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Flora of an Important Plant Area: Çatak valley I - (Çatak-Pervari) Van, Turkey

Abstract

Bani, B. & Adigüzel N.: Flora of an Important Plant Area: Çatak valley I - (Çatak-Pervari) Van, Turkey. — Fl. Medit. 18: 11-63. 2008. — ISSN 1120-4052.

The vascular flora of Çatak valley has been studied in 2002-2004. 823 species and infraspecific taxa were found, they belong to 363 genera and 78 families. 53 are endemic to Turkey (6.43 %). 415 taxa are new records for C9 grid square. Besides, *Asperuginoides axillaris* (*Brassicaceae*), is new to the Flora of Turkey.

Key words: Flora, Turkey, *Asperuginoides axillaris*.

Introduction

The research area is located in Van Province, between Çatak (Van) and Pervari (Siirt) towns, within C9 grid square according to Flora of Turkey (Davis 1965) and situated in East Anatolia, between 37° 55' - 38° 00' North latitudes and 42° 59' - 43° 03' East longitudes. The length of the area is 30 km, and its width varies from 4 km to 9 km. Çatak river passes through our research area which consists of hilly and mountainous landscapes. These are as follow: Lezik, Great Kato, Belbuka, Lisek and Beşgöze hills. Altitude range is between 1200-3000 m. Kaçit, Dalbastı, Övecek, Yeniköy, Urganlı, Atlıhan, Büyükağaç and Kıyıcak villages are located in the valley (Fig. 1).

Non-limy brown forest soils and chestnut soils are characteristic for the area. Limestone rocks exist especially between Urganlı village and Narlı bridge (TOKB 1971).

There is no meteorological data available from Çatak town and the climatic characterisation of the research area was done by using the available data from three nearest meteorological stations. These are as follows: Pervari (1380 m), Bahçesaray (1750 m), Gürpınar (2175 m) (DMİ 2004). The research area belongs to the Mediterranean type of climate. According to Emberger, the precipitation-temperature coefficient (Q) is 58 for Pervari, 90.6 for Bahçesaray and 25.73 for Gürpınar. Pervari is characterized as semiarid and extremely cold; Bahçesaray gets low precipitation and is extremely cold; Gürpınar is characterized as arid and iced Mediterranean type (Akman 1990). The annual mean temperature of Pervari is 12.2 °C, Bahçesaray is 8.7 °C, Gürpınar is 8.1 °C (Table 1). The maxi-

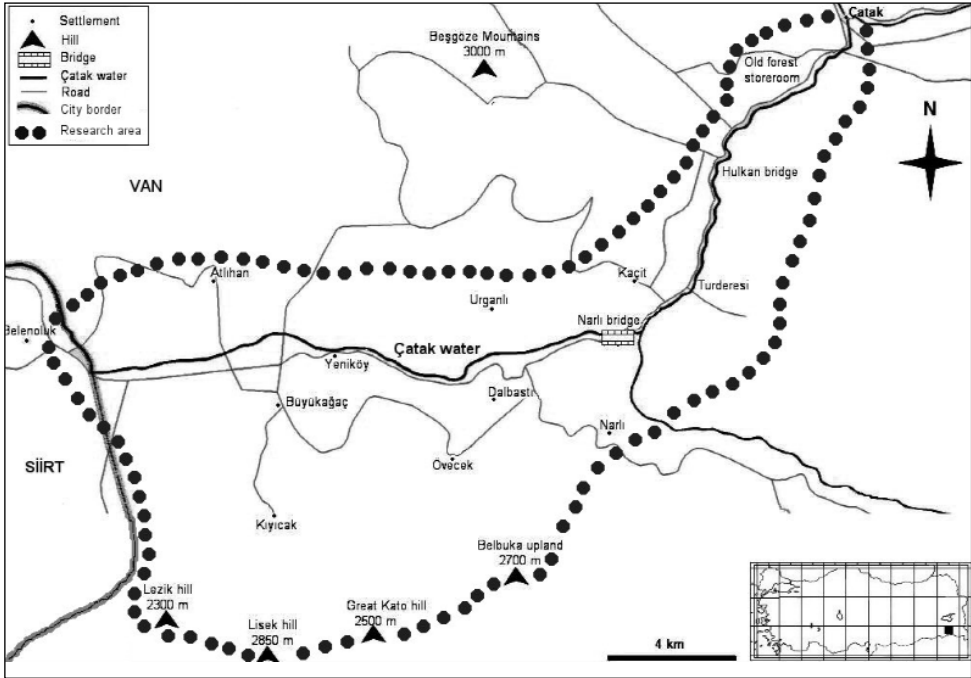


Fig. 1. Map of the research area.

imum mean temperature (in July) of Pervari is 33.4 °C, of Bahçesaray is 31.6 °C and Gürpınar is 28.5 °C. The minimum mean temperature (in January) of Pervari is -5.0 °C, Bahçesaray is -9.1 °C and of Gürpınar is -10.2 °C. The annual rainfall is 650.5 mm in Pervari, 1051.1 mm in Bahçesaray and 281.0 mm in Gürpınar (Table 2). According to meteorological data, the precipitation regimes of Pervari and Bahçesaray are typical of the second type of East Mediterranean Precipitation Regime, and in Gürpınar it shows typical of Submediterranean Precipitation Regime (Akman 1990). The ombrotermic diagrams of Pervari, Bahçesaray and Gürpınar show dry and rainy period (Fig. 2).

Table 1. Mean temperature values (°C).

STATIONS	Observation periods	1	2	3	4	5	6	7	8	9	10	11	12	Annual
PERVARI	22	-1.4	0.5	4.7	10.1	15.0	20.5	26.1	26.1	21.9	14.5	6.8	1.5	12.2
BAHÇESARAY	3	-4.6	-1.8	3.2	8.4	12.4	16.5	21.5	19.4	15.4	10.5	4.1	-0.2	8.73
GÜRPINAR	16	-4.4	-3.5	0.8	7.6	12.4	17.2	20.8	19.8	15.5	9.7	3.3	-2.6	8.1

Table 2. Mean precipitation values (mm).

STATIONS	Observation periods	1	2	3	4	5	6	7	8	9	10	11	12	Annual
PERVARI	20	60.1	72.6	106.8	105.4	77.6	15.7	3.2	2.7	3.3	55.2	79.3	68.6	650.5
BAHÇESARAY	2	83.4	88.8	183.0	81.1	89.6	28.8	7.4	21.5	17.7	123.1	171.8	154.9	1051.1
GÜRPINAR	12	14.0	17.9	29.1	52.4	44.2	14.4	2.1	2.2	10.1	28.1	34.5	32.0	281.0

Oak formations dominate on the slopes of the valley between 1250-1800 m. *Quercus infectoria* subsp. *boissieri*, *Q. brantii*, *Q. libani*, *Celtis glabrata* and *C. tournefortii* are the most common plants. Mixed with them there are *Paliurus spina-christi*, *Juglans regia*, *Pistacia khinjuk*, *P. eurycarpa*, *Acer monspessulanum* subsp. *cinerascens*, *A. tataricum*, *Lonicera caucasica* subsp. *caucasica*, *Cerasus microcarpa*, *Daphne mucronata*, *Cotoneaster nummularius*, *Juniperus excelsa* and *J. oxfordensis* subsp. *oxycedrus*.

Under oak formation, most common species are as follows: *Alliaria petiolata*, *Sameraria stylophora*, *Geranium rotundifolium*, *Astragalus tigridis*, *A. campylosema* subsp. *campylosema*, *Trigonoscladium viscidulum*, *Centaurea triumfettii*, *Crepis sancta*, *Scorzonera latifolia*, *Ziziphora capitata*, *Galium aparine*, *Orchis tridentata*.

Steppe vegetation predominates between 1800-3000 m, but steppe areas can be found also at lower altitudes in clearings of oak formation. *Alyssum baumgartnerianum*, *Arenaria gypsophiloides* var. *glabra*, *Astragalus asiocalyx*, *A. rechingeri*, *Lotus gebelia* var. *hir-*

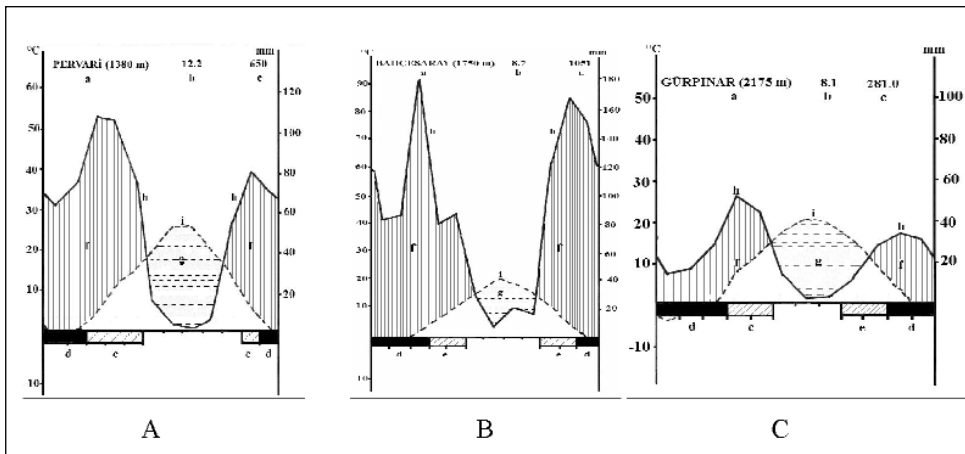


Fig. 2. Ombrothermic diagrams of Pervari (A), Bahçesaray (B) and Gürpınar (C)
 a: meteorological station and altitude, b: annual average temperature, c: annual average precipitation, d: absolute freezing months, e: probable freezing months, f: rainy period, g: arid period, h: rain curve, i: temperature curve.

sutissimus, *Onobrychis carduchorum*, *Carthamus lanatus*, *C. dentatus*, *Centaurea persica*, *Campanula glomerata* subsp. *hispida*, *Phlomis pungens* var. *hirta* can be cited.

Along streamsides and in wet places there are common species as *Equisetum ramosissimum*, *Aquilegia olympica*, *Lepidium latifolium*, *Nasturtium officinale*, *Silene compacta*, *Tamarix smyrnensis*, *Cirsium pubigerum* var. *spinosa*, *Juglans regia*, *Salix alba*, *S. pseudomedemii*, *S. pentandra*, *S. caprea*, *S. excelsa*, *Populus euphratica*, *Epilobium hirsutum*, *Cyperus longus*, *Carex stenophylla* subsp. *stenophylloides*, *Thypha angustifolia* and *Phragmites australis*.

Ceterach officinarium, *Ranunculus munzurenensis*, *Aubrieta parviflora*, *Polygala hohenackeriana*, *Valeriana sisymbriifolia*, *Centaurea karduchorum*, *C. urvillei*, *Saxifraga kotschyi*, *Campanula coriacea*, *Onosma alborosea* subsp. *alborosea* var. *alborosea*, *Stachys ballotaeformis* are usual at rocky places.

Çatak valley has been selected as one of the Important Plant Areas of Turkey (Özhayat & al. 2005). However, the flora of the area has not been previously studied in detail. Studies on the flora and vegetation have been done in many adjacent areas of Çatak valley: Ereğ Mountain (Özçelik 1987), Süphan Mountain (Behçet 1989), Toprakkale (Öğün & Altan 1992), Çavuştepe (Temur & Altan 1993), Hizan (Altan & Behçet 1995), Kurubaş Pass (Öztürk & Behçet 1998), Özalp (Özgökçe & Behçet 2002), Pirreşit Mountain (Ünal & Behçet 2002), Bahçesaray (Firat & Demirkuş 2002), Akçadağ (Karabacak & Behçet 2003), Güzeldere Pass (Armağan & Koyuncu 2003), Bitlis Stream Valley (Altiok & Behçet 2005), Deveboynu Peninsula (Bingöl & Adigüzel 2004), Upper Çatak Valley (Pınar & Adigüzel 2005) and Başet Mountain (Ünal & Behçet 2005). Some of them are as master or doctorate thesis.

Material and Methods

Field studies were carried out between 2002-2004. Excursions were made during different seasons and 1650 plant specimens were collected from 27 localities (Table 5). Herbarium vouchers were deposited at VANF and GAZI.

The specimens were identified by using mainly “Flora of Turkey and the East Aegean Islands” (Davis 1965-1985; Davis & al. 1988; Güner & al. 2000) and Flora of Iraq (Townsend & Guest 1966-1985), Flora Iranica (Rechinger 1965-1997) and Flora of the USSR (Komarov 1933-1964). All the taxa are listed in the section Floristic list. The names of the taxa are given according to Flora of Turkey. Under each taxon following informations dealing with the specimens were presented: locality number (see Table 5), habitat, altitude, date, and collector’s acronym (B.B. = Baris Bani) with collector’s number. After the information on the specimens the phytogeographic region, endemism, and threat category are given when appropriate. Author names have been checked according to Brummit & Powell (2001).

Endemics and rare plants were given according to Ekim & al. (2000) and their threat categories were revised to IUCN categories (2001).

The relevant literatures of floristic studies nearby our area were checked (Altan & Şahin 1989, Donner 1990, Erik & Sümbül 1992, Ertekin & Savaş 1997, Yıldırım 1994, 1997a, 1997b, 1998a, 1998b, 1999, 2000a, 2000b, 2001a, 2001b, 2002a, 2002b, 2003a, 2003b, Yıldırım & Dönmez 1998, Yıldırım & Güner 1989). After this control, 415

taxa are new to the square C9 of the grid system of Turkey adopted. These taxa were marked with (*) in the floristic list.

Results and Discussion

The research area is situated in Van province in East Anatolia geographically, also within Irano-Turanian phytogeographic region.

823 species and subspecies belonging to 363 genera and 78 families were determined from the 1650 specimens. 5 of the taxa belong to *Pteridophyta* and 818 to *Spermatophyta*; 3 taxa belong to *Gymnospermae*, 712 to *Dicotyledones* and 103 to *Monocotyledones*. *Asperuginoides axillaris* proved to be a new genus and species for Turkey, and the finding was published separately (Bani & Adıgüzel 2006).

The number of endemic taxa is 53, and the endemism ratio is 6.43 %. According to Ekim & al. (2000) and IUCN (2001) they are distributed in the threat categories as follows; 1 Endangered (EN), 2 Vulnerable (VU), 14 Near Threatened (NT), 34 Least Concern (LC). The threat categories of rare taxa are as follows; 1 CR, 1 EN, 29 VU, 1

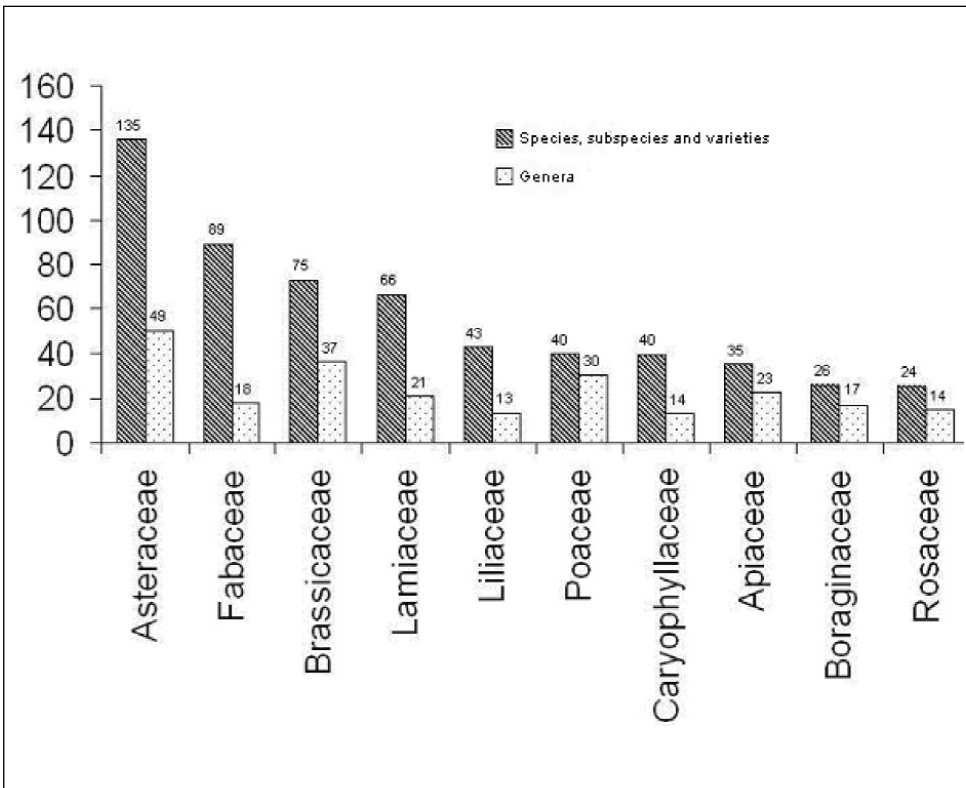


Fig. 3. The families with great number of taxa and genera.

Table 3. The families with the greatest number of taxa and endemics.

Family	taxa	genera	species	subsp.	var.	end.
<i>Asteraceae</i>	135	49	121	34	19	11
<i>Fabaceae</i>	89	18	84	17	19	8
<i>Brassicaceae</i>	75	37	71	3	2	2
<i>Lamiaceae</i>	66	21	56	21	11	6
<i>Liliaceae</i>	43	13	43	3	0	2
<i>Poaceae</i>	40	30	39	5	2	0
<i>Caryophyllaceae</i>	40	14	39	8	8	4
<i>Apiaceae</i>	35	23	35	1	1	2
<i>Boraginaceae</i>	26	17	26	5	4	2
<i>Rosaceae</i>	24	14	23	8	3	0
Total	573	236	537	105	69	37

NT, 2 LC.

Tanacetum argyrophyllum (K.Koch) Tzvelev var. *polycephalum* (Sch.Bip.) Grierson and *Cephalorrhynchus rechingerianus* Tuisl had been with “DD” category in Red Data Book of Turkish Plants (Ekim et al. 2000). These two taxa were collected during our field trips. We recommended threat categories for *Tanacetum argyrophyllum* var. *polycephalum* as “CR” and for *Cephalorrhynchus rechingerianus* as “VU” (Adigüzel & al. 2006).

The families with the greatest number of taxa: *Asteraceae* 135, *Fabaceae* 89, *Brassicaceae* 75, *Lamiaceae* 66, *Liliaceae* 43, *Poaceae* 40, *Caryophyllaceae* 40, *Apiaceae* 35, *Boraginaceae* 26, *Rosaceae* 24. The first nine taxon-rich families in Flora of Turkey and in this study are in the same sequence.

The numbers of genera in the ten major families are: *Asteraceae* 49, *Brassicaceae* 37, *Poaceae* 30, *Apiaceae* 23, *Lamiaceae* 21, *Fabaceae* 18, *Boraginaceae* 17, *Rosaceae* 14, *Caryophyllaceae* 14, *Liliaceae* 13 (Fig. 3, Table 3). The first ten genus-rich families in Flora of Turkey and in this study are the same, but they have a different order.

The numbers of specific and infraspecific taxa in the ten biggest genera are: *Astragalus* 26, *Centaurea* 18, *Salvia* 15, *Trifolium* 15, *Alyssum* 14, *Silene* 13, *Allium* 13, *Ranunculus* 10, *Euphorbia* 9, *Campanula* 9. The genus with the greatest number of endemics is *Astragalus* with 6 endemics (23.7 %); *Centaurea* is the second with 3 endemic taxa (16.6 %) and *Alyssum* is the third with 2 endemic taxa (14.3 %). According to the nearby areas except Bitlis River valley and Hizan (Bitlis), *Astragalus* is the richest genus.

Distributions of the species and infraspecific taxa according to phytogeographic region in the research area are as follows: Irano-Turanian 353 (42.89 %), Mediterranean 32 (3.88 %), Euro-Siberian elements 40 (4.85 %), pluriregional and unknown 398 (48.35 %) (Fig. 4).

During the recent years, floristic studies have increased in the Van Province. Some of them have been done as PhD and MSc thesis. Seven of them have not been published

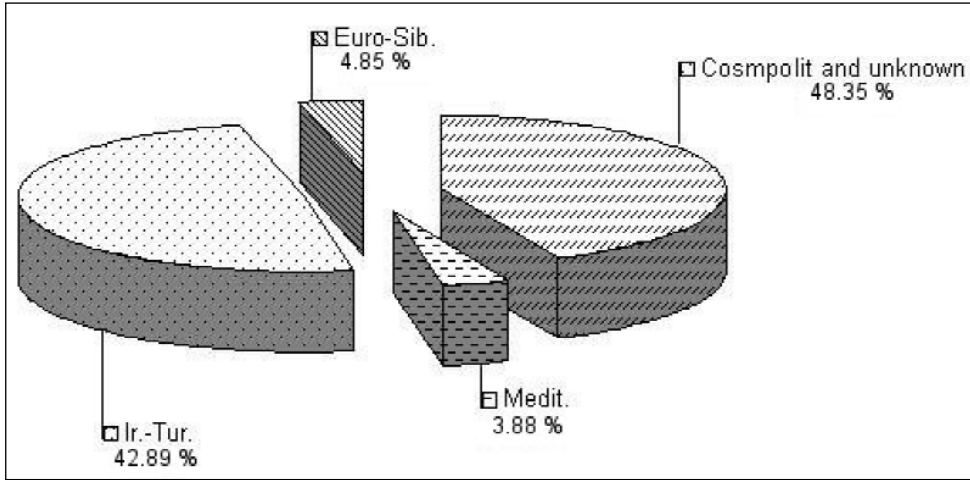


Fig. 4. Distributions of the species, subspecies and varieties according to phytogeographic region.

yet. These thesis are as follows: Yukarı Çatak Vadisi (Çatak-Van) Florası (Pınar & Adıgüzel 2005), Akçadağ (Erciş-Van) Florası (Karabacak & Behçet 2003), Bahçesaray (Van) ve Çevresi Florası Üzerine Bir Araştırma (Fırat & Demirkuş 2002), Çavuştepe (Van) Florası (Temur & Atlan 1993), Deveboynu Yarımadası (Gevaş-Van) ve Çevresi Florası (Bingöl & Adıgüzel 2004), Güzeldere Geçidi (Başkale-Van) Florası Üzerine Bir

Table 4. A floristic comparison of the research area (Catak Valley I) with nearby areas.

