

## The Flora of Deveboynu Peninsula (Gevaş-Van/Turkey) and its Environment

### Deveboynu Yarımadası ve Çevresi Florası (Gevaş-Van/Türkiye)

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### Abstract

This paper describes a floristic study of Deveboynu peninsula and its environments. The research area is in the B9 square according to the grid system. The research was carried out between 2001-2003. During the study period, 1602 vascular plant specimens were collected. After the identification of the specimens, the flora was determined to include 742 taxa belonging to 297 genus and 68 families. 50 taxa are endemic to Turkey and the rate of endemism is 6.74 %. According to the phytogeographical analysis, 350 taxa (47.17%) are Irano-Turanian elements, 37 taxa (4.98%) are Euro-Siberian elements (incl. Euxine elements), 35 taxa (4.71%) are Mediterranean elements, and 320 taxa (43.12%) are multi-regional or are taxa whose phytogeographical regions are unknown. The 3 largest families are *Asteraceae* (111 taxa), *Fabaceae* (65 taxa) and *Brassicaceae* (59 taxa). The 3 largest genera are *Astragalus* (25 taxa), *Centaurea* (14 taxa) and *Silene* (13 taxa).

**Keywords:** Flora, Deveboynu peninsula, Van, Turkey

### Öz

Deveboynu yarımadası ve çevresinin florası bu çalışmada sunulmuştur. Araştırma alanı kareleme sistemine göre B9 karesi içerisinde yer almaktadır. 2001-2003 yılları arasında gerçekleştirilen bu araştırma esnasında 1602 vasküler bitki örneği toplanmıştır. Toplanan örneklerin teşhisi sonucu 297 cins ve 68 familyaya ait toplam 742 takson belirlenmiştir. Bu taksonlardan 50 tanesi endemik olup toplam takson sayısına oranı % 6.74'dür. Bitkicoğrafyası analizine göre, 350 takson (%47.17) İran-Turan elementi, 37 takson (%4.98) Avrupa-Sibirya elementi (Öksin elementi dahil), 35 takson (%4.71) Akdeniz elementi ve 320 takson (%43.12) çok bölgeli veya bitkicoğrafyası bölgesi bilinmeyen taksonlardır. En çok taksona sahip 3 familya: *Asteraceae* (111), *Fabaceae* (65) ve *Brassicaceae* (59) iken, en çok taksona sahip ilk 3 cins ise şu şekilde sıralanmıştır: *Astragalus* (25), *Centaurea* (14) ve *Silene* (13).

**Anahtar Kelimeler:** Flora, Deveboynu yarımadası, Van, Türkiye

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## 1. Introduction

Deveboynu peninsula is located in the south of Lake Van, within the borders of Van province, situated in the Irano-Turanian phytogeographical region between Gevaş and Tatvan town. The area is stated to be in the B9 square according to the grid system adopted in the Flora of Turkey (Davis 1965) and between 38° 21' - 38° 30' North latitudes and 42° 45' - 42° 57' East longitudes. The altitude range of the research area is about between 1500-3000 m. Karaayvaz (2586 m), Meşe (2202 m), and Gençler (2191 m) hills, İnköy, Göründü, and Altınşaç villages are located in the valley (Fig. 1). Non-calcareous brown soils are characteristic for the area (TOKB 1971).

Because of absence of meteorological station in this research area we used meteorological data obtained from the neighboring stations (Gevaş (1691 m), Tatvan (1665 m) and Van (1671 m) to determinate the climate in the region (DMİ 2004). The research area belongs to the

Mediterranean type of climate. According to Emberger, the precipitation-temperature coefficient (Q) is 50.14 for Gevaş, 37.28 for Van, and 82.72 for Tatvan. Gevaş gets Semiarid and very cold; Van is characterized as semiarid and is extremely cold mediterranean type; Tatvan is characterized as low precipitation and is very cold Mediterranean type (Akman 1990). The annual mean temperature of Gevaş is 8,9 °C, Van is 9.0 °C, Tatvan is 8.8 °C (Table 2). The annual rainfall is 505.1 mm in Gevaş, 383.5 mm in Van and 816.0 mm in Tatvan (Table 3). According to meteorological data, the precipitation regimes of Gevaş and Tatvan are the second type of East Mediterranean Precipitation Regime, and Submediterranean Precipitation Regime is in Van (Akman 1990) (Table 1). The ombrotermic diagrams of Gevaş, Van and Tatvan (Fig. 2).

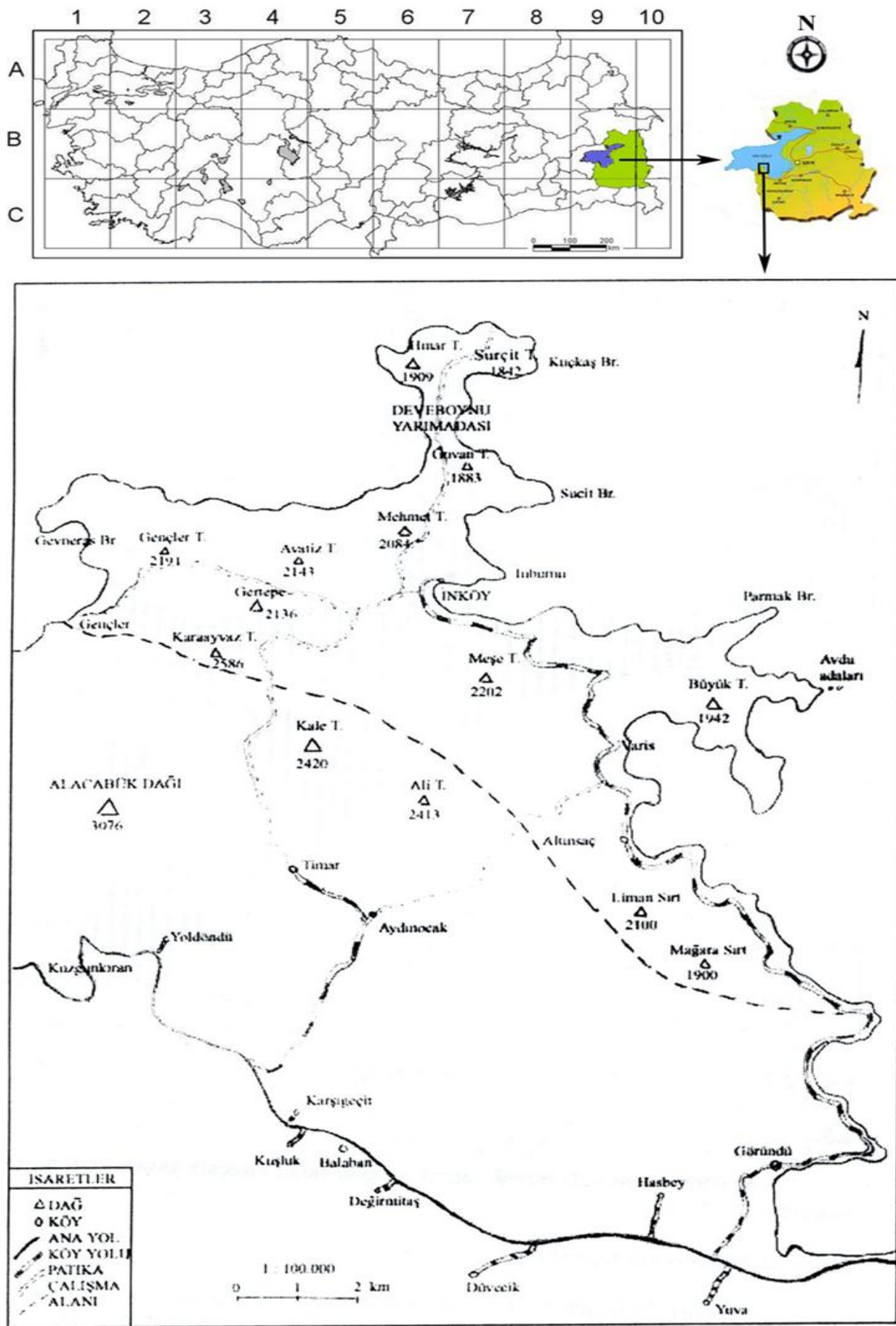
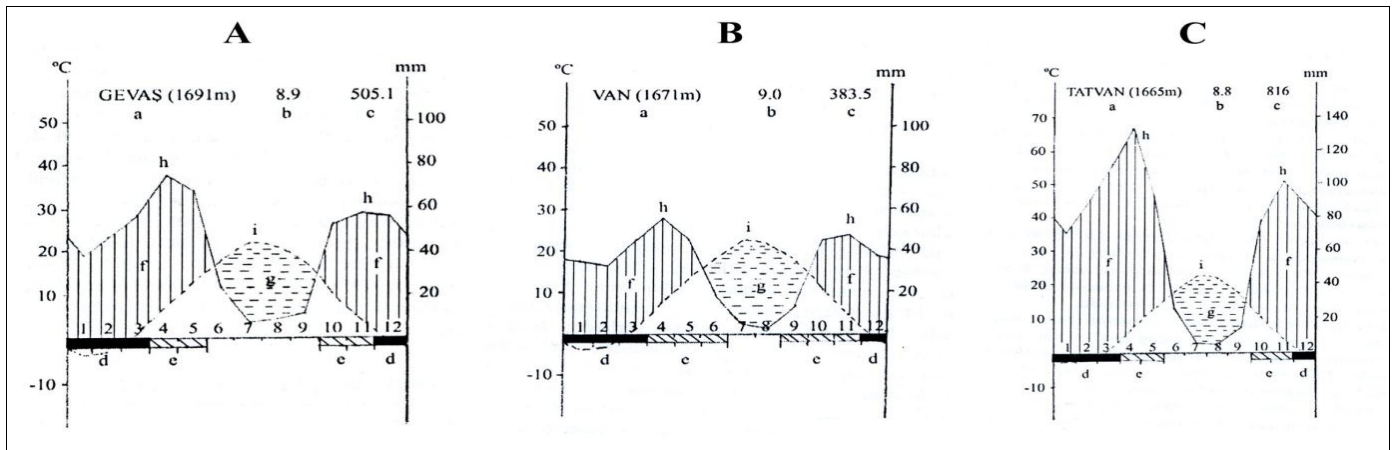


Figure 1. Map of research area.



**Figure 2.** Ombrothermic diagrams of Gevaş (A), Van (B) and Tatvan (C)

**a:** meteorological station and altitude, **b:** annual average temperature, **c:** annual average precipitation, **d:** absolute freezing months, **e:** probable freezing months, **f:** rainy period, **g:** arid period, **h:** rain curve, **i:** temperature curve

**Table 1.** Types of bioclimate, precipitation regime and related data

Stations	h	P	M	m	Q	PE	PE/M	Precipitation Regime	Bioclimate
Gevaş	1691	505.1	28.3	-7.2	50.14	40.3	1.42	Second type of East Mediterranean Precipitation Regime	(SpWASm) Semiarid and very cold mediterranean type
Van	1671	383.5	28.3	-8	37.28	26.6	0.93	Submediterranean Precipitation Regime	(SpAWSm) Semiarid and is extremely cold mediterranean type
Tatvan	1665	816	28.4	-6.3	82.72	34.7	1.22	Second type of East Mediterranean Precipitation Regime	(SpWASm) Low precipitation and is very cold mediterranean type

h - altitude in m; P - mean annual precipitation in mm; M - mean temperature (°C) for the hottest month; m - mean temperature (°C) for the coldest month; Q - Emberger's pluviometric quotient: 2000 P/M<sup>2</sup>-m<sup>2</sup>; PE: Summer rainfall; PE/M - Emberger's index of xericity; A -Autumn; Sp - Spring; W - Winter; Sm - Summer.

**Table 2.** Mean temperature values (°C)

Stations	Observation periods (Year)	Months												Annual
		1	2	3	4	5	6	7	8	9	10	11	12	
Gevaş	21	-3.3	-3.1	1.0	8.2	13.0	18.0	22.0	21.1	16.8	10.2	4.1	-0.9	8.9
Tatvan	40	-2.9	-2.4	0.7	6.8	12.3	17.7	21.9	21.5	16.8	10.2	3.9	-0.7	8.8
Van	65	-3.7	-3.2	0.9	7.4	13.0	18.0	22.1	21.7	17.2	10.6	4.4	-0.8	9.0

**Table 3.** Mean precipitation values (mm)

Stations	Observation periods (Year)	Months												Annual
		1	2	3	4	5	6	7	8	9	10	11	12	
Gevaş	21	39.2	47.0	57.3	74.8	67.9	23.8	7.3	9.2	11.2	53.2	57.8	56.4	505.1
Tatvan	35	71.0	91.4	11.8	133.4	92.0	25.4	5.1	4.2	15.1	77.9	102	86.7	816.0
Van	63	35.7	32.5	44.8	55.4	45.4	18.0	5.3	3.3	13.1	45.3	47.7	37	383.5

## 2. Materials and Methods

The materials of the study, consisting of 1602 vascular plant specimens, were collected during the vegetation seasons between 2001 and 2003. These specimens were dried according to herbarium techniques and numbered. The specimens are kept in VANF herbarium collection.

The majority of the specimens were identified basically 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 the other floras (Komarov and Shishkin 1933-1964; Tutin et al. 1964-1980; Rechinger et al. 1965-1977; Townsend and Guest 1966-1985; Zohary 1966-1986) and the herbarium of VANF.

Floristic list is given as appendix. All taxa in the floristic list were given according to APG III system (Reveal and Chase 2011; Haston et al. 2009) and alphabetically. Flora of Turkey and The East Aegean Island (Davis 1965-1985; Davis et al. 1988; Güner et al. 2000). Grid square and city name are not mentioned for each location because the study area is completely within the B9 Van, Gevaş. Author abbreviations of plant names are given according to Brummitt and Powell (2001).

The phytogeographical regions of the taxa were evaluated according to Flora of Turkey (Davis 1965-1985; Davis et al. 1988) and threat categories of the endemic and rare taxa were given according to Ekim et al. (2000), Vural (2006) and revised according to IUCN risk categories (IUCN 2014).

The findings were compared with the results of the neighbouring areas in terms of phytogeographic elements, number of taxa and endemism.

### 2.1. Abbreviations

The abbreviations used in the text and in the floristic list are as follows: Ir.-Tur.: Irano-Turanian element; Medit.: Mediterranean element; Euro-Sib.: Euro-Siberian element; Eux.: Euxine element; Hyr.-Eux.: Hyrcano Euxine element; END.: Endemic; CR: Critically endangered; EN: Endangered; VU: Vulnerable; NT: Near threatened; LC: Least concern; DD: Data deficient; ÖB.:Ömer Bingöl, VANF: Yüzüncü Yıl University Faculty of Sciences, Department of Biology Herbarium in Van.

### 2.2. Stations

1. Altınsaç village-İnköy village, around of church
2. Altınsaç village-İnköy village, around of Büyüktepe
3. Altınsaç village, around of first bay
4. Altınsaç village, around of second bay
5. Altınsaç village-İnköy village, surrounding of fountain
6. Altınsaç village, Düz district, around of Varis
7. İnköy village, Eskibağ-Gençlik plateau
8. İnköy village, Gençlik hill
9. İnköy village, around Eskibağ
10. İnköy village, around of Kumlu hill
11. İnköy village, Gençler plateau
12. İnköy village, Deveboynu peninsula
13. İnköy village, around of İbnurnu

14. İnköy village, opposite slopes of İnköy village, around of Gertepe

15. Around of İnköy village

16. Around of Altınsaç village

17. İnköy village, hills behind of İnköy village

18. Göründü village-Altınsaç village

19. Altınsaç village-İnköy village, 2 km from İnköy village, around of Meşe hill

## 3. Results and Discussion

At the end of the study, of the 1602 vascular plant specimens collected from the area, as a result of the identification of the plant specimens 68 families, 297 genera and 742 taxa were determined from the area. Two taxa were from the Pteridophyta division, and 740 belong to the Spermatophyta division. 3 taxa were Gymnosperms and 737 taxa are Angiosperms. Of the Angiosperms 646 taxa were Dicotyledonae, and 91 taxa were Monocotyledonae. The distribution of the taxa in the study is shown in Table 4.

The largest families based on their species number in the area are *Asteraceae* (111 spp.), *Fabaceae* (65 spp.), *Brassicaceae* (59 spp.), *Lamiaceae* (54 spp.) and *Poaceae* (40 spp.). In comparison with the Flora of Turkey (Davis et al. 1988), the order of the families is approximately the same in this study. The 10 largest families according to the number of species are shown in Table 5.

The richest genera in terms of the number of taxa are *Astragalus* L. (25), *Centaurea* (14) and *Silene* L. (13). The genera with the largest number of species in the research area are shown in Table 6.

The number of endemic taxa in the study area is 50 and the endemism rate is 6.74%. A total of 70 taxa, all endemics and 20 non-endemics were evaluated according to IUCN risk categories (Ekim et al. 2000; Vural 2006; IUCN 2014). The distribution of the threat categories as follows: 1 endemic taxa in CR, 2 endemic taxa in EN, 4 endemic and 14 non-endemic taxa in VU, 10 endemic and 1 non-endemic taxa in NT, 32 endemic and 4 non-endemic taxa in LC, 1 endemic and 1 non-endemic taxa in DD. The results are summarised in Table 7.

The species of the study area, categorised according to phytogeographic regions, can be listed as follows: Irano-Turanian elements 350 (47.17%) (43 endemics), Euro-Siberian elements 37 (3 Hyr. Eux., 8 Eux.) (4.98%) (0 endemic), and Mediterranean elements 35 (4.71%) (1 endemic). The remaining 320 (43.12%) (7 endemics) taxa are cosmopolitan or of unknown phytogeographical origin (Table 6). The dominance of the Irano-Turanian elements is expected because the study area lies in the Irano-Turanian region. Similar results were obtained from other floristic studies in East Anatolia close to Deveboynu peninsula (Table 8).

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**Table 4.** The dispersion of taxa into the large taxonomical groups.

Plant Group	Number of families	Number of genera	Number of taxa
<i>Pteridophyta</i>	1	1	2
<i>Spermatophyta</i>	67	296	740
<i>Gymospermae</i>	2	2	3
<i>Angiospermae</i>	65	294	737
<i>Dicotyledones</i>	56	248	646
<i>Monocotyledones</i>	9	46	91
Total	68	297	742

**Table 5.** Total taxa numbers of largest families found in the area.

Families	Genera	Taxa
<i>Asteraceae</i>	40	111 (14.96%)
<i>Fabaceae</i>	12	65 (8.76%)
<i>Brassicaceae</i>	25	59 (7.95%)
<i>Lamiaceae</i>	16	54 (7.27%)
<i>Poaceae</i>	26	40 (5.39%)
<i>Caryophyllaceae</i>	12	37 (4.98%)
<i>Rosaceae</i>	14	37 (4.98%)
<i>Boraginaceae</i>	16	31 (4.17%)
<i>Apiaceae</i>	18	28 (3.77%)
<i>Ranunculaceae</i>	7	28 (3.77%)
Other families	111	252 (33.96%)

**Table 6.** Taxa totals of the largest genera in the study area.

Genus	Number of taxa
<i>Astragalus</i>	25 (3.37%)
<i>Centaurea</i>	14 (1.88%)
<i>Silene</i>	13 (1.75%)
<i>Salvia</i>	12 (1.61%)
<i>Ranunculus</i>	11 (1.48%)
<i>Trifolium</i>	10 (1.34%)
<i>Galium</i>	10 (1.34%)
<i>Allium</i>	9 (1.21%)
<i>Tanacetum</i>	9 (1.21%)
<i>Euphorbia</i>	9 (1.21%)

**Table 7.** Risk categories of endangered taxa, most of them being endemics.

Categories	LC	VU	NT	EN	DD	CR	Total
Taxa	36	18	11	2	2	1	70

**Table 8.** The comparison of the distribution of phytogeographical elements and endemism rate (%) in the study area and nearby regions (abbreviations are below the table).

Study areas	Total taxa %	Irano- Turanian %	Euro-Siberian %	Mediterranean %	Cosmopolitan and others %	Endemism %
Deveboynu	742	47.17	4.98	4.71	43.16	6.74
Erek (Özçelik 1987)	574	40.9	8.8	2.9	32.0	6.9
Çatak Valley I (Bani and Adigüzel 2008)	823	42.89	4.85	3.88	48.35	6.43
Çatak Valley II (Pinar and Adigüzel 2011)	854	45.78	6.09	2.58	45.55	7.37
Kurubaş (Öztürk and Behçet 1998)	421	44.0	7.0	1.0	47.0	7.0
Toprakkale (Öğün and Altan 1992)	249	44.4	4.4	4.8	46.8	4.0
Özalp (Özgökçe and Behçet 2008)	1492	42.36	9.38	3.28	44.97	11.73
Bitlis River (Altıok and Behçet 2005)	925	31.8	4.9	8.7	54.6	6.8
Hizan (Altan and Behçet 1995)	627	34.9	6.2	4.7	54.2	7.9
Akçadağ (Karabacak and Behçet 2007)	891	35.4	9.9	2.9	51.8	7.5
Süphan (Behçet 1989)	780	37.0	8.7	2.0	52.3	8.5
Pirreşit (Ünal and Behçet 2007)	820	38.2	9.5	2.2	50.1	8.8
Mezraa (Rüstemoğlu and Behçet 2015)	612	48.85	5.56	3.60	40.26	8.0

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## APPENDIX

## THE FLORISTIC LIST

## PTERIDOPHYTA

## EQUISETACEAE

*Equisetum arvense* L.

5, moist area, 1750 m, 19.07.2002, ÖB. 2390.

*E. ramosissimum* Desf.

1, moist area, 1800 m, 05.08.2002, ÖB. 2487.

## SPERMATOPHYTA

## GYMNOSPERMAE

## CUPRESSACEAE

*Juniperus excelsa* M.Bieb. subsp. *excelsa*

4, stony slope, 1740 m, 15.06.2001, ÖB. 1285; 6, stony slope, 1900 m, 10.07.2001, ÖB.1463; 3, 1720 m, 28.09.2002, ÖB. 2572.

