



Flora of an important plant area: Çatak Valley - II (Çatak-Van/Turkey)

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Abstract

This research covers upper part of the flora of Çatak Valley. The research was carried out between 2002 and 2004. During the study period, 1739 vascular plant specimens were collected. After the identification of the specimens, the flora was determined to include 854 taxa (at specific and intraspecific ranks) belonging to 359 genera, and 76 families. 20 taxa were defined as new records for the B9 grid square. The endemism rate of the area is 7,37% based on 63 taxa. The largest families are *Asteraceae* (139 taxa), *Brassicaceae* (75 taxa), and *Fabaceae* (68 taxa). The largest genera are *Astragalus* L. (23), *Silene* L. and (20) *Centaurea* L.(18). The phytogeographic elements represented in the study area are as follows: Irano-Turanian 391 (45,78%), Euro-Siberian 52 (6,09%), and Mediterranean 22 (2,58%).

Key words: Flora, Çatak, Endemic, Van, Turkey

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Önemli bir bitki alanının florası: Çatak Vadisi - II (Çatak-Van/Türkiye)

Özet

Bu çalışma Çatak Vadisi'nin üst kısmının florasını kapsamaktadır. 2002-2004 yılları arasında gerçekleştirilen bu araştırma esnasında 1739 vasküler bitki örneği toplandı. Toplanan örneklerin teşhisi sonucu 359 cins ve 76 familyaya ait toplam 854 takson (tür ve türaltı kategoriler) belirlendi. 20 taksonun B9 karesi için yeni kayıt olduğu ortaya kondu. Alandan 63 endemik taksonun (% 7,37) yayılışı kaydedildi. En büyük üç familya; *Asteraceae* (139 takson), *Brassicaceae* (75 takson) ve *Fabaceae* (68 takson)' dir. En büyük cinsler; *Astragalus* L. (23), *Silene* L. (20) ve *Centaurea* L. (18)'dir. Araştırma alanında fitocoğrafi elementlerin dağılımı şöyledir; İran-Turan elementi 391 (% 45,78), Avrupa-Sibirya elementi 52 (% 6,09) ve Akdeniz elementi 22 (% 2,58).

Anahtar kelimeler: Flora, Çatak, Endemik, Van, Türkiye

1. Introduction

The research area is located in Van Province in East Anatolia, also within the Irano-Turanian phytogeographic region between Norduz Yayla and Çatak town, within B9 grid square according to Flora of Turkey (Davis, 1965) and between 38° 00' - 38° 10' North latitudes and 43° 00' - 43° 22' East longitudes. The length of the research area is about 28 km, and its width varies from 5 km to 7 km, altitude range is between 1500-3000 m, Çatak river passes through our research area. Çelintaş (2711 m) and Güllü (2674 m) hills, Kirazlı, Eliaçık, Alacayer, Bilgi villages and Alacayer village Çemik and Durak districts, Bilgi village Üçüzler district are located in the valley (Figure 1).

Chestnut soils are characteristic for the area. Limestone rocks exist especially Alacayer village, Durak and Çemik districts, between Bilgi village and Üçüzler district northern slopes (TOKB, 1971).

Because of absence of meteorological station in Çatak town we used meteorological data obtained from the only three station- Bahçesaray (1750 m), Gevaş (1696 m) and Gürpınar (2175 m) -to determinate the climate in the region (DMİ, 2004). The research area belongs to the Mediterranean type of climate. According to Emberger, the

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precipitation-temperature coefficient (Q) is 90,6 for Bahçesaray, 50,14 for Gevaş and 25,73 for Gürpınar. Bahçesaray gets low precipitation and is extremely cold; Gevaş is characterized as semiarid and very cold; Gürpınar is characterized as arid and iced Mediterranean type (Akman, 1990). The annual mean temperature of Bahçesaray is 8,7 °C, Gevaş is 8,9 °C, Gürpınar is 8,1 °C (Table 1). The annual rainfall is 1051,1 mm in Bahçesaray, 505,1 mm in Gevaş and 281,0 mm in Gürpınar (Table 2). According to meteorological data, the precipitation regimes of Bahçesaray and Gevaş are the second type of East Mediterranean Precipitation Regime, and Submediterranean Precipitation Regime is in Gürpınar (Akman, 1990). The ombrothermic diagrams of Bahçesaray, Gevaş and Gürpınar (Figure 2).