Areas	Total taxa	Ir.-Tur. (%)	Euro.-Sib. (%)	Medit. (%)	Pluriregional (%)	Endemism (%)
Çatak valley I	823	42.89	4.85	3.88	48.35	6.43
Çatak valley II	854	45.90	6.09	2.58	45.43	7.73
Akçadağ	889	35.47	2.92	6.98	61.68	8.5
Bahçesaray	912	44.0	8.0	2.0	46.0	14.26
Çavuştepe	251	33.0	4.3	3.5	59.5	6.3
Deveboynu	752	47.07	4.78	4.25	43.88	6.8
Erek	574	40.9	8.8	2.9	32	6.9
Güzeldere	788	50.63	4.19	1.14	40.61	12.06
Hizan	627	34.9	6.2	4.7	54.2	7.9
Kurubaş	421	44.0	7.0	1.0	47.0	7
Özalp	1492	42.6	9.38	3.28	44.97	11.73
Pirreşit	828	38.4	2.6	9.5	49.5	9
Süphan	780	37	8.7	2	52.3	8.5
Bitlis valley	925	31.8	4.1	8.7	54.6	6.8
Toprakkale	249	44.4	4.4	4.8	37.7	4
Başet	1172	46.41	5.71	1.7	516	12.2

Table 5. Collection localities.

Number of Locality	Localities (1-26 in Van: Çatak)
1.	Çatak-Old Forest Storeroom
2.	Old Forest Storeroom –Historical Hulkan bridge, north slopes
3.	Old Forest Storeroom –Historical Hulkan bridge, south slopes
4.	Kaçit village, surroundings of Turderesi, south slopes
5.	Historical Hulkan bridge-Turderesi, north slopes
6.	Surroundings of Kaçit village
7.	Kaçit village-Narlı village, south slopes
8.	Dalbastı village, surroundings of Narlı bridge
9.	Narlı bridge-Urganlı village, south slopes of Beşgöze mountains
10.	North of Urganlı village
11.	Dalbastı village, turn of road to Narlı village
12.	Dalbastı village-Narlı village
13.	Dalbastı village-Belbuka upland
14.	Surroundings of Dalbastı village
15.	Dalbastı village-Şeytanderesi
16.	Dalbastı village, surroundings of Şeytanderesi
17.	Around of Övceek village
18.	Şeytanderesi-Yeniköy village
19.	Around of Yeniköy village
20.	Around of Büyükağaç village
21.	Büyükağaç village, surroundings of Military station
22.	Büyükağaç village-Belenoluk village
23.	Kıyıcak village, Kato mountain, north slopes of Lisek hill
24.	Kıyıcak village, Kato mountain, north slopes of Lezik hill
25.	Kıyıcak village, north slopes of Great Kato mountain
26.	Surroundings of Atlıhan village
27.	Siirt: Pervari, Belenoluk village, surroundings of Sinbel bridge

Araştırma (Armağan & Koyuncu 2003), and Başet Dağı (Van) Flora ve Vejetasyonu (Ünal & Behçet 2005). Total number of taxa, phytogeographic regions and endemism of all these studies are compared in Table 4.

Acknowledgement

The authors thank to Scientific Research Administration of Yüzüncü Yıl University for its financial support (2002-FED-101 project) and to Astsubay Başçavuş Fatih Gök and Astsubay Çavuş

Mehmet Yorulmaz for their kind help during our field work. We will never forget their interests and supportive attitudes.

References

- Adıgüzel, N., Koyuncu, M. 1999: A new genus (*Brossardia* Boiss.) record for Turkey. – Turk. J. Bot. **23**: 355-356.
- , Bani B. & Pınar, S. M. 2006: Rare and endemic species from Van and Hakkari Provinces, East Anatolia/Turkey and their threat categories. – IV Balkan Botanical Congress. Sofia.
- Akman, Y. 1990: İklim ve Biyoiklim. Palme Yayınları. – Ankara.
- Altan, Y. & Behçet, L. 1995: Hizan (Bitlis) Florası. – Turk. J. Bot. **19**: 331-344.
- TOKB 1971: Van Gölü Havzası Toprakları. Tarım Orman ve Köy İşleri Bakanlığı, Topraksu Genel Müdürlüğü yayınları – Ankara.
- IUCN Species Survival Commission 2001: IUCN Red List Categories, 3.1. – Gland.
- Bani, B. & Adıgüzel, N. 2006: A new genus record for Turkey; *Aspeuginoides* Rauschert. – Intl. J. Bot. **2**: 440-442.
- Behçet, L. 1989: Süphan Dağı (Bitlis) Florası. – Y Y Ü Fen Bil. Ens. Dergisi **1**: 29-38.
- Brummitt, R. K. & Powell, C. E. 1992: Authors of Plant Names. – Kew.
- Davis, P. H. 1965-1985: Flora of Turkey and the East Aegean Islands, **1-9**. – Edinburgh.
- , Mill, R. R. & Tan, K. 1988: Flora of Turkey and the East Aegean Islands, **10**. – Edinburgh.
- DMİ 2004: Meteoroloji Bülteni. Devlet Meteoroloji İşleri Genel Müdürlüğü. – Ankara.
- Donner, J. 1990: Distribution maps to P.H. Davis, “Flora of Turkey, 1-10”. – Linzer Biol. Beitr. **22**: 381-515.
- Ekim, T., Koyuncu, M., Vural, M., Duman, H., Aytaç, Z. & Adıgüzel, N. 2000: Türkiye Bitkileri Kırmızı Kitabı (Red Data Book of Turkish Plants). Türkiye Tabiatını Koruma Derneği. – Ankara.
- Erik, S. & Sümbül, H. 1992: Türkiye Florasındaki Bazı Kareler için Yeni Kayıtlar. – Turk. J. Bot. **16**: 93-103.
- Ertekin, A. S., Saya Ö. 1997: New Floristic Records for the Various Grid Squares From *Fabaceae*. – Turk. J. Bot. **21**: 187-189.
- Güner, A., Özhatay, N., Ekim, T., Başer, K. H. C. 2000: Flora of Turkey and the East Aegean Islands, **11**. – Edinburgh.
- Komarov, V. L. 1933-1964: Flora of the USSR, **1-30**. – Moskov.
- Öğün, E. & Altan, Y. 1992: Toprakkale (Van) Florası. – Y Y Ü Fen Bil. Ens. Dergisi. **1**: 201-211.
- Özçelik, H. 1987: Ereğ Dağı (Van) Vejetasyonu Üzerinde Fitoekolojik Araştırmalar. – Çevre Dergisi, **4**: 3-15.
- Özgökçe, F. & Behçet, L. 2002: The flora of Özalp (Van). VIth Plant Life of Southwest Asia Symposium. – Van.
- Özhatay, N., Byfield, A. & Atay, S. 2005: Türkiye'nin 122 Önemli Bitki Alanı, WWF-Türkiye (Doğal Hayatı Koruma Vakfı). – İstanbul.
- Rechinger, K. H. 1965-1977: Flora Iranica. – Graz.
- Towsend, C. C. & Guest, E. 1966-1985: Flora of Iraq, **1-8**. – Baghdad.
- Ünal, M. & Behçet, L. 2007: Flora of Pirreşit Mountain (Van, Turkey) – Turk. J. Bot. **31**: 193-223.
- Yıldırım, Ş. 1994: Türkiye'den *Brassicaceae* (*Cruciferae*) familyasından çeşitli kareler için yeni floristik kayıtlar. – Turk. J. Bot. **18**: 381-392.
- 1997a: The Chorology of the Turkish species of *Acanthaceae*, *Aceraceae*, *Aizoaceae*, *Amaranthaceae* and *Anacardiaceae* families. – OT Sist. Bot. Dergisi **4**: 125-133.
- 1997b: The Chorology of the Turkish species of *Apiaceae* family. – OT Sist. Bot. Dergisi **4**: 105-128.
- Dönmez, A. A. 1998: Türkiye florası için iki yeni yetiştirme familya, birçok tür ve çeşitli kare

- kayıtları. – OT Sist. Bot. Dergisi **5**: 59-76.
- 1998a: The Chorology of the Turkish species of *Actinidiaceae*, *Apocynaceae*, *Aquifoliaceae* and *Araliaceae* families. – OT Sist. Bot. Dergisi **5**: 107-110.
- 1998b: The Chorology of the Turkish species of *Aristolochiaceae* family. – OT Sist. Bot. Dergisi **5**: 99-102.
- 1999: The Chorology of the Turkish species of *Asteraceae* family. – OT Sist. Bot. Dergisi **6**: 75-123.
- 2000a: Türkiye ve çeşitli kareler için doğal ve yetiştirme yeni bitki kayıtları. – OT Sist. Bot. Dergisi **7**: 55-82.
- 2000b: The Chorology of the Turkish species of *Boraginaceae* family. – OT Sist. Bot. Dergisi **7**: 257-272.
- 2001a: The Chorology of the Turkish species of *Brassicaceae*, *Buddlejaceae* and *Buxaceae* families. – OT Sist. Bot. Dergisi **8**: 141-169.
- 2001b: The Chorology of the Turkish species of *Cactaceae*, *Callitrichaceae*, *Calycanthaceae* and *Campanulaceae* families. – OT Sist. Bot. Dergisi **8**: 157-171.
- 2002a: The Chorology of the Turkish species of *Cannabaceae*, *Capparaceae* and *Caprifoliaceae* families. – OT Sist. Bot. Dergisi **9**: 153-158.
- 2002b: The Chorology of the Turkish species of *Caryophyllaceae*, *Casuarinaceae*, *Celastraceae*, *Ceratophyllaceae* and *Cercidiphyllaceae* families. – OT Sist. Bot. Dergisi **9**: 175-199.
- 2003a: The Chorology of the Turkish species of *Chenopodiaceae*, *Cistaceae*, *Convolvulaceae*, *Cornaceae* and *Corylaceae* families. – OT Sist. Bot. Dergisi **10**: 203-215.
- 2003b: The Chorology of the Turkish species of *Crassulaceae*, *Cucurbitaceae*, *Cuscutaceae* and *Cynocrabaceae* families. – OT Sist. Bot. Dergisi **10**: 249-260.

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Annex 1 – Floristic list

The localities of the research area are numbered and listed. All research area located in Van province is belong to C9 grid square, therefore we omitted “C9 Van: Çatak” in each locality (Table 5).

PTERIDOPHYTA

EQUISETACEAE

Equisetum ramosissimum Desf.

15, streamside, 1350-1600 m, 20.7.2002, *B.B.* 1253; **26**, streamside, 1300 m, 30.6.2003, *B.B.* 1974.
E. arvense L.

15, streamside, 1300 m, 16.6.2003, *B.B.* 1902; **13**, streamside, 1800 m, 28.7.2003, *B.B.* 2434.

ASPLENIACEAE

**Asplenium haussknechtii* Godet & Reut.

6, on rock, 1700-1800 m, 6.10.2003, *B.B.* 2550.

**Ceterach officinarum* DC.

22, on rock, 1400 m, 19.9.2003, *B.B.* 2522.

ATHYRIACEAE

**Cystopteris fragilis* (L.) Bernh.

7, on rock, 1700-1900 m, 16.5.2004, *B.B.* 2633.

SPERMATOPHYTA

GYMNOSPERMAE

CUPRESSACEAE

**Juniperus oxycedrus* L.

6, stony slope, 1600 m, 9.7.2003, *B.B.* 2120; 22, on rock, 1250 m, 12.7.2003, *B.B.* 2165.

J. excelsa M.Bieb.

10, rocky slope, 1500 m, 5.7.2003, *B.B.* 2053, 2066.

EPHEDRACEAE

**Ephedra major* Host

8, on rock, 1400 m, 8.6.2003, *B.B.* 1811; 7, steppe, 1700 m, 4.4.2004, *B.B.* 2573.

ANGIOSPERMAE

DICOTYLEDONES

RANUNCULACEAE

**Nigella oxypetala* Boiss.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1272. Ir.-Tur. element.

**N. latisecta* P.H.Davis

19, open oak forest, 1350 m, 16.6.2003, *B.B.* 1875. Ir.-Tur. element.

Delphinium carduchorum Chowdhuri & P.H.Davis

23, steppe, 2500 m, 13.7.2003, *B.B.* 2311. Endemic, Ir.-Tur. element; NT.

**D. macrostachyum* Boiss. ex Huth

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1278; 22, rocky place, 1250 m, 12.7.2003, *B.B.* 2182; 16, open oak forest, 1350-1500 m, 12.7.2003, *B.B.* 2196. Ir.-Tur. element; VU.

**Consolida scleroclada* (Boiss.) Schröd. var. *rigida* (Freyn & Sint.) P.H.Davis

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1249; 5, steppe, 1600-1700 m, 9.7.2003, *B.B.* 2150; 6, steppe, 2000 m, 12.7.2003, *B.B.* 2360; 1600-1800 m, 6.10.2003, *B.B.* 2546.

C. oliveriana (DC.) Schröd.

16, steppe, 1350-1500 m, 30.6.2003, *B.B.* 2012. Ir.-Tur. element.

**Adonis aestivalis* L.

14, wet place, 1400-1600 m, 27.5.2002, *B.B.* 1029; 1300-1450 m, 13.5.2003, *B.B.* 1492; 22, wet place, 1250-1350 m, 3.5.2003, *B.B.* 1410.

**A. eriocalycina* Boiss.

14, wet place, 1300-1450 m, 13.5.2003, *B.B.* 1495. Ir.-Tur. element.

Ranunculus sericeus Banks & Sol.

15, open oak forest, 1400-1600 m, 21.6.2003, *B.B.* 1954. Ir.-Tur. element.

**R. caucasicus* M.Bieb. subsp. *subleiocarpus* (Sommier & Levier) P.H.Davis

3, wet place, 1500 m, 9.7.2003, *B.B.* 2153.

**R. fenzlii* Boiss.

14, streamside, 1400-1600 m, 27.5.2002, *B.B.* 1028, 1031. Endemic, Ir.-Tur. element; LC.

**R. constantinopolitanus* (DC.) d'Urv.

14, open oak forest, 1500 m, 19.5.2003, *B.B.* 1564.

**R. damascenus* Boiss. & Gaill.

20, wet place, 1400-1600 m, 10.5.2003, *B.B. 1464, 1475*; **15**, open oak forest, 1350-1600 m, 13.5.2003, *B.B. 1517*. Ir.-Tur. element.

R. cuneatus Boiss.

14, wet place, 1400-1600 m, 27.5.2002, *B.B. 1033*; **16**, open oak forest, 1350-1500 m, 13.5.2003, *B.B. 1519/a*; **15**, open oak forest, 1450 m, 17.5.2003, *B.B. 1561*; **5**, wet place, 1700-1900 m, 16.5.2004, *B.B. 2630*.

**R. munzurenensis* S.Erik & Yıld.

16, on rock, 1350-1450 m, 12.4.2003, *B.B. 1374, 1376*; **22**, rocky place, 1250-1300 m, 19.4.2003, *B.B. 1395*; **9**, on rock, 1300-1800 m, 4.4.2004, *B.B. 2567*. Endemic, Ir.-Tur. element; NT.

**R. cfr. macrorrhynchus* Boiss.

14, wet place, 1300-1460 m, 13.5.2003, *B.B. 1494*; **16**, open oak forest, 1350-1500 m, 13.5.2003, *B.B. 1519/b*. Ir.-Tur. element.

**R. arvensis* L.

14, wet place, 1400-1600 m, 27.5.2002, *B.B. 1060*; 13.5.2003, *B.B. 1503*.

R. kochii Ledeb.

14, open oak forest, 1500 m, 6.4.2003, *B.B. 1364*; **16**, wet place, 1350-1450 m, 12.4.2003, *B.B. 1381*. Ir.-Tur. element.

**Ceratocephalus falcatus* (L.) Pers.

19, roadside, 1350 m, 12.4.2003, *B.B. 1372*; **17**, open oak forest, 1700-1800 m, 3.6.2004, *B.B. 2674*.

Aquilegia olympica Boiss.

4, wet place, 1500 m, 16.6.2003, *B.B. 1827*.

**Thalictrum sultanabadense* Stapf

7, on rock, 1700 m, 4.4.2004, *B.B. 2570*. Ir.-Tur. element; VU.

**T. flavum* L.

16, open oak forest, 1300-1550 m, 30.6.2003, *B.B. 1983*.

PAPAVERACEAE

**Papaver persicum* Lindl.

22, stony slope, 1300-1450 m, 19.5.2003, *B.B. 1568*; **8**, stony slope, 1500-1600 m, 16.5.2004, *B.B. 2623*.

**P. syriacum* Boiss. & Blanche

8, stony slope, 1500-1600 m, 16.5.2004, *B.B. 2627*.

**P. dubium* L.

17, open oak forest, 1400 m, 17.5.2003, *B.B. 1542*.

P. arenarium M.Bieb.

5, scree, 1400-1600 m, 8.6.2003, *B.B. 1804*; streamside, 1500-1700 m, 9.7.2003, *B.B. 2133*.

**P. clavatum* Boiss. & Hausskn. ex Boiss.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1051*; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1123*; **22**, wet place, 1300-1450 m, 19.5.2003, *B.B. 1567*. Endemic; LC.

**P. argemone* L.

22, wet place, 1200 m, 3.5.2003, *B.B. 1408*.

Corydalis integra Barbey & Fors.-Major

15, open oak forest, 1420 m, 6.4.2003, *B.B. 1355/b*; **19**, open oak forest, 1350 m, 6.4.2003, *B.B. 1361*.

C. oppositifolia DC.

23, steppe, 2300 m, 7.6.2003, *B.B. 1790*. Endemic.

**Fumaria officinalis* L.

22, wet place, 1200-1350 m, 3.5.2003, *B.B. 1416*.

**F. cilicica* Hausskn.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1173*; **15**, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1226*.

BRASSICACEAE (CRUCIFERAE)

**Brassica elongata* Ehrh.

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B. 1703*.

Sinapis arvensis L.

10, streamside, 1500-1700 m, 5.7.2003, *B.B. 2081*.

Hirschfeldia incana (L.) Lagr.-Foss.

26, streamside, 1350-1550 m, 30.6.2003, *B.B. 1976*.

Eruca sativa Mill. (cv.)

6, cultivated field, 1700-1800 m, 1.7.2003, *B.B. 2047*. Cultivated.

**Crambe orientalis* L.

15, roadside, 1500 m, 16.6.2003, *B.B. 1850*; **11**, roadside, 1500 m, 12.7.2003, *B.B. 2233*. Ir.-Tur. element.

**Conringia orientalis* (L.) Andrz.

16, wet place, 1400-1600 m, 3.5.2003, *B.B. 1431*; cultivated field, 13.5.2003, *B.B. 1522*.

C. perfoliata (C.A.Mey.) N.Busch

8, stony slope, 1400-1600 m, 24.5.2003, *B.B. 1676/b*.

**Lepidium ruderale* L.

14, waste place, 1500-1600 m, 16.5.2004, *B.B. 2625*.

L. perfoliatum L.

14, stony slope, 1500-1600 m, 16.5.2004, *B.B. 2621*; **4**, roadside, 1480 m, 13.6.2004, *B.B. 2657*.

**L. latifolium* L.

6, streamside, 1500 m, 1.7.2003, *B.B. 2035*; **12**, streamside, 1700 m, 12.7.2003, *B.B. 2237*.

**Cardaria draba* (L.) Desv.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1130*.

**C. draba* (L.) Desv. subsp. *chalepensis* (L.) O.E.Schulz

16, streamside, 1500 m, 16.6.2003, *B.B. 1849*.

**Isatis candolleana* Boiss.

8, on rock, 1400-1600 m, 24.5.2003, *B.B. 1681*; **6**, stony slope, 1600 m, 9.7.2003, *B.B. 2119*.

Endemic, Ir.-Tur. element; LC.

**I. cochlearis* Boiss.

22, on rock, 1250 m, 19.5.2003, *B.B. 1573*; **20**, on rock, 1450 m, 3.6.2003, *B.B. 1695*. Ir.-Tur. element.

Sameraria stylophora (Jaub.& Spach) Boiss.

16, oak forest, 1400 m, 3.5.2003, *B.B. 1427*; 13.5.2003, *B.B. 1518*; 17.5.2003, *B.B. 1546*. Ir.-Tur. element.

**Aethionema carneum* (Banks & Sol.) B.Fedstsch.

16, open oak forest, 1350 m, 18.8.2002, *B.B. 1328/b*; **15**, open oak forest, 1450 m, 17.5.2003, *B.B. 1532*. Ir.-Tur. element.

Ae. froedinii Rech.f.

27, oak forest, 1250 m, 19.4.2003, *B.B. 1393*; **15**, open oak forest, 1450 m, 17.5.2003, *B.B. 1558*. Ir.-Tur. element.

**Ae. arabicum* (L.) Andrz. ex. DC.

6, steppe, 1700 m, 8.6.2003, *B.B. 1826*.

**Ae. virgatum* (Boiss.) Hedge

8, on rock, 1400 m, 8.6.2003, *B.B. 1813*. Ir.-Tur. element.

Ae. fimbriatum Boiss.

23, steppe, 2300 m, 29.7.2003, *B.B.* 2476. Ir.-Tur. element.

Ae. speciosum Boiss. & Huet

23, steppe, 1900 m, 17.6.2003, *B.B.* 1785; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1937; 2500 m, 28.7.2003, *B.B.* 2405. Ir.-Tur. element.

**Ae. membranaceum* DC.

13, steppe, 2000 m, 21.6.2003, *B.B.* 1930; 2500 m, 28.7.2003, *B.B.* 2393. Ir.-Tur. element.

Ae. grandiflorum Boiss. & Hohen.

21, oak forest, 1380 m, 24.5.2003, *B.B.* 1673; **8**, stony slope, 1400-1600 m, 24.5.2003, *B.B.* 1683;

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1719; **23**, steppe, 2000 m, 7.6.2003, *B.B.* 1789; **4**, steppe, 1600 m, 9.7.2003, *B.B.* 2140. Ir.-Tur. element.

**Brossardia papyracea* Boiss.

24, sandy slope, 1800 m, 2.5.2004, *B.B.* 2601. Ir.-Tur. element; VU.

**Thlaspi kotschyianum* Boiss. & Hohen.

23, steppe, 2300 m, 7.9.2003, *B.B.* 1762, 1767.

**T. perfoliatum* L.

19, wet place, 1350 m, 12.4.2003, *B.B.* 1366; **16**, wet place, 1530 m, 12.4.2003, *B.B.* 1379; **20**, stony slope, 1520 m, 19.4.2003, *B.B.* 1398; **8**, stony slope, 1400-1600 m, 24.5.2003, *B.B.* 1676/a.

**Hutchinsia petraea* (L.) R.Br.

22, stony slope, 1250-1300 m, 19.4.2003, *B.B.* 1386; **9**, on rock, 1300 m, 4.4.2004, *B.B.* 2569.

Capsella bursa-pastoris (L.) Medik.

22, wet place, 1250-1350 m, 3.5.2003, *B.B.* 1420; **8**, stony slope, 1400-1600 m, 24.5.2003, *B.B.* 1678.

**Neslia apiculata* Fisch. & C.A.Mey. & Avé-Lall.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1043; **17**, stony slope, 1700-1800 m, 3.6.2004, *B.B.* 2669.

Peltariopsis planisiliqua (Boiss.) N.Busch

23, sandy slope, 1800 m, 29.7.2003, *B.B.* 2460; **14**, stony place, 1700 m, 19.9.2003, *B.B.* 2540. Ir.-Tur. element.

