, meadows, 1800 m, 01.06.2001, G.Hüner, OUFE 9799.

Crp.

Dactylorhiza iberica (M.Bieb ex Willd.) Soó

Kartalkaya, forest way, under *Pinus nigra*, 1340 m, 07.07.2002, G.Hüner, OUFE

9800; Bozkuş kule, southern slopes, 1550 m, 13.07.2002, G.Hüner, OUFE 9801.

E. Medit. Crp.

SPARGANIACEAE

Sparganium erectum L. subsp. *neglectum* (Beeby) K.Richter

Taşoluk, meadows, 1400 m, 14.08.2002, G.Hüner, OUFE 9802.

Euro-Sib. Crp.

TYPHACEAE

Typha angustifolia L.

Uluçayır to Kalabak, streamsides, 850 m, 16.06.2002, G.Hüner, OUFE 9803.

Crp.

JUNCACEAE

Juncus inflexus L.

Kalabak vicinity, around Kalabak stream, damp places, 1050 m, 12.07.2003, Ataşlar & OcaK, OUFE 13145.

Hcrp.

J. sparganiifolius Boiss. & Kotschy ex Buchenau

Çavuş stream, streamsides, 1400 m, 01.06.2001, G.Hüner, OUFE 9804a; Kalabak stream, wet places, 1000 m, 29.06.2002, G.Hüner, OUFE 9804b.

Endemic. E. Medit. Crp. LC

J. articulatus L.

Hızır stream, streamsides, 1450 m, 01.06.2001, G.Hüner, OUFE 9805; Kalabak stream, streamsides, 950 m, 08.09.2002, G.Hüner, OUFE 9806.

Euro-Sib. Crp.

CYPERACEAE

Eleocharis palustris (L.) Roem. & Schult.

Çimenharmanı, meadows, 1500 m, 29.04.2003, Ataşlar & OcaK, OUFE 13146.

Crp.

Schoenoplectus lacustris (L.) Palla subsp. *tabernaemontani* (C.C.Gmel.) A. & D.Löve

Kalabak vicinity, around Kalabak stream, streamsides, 1050 m, 21.05.2003, Ataşlar & OcaK, OUFE 13147.

Crp.