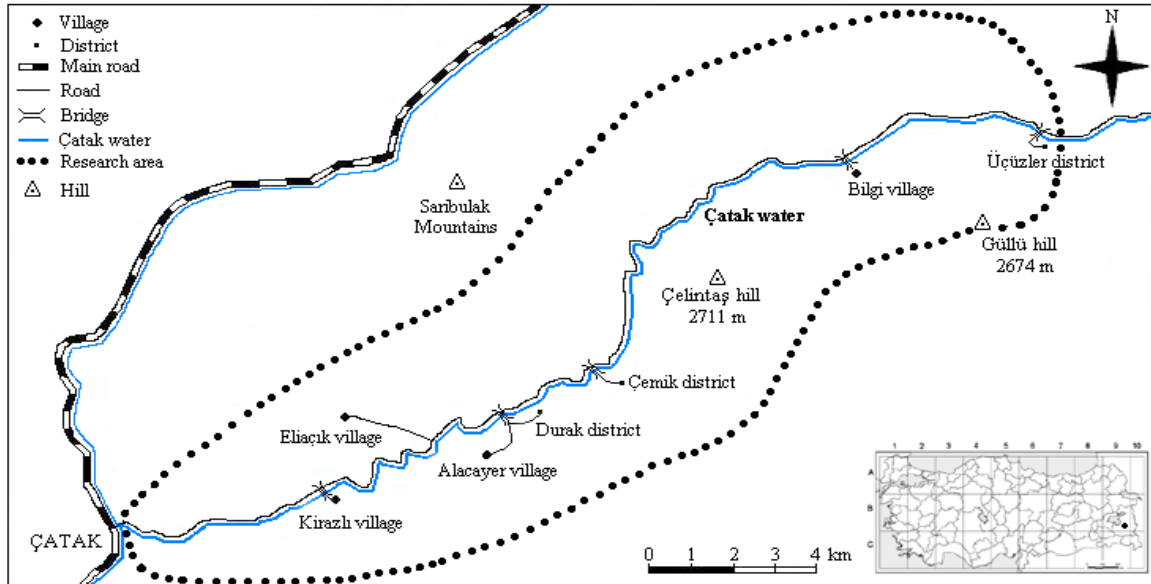


Figure 1. Map of the research area

The species of woody vegetation: *Celtis glabrata*, *Juniperus excelsa*, *Quercus infectoria* subsp. *boissieri*, *Q. libani*, *Q. robur* subsp. *pedunculiflora*, are the most common trees and shrubs. , *Acer monspessulanum* subsp. *cinerascens*, *A. monspessulanum* subsp. *ibericum*, *Amygdalus communis*, *Cerasus microcarpa* subsp. *tortuosa*, *C. brachypetala* var. *bornmuelleri*, *Crataegus monogyna* subsp. *monogyna*, *Lonicera caucasica* subsp. *caucasica*, *L. nummulariifolia* subsp. *nummulariifolia*, *Paliurus spina-christi*, *Pistacia eurycarpa*, *Juglans regia* in addition to sparsely *Daphne mucronata*, *Juniperus oxycedrus* subsp. *oxycedrus*, *Quercus petraea* subsp. *pinnatifolia*, *Rosa pulverulenta*, *R. canina* and *Rhamnus kurdicus* are mixed with these trees and shrubs.

Alyssum murale var. *murale*, *Arenaria gypsophilloides* var. *gypsophilloides*, *Corydalis integra*, *Serratula radiata* subsp. *biebersteiniana* are the most common species under the oak formation.

Steppe vegetation predominates between 1500-3000 m. The common species are as follows: *Aethionema speciosum* subsp. *speciosum*, *Ae. membranaceum*, *Alyssum desertorum* var. *desertorum*, *A. strigosum* subsp. *strigosum*, *Astragalus asiocalyx*, *A. gummifer*, *A. aduncus*, *A. brachycarpus*, *A. halicacabus*, *Centaurea persica*, *C. triumfettii*, *Dactylis glomerata* subsp. *hispanica*, *Eryngium billardieri*, *Helichrysum plicatum* subsp. *plicatum*, *Onobrychis cornuta*, *Papaver macrostomum*, *Phlomis lanceolata*, *Salvia sclarea*, *S. limbata*, *Tanacetum zahlbruckneri*, *Veronica orientalis* subsp. *orientalis*.