*J. oxycedrus* L. subsp. *oxycedrus*

6, stony slope, 1900 m, 10.07.2001, ÖB. 1469; 5, 1950 m, 08.05.20012, ÖB. 1687; 8, 1800 m, 28.07.2002, ÖB. 2743.

## EPHEDRACEAE

*Ephedra major* Host

2, on rock, 1900 m, 07.06.2002, ÖB. 1894; 16, roadside, 1720 m, 05.08.2002, ÖB. 2527.

## ANGIOSPERMAE

## DICOTYLEDONEAE

## ACANTHACEAE

*Acanthus dioscoridis* L. var. *dioscoridis*

4, juniper open, 1740 m, 15.06.2001, ÖB. 1287; under oak, 1900 m, 10.07.2001, ÖB. 1448, Ir.-Tur. elm.

## ADOXACEAE

*Sambucus nigra* L.

8, juniper open, 1800 m, 11.07.2001, ÖB. 1569, Euro-Sib.elm.

## AMARANTHACEAE

*Atriplex nitens* Schkuhr

13, sandy area, 1800 m, 27.07.2002, ÖB. 2441.

*Ceratocarpus arenarius* L.

15, roadside, 1700 m, 19.08.2002, ÖB. 2564.

*Chenopodium botrys* L.

12, juniper open, 2000 m, 18.07.2002, ÖB. 2346.

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

3, roadside, 1700 m, 28.09.2002, ÖB. 2566.

*N. tournefortii* (Jaub. & Spach) Moq.

3, roadside, 1700 m, 28.09.2002, ÖB. 2578, Ir.-Tur. elm.

*Salsola tragus* L. subsp. *tragus*

13, sandy area, 1800 m, 27.07.2002, ÖB. 2442; 3, roadside, 1720 m, 28.09.2002, ÖB.2570.

## ANACARDIACEAE

*Pistacia eurycarpa* Yalt.

12, juniper open, 2100 m, 01.06.2002, ÖB. 1865; 2, oak open, 1930 m, 07.06.2002, ÖB. 1922; 3, oak open 1800 m, 19.06.2002, ÖB. 2002, Ir.-Tur. elm.

*P. vera* L.

3, roadside, 1720 m, 05.08.2002, ÖB. 2536, Ir.-Tur. elm.

## APIACEAE (UMBELLIFERAE)

- Anthriscus nemorosa** (M.Bieb.) Spreng.  
16, in-garden, 1750 m, 07.06.2003, ÖB. 2669.
- Astrodaucus orientalis** (L.) Drude  
3, roadside, 1720 m, 15.06.2001, ÖB. 1228; 13, steppe, 1700 m, 27.07.2002, ÖB. 2418, Ir.-Tur. elm.
- Bunium paucifolium** DC.  
3, steppe, 1750 m, 19.06.2002, ÖB. 1987, Ir.-Tur. elm.
- Bupleurum falcatum** L. subsp. **cernuum** (Ten.) Arcang.  
6, under oak, 1900 m, 10.07.2001, ÖB. 1453; 13, steppe, 1900 m, 27.07.2002, ÖB. 2447; 12, steppe, 1700 m, 18.07.2002, ÖB. 2322.
- B. falcatum** L. subsp. **polyphyllum** (Ledeb.) H.Wolff  
6, under oak, 1900 m, 10.07.2001, ÖB. 1484; 18, oak slope, 2300 m, 13.07.2003, ÖB. 2760, Euxine (mt.) elm.
- B. gerardii** All.  
3, bushes, 1750 m, 19.06.2002, ÖB. 1959.
- Chaerophyllum crinitum** Boiss.  
2, steppe, 2000 m, 19.05.2001, ÖB. 1078; 4, juniper open, 1740 m, 15.06.2001, ÖB. 1313; 12, steppe, 1900 m, 01.06.2002, ÖB. 1826; 2, steppe, 1900 m, 07.06.2003, ÖB. 2682; 18, oak slope, 2300 m, 13.07.2003, ÖB. 2769, Ir.-Tur. elm.
- C. macrospermum** (Willd. ex Sprengel) Fisch. & C.A.Mey.  
12, oak open, 2100 m, 18.07.2002, ÖB. 2343, Ir.-Tur. elm.
- Eryngium billardierei** F.Delaroche  
5, stony slope, 1850 m, 29.06.2001, ÖB. 1400; 6, juniper open, 1900 m, 10.07.2001, ÖB. 1473; 12, steppe, 1750 m, 24.06.2002, ÖB. 2176; 14, juniper open, 2000 m, 27.07.2002, ÖB. 2454, Ir.-Tur. elm.
- Ferula orientalis** L.  
12, steppe, 1750 m, 25.06.2002, ÖB. 2193; 3, oak open, 1850 m, 19.07.2002, ÖB. 2416, Ir.-Tur. elm.
- Ferulago stellata** Boiss.  
8, oak open, 1800 m, 11.07.2001, ÖB. 1550; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2221; 18.07.2002, ÖB. 2352, Ir.-Tur. elm.
- Grammosciadium daucoides** DC.  
2, oak area, 2000 m, 12.07.2002, ÖB. 2269, Ir.-Tur. elm.
- Heptaptera anisoptera** (DC.) Tutin  
3, oak open, 1850 m, 19.07.2002, ÖB. 2415.
- Malabaila lasiocarpa** Boiss.  
3, roadside, 1720 m, 15.06.2001, ÖB. 1222; 19.06.2002, ÖB. 1981; 4, juniper open, 1740 m, 15.06.2001, ÖB. 1318; 12, steppe, 1800 m, 01.06.2002, ÖB. 1827; 22.05.2002, ÖB. 1709, END., Ir.-Tur. elm., "LC".
- Pimpinella anthriscoides** Boiss. var. **anthriscoides**  
2, oak area, 2000 m, 12.07.2002, ÖB. 2272, Ir.-Tur. elm.
- P. cappadocica** Boiss. & Balansa var. **cappadocica**  
6, under oak, 1900 m, 10.07.2001, ÖB. 1452; 1507, END., Ir.-Tur. elm., "LC".
- P. corymbosa** Boiss.  
6, steppe, 1800 m, 10.07.2001, ÖB. 1435; 7, steppe, 1750 m, 11.07.2001, ÖB. 1515; 12, steppe, 1700 m, 18.07.2002, ÖB. 2323, Ir.-Tur. elm.
- P. olivieroides** Boiss. & Hausskn.  
4, stony slope, 1950 m, 12.07.2001, ÖB. 1583; 12, oak open, 2000 m, 18.07.2002, ÖB. 2341.
- P. peucedanifolia** Fisch.  
12, oak open, 1900 m, 18.07.2002, ÖB. 2331; 2339, Ir.-Tur. elm.
- Prangos ferulacea** (L.) Lindl.  
14, steppe, 1900 m, 31.05.2002, ÖB. 1793.
- P. platychlaena** Boiss. subsp. **platychlaena**  
2, steppe, 2400 m, 12.07.2002, ÖB. 2293, END., Ir.-Tur. elm., "LC".
- P. uloptera** DC.  
18, oak slope, 2400 m, 13.07.2003, ÖB. 2775, Ir.-Tur. elm.
- Scandix pecten-veneris** L.  
2, steppe, 1950 m, 07.06.2003, ÖB. 2686.
- S. stellata** Banks & Sol.  
2, steppe, 1900 m, 07.06.2002, ÖB. 1903; 12, steppe, 2000 m, 08.06.2003, ÖB. 2694.
- Smyrniopsis cachroides** Boiss.  
3, oak open, 1850 m, 19.07.2002, ÖB. 2414; 18, steppe, 1950 m, 13.07.2003, ÖB. 2779, Ir.-Tur. elm.
- Smyrniium cordifolium** Boiss.  
3, oak open, 1750 m, 19.06.2002, ÖB. 1993, Ir.-Tur. elm.
- Torilis leptophylla** (L.) Rchb.f.  
3, roadside, 1720 m, 15.06.2001, ÖB. 1211; 19.06.2002, ÖB. 1969; 2, steppe, 1900 m, 07.06.2002, ÖB. 1902.
- Turgenia latifolia** (L.) Hoffm.  
3, roadside, 1720 m, 15.06.2001, ÖB. 1229; 1800 m, 19.06.2002, ÖB. 1970; 1750 m, 19.07.2002, ÖB. 2400; 19, steppe, 2200 m, 17.06.2003, ÖB. 2705.
- APOCYNACEAE**
- Cynanchum acutum** L. subsp. **acutum**  
3, oak open, 1850 m, 19.07.2002, ÖB. 2417.
- ARISTOLOCHIACEAE**
- Aristolochia bottae** Jaub. & Spach  
16, in-garden, 1750 m, 07.06.2003, ÖB. 2665, Ir.-Tur. elm.
- ASTERACEAE ( COMPOSITAE )**
- Achillea arabica** Kotschy  
3, juniper open, 1720 m, 15.05.2001, ÖB. 1225; 5, stony slope, 1900 m, 29.06.2001, ÖB. 1421; 8, stony slope, 2100 m, 11.07.2001, ÖB. 1554; 12, steppe, 1800 m, 18.07.2002, ÖB. 2315, Ir.-Tur. elm.
- A. millefolium** L. subsp. **millefolium** var. **millefolium**  
8, stony slope, 2100 m, 11.07.2001, ÖB. 1556; 1558; 11, oak open, 1750 m, 24.06.2002, ÖB. 2153; 1, steppe, 1900 m, 05.08.2002, ÖB. 2501, Euro-Sib. elm.
- A. vermicularis** Trin.  
4, juniper open, 1740 m, 15.06.2001, ÖB. 1303; 1310; 14, steppe, 1750 m, 25.06.2002, ÖB. 2191; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2223; 2, oak area, 2000 m, 12.07.2002, ÖB. 2257; 2265, Ir.-Tur. elm.
- Anthemis cotula** L.  
12, steppe, 1900 m, 01.06.2002, ÖB. 1856.
- A. cretica** L. subsp. **albida** (Boiss.) Grierson  
13, steppe, 1850 m, 27.07.2002, ÖB. 2444.
- Arctium tomentosum** Mill.  
16, under tree, 1750 m, 05.08.2002, ÖB. 2519.
- Artemisia spicigera** K.Koch  
5, steppe, 1700 m, 05.08.2002, ÖB. 2528, Ir.-Tur. elm.
- Bellis perennis** L.  
5, moist area, 1800 m, 23.04.2002, ÖB. 1639, Euro-Sib. elm.
- Carduus nutans** L. subsp. **nutans**  
12, steppe, 1750 m, 26.06.2002, ÖB. 2175; 1850 m, 11.07.2002, ÖB. 2194; 15, steppe, 1700 m, 28.07.2002, ÖB. 2465.
- C. pycnocephalus** L. subsp. **albidus** (M.Bieb.) Kazmi  
12, steppe, 1700 m, 18.07.2002, ÖB. 2373.
- C. pycnocephalus** L. subsp. **breviphyllarius** P.H.Davis



3, roadside, 1720 m, 15.06.2001, ÖB. 1213; 26.05.2003, ÖB. 2612; **11**, steppe, 1700 m, 24.06.2002, ÖB. 2152, Ir.-Tur. elm.

***Carlina oligocephala*** Boiss. & Kotschy subsp. ***oligocephala***

**1**, steppe, 1800 m, 05.08.2002, ÖB. 2485.

***Carthamus lanatus*** L.

**5**, roadside, 1700 m, 29.06.2001, ÖB. 1429; **12**, steppe, 1800 m, 11.07.2002, ÖB. 2208.

***Centaurea aggregata*** Fisch. & C.A.Mey. subsp. ***aggregata***

**5**, stony slope, 1850 m, 29.06.2001, ÖB. 1407; 1408; **6**, juniper open, 1850 m, 10.07.2001, ÖB. 1462; **7**, steppe, 1750 m, 11.07.2001, ÖB. 1510; **12**, steppe, 1700 m, 23.06.2002, ÖB. 2050; 24.06.2002, ÖB. 2175; 1900 m, 11.07.2002, ÖB. 2214; 1850 m, 18.07.2002, ÖB. 2354; 2358.

***C. aucheri*** (DC.) Wagenitz

**5**, steppe, 1750 m, 29.06.2001, ÖB. 1378; 19.07.2002, ÖB. 2393; **2**, steppe, 1900 m, 17.06.2003, ÖB. 2740, Ir.-Tur. elm.

***C. behen*** L.

**5**, roadside, 1800 m, 19.07.2002, ÖB. 2399, Ir.-Tur. elm.

***C. iberica*** Trev. ex Sprengel

**15**, steppe, 1800 m, 12.07.2002, ÖB. 2312.

***C. nydeggeri*** Hub.-Mor.

**13**, steppe, 1800 m, 27.07.2002, ÖB. 2436, END., Ir.-Tur. elm., "CR"

***C. persica*** Boiss.

**14**, oak open, 1800 m, 23.06.2002, ÖB. 2115-b, Ir.-Tur. elm., "VU"

***C. polyodiifolia*** Boiss. var. ***szovitsiana*** (Boiss.) Wagenitz

**3**, under oak, 1740 m, 15.06.2001, ÖB. 1266; **8**, stony slope, 2100 m, 11.07.2001, ÖB. 1561; **14**, steppe, 1800 m, 23.06.2002, ÖB. 2114, Ir.-Tur. elm.

***C. pseudoscabiosa*** Boiss. & Buhse subsp. ***araratica*** (Azn.) Wagenitz

**5**, stony slope, 1900 m, 29.06.2001, ÖB. 1411; **6**, oak open, 1850 m, 10.07.2001, ÖB. 1441, Ir.-Tur. elm.

***C. pterocaula*** Trautv.

**3**, oak open, 1850 m, 19.07.2002, ÖB. 2409, Ir.-Tur. elm.

***C. saligna*** (K.Koch) Wagenitz

**9**, oak open, 1800 m, 11.07.2001, ÖB. 1537; **2**, oak open, 2200 m, 12.07.2002, ÖB. 2287; **12**, juniper open, 2000 m, 18.07.2002, ÖB. 2348; **3**, steppe, 1720 m, 05.08.2002, ÖB. 2546, END., Ir.-Tur. elm., "LC"

***C. solstitialis*** L. subsp. ***solstitialis***

**5**, stony slope, 1850 m, 29.06.2001, ÖB. 1404; 05.08.2002, ÖB. 2506; **6**, steppe, 1900 m, 10.07.2001, ÖB. 1432; **15**, steppe, 1800 m, 12.07.2002, ÖB. 2310.

***C. spectabilis*** (DC.) Sch.Bip. var. ***spectabilis***

**12**, steppe, 1750 m, 24.06.2002, ÖB. 2174.

***C. urvillei*** DC. subsp. ***nimrodus*** (Boiss. & Hausskn.) Wagenitz

**5**, stony slope, 1900 m, 29.06.2001, ÖB. 1419; **14**, steppe, 1800 m, 23.06.2002, ÖB. 2115-a, Ir.-Tur. elm.

***C. virgata*** Lam.

**5**, roadside, 1700 m, 29.06.2001, ÖB. 1431; **12**, steppe, 1750 m, 11.07.2002, ÖB. 2207; 1850 m, 18.07.2002, ÖB. 2356; **15**, roadside, 1700 m, 19.08.2002, ÖB. 2549, Ir.-Tur. elm.

***Chardinia orientalis*** (L.) Kuntze

**3**, juniper open, 1720 m, 15.06.2001, ÖB. 1241; **14**, steppe, 1700 m, 23.06.2002, ÖB. 2059, Ir.-Tur. elm.

***Chondrilla juncea*** L.

**13**, steppe, 1700 m, 27.07.2002, ÖB. 2427.

***Chrysophthalmum montanum*** (DC.) Boiss.

**12**, oak open, 1900 m, 18.07.2002, ÖB. 2324, Ir.-Tur. elm.

***Cichorium intybus*** L.

**7**, steppe, 1750 m, 11.07.2001, ÖB. 1511; **2**, roadside, 2100 m, 19.07.2002, ÖB. 2381.

***Cirsium arvense*** (L.) Scop.

**2**, roadside, 1900 m, 19.07.2002, ÖB. 2380.

***C. ciliatum*** Moench subsp. ***szovitsii*** (K.Koch) Petr.

**3**, roadside, 1720 m, 05.08.2002, ÖB. 2545, Ir.-Tur. elm.

***C. leucocephalum*** (Willd.) Spreng. subsp. ***leucocephalum***

**8**, steppe, 1900 m, 28.07.2002, ÖB. 2472, Ir.-Tur. elm.

***C. sorocephalum*** Fisch. & C.A.Mey. subsp. ***congesteum*** (Fisch. & C.A.Mey. ex DC.) Yıldız, Dirmenci & Arabacı

**15**, roadside, 1720 m, 19.08.2002, ÖB. 2547, Ir.-Tur. elm.

***C. subinerme*** Fisch. & C.A.Mey.

**5**, juniper open, 1750 m, 19.07.2002, ÖB. 2394-a, Ir.-Tur. elm.

***Cota tinctoria*** (L.) J.Gay. ex Guss. var. ***tinctoria***

**3**, steppe, 1740 m, 15.06.2001, ÖB. 1280; 19.06.2001, ÖB. 2011; **4**, juniper open, 1740 m, 15.06.2001, ÖB. 1300;

**5**, juniper open, 1750 m, 29.06.2001, ÖB. 1374; 1417; **6**, juniper open, 1800 m, 10.07.2001, ÖB. 1467; **8**, oak open,

2000 m, 11.07.2001, ÖB. 1531; **12**, oak open, 1900 m,

23.06.2002, ÖB. 2044; 2047; **14**, steppe, 1900 m,

11.07.2002, ÖB. 2201; 2227; **2**, juniper open, 1800 m,

12.07.2002, ÖB. 2259; 2261; **1**, steppe, 1900 m,

05.08.2002, ÖB. 2502.

***C. tinctoria*** (L.) J.Gay. ex Guss. var. ***pallida*** (DC.) U.Özbek&Vural

**12**, steppe, 1900 m, 11.07.2002, ÖB. 2242; **14**, oak open, 2050 m, 23.06.2002, ÖB. 2108; **8**, oak area, 2000 m,

24.06.2002, ÖB. 2125.

***C. triumfettii*** (L.) J.Gay. ex Guss.

**14**, oak open, 2100 m, 23.06.2002, ÖB. 2106; **11**, oak open,

1750 m, 24.06.2002, ÖB. 2155; **12**, steppe, 1900 m,

11.07.2002, ÖB. 2241.

***Crepis alpina*** L.

**3**, juniper open, 1720 m, 15.06.2001, ÖB. 1237; **2**, steppe,

1900 m, 07.06.2002, ÖB. 1893; **19**, steppe, 1750 m,

26.05.2003, ÖB. 2623.

***C. foetida*** L. subsp. ***rheoadifolia*** (M.Bieb.) Čelak.

**7**, steppe, 1750 m, 11.07.2001, ÖB. 1516.

***C. gemicii*** Yıldırım, Bingöl & Armağan

**12**, mountain steppe, meadows and openings in *Quercus*

*petraea* subsp. *pinnatiloba*, 2100 m, 17.07.2002, ÖB.

2199, END., Ir.-Tur. elm., "VU"

***C. pulchra*** L. subsp. ***pulchra***

**14**, juniper open, 1800 m, 23.06.2002, ÖB. 2080; **2**,

steppe, 1900 m, 19.07.2002, ÖB. 2379.

***C. sancta*** (L.) Bornm.

**5**, juniper open, 1850 m, 08.05.2002, ÖB. 1676; **2**, steppe,

1900 m, 07.06.2002, ÖB. 1898; 1907; 17.06.2003, ÖB.

2738.