**Fibigia clypeata* (L.) Medik.

20, on rock, 1400-1600 m, 10.5.2003, *B.B.* 1467; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2107.

F. macrocarpa (Boiss.) Boiss.

8, open oak forest, 1400-1600 m, 8.6.2003, *B.B.* 1807.

F. suffruticosa (Vent.) Sweet

23, steppe, 2080 m, 7.6.2003, *B.B.* 1756; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1939; **6**, stony slope, 1900 m, 22.7.2003, *B.B.* 2362.

**Alyssum aureum* (Fenzl) Boiss.

27, open oak forest, 1250 m, 19.4.2003, *B.B.* 1391. Ir.-Tur. element.

**A. desertorum* Stapf var. *desertorum*

1, stony slope, 1500 m, 10.5.2003, *B.B.* 1445.

**A. desertorum* var. *prostratum* T.R.Dudley

16, roadside, 1300 m, 19.4.2003, *B.B.* 1403; **22**, rocky place, 1250-1400 m, 28.3.2004, *B.B.* 2562.

**A. strictum* Willd.

1, stony slope, 1500 m, 10.5.2003, *B.B.* 1443; **3**, steppe, 1700-1900 m, 17.5.2004, *B.B.* 2638. Ir.-Tur. element.

**A. contemptum* Schott & Kotschy

3, steppe, 1700-1900 m, 17.5.2004, *B.B.* 2639. Ir.-Tur. element.

**A. szovitsianum* Fisch. & C.A.Mey.

14, on rock, 1300-1460 m, 13.5.2003, *B.B.* 1493; **18**, open oak forest, 1300-1500 m, 24.5.2003, *B.B.* 1637.

- **A. minus* (L.) Rothm. var. *minus*
16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1329*; 1400 m, 17.5.2003, *B.B. 1532*; 24.5.2003, *B.B. 1614*.
- **A. minus* var. *micranthum* (C.A.Mey.) T.R.Dudley
23, steppe, 2080 m, 7.6.2003, *B.B. 1752*.
- **A. stapfii* Vierh.
20, on rock, 1400-1600 m, 10.5.2003, *B.B. 1479*. Ir.-Tur. element.
- **A. strigosum* Banks & Sol.
27, oak forest, 1200 m, 19.4.2003, *B.B. 1394*; **22**, wet place, 1250-1350 m, 3.5.2003, *B.B. 1415*; **16**, open oak forest, 1400-1600 m, 3.5.2003, *B.B. 1436*; **1**, stony slope, 1500 m, 10.5.2003, *B.B. 1439, 1441*.
- **A. baumgartnerianum* Bornm.
10, steppe, 1500-1700 m, 5.7.2003, *B.B. 2078*.
- **A. pateri* Nyár. subsp. *pateri*
23, sandy place, 1900 m, 7.6.2003, *B.B. 1738*. Endemic, Ir.-Tur. element; LC.
- **A. filiforme* Nyár.
13, steppe, 1900 m, 12.7.2003, *B.B. 2211, 2213*. Endemic, Ir.-Tur. element; LC.
- **A. murale* Waldst. & Kit.
23, steppe, 2200 m, 13.7.2003, *B.B. 2282*; **25**, steppe, 1900 m, 28.7.2003, *B.B. 2462*.
- **Asperuginoides axillaris* (Boiss. & Hohen.) Rauschert
16, open oak forest, 1320 m, 16.5.2004, *B.B. 2644*. Ir.-Tur. element; EN.
- **Clypeola jonthlaspi* L.
19, on rock, 1350-1500 m, 12.4.2003, *B.B. 1369*; **16**, stony slope, 1400 m, 17.5.2003, *B.B. 1551*.
- **Draba huetii* Boiss.
1, roadside, 1500 m, 10.5.2003, *B.B. 1455*.
- **Erophila verna* (L.) Chevall.
15, wet place, 1420 m, 6.4.2003, *B.B. 1356*; **19**, wet place, 1350-1500 m, 12.4.2003, *B.B. 1367*; **22**, stony slope, 1250-1300 m, 19.4.2003, *B.B. 1385, 1396*.
- Arabis caucasica* Willd.
22, on rock, 1250-1300 m, 19.4.2003, *B.B. 1384*.
- **A. nova* Vill.
22, wet place, 1250-1350 m, 3.5.2003, *B.B. 1413*; **20**, on rock, 1400-1600 m, 10.5.2003, *B.B. 1481*.
- **A. montbretiana* Boiss.
16, steppe, 1350-1600 m, 17.5.2003, *B.B. 1526*. Ir.-Tur. element.
- **A. aucheri* Boiss.
20, on rock, 1400-1600 m, 10.5.2003, *B.B. 1483*.
- **Nasturtium officinale* R.Br.
20, streamside, 1500 m, 10.5.2003, *B.B. 1463*; **15**, wet place, 1500 m, 16.6.2003, *B.B. 1848*.
- **Barbarea* cfr. *vulgaris* R.Br.
26, wet place, 1350-1500 m, 30.6.2003, *B.B. 1971*.
- **B.* cfr. *plantaginea* DC.
20, streamside, 1300-1460 m, 13.5.2003, *B.B. 1505*; **16**, wet place, 1500 m, 16.6.2003, *B.B. 1841*.
- **B. minor* K.Koch
23, streamside, 2080 m, 7.6.2003, *B.B. 1748*.
- Drabopsis verna* K.Koch
19, wet place, 1350-1500 m, 12.4.2003, *B.B. 1368/b*. Ir.-Tur. element.
- Aubrieta parviflora* Boiss.
20, on rock, 1400-1600 m, 10.5.2003, *B.B. 1466*. Ir.-Tur. element; VU.
- Hesperis persica* Boiss.
3, stony slope, 2000 m, 3.6.2004, *B.B. 2650*. Ir.-Tur. element.

Malcolmia africana (L.) R.Br.

22, wet place, 1250-1350 m, 3.5.2003, *B.B. 1411*; **8**, streamside, 1400-1600 m, 24.5.2003, *B.B. 1680*;
15, roadside, 1500 m, 16.6.2003, *B.B. 1851*.

Erysimum goniocaulon Boiss.

8, steppe, 1400 m, 24.5.2003, *B.B. 1668*.

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

19, stony place, 1350 m, 16.6.2003, *B.B. 1879*.

**E. cfr. smyrnaeum* Boiss. & Balansa

23, streamside, 2080 m, 7.6.2003, *B.B. 1753*.

**E. repandum* L.

20, cultivated field, 1380 m, 3.6.2003, *B.B. 1700*.

Alliaria petiolata (M.Bieb.) Cavara & Grande

9, oak forest, 1400-1500 m, 18.4.2004, *B.B. 2577*; 2.5.2004, *B.B. 2613*; **3**, stony slope, 1700-1900 m, 17.5.2004, *B.B. 2640*.

Parlatoria cakilooides Boiss.

12, stony slope, 1400 m, 3.6.2003, *B.B. 1731*.

Sisymbrium officinale (L.) Scop.

22, wet place, 1250-1350 m, 3.5.2003, *B.B. 1422*; 19.5.2003, *B.B. 1572*.

S. altissimum L.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1251*; **16**, open oak forest, 1350-1500 m, 13.5.2003, *B.B. 1523*; **18**, open oak forest, 1400-1600 m, 3.6.2003, *B.B. 1705*; **3**, open oak forest, 1500 m, 8.6.2003, *B.B. 1803*; **1**, open oak forest, 1500 m, 16.6.2003, *B.B. 1837*.

S. loeselii L.

6, cultivated field, 1600 m, 21.6.2003, *B.B. 1960*; cultivated field, 1800 m, 22.7.2003, *B.B. 2375*; **23**, steppe, 2000 m, 13.7.2003, *B.B. 2280*.

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

1, stony slope, 1500 m, 10.5.2003, *B.B. 1444*.

**Arabidopsis pumila* (Steph.) N.Busch

1, stony slope, 1500 m, 10.5.2003, *B.B. 1456, 1457*; **16**, on rock, 1350 m, 3.6.2004, *B.B. 2660*.

**Camelina rumelica* Velen.

22, wet place, 1250-1350 m, 3.5.2003, *B.B. 1407*; **16**, roadside, 1350 m, 13.5.2003, *B.B. 1524*.

CAPPARACEAE

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

9, stony place, 1400 m, 5.7.2003, *B.B. 2073*.

**Cleome iberica* DC.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1341*. E. Medit. element.

RESEDACEAE

Reseda lutea L.

23, steppe, 1900 m, 7.6.2003, *B.B. 1743*.

VIOLACEAE

**Viola odorata* L.

4, under planted poplars, 1450 m, 28.3.2004, *B.B. 2557*.

**V. kitaibeliana* Roem. & Schult.

14, open oak forest, 1400-1600 m, 27.4.2002, *B.B. 1013*; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1154*; 12.4.2003, *B.B. 1365*; **16**, open oak forest, 1350-1500 m, 13.5.2003, *B.B. 1514*;
9, stony slope, 1500-1700 m, 18.4.2004, *B.B. 2582*.

POLYGALACEAE

Polygala anatolica Boiss. & Heldr.

16, open oak forest, 1300 m, 17.5.2003, *B.B.* 1527.

P. hohenackeriana Fisch. & C.A.Mey.

22, on rock, 1400 m, 24.5.2003, *B.B.* 1627. Ir.-Tur. element.

CARYOPHYLLACEAE

**Arenaria rotundifolia* M.Bieb.

22, wet place, 1250-1350 m, 3.5.2003, *B.B.* 1419.

A. cucubaloides Sm.

23, steppe, 2000 m, 7.6.2003, *B.B.* 1787. Ir.-Tur. element.

**A. gypsophiloides* L. var. *gypsophiloides*

23, steppe, 1900 m, 29.7.2003, *B.B.* 2463. Ir.-Tur. element.

A. gypsophiloides var. *glabra* Fenzl

13, steppe, 2000 m, 21.6.2003, *B.B.* 1931. Ir.-Tur. element.

Minuartia juniperina (L.) Maire & Petitm.

1, stony slope, 1500 m, 10.5.2003, *B.B.* 1442; **13**, steppe, 2500 m, 28.7.2003, *B.B.* 2387.

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

9, on rock, 1400-1500 m, 4.4.2004, *B.B.* 2581; **3**, stony slope, 1600-1700 m, 3.6.2004, *B.B.* 2656.

Stellaria media subsp. *pallida* (Dumort.) Asch. & Graebn.

6, streamside, 1500 m, 28.7.2003, *B.B.* 2456.

Cerastium kotschyi Boiss.

14, wet place, 1300-1460 m, 13.5.2003, *B.B.* 1502. VU.

C. perfoliatum L.

15, wet place, 1500 m, 11.10.2002, *B.B.* 1010.

C. dichotomum L.

16, open oak forest, 1350-1600 m, 17.5.2003, *B.B.* 1539.

**Holosteum umbellatum* L.

15, open oak forest, 1420 m, 6.4.2003, *B.B.* 1357; **19**, roadside, 1350-1500 m, 12.4.2003, *B.B.* 1370; **16**, open oak forest, 1400-1600 m, 3.5.2003, *B.B.* 1433; **22**, on rock, 1250-1400 m, 28.3.2004, *B.B.* 2563.

**Moenchia mantica* (L.) Bartl.

4, steppe, 1700-1800 m, 1.7.2003, *B.B.* 2048.

Telephium oligospermum Steud. ex Boiss.

6, steppe, 2000 m, 22.7.2003, *B.B.* 2361. Ir.-Tur. element.

**Dianthus strictus* var. *gracilior* (Boiss.) Reeve

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1267; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2109.

**D. lactiflorus* Fenzl

13, steppe, 1900 m, 12.7.2003, *B.B.* 2216. Endemic; NT.

D. floribundus Boiss.

13, steppe, 2500 m, 28.7.2003, *B.B.* 2404; 1800 m, *B.B.* 2404. Ir.-Tur. element.

**D. tabrisianus* Bien. ex Boiss.

13, steppe, 2300 m, 28.7.2003, *B.B.* 2413; 1900 m, *B.B.* 2429. Ir.-Tur. element.

**D. orientalis* Adams

22, rocky slope, 1250-1350 m, 24.5.2003, *B.B.* 1632; **8**, stony slope, 1400 m, 3.6.2003, *B.B.* 1734;

23, steppe, 2000 m, 29.7.2003, *B.B.* 2471.

**D. masmenaeus* var. *glabrescens* Boiss.

13, steppe, 2500 m, 28.8.2003, *B.B.* 2406, 2408. Endemic, Ir.-Tur. element; LC.

D. hymenolepis Boiss.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1248; **16**, open oak forest, 1300-1550 m,

- 30.6.2003, *B.B.* 2002; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2096. Ir.-Tur. element.
 **D. zonatus* var. *aristatus* (Boiss.) Reeve
6, stony place, 1900 m, 22.7.2003, *B.B.* 2363.
Velezia rigida L.
1, steppe, 1500 m, 8.6.2003, *B.B.* 1796.
Saponaria viscosa C.A.Mey.
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1088. Ir.-Tur. element.
Gypsophila ruscifolia Boiss.
15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1240; **24**, open oak forest, 1700 m, 29.7.2003, *B.B.* 2486. Ir.-Tur. element.
 **G. pallida* Stapf
13, stony place, 2000 m, 28.8.2003, *B.B.* 2421. Ir.-Tur. element.
 **Vaccaria pyramidata* var. *grandiflora* (Fisch. ex DC.) Cullen
15, open oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1195; **16**, cultivated field, 1350 m, 8.9.2003, *B.B.* 2496.
Silene capitellata Boiss.
23, steppe, 2300 m, 7.6.2003, *B.B.* 1764. Endemic, Ir.-Tur. element; LC.
S. chloraefolia Sm.
26, open oak forest, 1250 m, 20.7.2003, *B.B.* 2335; **17**, steppe, 1700-1800 m, 3.6.2004, *B.B.* 2667. Ir.-Tur. element.
S. sclerophylla Chowdhuri
13, steppe, 1700 m, 12.7.2003, *B.B.* 2248. Endemic, Ir.-Tur. element; LC.
S. spergulifolia (Desf.) M.Bieb.
14, open oak forest, 1400-1600 m, 17.5.2002, *B.B.* 1078; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1938. Ir.-Tur. element.
 **S. arguta* Fenzl
13, steppe, 2000 m, 21.6.2003, *B.B.* 1942. Ir.-Tur. element.
 **S. odontopetala* Fenzl
13, on rock, 1900 m, 12.7.2003, *B.B.* 2217; **25**, on rock, 2100 m, 29.7.2003, *B.B.* 2481.
 **S. vulgaris* (Moench) Garcke var. *vulgaris*
19, wet place, 1350-1500 m, 1.6.2002, *B.B.* 1186; **15**, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1236; **16**, open oak forest, 1400-1600 m, 24.5.2003, *B.B.* 1615.
S. pungens Boiss.
16, open oak forest, 1400 m, 19.5.2003, *B.B.* 1607. Ir.-Tur. element.
S. compacta Fisch.
4, shady-wet slope, 1500 m, 8.6.2003, *B.B.* 1791; **6**, streamside, 1600 m, 21.6.2003, *B.B.* 1956.
S. alba subsp. *divaricata* (Rchb.) Walters
22, on rock, 1300-1450 m, 19.5.2003, *B.B.* 1574; **16**, open oak forest, 1400-1600 m, 24.5.2003, *B.B.* 1618; **23**, rocky place, 2500 m, 13.7.2003, *B.B.* 2313.
S. aegyptiaca (L.) L.f.
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1083; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1144; **20**, stony place, 1400-1600 m, 10.5.2003, *B.B.* 1488; **22**, rocky place, 1250-1300 m, 18.4.2004, *B.B.* 2589.
 **S. dichotoma* Ehrh.
18, open oak forest, 1300-1500 m, 19.5.2003, *B.B.* 1583/a; 24.5.2003, *B.B.* 1638.
S. conoidea L.
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1093.
 **Agrostemma githago* L.
18, cultivated field, 1400-1600 m, 3.6.2003, *B.B.* 1715.

ILLECEBRACEAE

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

1, on rock, 1500-1700 m, 16.6.2003, *B.B. 1852*.

**P. kurdica* subsp. *montis-munzur* Chaudhri

8, on rock, 1400-1600 m, 24.5.2003, *B.B. 1679*.

**P. kurdica* subsp. *hausssknechtii* Chaudhri

22, rocky place, 1250-1400 m, 12.7.2003, *B.B. 2179*.

POLYGONACEAE

**Atraphaxis spinosa* L.

16, on rock, 1350-1600 m, 17.5.2003, *B.B. 1530*. Ir.-Tur. element.

**A. billardierei* Jaub. & Spach

20, on rock, 1400-1500 m, 3.6.2003, *B.B. 1697*; **16**, on rock, 1500 m, 16.6.2003, *B.B. 1840*. Ir.-Tur. element.

**Rheum ribes* L.

14, open oak forest, 1500 m, 19.5.2003, *B.B. 1563*. Ir.-Tur. element.

Polygonum cognatum Meisn.

13, steppe, 2000 m, 21.6.2003, *B.B. 1927*; 28.7.2003, *B.B. 2433*.

**P. arenastrum* Bor.

6, wet place, 1700 m, 22.7.2003, *B.B. 2368*.

P. aviculare L.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1252*.

P. bellardii All.

6, wet place, 1500 m, 28.7.2003, *B.B. 2452*.

Rumex scutatus L.

6, steppe, 1700 m, 1.7.2003, *B.B. 2029*; **26**, open oak forest, 1350-1400 m, 20.7.2003, *B.B. 2344*.

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

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1134*; **15**, open oak forest, 1400 m, 21.6.2003, *B.B. 1952*; **13**, steppe, 1800 m, 28.7.2003, *B.B. 2432*.

R. angustifolius Campd.

23, wet place, 2300 m, 7.6.2003, *B.B. 1768*.

CHENOPODIACEAE

**Chenopodium botrys* L.

15, roadside, 1350-1600 m, 22.6.2002, *B.B. 1210*; **16**, roadside, 1350-1500 m, 18.8.2002, *B.B. 1327*;

26, salty place, 1400 m, 30.6.2003, *B.B. 1969*.

C. foliosum (Moench) Asch.

13, steppe, 2000 m, 21.6.2003, *B.B. 1922*.

C. album L.

16, cultivated field, 1350-1500 m, 18.8.2002, *B.B. 1335*; **6**, cultivated field, 1500 m, 28.8.2003, *B.B. 2459*.

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

22, rocky place, 1300 m, 19.9.2003, *B.B. 2520*.

**N. mucronata* subsp. *tournefortii* (Spach) Aellen

22, rocky place, 1250-1400 m, 12.7.2003, *B.B. 2171*; **12**, open oak forest, 1700 m, 12.7.2003, *B.B. 2240*.

AMARANTHACEAE

**Amaranthus retroflexus* L.

16, cultivated field, 1350-1450 m, 8.9.2003, *B.B. 2498*; **6**, cultivated field, 1700-1800 m, 6.10.2003, *B.B. 2547*.

TAMARICACEAE

Tamarix smyrnensis Bunge**16**, streamside, 1350-1500 m, 18.8.2002, *B.B.* 1332.

HYPERICACEAE (GUTTIFERAE)

Hypericum amblysepalum* Hochst.14**, stony slope, 1500 m, 16.6.2003, *B.B.* 1887.**Hypericum lysimachioides* Boiss. & Noë**20**, wet place, 1400-1500 m, 24.5.2003, *B.B.* 1658. Ir.-Tur. element.*H. hyssopifolium* Chaix subsp. *elongatum* (Ledeb.) Woronow**15**, open oak forest, 1350-1500 m, 18.8.2002, *B.B.* 1304. Ir.-Tur. element.*H. scabrum* L.**14**, stony slope, 1500 m, 24.5.2003, *B.B.* 1606. Ir.-Tur. element.**H. perfoliatum* L.**15**, open oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1204; **18**, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1726. Medit. element.

MALVACEAE

Hibiscus trionum* L.15**, cultivated field, 1350-1600 m, 20.7.2002, *B.B.* 1239; **16**, cultivated field, 1350 m, 18.8.2002, *B.B.* 1305; 8.9.2003, *B.B.* 2497.*Malva neglecta* Wallr.**16**, cultivated field, 1350 m, 30.6.2003, *B.B.* 1998.**Alcea apterocarpa* (Fenzl) Boiss.**15**, open oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1212; **19**, steppe, 1450 m, 16.6.2003, *B.B.* 1864;**12**, open oak forest, 1700 m, 12.7.2003, *B.B.* 2236. Endemic, Ir.-Tur. element; LC.**Althaea cannabina* L.**10**, cultivated field, 1500-1700 m, 5.7.2003, *B.B.* 2074.

LINACEAE

Linum mucronatum* Bertol. subsp. *mucronatum*26**, open oak forest, 1250 m, 20.7.2003, *B.B.* 2338. Ir.-Tur. element.**L. mucronatum* subsp. *armenum* (Bordz.) P.H.Davis**19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1174; **18**, open oak forest, 1400-1600 m, 3.6.2003,*B.B.* 1722; **15**, open oak forest, 1400 m, 21.6.2003, *B.B.* 1950; **10**, open oak forest, 1500 m, 5.7.2003,*B.B.* 2070. Ir.-Tur. element.*L. nodiflorum* L.**16**, open oak forest, 1400-1600 m, 17.5.2003, *B.B.* 1549. Medit. element.**L. corymbulosum* Rchb.**16**, wet place, 1300-1550 m, 30.6.2003, *B.B.* 1987. Medit element.

GERANIACEAE

Geranium lucidum* L.22**, rocky place, 1250-1350 m, 3.5.2003, *B.B.* 1417; 18.4.2004, *B.B.* 2590.*G. rotundifolium* L.**14**, wet place, 1400-1600 m, 27.5.2002, *B.B.* 1039; **16**, oak forest, 1350-1500 m, 13.5.2003, *B.B.*1513; **20**, stony slope, 1400-1500 m, 3.6.2003, *B.B.* 1698.**G. pusillum* Bornm.f.**6**, steppe, 1700 m, 8.6.2003, *B.B.* 1819.**G. tuberosum* L.

14, wet place, 1650 m, 18.4.2004, *B.B.* 2590.

**G. stepporum* P.H.Davis

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1050; **15**, open oak forest, 1500 m, 19.5.2003, *B.B.* 1583/b; **3**, wet place, 1700-1900 m, 16.5.2004, *B.B.* 2634. Ir.-Tur. element.

G. collinum Steph. ex Willd.

5, stony place, 1700 m, 1.7.2003, *B.B.* 2026; **4**, wet place, 1500 m, 9.7.2003, *B.B.* 2152.

**Erodium ciconium* (L.) L'Her.

16, wet place, 1350-1450 m, 12.4.2003, *B.B.* 1378.

**E. cicutarium* (L.) L'Her.

16, wet place, 1400-1600 m, 3.5.2003, *B.B.* 1437.

ZYGOPHYLLACEAE

**Tribulus terrestris* L.

16, sandy slope, 1350-1500 m, 18.8.2002, *B.B.* 1309.