Table 1. Mean temperature values (°C)

STATIONS	Observation periods	1	2	3	4	5	6	7	8	9	10	11	12	Annual
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
GEVAŞ	21	-3,3	-3,1	1,0	8,2	13,0	18,0	22,0	21,1	16,8	10,2	4,1	-0,9	8,9
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

Alliari petiolata, *Aquilegia olympica*, *Carex stenophylla* subsp. *stenophylloides*, *Cirsium arvense* subsp. *vestitum*, *Dactylorhiza umbrosa*, *Eleocharis uniglumis*, *Epilobium roseum*, subsp. *subsessile*, *Equisetum arvense*, *E. ramosissimum*, *Juglans regia*, *Juncus compressus*, *Lepidium latifolium*, *Lysimachia vulgaris*, *Lythrum salicaria*, *Medicago sativa* subsp. *sativa*, *Phragmites australis*, *Populus tremula*, *Salix alba*, *Scirpoides holoschoenus*, *Silene compacta*, *Tamarix smyrnensis*, , *Trachomitum venetum* subsp. *sarmatiense*, *Trifolium pratense* var. *pratense*, *Typha angustifolia* and *Viola odorata* grow in wet places and in streambanks.

Table 2. Mean precipitation values (mm)

STATIONS	Observation periods	1	2	3	4	5	6	7	8	9	10	11	12	Annual
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
GEVAŞ	21	39,2	47,0	57,3	74,8	67,9	23,8	7,3	9,2	11,2	53,2	57,8	56,4	505,1
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

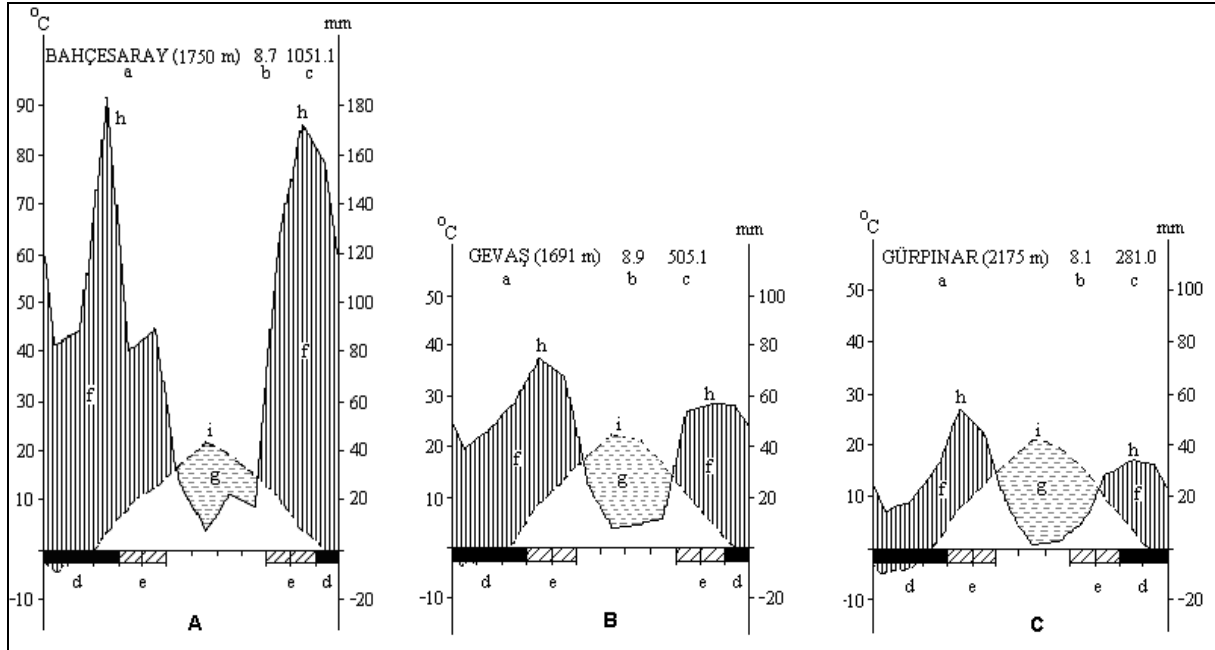


Figure 2. Ombrothermic diagrams of Bahçesaray (A), Gevaş (B) and Gürpınar (C)