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

**5**, steppe, 2000 m, 17.06.2003, ÖB. 2725.

***C. vulgaris*** Cass.



- 3, juniper open, 1720 m, 15.06.2001, ÖB. 1215; 19.06.2002, ÖB. 1982; 5, juniper open, 1750 m, 29.06.2001, ÖB. 1386; 14, steppe, 1700 m, 23.06.2002, ÖB. 2051; 2100 m, 11.07.2002, ÖB. 2245; 12, steppe, 2000 m, 27.07.2002, ÖB. 2463.
- Cyanus triumfettii** (All.) Dostal ex A.Löve & D.Löve subsp. **triumfettii**  
3, oak open, 1740 m, 15.06.2001, ÖB. 1256; 14, oak open, 1900 m, 31.05.2002, ÖB. 1806.
- Echinops adenocladus** (Hedge) C.Vural  
6, juniper open, 1800 m, 10.07.2001, ÖB. 1474; 13, steppe, 1900 m, 27.07.2002, ÖB. 2451; 1, steppe, 1750 m, 05.08.2002, ÖB. 2513, END., Ir.-Tur. elm., "NT".
- E. orientalis** Trautv.  
5, stony slope, 1850 m, 29.06.2001, ÖB. 1406; 12, steppe, 1700 m, 18.07.2002, ÖB. 2376, Ir.-Tur. elm.
- Garhadiolus hedynois** Jaub. & Spach  
14, steppe, 1720 m, 31.05.2002, ÖB. 1768, Ir.-Tur. elm.
- Gundelia tournefortii** L. var. **armata** Freyn & Sint.  
2, steppe, 1900 m, 19.05.2001, ÖB. 1111; 3, roadside, 1720 m, 15.06.2001, ÖB. 1249; 14, steppe, 1900 m, 31.05.2002, ÖB. 1823, Ir.-Tur. elm.
- Helichrysum plicatum** DC. subsp. **plicatum**  
6, juniper open, 1900 m, 10.07.2001, ÖB. 1504; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2224; 18.07.2002, ÖB. 2340.
- H. plicatum** DC. subsp. **polyphyllum** (Ledeb.) P.H.Davis & Kupicha  
3, under oak, 1740 m, 15.06.2001, ÖB. 1257; 6, under oak, 1900 m, 10.07.2001, ÖB. 1442; 12, oak open, 2100 m, 18.07.2002, ÖB. 2334.
- H. plicatum** DC. subsp. **pseudoplicatum** (Nábělek) P.H.Davis & Kupicha  
7, steppe, 1750 m, 11.07.2001, ÖB. 1519; 24.06.2002, ÖB. 2164; 8, stony slope, 2100 m, 11.07.2001, ÖB. 1559; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2236; 1900 m, 18.07.2002, ÖB. 2326.
- Inula oculus-christi** L.  
6, juniper open, 1900 m, 10.07.2001, ÖB. 1503; 12, steppe, 1750 m, 24.06.2002, ÖB. 2173; 11.07.2002, ÖB. 2254; 2, juniper open, 1850 m, 12.07.2002, ÖB. 2258; 28.07.2002, ÖB. 2481, Euro-Sib. elm.
- I. peacockiana** (Aitch. & Hemsl.) Korovin  
4, juniper open, 1740 m, 1.06.2001, ÖB. 1321; 3, oak area, 1750 m, 19.07.2002, ÖB. 2402, Ir.-Tur. elm.
- I. thapsoides** (M.Bieb ex Willd.) Spreng. subsp. **australis** Grierson  
6, juniper open, 1900 m, 10.07.2001, ÖB. 1502; 12.07.2002, ÖB. 2263.
- Klasea cerinthifolia** (Sm.) Greuter & Wagenitz  
6, steppe, 1900 m, 10.07.2001, ÖB. 1438; 12, steppe, 1800 m, 11.07.2002, ÖB. 2213.
- K. radiata** (Waldst. & Kit) A.Löve & D.Löve subsp. **biebersteiniana** (Grossh.) Greuter  
12, oak open, 2200 m, 11.07.2002, ÖB. 2198, Euro-Sib. elm.
- Lactuca aculeata** Boiss. & Kotschy ex Boiss.  
15, roadside, 1700 m, 19.08.2002, ÖB. 2548, Ir.-Tur. elm.
- L. hispida** DC.  
8, oak area, 2000 m, 24.06.2002, ÖB. 2128.
- L. mulgedioides** (Vis. & Pancic) Boiss. & Kotschy ex Boiss.  
14, oak open, 1750 m, 25.06.2002, ÖB. 2178.
- L. orientalis** (Boiss.) Boiss.  
13, steppe, 1700 m, 27.07.2002, ÖB. 2424, Ir.-Tur. elm.
- L. rechingeriana** (Tuisl) N.Kilian & Greuter  
12, steppe, 2200 m, 01.06.2002, ÖB. 1857; 2100 m, 23.06.2002, ÖB. 2043; 2, steppe, 1800 m, 07.06.2003, ÖB. 2676, Ir.-Tur. elm.
- L. serriola** L.  
16, roadside, 1750 m, 05.08.2002, ÖB. 2525, Euro-Sib. elm.
- L. tuberosa** Jacq.  
8, juniper open, 1800 m, 24.06.2002, ÖB. 2141.
- L. viminea** (L.) J.Presl & C.Presl  
16, steppe, 1700 m, 28.10.2002, ÖB. 2580.
- Lapsana communis** L. subsp. **intermedia** (M.Bieb.) Hayek  
8, oak area, 2000 m, 24.06.2002, ÖB. 1533.
- L. communis** L. subsp. **pisidica** (Boiss. & Heldr.) Rech. .  
8, oak area, 2000 m, 11.07.2001, ÖB. 2130.
- Leontodon asperimus** (Willd.) Endl.  
11, steppe, 1700 m, 24.06.2002, ÖB. 2148; 8, steppe, 1900 m, 28.07.2002, ÖB. 2466, Ir.-Tur. elm.
- L. crispus** Vill. subsp. **asper** (Waldst. & Kit.) Röhl. var. **asper**  
4, juniper open, 1740 m, 15.06.2001, ÖB. 1312.
- Onopordum acanthium** L.  
5, juniper open, 1900 m, 19.07.2002, ÖB. 2385.
- O. candidum** Nábělek  
3, roadside, 1720 m, 05.08.2002, ÖB. 2544, Ir.-Tur. elm.
- Picnomon acarna** (L.) Cass.  
13, steppe, 1720 m, 27.07.2002, ÖB. 2419, Medit. elm.
- Picris strigosa** M.Bieb. subsp. **strigosa**  
13, steppe, 1700 m, 27.07.2002, ÖB. 2425, Ir.-Tur. elm.
- Pilosella x auriculoides** (Láng) Arv.-Touv.  
12, oak open, 2100 m, 11.07.2002, ÖB. 2244.
- P. x maschukensis** (Litv. & Zahn) Soják  
9, oak open, 1800 m, 11.07.2001, ÖB. 1544; steppe, 1850 m, 05.08.2002, ÖB. 2511.
- P. procera** (Fr.) F.W.Schultz & Sch.Bip.  
12, oak open, 2200 m, 11.07.2002, ÖB. 2197.
- Psephellus karduchorum** (Boiss.) Wagenitz  
2, on rock, 2300 m, 12.07.2002, ÖB. 2296; 2302, END., Ir.-Tur. elm., "VU".
- Reichardia dichotoma** (Vahl) Freyn  
5, roadside, 1720 m, 29.06.2001, ÖB. 1428; 19.07.2002, ÖB. 2398, Ir.-Tur. elm.
- Scorzonera cana** (C.A.Mey.) Griseb. var. **jacquiniana** (W. Koch) D.F.Chamb.  
2, steppe, 1900 m, 07.06.2002, ÖB. 1896.
- S. eriophora** DC.  
6, oak open, 1800 m, 10.07.2001, ÖB. 1456; 12, juniper open, 2000 m, 11.07.2002, END., "LC".
- S. incisa** DC.  
11, steppe, 1750 m, 24.06.2002, ÖB. 2168; 2169, Ir.-Tur. elm.
- S. latifolia** (Fisch. & C.A.Mey.) DC. var. **latifolia**  
5, juniper open, 1900 m, 19.07.2002, ÖB. 2384, Ir.-Tur. elm.
- S. mollis** M.Bieb. subsp. **mollis**  
2, stony slope, 2000 m, 19.05.2001, ÖB. 1083; 14, oak open, 1900 m, 31.05.2002, ÖB. 1816; 12, steppe, 1900 m, 01.06.2002, ÖB. 1870.

- S. mollis** M.Bieb. subsp. **szowitzii** (DC.) D.F.Chamb.  
**12**, steppe, 1850 m, 22.05.2002, ÖB. 1724; **14**, steppe, 1900 m, 31.05.2002, ÖB. 1780; **12**, oak open, 2100 m, 01.06.2002, ÖB. 1834, Ir.-Tur. elm.
- S. rigida** DC.  
**2**, on rock, 2300 m, 12.07.2002, ÖB. 2297, Ir.-Tur. elm.
- S. veratrifolia** Fenzl  
**19**, roadside, 1800 m, 17.06.2003, ÖB. 2715, Ir.-Tur. elm.
- Senecio doriiformis** DC. subsp. **orientalis** (Fenzl) V.A.Matthews  
**18**, juniper open, 1750 m, 08.06.2003, ÖB. 2704, Ir.-Tur. elm.
- S. othonnae** M.Bieb.  
**3**, oak open, 1850 m, 19.07.2002, ÖB. 2408, Euro-Sib. elm.
- S. racemosus** (M.Bieb.) DC.  
**4**, juniper open, 1740 m, 15.06.2001, ÖB. 1308; **12**, steppe, 2100 m, 23.06.2002, ÖB. 2039; 11.07.2002, ÖB. 2202.
- S. vernalis** Waldst. & Kit.  
**3**, stony slope, 1720 m, 15.06.2001, ÖB. 1209; 13.04.2002, ÖB. 1617; 19.06.2002, ÖB. 1989; **13**, oak open, 1750 m, 22.05.2002, ÖB. 1716.
- Tanacetum abrotanifolium** (L.) Druce  
**6**, oak open, 1900 m, 10.07.2001, ÖB. 1440, Ir.-Tur. elm.
- T. aureum** (Lam.) Greuter, M.V.Agav & Wagenitz var. **oligocephalum** (DC.) Kandemir  
**18**, oak slope, 2200 m, 13.07.2003, ÖB. 2771.
- T. cadmeum** (Boiss.) Heywood subsp. **orientale** Grierson  
**4**, juniper open, 1740 m, 15.06.2001, ÖB. 1307, END., Ir.-Tur. elm., "LC".
- T. cilicium** (Boiss.) Grierson  
**8**, oak open, 2000 m, 11.07.2001, ÖB. 1534; 1900 m, 28.07.2002, ÖB. 2470, E. Medit. elm.
- T. kotschyi** (Boiss.) Grierson  
**3**, on rock, 2000 m, 19.06.2002, ÖB. 2028; **14**, on rock, 2000 m, 23.06.2002, ÖB. 2100, Ir.-Tur. elm.
- T. nitens** (Boiss. & Noë) Grierson  
**14**, oak open, 2100 m, 23.06.2002, ÖB. 2104; 2107, END., "LC".
- T. polycephalum** Sch.Bip. subsp. **argyrophyllum** (K.Koch) Podlech  
**12**, steppe, 1800 m, 11.07.2002, ÖB. 2205; **2**, steppe, 1850 m, 12.07.2002, ÖB. 2262; 2264; **18**, steppe, 2300 m, 13.07.2003, ÖB. 2783, Ir.-Tur. elm.
- T. tomentellum** (Boiss.) Grierson  
**12**, stony slope, 1850 m, 19.08.2002, ÖB. 2251.
- T. zahlbruckneri** (Nábělek) Grierson  
**3**, stony slope, 1740 m, 15.06.2001, ÖB. 1282; 19.06.2002, ÖB. 2010; **9**, oak open, 1800 m, 11.07.2001, ÖB. 1542; **2**, steppe, 2100 m, 31.05.2002, ÖB. 1794; 1802; 1950 m, 07.06.2002, ÖB. 1921; **14**, juniper open, 1900 m, 23.06.2002, ÖB. 2086; oak area, 2000 m, 24.06.2002, ÖB. 2086, END., Ir.-Tur. elm., "LC".
- Taraxacum fedtschenkoi** Hand.-Mazz.  
**12**, juniper open, 2000 m, 18.07.2002, ÖB. 2351.
- T. kurdiciforme** G.E.Haglund  
**3**, roadside, 1700 m, 28.09.2002, ÖB. 2567, Ir.-Tur. elm.
- T. macrolepium** Schischk.  
**16**, roadside, 1750 m, 26.05.2003, ÖB. 2639.
- T. montanum** (C.A.Mey.) DC.  
**4**, steppe, 1980 m, 12.07.2001, ÖB. 1595, Ir.-Tur. elm.
- T. scaturiginosum** G.E.Haglund  
**5**, water edge, 1800 m, 23.04.2002, ÖB. 1641.
- Tragopogon bupthalmoides** (DC.) Boiss. var. **bupthalmoides**  
**8**, oak open, 1900 m, 24.06.200, ÖB. 2133; **12**, steppe, 1750 m, 25.06.2002, ÖB. 2179; **16**, steppe, 1750 m, 07.06.2003, ÖB. 2671, Ir.-Tur. elm.
- T. pterocarpus** DC.  
**1**, steppe, 2000 m, 08.06.2003, ÖB. 2700, Ir.-Tur. elm.
- T. reticulatus** Boiss. & Huet  
**14**, steppe, 2200 m, 25.06.2002, ÖB. 2184.
- Turanecio eriospermus** (DC.) Hamzaoğlu  
**2**, steppe, 2400 m, 12.07.2002, ÖB. 2291, Ir.-Tur. elm.
- Xeranthemum annuum** L.  
**5**, juniper open, 1800 m, 29.06.2001, ÖB. 1392; **6**, under oak, 1800 m, 10.07.2001, ÖB. 1460; **12**, juniper open, 2000 m, 11.07.2002, ÖB. 2229; 1800 m, 18.07.2002, ÖB. 2316.
- BERBERIDACEAE**
- Bongardia chrysogonum** (L.) Spach  
**2**, steppe, 1900 m, 07.06.2002, ÖB. 1909, Ir.-Tur. elm.
- Leontice leontopetalum** L.  
**3**, steppe, 1900 m, 13.04.2002, ÖB. 1630.
- BORAGINACEAE**
- Alkanna froedinii** Rech. f.  
**3**, steppe, 1740 m, 15.06.2001, ÖB. 1275; **14**, steppe, 1900 m, 23.06.2002, ÖB. 2082, END., Ir.-Tur. elm., "LC".
- A. orientalis** (L.) Boiss. var. **orientalis**  
**3**, oak open, 1800 m, 05.05.2002, ÖB. 1649; **12**, steppe, 1760 m, 22.05.2002, ÖB. 1761, Ir.-Tur. elm.
- A. trichophila** Hub.-Mor. var. **mardinensis** Hub.-Mor.  
**14**, steppe, 2250 m, 25.06.2002, ÖB. 2187, END., Ir.-Tur. elm., "LC".
- Anchusa azurea** Mill. var. **azurea**  
**13**, oak open, 1750 m, 22.05.2002, ÖB. 1721; **12**, steppe, 1800 m, 01.06.2002, ÖB. 1847.
- A. azurea** Mill. var. **macrocarpa** (Boiss.& Hohen.) D.F.Chamb.  
**4**, juniper open, 1740 m, 15.06.2001, ÖB. 1319.
- A. strigosa** Banks & Sol.  
**5**, juniper open, 1800 m, 29.06.2001, ÖB. 1398; **12**, juniper open, 1850 m, 18.07.2002, ÖB. 2357; **16**, roadside, 1720 m, 17.06.2003, ÖB. 2747.
- Asperugo procumbens** L.  
**5**, juniper open, 1850 m, 05.08.2002, ÖB. 1677; 1780 m, 26.05.2003, ÖB. 2631, Euro-Sib. elm.
- Buglossoides arvensis** (L.) I.M.Johnst.  
**1**, oak area, 2100 m, 19.05.2001, ÖB. 1089; **3**, oak open, 1800 m, 05.05.2002, ÖB. 1647; 1656.
- Caccinia macranthera** (Banks&Sol.)Brand. var. **macranthera**  
**12**, steppe, 1700 m, 18.07.2002, ÖB. 2372.
- Cerintho minor** L. subsp. **auriculata** (Ten.) Domac  
**14**, juniper open, 1900 m, 23.06.2002, ÖB. 2087.
- Echium italicum** L.  
**5**, roadside, 1700 m, 29.06.2001, ÖB. 1430; **14**, steppe, 1700 m, 23.06.2002, ÖB. 2066, Medit. elm.
- Heliotropium lasiocarpum** Fisch. & C.A.Mey.  
**3**, steppe, 1750 m, 17.07.2002, ÖB. 2404, Ir.-Tur. elm.
- Lappula barbata** (M.Bieb.) Gürke

5, stony slope, 1900 m, 29.06.2001, ÖB. 1412; **12**, juniper open, 1800 m, 23.06.2002, ÖB. 2069; **16**, roadside, 1720 m, 17.06.2003, ÖB. 2750, Ir.-Tur. elm.

**Myosotis alpestris** F.W.Schmidt subsp. **alpestris**

**2**, stony slope, 2000 m, 19.05.2001, ÖB. 1067.

**M. minutiflora** Boiss. & Reut.

**3**, steppe, 1800 m, 05.05.200, ÖB. 1646; **12**, steppe, 2100 m, 22.05.2002, ÖB. 1705, Medit. elm.

**M. olympica** Boiss.

**5**, juniper open, 1950 m, 08.05.2002, ÖB. 1683, Euxine (mt.) elm.

**M. sylvatica** Hoffm. subsp. **rivularis** Vestergr.

**16**, steppe, 1850 m, 07.06.2003, ÖB. 2652, Hyrcano Euxine (mt.) elm.

**Nonea melanocarpa** Boiss.

**3**, steppe, 1700 m, 19.06.2002, ÖB. 1995, Ir.-Tur. elm.

**N. persica** Boiss.

**3**, juniper open, 1800 m, 08.05.2002, ÖB. 1702, Ir.-Tur. elm.

**Onosma caeruleescens** Boiss.

**3**, on rock, 1800 m, 19.06.2002, ÖB. 2007; **18**, oak slope, 1800 m, 26.05.2003, ÖB. 2605, Ir.-Tur. elm.

**O. haussknechtii** Bornm.

**12**, steppe, 2100 m, 01.06.2001, ÖB. 1863, Ir.-Tur. elm.

**O. lanceolata** Boiss. & Hausskn.

**6**, under oak, 1900 m, 10.07.2001, ÖB. 1481; **14**, steppe, 1700 m, 23.06.2002, ÖB. 2056, Ir.-Tur. elm.

**O. rascheyana** Boiss.

**2**, steppe, 1850 m, 19.05.2001, ÖB. 1081; **3**, oak open, 1800 m, 05.05.2002, ÖB. 1653; **12**, oak open, 2100 m, 22.05.2002, ÖB. 1708; 01.06.2002, ÖB. 1840, Ir.-Tur. elm.

**O. sericea** Willd.

**5**, juniper open, 1750 m, 29.06.2001, ÖB. 1369; 19.06.2002, ÖB. 1984; **3**, steppe, 1850 m, 26.05.2003, ÖB. 2622, Ir.-Tur. elm.

**O. trachytricha** Boiss.

**5**, stony slope, 1900 m, 29.06.2001, ÖB. 1420; **6**, steppe, 1900 m, 10.07.2001, ÖB. 1444; **3**, steppe, 1720 m, 05.08.2002, ÖB. 2541; **16**, steppe, 1900 m, 07.06.2003, ÖB. 2656, Ir.-Tur. elm.

**Phyllocara aucheri** A. DC.

**12**, steppe, 1750 m, 22.05.2002, ÖB. 1751; 23.06.2002, ÖB. 2062.

**Rindera albida** (Wettst.) Kusn.

**12**, oak open, 2100 m, 22.05.2002, ÖB. 1829; 23.06.2002, ÖB. 2095; **14**, steppe, 2100 m, 31.05.2002, ÖB. 1796; **18**, steppe, 2500 m, 13.07.2003, ÖB. 2777, Ir.-Tur. elm.

**Rochelia cardiosepala** Bunge

**14**, steppe, 1720 m, 31.05.2002, ÖB. 1767; **3**, steppe, 1700 m, 19.06.2002, ÖB. 1997, Ir.-Tur. elm.

**R. disperma** (L.f.) K.Koch var. **disperma**

**5**, steppe, 1780 m, 26.05.2003, ÖB. 2610.

**R. disperma** (L.f.) K.Koch var. **microcalycina** (Bornm.) Edmondson

**2**, stony slope, 2000 m, 19.05.2001, ÖB. 1074; **3**, roadside, 1720 m, 15.06.2001, ÖB. 1242; 1800 m, 19.06.2002, ÖB. 1971; **14**, steppe, 1720 m, 31.05.2002, ÖB. 1776, END., Ir.-Tur. elm., "LC".

**Solananthus circinnatus** Ledeb.

**16**, steppe, 1750 m, 26.05.2003, ÖB. 2641, Ir.-Tur. elm.

**BRASSICACEAE ( CRUCIFERAE )**

**Aethionema arabicum** (L.) Andr. ex DC.

**2**, Stony slope, 2000 m, 19.05.2001, ÖB. 1079; **12**, steppe, 1850 m, 22.05.2002, ÖB. 1737; **3**, steppe, 1800 m, 19.06.2002, ÖB. 2014.

**Ae. carneum** (Banks. & Sol.) B.Fedtsch.

**5**, oak open, 1800 m, 08.05.2002, ÖB. 1668; **14**, oak open, 1900 m, 31.05.2002, ÖB. 1817, Ir.-Tur. elm.

**Ae. fimbriatum** Boiss.

**6**, oak open, 1900 m, 10.07.2001, ÖB. 1455; **2**, oak open, 2100 m, 12.07.2002, ÖB. 2282; **18**, oak slope, 2300 m, 13.07.2003, ÖB. 2774, Ir.-Tur. elm.

**Ae. grandiflorum** Boiss. & Hohen. var. **grandiflorum**

**3**, juniper open, 1720 m, 15.06.2001, ÖB. 1236; **14**, juniper open, 1800 m, 23.06.2002, ÖB. 2081; **12**, steppe, 2100 m, 25.06.2002, ÖB. 2182;2183; **18**, steppe, 1820 m, 26.05.2003, ÖB. 2638.

**Ae. membranaceum** (Desv.) DC.

**2**, oak open, 1850 m, 19.05.2001, ÖB. 1903; **5**, oak open, 1900 m, 29.06.2001, ÖB. 1380;1331;1405; **6**, oak open, 1950 m, 12.07.2002, ÖB. 1592; **12**, oak open, 1900 m, 10.07.2002, ÖB. 1454; **12**, steppe, 2000 m, 01.06.2002, ÖB. 1830;1837, Ir.-Tur. elm.

**Ae. speciosum** Boiss. & Huet subsp. **speciosum**

**2**, oak open, 1900 m, 19.05.2001, ÖB. 1112; **4**, oak open, 1900 m, 12.07.2001, ÖB. 1587; **12**, oak open, 1900 m, 31.05.2002, ÖB. 1815; **11**, steppe, 1900 m, 01.06.2002, ÖB. 1883;1885, Ir.-Tur. elm.

**Ae. trinervium** Boiss.

**2**, oak open, 1900 m, 19.05.2001, ÖB. 1902; **14**, oak open, 1900 m, 31.05.2002, ÖB. 1808; **12**, steppe, 1900 m, 01.06.2002, ÖB. 1888.

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

**1**, under oak, 2100 m, 19.05.2001, ÖB. 1088; **3**, under oak, 1740 m, 15.06.2001, ÖB. 1253; **12**, under oak, 1900 m, 01.06.2002, ÖB. 1884.