RUTACEAE

**Haplophyllum buxbaumii* subsp. *mesopotamicum* (Boiss.) C.C.Towns.

26, open oak forest, 1300 m, 20.7.2003, *B.B.* 2334. Ir.-Tur. element; VU.

ACERACEAE

**Acer tataricum* L.

15, streamside, 1350-1600 m, 20.7.2002, *B.B.* 1234.

A. monspessulanum subsp. *cinerascens* (Boiss.) Yalt.

15, streamside, 1300 m, 17.5.2003, *B.B.* 1545. Ir.-Tur. element.

VITACEAE

Vitis vinifera L.

15, streamside, 1300 m, 22.6.2002, *B.B.* 1214; **22**, rocky slope, 1300 m, 19.9.2003, *B.B.* 2527.

RHAMNACEAE

Paliurus spina-christi Mill.

15, oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1193; 20.7.2002, *B.B.* 1245; 16.3.2003, *B.B.* 1355/a.

**Frangula alnus* subsp. *pontica* (Boiss.) P.H.Davis & Yalt.

22, streamside, 1250 m, 19.9.2003, *B.B.* 2528. Endemic; LC.

**Rhamnus kurdica* Boiss. & Hohen.

22, rocky place, 1300 m, 19.9.2003, *B.B.* 2525. Ir.-Tur. element.

ANACARDIACEAE

**Rhus coriaria* L.

26, streamside, 1300 m, 12.7.2003, *B.B.* 2186, 2342.

Pistacia eurycarpa Yalt.

8, oak forest, 1450 m, 8.6.2003, *B.B.* 1815; **26**, oak forest, 1250-1400 m, 20.7.2003, *B.B.* 2339; **18**, oak forest, 1350-1450 m, 8.9.2003, *B.B.* 2492. Ir.-Tur. element.

**P. khinjuk* Stocks

22, rocky place, 1250-1400 m, 12.7.2003, *B.B.* 2167. Ir.-Tur. element.

**P. vera* L. (cv.)

6, oak forest, 1700 m, 22.7.2003, *B.B.* 2380. Ir.-Tur. element, Cultivated.

CELASTRACEAE

**Euonymus latifolius* subsp. *cauconis* Coode & Cullen

4, streamside, 1600 m, 16.6.2003, *B.B. 1886*. Endemic; NT.

FABACEAE (LEGUMINOSAE)

Robinia pseudoacacia L. (cv.)

1, cultivated field, 1500 m, 16.6.2003, *B.B. 1833*, Cultivated.

Colutea cilicica Boiss. & Balansa

14, open oak forest, 1450 m, 27.5.2002, *B.B. 1069*; 15, open oak forest, 1400 m, 22.6.2002, *B.B. 1191*.

**Astragalus emarginatus* Labill.

25, steppe, 2000 m, 29.7.2003, *B.B. 2474*. Ir.-Tur. element.

A. cretaceus Boiss. & Kotschy

23, steppe, 2080 m, 7.6.2003, *B.B. 1755*; 15, open oak forest, 1500 m, 19.5.2003, *B.B. 1584*. Ir.-Tur. element.

**A. pulchellus* Boiss.

23, steppe, 1800 m, 7.6.2003, *B.B. 1784*; 1600 m, *B.B. 1786*. Ir.-Tur. element; VU.

A. angustiflorus K.Koch

18, open oak forest, 1350 m, 24.5.2003, *B.B. 1642*. Ir.-Tur. element.

A. pinetorum Boiss.

23, steppe, 2300 m, 7.6.2003, *B.B. 1763*. Ir.-Tur. element; LC.

**A. rechingeri* Širj.

23, steppe, 2080 m, 7.6.2003, *B.B. 1757*. Endemic, Ir.-Tur. element; NT.

**A. cfr. ochrochlorus* Boiss. & Hohen.

23, steppe, 2700 m, 13.7.2003, *B.B. 2268*.

A. brachycalyx Fisch.

13, steppe, 1900 m, 12.7.2003, *B.B. 2227*. Ir.-Tur. element.

A. gummifer Labill.

15, open oak forest, 1350 m, 18.8.2002, *B.B. 1330*; 16, open oak forest, 1400 m, 21.6.2003, *B.B. 1945*. Ir.-Tur. element.

**A. amblolapis* Fisch.

16, open oak forest, 1350 m, 18.8.2002, *B.B. 1350*; 10, steppe, 1500 m, 5.7.2003, *B.B. 2082*. Ir.-Tur. element.

**A. compactus* Lam.

23, steppe, 2200 m, 13.7.2003, *B.B. 2295*. Endemic, Ir.-Tur. element; LC.

A. kurdicus var. *muschianus* (Kotschy & Boiss.) D.F.Chamb.

23, steppe, 2500 m, 13.7.2003, *B.B. 2255*. Ir.-Tur. element.

**A. hymenocystis* Fisch. & C.A.Mey.

13, steppe, 2500 m, 28.7.2003, *B.B. 2399*. Ir.-Tur. element.

**A. lagopodioides* Vahl

23, steppe, 2300 m, 13.7.2003, *B.B. 2262*. Ir.-Tur. element.

A. halicacabus Lam.

19, open oak forest, 1350 m, 1.6.2002, *B.B. 1150*; 16.6.2003, *B.B. 1882*. Ir.-Tur. element.

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

19, open oak forest, 1350 m, 1.6.2002, *B.B. 1160*. Ir.-Tur. element.

A. echinops Aucher ex Boiss.

15, open oak forest, 1400 m, 22.6.2002, *B.B. 1202*.

**A. odoratus* Lam.

23, steppe, 2300 m, 13.7.2003, *B.B. 2279*.

**A. cfr. adunciformis* Boiss.

13, steppe, 2000 m, 21.6.2003, *B.B. 1940*.

A. asciocalyx Bunge

23, steppe, 2000 m, 7.6.2003, *B.B.* 1788; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1912, 1934. Ir.-Tur. element.

**A. aduncus* Willd.

19, open oak forest, 1350 m, 1.6.2002, *B.B.* 1169; 16.6.2003, *B.B.* 1867; **15**, open oak forest, 1400 m, 22.6.2002, *B.B.* 1206; 19.5.2003, *B.B.* 1599; 21.6.2003, *B.B.* 1951; **18**, open oak forest, 1300 m, 24.5.2003, *B.B.* 1636, 1649; 3.6.2003, *B.B.* 1717; **20**, open oak forest, 1400 m, 24.5.2003, *B.B.* 1661; **23**, steppe, 1900 m, 7.6.2003, *B.B.* 1737; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1936; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2106. Ir.-Tur. element.

A. fragrans Willd.

23, steppe, 2300 m, 7.6.2003, *B.B.* 1765. Ir.-Tur. element.

**A. tigridis* Boiss.

19, open oak forest, 1350 m, 16.6.2003, *B.B.* 1870. Ir.-Tur. element.

**A. campylosema* Boiss.

14, open oak forest, 1500 m, 27.5.2002, *B.B.* 1087; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1178. Endemic, Ir.-Tur. element; LC.

A. cfr. achundovii Grossh.

19, open oak forest, 1350 m, 29.5.2002, *B.B.* 1127; **16**, open oak forest, 1400 m, 17.5.2003, *B.B.* 1553; **18**, open oak forest, 1350 m, 24.5.2003, *B.B.* 1647. Ir.-Tur. element; VU.

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

23, steppe, 2200 m, 7.6.2003, *B.B.* 1777; 2300 m, 13.7.2003, *B.B.* 2273; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1925. Endemic, Ir.-Tur. element; NT.

**Oxytropis kotschyana* Boiss. & Hohen.

23, steppe, 2200 m, 7.6.2003, *B.B.* 1778. Ir.-Tur. element; VU.

Phaseolus vulgaris L. (cv.)

6, cultivated field, 1800 m, 22.7.2003, *B.B.* 2372. Cultivated.

**Cicer pinnatifidum* Jaub. & Spach

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1725.

**Vicia villosa* Roth subsp. *villosa*

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1137; **16**, open oak forest, 1400-1600 m, 24.5.2003, *B.B.* 1621; 21.6.2003, *B.B.* 1906; **18**, open oak forest, 1300-1500 m, 24.5.2003, *B.B.* 1641; **25**, stony place, 2100 m, 29.7.2003, *B.B.* 2482; **17**, open oak forest, 1700-1800 m, 3.6.2004, *B.B.* 2672.

**V. villosa* subsp. *dasycarpa* (Ten.) Cav.

5, stony place, 1700 m, 1.7.2003, *B.B.* 2027.

**V. noeana* var. *megalodonta* Rech.f.

4, steppe, 1700 m, 1.7.2003, *B.B.* 2033, 2042. Ir.-Tur. element.

V. peregrina L.

6, steppe, 1700 m, 8.6.2003, *B.B.* 1821.

**V. anatolica* Turrill

16, open oak forest, 1350-1600 m, 17.5.2003, *B.B.* 1538; **20**, steppe, 1400 m, 24.5.2003, *B.B.* 1652, 1660; **1**, steppe, 1500-1700 m, 16.6.2003, *B.B.* 1854. Ir.-Tur. element.

**V. sativa* subsp. *nigra* (L.) Ehrh. var. *nigra*

16, open oak forest, 1400-1500 m, 17.5.2004, *B.B.* 2642.

V. sativa subsp. *nigra* var. *segetalis* (Thuill) Ser. ex DC.

14, wet place, 1400-1600 m, 27.5.2002, *B.B.* 1056; **16**, wet place, 1400 m, 19.5.2003, *B.B.* 1593; 1500 m, 16.6.2003, *B.B.* 1639; **20**, wet place, 1400-1500 m, 24.5.2003, *B.B.* 1654, 1658; **11**, wet place, 1400 m, 3.6.2003, *B.B.* 1733; **6**, steppe, 1700 m, 8.6.2003, *B.B.* 1823.

**Lathyrus brachypterus* var. *haussknechtii* (Širj.) P.H.Davis

23, steppe, 2000 m, 7.6.2003, *B.B.* 1780. Endemic, Ir.-Tur. element; LC.

L. cfr. boissieri Širj.

15, open oak forest, 1400 m, 21.6.2003, *B.B. 1944*; **24**, cultivated field, 1900 m, 13.7.2003, *B.B. 2307*. Ir.-Tur. element.

**L. rotundifolius* subsp. *miniatus* (M.Bieb. ex Stev.) P.H.Davis

18, wet place, 1400 m, 3.6.2003, *B.B. 1713*; **23**, steppe, 2100 m, 13.7.2003, *B.B. 2294*.

L. inconspicuus L.

15, open oak forest, 1450 m, 17.5.2003, *B.B. 1559/a*.

L. cicera L.

14, open oak forest, 1450 m, 27.5.2002, *B.B. 1067*; wet place, 1460 m, 13.5.2003, *B.B. 1491*; **16**, open oak forest, 1400 m, 19.5.2003, *B.B. 1595*; **6**, steppe, 1700 m, 8.6.2003, *B.B. 1822*.

**L. nissolia* L.

19, wet place, 1350-1500 m, 1.6.2002, *B.B. 1158*.

**L. aphaca* var. *biflorus* Post

14, open oak forest, 1450 m, 27.5.2002, *B.B. 1070*; **19**, wet place, 1350 m, 1.6.2002, *B.B. 1159*.

**Pisum sativum* subsp. *elatius* var. *pumilio* Meikle

15, stony slope, 1350-1500 m, 15.5.2003, *B.B. 1510*; open oak forest, 1400-1600 m, 17.5.2003, *B.B. 1544*; **7**, stony slope, 1400-1600 m, 24.5.2003, *B.B. 1682*; **6**, steppe, 1700 m, 8.6.2003, *B.B. 1820*.

**Ononis arvensis* L.

18, wet place, 1350 m, 30.6.2003, *B.B. 2016*. Euro.-Sib. element.

O. spinosa subsp. *leiosperma* (Boiss.) Širj.

16, oak forest, 1350 m, 18.8.2002, *B.B. 1328/a*.

**Trifolium repens* L.

19, wet place, 1350 m, 1.6.2002, *B.B. 1142*; **15**, wet place, 1500 m, 19.5.2003, *B.B. 1590*.

T. nigrescens subsp. *petrisavii* (Clementi) Holmboe

18, wet place, 1380 m, 3.6.2003, *B.B. 1708*.

T. speciosum Willd.

14, wet place, 1450 m, 27.5.2002, *B.B. 1040*; **19**, open oak forest, 1350 m, 1.6.2002, *B.B. 1179*; **7**, stony slope, 1400 m, 24.5.2003, *B.B. 1677*.

T. campestre Schreb.

14, oak forest, 1400-1600 m, 27.5.2002, *B.B. 1061*; **16**, wet place, 1350 m, 18.8.2002, *B.B. 1311*; **18**, wet place, 1300-1350 m, 24.5.2003, *B.B. 1648*.

**T. fragiferum* var. *pulchellum* Lange

19, wet place, 1350 m, 16.6.2003, *B.B. 1880*.

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

14, wet place, 1520 m, 27.5.2002, *B.B. 1079*; **19**, open oak forest, 1400 m, 1.6.2002, *B.B. 1181/a*;

15, open oak forest, 1450 m, 17.5.2003, *B.B. 1559/b*; **18**, wet place, 1300-1350 m, 24.5.2003, *B.B. 1646*; **20**, wet place, 1400 m, 3.6.2003, *B.B. 1694*. Medit. element.

**T. physodes* var. *psilocalyx* Boiss.

19, open oak forest, 1400 m, 1.6.2002, *B.B. 1181/b*; **20**, steppe, 1400 m, 24.5.2003, *B.B. 1659*. E. Medit. element.

T. tumens Stev. ex M.Bieb.

18, wet place, 1250 m, 20.7.2003, *B.B. 2322*. Hyrcano-Euxine element.

**T. chusii* Godr. & Gren.

15, oak forest, 1350-1600 m, 20.7.2002, *B.B. 1241*; **16**, wet place, 1400 m, 19.5.2003, *B.B. 1594*; **22**, steppe, 1250-1350 m, 24.5.2003, *B.B. 1626*; **18**, steppe, 1350 m, 30.6.2003, *B.B. 2014*.

**T. pratense* var. *sativum* Schreb.

1, wet place, 1500 m, 16.6.2003, *B.B. 1836*; **16**, wet place, 1500 m, 16.6.2003, *B.B. 1845*.

T. longidentatum Nábělek

23, steppe, 2200 m, 13.7.2003, *B.B. 2267*. Endemic, Ir.-Tur. element; NT.

**T. lucanicum* Gasp.

16, open oak forest, 1400 m, 19.5.2003, *B.B. 1603*. *Medit. element.*

**T. arvense* L.

5, stony slope, 1500-1700 m, 9.7.2003, *B.B. 2134*; **2**, stony slope, 2000 m, 3.6.2004, *B.B. 2649*.

**T. angustifolium* L.

16, wet place, 1400 m, 17.5.2003, *B.B. 1528*; **17**, streamside, 1700-1800 m, 3.6.2004, *B.B. 2678*.

**T. pauciflorum* d'Urv.

24, wet place, 1600 m, 7.6.2003, *B.B. 1744*. *Medit. element.*

Melilotus officinalis (L.) Desr.

15, streamside, 1300 m, 22.6.2002, *B.B. 1217*.

**M. alba* Desr.

14, streamside, 1500 m, 27.5.2002, *B.B. 1038*; **15**, streamside, 1400 m, 20.7.2002, *B.B. 1292*.

**Trigonella brachycarpa* (Fisch.) Moris

7, on rock, 1500-1600 m, 16.5.2004, *B.B. 2628*. *Ir.-Tur. element.*

**T. velutina* Boiss.

16, open oak forest, 1300-1450 m, 19.5.2003, *B.B. 1597*. *Ir.-Tur. element.*

T. strangulata Boiss.

16, open oak forest, 1350-1600 m, 17.5.2003, *B.B. 1552*; **7**, stony slope, 1500-1600 m, 16.5.2004, *B.B. 2626*. *Ir.-Tur. element.*

**T. aurantiaca* Boiss.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1076*; **16**, 1350-1500 m, 13.5.2003, *B.B. 1521*. *Ir.-Tur. element.*

**T. crassipes* Boiss.

1, stony slope, 1500 m, 10.5.2003, *B.B. 1451*. *Ir.-Tur. element.*

T. monantha C.A.Mey. subsp. *monantha*

1, stony slope, 1500 m, 10.5.2003, *B.B. 1453/b*; **3**, stony slope, 1500-1600 m, 3.6.2004, *B.B. 2654*. *Ir.-Tur. element.*

**T. monantha* subsp. *noeana* (Boiss.) Hub.-Mor.

16, open oak forest, 1300-1450 m, 19.5.2003, *B.B. 1598*. *Ir.-Tur. element.*

Medicago radiata L.

20, steppe, 1570 m, 7.6.2003, *B.B. 1746*; **1**, wet place, 1500-1700 m, 16.6.2003, *B.B. 1857*. *Ir.-Tur. element.*

**M. orbicularis* (L.) Bartal.

22, wet place, 1300 m, 19.5.2003, *B.B. 1570*.

**M. sativa* subsp. *coerulea* (Less. ex Ledeb.) Schmahl.

15, streamside, 1450 m, 22.6.2002, *B.B. 1220*; **16**, streamside, 1350 m, 18.8.2002, *B.B. 1321*; **2**, cultivated field, 1700 m, 1.7.2003, *B.B. 2046*; **22**, streamside, 1250 m, 12.7.2003, *B.B. 2180*.

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

14, wet place, 1400-1600 m, 27.5.2002, *B.B. 1042/b*; **16**, wet place, 1400 m, 19.5.2003, *B.B. 1596*;

1, wet place, 1500 m, 16.6.2003, *B.B. 1830*.

**M. rigidula* var. *submitis* (Boiss.) Heyn

22, wet place, 1300-1450 m, 19.5.2003, *B.B. 1569*.

Lotus corniculatus L. var. *corniculatus*

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1161, 1163*; **4**, streamside, 1600-1700 m, 9.7.2003, *B.B. 2146*.

**L. corniculatus* var. *tenuifolius* L.

16, open oak forest, 1300-1550 m, 30.6.2003, *B.B. 1988*.

**L. gebelia* var. *hirsutissimus* (Ledeb.) Dinsm.

15, oak forest, 1350-1600 m, 20.7.2002, *B.B. 1244, 1286*; **18**, wet place, 1400-1600 m, 3.6.2003, *B.B. 1709*; **16**, wet place, 1350 m, 16.6.2003, *B.B. 1904*.

**Coronilla orientalis* Mill.

2, steppe, 1700-1800 m, 1.7.2003, *B.B.* 2038; **6**, steppe, 1600-1700 m, 9.7.2003, *B.B.* 2149.

C. varia L.

15, streamside, 1400 m, 22.6.2002, *B.B.* 1222; 20.7.2002, *B.B.* 1265; **16**, streamside, 1350 m, 18.8.2002, *B.B.* 1323, 1334; wet place, 1300 m, 30.6.2003, *B.B.* 2000; **18**, wet place, 1400 m, 3.6.2003, *B.B.* 1702; **26**, streamside, 1350 m, 30.6.2003, *B.B.* 1973.

**Hedysarum varium* Willd.

15, open oak forest, 1400 m, 22.6.2002, *B.B.* 1201; **19**, open oak forest, 1350 m, 16.6.2003, *B.B.* 1871. Ir.-Tur. element.

**Onobrychis cornuta* (L.) Desv.

13, steppe, 2500 m, 28.7.2003, *B.B.* 2389; **24**, sandy slope, 1800 m, 2.5.2004, *B.B.* 2602. Ir.-Tur. element.

O. carduchorum C.C.Townsn.

14, open oak forest, 1500 m, 27.5.2002, *B.B.* 1030; **18**, open oak forest, 1300-1350 m, 24.5.2003, *B.B.* 1645; **19**, open oak forest, 1350 m, 16.6.2003, *B.B.* 1869, 1877; **2**, steppe, 1700 m, 1.7.2003, *B.B.* 2044. Ir.-Tur. element.

**O. sulphurea* Boiss. & Balansa var. *vanensis*

17, open oak forest, 1400 m, 16.6.2003, *B.B.* 1891. Endemic, Medit. element; LC.

O. altissima Grossh.

2, wet place, 1500 m, 9.7.2003, *B.B.* 2156.

O. galegifolia Boiss.

19, open oak forest, 1350 m, 16.6.2003, *B.B.* 1873. Ir.-Tur. element.

**O. cappadocica* Boiss.

1, stony slope, 1500 m, 8.6.2003, *B.B.* 1792. Endemic, Ir.-Tur. element; LC.

ROSACEAE

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

15, oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1215; 20.7.2002, *B.B.* 1290. Ir.-Tur. element.

**Armeniaca vulgaris* Lam., (cv.)

6, cultivated field, 1800 m, 22.7.2003, *B.B.* 2378. Cultivated.

Amygdalus communis L.

22, rocky place, 1250-1350 m, 24.5.2003, *B.B.* 1634.

Rubus caesius L.

2, streamside, 1600-1700 m, 9.7.2003, *B.B.* 2142.

R. sanctus Schreb.

15, streamside, 1350-1600 m, 20.7.2002, *B.B.* 1285.

**Potentilla inclinata* Vill.

19, open oak forest, 1300-1500 m, 1.6.2002, *B.B.* 1166; **16**, open oak forest, 1400-1600 m, 24.5.2003, *B.B.* 1619; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1919; 28.7.2003, *B.B.* 2431.

P. recta L.

2, steppe, 1700 m, 1.7.2003, *B.B.* 2028; **5**, steppe, 1500-1700 m, 9.7.2003, *B.B.* 2138.

P. reptans L.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1168; **18**, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1712.

P. speciosa Willd.

22, rocky place, 1250-1400 m, 12.7.2003, *B.B.* 2172; 1300 m, 19.9.2003, *B.B.* 2523/b.

**Geum urbanum* L.

15, open oak forest, 1300-1600 m, 20.7.2002, *B.B.* 1298; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2097. Euro-Sib. element.

**Agrimonia eupatoria* L.

3, streamside, 1600-1700 m, 9.7.2003, *B.B.* 2145.

**Sanguisorba minor* Scop. subsp. *minor*

15, open oak forest, 1500 m, 19.5.2003, *B.B.* 1586.

S. minor subsp. *muricata* (Spach) Briq.

17, open oak forest, 1600 m, 12.7.2003, *B.B.* 2209.

Alchemilla persica Rothm.

4, streamside, 1550 m, 16.6.2003, *B.B.* 1885; **2**, streamside, 1600-1700 m, 9.7.2003, *B.B.* 2147; **25**, streamside, 2000 m, 29.7.2003, *B.B.* 2473.

Rosa pulverulenta M.Bieb.

13, on rock, 2300 m, 28.7.2003, *B.B.* 2412.

R. canina L.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1132; **16**, open oak forest, 1350 m, 20.7.2003, *B.B.* 2330.