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

The common species of the rocky places are *Arabis caucasica* subsp. *caucasica*, *Aubrieta parviflora*, *Campanula coriacea*, *Centaurea karduchorum*, *C. urvillei* subsp. *urvillei*, *C. urvillei* subsp. *nimrodica*, *Cotoneaster nummularia*, *Dianthus orientalis*, *Ephedra major*, *Minuartia juniperina*, *Paronychia kurdica* subsp. *kurdica* var. *kurdica*, *P. kurdica* subsp. *haussknechtii*, *Potentilla lignosa*, *Rosularia sempervivum* subsp. *kurdica*, *R. sempervivum* subsp. *persica*, *Sedum album*, *Scorzonera rigida*, *Silene odontopetala*, *Stachys lavandulifolia* var. *glabrescens*, *S. ballotiformis*, *Tanacetum kotschyi*, *Thymus kotschyianus* var. *kotschyianus*, *T. kotschyianus* var. *glabrescens*, *T. kotschyianus* var. *eriphorus*, *Valeriana sisymbriifolia*, *V. leucophaea*.

Çatak valley has been selected as one of the Important Plant Areas of Turkey (Özhayat et al., 2005). However, the flora of the area has not been previously studied in detail. Studied part of the valley was published in 2008 (Bani and Adigüzel, 2008).

2. Materials and methods

Field works were carried out between 2002-2004, 1739 plant specimens were collected from 23 localities (Table 6). The herbarium specimens were deposited at Yüzüncü Yıl University, Herbarium of the Biology Department (VANF).

The specimens were identified by using “Flora of Turkey and the East Aegean Islands” (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000), Flora of Iraq (Townsend and Guest, 1966-1985), Flora Iranica (Rechinger, 1965-1977) and Flora of the USSR (Komarov, 1933-1964). All the taxa are listed in the paragraph Floristic list. The names of the taxa are given according to Flora of Turkey. Author names have been checked according to Brummit and Powell (2001). Under each taxon, locality number, habitat, altitude, date, and collector’s acronym (M.P. = Mesut Pınar) with collector’s number, phytogeographic region, endemism, and threat category are given when appropriate.

Threat categories of the rare and endemic plants are given according to Red Data Book of Turkish Plants (Ekim et al., 2000) and are revised to IUCN categories (2001).

The relevant literatures of floristic studies nearby our area are checked (Altan and Şahin, 1989, Altıok and Behçet, 2005, Behçet et al., 2009, Donner, 1990, Erik and Sümbül, 1992, Ertekin and Saya, 1997, Karabacak and Behçet, 2007, Ünal and Behçet, 2007, Yıldırım, 1994, 1997a, 1997b, 1998a, 1998b, 1999a, 1999b, 2000a, 2000b, 2001a, 2001b, 2002a, 2002b, 2003a, 2003b, 2004a, 2004b, 2005a, 2005b, 2006a, 2006b, 2007a, 2007 b, 2008a, 2008a, 2009a, 2009b, 2010a, 2010b, Yıldırım and Dönmez, 1998, Yıldırım and Güner, 1989). After this control, 20 taxa are new to the square B9 of the grid system of Turkey adopted by Davis (1965). These taxa are marked with (*) in the floristic list.

The localities are numbered and listed. Research area is belong to B9 grid square, therefore we omitted “B9 Van: Çatak” in each locality (Table 6).

Abbreviations

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

3. Results and discussion

854 species and infraspecific taxa belonging to 359 genera and 76 families were determined from the 1739 specimens. 2 of the taxa belong to *Pteridophyta* and 852 to *Spermatophyta*; 3 taxa belong to *Gymnospermae*, 740 to *Dicotyledones* and 109 to *Monocotyledones*.

The number of endemic taxa is 63, and the endemism ratio is 7,37 %. According to Ekim et al. (2000) and IUCN (2001) they are distributed in the threat categories as follows; 1 Critical (CR), 1 Endangered (EN), 4 Vulnerable (VU), 18 Near Threatened (NT), 39 Least Concern (LC). The threat categories of rare taxa are as follows; 27 VU, 1 NT, 1 LC.

Cephalorrhynchus rechingerianus had been with “DD” category in Red Data Book of Turkish Plants (Ekim et al., 2000). This taxon was collected during field excursions. We recommended threat category for *Cephalorrhynchus rechingerianus* as “VU” (Adıgüzel et al., 2006).

The families with the greatest number of taxa: *Asteraceae* 139, *Brassicaceae* 75, *Fabaceae* 68, *Lamiaceae* 63, *Poaceae* 49, *Caryophyllaceae* 48, *Liliaceae* 42, *Apiaceae* 42, *Boraginaceae* 38, *Rosaceae* 29. The first nine taxon-rich families in Flora of Turkey and this study are in the same, but they have a different order.