**Alyssum contemptum** Schott & Kotschy

**14**, steppe, 1720 m, 31.05.2002, ÖB. 1772; **14**, steppe, 01.06.2002, ÖB. 1882, Ir.-Tur. elm.

**A. desertorum** Stapf.

**5**, steppe, 1800 m, 23.04.2002, ÖB. 1638; **18**, steppe, 1800 m, 26.05.2003, ÖB. 2606.

**A. filiforme** Nyár.

**2**, on rock, 2300 m, 12.07.2002, ÖB. 2294; **12**, stony slope, 18.07.2002, ÖB. 2359, END., Ir.-Tur. elm., "LC".

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

**9**, oak open, 1800 m, 11.07.2001, ÖB. 1549; **4**, stony slope, 1950 m, 12.07.2001, ÖB. 1588; **5**, steppe, 2100 m, 11.07.2002, ÖB. 2248; **12**, steppe, 1850 m, 18.07.2002, ÖB. 2329.

**A. simplex** Rudolph

**1**, oak open, 2100 m, 19.05.2001, ÖB. 1087; **19**, steppe, 1980 m, 26.05.2003, ÖB. 2617.

**A. stapfii** Vierh.

**3**, oak open, 1720 m, 15.06.2001, ÖB. 1221; **5**, oak open, 1800 m, 05.08.2002, ÖB. 1661; **12**, steppe, 1750 m, 22.05.2002, ÖB. 1874, Ir.-Tur. elm.

**A. szowitsianum** Fisch. & C.A.Mey.

**5**, oak open, 1800 m, 08.05.2002, ÖB. 1663;1640; **14**, steppe, 1720 m, 31.05.2002, ÖB. 1774; **14**, steppe, 1800 m, 23.06.2002, ÖB. 2112; **18**, steppe, 1800 m, 26.05.2003, ÖB. 2604.

**Arabis alpina** L. subsp. **alpina**

1, on rock, 2100 m, 19.05.2001, ÖB. 1086; 5, on rock, 1950 m, 08.05.2002, ÖB. 1684; 3, under rock, 1900 m, 13.04.2002, ÖB. 1628.

**A. montbretiana** Boiss.

2, steppe, 1900 m, 19.05.2001, ÖB. 1071; 3, oak open, 1800 m, 05.05.2002, ÖB. 1648; 14, steppe, 1720 m, 31.05.2002, ÖB. 1765, Ir.-Tur. elm.

**A. nova** Vill.

3, steppe, 1720 m, 13.04.2002, ÖB. 1617; 5, under rock, 1750 m, 23.04.2002, ÖB. 1633; 2, steppe, 1800 m, 07.06.2002, ÖB. 1911.

**Barbarea plantaginea** DC.

14, speppe, 2100 m, 25.06.2002, ÖB. 2188; 5, wetland, 1780 m, 26.05.2003, ÖB. 2992.

**Brassica elongata** Ehrh.

12, steppe, 1750 m, 17.06.2003, ÖB. 2374, Ir.-Tur. Elm.

**Camelina rumelica** Velen.

12, steppe, 1750 m, 22.05.2002, ÖB. 1731.

**Capsella bursa-pastoris** (L.) Medik.

13, stony slope, 1720 m, 22.05.2002, ÖB. 1713.

**Chorispora tenella** (Pall.) DC.

5, wetland, 1800 m, 10.05.2003, ÖB. 2592.

**Clypeola jonthlaspi** L.

5, oak open, 1800 m, 05.05.2002, ÖB. 1645;1658.

**Coluteocarpus vesicaria** (L.) Holmboe subsp. **vesicaria**

3, oak open, 1800 m, 08.05.2002, ÖB. 1690, Ir.-Tur. elm.

**Conringia orientalis** (L.) Dumort

3, steppe, 1720 m, 13.04.2002, ÖB. 1619; 5, steppe, 1800 m, 23.04.2002, ÖB. 1635; 12, steppe, 1850 m, 22.05.2002, ÖB. 1736.

**Descurainia sophia** (L.) Webb ex Prantl

13, oak open, 1750 m, 22.05.202, ÖB. 1722; 3, steppe, 1700 m, 19.06.2002, ÖB. 1975.

**Draba huetii** Boiss.

2, stony slope, 1900 m, 19.05.2001, ÖB. 1073.

**D. minima** (C.A.Mey.) Steud.

18, steppe, 1720 m, 26.05.2003, ÖB. 2585.

**D. nuda** (Belanger) Al-Shehbaz & M.Koch

5, steppe, 1800 m, 23.04.2002, ÖB. 1637-b; 18, steppe, 1800 m, 03.05.2003, ÖB. 2598, Ir.-Tur. elm.

**D. verna** L.

5, steppe, 1800 m, 23.04.2002, ÖB. 1637-a.

**Erysimum crassipes** Fisch. & C.A.Mey.

3, stony slope, 1720 m, 15.06.2001, ÖB. 1197; 19.06.2002, 1978; 05.08.2002, 2521; 16, stony slope, 1850 m, 29.06.2001, ÖB. 1403; 1700 m, 05.08.2002, 2529; 15, oak open, 2000 m, 23.06.2002, ÖB. 2102; 14, oak open, 1800 m, 11.07.2002, ÖB. 2211; 2225; 12, oak open, 1700 m, 18.07.2002, ÖB. 2374; 14, steppe, 1750 m, 25.06.2002, ÖB. 2180.

**E. cuspidatum** (M.Bieb.) DC.

8, steppe, 2100 m, 24.06.2002, ÖB. 2117; 12, steppe, 1700 m, ÖB. 2147; 1800 m, ÖB. 2253; 5, steppe, 1750 m, 05.08.2002, ÖB. 2514; 2531; 18, steppe, 1750 m, 19.08.2002, ÖB. 2558.

**E. leucanthemum** (Stephan ex Willd.) B.Fedtsch

5, juniper open, 1750 m, 29.06.2001, ÖB. 1365.

**E. pulchellum** (Willd.) J.Gay subsp. **pulchellum**

2, stony slope, 1800 m, 19.05.2001, ÖB. 1066.

**E. repandum** L.

3, steppe, 1750 m, 19.06.2002, ÖB. 1988.

**E. sintenianum** Bornm.

12, oak open, 2100 m, 01.06.2002, Ö.B, 1835, END., Ir.-Tur. elm., "LC".

**E. smyrnaeum** Boiss. & Balansa

12, steppe, 1800 m, 01.06.2002, ÖB. 1851.

**Euclidium syriacum** (L.) Aiton

2, steppe, 1820 m, 07.06.2002, ÖB. 1940 m.

**Fibigia clypeata** (L.) Medik.

8, oak open, 1900 m, 24.06.2002, ÖB. 2136.

**F. macrocarpa** (Boiss.) Boiss.

14, juniper open, 1800 m, 27.07.2002, ÖB. 2455; 16, roadside, 1720 m, 05.08.2002, ÖB. 2540.

**F. suffruticosa** (Vent.) Sweet

4, oak open, 1740 m, 15.06.2001, ÖB. 1301; 12, steppe, 1900m, 01.06.2002, ÖB. 1825; 3, stony slope, 1900 m, 01.06.2002, ÖB. 2027.

**Hesperis bicuspidata** (Willd.) Poir.

2, stony slope, 1800 m, 19.05.2001, ÖB. 1068; 14, stony slope, 1900 m, 31.05.2002, ÖB. 1805; 14, stony slope, 2250 m, 25.06.2002, ÖB. 2185, END., Ir.-Tur. elm., "LC".

**H. pendula** DC. subsp. **campicarpa** (Boiss.) Dvorak

3, oak open, 1800 m, 08.05.2002, ÖB. 1700; 18, oak open, 1800 m, 26.05.2003, ÖB. 2603, Ir.-Tur. elm.

**H. persica** Boiss.

2, stony slope, 1950 m, 07.06.2003, ÖB. 2684, Ir.-Tur. elm.

**Isatis cappadocica** Desv. subsp. **subradiata** (Rupr.) P.H.Davis var. **subradiata**

12, oak open, 1800 m, 18.07.2002, ÖB. 2337; 6, oak open, 1900 m, 10.07.2002, ÖB. 1482; 14, steppe, 2250 m, 25.06.2002, ÖB. 2189a; 2, oak open, 2200 m, 12.07.2002, ÖB. 2280, Ir.-Tur. elm.

**I. cochlearis** Boiss.

12, steppe, 1900 m, 01.06.2002, ÖB. 1855a; 2, steppe, 1950 m, 07.06.2002, ÖB. 1925; 19, steppe, 1950 m, ÖB. 2621, Ir.-Tur. elm.

**I. tinctoria** L. subsp. **tomentella** (Boiss.) P.H.Davis

14, steppe, 2250 m, 25.06.2002, ÖB. 2189a.

**Lepidium chalepense** L.

3, oak open, 1750 m, 19.07.2002, ÖB. 2406.

**L. draba** L.

14, steppe, 1700 m, 23.06.2002, ÖB. 2065.

**L. latifolium** L.

12, steppe, 1800 m, 17.07.2002, ÖB. 2366; 7, steppe, 1750 m, 11.07.2001, ÖB. 1526.

**L. perfoliatum** L.

12, steppe, 1800 m, 18.07.2002, ÖB. 2367.

**Litwinowia tenuissima** (Pall.) Woronow ex Pavlov

16, roadside, 1750 m, 26.05.2003, ÖB. 2640.

**Microthlaspi perfoliatum** (L.) F.K.Mey.

2, steppe, 1900 m, 19.05.2001, ÖB. 1072-a; 3, steppe, 1720 m, 23.07.2001, ÖB. 1615.

**Neslia paniculata** (L.) Desv. subsp. **paniculata**

3, juniper open, 1720m, 15.06.2001, ÖB. 1198.

**Neurotropis platycarpa** (Fisch. & C.A.Mey.) F.K.Mey.

2, steppe, 1800 m, 19.05.2001. ÖB. 1072-b.

**Sisymbrium altissimum** L.

3, roadside, 1720 m, 15.06.2001, ÖB. 1251; 12, steppe, 1720 m, 01.06.2001, ÖB. 1880; 5, roadside, 1700 m, 05.08.2002, ÖB. 2530; 19, roadside, 1750 m, 17.06.2003, ÖB. 2717.

**S. loeselii** L.

**11**, juniper open, 1800 m, 11.07.2001, ÖB. 1572; **16**, roadside, 1750 m, 05.08.2002, ÖB. 2524; 07.06.2003, ÖB.1668.

*Strigosella africana* (L.) Botsch.

**19**, steppe, 1780 m, 26.05.2003, ÖB. 2632.

#### CAMPANULACEAE

*Asyneuma amplexicaule* (Willd.) Hand.-Mazz. subsp. *angustifolium* (Boiss.) Bornm.

**8**, oak open, 1900 m, 24.06.2002, ÖB. 2132, Ir.-Tur. elm.

*A. amplexicaule* Hand.-Mazz. subsp. *aucheri* (A.DC.) Bornm.

**6**, under oak, 1900 m, 10.07.2001, ÖB. 1488; **12**, oak open, 2200 m, 11.07.2002, ÖB. 2204, Ir.-Tur. elm.

*A. pulchellum* (Fisch.&C.A.Mey.) Bornm.

**14**, juniper open, 1800 m, 23.06.2002, ÖB. 2067, Ir.-Tur. elm.

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

**6**, oak open, 1900 m, 10.07.2001, ÖB. 1445, Ir.-Tur. elm.

*Campanula aucheri* A.DC.

**8**, oak open, 2400 m, 11.07.2001, ÖB. 1536, Euxine (mt.) elm.

*C. bornmuelleri* Nábělek

**2**, on rock, 2200 m, 12.07.2002, ÖB. 2307, END., Ir.-Tur. elm., "NT".

*C. conferta* A.DC.

**3**, steppe, 1740 m, 15.06.2001, ÖB. 1271; 2000 m, 19.06.2002, ÖB. 2032, Ir.-Tur. elm.

*C. coriacea* P.H.Davis

**15**, on rock, 1900 m, 19.08.2002, ÖB. 2552; 1750 m, ÖB. 2563, END., Ir.-Tur. elm., "LC".

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

**11**, oak open, 1750 m, 24.06.2002, ÖB. 2157, Euro-Sib. elm.

*C. involucreta* Aucher ex A.DC.

**3**, under oak, 1740 m, 15.06.2001, ÖB. 1263; **12**, steppe, 1900 m, 31.05.2002, ÖB. 1883; **14**, juniper open, 1900 m, 23.06.2002, ÖB. 2085, Ir.-Tur. elm.

*C. stevenii* M.Bieb. subsp. *beauverdiana* (Fomin) Rech.f.&Schiman-Czeika

**14**, steppe, 1900 m, 31.05.2002, ÖB. 1781; **16**, steppe, 1850 m, 07.06.2003, ÖB. 2658, Ir.-Tur. elm.

*C. stricta* L. var. *stricta*

**6**, under oak, 1900 m, 10.07.2001, ÖB. 1485; **12**, oak open, 2100 m, 18.07.2002, ÖB. 2338, Ir.-Tur. elm.

#### CAPRIFOLIACEAE

*Cephalaria hirsuta* Stapf

**6**, juniper open, 1900 m, 10.07.2001, ÖB. 1472, Ir.-Tur. elm.

*C. microcephala* Boiss.

**6**, under oak, 1900 m, 10.07.2001, ÖB. 1478; 1505; **13**, steppe, 1900 m, 27.07.2002, ÖB. 2445, Ir.-Tur. elm.

*Dipsacus lacinatus* L.

**3**, roadside, 1720 m, 05.08.2002, ÖB. 2543.

*Lonicera caucasica* Pall. subsp. *caucasica*

**16**, roadside, 1720 m, 17.06.2003, ÖB. 2743.

*L. iberica* M.Bieb.

**3**, oak open, 1750 m, 19.06.2002, ÖB. 1953, Hyrcano-Euxine elm.

*L. orientalis* Lam.

**3**, roadside, 1720 m, 15.06.2001, ÖB. 1247; 19.06.2002, ÖB. 1991; **11**, juniper open, 1800 m, 11.07.2001, ÖB. 1570, END., "LC".

*Pterocephalus kurdicus* Vatke var. *kurdicus*

**6**, juniper open, 1900 m, 10.07.2001, ÖB. 1498; **4**, steppe, 1950 m, 12.07.2001, ÖB. 1589;1591; **12**, steppe, 1800 m, 11.07.2002, ÖB. 2209; 18.07.2002, ÖB. 2317; **13**, steppe, 1700 m, 27.07.2002, ÖB. 2422, "VU".

*P. pinardii* Boiss.

**12**, on rock, 2200 m, 11.07.2002, ÖB. 2203, END., E. Medit. elm., "LC".

*P. plumosus* (L.) Coulter

**14**, juniper open, 1800 m, 23.06.2002, ÖB. 2077.

*Scabiosa argentea* L.

**5**, juniper open, 1800 m, 29.06.2001, ÖB. 1397; 1900 m, ÖB. 1418; **6**, juniper open, 1900 m, 10.07.2001, ÖB. 1501; **12**, steppe, 1700 m, 18.07.2002, ÖB. 2321;2369.

*S. bicolor* Kotschy ex Boiss.

**3**, stony slope, 1740 m, 15.06.2001, ÖB. 1284.

*S. micrantha* Desf.

**3**, steppe, 1800 m, 19.06.2002, ÖB. 2004.

*S. persica* Boiss.

**3**, stony slope, 1720 m, 15.06.2001, ÖB. 1199; 19.06.2002, ÖB. 1973; **12**, steppe, 2200 m, 01.06.2002, ÖB. 1866, Ir.-Tur. elm.

*S. rotata* M.Bieb.

**5**, juniper open, 1800 m, 29.06.2001, ÖB. 1389, Ir.-Tur. elm.

*Valeriana dioscoridis* Sm.

**1**, oak area, 2100 m, 19.05.2001, ÖB. 1085; **14**, steppe, 2140 m, 25.06.2002, ÖB. 2186, E. Medit. elm.

*V. sisymbriifolia* Vahl

**2**, under rock, 2100 m, 19.05.2001, ÖB. 1109; 1780 m, 26.05.2003, ÖB. 2607; **3**, juniper open, 1800 m, 08.05.2002, ÖB. 1701; **14**, under rock, 1800 m, 31.05.2002, ÖB. 1787; 1789; **12**, under rock, 1800 m, 01.06.2002, ÖB. 1850; **2**, under rock, 1850 m, 07.06.2003, ÖB. 2679, Ir.-Tur. elm.

*Valerianella carinata* Loisel

**5**, juniper open, 1800 m, 08.05.2002, ÖB. 1665; **2**, under rock, 1900 m, 07.06.2002, ÖB. 1901.

*V. coronata* (L.) DC.

**14**, oak open, 1900 m, 31.05.2001, ÖB. 1809.

*V. dactylophylla* Boiss. & Hohen.

**14**, steppe, 1900 m, 31.05.2001, ÖB. 1785, Ir.-Tur. elm.

*V. vesicaria* (L.) Moench

**3**, roadside, 1720 m, 15.06.2001, ÖB.1202; **13**, stony slope, 1720 m, 22.05.2002, ÖB. 1714; **12**, steppe, 1800 m, 01.06.2002, ÖB. 1852.

#### CARYOPHYLLACEAE

*Arenaria serpyllifolia* L. subsp. *leptocladus* (Rchb.) Nyman

**3**, steppe, 1720 m, 13.04.2002, ÖB. 1621.

*Cerastium dichotomum* L. subsp. *dichotomum*

**14**, steppe, 1720 m, 31.05.2002, ÖB. 1770.

*C. dichotomum* L. subsp. *inflatum* (Link) Cullen

**12**, steppe, 1850 m, 22.05.2002, ÖB. 1733; 1900 m, 01.06.2002, ÖB. 1854.

*Dianthus crinitus* Sm. var. *crinitus*

**18**, roadside, 1700 m, 18.07.2003, ÖB. 2755.

*D. erythrocoleus* Boiss.

**5**, stony slope, 1900 m, 29.06.2001, ÖB. 1426; steppe, 1800 m, 11.07.2002, ÖB. 2256, END., Ir.-Tur. elm., "LC".

*D. floribundus* Boiss.

12, juniper open, 1700 m, 18.07.2002, ÖB. 2325, Ir.-Tur. elm.

**D. libanotis** Labill.

5, juniper open, 1900 m, 19.07.2002, ÖB. 2383, Ir.-Tur. elm.

**D. orientalis** Adams

12, steppe, 2100 m, 23.06.2002, ÖB. 2037; 11, steppe, 1750 m, 24.06.2002, ÖB. 2162; 2, on rock, 2300 m, 12.07.2002, ÖB. 2299; 18, oak slope, 2200 m, 13.07.2003, ÖB. 2756.

**D. strictus** Banks & Sol. var. **gracilior** (Boiss.) Reeve

5, juniper open, 1800 m, 29.06.2001, ÖB. 1388; 7, steppe, 1750 m, 11.07.2001, ÖB. 1518; 12, steppe, 1800 m, 18.07.2002, ÖB. 2314; 16, juniper open, 1800 m, 28.07.2002, ÖB. 2479.

**Eremogone cucubaloides** (Sm.) Hohen.

3, under oak, 1740 m, 15.06.2001, ÖB. 1258; 1900 m, 19.06.2001, ÖB. 2025; 16, steppe, 1950 m, 07.06.2003, ÖB. 2654, Ir.-Tur. elm.

**E. gypsophiloides** (L.) Fenzl

4, juniper open, 1740 m, 15.06.2001, ÖB. 1299; 6, oak botttom, 1900 m, 10.07.2001, ÖB. 1492; 8, stony slope, 2100 m, 11.07.2001, ÖB. 1555; 3, oak open, 1800 m, 19.06.2002, ÖB. 2003; 14, steppe, 1800 m, 25.06.2002, ÖB. 2111; 16, roadside, 1720 m, 17.06.2003, ÖB. 2722, 18, oak slope, 2250 m, 13.07.2003, ÖB. 2801; Ir.-Tur. elm.

**Gypsophila bicolor** (Freyn. & Sint.) Grossh.

6, juniper open, 1900 m, 10.07.2001, ÖB. 1496, Ir.-Tur. elm.

**G. pallida** Stapf

18, steppe, 2300 m, 13.07.2003, ÖB. 2803, Ir.-Tur. elm.

**G. ruscifolia** Boiss.

12, steppe, 1700 m, 11.07.2002, ÖB. 2206; 8, steppe, 1800 m, 28.07.2002, ÖB. 2477; 15, steppe, 1750 m, 19.08.2002, ÖB. 2560, Ir.-Tur. elm.

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

18, roadside, 1700 m, 18.05.2003, ÖB. 2599.

**H. umbellatum** L. var. **umbellatum**

18, steppe, 1720 m, 12.04.2003, ÖB. 1733; 16, steppe, 1800 m, 10.05.2003, ÖB. 2595.

**Minuartia hamata** (Hauskn.) Mattf.

14, oak open, 1900 m, 31.05.2002, ÖB. 1814.

**M. lineata** Bornm.

2, on rock, 1900 m, 12.07.2002, ÖB. 2305, Ir.-Tur. elm.

**M. micrantha** Schischk.

2, on rock, 2200 m, 12.07.2002, ÖB. 2303.

**M. multinervis** (Boiss.) Bornm.

2, steppe, 1900 m, 07.06.2002, ÖB. 1904.

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

2, on rock, 1950 m, 07.06.2002, ÖB. 1917; 13, on rock, 1900 m, 27.07.2002, ÖB. 2443.

**Silene ampullata** Boiss.

12, steppe, 1850 m, 22.05.2002, ÖB. 1745; 1900 m, 01.06.2002, ÖB. 1872; 18, steppe, 1820 m, 26.05.2003, ÖB. 2637, Ir.-Tur. elm.

**S. araratica** Schischk. subsp. **araratica**

12, on rock, 2000 m, 23.06.2002, ÖB. 2046; 8, steppe, 2100 m, 24.06.2002, ÖB. 2123, Ir.-Tur. elm., "NT".

**S. chlorifolia** Sm.

12, oak open, 2100 m, 23.06.2002, ÖB. 2041; 8, oak open, 1900 m, 24.06.2002, ÖB. 2134, Ir.-Tur. elm.