R. heckeliana subsp. *vanheurckiana* (Crép.) Ö.Nilsson

23, on rock, 2500 m, 13.7.2003, *B.B.* 2252. Ir.-Tur. element.

Cotoneaster melanocarpus (Bunge) Fisch.

13, steppe, 1800 m, 28.7.2003, *B.B.* 2438.

C. nummularius Fisch. & C.A.Mey.

19, oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1135; **15**, oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1221.

Crataegus monogyna Jacq.

16, oak forest, 1350-1600 m, 17.5.2003, *B.B.* 1529, 1540; 12.7.2003, *B.B.* 2198.

Sorbus umbellata (Desf.) Fritsch

13, steppe, 1900 m, 28.7.2003, *B.B.* 2426.

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

14, roadside, 1650 m, 18.4.2004, *B.B.* 2587.

Pyrus syriaca Boiss.

16, oak forest, 1350-1500 m, 13.5.2003, *B.B.* 1525.

**P. elaeagnifolia* subsp. *kotschyana* (Boiss.) Browicz

16, roadside, 1310 m, 3.5.2003, *B.B.* 1434.

PUNICACEAE

Punica granatum L.

26, streamside, 1250 m, 20.7.2003, *B.B.* 2340.

LYTHRACEAE

Lythrum salicaria L.

16, streamside, 1350-1500 m, 18.8.2002, *B.B.* 1303; 30.6.2003, *B.B.* 1984; **10**, streamside, 1700 m, 5.7.2003, *B.B.* 2084. Euro-Sib. element.

ONAGRACEAE

Epilobium hirsutum L.

16, streamside, 1300 m, 30.6.2003, *B.B.* 1981/b.

**E. palustre* L.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B.* 1325; streamside, 1350-1500 m, 12.7.2003, *B.B.* 2193; **1**, streamside, 1500 m, 16.6.2003, *B.B.* 1828. Cicumboreal.

E. frigidum Hausskn.

22, rocky place, 1250 m, 12.7.2003, *B.B.* 2185.

CUCURBITACEAE

Bryonia multiflora Boiss. & Heldr.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1225*. Ir.-Tur. element.

Cucurbita pepo L. (cv.)

6, cultivated field, 1800 m, 22.7.2003, *B.B. 2369, 2371*. Cultivated.

CRASSULACEAE

**Rosularia sempervivum* (M.Bieb.) A.Berger

8, on rock, 1400-1600 m, 3.6.2003, *B.B. 1732*; **23**, on rock, 1900 m, 29.7.2003, *B.B. 2467*. Ir.-Tur. element.

Sedum hispanicum L.

14, open oak forest, 1400-1600 m, 27.4.2002, *B.B. 1052*.

SAXIFRAGACEAE

Saxifraga kotschyi Boiss.

4, on rock, 1500 m, 28.3.2004, *B.B. 2256*.

APIACEAE (UMBELLIFERAE)

Eryngium bornmuelleri Nábělek

23, steppe, 2300 m, 13.7.2003, *B.B. 2250*. Ir.-Tur. element; NT

E. pyramidale Boiss. & Hausskn.

16, open oak forest, 1400-1600 m, 8.9.2003, *B.B. 2513*. Ir.-Tur. element.

E. billardierei Delar.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1351*; **12**, open oak forest, 1800 m, 8.7.2003, *B.B. 2101*; **6**, steppe, 2000 m, 22.7.2003, *B.B. 2382*; **13**, steppe, 2500 m, 28.7.2003, *B.B. 2403*; **14**, open oak forest, 1800 m, 28.7.2003, *B.B. 2447*. Ir.-Tur. element.

Myrrhoides nodosa (L.) Cannon

22, rocky place, 1300-1450 m, 19.5.2003, *B.B. 1577*; **16**, open oak forest, 1350 m, 21.6.2003, *B.B. 1907*.

Chaerophyllum macropodium Boiss.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1048*; **19**, open oak forest, 1350 m, 16.6.2003, *B.B. 1866*; **17**, 1600 m, 16.6.2003, *B.B. 1894*; **4**, streamside, 1500-1700 m, 9.7.2003, *B.B. 2130/a*. Ir.-Tur. element.

C. crinitum Boiss.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1077*. Ir.-Tur. element.

Grammosciadium platycarpum Boiss. & Hausskn.

19, open oak forest, 1300-1500 m, 24.5.2003, *B.B. 1640*; **17**, wet place, 1700-1800 m, 3.6.2004, *B.B. 2681*. Ir.-Tur. element.

**Anthriscus cerefolium* (L.) Hoffm.

16, on rock, 1350-1500 m, 13.5.2003, *B.B. 1516*; open oak forest, 1350 m, 3.6.2004, *B.B. 2666*.

**Scandix stellata* Banks & Sol.

16, open oak forest, 1350-1600 m, 17.5.2003, *B.B. 1531*; **19**, open oak forest, 1400-1600 m, 3.6.2003, *B.B. 1728*; **17**, wet place, 1700-1800 m, 3.6.2004, *B.B. 2682*.

**S. pecten-veneris* L.

20, open oak forest, 1400-1600 m, 10.5.2003, *B.B. 1486*; **17**, wet place, 1700-1800 m, 3.6.2004, *B.B. 2680*.

Smyrniium cordifolium Boiss.

22, rocky place, 1250-1350 m, 24.5.2003, *B.B. 1651*. Ir.-Tur. element.

**Pimpinella affinis* Ledeb.

16, open oak forest, 1300-1550 m, 30.6.2003, *B.B. 2004*; 1350-1500 m, 12.7.2003, *B.B. 2194*.

**P.* cfr. *aromatica* M.Bieb.

13, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1276. VU.

P. kotschyana Boiss.

10, streamside, 1500 m, 5.6.2003, *B.B.* 2053; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2103. Ir.-Tur. element.

P. tragiium subsp. *lithophila* (Schischk.) Tutin

13, steppe, 2300 m, 28.7.2003, *B.B.* 2418.

**Sium* *sisarum* var. *lancifolium* (M.Bieb.) Thell.

16, wet place, 1300-1550 m, 30.6.2003, *B.B.* 1986.

**Prangos pabularia* Lindl.

14, streamside, 1300-1460 m, 13.5.2003, *B.B.* 1506. Ir.-Tur. element.

**P. peucedanifolia* Fenzl

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1053; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1148. Ir.-Tur. element.

Bupleurum croceum Fenzl

16, open oak forest, 1500 m, 16.6.2003, *B.B.* 1843. Ir.-Tur. element.

**B. kurdicum* Boiss.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1262; 1350-1500 m, 18.8.2002, *B.B.* 1338; **16**, open oak forest, 1350-1500 m, 12.7.2003, *B.B.* 2195. Ir.-Tur. element.

Falcaria vulgaris Bernh.

16, streamside, 1350-1600 m, 20.7.2002, *B.B.* 1264; 18.8.2002, *B.B.* 1313; 12.7.2003, *B.B.* 2199.

**Ferulago platycarpa* Boiss. & Balansa

13, steppe, 1800 m, 28.7.2003, *B.B.* 2437. Endemic, Ir.-Tur. element; LC.

F. angulata Boiss.

13, steppe, 2500 m, 28.8.2003, *B.B.* 2407. Ir.-Tur. element; VU.

Opopanax hispidum (Friv.) Griseb.

26, open oak forest, 1350 m, 30.6.2003, *B.B.* 1980.

Malabaila lasiocarpa Boiss.

19, open oak forest, 1300-1500 m, 1.6.2002, *B.B.* 1184; **7**, steppe, 1400 m, 24.5.2003, *B.B.* 1667. Endemic, Ir.-Tur. element; LC.

**Trigonosciadium viscidulum* Boiss. & Hausskn.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1036; **18**, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1729. Ir.-Tur. element; VU.

**Torilis arvensis* subsp. *neglecta* (Spreng.) Thell.

6, stony slope, 1600 m, 9.7.2003, *B.B.* 2122; streamside, 1700 m, 22.7.2003, *B.B.* 2366; **2**, wet place, 1500 m, 9.7.2003, *B.B.* 2154.

T. leptocarpa (Hochst.) C.C.Towns.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1293; **10**, open oak forest, 1500 m, 5.7.2003, *B.B.* 2068. Ir.-Tur. element.

T. tenella (Delile) Rchb.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1274.

**Astrodaucus orientalis* (L.) Drude

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1209; 1400 m, 21.6.2003, *B.B.* 1946/b; **4**, streamside, 1550 m, 9.7.2003, *B.B.* 2126. Ir.-Tur. element.

**Caucalis platycarpos* L.

4, streamside, 1550 m, 9.7.2003, *B.B.* 2131.

Turgenia latifolia (L.) Hoffm.

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1707.

**Orlaya daucooides* (L.) Greuter

22, rocky place, 1250-1350 m, 24.5.2003, *B.B. 1633*. *Medit. element.*

Daucus carota L.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1324*; 1300-1550 m, 30.6.2003, *B.B. 1991*; 12.7.2003, *B.B. 2192*.

**Artemisia squamata* L.

15, open oak forest, 1400 m, 21.6.2003, *B.B. 1948*; **26**, open oak forest, 1350-1400 m, 30.6.2003, *B.B. 1963*.

CAPRIFOLIACEAE

**Lonicera caucasica* Pall.

8, oak forest, 1400-1600 m, 8.6.2003, *B.B. 1810*; **6**, steppe, 2000 m, 22.7.2003, *B.B. 2348*.

VALERIANACEAE

Valeriana alliariifolia Adams

25, streamside, 2100 m, 29.7.2003, *B.B. 2478*.

**V. sisymbriifolia* Vahl

14, on rock, 1500-1600 m, 19.4.2003, *B.B. 1400*; **22**, rocky place, 1250-1350 m, 3.5.2003, *B.B. 1409*. Ir.-Tur. element.

**V. dioscoridis* Sm.

16, on rock, 1350-1600 m, 17.5.2003, *B.B. 1533*. E. *Medit element.*

Centranthus longiflorus Stev.

2, scree, 1500 m, 6.7.2003, *B.B. 2089*. Ir.-Tur. element.

Valerianella coronata (L.) DC.

1, open oak forest, 1500-1700 m, 8.6.2003, *B.B. 1799*.

V. vesicaria (L.) Moench

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1059*; **15**, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1229*; **16**, 1400 m, 19.5.2003, *B.B. 1605*.

Dipsacaceae

Cephalaria setosa Boiss. & Hohen.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1280*. Ir.-Tur. element.

C. syriaca (L.) Schrad.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1198*.

**C. speciosa* Boiss. & Kotschy

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1277*; **17**, open oak forest, 1600 m, 12.7.2003, *B.B. 2205*. Endemic, Ir.-Tur. element; LC.

C. microcephala Boiss.

13, steppe, 2300 m, 28.8.2003, *B.B. 2417*. Ir.-Tur. element.

**Scabiosa micrantha* Desf.

18, wet place, 1400-1600 m, 3.6.2003, *B.B. 1711*; **6**, steppe, 1700 m, 8.6.2003, *B.B. 1818*.

**S. calocephala* Boiss.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1242*. Ir.-Tur. element.

S. persica Boiss.

22, stony slope, 1250-1350 m, 18.8.2002, *B.B. 1325*. Ir.-Tur. element.

Pterocephalus pyrethrifolius Boiss. & Hohen.

22, rocky place, 1250 m, 12.7.2003, *B.B. 2170*. Ir.-Tur. element.

**P. kurdicus* var. *viscosissimus* Bornm.

6, stony slope, 1600 m, 9.7.2003, *B.B. 2118*; steppe, 2000 m, 22.7.2003, *B.B. 2449*. Ir.-Tur. element; VU.

ASTERACEAE (COMPOSITAE)

Helianthus annuus L. (cv.)**12**, cultivated field, 1700 m, 12.7.2003, *B.B.* 2235. Cultivated.*Chrysophthalmum montanum* (DC.) Boiss.**10**, on rock, 1500-1700 m, 5.7.2003, *B.B.* 2064. Ir.-Tur. element.**Inula helenium* subsp. *vanensis* Grierson**26**, streamside, 1300 m, 20.7.2003, *B.B.* 2317. Endemic, Ir.-Tur. element.*I. inuloides* (Fenzl) Grierson**14**, stony slope, 1700 m, 28.7.2003, *B.B.* 2443. Ir.-Tur. element; VU.*I. salicina* L.**16**, wet place, 1350-1500 m, 18.8.2002, *B.B.* 1307; 30.6.2003, *B.B.* 1961; **12**, open oak forest, 1700 m, 8.7.2003, *B.B.* 2116. Euro-Sib. element.*I. acaulis* var. *caulescens* Nábělek**13**, steppe, 2500 m, 28.7.2003, *B.B.* 2392.**I. oculus-christi* L.**12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2102. Euro-Sib. element.**I. britannica* L.**22**, streamside, 1700 m, 13.7.2003, *B.B.* 2304. Euro-Sib. element.**I. germanica* L.**6**, streamside, 1500 m, 28.7.2003, *B.B.* 2454. Euro-Sib. element.*I. thapsoides* (M.Bieb. ex Willd.) Spreng. subsp. *australis* Grierson**12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2114; **17**, open oak forest, 1600 m, 12.7.2003, *B.B.* 2206.**Pulicaria dysenterica* (L.) Bernh.**22**, streamside, 1300 m, 19.9.2003, *B.B.* 2530.**Phagnalon kotschyi* Sch.Bip. ex Boiss.**22**, on rock, 1250-1400 m, 12.7.2003, *B.B.* 2158. Ir.-Tur. element.*Helichrysum pallasii* (Spreng.) Ledeb.**13**, sandy place, 2000 m, 28.7.2003, *B.B.* 2422. Ir.-Tur. element.**H. plicatum* DC. subsp. *plicatum***18**, open oak forest, 1350-1500 m, 30.6.2003, *B.B.* 2020; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2110; **6**, steppe, 2000 m, 22.7.2003, *B.B.* 2347.*H. plicatum* subsp. *polyphyllum* (Ledeb.) P.H.Davis & Kupicha**16**, open oak forest, 1350 m, 12.7.2003, *B.B.* 2190; **23**, steppe, 2300 m, 13.7.2003, *B.B.* 2272.*H. plicatum* subsp. *pseudoplicatum* (Nábělek) P.H.Davis & Kupicha**12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2092; **23**, steppe, 2100 m, 13.7.2003, *B.B.* 2291.**Logfia arvensis* (L.) Holub**3**, stony slope, 1500-1600 m, 3.6.2004, *B.B.* 2653.*Erigeron acer* L.**12**, streamside, 1700 m, 12.7.2003, *B.B.* 2242.*Psychrogeton nigromontanus* (Boiss. & Buhse) Grierson**14**, open oak forest, 1700 m, 28.7.2003, *B.B.* 2441. Ir.-Tur. element.**Bellis perennis* L.**14**, wet place, 1400-1600 m, 27.5.2002, *B.B.* 1058; **19**, wet place, 1350 m, 18.8.2002, *B.B.* 1360. Euro-Sib. element.*Senecio eriospermus* DC. var. *eriospermus***13**, on rock, 1900 m, 12.7.2003, *B.B.* 2220, 2223. Ir.-Tur. element.**S. eriospermus* var. *crambefolius* Boiss.**23**, steppe, 2500 m, 13.7.2003, *B.B.* 2301/b. Endemic, Ir.-Tur. element; LC.**S. doriiformis* subsp. *orientalis* (Fenzl) Matthews

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1255; **5**, stony slope, 1500 m, 6.7.2003, *B.B.* 2088; **23**, steppe, 2100 m, 13.7.2003, *B.B.* 2293. Ir.-Tur. element.

**S. paucilobus* DC.

23, on rock, 2500 m, 13.7.2003, *B.B.* 2264; **13**, stony place, 2300 m, 28.7.2003, *B.B.* 2414. Ir.-Tur. element; VU.

S. vernalis Waldst. & Kit.

14, wet place, 1400-1600 m, 27.5.2002, *B.B.* 1041; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1172; **16**, open oak forest, 1350-1450 m, 12.4.2003, *B.B.* 1380; **18**, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1704; 1350-1500 m, 30.6.2003, *B.B.* 2021; **2**, stony slope, 1500 m, 9.7.2003, *B.B.* 2155.

**Tussilago farfara* L.

15, on rock, 1350-1450 m, 12.4.2003, *B.B.* 1375. Euro-Sib. element.

**Anthemis tinctoria* L.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1197, 1207.

**A.* cfr. *coelopoda* subsp. *bourgaei* Boiss.

20, stony place, 1400-1500 m, 3.6.2003, *B.B.* 1688.

**A. austriaca* Jacq.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1075; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1138; **1**, stony slope, 1500 m, 10.5.2003, *B.B.* 1448; **15**, open oak forest, 1500-1700 m, 19.5.2003, *B.B.* 1587.

Achillea vermicularis Trin.

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1727; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1921. Ir.-Tur. element.

A. millefolium L.

16, wet place, 1300-1550 m, 30.6.2003, *B.B.* 1993. Euro-Sib. element.

**A. nobilis* subsp. *neilreichii* (A.Kern.) Formánek

16, open oak forest, 1350-1500 m, 12.7.2003, *B.B.* 2200. Euro-Sib. element.

A. filipendulina Lam.

1, cultivated field, 1500 m, 27.7.2003, *B.B.* 2383. Ir.-Tur. element.

A. biebersteinii Afan.

19, open oak forest, 1350 m, 1.6.2002, *B.B.* 1157; **16**, open oak forest, 1400-1600 m, 24.5.2003, *B.B.* 1620; **20**, wet place, 1400-1500 m, 3.6.2003, *B.B.* 1684; **6**, cultivated field, 1600 m, 21.6.2003, *B.B.* 1959; **26**, wet place, 1350 m, 30.6.2003, *B.B.* 1979. Ir.-Tur. element.

Tanacetum balsamita subsp. *balsamitoides* (Sch.Bip.) Grierson

23, steppe, 2500 m, 13.7.2003, *B.B.* 2298; **13**, streamside, 2500 m, 28.7.2003, *B.B.* 2394.

T. zahlbruckneri (Nábělek) Grierson

23, steppe, 2200 m, 7.6.2003, *B.B.* 1779. Endemic, Ir.-Tur. element; LC.

T. kotschyi (Boiss.) Grierson

16, on rock, 1500-1700 m, 19.5.2003, *B.B.* 1585; 4.5.2003, *B.B.* 1612. Ir.-Tur. element.

**T.* cfr. *cadmeum* (Boiss.) Heywood subsp. *orientale* Grierson

13, steppe, 2000 m, 21.6.2003, *B.B.* 1916. Endemic, Ir.-Tur. element; LC.

T. argyrophyllum (K.Koch) Tzvelev var. *argyrophyllum*

5, steppe, 1700-1800 m, 1.7.2003, *B.B.* 2041. Ir.-Tur. element.

**T. argyrophyllum* var. *polycephalum* (Sch.Bip.) Grierson

23, steppe, 2700 m, 13.7.2003, *B.B.* 2257. Ir.-Tur. element; CR.

**T. argenteum* subsp. *canum* (K.Koch) Grierson

13, steppe, 2300 m, 28.7.2003, *B.B.* 2411.

Tripleurospermum melanolepis (Boiss. & Buhse) Pobed.

20, rocky place, 1400-1600 m, 10.5.2003, *B.B.* 1487.

**T. cfr. oreades* (Boiss.) Rech.f.

22, oak forest, 1250-1350 m, 3.5.2003, *B.B. 1406*; **14**, wet place, 1300-1460 m, 13.5.2003, *B.B. 1498*.

**T. oreades*. var. *tchihatchewii* (Boiss.) E.Hossain

22, rocky place, 1250-1300 m, 18.4.2004, *B.B. 2588*.

**T. cfr. transcaucasicum* (Manden.) Pobed.

22, steppe, 2000 m, 21.6.2003, *B.B. 1924*.

T. decipiens (Fisch. & C.A.Mey.) Bornm.

3, stony slope, 2000 m, 3.6.2004, *B.B. 2648*.

**T. disciforme* (C.A.Mey.) Sch.Bip.

2, streamside, 1700 m, 1.7.2003, *B.B. 2034*. Ir.-Tur. element.

**Artemisia incana* (L.) Druce

22, on rock, 1300 m, 19.9.2003, *B.B. 2519*. Ir.-Tur. element.

A. absinthium L.

6, streamside, 1600-1700 m, 9.7.2003, *B.B. 2143*; **26**, streamside, 1300 m, 12.7.2003, *B.B. 2187*.

Gundelia tournefortii L. var. *tournefortii*

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1097*; **15**, open oak forest, 1500-1700 m, 19.5.2003, *B.B. 1592*.

**G. tournefortii* var. *armata* Freyn & Sint.

13, steppe, 1700 m, 12.7.2003, *B.B. 2247*. Ir.-Tur. element.

Cousinia grandis C.A.Mey.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1283*; **13**, steppe, 1700 m, 12.7.2003, *B.B. 2249*. Ir.-Tur. element; VU.

Arctium minus subsp. *pubens* (Bab.) Arènes

26, streamside, 1350 m, 12.7.2003, *B.B. 2189*; 20.7.2003, *B.B. 2332*. Euro-Sib. element.

**Onopordum turcicum* Danin

3, stony slope, 1500-1700 m, 9.7.2003, *B.B. 2127*. Ir.-Tur. element.

O. carduchorum Bornm. & Beauverd

26, open oak forest, 1350-1400 m, 30.6.2003, *B.B. 1964*. Ir.-Tur. element.

Cirsium congestum Fisch & C.A.Mey. ex DC.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1348*. Ir.-Tur. element.

**C. bracteosum* DC.

23, steppe, 2200 m, 13.7.2003, *B.B. 2292*; **13**, steppe, 1800 m, 28.7.2003, *B.B. 2439*. Ir.-Tur. element.

**C. simplex* C.A.Mey.

12, streamside, 1700 m, 8.7.2003, *B.B. 2115*. Euxine element.

C. pubigerum var. *caniforme* Petr.

6, streamside, 1600 m, 6.10.2003, *B.B. 2541*.

**C. pubigerum* var. *spinosum* Petr.

16, streamside, 1350-1500 m, 18.8.2002, *B.B. 1337*; **3**, wet place, 1500 m, 9.7.2003, *B.B. 2157*; **13**, steppe, 2000 m, 28.7.2003, *B.B. 2430*.

C. arvense subsp. *vestitum* (Wimm. & Grab.) Petr.

26, streamside, 1300 m, 12.7.2003, *B.B. 2188*; **23**, streamside, 1900 m, 13.7.2003, *B.B. 2296*.

Picnomon acarna (L.) Cass.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1349*. Medit. element.

**Carduus pycnocephalus* subsp. *albidus* (M.Bieb.) Kazmi

20, wet place, 1400-1500 m, 3.6.2003, *B.B. 1686*; **22**, rocky place, 1250-1400 m, 12.7.2003, *B.B. 2159*.

**C. pycnocephalus* subsp. *breviphyllarius* P.H.Davis

19, open oak forest, 1300-1500 m, 1.6.2002, *B.B. 1185*. Ir.-Tur. element.