The numbers of genera in the ten major families: *Asteraceae* 50, *Brassicaceae* 36, *Poaceae* 36, *Apiaceae* 26, *Lamiaceae* 19, *Boraginaceae* 16, *Rosaceae* 15, *Fabaceae* 14, *Caryophyllaceae* 14, *Liliaceae* 11 (Figure 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.

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

Family	taxa	genera	species	subsp.	var.	end.
<i>Asteraceae</i>	139	50	86	32	21	17
<i>Brassicaceae</i>	75	36	59	12	4	5
<i>Fabaceae</i>	68	14	42	13	13	6
<i>Lamiaceae</i>	63	19	36	16	11	3
<i>Poaceae</i>	49	36	34	13	2	-
<i>Caryophyllaceae</i>	48	14	36	6	6	4
<i>Liliaceae</i>	42	11	36	4	2	4
<i>Apiaceae</i>	42	26	38	2	2	3
<i>Boraginaceae</i>	38	16	22	9	7	4
<i>Rosaceae</i>	29	15	18	6	5	2
Total	593	237	408	113	73	48

The numbers of specific and infraspecific taxa in the ten largest genera are: *Astragalus* 23, *Silene* 20, *Centaurea* 18, *Salvia* 13, *Allium* 13, *Ranunculus* 10, *Alyssum* 9, *Scorzonera* 9, *Euphorbia* 9, *Campanula* 9. According to the nearby areas except Bitlis River valley and Hizan (Bitlis), *Astragalus* is the richest genus.

Major families and genera of this study with nearby study; Çatak Valley-I are compared in Table 4. Floristic comparison of the research area with nearby areas are compared in Table 5.

Distributions of the species and infraspecific taxa according to phytogeographic regions in the research area as follows: Irano-Turanian elements 391 (45,78 %), Euro-Siberian elements 52 (6,09 %), and Mediterranean elements 22 (2,58 %), pluriregional and unknown 389 (45,55 %) (Figure 4).

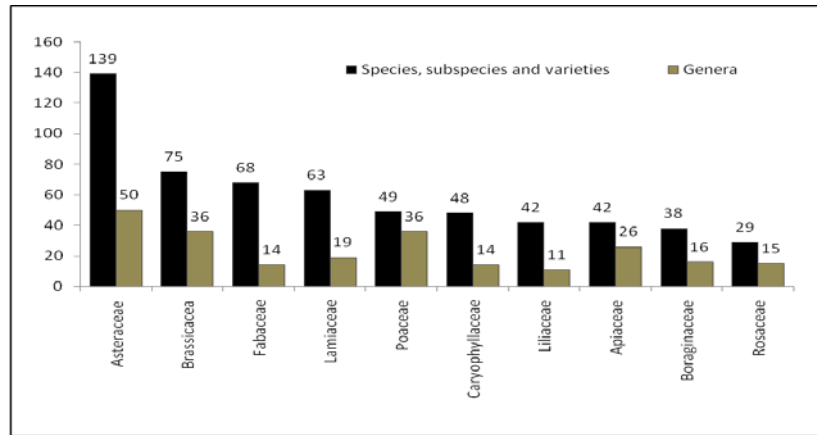


Figure 3. The families with great number of taxa and genera

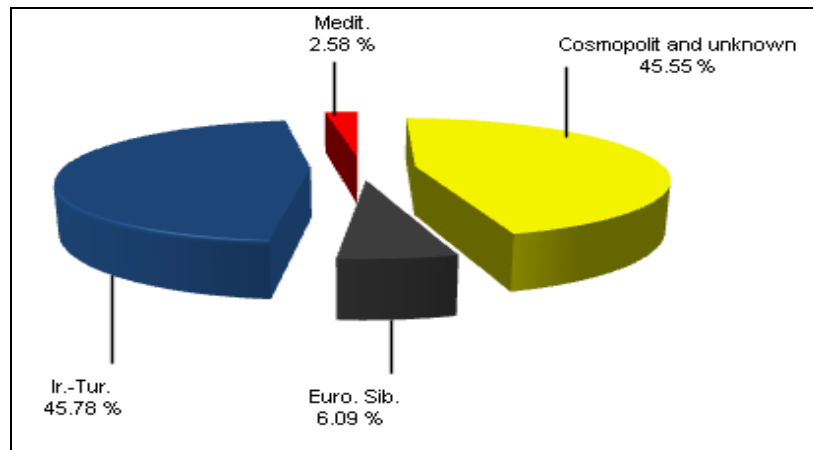


Figure 4. Distributions of the species, subspecies and varieties according to phytogeographic region.