**S. conoidea** L.

14, oak open, 1900 m, 31.05.2002, ÖB. 1818; 12, oak open, 2100 m, 01.06.2002, ÖB. 1838.

**S. dianthoides** Pers.

3, oak open, 180 m, 05.08.2002, ÖB. 1693, Ir.-Tur. elm.

**S. dichotoma** Ehrh. subsp. **dichotoma**

3, oak open, 1700 m, 19.06.2002, ÖB. 1948.

**S. erimicana** Stapf

6, juniper open, 1900 m, 10.07.2001, ÖB. 1471, Ir.-Tur. elm., "VU".

**S. marschallii** C.A.Mey. subsp. **marschallii**

8, oak slope, 2000 m, 24.06.2002, ÖB. 2124; 18, steppe, 2300 m, 13.07.2003, ÖB. 2791, Ir.-Tur. elm.

**S. odontopetala** Fenzl

14, on rock, 2000 m, 27.07.2002, ÖB. 2456; 16, on rock, 2300 m, 13.07.2003, ÖB. 2744.

**S. sclerophylla** Chowdhuri

8, oak open, 2000 m, 11.07.2001, ÖB. 1532, Ir.-Tur. elm., "LC".

**S. stenobotrys** Boiss. & Hausskn.

4, juniper open, 1740 m, 15.06.2001, ÖB. 1292; 6, under oak, 1800 m, 10.07.2001, ÖB. 1439, Ir.-Tur. elm.

**S. vulgaris** (Moench) Garcke var. **commutata** (Guss.) Coode & Cullen

3, oak open 1700 m, 19.06.2002, ÖB. 1976; 11, steppe, 1700 m, 24.06.2002, ÖB. 2150.

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

6, under oak, 1900 m, 10.07.2001, ÖB. 1477; 9, under oak, 1800 m, 11.07.2001, ÖB. 1541.

**Stellaria kotschyana** Fenzl ex Boiss.

18, steppe, 2300 m, 13.07.2003, ÖB. 2797.

**Vaccaria hispanica** (Mill.) Rauschert

3, roadside, 1700 m, 19.06.2002, ÖB. 2000; 12, steppe 1700 m, 24.06.2002, ÖB. 2172; 16, roadside, 1720 m, 17.06.2003, ÖB. 2744.

**Velezia rigida** L.

8, steppe, 1800 m, 24.06.2002, ÖB. 2138.

## CISTACEAE

**Helianthemum ledifolium** (L.) Mill.

12, steppe, 1720 m, 01.06.2002, ÖB. 1878.

**H. salicifolium** (L.) Mill.

12, steppe, 1850 m, 22.05.2002, ÖB. 1734.

## CLEOMACEAE

**Cleome ornithopodioides** L.

12, steppe, 1750 m, 22.05.2002, ÖB. 1732, E. Medit. elm.

## CONVOLVULACEAE

**Convolvulus arvensis** L.

14, steppe, 1700 m, 25.06.2002, ÖB. 2181.

**C. galaticus** Rost. ex Choisy

5, juniper open, 1800 m, 19.07.2002, ÖB. 2401, END., Ir.-Tur. elm., "LC".

**Cuscuta approximata** Bab.

13, steppe, 1700 m, 27.07.2002, ÖB. 2426.

**C. kurdica** Engelm.

18, oak slope, 2300 m, 13.07.2003, ÖB. 2763, Ir.-Tur. elm.

**C. monogyna** Vahl subsp. **monogyna**

3, steppe, 1750 m, 19.07.2002, ÖB. 2410; 05.08.2002, ÖB. 2516

## CRASSULACEAE

**Prometheum aizoon** (Fenzl.) t Hart

2, on rock, 2200 m, 12.07.2002, ÖB. 2301, Ir.-Tur. elm.

**P. sempervivoides** (Fisch. ex M.Bieb.) H. Ohba

4, steppe, 1980 m, 12.07.2001, ÖB. 1596; 3, steppe, 2100 m, 19.06.2002, ÖB. 2034; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2231.

**Rosularia sempervivum** (M.Bieb.) A.Berger subsp. **persica** (Boiss.) Eggli

3, on rock, 2000 m, 19.06.2002, ÖB. 2033; 19, on rock, 1800 m, 17.06.2003, ÖB. 2713, Ir.-Tur. elm.

**R. sempervivum** A. Berger subsp. **sempervivum**

2, on rock, 1900 m, 07.06.2002, ÖB. 1918; 16, on rock, 1900 m, 07.06.2003, ÖB. 2685, Ir.-Tur. elm.

**Sedum album** L.

3, on rock, 2000 m, 19.06.2002, ÖB. 2021; 1720 m, 28.09.2002, ÖB. 2571; 11, steppe, 1750 m, 24.06.2002, ÖB. 2167; 2, on rock, 1950 m, 07.06.2003, ÖB. 2688.

**S. rubens** L.

2, on rock, 1900 m, 07.06.2002, ÖB. 1908; 5, on rock, 1850 m, 17.06.2002, ÖB. 2732, Medit. elm.

#### ELAEAGNACEAE

**Elaeagnus angustifolia** L. var. **angustifolia**

11, juniper open, 1800 m, 11.07.2001, ÖB. 168; 16, roadside, 1750 m, 05.08.2002, ÖB. 2522; 17.06.2003, ÖB. 2749.

#### EUPHORBIACEAE

**Euphorbia cheiradenia** Boiss. & Hohen.

4, juniper open, 1740 m, 15.06.2001, ÖB. 1296, Ir.-Tur. elm.

**E. denticulata** Lam.

6, juniper open, 1900 m, 10.07.2001, ÖB. 1494; 12, steppe, 1850 m, 22.05.2002, ÖB. 1746; 14, steppe, 1900 m, 31.05.2002, ÖB. 1792; 8, oak area, 2000 m, 24.06.2002, ÖB. 2129; 13, juniper open, 1800 m, 27.07.2002, ÖB. 2435; 2, steppe, 1850 m, 07.06.2003, ÖB. 2681, Ir.-Tur. elm.

**E. esula** L. subsp. **tommasiana** (Bertol.) Kuzmanov

4, juniper open, 1740 m, 1.06.2001, ÖB. 1289; 2, roadside, 1900 m, 07.06.2002, ÖB. 1941; 11, oak open, 1750 m, 24.06.2002, ÖB. 2154; 12, steppe, 1800 m, 11.07.2002, ÖB. 2251.

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

3, roadside, 1720 m, 15.06.2001, ÖB. 1232; 1, juniper open, 1900 m, 08.05.2002, ÖB. 2488; 2509; 15, roadside, 1750 m, 19.08.2002, ÖB. 2554.

**E. heteradena** Jaub. & Spach

1, steppe, 1750 m, 19.08.2002, ÖB. 2557, Ir.-Tur. elm.

**E. macrocarpa** Boiss. & Buhse

3, oak open, 1800 m, 05.05.2002, ÖB. 1651; 12, steppe, 2000 m, 01.06.2002, ÖB. 1828; 23.06.2002, ÖB. 2096; 2, steppe, 1800 m, 07.06.2003, ÖB. 2683, Ir.-Tur. elm.

**E. macroclada** Boiss.

3, stony slope, 1740 m, 15.06.2001, ÖB. 1274; 15, juniper open, 1900 m, 19.08.2002, ÖB. 2559; 12, juniper open, 2100 m, 11.07.2002, ÖB. 2232; 1900 m, 18.07.2002, ÖB. 2332, Ir.-Tur. elm.

**E. seguieriana** Necker subsp. **seguieriana**

12, steppe, 1700 m, 18.07.2002, ÖB. 2371, Euro-Sib. elm.

**E. szovitsii** Fisch. & C.A.Mey. var. **kharpuntensis** Azn. ex M.S.Khan

15, roadside, 1750 m, 19.08.2002, ÖB. 2555, Ir.-Tur. elm.

#### FABACEAE (LEGUMINOSAE)

**Astragalus aduncus** Willd.

4, juniper open, 1740 m, 15.06.2001, ÖB. 1291; 12, steppe, 1900 m, 23.06.2002, ÖB. 2088, Ir.-Tur. elm.

**A. amblelepis** Fisch.

2, steppe, 1900 m, 28.07.2002, ÖB. 2482, Ir.-Tur. elm.

**A. angustiflorus** K.Koch. subsp. **angustiflorus**

2, steppe, 1900 m, 19.05.2001, ÖB. 1102; 12, steppe, 1850 m, 22.05.2002, ÖB. 1749; 23.06.2002, ÖB. 2091, Ir.-Tur. elm.

**A. ascioalyx** Bunge

4, steppe, 1950 m, 12.07.2001, ÖB. 1593, Ir.-Tur. elm.

**A. bicolor** Lam. subsp. **bicolor**

2, on rock, 2300 m, 12.07.2002, ÖB. 2295, Ir.-Tur. elm.

**A. brachycalyx** Fisch. Ex Boiss. subsp. **brachycalyx**

1, juniper open, 1850 m, 05.08.2002, ÖB. 2499, Ir.-Tur. elm.

**A. caraganae** Fisch. & C.A.Mey.

12, steppe, 1800 m, 01.06.2002, ÖB. 1848; 1730 m, 23.06.2002, ÖB. 2063; 11.07. 2002, ÖB. 2252, Ir.-Tur. elm.

**A. cryptocarpus** DC.

6, oak open, 1850 m, 10.07.2001, ÖB. 1449; 2, juniper open, 1800 m, 28.07.2002, ÖB. 2478; 19, steppe, 2000 m, 26.05.2003, ÖB. 2613, END., Ir.-Tur. elm., "NT".

**A. davisii** D.F.Chamb. & V.A.Matthews

14, oak open, 1900 m, 31.05.2002, ÖB. 2790, END., Ir.-Tur. elm., "NT".

**A. eriocephalus** Willd. subsp. **elongatus** D.F.Chamb. & Matthews

1, juniper open, 1900 m, 05.08.2002, ÖB. 2496, Ir.-Tur. elm.

**A. fraxinifolius** DC.

2, steppe, 2400 m, 12.07.2002, ÖB. 2292, Ir.-Tur. elm.

**A. fumosus** Boriss.

3, stony slope, 1740 m, 15.06.2001, ÖB. 1268; 12, steppe, 1750 m, 22.05.2002, ÖB. 1741; 1758.

**A. gevashensis** D.F.Chamb. & V.A.Matthews

5, juniper open, 1750 m, 19.07.2002, ÖB. 2394-b, END., Ir.-Tur. elm., "VU".

**A. gummifer** Labill.

8, juniper open, 1800 m, 28.07.2002, ÖB. 2474; 1, juniper open, 1900 m, 05.08.2002, ÖB. 2492; 2493; 2495, Ir.-Tur. elm.

**A. kurdicus** Boiss.

6, juniper open, 1900 m, 10.07.2001, ÖB. 1495; 5, juniper open, 1900 m, 19.07.2002, ÖB. 2395, Ir.-Tur. elm.

**A. lagopodioides** Vahl

3, stony slope, 1740 m, 15.06.2001, ÖB. 1277; 19.06.2002, ÖB. 1945; 4, stony slope, 1950 m, 12.07.2001, ÖB. 1581, Ir.-Tur. elm.

**A. lagopoides** Lam.

9, oak open, 1800 m, 11.07.2001, ÖB. 1545; 12, oak open, 1900 m, 11.07.2002, ÖB. 2239; 2000 m, 18.07.2002, ÖB. 2350; 1, juniper open, 1900 m, 05.08.2002, ÖB. 2489, Ir.-Tur. elm.

**A. lycius** Boiss.

3, roadside, 1720 m, 15.06.2001, ÖB. 1196; 12, steppe, 1720 m, 01.06.2002, ÖB. 1875; 14, steppe, 1800 m, 11.07.2002, ÖB. 2219, END., "NT".

**A. macrocephalus** Willd. subsp. **finitimus** (Bunge) D.F.Chamb.

5, juniper open, 1750 m, 29.06.2001, ÖB. 1367; 1, steppe, 05.08.2002, ÖB. 2508, Ir.-Tur. elm.

**A. macrourus** Fisch. & C.A.Mey.

6, oak open, 1900 m, 10.07.2001, ÖB. 1490, Ir.-Tur. elm.



**A. microcephalus** Willd. subsp. **microcephalus**

1, juniper open, 1800 m, 05.08.2002, ÖB. 2491, Ir.-Tur. elm., "VU".

**A. ocephalus** Boiss. subsp. **ocephalus**

12, steppe, 2100 m, 19.06.2002, ÖB. 2042, Ir.-Tur. elm.

**A. plumosus** Willd.

4, juniper open, 1740 m, 15.06.2001, ÖB. 1306; 6, juniper open, 1900 m, 10.07.2001, ÖB. 1493; 2, stony slope, 1950 m, 12.07.2001, ÖB. 1584, Ir.-Tur. elm.

**A. pycnocephalus** Fisch.

5, juniper open, 1800 m, 29.06.2001, ÖB. 1396; 6, juniper open, 1850 m, 10.07.2001, ÖB. 1499; 12, oak open, 1900 m, 11.07.2002, ÖB. 2196, Ir.-Tur. elm.

**A. strictifolius** Boiss. var. **strictifolius**

6, juniper open, 1900 m, 10.07.2001, ÖB. 1497; 1, juniper open, 1950 m, 05.08.2002, ÖB. 2497.

**Lathyrus boissieri** Širj.

11, oak open, 1750 m, 24.06.2002, ÖB. 2159, Ir.-Tur. elm.

**L. cicera** L.

3, roadside, 1720 m, 15.06.2001, ÖB. 1239; 5, juniper open, 1800 m, 08.05.2002, ÖB. 1667; 12, steppe, 1850 m, 22.05.2002, ÖB. 1739, Medit. elm.

**L. haussknechtii** Širj.

19, steppe, 1950 m, 26.05.2003, ÖB. 2620, END., Ir.-Tur. elm., "LC".

**L. nivalis** Hand.-Mazz.

12, oak open, 2100 m, 08.06.2003, ÖB. 2689, END., Ir.-Tur. elm., "LC".

**Lotus corniculatus** L. var. **corniculatus**

5, juniper open, 1900 m, 29.06.2001, ÖB. 1414; 10, stony area, 1800 m, 11.07.2001, ÖB. 1564.

**L. gebelia** Vent. var. **gebelia**

8, steppe, 1800 m, 24.06.2002, ÖB. 2139, Ir.-Tur. elm.

**Medicago lupulina** L.

16, in-garden, 1750 m, 07.06.2003, ÖB. 2647; 19, steppe, 1750 m, 17.06.2003, ÖB. 2718.

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

14, steppe, 1700 m, 23.06.2002, ÖB. 2048; 19, roadside, 1780 m, 26.05.2003, ÖB. 2630.

**M. monantha** (C.A.Mey.) Trautv.

3, steppe, 1750 m, 19.06.2002, ÖB. 1962, Ir.-Tur. elm.

**M. orthoceras** (Kar. & Kir.) Trautv.

19, steppe, 1780 m, 26.05.2003, ÖB. 2635, Ir.-Tur. elm.

**M. radiata** L.

3, stony slope, 1720 m, 15.06.2001, ÖB.1203; 12, steppe, 1900 m, 01.06.2002, ÖB. 1864, Ir.-Tur. elm.

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

2, steppe, 1900 m, 07.06.2002, ÖB. 1906.

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

3, juniper open, 1720 m, 15.06.2001, ÖB. 1227; 5, juniper open, 1750 m, 29.06.2001, ÖB. 1368; 6, oak bottom, 10.07.2001, ÖB. 1446; 12, juniper open 1900 m, 11.07.2002, ÖB. 2216.

**Melilotus officinalis** (L.) Desr.

5, juniper open, 1800 m, 29.06.2001, ÖB. 1390.

**Onobrychis carduchorum** C.C.Townsend

3, juniper open, 1720 m, 15.06.2001, ÖB. 1224; 19.06.2002, ÖB. 1980; 12, steppe, 1900 m, 01.06.2002, ÖB. 1868; 14, steppe, 1700 m, 23.06.2002, ÖB. 2060, Ir.-Tur. elm.

**O. cornuta** (L.) Desv.

14, oak open, 1900 m, 31.05.2002, ÖB. 1807, Ir.-Tur. elm.

**O. major** (Boiss.) Hand.-Maz.

3, under oak, 1740 m, 15.06.2001, ÖB. 1261 "VU".

**O. transcaucasica** Grossh.

8, oak open, 2000 m, 18.07.2001, ÖB. 1530; 4, Steppe, 1980 m, 12.07.2001, ÖB. 1590; 12, oak open, 2100 m, 18.07.2002, ÖB. 2342, Ir.-Tur. elm.

**Ononis spinosa** L. subsp. **leiosperma** (Boiss.) Širj.

4, stony area, 1800 m, 11.07.2001, ÖB. 1565; 12, steppe, 1800 m, 11.07.2002, ÖB. 2250.

**Pisum sativum** L. subsp. **elatius** (M.Bieb.) Aschers. & Graebn. var. **pumilio** Meikle

2, stony slope, 2000 m, 19.05.2002, ÖB. 1069; 12, steppe, 1850 m, 22.05.2002, ÖB. 1725.

**Securigera orientalis** (Mill.) Lassen subsp. **orientalis**

3, stony slope, 1720 m, 15.06.2001, ÖB. 1204; 12, stony slope, 1900 m, 29.06.2001, ÖB. 1416; 2, steppe, 1800 m, 01.06.2002, ÖB. 1843; 1900 m, 07.06.2002, ÖB. 1934.

**Trifolium arvense** L. var. **arvense**

2, steppe, 1800 m, 07.06.2002, ÖB. 1912; 17.06.2003, ÖB. 2733.

**T. bocconeii** Savi

12, steppe, 1900 m, 01.06.2002, ÖB. 1867-a; 1, steppe, 1850 m, 05.08.2002, ÖB. 2512, Medit. elm.

**T. campestre** Schreb.

12, steppe, 1800 m, 01.06.2002, ÖB. 1849.

**T. dasyurum** C.Presl

2, steppe, 1800 m, 07.06.2002, ÖB. 1913; 1900 m, 1932, E. Medit. elm.

**T. ochroleucum** L.

11, steppe, 1750 m, 24.06.2002, ÖB. 2163.

**T. pauciflorum** d'Urv.

2, steppe, 2100 m, 01.06.2002, ÖB. 1867-b, E. Medit. elm.

**T. phleoides** Pourr. ex Willd.

2, steppe, 1800 m, 07.06.2002, ÖB. 1914; 2642, Medit. elm.

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

12, steppe, 1720 m, 01.06.2002, ÖB. 1877-a; 11, steppe, 1750 m, 24.06.2002, ÖB. 2160, Medit. elm.

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

7, steppe, 1750 m, 11.07.2001, ÖB. 1524.

**T. repens** L. var. **repens**

16, in-garden, 1750 m, 07.06.2003, ÖB. 2646.

**Trigonella mesopotamica** Hub-Mor.

1, oak open, 1800 m, 19.05.2001, ÖB. 1096; 12, steppe, 1850 m, 22.05.2002, ÖB. 1742, Ir.-Tur. elm.

**T. spruneriana** Boiss.

3, steppe, 1700 m, 19.06.2002, ÖB. 1996, Ir.-Tur. elm.

**T. velutina** Boiss.

2, steppe, 1900 m, 07.06.2002, ÖB. 1910; 17.06.2003, ÖB. 2737, Ir.-Tur. elm.

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

5, juniper open, 1800 m, 29.06.2001, ÖB. 1384; 4, steppe, 1980 m, 12.07.2001, ÖB. 1594.

**V. ervilia** (L.) Willd.

2, steppe, 1900 m, 07.06.2002, ÖB. 1905.

**V. hirsuta** (L.) Gray

12, steppe, 1850 m, 22.05.2002, ÖB. 1728.

**V. peregrina** L.

12, steppe, 1850 m, 22.05.2002, ÖB. 1738; 5, steppe, 1900 m, 26.05.2003, ÖB. 2625.

**V. truncatula** Fisch. ex M.Bieb.

1, oak open, 1950 m, 19.05.2001, ÖB. 1098; 14, oak open, 1900 m, 26.05.2003, ÖB. 1820, Euro-Sib. elm.

*V. villosa* Roth subsp. *villosa*

3, juniper open, 1720 m, 15.06.2001, ÖB. 1250; 12, steppe, 1900 m, 01.06.2002, ÖB. 1886; 2, oak open, 1900 m, 07.06.2002, ÖB. 1942, Ir.-Tur. elm.

#### FAGACEAE

*Quercus petraea* (Matt.) Liebl. subsp. *pinnatifolia* (C. Koch) Menitsky

12, oak open, 2000 m, 11.07.2002, ÖB. 2235; 8, oak area, 1900 m, 28.07.2002, ÖB. 2469, END., "LC".

#### GENTIANACEAE

*Gentiana olivieri* Griseb.

3, juniper open, 2000 m, 19.06.2002, ÖB. 2024; 14, steppe, 2100 m, ÖB. 2109, Ir.-Tur. elm.

#### GERANIACEAE

*Erodium cicutarium* (L.) L'Hér. subsp. *cutarium*

5, steppe, 1800 m, 23.04.2002, ÖB. 1632; 08.05.2002, ÖB. 1672; 8, steppe, 1900 m, 28.07.2002, ÖB. 2468; 12, steppe, 1900 m, 08.06.2003, ÖB. 2692.

*Geranium rotundifolium* L.

13, oak open, 1750 m, 22.05.2002, ÖB. 1719.

*G. tuberosum* L.

2, oak slope, 2000 m, 19.05.2001, ÖB. 1101; 3, oak open, 1850 m, 08.05.2002, ÖB. 1694.

#### HYPERICACEAE

*Hypericum amblysepalum* Hochst.

8, under oak, 2000 m, 24.06.2002, ÖB. 2126; 16, ingarden, 1950 m, 07.06.2003, ÖB. 2661.

*H. helianthemoides* (Spach) Boiss.