**C. pycnocephalus* subsp. *cinereus* (M.Bieb.) P.H.Davis

18, open oak forest, 1300-1500 m, 30.6.2003, *B.B. 2006*. Ir.-Tur. element.

Jurinea cataonica Boiss. & Hausskn.

13, sandy slope, 2000 m, 28.7.2003, *B.B. 2420*; **25**, sandy slope, 1800 m, 28.7.2003, *B.B. 2461*.

Endemic, Ir.-Tur. element; LC.

**Serratula cerinthifolia* (Sm.) Boiss.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1352*; **26**, open oak forest, 1350-1400 m, 30.6.2003, *B.B. 1962*; **17**, open oak forest, 1600 m, 12.7.2003, *B.B. 2210*.

S. coriacea Fisch. & C.A.Mey. ex DC.

16, open oak forest, 1400-1600 m, 8.9.2003, *B.B. 2509*. Ir.-Tur. element.

Acroptilon repens (L.) DC.

17, open oak forest, 1600 m, 16.6.2003, *B.B. 1896*. Ir.-Tur. element.

Centaurea virgata Lam.

12, open oak forest, 1800 m, 8.7.2003, *B.B. 2105*. Ir.-Tur. element.

C. saligna (K.Koch) Wagenitz

26, open oak forest, 1350 m, 30.6.2003, *B.B. 1978*. Endemic, Ir.-Tur. element; LC.

C. rhizantha C.A.Mey.

23, steppe, 2850 m, 13.7.2003, *B.B. 2251*. Ir.-Tur. element.

C. spectabilis (Fisch. & C.A.Mey.) Sch.Bip.

19, steppe, 1350 m, 16.6.2003, *B.B. 1872*; **6**, steppe, 1700 m, 22.7.2003, *B.B. 2365*.

C. handelii Wagenitz

23, steppe, 2300 m, 13.7.2003, *B.B. 2269*. Ir.-Tur. element; VU.

C. gigantea Sch.Bip. ex Boiss.

16, oak forest, 1350-1600 m, 20.7.2002, *B.B. 1261*; **17**, oak forest, 1400 m, 20.7.2003, *B.B. 2316*. Ir.-Tur. element; VU.

C. nemecii Nábělek

23, steppe, 2200 m, 13.7.2003, *B.B. 2315*. Ir.-Tur. element; VU, (seed).

C. behen L.

17, open oak forest, 1600 m, 12.7.2003, *B.B. 2204*; **16**, open oak forest, 1400-1600 m, 8.9.2003, *B.B. 2508*. Ir.-Tur. element.

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

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B. 1714*; 1500-1700 m, 16.6.2003, *B.B. 1860*.

**C. hakkariensis* Wagenitz

23, steppe, 2500 m, 13.7.2003, *B.B. 2253*. Endemic, Ir.-Tur. element; VU.

C. solstitialis L.

2, steppe, 1500-1700 m, 9.7.2003, *B.B. 2135*; **16**, steppe, 1250 m, 20.7.2003, *B.B. 2325/a*; **26**, open oak forest, 1250 m, 20.7.2003, *B.B. 2337/b*. Ir.-Tur. element.

C. iberica Trevir. ex Spreng.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1347*.

**C. urvillei* DC. subsp. *urvillei*

1, steppe, 1500-1700 m, 8.6.2003, *B.B. 1798*. Medit. element.

**C. urvillei* subsp. *hayekiana* Wagenitz

20, on rock, 1400-1500 m, 3.6.2003, *B.B. 1696*. Ir.-Tur. element.

C. persica Boiss.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1232*; **12**, open oak forest, 1600 m, 21.6.2003, *B.B. 1909*; **16**, open oak forest, 1300-1500 m, 30.6.2003, *B.B. 2003*; **13**, steppe, 1900 m, 12.7.2003, *B.B. 2231*; **25**, steppe, 1900 m, 13.7.2003, *B.B. 2308*. Ir.-Tur. element; VU.

**C. karduchorum* Boiss.

22, on rock, 1250-1350 m, 24.5.2003, *B.B. 1629*; **1**, on rock, 1500 m, 7.6.2003, *B.B. 1783*; **8**, on rock, 1400-1600 m, 8.6.2003, *B.B. 1805*. Endemic, Ir.-Tur. element; NT.

**C. triumfettii* All.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1032*.

**C. depressa* M.Bieb.

16, cultivated field, 1300 m, 16.6.2003, *B.B. 1900*.

Zoegea leptaurea L.

17, open oak forest, 1600 m, 12.7.2003, *B.B. 2208*. Ir.-Tur. element.

Crupina crupinastrum (Moris) Vis.

19, open oak forest, 1350-1500 m, 29.5.2002, *B.B. 1124*; **22**, roadside, 1250-1350 m, 24.5.2003, *B.B. 1624*.

**Carthamus lanatus* L.

18, steppe, 1350 m, 30.6.2003, *B.B. 2013*.

**C. dentatus* Vahl

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1344*.

Carlina oligocephala Boiss. & Kotschy

6, steppe, 2000 m, 22.7.2003, *B.B. 2381*.

Xeranthemum annuum L.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1216*.

Chardinia orientalis (L.) Kuntze

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1066, 1077*; 1300-1460 m, 13.5.2003, *B.B. 1496*. Ir.-Tur. element.

**Echinops pungens* Trautv.

13, steppe, 1700 m, 12.7.2003, *B.B. 2245*. Ir.-Tur. element.

**E. orientalis* Trautv.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1346*; 8.9.2003, *B.B. 2502*; **5**, stony slope, 1600-1800 m, 6.10.2003, *B.B. 2552*. Ir.-Tur. element.

Cichorium intybus L.

16, streamside, 1350-1500 m, 18.8.2002, *B.B. 1314*.

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

18, open oak forest, 1300-1500 m, 24.5.2003, *B.B. 1639*.

S. mollis M.Bieb. subsp. *mollis*

13, on rock, 1900 m, 12.7.2003, *B.B. 2221*.

**S. cfr. mollis* subsp. *szowitsii* (DC.) D.F.Chamb.

1, stony slope, 1600 m, 10.5.2003, *B.B. 1459*. Ir.-Tur. element.

S. papposa DC.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1063*; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1126*. Ir.-Tur. element.

S. davisii Lipsch.

16, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1288*. Endemic, Ir.-Tur. element; VU.

S. latifolia (Fisch. & C.A.Mey.) DC.

17, oak forest, 1600 m, 16.6.2003, *B.B. 1892*; **6**, oak forest, 1700-1800 m, 1.7.2003, *B.B. 2045*. Ir.-Tur. element.

S. veratrifolia Fenzl

16, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1259*; **25**, open oak forest, 1700 m, 29.7.2003, *B.B. 2485*. Ir.-Tur. element.

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

15, open oak forest, 1500-1700 m, 19.5.2003, *B.B. 1591*; **20**, wet place, 1400-1500 m, 3.6.2003, *B.B. 1689*.

**T. longirostris* var. *abbreviatus* Boiss.

16, open oak forest, 1350-1600 m, 17.5.2003, *B.B. 1536*; 1300-1450 m, 19.5.2003, *B.B. 1581*; **7**, streamside, 1500-1600 m, 16.5.2004, *B.B. 2632*.

Leontodon hispidus L.

13, streamside, 2500 m, 28.7.2003, *B.B. 2400*.

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

10, on rock, 1500 m, 5.7.2003, *B.B. 2067*; **13**, on rock, 1900 m, 12.7.2003, *B.B. 2222*.

**L. crispus* subsp. *asper* var. *setulosus* (Halácsy) Kupicha

13, on rock, 1900 m, 12.7.2003, *B.B. 2224*.

**L. oxylepis* var. *divaricatus* (Boiss.) Kupicha

22, rocky place, 1250-1400 m, 12.7.2003, *B.B. 2162*. Endemic, Ir.-Tur. element; LC.

Rhagadiolus angulosus (Jaub. & Spach) Kupicha

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1073*; **15**, open oak forest, 1500-1700 m, 19.5.2003, *B.B. 1602*. Ir.-Tur. element.

Reichardia glauca Matthews

6, stony slope, 1600 m, 9.7.2003, *B.B. 2117*; **14**, stony slope, 1700 m, 28.7.2003, *B.B. 2442*. Ir.-Tur. element.

**Pilosella echioides* subsp. *procera* (Fries) Sell & C. West

2, steppe, 1700-1800 m, 1.7.2003, *B.B. 2040/a*.

**P.* cfr. × *auriculoides* (Láng.) Sell & C. West

13, steppe, 2000 m, 21.6.2003, *B.B. 1918*; **15**, wet place, 1300-1550 m, 30.6.2003, *B.B. 1981/a*.

**P.* × *maschukensis* (Litw. & Zahn) Soják

2, steppe, 1700-1800 m, 1.7.2003, *B.B. 2040/b*.

**P. verruculata* (Link) Soják

23, steppe, 2200 m, 13.7.2003, *B.B. 2286*.

Cicerbita adenophora (Boiss. & Kotschy) Beauverd

25, steppe, 2100 m, 29.7.2003, *B.B. 2477*. Ir.-Tur. element.

Cephalorrhynchus rechingerianus Tuisl

19, open oak forest, 1300-1500 m, 1.6.2002, *B.B. 1188*; **22**, rocky place, 1300-1450 m, 19.5.2003, *B.B. 1581/b*; **16**, open oak forest, 1400-1600 m, 24.5.2003, *B.B. 1611*. Ir.-Tur. element; VU.

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

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1218*; **18**, open oak forest, 1400-1600 m, 3.6.2003, *B.B. 1724/a*; **6**, shady-wet place, 1600-1700 m, 9.7.2003, *B.B. 2151*.

Lactuca serriola L.

18, wet place, 1250 m, 20.7.2003, *B.B. 2325/b*; **22**, rocky slope, 1300 m, 19.9.2003, *B.B. 2523/a*. Euro-Sib. element.

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

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1316*; **10**, oak forest, 1500 m, 5.7.2003, *B.B. 2069*; **22**, rocky slope, 1300 m, 19.9.2003, *B.B. 2521*.

S. orientalis (Boiss.) Soják

16, open oak forest, 1350-1600 m, 27.7.2002, *B.B. 1233*. Ir.-Tur. element.

Taraxacum cfr. *syriacum* Boiss

23, steppe, 2000 m, 13.7.2003, *B.B. 2278*. Ir.-Tur. element.

T. montanum (C.A. Mey.) DC.

5, steppe, 1600-1700 m, 9.7.2003, *B.B. 2141*. Ir.-Tur. element.

T. scaturiginosum G.E. Haglund

16, streamside, 1400-1600 m, 3.5.2003, *B.B. 1430*.

T. kurdiciforme G.E. Haglund

14, wet place, 1600 m, 19.4.2003, *B.B. 1405/b*. Ir.-Tur. element.

**T. cfr. fedtschenkoi* Hand.-Mazz.

1, stony slope, 1500 m, 10.5.2003, *B.B. 1450*. VU.

Chondrilla juncea L.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1319*; **23**, steppe, 2200 m, 13.7.2003, *B.B. 2287*.

**Crepis hakkarica* Lamond

23, steppe, 2700 m, 13.7.2003, *B.B. 2258*. Endemic, Ir.-Tur. element; EN.

**C. pannonica* (Jacq.) K.Koch

1, steppe, 1400-1600 m, 8.6.2003, *B.B. 1801*.

**C. cfr. pulchra* L.

18, open oak forest, 1400-1600 m, 3.6.2003, *B.B. 1724/b*.

**C. alpina* L.

19, steppe, 1350 m, 1.6.2002, *B.B. 1183*; **18**, open oak forest, 1300-1500 m, 24.5.2003, *B.B. 1644*.

C. foetida subsp. *rhoeadifolia* (M.Bieb.) Čelak.

1, steppe, 1500-1700 m, 8.6.2003, *B.B. 1793*; **10**, steppe, 1500-1700 m, 5.7.2003, *B.B. 2079*; **4**, streamside, 1550 m, 9.7.2003, *B.B. 2125*.

C. foetida subsp. *commutata* (Spreng) Babč.

18, stony slope, 1400-1600 m, 3.6.2003, *B.B. 1721*.

C. sancta (L.) Babč.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1015*; **27**, oak forest, 1100 m, 19.4.2003, *B.B. 1392*; **1**, wet place, 1500 m, 10.5.2003, *B.B. 1454*; **16**, cultivated field, 1350 m, 17.5.2003, *B.B. 1548*;

18, open oak forest, 1300-1500 m, 24.5.2003, *B.B. 1650*; **1**, steppe, 1500-1700 m, 8.6.2003, *B.B. 1797*; **22**, on rock, 1250-1400 m, 12.7.2003, *B.B. 2160*.

CAMPANULACEAE

Campanula rapunculoides subsp. *cordifolia* (K.Koch) Damboldt

5, under Walnut, 1700 m, 1.7.2003, *B.B. 2030*.

**C. sibirica* subsp. *hohenackeri* (Fisch. & C.A.Mey.) Damboldt

13, steppe, 1900 m, 12.7.2003, *B.B. 2230*. Euxine element.

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

23, steppe, 2100 m, 13.7.2003, *B.B. 2300*. Euro.-Sib. element.

C. involucrata Aucher ex A.DC.

21, oak forest, 1380 m, 24.5.2003, *B.B. 1674*; **23**, steppe, 2000 m, 7.6.2003, *B.B. 1775*; **12**, open oak forest, 1800 m, 8.7.2003, *B.B. 2099*. Ir.-Tur. element.

C. sclerotricha Boiss.

15, streamside, 1350-1600 m, 22.6.2002, *B.B. 1231*. Ir.-Tur. element.

C. coriacea P.H.Davis

1, on rock, 1500 m, 22.7.2003, *B.B. 2384*; **6**, on rock, 1700-1800 m, 6.10.2003, *B.B. 2544*. Endemic, Ir.-Tur. element; LC.

**C. radula* Fisch.

25, on rock, 1900 m, 29.7.2003, *B.B. 2465*. Ir.-Tur. element.

C. conferta A.DC.

13, steppe, 2000 m, 21.6.2003, *B.B. 1929*. Ir.-Tur. element.

C. reuterana Boiss. & Balansa

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1129*; **7**, stony slope, 1400 m, 24.5.2003, *B.B. 1669*. Ir.-Tur. element.

**Asyneuma amplexicaule* (Willd.) Hand.-Mazz.

23, steppe, 2300 m, 13.7.2003, *B.B. 2260/a*.

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

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1279*; **17**, open oak forest, 1600 m, 16.6.2003, *B.B. 1888*. Ir.-Tur. element.

Legousia falcata (Ten.) Fritsch

19, open oak forest, 1300-1500 m, 1.6.2002, *B.B. 1182*. Medit. element.

PRIMULACEAE

Dionysia bornmuelleri (Pax) Melch.

22, on rock, 1250-1300 m, 3.5.2003, *B.B. 1424*; 12.5.2003, *B.B. 1483*. Ir.-Tur. element; VU.

**Androsace maxima* L.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1052*.

Lysimachia vulgaris L.

16, wet place, 1300-1550 m, 30.6.2003, *B.B. 1995*; **6**, stony slope, 1600 m, 9.7.2003, *B.B. 2123*.

**Anagallis foemina* Mill.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1213*; 18.8.2002, *B.B. 1331*. Medit. element.

OLEACEAE

**Fraxinus angustifolia* Vahl

16, streamside, 1350-1500 m, 18.8.2002, *B.B. 1330*.

APOCYNACEAE

**Trachomitum venetum* subsp. *sarmatiense* (Woodson) Avet.

15, open oak forest, 1300-1600 m, 22.6.2002, *B.B. 1203*. E. Medit. element.

GENTIANACEAE

Centaurium erythraea subsp. *turcicum* (Velen.) Melderis

15, streamside, 1350-1600 m, 22.6.2002, *B.B. 1200*; **26**, streamside, 1300 m, 30.6.2003, *B.B. 1982*;

3, streamside, 1500 m, 1.11.2003, *B.B. 2553*.

CONVOLVULACEAE

**Convolvulus arvensis* L.

19, open oak forest, 1350 m, 1.6.2002, *B.B. 1134*; **16**, open oak forest, 1350-1500 m, 18.8.2002, *B.B. 1333*; **18**, open oak forest, 1350 m, 8.9.2003, *B.B. 2489*.

C. betonicifolius subsp. *peduncularis* (Boiss.) Parris

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1199/b*. Ir.-Tur. element.

C. scammonia L.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1287*; **19**, open oak forest, 1350 m, 16.6.2003, *B.B. 1876*. E. Medit. element.

CUSCUTACEAE

**Cuscuta babylonica* Aucher ex Choisy

10, on *Astragalus*, 1500-1700 m, 5.7.2003, *B.B. 2059*. Ir.-Tur. element.

BORAGINACEAE

**Heliotropium circinatum* Griseb.

22, cultivated field, 1300 m, 19.9.2003, *B.B. 2529*. Ir.-Tur. element.

**H. europaeum* L.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B. 1068, 1084*; **15**, roadside, 1350-1600 m, 20.7.2002, *B.B. 1246*; **16**, open oak forest, 1350-1600 m, 18.8.2002, *B.B. 1308*; **22**, cultivated field, 1300 m, 19.9.2003, *B.B. 2533*; **6**, cultivated field, 1600-1800 m, 6.10.2003, *B.B. 2545*. Medit. element.

- **Lappula sinaica* (DC.) Asch. ex Schweinf.
3, stony slope, 1800 m, 3.6.2004, *B.B.* 2659. Ir.-Tur. element.
- **Rochelia cancellata* Boiss. & Balansa
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1062. Ir.-Tur. element.
- **R. cardiosepala* Bunge
8, wet place, 1700-1900 m, 16.5.2004, *B.B.* 2631. Ir.-Tur. element.
- Asperugo procumbens* L.
27, open oak forest, 1200 m, 3.5.2003, *B.B.* 1414/a; **14**, stony slope, 1400-1600 m, 10.5.2003, *B.B.* 1474, 1474. Euro-Sib. element.
- Myosotis incrassata* Guss.
16, open oak forest, 1300-1460 m, 13.5.2003, *B.B.* 1511. E. Medit. element.
- **M. ramosissima* Rochel ex Schult
27, open oak forest, 1200 m, 3.5.2003, *B.B.* 1414/b, 1423.
- **M. refracta* Boiss.
22, rocky place, 1250-1350 m, 18.4.2004, *B.B.* 2591. Medit. element.
- **M. alpestris* F.W.Schmidt
20, wet slope, 1400-1600 m, 10.5.2003, *B.B.* 1485.
- M. olympica* Boiss.
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1086. Euxine element.
- **Paracaryum cristatum* (Schreb.) Boiss.
13, steppe, 2000 m, 21.6.2003, *B.B.* 1926. Endemic, Ir.-Tur. element; LC.
- Rindera lanata* var. *canescens* (A.DC.) Kusn.
8, open oak forest, 1400 m, 8.6.2003, *B.B.* 1806. Ir.-Tur. element.
- **Solenanthes stamineus* (Desf.) Wettst.
23, stony place, 2300 m, 7.6.2003, *B.B.* 1736; **3**, cultivated field, 1700-1900 m, 16.5.2004, *B.B.* 2629.
- **Arnebia decumbens* (Vent.) Coss. & Kralik
20, rocky place, 1400-1600 m, 10.5.2003, *B.B.* 1472. Ir.-Tur. element.
- **Buglossoides arvensis* (L.) I.M.Johnst.
20, open oak forest, 1500-1600 m, 19.4.2003, *B.B.* 1401; stony slope, 1400-1600 m, 10.5.2003, *B.B.* 1489.
- **Neatostema apulum* (L.) I.M.Johnst.
15, open oak forest, 1500 m, 27.4.2002, *B.B.* 1009; **22**, rocky place, 1250-1300 m, 19.4.2003, *B.B.* 1387; **14**, open oak forest, 1600 m, 19.4.2003, *B.B.* 1404; **20**, stony slope, 1400-1600 m, 10.5.2003, *B.B.* 1477. Medit. element.
- Echium italicum* L.
1, stony place, 1500 m, 16.6.2003, *B.B.* 1832. Medit. element.
- Onosma trachytricha* Boiss.
18, open oak forest, 1400-1600 m, 3.6.2003, *B.B.* 1720. Ir.-Tur. element.
- **O. lanceolata* Boiss. & Hausskn.
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1081; **23**, steppe, 2300 m, 13.7.2003, *B.B.* 2266. Ir.-Tur. element.
- O. alborosea* Fisch. & C.A.Mey.
22, on rock, 1350 m, 3.5.2003, *B.B.* 1421; **20**, on rock, 1400-1600 m, 10.5.2003, *B.B.* 1478. Ir.-Tur. element.
- Anchusa azurea* Mill.
14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1095; **15**, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1257; **16**, open oak forest, 1350 m, 24.5.2003, *B.B.* 1617; **8**, steppe, 1400 m, 24.5.2003, *B.B.* 1672; **6**, steppe, 1700 m, 8.6.2003, *B.B.* 1825; **1**, steppe, 1500-1700 m, 16.6.2003, *B.B.* 1856.

Nonea cf. *macrantha* (Riedl) A.Baytop

25, stony place, 1600 m, 7.6.2003, *B.B.* 1760. Ir.-Tur. element.

**Alkanna orientalis* (L.) Boiss.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B.* 1230; 1300-1460 m, 13.5.2003, *B.B.* 1508. Ir.-Tur. element.

A. froedinii Rech.f.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1049; **13**, steppe, 1700 m, 12.7.2003, *B.B.* 2246.

Endemic, Ir.-Tur. element; LC.

Trichodesma incanum (Bunge) A.DC.

5, scree, 1700 m, 6.7.2003, *B.B.* 2087. Ir.-Tur. element.

SOLANACEAE

Solanum nigrum L.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B.* 1312.

Lycopersicon esculentum Mill. (cv.)

6, cultivated field, 2000 m, 22.7.2003, *B.B.* 2353. Cultivated.

Hyoscyamus niger L.

1, roadside, 1500 m, 10.5.2003, *B.B.* 1449; **7**, stony slope, 1400-1500 m, 24.5.2003, *B.B.* 1666.

Nicotiana tabacum L. (cv.)

16, cultivated field, 1300 m, 13.7.2003, *B.B.* 2303. Cultivated.

SCROPHULARIACEAE

Verbascum agrimoniifolium (K.Koch) Hub.-Mor.

22, rocky place, 1300 m, 12.7.2003, *B.B.* 2178. Ir.-Tur. element.

V. oreophilum var. *joannis* (Bordz.) Hub.-Mor.

13, steppe, 2300 m, 28.7.2003, *B.B.* 2419; 1800 m, *B.B.* 2435. Ir.-Tur. element.

V. kurdicum Hub.-Mor.

6, steppe, 2000 m, 22.7.2003, *B.B.* 2351. Endemic, Ir.-Tur. element; LC.