- Scirpoides holoschoenus** (L.) Sojak
Kalabak vicinity, around Kalabak stream, streamsides, 1050 m, 21.05.2003, Ataşlar & Ocak, OUFÉ 13148.
Crp.
- Carex remota** L.
Evcikdüzü, rocky places, 1000 m, 13.07.2002, G.Hüner, OUFÉ 9807; Hızır stream, streamsides, 1250 m, 13.07.2002, G.Hüner, OUFÉ 9808.
Euro-Sib. Crp.
***C. pendula** Huds.
Kalabak vicinity, around Kalabak stream, streamsides, 1050 m, 21.05.2003, Ataşlar & Ocak, OUFÉ 13149.
Euro-Sib. Crp.
- C. distans** L.
Taşoluk, southern slopes, 1350 m, 01.06.2001, G.Hüner, OUFÉ 9809.
Euro-Sib. Crp.
- POACEAE (GRAMINEAE)**
- Brachypodium sylvaticum** (Huds.) P.Beauv.
Ören to Gobak, forest way, open forest, 1250 m, 01.06.2001, G.Hüner, OUFÉ 98910.
Euro-Sib. Hcrp.
- Aegilops umbellulata** Zhuk. subsp. *umbellulata*
Tay Harası, steppe, 950 m, 29.06.2002, G.Hüner, OUFÉ 9811.
Ir.-Tur. Th.
- A. triuncialis** L. subsp. *triuncialis*
Gavureyrek hill, slopes, 1000 m, 07.06.2002, G.Hüner, OUFÉ 9812; Kalabak burnt land, steppe, 850 m, 11.06.2002, G.Hüner, OUFÉ 9813.
Th.
- A. columnaris** Zhuk.
Aşağı Kalabak, steppe, 900 m, 18.06.2002, G.Hüner, OUFÉ 9814.
Ir.-Tur. Th.
- ***Hordeum murinum** L. subsp. *glaucum* (Steud.) Tzvelev
Evcikdüzü, steppe, 1000 m, 13.07.2002, G.Hüner, OUFÉ 9815.
Th.
- H. bulbosum** L.
Kalabak Orman İşletme Şefliği, steppe, 1050 m, 29.06.2002, G.Hüner, OUFÉ 9816; Sarıöküz, steppe, 1150 m, 13.07.2002, G.Hüner, OUFÉ 9817.
Hcrp.
- Taeniatherum caput-medusae** (L.) Nevski subsp. *crintum* (Schreber) Melderis
Kalabak vicinity, steppe, 1100 m, 29.06.2002, G.Hüner, OUFÉ 9818.
Th.
- Bromus racemosus** L.
Şelale, apple orchard, 1200 m, 23.06.2002, G.Hüner, OUFÉ 9819.
Euro-Sib. Th.
- B. intermedius** Guss.
Ilica, open places, 1150 m, 23.06.2002, G.Hüner, OUFÉ 9820.
Th.
- Koeleria cristata** (L.) Pers.
Kalabak vicinity, steppe, 1100 m, 08.09.2002, G.Hüner, OUFÉ 9821.
Hcrp.
- Calamagrostis pseudophragmites** (Haller f.) Koeler
Seklice village, roadsides, 950 m, 11.06.2002, G.Hüner, OUFÉ 9824; Sarıöküz, roadsides, 1150 m, 14.08.2002, G.Hüner, OUFÉ 9825.
Euro-Sib. Hcrp.
- Phleum bertolonii** DC.
Ilica, roadsides, 1150 m, 11.06.2001, G.Hüner, OUFÉ 9826; Aşağı Kalabak, steppe, 900 m, 13.07.2002, G.Hüner, OUFÉ 9827.
Hcrp.
- P. phleoides** (L.) Karsten
Sarıöküz, plantation area, 880 m, 29.06.2002, G.Hüner, OUFÉ 9828; Kartalkaya, roadsides, 1340 m, 29.06.2002, G.Hüner, OUFÉ 9829.
Euro-Sib. Hcrp.
- Lolium perenne** L.
Yukarı Kalabak, field margins, 1100 m, 18.06.2002, G.Hüner, OUFÉ 9830.
Euro-Sib. Hcrp.
- L. rigidum** Gaudin var. *rigidum*
Aşağı Ilica, steppe, 1000 m, 11.06.2001, G.Hüner, OUFÉ 9831; Kalabak, field margins, 900 m, 18.06.2002, G.Hüner, OUFÉ 9832.
Th.
- Poa pratensis** L.
Tay Harası, steppe, 950 m, 01.06.2001, G.Hüner, OUFÉ 9833; Hızır stream, open *Pinus nigra*, 1300 m, 11.06.2001, G.Hüner, OUFÉ 9834.
Crp.
- P. nemoralis** L.
Doğankaya hill, under *Pinus nigra*, 1500 m, 18.06.2002, G.Hüner, OUFÉ 9835; Kalabak burnt land, steppe, 830 m, 13.07.2002, G.Hüner, OUFÉ 9836.
Hcrp.
- Dactylis glomerata** L. subsp. *hispanica* (Roth) Nyman
Gavureyrek hill, steppe, 1000 m, 27.06.2001, G.Hüner, OUFÉ 9837; Kalabak burnt land, steppe, 830 m, 13.07.2002, G.Hüner, OUFÉ 9838.
Hcrp.
- ***Briza media** L.
Kalabak burnt land, steppe, 830 m, 13.07.2002, G.Hüner, OUFÉ 9839; Tay Harası, steppe, 950 m, 13.07.2002, G.Hüner, OUFÉ 9840.
Hcrp.
- B. humilis** M.Bieb.
Kalabak, steppe, 900 m, 29.06.2002, G.Hüner, OUFÉ 9841.
Th.
- Stipa bromoides** (L.) Dörfler
Kalabak burnt land, steppe, 830 m, 13.07.2002, G.Hüner, OUFÉ 9842; Ilica, steppe, 1150 m, 14.08.2002, G.Hüner, OUFÉ 9843.
Medit. Hcrp.