10, stony slope, 1800 m, 11.07.2001, ÖB. 1563, Ir.-Tur. elm.

*H. lydium* Boiss.

5, stony slope, 1900 m, 29.06.2001, ÖB. 1423, Ir.-Tur. elm.

*H. lysimachioides* Boiss. & Noë var. *lysimachioides*

12, steppe, 1800 m, 01.06.2002, ÖB. 1832; 18, juniper open, 1750 m, 08.06.2003, ÖB. 2703; 17.06.2003, ÖB. 2752, Ir.-Tur. elm.

*H. microcalycinum* Boiss. & Heldr.

12, steppe, 1900 m, 01.06.2002, ÖB. 1887, Ir.-Tur. elm.

*H. scabrum* L.

3, stony slope, 1740 m, 15.06.2001, ÖB. 1281; 19.06.2002, ÖB. 1960; 14, steppe, 1700 m, 23.06.2002, ÖB. 2058; 8, steppe, 2100 m, 24.06.2002, ÖB. 2121, Ir.-Tur. elm.

#### JUGLANDACEAE

*Juglans regia* L.

11, juniper open, 1800 m, 11.07.2001, ÖB. 1574; 16, ingarden, 1700 m, 05.08.2002, ÖB. 2571; 17.06.2003, ÖB. 2720.

#### LAMIACEAE (LABIATAE)

*Ajuga chamaepitys* (L.) Schreb. subsp. *chia* (Schreb.) Arcang.

12, steppe, 1760 m, 22.05.2002, ÖB. 1763; 2, oak open, 1900 m, 07.06.2002, ÖB. 1930; 3, steppe, 1800 m, 19.06.2002, ÖB. 1967.

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

16, under tree, 1750 m, 05.08.2002, ÖB. 2520, Ir.-Tur. elm.

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

8, oak open, 2000 m, 11.07.2001, ÖB. 1535; 2, oak area, 2000 m, 12.07.2002, ÖB. 2267.

*Lallemantia iberica* (M.Bieb.) Fisch. & C.A.Mey.

3, stony slope, 1740 m, 15.06.2001, ÖB. 1207; 19.06.2002, ÖB. 1974; 2, steppe, 1900 m, 07.06.2002, ÖB. 1931, Ir.-Tur. elm.

*L. peltata* (L.) Fisch. & C.A.Mey.

12, steppe, 2200 m, 08.06.2003, ÖB. 2691, Ir.-Tur. elm.

*Lamium amplexicaule* L. var. *amplexicaule*

3, steppe, 1700 m, 19.06.2002, ÖB. 1997; 2, steppe, 1780 m, 07.06.2003, ÖB. 2673, Euro-Sib. elm.

*L. garganicum* L. subsp. *striatum* (Sm.) Hayek var. *striatum*

18, steppe, 1800 m, 18.07.2003, ÖB. 2600, Medit. elm.

*L. macrodon* Boiss. & Huet

3, oak open, 1800 m, 08.05.2002, ÖB. 1689, Ir.-Tur. elm.

*Marrubium anisodon* K.Koch

6, steppe, 1900 m, 10.07.2001, ÖB. 1437.

*M. cuneatum* Banks. & Sol.

2, steppe, 1900 m, 17.06.2003, ÖB. 2742, Ir.-Tur. elm.

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

5, stony slope, 1900 m, 29.06.2001, ÖB. 1424, Ir.-Tur. elm.

*Mentha longifolia* (L.) L. subsp. *typhoides* (Briq.) Harley

11, juniper open, 1800 m, 11.07.2002, ÖB. 1576; 5, water edge, 1750 m, 19.07.2002, ÖB. 2386; 1, juniper open, 1800 m, 05.08.2002, ÖB. 2486.

*Nepeta betonicifolia* C.A.Mey. subsp. *betonicifolia*

2, steppe, 1900 m, 19.05.2001, ÖB. 1080; 3, under oak, 1740 m, 15.06.2001, ÖB. 1260, Ir.-Tur. elm.

*N. italica* L.

5, stony slope, 1900 m, 29.06.2001, ÖB. 1425; 1720 m, 17.06.2003, ÖB. 2736, Medit. elm.

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

4, juniper open, 1740 m, 15.06.2001, ÖB. 1317.

*N. trachonitica* Post.

3, stony slope, 1740 m, 15.06.2001, ÖB. 1276; 12, oak open, 2100 m, 23.06.2002, ÖB. 2040, Ir.-Tur. elm.

*Origanum vulgare* L. subsp. *gracile* (C.Koch) Ietsw.

11, juniper open, 1800 m, 11.07.2001, ÖB. 1578; 12, steppe, 1700 m, 18.07.2002, ÖB. 2318; 2362, Ir.-Tur. elm.

*Phlomis armeniaca* Willd.

6, juniper open, 1900 m, 10.07.2001, ÖB. 1465; 12, steppe, 1800 m, 11.07.2002, ÖB. 2210, Ir.-Tur. elm., "LC".

*P. capitata* Boiss.

5, juniper open, 1800 m, 29.06.2002, ÖB. 1385; 1402, END., Ir.-Tur. elm., "LC".

*P. lanceolata* Boiss. & Hohen.

13, steppe, 1700 m, 22.07.2002, ÖB. 2423, Ir.-Tur. elm.

*P. pungens* Willd. var. *hirta* Velen

6, steppe, 1900 m, 10.07.2001, ÖB. 1434, Ir.-Tur. elm.

*P. pungens* Willd. var. *hispida* Hub.-Mor.

12, steppe, 1850 m, 11.07.2002, ÖB. 2195, Ir.-Tur. elm.

*P. tuberosa* L.

6, under oak, 1900 m, 10.07.2001, ÖB. 1491; 11, oak open, 1750 m, 24.06.2002, ÖB. 2158; 2, oak area, 2000 m, 12.07.2002, ÖB. 2275.

*Salvia atropatana* Bunge

18, steppe, 2400 m, 13.07.2003, ÖB. 2786, Ir.-Tur. elm.

*S. candidissima* Vahl subsp. *candidissima*

19, roadside, 1750 m, 17.06.2003, ÖB. 2712, Ir.-Tur. elm.

*S. ceratophylla* L.

19, steppe, 2200 m, 17.06.2003, ÖB. 2707, Ir.-Tur. elm.

**S. limbata** C.A.Mey.

5, stony slope, 1900 m, 29.06.2001, ÖB. 1422; 3, oak open, 1700 m, 19.06.2002, ÖB. 1949; 18, stony slope, 170 m, 13.07.2003, ÖB. 2793, Ir.-Tur. elm.

**S. macrochlamys** Boiss. & Kotschy

14, juniper open, 1900 m, 23.06.2002, ÖB. 2090; 2000 m, 11.07.2002, ÖB. 2233; 8, steppe, 2100 m, 11.07.2001, ÖB. 1552, Ir.-Tur. elm.

**S. multicaulis** Vahl

1, oak area, 1900 m, 19.05.2001, ÖB. 1094; 08.05.2002, ÖB. 1678; 4, juniper open, 1740 m, 15.06.2001, ÖB. 1297, 13, oak open, 1750 m, 22.05.2002, ÖB. 1717, Ir.-Tur. elm.

**S. poculata** Náb.

2, oak open, 1950 m, 19.05.2001, ÖB. 1099; 1100; 3, under oak 1740 m, 15.06.2001, ÖB. 1255; 14, steppe, 1720 m, 31.05.2002, ÖB. 1778, Ir.-Tur. elm.

**S. staminea** Montbret & Aucher ex Benth.

18, steppe, 1720 m, 13.07.2003, ÖB. 2754, Ir.-Tur. elm.

**S. syriaca** L.

12, steppe, 1850 m, 24.06.2002, ÖB. 2170, Ir.-Tur. elm.

**S. trichoclada** Benth.

12, steppe, 1750 m, 22.05.2002, ÖB. 1756; 01.06.2002, ÖB. 1846; 1879; 1900 m, 23.06.2002, ÖB. 2092; 3, juniper open, 1700 m, 19.06.2002, ÖB. 1994, Ir.-Tur. elm.

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

7, steppe, 1750 m, 11.07.2001, ÖB. 1517; 8, steppe, 2100 m, 11.07.2001, ÖB. 1553; 12, oak open, 2200 m, 11.07.2002, ÖB. 2200, Ir.-Tur. elm.

**S. virgata** Jacq.

12, steppe, 1750 m, 18.07.2002, ÖB. 2319, Ir.-Tur. elm.

**Scutellaria orientalis** L. subsp. **alpina** (Boiss.) O.Schwarz var. **glandulosissima** O.Schwarz

4, juniper open, 1740 m, 15.06.2001, ÖB. 1302, END., "NT".

**S. orientalis** L. subsp. **virens** (Boiss. & Kotschy) J.R.Edm.

6, under oak, 1800 m, 10.07.2001, ÖB. 1487; 2, steppe, 2400 m, 12.07.2002, ÖB. 2289, Ir.-Tur. elm.

**Stachys iberica** M.Bieb. subsp. **georgica** Rech. f.

5, juniper open, 1800 m, 29.06.2001, ÖB. 1394, Ir.-Tur. elm.

**S. iberica** M.Bieb. subsp. **iberica** var. **iberica**

14, steppe, 1700 m, 23.06.2002, ÖB. 2054, Ir.-Tur. elm.

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

12, juniper open, 2000 m, 11.07.2002, ÖB. 2237, Ir.-Tur. elm.

**S. lavandulifolia** J. Vahl var. **lavandulifolia**

2, steppe, 1900 m, 19.05.2001, ÖB. 1077; 1950 m, 12.07.2001, ÖB. 1586; 4, juniper open, 1740 m, 1.06.2001, ÖB. 1288; 6, juniper open, 1900 m, 10.07.2001, ÖB. 1466; 1750 m, 22.05.2002, ÖB. 1718; 12, steppe, 1900 m, 01.06.2002, ÖB. 1871, Ir.-Tur. elm.

**S. macrostachya** Brig.

4, juniper open, 1740 m, 15.06.2001, ÖB. 1305; 19.07.2002, 2047; 18, oak slope, 2300 m, 13.07.2002, ÖB. 2773, Euxine elm.

**Teucrium chamaedrys** L. subsp. **sinuatum** (Celak.) Rech.f.

5, water edge, 1700 m, 05.08.2002, ÖB. 2532, Ir.-Tur. elm.

**T. chamaedrys** L. subsp. **sypsiense** (C.Koch) Rech.f.

5, juniper open, 1750 m, 29.06.2001, ÖB. 1364; 6, juniper open, 10.07.2001, ÖB. 1464; 14, steppe, 1800 m, 23.06.2002, ÖB. 2110; 11.07.2002, ÖB. 2217, Ir.-Tur. elm.

**T. polium** L.

5, juniper open, 1800 m, 29.06.2001, ÖB. 1383; 6, juniper open, 1900 m, 10.07.2001, ÖB. 1458; 1500; 11, juniper open, 1800 m, 11.07.2001, ÖB. 1571; 14, steppe, 1730 m, 23.06.2002, ÖB. 2064; 18.07.2002, ÖB. 2349.

**T. pruinatum** Boiss.

18, steppe, 2300 m, 13.07.2003, ÖB. 2799, Ir.-Tur. elm.

**Thymus fedtschenkoi** Ronniger

8, steppe, 2100 m, 24.06.2002, ÖB. 2116, END., Ir.-Tur. elm., "NT".

**T. kotschyanus** Boiss. & Hohen. subsp. **kotschyanus**

3, stony slope, 1740 m, 15.06.2001, ÖB. 1272; 6, under oak, 1800 m, 10.07.2001, ÖB. 1447; 8, steppe, 2100 m, 24.06.2002, ÖB. 2118, 12, juniper open, 1900 m, 18.07.2002, ÖB. 2330;

1, steppe, 1850 m, 05.08.2002, ÖB. 2510, Ir.-Tur. elm.

**T. migricus** Klokov & Des.-Shost.

8, steppe, 2100 m, 24.06.2002, ÖB. 2120; 2000 m, 11.07.2002, ÖB. 2226, Ir.-Tur. elm.

**T. pubescens** Boiss. & Kotschy ex Celak.

3, roadside, 1720 m, 15.06.2001, ÖB. 1245, END., Ir.-Tur. elm., "NT".

**T. transcaucasicus** Ronniger

3, stony slope, 1740 m, 15.06.2001, ÖB. 1279; 14, oak open, 2000 m, 23.06.2002, ÖB. 2098, "VU".

**Ziziphora capitata** L.

3, roadside, 1720 m, 15.06.2001, ÖB. 1217; 12, steppe, 2200 m, 01.06.2002, ÖB. 1859; 16, steppe, 1800 m, 07.06.2003, ÖB. 2653.

**Z. clinopodioides** Lam.

5, juniper open, 1750 m, 29.06.2001, ÖB. 1362; 14, juniper open, 1900 m, 10.07.2001, ÖB. 1468, Ir.-Tur. elm.

**Z. persica** Bunge

12, steppe, 2200 m, 08.06.2003, ÖB. 2690, Ir.-Tur. elm.

## LINACEAE

**Linum austriacum** L. subsp. **austriacum**

3, juniper open, 1700 m, ÖB. 19.06.2002, ÖB. 1943.

**L. corymbulosum** Rchb.

14, juniper open, 1800 m, 23.06.2002, ÖB. 2078; 12, juniper open, 08.06.2003, ÖB. 2697, Medit. elm.

**L. densiflorum** P.H.Davis

3, under oak, 1740 m, 15.06.2001, ÖB. 1278; 19.06.2002, ÖB. 1947, Ir.-Tur. elm.

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

6, under oak, 1800 m, 10.07.2001, ÖB. 1480, END., Ir.-Tur. elm., "LC".

**L. mucrotanum** Bertol. subsp. **armenum** (Bordz.) P.H.Davis

3, roadside, 1720 m, 15.06.2001, ÖB. 1206; 12, steppe, 2100 m, 25.06.2002, ÖB. 2038; 2, steppe, 1780 m, 07.06.2003, ÖB. 2674, Ir.-Tur. elm.

**L. mucrotanum** Bertol. subsp. **mucrotanum**

5, roadside, 1700 m, 29.06.2001, ÖB. 1427; 8, stony slope, 1800 m, 11.07.2001, ÖB. 1562, Ir.-Tur. elm.

**L. nervosum** Waldst. & Kit.

3, under oak, 2000 m, 19.06.2002, ÖB. 2019.

**L. nodiflorum** L.

12, steppe, 2200 m, 01.06.2002, ÖB. 1862, Medit. elm.

**MALVACEAE****Alcea digitata** (Boiss.) Alef.

9, oak open, 1800 m, 11.07.2001, ÖB. 139, Ir.-Tur. elm.

**A. fasciculiflora** Zohary

11, steppe, 1700 m, 24.06.2002, ÖB. 2149, END., Ir.-Tur. elm. "DD".

**A. kurdica** (Schltdl.) Alef.

11, steppe, 1700 m, 24.06.2002, ÖB. 2151, Ir.-Tur. elm.

**Malva neglecta** Wallr.

16, in-garden, 1730 m, 07.06.2003, ÖB. 2664.

**MORACEAE****Ficus carica** L. subsp. **rupestris** (Hauskn.) Browicz

12, steppe, 1700 m, 18.07.2002, ÖB. 2360, Ir.-Tur. elm.

**Morus nigra** L.

11, in-garden, 11.07.2001, ÖB. 1575; 16, roadside, 1750 m, 05.08.2002, ÖB. 2523.

**NITRARIACEAE****Peganum harmala** L.

3, roadside, 1850 m, 19.07.2002, ÖB. 2413.

**OLEACEAE****Fraxinus angustifolia** Vahl subsp. **syriaca** (Boiss.) Yalt.

11, juniper open, 1800 m, 11.07.2001, ÖB. 1566; 16, roadside, 170 m, 05.08.2002, ÖB. 2526; 17.06.2003, ÖB. 2748, Ir.-Tur. elm.

**OROBANCHACEAE****Bornmuellerantha aucheri** (Boiss.) Rothm.

5, juniper open, 1750 m, 29.06.2001, ÖB. 1370; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2238; 2100 m, 18.07.2002, ÖB. 2335; 13, juniper open, 1800 m, 27.07.2002, ÖB. 2438; 2, juniper open, 1800 m, 28.07.2002, Ö. B. 2480, Ir.-Tur. elm.

**Bungea trifida** (Vahl.) C.A.Mey.

1, steppe, 2050 m, 19.05.2001, ÖB. 1084; 1760 m, 22.05.2002, ÖB. 1762, Ir.-Tur. elm.

**Euphrasia pectinata** Ten.

12, oak open, 2100 m, 18.07.2002, ÖB. 2336, Euro-sib. elm.

**Orobanche aegyptiaca** Pers.

3, steppe, 2000 m, 19.06.2002, ÖB. 2030; 16, steppe, 1900 m, 07.06.2003, ÖB. 2657.

**O. alba** Stephan ex Willd. subsp. **alba**

2, steppe, 1950 m, 07.06.2003, ÖB. 2687.

**O. anatolica** Boiss. & Reut. ex Reut.

2, oak slopy, 1900 m, 19.05.2001, ÖB. 1110; 12, oak open, 2100 m, 01.06.2002, ÖB. 1836; 1, steppe, 1850 m, 07.06.2003, ÖB. 2260.

**O. armena** Tzvelev

14, steppe, 2000 m, 23.06.2002, ÖB. 2094, END., Ir.-Tur. elm., "EN".

**O. caryophyllacea** Sm.

18, juniper open, 1750 m, 08.06.2003, ÖB. 2702.

**O. elatior** Sutton

12, oak open, 2100 m, 01.06.2002, ÖB. 1839.

**O. kurdica** Boiss. & Hauskn. ex Boiss.

14, steppe, 2100 m, 31.05.2002, ÖB. 1799, Ir.-Tur. elm.

**O. lutea** Baumg.

16, in-garden, 1750 m, 07.06.2003, ÖB. 2666.

**O. schultzei** Mutel

11, steppe, 1700 m, 24.06.2002, ÖB. 2146, Medit. elm.

**PAEONIACEAE****P. arietina** G.Anderson

12, under oak, 1900 m, 01.06.2002, ÖB. 1891a, Ir.-Tur. elm.

**PAPAVERACEAE****Corydalis oppositifolia** DC. subsp. **oppositifolia**

3, steppe, 1900 m, 13.04.2002, ÖB. 1625; 5, juniper open, 1950 m, 08.05.2002, ÖB. 1982, END., Ir.-Tur. elm., "LC".

**Fumaria aspela** Boiss.

5, juniper open, 1750 m, 29.06.2001, ÖB. 1372; 3, oak open, 1750 m, 19.06.2002, ÖB. 1966, Ir.-Tur. elm.

**F. officinalis** L. subsp. **cilicica** (Hauskn.) Liden

12, steppe, 1850 m, 22.05.2002, ÖB. 1752, Ir.-Tur. elm.

**F. schleicheri** Soy.-Will. subsp. **microcarpa** (Hauskn.) Liden

15, steppe, 1720 m, 08.06.2003, ÖB. 2698.

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

3, roadside, 1720 m, 05.08.2002, ÖB. 2542, Ir.-Tur. elm.

**G. haussknechtii** Bornm. & Fedde

3, roadside, 1700 m, 19.06.2002, ÖB. 1998, Ir.-Tur. elm. "DD".

**Hypecoum pendulum** L.

3, steppe, 1900 m, 08.05.2002, ÖB. 1698.

**Papaver arenarium** M.Bieb.

12, steppe, 1900 m, 01.06.2002, ÖB. 1853; 3, steppe, 1800 m, 19.06.2002, ÖB. 2008.

**P. armeniacum** Lam.

12, steppe, 1720 m, 01.06.2002, ÖB. 1824, Ir.-Tur. elm.

**P. bracteatum** Lindl.

3, under oak, 1740 m, 15.06.2001, ÖB. 1267; 12, step, 1900 m, 01.06.2002, ÖB. 1890, Ir.-Tur. elm.

**P. dubium** L. subsp. **dubium**

2, oak open, 1900 m, 07.06.2002, ÖB. 1916; 16, steppe, 1750 m, 07.06.2003, ÖB. 2672.

**P. fugax** Poir. var. **fugax**

18, steppe, 2350 m, 13.07.2003, ÖB. 2796.

**P. fugax** Poiret var. **platydiscus** Cullen

2, roadside, 1900 m, 18.07.2002, ÖB. 2382, END., Ir.-Tur. elm., "LC".

**P. macrostomum** Boiss. & Huet

3, roadside, 19.06.2002, ÖB. 2006; 12, steppe, 1800 m, 01.06.2002, ÖB.1881; 18, oak open, 1730 m, 17.06.2003, ÖB. 2751, Ir.-Tur. elm.

**P. minus** (Boivin ex Bél.) Meikle

14, steppe, 1720 m, 31.05.2002, ÖB. 1769, Medit. elm.

**P. orientale** L.

14, oak open, 2000 m, 23.06.2002, ÖB. 2103, Hyrocano-Euxine elm.

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

3, roadside, 1720 m, 15.06.2001, ÖB. 1231; 19.06.2002, ÖB. 1965.

**R. refracta** DC. subsp. **occidentalis** Kadereit

16, in-garden, 1750 m, 07.06.2003, ÖB. 2670, Ir.-Tur. elm.

**PLANTAGINACEAE****Globularia trichosantha** Fisch. & C.A.Mey. subsp. **trichosantha**

2, steppe, 1900 m, 19.05.2001, ÖB. 1082; 4, juniper open, 1740 m, 15.06.2001, ÖB. 1309; 6, juniper open, 1900 m, 10.07.2001, ÖB. 1459; 31.05.2002, ÖB. 1786; 5, juniper open, 1950 m, 08.05.2002, ÖB. 1686; 12, steppe, 1850 m, 22.05.2002, ÖB. 1747, Ir.-Tur. elm.

**Linaria chalepensis** (L.) Mill. var. **chalepensis**

19, steppe, 2000 m, 26.05.2003, ÖB. 2619, E. Medit. elm.