**V. lasianthum* Boiss. ex Benth

1, steppe, 1500-1700 m, 16.6.2003, *B.B.* 1835, 1853.

**V. speciosum* Schrad.

16, roadside, 1300 m, 12.7.2003, *B.B.* 2191.

**V. cheiranthifolium* Boiss.

12, open oak forest, 1800 m, 8.7.2003, *B.B.* 2090.

Scrophularia pruinosa Boiss.

7, stony slope, 1400 m, 24.5.2003, *B.B.* 1670. Ir.-Tur. element.

S. rimarum Bornm.

22, rocky place, steppe, 2300 m, 28.7.2003, *B.B.* 2416.

**S. lucida* L.

16, open oak forest, 1500 m, 16.6.2003, *B.B.* 1847. Medit. element.

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

16, open oak forest, 1400 m, 19.5.2003, *B.B.* 1608. Ir.-Tur. element.

Linaria chalepensis (L.) Mill.

16, open oak forest, 1350-1500 m, 13.5.2003, *B.B.* 1512; 17.5.2003, *B.B.* 1537; **9**, wet place, 1400-1500 m, 18.4.2004, *B.B.* 2578; 2.5.2004, *B.B.* 2615.

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

26, streamside, 1350-1550 m, 30.6.2003, *B.B.* 1977; **23**, steppe, 2000 m, 13.7.2003, *B.B.* 2277. Ir.-Tur. element.

L. kurdica subsp. *araratica* (Tzvelev) P.H.Davis

22, rocky place, 1250 m, 12.7.2003, *B.B.* 2179. Ir.-Tur. element.

**Veronica pusilla* Kotschy

27, oak forest, 1200 m, 19.4.2003, *B.B. 1390*; **14**, wet place, 1300-1460 m, 13.5.2003, *B.B. 1504*. Ir.-Tur. element.

**V. cfr. praecox* All.

22, rocky place, 1250-1400 m, 28.3.2004, *B.B. 2561*.

V. intercedens Bornm.

15, open oak forest, 1450 m, 17.5.2003, *B.B. 1557*. Ir.-Tur. element.

**V. polita* Fr.

4, wet place, 1500 m, 28.3.2004, *B.B. 2559*.

**V. persica* Poir.

20, rocky place, 1400-1500 m, 3.6.2003, *B.B. 1692*.

V. anagallis-aquatica subsp. *oxycarpa* (Boiss.) Elenevsky

19, streamside, 1350 m, 19.9.2003, *B.B. 2537*.

V. orientalis Mill.

16, streamside, 1350-1600 m, 17.5.2003, *B.B. 1541*; **24**, streamside, 1570 m, 7.6.2003, *B.B. 1748*.

Ir.-Tur. element.

Lagotis stolonifera (K.Koch) Maxim.

24, stony place, 1700 m, 2.5.2004, *B.B. 2595*. Ir.-Tur. element.

Odontites aucheri Boiss.

13, steppe, 2500 m, 28.7.2003, *B.B. 2391*. Ir.-Tur. element.

Rhynchosorys kurdica Nábělek

25, stony place, 2100 m, 29.7.2003, *B.B. 2479*. Endemic, Ir.-Tur. element; NT.

OROBANCHACEAE

Orobanche mutelii F.W.Schultz

13, steppe, 1900 m, 12.7.2003, *B.B. 2214*.

**O. oxyloba* (Reut.) Beck

20, steppe, 1400-1500 m, 24.5.2003, *B.B. 1662*.

**O. purpurea* Jacq.

5, steppe, 1700-1800 m, 1.7.2003, *B.B. 2050*.

**O. cernua* Loefl.

23, steppe, 2300 m, 7.6.2003, *B.B. 1781*; 2700 m, 13.7.2003, *B.B. 2261*; 2800 m, *B.B. 2263*; **5**,

steppe, 1500-1700 m, 9.7.2003, *B.B. 2137*.

ACANTHACEAE

Acanthus dioscoridis L.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1254*; **12**, open oak forest, 1600 m, 21.6.2003, *B.B. 1910*.

GLOBULARIACEAE

Globularia trichosantha Fisch. & C.A.Mey.

23, steppe, 1900 m, 2.5.2004, *B.B. 2605*.

VERBENACEAE

**Verbena officinalis* L.

5, steppe, 1700-1800 m, 1.7.2003, *B.B. 2049*; **10**, streamside, 1500 m, 5.7.2003, *B.B. 2056*.

LAMIACEAE (LABIATEAE)

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

14, open oak forest, 1500 m, 27.5.2002, *B.B. 1072*.

**A. chamaepitys* subsp. *chia* var. *ciliata* Briq.

23, steppe, 2300 m, 13.7.2003, *B.B.* 2274.

Teucrium scordium subsp. *scordioides* (Schreb.) Maire & Petitm.

18, open oak forest, 1250 m, 20.7.2003, *B.B.* 2321; **19**, open oak forest, 1350 m, 19.9.2003, *B.B.* 2538. Euro.-Sib. element.

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

15, open oak forest, 1350-1500 m, 20.7.2002, *B.B.* 1273; **18**, open oak forest, 1350 m, 30.6.2003, *B.B.* 2018; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2091. Euro.-Sib. element.

T. chamaedrys subsp. *sinuatum* (Čelak) Rech.f.

15, open oak forest, 1400 m, 21.6.2003, *B.B.* 1949; **12**, open oak forest, 1800 m, 8.7.2003, *B.B.* 2095. Ir.-Tur. element.

T. polium L.

18, open oak forest, 1350 m, 16.6.2003, *B.B.* 1874; **26**, open oak forest, 1350 m, 30.6.2003, *B.B.* 1966; **13**, steppe, 1900 m, 12.7.2003, *B.B.* 2212.

**Scutellaria albida* subsp. *condensata* (Rech.f.) J.R.Edm.

15, open oak forest, 1400 m, 20.7.2002, *B.B.* 1247; **18**, roadside, 1350 m, 16.6.2003, *B.B.* 1858; open oak forest, 30.6.2003, *B.B.* 2017. Ir.-Tur. element.

**S. orientalis* subsp. *bornmuelleri* (Hausskn. ex Boiss.) J.R.Edm.

5, steppe, 1700 m, 1.7.2003, *B.B.* 2036; **23**, streamside, 1900 m, 13.7.2003, *B.B.* 2297. Ir.-Tur. element.

Eremostachys molucelloides Bunge

4, stony slope, 1750 m, 3.6.2004, *B.B.* 2647. Ir.-Tur. element.

Phlomis tuberosa L.

23, cultivated field, 1800 m, 13.7.2003, *B.B.* 2299.

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

14, oak forest, 1500 m, 20.7.2002, *B.B.* 1258; **18**, open oak forest, 1500 m, 16.6.2003, *B.B.* 1863, 1899; **24**, steppe, 1900 m, 13.7.2003, *B.B.* 2306.

P. rigida Labill.

23, steppe, 2100 m, 13.7.2003, *B.B.* 2289. Ir.-Tur. element.

**P. armeniaca* Willd.

12, open oak forest, 1800 m, 8.7.2003, *B.B.* 2091. Endemic, Ir.-Tur. element; LC.

P. lanceolata Boiss. & Hohen.

12, open oak forest, 1800 m, 8.7.2003, *B.B.* 2111. Ir.-Tur. element.

Lamium garganicum subsp. *reniforme* (Montbret & Aucher ex Benth) R.R.Mill

22, 1250 m, on rock, 3.5.2003, *B.B.* 1425; 24.5.2003, *B.B.* 1628; 1400 m, 19.9.2003, *B.B.* 2526.

**L. amplexicaule* L.

19, on rock, 1350 m, 12.4.2003, *B.B.* 1371; **20**, stony slope, 1500 m, 19.4.2003, *B.B.* 1399; **1**, stony slope, 1500 m, 10.5.2003, *B.B.* 1440; **15**, open oak forest, 1350 m, 13.5.2003, *B.B.* 1520; 17.5.2003, *B.B.* 1535. Euro.-Sib. element.

**L. macrodon* Boiss. & Huet

1, stony slope, 1500 m, 10.5.2003, *B.B.* 1458; **20**, wet place, 1450 m, 10.5.2003, *B.B.* 1482. Ir.-Tur. element.

**Ballota nigra* L. subsp. *nigra*

5, under walnut, 1450 m, 1.7.2003, *B.B.* 2096/b. Euro.-Sib. element.

**B. nigra* subsp. *uncinata* (Fiori & Bég.) Patzak

23, stony place, 2700 m, 13.7.2003, *B.B.* 2256. Medit. element.

**B. nigra* subsp. *kurdica* P.H.Davis

6, steppe, 1900 m, 22.7.2003, *B.B.* 2379. Ir.-Tur. element.

**Marrubium parviflorum* subsp. *oligodon* (Boiss.) Seybold

8, open oak forest, 1400 m, 16.6.2003, *B.B.* 1898. Endemic, Ir.-Tur. element; LC.

M. astracanicum Jacq.

13, steppe, 2000 m, 21.6.2003, *B.B.* 1914; **23**, steppe, 2200 m, 13.7.2003, *B.B.* 2284; **25**, steppe, 1900 m, 29.7.2003, *B.B.* 2464.

**Stachys balansae* Boiss. & Kotschy subsp. *balansae*

13, steppe, 2000 m, 21.6.2003, *B.B.* 1917.

S. balansae subsp. *carduchorum* R.Bhattacharjee

23, steppe, 2700 m, 13.7.2003, *B.B.* 2259. Ir.-Tur. element.

S. ballotaeformis Vatke

19, oak forest, 1350 m, 1.6.2002, *B.B.* 1162, 1167; **22**, on rock, 1300-1450 m, 19.5.2003, *B.B.* 1566, 1575;

16, on rock, 1400-1600 m, 24.5.2003, *B.B.* 1616; **23**, steppe, 2500 m, 13.7.2003, *B.B.* 2312. Ir.-Tur. element.

S. lavandulifolia Vahl var. *lavandulifolia*

23, sandy slope, 1900 m, 7.6.2003, *B.B.* 1742. Ir.-Tur. element.

S. lavandulifolia var. *brachyodon* Boiss.

18, open oak forest, 1400-1500 m, 3.6.2003, *B.B.* 1716. Ir.-Tur. element.

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

5, steppe, 1700-1800 m, 1.7.2003, *B.B.* 2097; **4**, steppe, 1600-1700 m, 9.7.2003, *B.B.* 2148; **13**,

steppe, 1900 m, 12.7.2003, *B.B.* 2229. Ir.-Tur. element.

**S. satureioides* Montbret & Aucher ex Bentham

22, on rock, 1500 m, 10.5.2003, *B.B.* 1470; **1**, steppe, 1500-1700 m, 16.6.2003, *B.B.* 1855; **16**, open

oak forest, 1350-1500 m, 12.7.2003, *B.B.* 2202. Ir.-Tur. element.

S. melampyroides Hand.-Mazz.

26, salty slope, 1400-1500 m, 30.6.2003, *B.B.* 1967. Ir.-Tur. element.

Nepeta italica L.

20, stony slope, 1400 m, 3.6.2003, *B.B.* 1690; **6**, steppe, 1700 m, 8.6.2003, *B.B.* 1817; **16**, stony

place, 1500 m, 16.6.2003, *B.B.* 1846; **5**, steppe, 1700 m, 1.7.2003, *B.B.* 2039.

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

5, open oak forest, 1700 m, 1.7.2003, *B.B.* 2024.

N. betonicifolia C.A.Mey.

23, steppe, 2200 m, 7.6.2003, *B.B.* 1773; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1913. Ir.-Tur. element.

N. fissa C.A.Mey.

16, open oak forest, 1400 m, 18.8.2002, *B.B.* 1320; **13**, stony place, 1900 m, 12.7.2003, *B.B.* 2232.

Ir.-Tur. element.

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

23, steppe, 2000 m, 7.6.2003, *B.B.* 1782. Ir.-Tur. element.

L. iberica (M.Bieb.) Fisch. & C.A.Mey.

14, open oak forest, 1500 m, 27.5.2002, *B.B.* 1094; **19**, open oak forest, 1350-1500 m, 1.6.2002, *B.B.*

1140, 1176; **16**, open oak forest, 1400 m, 17.5.2003, *B.B.* 1543; **15**, open oak forest, 1450 m,

17.5.2003, *B.B.* 1560; **7**, stony slope, 1500-1600 m, 16.5.2004, *B.B.* 2624. Ir.-Tur. element.

**Hymenocrater bituminosus* Fisch. & C.A.Mey.

8, open oak forest, 1400 m, 8.6.2003, *B.B.* 1812; **7**, on rock, 1500-1600 m, 16.5.2004, *B.B.* 2618. Ir.-

Tur. element.

**Prunella vulgaris* L.

13, steppe, 2000 m, 21.6.2003, *B.B.* 1928. Euro-Sib. element.

**Origanum vulgare* subsp. *gracile* (K.Koch) Ietsw.

10, streamside, 1500 m, 5.7.2003, *B.B.* 2060; **6**, streamside, 2000 m, 22.7.2003, *B.B.* 2354. Ir.-Tur.

element.

**Clinopodium vulgare* L. subsp. *vulgare*

23, steppe, 2200 m, 13.7.2003, *B.B.* 2302.

**C. vulgare* subsp. *arundanum* (Boiss.) Nyman

5, cultivated field, 1700 m, 1.7.2003, *B.B.* 2031; **10**, streamside, 1500-1700 m, 5.7.2003, *B.B.* 2085.

Micromeria cremnophila subsp. *anatolica* P.H.Davis

22, rocky place, 1350-1400 m, 12.7.2003, *B.B.* 2175. Endemic, Ir.-Tur. element; LC.

Cyclotrichium stamineum (Boiss. & Hohen.) Manden. & Scheng.

22, on rock, 1250-1400 m, 12.7.2003, *B.B.* 2173; **6**, stony slope, 1700-1800 m, 6.10.2003, *B.B.* 2542.

Ir.-Tur. element; VU.

**C. glabrescens* (Boiss. & Kotschy ex Rech.f.) Leblebici

22, on rock, 1250-1400 m, 12.7.2003, *B.B.* 2177; **24**, open oak forest, 1700 m, 29.7.2003, *B.B.* 2484.

Endemic, Ir.-Tur. element; NT.

Thymus kotschyanus var. *glabrescens* Boiss.

22, on rock, 1250 m, 19.5.2003, *B.B.* 1579; **20**, on rock, 1400 m, 3.6.2003, *B.B.* 1691; **8**, open oak forest, 1450 m, 8.6.2003, *B.B.* 1814; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1933; **26**, streamside, 1350 m, 30.6.2003, *B.B.* 1975. Ir.-Tur. element.

T. kotschyanus var. *eriophorus* (Ronniger) Jalas

13, steppe, 2000 m, 21.6.2003, *B.B.* 1932. Ir.-Tur. element.

T. pubescens Boiss. & Kotschy ex Čelak. var. *pubescens*

13, steppe, 2000 m, 21.6.2003, *B.B.* 1935.

**T. pubescens* var. *cratericola* Jalas

13, steppe, 1900 m, 12.7.2003, *B.B.* 2219. Endemic, Ir.-Tur. element; NT.

**Mentha longifolia* (L.) Huds.

16, streamside, 1400 m, 18.8.2002, *B.B.* 1315/a. Euxine element.

Ziziphora clinopodioides Lam.

6, steppe, 2000 m, 22.7.2003, *B.B.* 2358.

Z. capitata L.

14, oak forest, 1520 m, 27.5.2002, *B.B.* 1035; **19**, oak forest, 1350 m, 1.6.2002, *B.B.* 1170; **16**, oak forest, 1400 m, 17.5.2003, *B.B.* 1534, 1550. Ir.-Tur. element.

Salvia macrochlamys Boiss. & Kotschy

11, steppe, 1500 m, 12.7.2003, *B.B.* 2234. Ir.-Tur. element.

S. trichoclada Bentham

14, open oak forest, 1520 m, 27.5.2002, *B.B.* 1082; **19**, open oak forest, 1350 m, 16.6.2003, *B.B.* 1856, 1883; **5**, steppe, 1700 m, 1.7.2003, *B.B.* 2043. Ir.-Tur. element.

S. multicaulis Vahl

14, open oak forest, 1520 m, 27.5.2002, *B.B.* 1054, 1092; **19**, open oak forest, 1350 m, 1.6.2002, *B.B.* 1131. Ir.-Tur. element.

S. syriaca L.

24, steppe, 1600 m, 7.6.2003, *B.B.* 1759. Ir.-Tur. element.

S. sclarea L.

6, streamside, 1600 m, 21.6.2003, *B.B.* 1955; **10**, streamside, 1500 m, 5.7.2003, *B.B.* 2086.

S. microstegia Boiss. & Balansa

19, 1350 m, sandy slope, 1.6.2002, *B.B.* 1119; **8**, stony slope, 1400 m, 24.5.2003, *B.B.* 1671. Ir.-Tur. element.

**S. atropatana* Bunge

12, open oak forest, 1800 m, 8.7.2003, *B.B.* 2113. Ir.-Tur. element.

S. poculata Nábělek

23, steppe, 2300 m, 7.6.2003, *B.B.* 1761, 1766. Ir.-Tur. element.

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

1, wet place, 1500 m, 16.6.2003, *B.B.* 1831. Ir.-Tur. element.

**S. staminea* Montbret & Aucher ex Benth

15, wet place, 1300 m, 30.6.2003, *B.B.* 2001. Ir.-Tur. element.

**S. virgata* Jacq.

15, open oak forest, 1400 m, 22.6.2002, *B.B.* 1204; 20.7.2002, *B.B.* 1235, 1268; **16**, open oak forest, 1350 m, 18.8.2002, *B.B.* 1317. Ir.-Tur. element.

S. nemorosa L.

1, wet place, 1500 m, 16.6.2003, *B.B.* 1829; **5**, roadside, 1700 m, 1.7.2003, *B.B.* 2032; **4**, steppe, 1600 m, 9.7.2003, *B.B.* 2139.

**S. dichroantha* Stapf

19, open oak forest, 1350 m, 16.6.2003, *B.B.* 1868. Endemic, Ir.-Tur. element; LC.

S. verticillata L. subsp. *verticillata*

15, 1400 m, open oak forest, 22.6.2002, *B.B.* 1223; **19**, open oak forest, 1350 m, 1.6.2002, *B.B.* 1237;

1, stony slope, 1500 m, 16.6.2003, *B.B.* 1834; wet place, *B.B.* 1838; **5**, steppe, 1500 m, 9.7.2003, *B.B.* 2136. Euro-Sib. element.

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

15, open oak forest, 1400 m, 22.6.2002, *B.B.* 1194; **23**, steppe, 2100 m, *B.B.* 2290. Ir.-Tur. element.

PLUMBAGINACEAE

**Plumbago europaea* L.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B.* 1318; **18**, steppe, 1350 m, 8.9.2003, *B.B.* 2487. Euro-Sib. element.

**Acantholimon armenum* var. *balansae* Boiss. & Huet

15, open oak forest, 1300-1600 m, 20.7.2002, *B.B.* 1300; **19**, open oak forest, 1350-1500 m, 30.6.2003, *B.B.* 2011. Ir.-Tur. element.

PLANTAGINACEAE

**Plantago major* L. subsp. *major*

16, streamside, 1350-1500 m, 18.8.2002, *B.B.* 1326/a.

THYMELAEACEAE

**Daphne oleoides* subsp. *kurdica* (Bornm.) Bornm.

25, stony slope, 2000 m, 29.7.2003, *B.B.* 2469. Ir.-Tur. element.

D. mucronata Royle

15, slope, 1400 m, 20.7.2002, *B.B.* 1256; **12**, slope, 1800 m, 8.7.2003, *B.B.* 2112; **23**, steppe, 2000

m, 13.7.2003, *B.B.* 2275; **26**, stony slope, 1250 m, 20.7.2003, *B.B.* 2336; **13**, steppe, 1900 m, 28.7.2003, *B.B.* 2428. Ir.-Tur. element.

ELAEAGNACEAE

Elaeagnus angustifolia L.

15, cultivated field, 1500 m, 16.6.2003, *B.B.* 1842.

ARISTOLOCHIACEAE

Aristolochia bottae Jaub. & Spach

10, steppe, 1500-1700 m, 5.7.2003, *B.B.* 2077. Ir.-Tur. element.

EUPHORBIACEAE

Chrozophora tinctoria (L.) Raf.

1, stony slope, 1500 m, 27.7.2003, *B.B.* 2385; **6**, steppe, 1500 m, 8.9.2003, *B.B.* 2517.

Euphorbia macrocarpa Boiss. & Buhse

23, steppe, 2200 m, 13.7.2003, *B.B. 2301*. Ir.-Tur. element.

**E. cardiophylla* Boiss. & Heldr.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1136*. Endemic, Ir.-Tur. element; LC.

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

26, open oak forest, 1350-1400 m, 30.6.2003, *B.B. 1968*; **6**, steppe, 1900 m, 22.7.2003, *B.B. 2359*. Ir.-Tur. element.

**E. szovitsii* var. *kharputensis* Azn. ex. M.S.Khan

6, steppe, 1500 m, 28.7.2003, *B.B. 2457*; **9**, rocky place, 1300-1800 m, 4.4.2004, *B.B. 2566*.

E. falcata L.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1238*; **16**, cultivated field, 1350-1500 m, 18.8.2002, *B.B. 1336*.

E. denticulata Lam.

7, steppe, 1400 m, 24.5.2003, *B.B. 1664*. Ir.-Tur. element.

E. macroclada Boiss.

15, open oak forest, 1350-1600 m, 20.7.2002, *B.B. 1291*; 18.8.2002, *B.B. 1343*; **5**, steppe, 1700-1800 m, 1.7.2003, *B.B. 2052*; **12**, open oak forest, 1800 m, 8.7.2003, *B.B. 2104*; **22**, rocky place, 1250 m, 12.7.2003, *B.B. 2183, 2184*; **6**, steppe, 1800 m, 22.7.2003, *B.B. 2357*; **13**, steppe, 1900 m, 28.7.2003, *B.B. 2427*. Ir.-Tur. element.

**E. virgata* Waldst. & Kit.

15, open oak forest, 1350-1600 m, 20.7.2003, *B.B. 2360*; **23**, steppe, 2200 m, 13.7.2003, *B.B. 2283*;

6, steppe, 2000 m, 22.7.2003, *B.B. 2373*; **13**, steppe, 1800 m, 28.7.2003, *B.B. 2436*.

E. sanasunitensis Hand.-Mazz.

13, steppe, 2500 m, 28.7.2003, *B.B. 2395*. Endemic, Ir.-Tur. element; NT.

URTICACEAE

**Urtica dioica* L.

6, streamside, 1800 m, 22.7.2003, *B.B. 2356*. Euro-Sib. element.

Parietaria judaica L.

15, on rock, 1350-1600 m, 20.7.2002, *B.B. 1250*; **22**, rocky place, 1300-1400 m, 19.5.2003, *B.B. 1580*; 12.7.2003, *B.B. 2164*; **4**, on rock, 1600-1700 m, 9.7.2003, *B.B. 2144*.