**L. grandiflora** Desf.  
3, juniper open, 2000 m, 19.06.2002, ÖB. 2031; 1700 m, 05.08.2002, ÖB. 2515; 12, juniper open, 1900 m, 11.07.2002, ÖB. 2215, Ir.-Tur. elm.

**L. kurdica** Boiss. & Hohen. subsp. **araratica** (Tzvel.) P.H.Davis

3, roadside, 1720 m, 15.06.2001, ÖB. 1244; 5, juniper open, 1750 m, 29.06.2001, ÖB. 1375, Ir.-Tur. elm.

**L. kurdica** Boiss. & Hohen. subsp. **kurdica**

3, oak open, 1750 m, 19.07.2002, ÖB. 2405; 18, steppe, 2100 m, 13.07.2003, ÖB. 2789, Ir.-Tur. elm.

**Plantago lanceolata** L.

14, oak open, 2100 m, 31.05.2002, ÖB. 1810; 8, steppe, 1900 m, 28.07.2002, ÖB. 2467; 16, steppe, 1800 m, 07.06.2003, ÖB. 2655.

**Veronica arguteserrata** Regel & Schmahl.

19, moist area, 1780 m, 26.05.2003, ÖB. 2633, Ir.-Tur. elm.

**V. orientalis** Mill. subsp. **carduchorum** P.H.Davis ex M.A.Fisch.

13, oak open, 1750 m, 22.05.2002, ÖB. 1715; 8, steppe, 2100 m, 24.06.2002, ÖB. 2122, END., Ir.-Tur. elm., "NT".

**V. orientalis** Mill. subsp. **orientalis**

1, oak area, 2100 m, 19.05.2001, ÖB. 1090; 1091; 8, stony slope, 2100 m, 11.07.2001, ÖB. 1560; 24.06.2002, ÖB. 2119; 3, oak open, 2000 m, 19.06.2002, ÖB. 2022; 16, steppe, 1900 m, 07.06.2003, ÖB. 2659.

**V. oxycarpa** Boiss.

5, water edge, 1700 m, 05.08.2002, ÖB. 2533; 1780 m, 26.05.2003, ÖB. 2608.

**V. polita** Fr.

5, under oak, 1800 m, 23.04.2002, ÖB. 1634; 08.05.2002, ÖB. 1660.

#### PLUMBAGINACEAE

**Acantholimon capitatum** Sosn. subsp. **capitatum**

2, on rock, 2200 m, 12.07.2002, ÖB. 2300, END., Ir.-Tur. elm., "VU".

**A. caryophyllaceum** Boiss.

5, juniper open, 1800 m, 29.06.2001, ÖB. 1395; 6, juniper open, 1900 m, 10.07.2001, ÖB. 147; 12, juniper open, 2000 m, 11.07.2002, ÖB. 2234; 18, steppe, 1900 m, 13.07.2003, ÖB. 2767.

**A. puberulum** Boiss. & Balansa subsp. **puberulum**

2, steppe, 2200 m, 12.07.2002, ÖB. 2298, Ir.-Tur. elm.

**Plumbago europaea** L.

13, steppe, 1750 m, 27.07.2002, ÖB. 2433; 15, steppe, 1750 m, 19.08.2002, ÖB. 2562; 3, roadside, 1720 m, 28.09.2002, ÖB. 2576, Euro-Sib. elm.

#### POLYGALACEAE

**Polygala anatolica** Boiss. & Heldr.

14, steppe, 1700 m, 24.06.2002, ÖB. 2192.

#### POLYGONACEAE

**Atraphaxis billardieri** Jaub. & Spach var. **billardieri**

18, on rock, 2500 m, 13.07.2003, ÖB. 2780, Ir.-Tur. elm.

**Polygonum bistorta** L. subsp. **bistorta**

12, steppe, 1700 m, 18.07.2002, ÖB. 2375; 13, juniper open, 1800 m, 18.07.2002, ÖB. 2434; 14, juniper open, 1700 m, 27.07.2002, ÖB. 2458; 15, steppe, 1750 m, 19.08.2002, ÖB. 2561; 3, roadside, 1720 m, 28.09.2002, ÖB. 2575, Euro.-Sib. elm.

**Rheum ribes** L.

14, stony slope, 2100 m, 31.05.2002, ÖB. 1801, Ir.-Tur. elm.

**Rumex caucasicus** Rech.f.

14, water edge, 2140 m, 25.06.2002, ÖB. 2190, Euxine (mt) elm.

**R. crispus** L.

7, steppe, 1750 m, 11.07.2001, ÖB. 1528.

**R. ponticus** E.H.L.Krause

19, moist area, 2000 m, 17.06.2003, ÖB. 2709, END., Ir.-Tur. elm., "LC".

**R. tuberosus** L. subsp. **horizontalis** (K.Koch) Rech.f.

3, roadside, 1720 m, 15.06.2001, ÖB. 1205; 4, juniper open, 1740 m, 15.06.2001, ÖB. 1294; 14, oak open, 1900 m, 31.05.2002, ÖB. 1819; 14, juniper open, 1800 m, 23.06.2002, ÖB. 2072.

#### PRIMULACEAE

**Anagallis foemina** Mill.

3, steppe, 1750 m, 19.06.2002, ÖB. 1990, Medit. elm.

**Androsace maxima** L.

3, steppe, 1720 m, 13.04.2002, ÖB. 1616; 5, steppe, 1800 m, 23.04.2002, ÖB. 1636; 08.05.2002, ÖB. 1666.

#### RANUNCULACEAE

**Adonis aestivalis** L. subsp. **aestivalis**

12, steppe, 2200 m, 11.06.2002, ÖB. 1860a; 15, moist area, 1780 m, 26.05.2003, ÖB. 2629.

**A. aestivalis** L. subsp. **parviflora** (Fisch. ex DC.) Busch

12, steppe, 2200 m, 11.06.2002, ÖB. 1860b.

**A. flammea** Jacq.

5, Juniper open, 1800 m, 08.05.2002, ÖB. 1669.

**Ceratocephala falcata** (L.) Pers.

3, steppe, 1720 m, 13.04.2002, ÖB. 1620; 14, steppe, 1720 m, 31.05.2002, ÖB. 1775.

**C. testiculata** (Crantz) Roth

14, steppe, 1720 m, 31.05.2002, ÖB. 1773.

**Consolida oliveriana** (DC.) Schrödinger

12, Juniper open, 1850 m, 18.07.2002, ÖB. 2355, Ir.-Tur. elm.

**C. scleroclada** (Boiss.) Schrodinger var. **rigida** (Freyne & Sint.) P.H.Davis

12, steppe, 1900 m, 11.07.2002, ÖB. 2220; 13, steppe, 1700 m, 27.07.2002, ÖB. 2421.

**Delphinium laxiusculum** (Boiss.) Rouy

12, juniper open, 1900 m, 11.07.2002, ÖB. 2218, Ir.-Tur. elm., "VU".

**D. macrostachyum** Boiss. ex Huth

6, oak open, 1900 m, 10.07.2001, ÖB. 1479; 7, step, 1750 m, 11.07.2001, ÖB. 1527, Ir.-Tur. elm., "VU".

**D. pallidiflorum** Freyne

5, slope, 1800 m, 29.06.2001, ÖB. 1382, Ir.-Tur. elm.

**D. vanense** Rech.f.

5, juniper open, 1800 m, 29.06.2001, ÖB. 1379; 8, stony slope, 2100 m, 11.07.2001, ÖB. 1551; 12, juniper open, 1900 m, 18.07.2003, ÖB. 2327, END., Ir.-Tur. elm., "NT".

**Nigella latisecta** P.H.Davis

3, roadside, 1700 m, 15.06.2001, ÖB. 1200, Ir.-Tur. elm.

**N. oxypetala** Boiss.

3, steppe, 1800 m, 19.06.2002, ÖB. 1968, Ir.-Tur. elm.

**N. segetalis** M.Bieb.

16, steppe, 1900 m, 08.06.2003; ÖB. 2655.

**Ranunculus arvensis** L.

3, roadside, 1720 m, 15.06.2001, ÖB. 1238; 2, roadside, 1900 m, 07.06.2002, ÖB. 1933.

- R. aucheri** Boiss.  
3, oak open, 1800 m, 08.05.2002, ÖB. 1692.
- R. caucasicus** M.Bieb. subsp. **subleiocarpus** (Sommier & Levier) P.H.Davis  
2, steppe, 2000 m, 19.05.2001, ÖB. 1076b.
- R. cuneatus** Boiss.  
2, steppe, 2000 m, 19.05.2001, ÖB. 1075; 12, steppe, 1750 m, 22.05.2002, ÖB. 1729.
- R. damascenus** Boiss. & Gaill.  
14, steppe, 1720 m, 31.05.2002, ÖB. 1779, Ir.-Tur. elm.
- R. fenzlii** Boiss.  
2, steppe, 2000 m, 19.05.2001, ÖB. 1076a; 14, oak open, 1900 m, 31.05.2001, ÖB. 1811; 19, step, 2000 m, 26.05.2003, ÖB. 2614, END., Ir.-Tur. elm., "LC".
- R. illyricus** L. subsp. **illyricus**  
3, oak open, 1800 m, 08.05.2002, ÖB. 1695.
- R. kochii** Ledeb.  
3, on rock, 1900 m, 13.04.2002, ÖB. 1629; 18, step, 1720 m, 12.04.2003, ÖB. 2583, Ir.-Tur. elm.
- R. kotschyi** Boiss.  
5, Juniper open, 1850 m, 05.08.2002, ÖB.1675.
- R. macrorhynchus** Boiss. subsp. **macrorhynchus**  
12, steppe, 1850 m, 22.05.2002, ÖB. 1748; 1800 m, 01.06.2002, ÖB. 1831; 2, step, 1950 m, 07.06.2002, ÖB. 1920, Ir.-Tur. elm.
- R. oxyspermus** Willd.  
3, oak open, 1800 m, 08.05.2002, ÖB. 1655, Ir.-Tur. elm.
- Thalictrum flavum** L.  
3, oak open, 1700 m, 08.05.2002, ÖB. 1650, Euro-Sib. elm.
- T. minus** L. var. **minus**  
3, oak open, 1900 m, 08.05.2002, ÖB. 1696, Ir.-Tur. elm.
- T. sultanabadense** Stapf  
3, oak open, 1900 m, 13.04.2002, ÖB. 1626, Ir.-Tur. elm.
- RESEDACEAE**
- Reseda lutea** L. var. **lutea**  
5, juniper open, 1750 m, 29.06.2001, ÖB. 1376; 14, steppe, 1750 m, 25.06.2002, ÖB. 2192.
- RHAMNACEAE**
- Rhamnus kurdica** Boiss. & Hoh.  
18, oak slope, 2100 m, 13.07.2003, ÖB. 2785, Ir.-Tur. elm.
- ROSACEAE**
- Agrimonia eupatoria** L. subsp. **asiatica** (Juz.) Skalicky  
5, stony slope, 1900 m, 29.06.2001, ÖB. 1410.
- A. repens** L.  
2, water edge, 1700 m, 05.08.2002, ÖB. 2484.
- Amygdalus communis** L.  
3, juniper open, 1740 m, 15.06.2001, ÖB. 1286; 12, steppe, 1900 m, 01.06.2002, ÖB. 1889; 2000 m, 18.07.2002, ÖB. 2353.
- A. trichamygdalus** (Hand.-Mazz.) Woronow var. **trichamygdalus**  
3, roadside, 1800 m, 05.05.2002, ÖB. 1642;1657; 16, roadside, 1800 m, 10.05.2003, ÖB. 2596, Ir.-Tur. elm.
- Cerasus brachypetala** Boiss. var. **bornmuelleri** (Schneider) Browicz  
4, stony slope, 1950 m, 12.07.2003, ÖB. 1582, Ir.-Tur. elm.
- C. mahaleb** (L.) Mill. var. **mahaleb**  
2, oak open, 1800 m, 19.05.2001, ÖB. 1107.
- C. microcarpa** (C.A.Mey.) Boiss. subsp. **microcarpa**  
12, juniper open, 1900 m, 18.07.2002, ÖB. 2333, Ir.-Tur. elm.
- C. microcarpa** (C.A.Mey.) Boiss. subsp. **tortuosa** (Boiss. & Hausskn.) Browicz  
3, roadside, 1750 m, 1.06.2001, ÖB. 1248;1264; 5, juniper open, 1800 m, 29.06.2001, ÖB. 1399; 9, oak open, 1800 m, 11.07.2001, ÖB. 1546;1548, Ir.-Tur. elm.
- C. prostrata** (Labill) Ser. var. **prostrata**  
2, oak open, 1800 m, 19.05.2001, ÖB. 1108; 14, oak open, 1900 m, 31.05.2002, ÖB. 1790.
- Cotoneaster morulus** Pojark.  
6, juniper open, 1900 m, 10.07.2001, ÖB. 1475; 2, roadside, 1900 m, 07.06.2002, ÖB. 1929; 12, oak open, 2100 m, 11.07.2002, ÖB. 2240.
- C. nummularius** Fisch. & C.A.Mey.  
3, stony area, 1750 m, 19.06.2002, ÖB. 1955; 28.09.2002, ÖB. 2573.
- Crataegus azarolus** L. subsp. **pontica** (K.Koch) K.I.Chr.  
12, steppe, 1700 m, 18.07.2002, ÖB. 2368.
- C. orientalis** Pall. ex M.Bieb. var. **orientalis**  
4, juniper open, 1740 m, 15.06.2001, ÖB. 1315; 7, bushes, 1750 m, 11.07.2001, ÖB. 1522.
- C. orientalis** Pall. ex M.Bieb. var. **szovitsii** (Pojark.) K.I.Chr.  
14, juniper open, 1800 m, 23.06.2002, ÖB. 2074, Ir.-Tur. elm.
- Cydonia oblonga** Mill.  
7, bushes, 1750 m, 11.07.2001, ÖB. 1509.
- Geum urbanum** L.  
2, under oak, 2000 m, 12.07.2002, ÖB. 2273, Euro-Sib. elm.
- Malus sylvestris** (L.) Mill. subsp. **orientalis** (Uglitzk.) Browicz var. **orientalis**  
7, bushes, 1750 m, 11.07.2001, ÖB. 1520.
- Potentilla argentea** L.  
5, juniper open, 1800 m, 29.06.2001, ÖB. 1377;1387.
- P. carduchorum** Soják  
5, stony slope, 1900 m, 29.06.2001, ÖB. 1413, END., Ir.-Tur. elm., "EN".
- P. divaricata** DC.  
3, juniper open, 1800 m, 15.06.2001, ÖB. 1201, Euxine (mt.) elm., "VU".
- P. recta** L.  
2, steppe, 1900 m, 07.06.2002, ÖB. 1915; 14, juniper open, 1800 m, 23.06.2002, ÖB. 2079; 16, steppe, 2000 m, 08.06.2003, ÖB. 2699.
- P. speciosa** Willd.  
2, steppe, 2200 m, 12.07.2002, ÖB. 2308.
- Prunus cocomilia** Ten.  
11, juniper open, 1800 m, 11.07.2001, ÖB. 1573.
- P. divaricata** Ledeb. var. **divaricata**  
2, oak open, 2200 m, 12.07.2002, ÖB. 2276.
- P. x domestica** L.  
3, oak open, 1750 m, 19.06.2002, ÖB. 1954.
- Pyrus syriaca** Boiss. var. **microphylla** Zoh. ex Browicz  
11, oak open, 1750 m, 24.06.2002, ÖB. 2156; 19, oak area, 1900 m, 26.05.2003, ÖB. 2615.
- P. syriaca** Boiss. var. **syriaca**  
6, oak area, 1800 m, 10.07.2001, ÖB. 1433; 12, oak area, 1800 m, 11.07.2002, ÖB. 2249.
- Rosa boissieri** Crep.  
1, juniper open, 1750 m, 05.08.2002, ÖB. 2507.

**R. canina** L.

**3**, roadside, 1720 m, 15.06.2001, ÖB. 1246; 19.06.2002, ÖB. 1972; 28.09.2002, ÖB. 2574; **11**, juniper open, 1800 m, 24.06.2002, ÖB. 2140; **19**, in-garden, 1750 m, 07.06.2003, ÖB. 2643.

**R. foetida** J.Herrm.

**16**, in-garden, 1800 m, 07.06.2003, ÖB. 2662, Ir.-Tur. elm.

**R. hemisphaerica** J.Herrm.

**11**, bushes, 1700 m, 24.06.2002, ÖB. 2145, Ir.-Tur. elm.

**R. iberica** Stev.

**2**, juniper open, 1850 m, 12.07.2002, ÖB. 2260; **18**, roadside, 2350 m, 13.07.2003, ÖB. 2787.

**Sanguisorba minor** L. subsp. **balearica** (Bourg. ex Nyman) Munuz Garm. & C.Navarro

**3**, juniper open, 1800 m, 15.06.2001, ÖB. 1223; **6**, under oak, 1900 m, 10.07.2001, ÖB. 1450; **14**, juniper open, 1800 m, 23.06.2002, ÖB. 2070.

**S. minor** L. subsp. **lasiocarpa** (Boiss. & Hausskn.) Nordbrog

**12**, oak open, 1830 m, 01.06.2002, ÖB. 1844; 1700 m, 18.07.2002, ÖB. 2370.

**Sorbus migarica** Zinserl.

**3**, bushes, 1720 m, 19.06.2002, ÖB. 1946.

**S. persica** Hedl.

**3**, roadside, 1700 m, 28.09.2002, ÖB. 2577, Ir.-Tur. elm.

**S. takhtajanii** Gabr.

**3**, oak open, 1740 m, 15.06.2001, ÖB. 1262; **9**, oak open, 1800 m, 11.07.2001, ÖB. 1547.

**RUBIACEAE**

**Asperula glomerata** (M.Bieb.) Griseb. subsp. **eriantha** (Hasskn. ex Bornm.) Ehrend

**13**, steppe, 1700 m, 27.07.2002, ÖB. 2428.

**A. prostrata** (Adams) K.Koch

**2**, on rock, 2200 m, 12.07.2002, ÖB. 2304, Euxine (mt.) elm.

**Callipeltis cucullaris** (L.) Steven.

**3**, roadside, 1720 m, 15.06.2001, ÖB. 12319; 19.06.2002, ÖB. 1901; **12**, steppe, 1760 m, 22.05.2002, ÖB. 1760; **2**, under rock, 1900 m, 07.06.2002, ÖB. 1900, Ir.-Tur. elm.

**Cruciata laevipes** Opiz

**2**, stony slope, 2000 m, 19.05.2001, ÖB. 1070; **5**, steppe, 1900 m, 26.05.2003, ÖB. 2627, Euro-Sib. elm.

**C. taurica** (Pall. ex Willd.) Ehrend.

**4**, juniper open, 1740 m, 15.06.2001, ÖB. 1293; **2**, juniper open, 1750 m, 29.06.2001, ÖB. 1363; **12**, steppe, 1850 m, 22.05.2002, ÖB. 1750; **18**, roadside, 1900 m, 07.06.2002, ÖB. 1928; **1**, steppe, 2200 m, 13.07.2003, ÖB. 2758, Ir.-Tur. elm.

**Galium consanguineum** Boiss.

**19**, steppe, 1900 m, 17.06.2003, ÖB. 2711, Ir.-Tur. elm.

**G. humifusum** M.Bieb.

**4**, juniper open, 1740 m, 15.06.2001, ÖB. 1295; **12**, steppe, 1700 m, 18.07.2002, ÖB. 2364; **1**, steppe, 1800 m, 05.08.2002, ÖB. 2504.

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

**12**, steppe, 1850 m, 22.05.2002, ÖB. 1740; **2**, on rock, 1950 m, 07.06.2002, ÖB. 1919; **3**, under rock, 2100 m, 19.06.2002, ÖB. 2036; **5**, steppe, 1900 m, 26.05.2003, ÖB. 2626, Ir.-Tur. elm.

**G. paschale** Forssk.

**2**, oak area, 2000 m, 12.07.2002, ÖB. 2271, E. Medit. (mt.) elm.

**G. rubioides** L.

**16**, under tree, 1750 m, 05.08.2002, ÖB. 2518, Euxine (mt.) elm., "VU".

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

**3**, under oak, 1740 m, 15.06.2001, ÖB. 1252; **19**, steppe, 1750 m, 17.06.2003, ÖB. 2719, Euro-Sib. elm.

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

**3**, oak open, 1750 m, 19.06.2002, ÖB. 1964; 17.06.2003, ÖB. 2721, Ir.-Tur. elm.

**G. tricorntum** Dandy

**5**, juniper open, 1800 m, 29.06.2001, ÖB. 1392, Medit. elm.

**G. verticillatum** Danthoine ex Lam.

**2**, under rock, 1900 m, 07.06.2002, ÖB. 1899; **5**, steppe, 1750 m, 17.06.2003, ÖB. 2731, Medit. elm.

**G. verum** L. subsp. **verum**

**4**, juniper open, 1740 m, 15.06.2001, ÖB. 1290; **12**, juniper open, 2000 m, 11.07.2002, ÖB. 2230; **18**, steppe, 2300 m, 13.07.2003, ÖB. 2765; 2794, Euro-Sib. elm.

**RUTACEAE**

**Haplophyllum schelkovnikovii** Grossh.

**12**, steppe, 1800 m, 11.07.2002, ÖB. 2212; **3**, roadside, 1720 m, 05.08.2002, ÖB. 2538, Ir.-Tur. elm.

**SALICACEAE****Populus tremula** L.

**17**, moist area, 1850 m, 27.07.2002, ÖB. 2452, Euro-Sib. elm.

**Salix alba** L.

**11**, water edge, 1750 m, 11.07.2001, ÖB. 1577.

**SANTALACEAE**

**Thesium billardieri** Boiss.

**14**, oak open, 2000 m, 23.06.2002, ÖB. 2101, Ir.-Tur. elm.

**T. kotschyianum** Boiss.

**14**, juniper open, 1800 m, 23.06.2002, ÖB. 2073; 1900 m, 27.07.2002, ÖB. 2453, Ir.-Tur. elm.

**SAPINDACEAE**

**Acer monspessulanum** L. subsp. **cinerascens** (Boiss.) Yalt.

**12**, oak open, 1900 m, 23.06.2002, ÖB. 2045, Ir.-Tur. elm.

**SCROPHULARIACEAE**

**Scrophularia cinerascens** Boiss.

**6**, steppe, 1900 m, 10.07.2001, ÖB. 1436.

**S. libanotica** Boiss. subsp. **libanotica** var. **libanotica**

**13**, juniper open, 1800 m, 27.07.2002, ÖB. 2440, E. Medit. elm.

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

**3**, steppe, 1700 m, 19.06.2002, ÖB. 1999, Ir.-Tur. elm.

**Verbascum calvum** Boiss. & Kotschy

**2**, steppe, 1800 m, 28.07.2002, ÖB. 2483, END., Ir.-Tur. elm., "LC".

**V. cheiranthifolium** Boiss. var. **cheiranthifolium**

**18**, steppe, 1730 m, 17.06.2003, ÖB. 2753.

**V. macrocarpum** Boiss.

**8**, oak open, 2000 m, 11.07.2001, ÖB. 1529, Ir.-Tur. elm.

**V. oreophilum** K.Koch var. **oreophilum**

**2**, oak area, 2000 m, 12.07.2002, ÖB. 2268; **3**, oak open, 1750 m, 19.07.2002, ÖB. 2412, Ir.-Tur. elm., "LC".

**V. phoeniceum** L.

**16**, steppe, 1900 m, 07.06.2003, ÖB. 2651.

**V. speciosum** Schrad.



12, steppe, 1850 m, 24.06.2002, ÖB. 2177.

*V. vanense* Hub.-Mor.

12, oak area, 2000 m, 12.07.2002, ÖB. 1869; 15, steppe, 1800 m, 19.07.2002, ÖB. 2378, END., Ir.-Tur. elm., "LC".

#### SOLANACEAE

*Hyoscyamus reticulatus* L.

13, oak open, 1750 m, 22.05.2002, ÖB. 1720; 1, steppe, 1750 m, 08.05.2002, ÖB. 2490; 18, steppe, 1700 m, 18.05.2003, ÖB. 2598, Ir.-Tur. elm.

*Lycium anatolicum* A.Baytop & R.Mill.

16, steppe, 1800 m, 13.07.2002, ÖB. 2313, END., Ir.-Tur. elm., "LC".

#### THYMELAEACEAE

*Daphne mucronata* Royle subsp. *mucronata*

6, oak open, 1900 m, 10.07.2001, ÖB. 1504; 18, oak slope, 2300 m, 13.07.2003, ÖB. 2802, Ir.-Tur. elm.

*D. oleoides* Schreb. subsp. *kurdica* (Bornm.) Bornm.

3, roadside, 1720 m, 15.06.2001, ÖB. 1235; 1270; 4, juniper open, 1740 m, 15.06.2001, ÖB. 1316; 5, juniper open, 1720 m, 29.06.2001, ÖB. 1373; 14, juniper open, 1800 m, 23.06.2002, ÖB. 2075; 2084; 1900 m, 18.07.2002, ÖB. 2320, Ir.-Tur. elm.

#### URTICACEAE

*Parietaria judaica* L.

13, steppe, 1750 m, 27.07.2002, ÖB. 2432.

*Urtica dioica* L.

11, juniper open, 1800 m, 11.07.2001, ÖB. 1580; 15, roadside, 1800 m, 19.07.2002, ÖB. 2377, Euro-Sib. elm.

#### VERBENACEAE

*Verbena officinalis* L.

5, juniper open, 1750 m, 19.07.2002, ÖB. 2389; 05.08.2002, ÖB. 2535.

#### VIOLACEAE

*Viola occulta* Lehm.

3, steppe, 1720 m, 13.04.2002, ÖB. 1622; 5, juniper open, 1800 m, 08.05.2002, ÖB. 1662; 13, steppe, 1750 m, 22.05.2002, ÖB. 1712; 12, steppe, 1750 m, 22.05.2002, ÖB. 1730; 1735.

#### VITACEAE

*Vitis sylvestris* C.C.Gmel.

7, oak open, 1750 m, 11.07.2001, ÖB. 1523.

#### MONOCOTYLEDONEAE

##### AMARYLLIDACEAE

*Allium affine* Ledeb.

14, steppe, 2100 m, 27.07.2002, ÖB. 2462, Ir.-Tur. elm.

*A. akaka* S.G.Gmel. ex Schult. & Schult. f.

14, stony slope, 1900 m, 31.05.2002, ÖB. 1892, Ir.-Tur. elm.

*A. anacoleum* Hand.-Mazz.

15, stony slope, 1850 m, 19.08.2002, ÖB. 2550, Ir.-Tur. elm.

*A. atroviolaceum* Boiss.

2, steppe, 1900 m, 17.06.2003, ÖB. 2741.

*A. callidictyon* C.A.Mey. ex Kunth

13, steppe, 1900 m, 27.07.2002, ÖB. 2450, Ir.-Tur. elm.

*A. dictyoprasum* C.A.Mey. ex Kunth

9, oak open, 1800 m, 11.07.2001, ÖB. 1540; 12, juniper open, 2000 m, 18.07.2002, ÖB. 2345, Ir.-Tur. elm.

*A. guttatum* Stev. subsp. *guttatum*

2, oak open, 2200 m, 12.07.2002, ÖB. 2284; 12, juniper open, 2000 m, 18.07.2002, ÖB. 2347.

*A. paniculatum* L. subsp. *paniculatum*

13, steppe, 1900 m, 27.07.2002, ÖB. 2448, Medit. elm.

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

3, stony slope, 1740 m, 15.06.2001, ÖB. 1283; 18, steppe, 2000 m, 13.07.2003, ÖB. 2762, Medit. elm.

*Stenbergia clusiana* (Ker Gawl.) Ker Gawl. ex Spreng.

16, steppe, 1700 m, 28.10.2002, ÖB. 2582, Ir.-Tur. elm.

#### ASPARAGACEAE

*Bellevalia fominii* Woronow

2, steppe, 1900 m, 19.05.2001, ÖB. 1106, Ir.-Tur. elm., "VU".

*B. longistyla* (Miscz.) Grossh.

12, steppe, 1850 m, 22.05.2002, ÖB. 1723, Ir.-Tur. elm., "VU".

*Muscari armeniacum* Leichtlin ex Baker

5, steppe, 1800 m, 23.04.2002, ÖB. 1631; 08.05.2002, ÖB. 1673; 12, steppe, 1850 m, 22.05.2002, ÖB. 1726.

*M. comosum* (L.) Mill.

12, steppe, 1720 m, 01.06.2002, ÖB. 1873, Medit. elm.

*M. longipes* Boiss.

4, juniper open, 1740 m, 15.06.2001, ÖB. 1311; 16, steppe, 1720 m, 17.06.2003, ÖB. 2746, Ir.-Tur. elm.

*Ornithogalum arcuatum* Steven

14, oak open, 2000 m, 23.06.2002, ÖB. 2099, Ir.-Tur. elm.

*O. narbonense* L.

12, steppe, 1720 m, 01.06.2002, ÖB. 1876-a; 23.06.2002, ÖB. 2052, Medit. elm.

*O. oligophyllum* E.D.Clarke

12, steppe, 1720 m, 01.06.2002, ÖB. 1876-b.

*O. wiedemannii* Boiss. var. *wiedemannii*

5, juniper open, 1950 m, 08.05.2002, ÖB. 1685.

*Puschkinia scilloides* Adams

3, under oak, 1800 m, 13.04.2002, ÖB. 1613; 1623; 18, oak slope, 03.05.2003, ÖB. 2590, Ir.-Tur. elm.

#### IRIDACEAE

*Crocus cancellatus* Herb. subsp. *damascenus* (Herb.) B.Mathew

15, steppe, 1700 m, 28.10.2002, ÖB. 2579; 2581, Ir.-Tur. elm.

*Gladiolus atroviolaceus* Boiss.

12, steppe, 1800 m, 22.05.2002, ÖB. 1744; 14, steppe, 2100 m, 31.05.2002, ÖB. 1795; 16, steppe, 1750 m, 07.06.2003, ÖB. 2667, Ir.-Tur. elm.

*Iris aucheri* (Baker) Sealy

12, oak open, 2100 m, 22.05.2002, ÖB. 1706, Ir.-Tur. elm., "VU".

*I. persica* L.

18, steppe, 1720 m, 12.04.2003, ÖB. 2587, Ir.-Tur. elm.

*I. sari* Schott ex Baker

12, oak open, 2100 m, 01.06.2002, ÖB. 1841, END., Ir.-Tur. elm., "LC".

#### IXIOLIRIACEAE

*Ixiolirion tataricum* (Pall.) Schult. & Schult.f. var. *tataricum*

14, steppe, 1900 m, 31.05.2002, ÖB. 1813, Ir.-Tur. elm.

#### JUNCACEAE

*Juncus inflexus* L.

5, moist area, 1750 m, 19.07.2002, ÖB. 2388.

#### LILIACEAE

*Colchicum kotschyi* Boiss.

15, stony slope, 1800 m, 19.08.2002, ÖB. 2553; 18, roadside, 1700 m, 18.05.2003, ÖB. 2601, Ir.-Tur. elm.

- Fritillaria crassifolia** Boiss. & A. Huet. subsp. **kurdica** (Boiss. & Noë) Rix  
**12**, oak open, 2100 m, 22.05.2002, ÖB. 1710, Ir.-Tur. elm.
- F. imperialis** L.  
**12**, steppe, 1800 m, 01.06.2002, ÖB. 1833; **3**, stony slope, 1800 m, 10.05.2003, ÖB. 2567, Ir.-Tur. elm., "VU".
- F. minuta** Boiss. & Noë  
**3**, oak open, 1900 m, 08.05.2002, ÖB. 1697; **18**, oak open, 1750 m, 03.05.2003, ÖB. 2591, Ir.-Tur. elm.
- Gagea bohemica** (Zauschn.) Schult. & Schult.f.  
**3**, steppe, 1900 m, 13.04.2002, ÖB. 1624; **18**, steppe, 1720 m, 12.04.2003, ÖB. 2584-a.
- G. bulbifera** (Pall.) Salisb.  
**3**, steppe, 1800 m, 05.05.2002, ÖB. 1650;1652; **18**, steppe, 1720 m, 12.04.2003, ÖB. 2586, Euro-Sib. elm.
- G. chrysantha** (Jan.) Schult. & Schult.f.  
**18**, steppe, 1720 m, 12.04.2003, ÖB. 2584-b, Medit. elm.
- G. gageoides** (Zucc.) Vved.  
**5**, juniper open, 1950 m, 08.05.2002, ÖB. 1680, Ir.-Tur. elm.
- G. villosa** (M.Bieb.) Sweet var. **hermonis** Dafni & Heyn  
**3**, steppe, 1800 m, 05.05.2002, ÖB. 1654-b, Ir.-Tur. elm.
- G. villosa** (M.Bieb.) Sweet var. **villosa**  
**3**, steppe, 1800 m, 05.05.2002, ÖB. 1654-a, Medit. elm.
- Tulipa armena** Boiss. var. **armena**  
**3**, oak open, 1720 m, 05.05.2002, ÖB. 1644; 1800 m, 08.05.2002 ÖB. 1699, "LC".
- T. humilis** Herb.  
**2**, steppe, 2000 m, 19.05.2001, ÖB. 1065; **12**, oak open, 2100 m, 22.05.2002, ÖB. 1711.
- ORCHIDACEAE**
- Anacamptis pyramidalis** (L.) Rich.  
**11**, under tree, 1750 m, 24.06.2002, ÖB. 2143.
- Dactylorhiza flavescens** (K. Koch) Holub  
**12**, oak open, 2100 m, 22.05.2002, ÖB. 1703; 1705; **16**, oak open, 1800 m, 10.05.2003, ÖB. 2593.
- D. umbrosa** (Kar.& Kir.) Nevski  
**16**, in-garden, 1750 m, 07.06.2003, ÖB. 2648, Ir.-Tur. elm.
- Ophrys reinholdii** Spruner ex Fleischm. subsp. **straussii** (H. Fleischm.) E.Nelson  
**5**, juniper open, 1850 m, 08.05.2002, ÖB. 1674; 1900 m, 26.05.2003, ÖB. 2628.
- Orchis anatolica** Boiss.  
**12**, under oak, 1700 m, 22.05.2002, ÖB. 1755, E. Medit. elm.
- O. coriophora** L.  
**16**, in-garden, 1750 m, 07.06.2003, ÖB. 2649.
- O. papilionacea** L. subsp. **schirwanica** (Woronow) Soó  
**14**, oak area, 2000 m, 31.05.2002, ÖB. 1791; 1797.
- O. pinetorum** Boiss. & Kotschy  
**2**, oak slope, 1900 m, 19.05.2001, ÖB. 1105; **12**, oak open, 2100 m, 22.05.2002, ÖB. 1707; **14**, oak open, 2100 m, 31.05.2002, ÖB. 1803; **3**, steppe, 1800 m, 07.06.2003, ÖB. 2678.
- O. simia** Lam.  
**16**, in-garden, 1750 m, 07.06.2003, ÖB. 2650.
- O. spitzselii** Sauter ex W.D.J. Koch  
**2**, under oak, 1900 m, 07.06.2003, ÖB. 2680.
- O. tridentata** Scop.  
**12**, under oak, 1800 m, 22.05.2002, ÖB. 1753, Medit. elm.
- POACEAE (GRAMINEAE)**
- Aegilops columnaris** Zhuk.  
**14**, steppe, 1700 m, 23.06.2002, ÖB. 2055, Ir.-Tur. elm.
- Ae. cylindrica** Host  
**3**, roadside, 1720 m, 15.06.2001, ÖB. 1216, Ir.-Tur. elm.
- Ae. neglecta** Req. ex Bertol.  
**12**, steppe, 2100 m, 11.07.2002, ÖB. 2247; 1850 m, 08.06.2003, ÖB. 2696; **5**, steppe, 1900 m, 17.06.2003, ÖB. 2728, Medit. elm.
- Ae. triuncialis** L. subsp. **triuncialis**  
**3**, roadside, 1720 m, 15.06.2001, ÖB. 1214;1215.
- Agropyron cristatum** (L.) Gaertn. subsp. **incanum** (Nábělek) Melderis  
**2**, oak open, 2200 m, 12.07.2002, ÖB. 2285, Ir.-Tur. elm.
- Arrhenatherum kotschyi** Boiss.  
**14**, juniper open, 1800 m, 23.06.2002, ÖB. 2071, Ir.-Tur. elm.
- Avena barbata** Pott. ex Link. subsp. **barbata**  
**5**, steppe, 2000 m, 17.06.2003, ÖB. 2726, Medit. elm.
- A. eriantha** Durieu  
**3**, roadside, 1720 m, 15.06.2001, ÖB. 1212.
- Bromus danthoniae** Trin. ex C.A. Mey.  
**5**, juniper open, 1750 m, 29.06.2001, ÖB. 1371; **14**, juniper open, 1800 m, 23.06.2002, ÖB. 2076.
- B. japonicus** Thunb. subsp. **japonicus**  
**3**, steppe, 1720 m, 15.06.2001, ÖB. 1273.
- B. japonicus** Thunb. subsp. **anatolicus** (Boiss. & Heldr.) Penzes  
**8**, steppe, 2000 m, 24.06.2002, ÖB. 2131.
- B. tectorum** L. subsp. **tectorum**  
**5**, steppe, 2000 m, 17.06.2003, ÖB. 2724.
- B. variegatus** M. Bieb. subsp. **variegatus**  
**2**, roadside, 1900 m, 07.06.2002, ÖB. 1937, Ir.-Tur. elm.
- Catabrosa capusii** Franch.  
**19**, steppe, 1780 m, 26.05.2003, ÖB. 2634, Ir.-Tur. elm.
- Cynodon dactylon** (L.) Pers. var. **villosus** Regel  
**7**, steppe, 170 m, 11.07.2001, ÖB. 1513; **12**, steppe, 1700 m, 18.07.2002, ÖB. 2361.
- Dactylis glomerata** L. subsp. **hispanica** (Roth) Nyman  
**3**, juniper open, 1720 m, 15.06.2001, ÖB. 1220; 19.06.2002, ÖB. 1957; **6**, oak open, 1900 m, 10.07.2001, ÖB. 1486; 2200 m, 12.07.2002, ÖB. 2281; **18**, steppe, 1950 m, 13.07.2003, ÖB. 2770.
- Echinaria capitata** (L.) Desf.  
**3**, roadside, 1720 m, 1.06.2001, ÖB. 1243; **5**, juniper open, 1800 m, 08.05.2002, ÖB. 1664; **12**, steppe, 1760 m, 22.05.2002, ÖB. 1757.
- Elymus elongatiformis** (Drobov) Assadi  
**18**, oak slope, 1900 m, 13.07.2003, ÖB. 2761, Ir.-Tur. elm.
- E. hispidus** (Opiz) Melderis subsp. **barbulatus** (Schur) Melderis  
**13**, juniper open, 1800 m, 27.07.2002, ÖB. 2437; 2100 m, ÖB. 2457; **18**, steppe, 1950 m, 13.07.2003, ÖB. 2768.
- E. hispidus** (Opiz) Melderis subsp. **podpyrae** (Nábělek) Melderis  
**7**, steppe, 1750 m, 11.07.2001, ÖB. 1525; **14**, steppe, 2100 m, 27.07.2002, ÖB. 2460, Ir.-Tur. elm.
- Eremopoa persica** (Trin.) Roshev.  
**3**, steppe, 2000 m, 19.06.2002, ÖB. 2023; **13**, steppe, 1750 m, 27.07.2002, ÖB. 2430.
- Festuca brunnescens** (Tzvelev) Galushko  
**2**, steppe, 1900 m, 07.06.2002, ÖB. 1939, Ir.-Tur. elm.
- Heterantherium piliferum** Hochst. ex Jaub. & Spach  
**3**, steppe, 1740 m, 15.06.2001, ÖB. 1269, Ir.-Tur. elm.

***Hordeum bulbosum* L.**

**3**, roadside, 1720 m, 1.06.2001, ÖB. 1234; **2**, steppe, 1900 m, 07.06.2002, ÖB. 1935; **14**, steppe, 1700 m, 23.06.2002, ÖB. 2053.

***H. murinum* L. subsp. *leporinum* (Link.) Arcang**

**12**, steppe, 1700 m, 18.07.2002, ÖB. 2365.

***Koeleria cristata* (L.) Pers.**

**14**, steppe, 1730 m, 23.06.2002, ÖB. 2061; 2100 m, 11.07.2002, ÖB. 2246; **13**, oak open, 2200 m, 12.07.2002, ÖB. 2283; 2000 m, 17.06.2003, ÖB. 2737.

***Lolium multiflorum* Lam.**

**5**, juniper open, 1800 m, 08.05.2002, ÖB. 1671.

***Melica persica* Kunth subsp. *jacquemontii* (Decne. ex Jacquem.) P. H. Davis**

**7**, steppe, 1750 m, 11.07.2001, ÖB. 1512; **13**, oak open, 2200 m, 12.07.2002, ÖB. 2229; **2**, steppe, 1900 m, 07.06.2002, ÖB. 1897; 17.06.2003, ÖB. 2735; **18**, steppe, 2500 m, 13.07.2003, ÖB. 2759; 2772, Ir.-Tur. elm.

***Phleum montanum* C. Koch subsp. *montanum***

**18**, steppe, 2100 m, 13.07.2003, ÖB. 2766.

***P. paniculatum* Huds. subsp. *ciliatum* (Boiss.) M. Doğan**

**3**, steppe, 1750 m, 19.06.2002, ÖB. 1986; **12**, steppe, 1700 m, 18.07.2002, ÖB. 2363, Ir.-Tur. elm.

***Phragmites australis* (Cav.) Trin. ex Steud.**

**15**, wetland, 1700 m, 13.07.2003, ÖB. 2805, Euro-Sib. elm.

***Piptatherum holciforme* Roem. & Schult. subsp.*****holciforme* var. *holciforme***

**18**, steppe, 2300 m, 13.07.2003, ÖB. 2784.

***Poa bulbosa* L.**

**19**, steppe, 2100 m, 26.05.2003, ÖB. 2616.

***Psathyrostachys fragilis* (Boiss.) Nevski subsp.*****secaliniformis* Tzvelev**

**2**, oak open, 2200 m, 12.07.2002, ÖB. 2277, Ir.-Tur. elm.

***Sclerochloa dura* (L.) P. Beauv.**

**19**, steppe, 1780 m, 26.05.2003, ÖB. 2636, Euro-Sib. elm.

***Stipa ehrenbergiana* Trin. & Rupr.**

**2**, steppe, 1900 m, 17.06.2003, ÖB. 2739, Ir.-Tur. elm.

***S. lessingiana* Trin. & Rupr.**

**18**, steppe, 2300 m, 13.07.2003, ÖB. 2792.

***S. pontica* P. A. Smirn.**

**3**, steppe, 2000 m, 19.06.2002, ÖB. 2029.

***Taeniatherum caput-medusae* (L.) Nevski subsp.*****crinitum* (Schreb.) Melderis**

**3**, juniper open, 1720 m, 15.06.2001, ÖB. 1218; **5**, steppe, 2000 m, 17.06.2003, ÖB. 2723, Ir.-Tur. elm.

***Trisetum flavescens* (L.) P. Beauv.**

**14**, juniper open, 1700 m, 23.06.2002, ÖB. 2057, Euro-Sib. elm.

**XANTHORRHOEACEAE*****Eremurus spectabilis* M. Bieb.**

**14**, steppe, 2100 m, 31.05.2002, ÖB. 1798; **12**, oak open, 2100 m, 01.06.2002, ÖB. 1842, Ir.-Tur. elm.