MORACEAE

Morus alba L. (cv.)

26, streamside, 1250 m, 20.7.2003, *B.B. 2343*. Cultivated.

M. nigra L. (cv.)

26, streamside, 1250 m, 20.7.2003, *B.B. 2341*. Cultivated.

Ficus carica subsp. *rupestris* (Hausskn.) Browicz

16, on rock, 1350-1500 m, 18.8.2002, *B.B. 1310*; **22**, rocky place, 1250-1400 m, 12.7.2003, *B.B. 2168*. Ir.-Tur. element.

ULMACEAE

Celtis tournefortii Lam.

22, roadside, 1250 m, 24.5.2003, *B.B. 1623*.

C. glabrata Stev. ex Planch.

22, roadside, 1300 m, 19.9.2003, *B.B. 2535*.

JUGLANDACEAE

**Juglans regia* L.

7, streamside, 1400 m, 24.5.2003, *B.B. 1665*.

FAGACEAE

Quercus infectoria subsp. *boissieri* (Reut.) O.Schwarz

15, slope, 1420 m, 16.3.2003, *B.B.* 1354; **10**, rocky slope, 1500 m, 5.7.2003, *B.B.* 2083; **18**, slope, 1350 m, 8.9.2003, *B.B.* 2493, 2495; **22**, rocky slope, 1300 m, 19.9.2003, *B.B.* 2534.

Q. brantii Lindley

10, rocky slope, 1500 m, 5.7.2003, *B.B.* 2072; **22** rocky slope, 1300 m, 12.7.2003, *B.B.* 2169; 19.9.2003, *B.B.* 2518; **18**, slope, 1350 m, 8.9.2003, *B.B.* 2490. Ir.-Tur. element.

Q. libani Oliv.

15, slope, 1350-1600 m, 20.7.2002, *B.B.* 1296; 13.5.2003, *B.B.* 1507; **16**, slope, 1350 m, 13.5.2003, *B.B.* 1509; **10**, rocky slope, 1500 m, 5.7.2003, *B.B.* 2076; **18**, slope, 1300 m, 20.7.2003, *B.B.* 2331; **22**, rocky slope, 1300 m, 19.9.2003, *B.B.* 2532. Ir.-Tur. element.

SALICACEAE

**Salix pentandra* L.

15, streamside, 1400 m, 17.5.2003, *B.B.* 1554. Euro.-Sib. element.

**S. alba* L.

18, streamside, 1250 m, 20.7.2003, *B.B.* 2326; **22**, streamside, 1250 m, 18.4.2004, *B.B.* 2594; **9**, streamside, 1480 m, 2.5.2004, *B.B.* 2614, 2616; **17**, streamside, 1700-1800 m, 3.6.2004, *B.B.* 2679. Euro.-Sib. element.

**S. excelsa* J.F.Gmel.

9, streamside, 1480 m, 2.5.2004, *B.B.* 2612. Ir.-Tur. element.

**S. caprea* L.

4, streamside, 1500 m, 28.3.2004, *B.B.* 2560. Euro.-Sib. element.

**S. pseudomedemii* E.Wolf

4, streamside, 1500 m, 4.4.2004, *B.B.* 2574, 2575. Euxine element.

Populus euphratica Oliv. (cv.)

6, cultivated field, 1800 m, 22.7.2003, *B.B.* 2377. Cultivated.

RUBIACEAE

Crucianella gilanica Trin. subsp. *pontica* (Ehrend.) Ehrend.

24, steppe, 1800 m, 17.7.2003, *B.B.* 2309. Euxine element.

C. gilanica subsp. *glauca* (A.Rich. ex DC.) Ehrend.

12, open oak forest, 1800 m, 8.7.2003, *B.B.* 2094; **26**, open oak forest, 1350 m, 20.7.2003, *B.B.* 2333. Ir.-Tur. element.

Asperula xylorrhiza Nábělek

18, open oak forest, 1600 m, 16.6.2003, *B.B.* 1889; 1350-1500 m, 30.6.2003, *B.B.* 2019. Ir.-Tur. element.

**Galium verum* subsp. *glabrescens* Ehrend.

16, open oak forest, 1300-1500 m, 30.6.2003, *B.B.* 1996. Ir.-Tur. element.

G. consanguineum Boiss.

16, open oak forest, 1300-1500 m, 30.6.2003, *B.B.* 1990; **13**, on rock, 1900 m, 12.7.2003, *B.B.* 2228; **23**, steppe, 2200 m, 13.7.2003, *B.B.* 2285. Ir.-Tur. element.

G. psilophyllum Ehrend. & E.Schonbeck-Temesy

22, rocky place, 1250-1350 m, 24.5.2003, *B.B.* 1631; **13**, steppe, 2300 m, 28.7.2003, *B.B.* 2415. Ir.-Tur. element.

**G. aparine* L.

16, oak forest, 1350 m, 3.6.2004, *B.B.* 2661.

G. tricornutum Dandy

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1044. Medit element.

G. haussknechtii Ehrend.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1227*. Ir.-Tur. element.

G. nigricans Boiss.

3, stony slope, 1500-1600 m, 3.6.2004, *B.B. 2652*. Ir.-Tur. element.

**G. murale* (L.) All.

17, on rock, 1700-1800 m, 3.6.2004, *B.B. 2673*. Medit. element.

Callipeltis cucullaria (L.) Stev.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B. 1177*; **20**, stony slope, 1400-1500 m, 24.5.2003, *B.B. 1655*. Ir.-Tur. element.

Cruciata taurica (Palas ex Willd.) Ehrend.

23, streamside, 2080 m, 7.6.2003, *B.B. 1751*. Ir.-Tur. element.

Rubia tinctorum L.

6, cultivated field, 1800 m, 22.7.2003, *B.B. 2376*. Ir.-Tur. element.

MONOCOTYLEDONES

ARACEAE

Arum elongatum subsp. *detruncatum* (C.A.Mey. ex Schott) Riedl

10, stony slope, 1500-1700 m, 5.7.2003, *B.B. 2080*; **16**, streamside, 1400-1500 m, 17.5.2004, *B.B. 2641*. Ir.-Tur. element.

LILIACEAE

Asparagus verticillatus L.

16, oak forest, 1300-1550 m, 30.6.2003, *B.B. 1992*.

**Eremurus spectabilis* M.Bieb.

22, rocky place, 1300-1450 m, 19.5.2003, *B.B. 1581/a*; **23**, on rock, 1900 m, 2.5.2004, *B.B. 2606*. Ir.-Tur. element.

**Allium tchihatschewii* Boiss.

23, sandy place, 1900 m, 7.6.2003, *B.B. 1739*. Endemic, Ir.-Tur. element; LC.

**A. pallens* L.

15, open oak forest, 1300-1600 m, 20.7.2002, *B.B. 1299*. Medit. element.

**A. pseudoflavum* Vved.

17, open oak forest, 1700-1800 m, 3.6.2004, *B.B. 2677*. Ir.-Tur. element.

**A. pseudoampeloprasum* Misczenko ex Grossh.

15, open oak forest, 1400 m, 21.6.2003, *B.B. 1947*; **16**, open oak forest, 1400-1500 m, 17.5.2004, *B.B. 2643*. Ir.-Tur. element; VU.

**A. atroviolaceum* Boiss.

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1208/a*.

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

15, open oak forest, 1350-1600 m, 22.6.2002, *B.B. 1208/b*; 21.6.2003, *B.B. 1953*; **12**, open oak forest, 1800 m, 8.7.2003, *B.B. 2100*. Medit. element.

A. vineale L.

18, open oak forest, 1250 m, 20.7.2003, *B.B. 2318*.

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

16, open oak forest, 1350-1500 m, 12.7.2003, *B.B. 2197*. Ir.-Tur. element.

A. akaka S.G.Gmelin

9, rocky slope, 1400-1500 m, 2.5.2004, *B.B. 2611*. Ir.-Tur. element.

**A. chrysantherum* Boiss. & Reut.

18, open oak forest, 1600 m, 16.6.2003, *B.B. 1893*. Ir.-Tur. element.

- **A. cfr. decipiens* Fisch. ex Schult. & Schult.f.
23, steppe, 2400 m, 7.6.2003, *B.B. 1772*. Euxine element.
- **A. kharputense* Freyn & Sint.
15, open oak forest, 1450 m, 17.5.2003, *B.B. 1556*. Ir.-Tur. element.
- **A. shatakiense* Rech.f.
23, wet place, 2300 m, 7.6.2003, *B.B. 1774*. Endemic, Ir.-Tur. element; NT.
- **Scilla bifolia* L.
23, rocky place, 2000 m, 2.5.2004, *B.B. 2603*. Medit. element.
- S. persica* Hausskn.
20, wet place, 1400-1600 m, 10.5.2003, *B.B. 1460*. Ir.-Tur. element.
- **S. siberica* Haw. subsp. *armena* (Grossh.) Mordak
22, rocky place, 1250-1350 m, 19.4.2003, *B.B. 1388*; 28.3.2004, *B.B. 2564*. Ir.-Tur. element.
- Puschkinia scilloides* Adams
23, stony place, 2500 m, 7.6.2003, *B.B. 1769*. Ir.-Tur. element.
- **Ornithogalum sphaerocarpum* A.Kern.
15, oak forest, 1400-1600 m, 3.6.2003, *B.B. 1730*.
- O. narbonense* L.
14, streamside, 1400-1600 m, 27.5.2002, *B.B. 1024, 1025*. Medit. element.
- **O. oligophyllum* Clarke
14, wet place, 1300-1600 m, 13.5.2003, *B.B. 1497*.
- **O. platyphyllum* Boiss.
14, streamside, 1400-1600 m, 27.5.2002, *B.B. 1026*. Ir.-Tur. element.
- **O. alpigenum* Stapf
9, steppe, 1400-1500 m, 18.4.2004, *B.B. 2579*. Endemic, E. Medit. element; NT.
- **Muscari tenuiflorum* Tausch
19, open oak forest, 1300-500 m, 1.6.2002, *B.B. 1189*; **17**, stony slope, 1700-1800 m, 3.6.2004, *B.B. 2668*.
- **M. longipes* Boiss.
14, wet place, 1400-1600 m, 27.5.2002, *B.B. 1034*. Ir.-Tur. element.
- M. armeniacum* Leichtlin ex Baker
15, wet place, 1400-1600 m, 3.5.2003, *B.B. 1430*; **14**, wet place, 1650 m, 18.4.2004, *B.B. 2586*.
- **M. neglectum* Guss.
14, wet place, 1400-1600 m, 27.5.2002, *B.B. 1042/a*; **16**, oak forest, 1350-1500 m, 12.4.2003, *B.B. 1377*.
- **Bellevalia longistyla* (Miscz.) Grossh.
1, stony slope, 1500 m, 10.5.2003, *B.B. 1446*; **24**, wet place, 1800 m, 2.5.2004, *B.B. 2598*. Ir.-Tur. element; VU.
- **B. paradoxa* (Fisch. & C.A.Mey.) Boiss.
14, wet place, 1400-1600 m, 10.5.2003, *B.B. 1462*. Ir.-Tur. element.
- **Fritillaria imperialis* L.
24, oak forest, 1800-1900 m, 2.5.2004, *B.B. 2609*. Ir.-Tur. element; VU.
- F. minuta* Boiss. & Noë
20, wet place, 1400-1600 m, 10.5.2003, *B.B. 1461/a*; **23**, rocky place, 2300 m, 7.6.2003, *B.B. 1770*. Ir.-Tur. element.
- F. pinardii* Boiss.
24, sandy slope, 1800 m, 2.5.2004, *B.B. 2599*. Ir.-Tur. element.
- **F. zagrica* Stapf
14, wet place, 1400-1600 m, 10.5.2003, *B.B. 1461/b*. Ir.-Tur. element.

Tulipa humilis Herb.

9, rocky place, 1800 m, 4.4.2004, *B.B.* 2565.

T. julia K.Koch

16, oak forest, 1350 m, 24.5.2003, *B.B.* 1610. Ir.-Tur. element.

**Gagea gageoides* (Zucc.) Vved.

16, open oak forest, 1350-1500 m, 18.8.2002, *B.B.* 1326/b. Ir.-Tur. element.

G. reticulata (Pall.) Schult. & Schult. f.

14, open oak forest, 1400-1600 m, 27.4.2002, *B.B.* 1016. Ir.-Tur. element.

G. tenera Pascher

16, open oak forest, 1420 m, 6.4.2003, *B.B.* 1359. Ir.-Tur. element.

**G. glacialis* K.Koch

4, on rock, 1500 m, 28.3.2004, *B.B.* 2558. Ir.-Tur. element.

**Colchicum szovitsii* Fisch. & C.A.Mey.

14, wet place, 1500 m, 6.4.2003, *B.B.* 1363. Ir.-Tur. element.

**C. kotschyi* Boiss.

2, rocky place, 1250-1300 m, 18.4.2004, *B.B.* 2592. Ir.-Tur. element.

Merendera kurdica Bornm.

23, wet place, 2500 m, 7.6.2003, *B.B.* 1771. Ir.-Tur. element.

AMARYLLIDACEAE

Ixiolirion tataricum (Pall.) Herb. subsp. *montanum* (Labill.) Takht.

14, open oak forest, 1400-1600 m, 27.5.2002, *B.B.* 1065. Ir.-Tur. element.

IRIDACEAE

**Iris sari* Schott ex Baker

23, steppe, 2300 m, 7.6.2003, *B.B.* 1758. Endemic, Ir.-Tur. element; LC.

I. aucheri (Baker) Sealy

22, rocky place, 1250-1350 m, 18.4.2004, *B.B.* 2593. Ir.-Tur. element; VU.

**I. caucasica* subsp. *turcica* B.Mathew

24, sandy place, 1800 m, 2.5.2004, *B.B.* 2596. Ir.-Tur. element.

I. persica L.

15, open oak forest, 1420 m, 6.4.2003, *B.B.* 1358. Ir.-Tur. element.

**Crocus biflorus* subsp. *tauri* (Maw) B.Mathew

15, open oak forest, 1420 m, 16.3.2003, *B.B.* 1353; **14**, open oak forest, 1500 m, 6.4.2003, *B.B.* 1562. Ir.-Tur. element.

Gladiolus kotschyanus Boiss.

18, wet place, 1400-1600 m, 3.6.2003, *B.B.* 1718; **13**, wet place, 2000 m, 21.6.2003, *B.B.* 1920. Ir.-Tur. element.

G. atroviolaceus Boiss.

14, steppe, 1400-1600 m, 27.5.2002, *B.B.* 1096. Ir.-Tur. element.

ORCHIDACEAE

Epipactis palustris (L.) Crantz

15, streamside, 1300 m, 30.6.2003, *B.B.* 1997. Euro-Sib. element.

Ophrys straussii H.Fleischm. & Bornm.

14, streamside, 1400-1600 m, 27.5.2002, *B.B.* 1074.

Orchis coriophora L.

14, streamside, 1400-1600 m, 27.5.2002, *B.B.* 1085.

O. tridentata Scop.

21, oak forest, 1380 m, 24.5.2003, *B.B.* 1675. Medit. element.

O. palustris Jacq.

14, streamside, 1400-1600 m, 27.5.2002, *B.B.* 1027.

Dactylorhiza flavescens (K.Koch) H. Baumann & Künkele

5, cultivated field, 1900 m, 17.5.2004, *B.B.* 2646. Euxine element.

D.cf. umbrosa (Kar. & Kir.) Nevski

1, streamside, 1500-1700 m, 8.6.2003, *B.B.* 1795.

TYPHACEAE

**Thypha angustifolia* L.

19, streamside, 1350 m, 19.9.2003, *B.B.* 2536.

CYPERACEAE

**Cyperus longus* L.

18, wet place, 1250 m, 20.7.2003, *B.B.* 2323.

Scirpoides holoschoenus (L.) Sojak

16, streamside, 1300-1500 m, 30.6.2003, *B.B.* 1994.

**Carex stenophylla* subsp. *stenophylloides* (V.Krecz.) T.V.Egorova

19, wet place, 1350-1500 m, 12.4.2003, *B.B.* 1373. Ir.-Tur. element.

POACEAE (GRAMINEAE)

**Elymus caninus* (L.) L.

13, steppe, 1900 m, 28.7.2003, *B.B.* 2425. Euro-Sib. element.

**Heterantherium piliferum* (Sol.) Hochst.

18, open oak forest, 1700-1800 m, 3.6.2004, *B.B.* 2676. Ir.-Tur. element.

Aegilops cylindrica Host

26, open oak forest, 1350-1500 m, 30.6.2003, *B.B.* 1970. Ir.-Tur. element.

**A. tauschii* Cosson

18, open oak forest, 1350 m, 30.6.2003, *B.B.* 2022. Ir.-Tur. element.

Triticum dicoccon Schrank (cv.)

6, cultivated field, 1800 m, 22.7.2003, *B.B.* 2355. Cultivated.

**Secale anatolicum* Boiss.

15, wet place, 1300-1550 m, 30.6.2003, *B.B.* 1989.

Psathyrostachys fragilis (Boiss.) Nevski

23, steppe, 2500 m, 13.7.2003, *B.B.* 2254. Ir.-Tur. element.

**Hordeum murinum* L.

19, wet place, 1350-1500 m, 1.6.2002, *B.B.* 1155.

H. bulbosum L.

18, wet place, 1450 m, 16.6.2003, *B.B.* 1862.

Taeniatherum caput-medusae subsp. *crinitum* (Schreb.) Melderis

18, wet place, 1350-1500 m, 1.6.2002, *B.B.* 1149; 1450 m, 16.6.2003, *B.B.* 1861; **26**, salty slope, 1400 m, 30.6.2003, *B.B.* 1965. Ir.-Tur. element.

Bromus danthoniae Trin.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1147; **16**, open oak forest, 1350-1600 m, 20.7.2002, *B.B.* 1281.

B. pumilio (Trin.) P.M.Sm.

19, open oak forest, 1350 m, 16.6.2003, *B.B.* 1865.

**B. tomentellus* Boiss.

23, rocky place, 1900 m, 7.6.2003, *B.B.* 1740; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1915. Ir.-Tur. element.

**Arrhenatherum kotschyi* Boiss.

22, rocky place, 1300-1450 m, 19.5.2003, *B.B.* 1578. Ir.-Tur. element.

Calamagrostis pseudophragmites (Haller f.) Koeler

16, streamside, 1300-1550 m, 30.6.2003, *B.B.* 1985. Euro-Sib. element.

Apera intermedia Hack. apud Zederb.

5, stony slope, 1500 m, 9.7.2003, *B.B.* 2129. Ir.-Tur. element.

**Polypogon viridis* (Gouan) Breistr.

19, steppe, 1350-1500 m, 30.6.2003, *B.B.* 2010. Euro-Sib. element.

**Phleum pratense* L.

19, wet place, 1350-1500 m, 1.6.2002, *B.B.* 1146; **14**, wet place, 1300-1460 m, 13.5.2003, *B.B.* 1501;

16, wet place, 1350-1550 m, 12.7.2003, *B.B.* 2201; **18**, wet place, 1300 m, 20.7.2003, *B.B.* 2320.

Euro-Sib. element.

P. boissieri Bornm.

10, streamside, 1500 m, 5.7.2003, *B.B.* 2062. Ir.-Tur. element.

**Festuca arundinacea* Schreb. subsp. *arundinacea*

12, streamside, 1700 m, 12.7.2003, *B.B.* 2241/a.

**Lolium multiflorum* Lam.

18, wet place, 1300 m, 20.7.2003, *B.B.* 2319.

Poa trivialis L.

18, wet place, 1350-1500 m, 1.6.2002, *B.B.* 1145.

**P. timoleontis* Heldr. ex Boiss.

14, wet place, 1400-1600 m, 27.5.2002, *B.B.* 1064. E. Medit. element.

P. bulbosa L.

1, stony slope, 1500 m, 10.5.2003, *B.B.* 1447; **24**, stony place, 2000 m, 2.5.2004, *B.B.* 2604.

Eremopoa songarica (Schrenk) Roshev.

18, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1143. Ir.-Tur. element.

Dactylis glomerata subsp. *hispanica* (Roth) Nyman

15, open oak forest, 1500-1700 m, 19.5.2003, *B.B.* 1588; **18**, wet place, 1600 m, 16.6.2003, *B.B.*

1890; **22**, rocky place, 1250 m, 12.7.2003, *B.B.* 2181; **13**, steppe, 1900 m, 12.7.2003, *B.B.* 2225.

**Briza humilis* M.Bieb.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1141.

**Melica persica* subsp. *jacquemontii* (Decne. ex Jacquem.) P.H.Davis

20, wet place, 1400-1500 m, 3.6.2003, *B.B.* 1693. Ir.-Tur. element.

**M. persica* subsp. *inaequiglumis* (Boiss.) Bor

22, wet place, 1300-1450 m, 19.5.2003, *B.B.* 1576; **7**, stony slope, 1500-1600 m, 16.5.2004, *B.B.* 2619.

Glyceria plicata (Fr.) Fr.

19, open oak forest, 1350-1500 m, 1.6.2002, *B.B.* 1151.

**Stipa bromoides* (L.) Dörfl.

10, wet place, 1500 m, 5.7.2003, *B.B.* 2065. Medit. element.

**S. kurdistanica* Bor

22, rocky place, 1250-1400 m, 12.7.2003, *B.B.* 2161. Ir.-Tur. element; VU.

**S. ehrenbergiana* Trin. & Rupr.

20, on rock, 1450 m, 3.6.2003, *B.B.* 1701; **13**, steppe, 2000 m, 21.6.2003, *B.B.* 1923; **7**, on rock, 1500-1600 m, 16.5.2004, *B.B.* 2622. Ir.-Tur. element.

Piptatherum holciforme (M.Bieb.) Roem. & Schult. subsp. *holciforme* var. *holciforme*

15, wet place, 1500-1700 m, 19.5.2003, *B.B.* 1589.

Phragmites australis (Cav.) Trin. ex Steud.

18, streamside, 1250 m, 20.7.2003, *B.B.* 2324. Euro-Sib. element.

**Cynodon dactylon* var. *villosus* Regel

18, steppe, 1350 m, 30.6.2003, *B.B.* 2008; **22**, steppe, 1300 m, 19.9.2003, *B.B.* 2531.

**Crypsis aculeata* (L.) Aiton

13, salty place, 1700 m, 19.9.2003, *B.B.* 2539.

**Setaria viridis* (L.) P.Beauv.

16, cultivated field, 1300 m, 8.9.2003, *B.B.* 2499.

**Pennisetum orientale* Rich.

19, open oak forest, 1350 m, 16.6.2003, *B.B.* 1881; **22**, streamside, 1250-1400 m, 12.7.2003, *B.B.* 2166. Ir.-Tur. element.

Bothriochloa ischaemum (L.) Keng

15, open oak forest, 1350-1600 m, 2.7.2002, *B.B.* 1243.