Table 4. Major families and genera comparison of nearby study; Çatak Valley-I with this study; Çatak Valley-II.

The first ten major families with the greatest number of taxa		The first ten major families with the greatest number of genera		The first ten major genera with the number of taxa	
Çatak Valley II	Çatak Valley I	Çatak Valley II	Çatak Valley I	Çatak Valley II	Çatak Valley I
<i>Asteraceae</i> 139	<i>Asteraceae</i> 135	<i>Asteraceae</i> 50	<i>Asteraceae</i> 49	<i>Astragalus</i> 23	<i>Astragalus</i> 26
<i>Brassicaceae</i> 75	<i>Fabaceae</i> 89	<i>Brassicaceae</i> 36	<i>Brassicaceae</i> 37	<i>Silene</i> 20	<i>Centaurea</i> 18
<i>Fabaceae</i> 68	<i>Brassicaceae</i> 75	<i>Poaceae</i> 36	<i>Poaceae</i> 30	<i>Centaurea</i> 18	<i>Salvia</i> 15
<i>Lamiaceae</i> 63	<i>Lamiaceae</i> 66	<i>Apiaceae</i> 26	<i>Apiaceae</i> 23	<i>Salvia</i> 13	<i>Trifolium</i> 15
<i>Poaceae</i> 49	<i>Liliaceae</i> 43	<i>Lamiaceae</i> 19	<i>Lamiaceae</i> 21	<i>Allium</i> 13	<i>Alyssum</i> 14
<i>Caryophyllaceae</i> 48	<i>Poaceae</i> 40	<i>Boraginaceae</i> 16	<i>Fabaceae</i> 18	<i>Ranunculus</i> 10	<i>Silene</i> 13
<i>Liliaceae</i> 42	<i>Caryophyllaceae</i> 40	<i>Rosaceae</i> 15	<i>Boraginaceae</i> 17	<i>Alyssum</i> 9	<i>Allium</i> 13
<i>Apiaceae</i> 42	<i>Apiaceae</i> 35	<i>Fabaceae</i> 14	<i>Rosaceae</i> 14	<i>Scorzonera</i> 9	<i>Ranunculus</i> 10
<i>Boraginaceae</i> 38	<i>Boraginaceae</i> 26	<i>Caryophyllaceae</i> 14	<i>Caryophyllaceae</i> 14	<i>Euphorbia</i> 9	<i>Euphorbia</i> 9
<i>Rosaceae</i> 29	<i>Rosaceae</i> 24	<i>Liliaceae</i> 11	<i>Liliaceae</i> 13	<i>Campanula</i> 9	<i>Campanula</i> 9

Table 5. The floristic comparison of the research area (Çatak Valley-II) with nearby areas

Areas	Total taxa %	Ir.-Tur. %	Euro.-Sib. %	Medit. %	Pluriregional %	Endemism %
Çatak Valley II	854	45,78	6,09	2,58	45,55	7,37
Çatak Valley I	823	42,89	4,85	3,88	48,35	6,43
Akçadağ	891	35,4	9,9	2,9	51,8	7,5
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	32,0	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	7,0
Özalp	1492	42,36	9,38	3,28	44,97	11,73
Pirreşit	820	38,2	9,5	2,2	50,1	8,8
Süphan	780	37,0	8,7	2,0	52,3	8,5
Bitlis Valley	925	31,8	4,9	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	51,6	12,2

Table 6. Collection localities

Number of Locality	Localities
1.	Çatak - Kirazlı village, after 2 km from Çatak, north slopes
2.	Çatak - Kirazlı village, 1 km from to Kirazlı village, North slopes
3.	Çatak - Kirazlı village, south slopes
4.	Kirazlı village, south slopes
5.	Kirazlı village, north slopes
6.	Kirazlı village - Alacayer village, after 2 km from Kirazlı village
7.	Kirazlı village - Alacayer village, surrounding of Waterfall
8.	Surroundings of Eliaçık village
9.	Alacayer village, south slopes
10.	Alacayer village, north slopes
11.	Alacayer village, surroundings of Durak district
12.	Alacayer village Durak district - Çemik district
13.	Alacayer village, surroundings of Çemik district
14.	Alacayer village, Çemik district, 1 km later from Çemik district
15.	Alacayer village, Çemik district - Bilgi village, 2 km later from Çemik district, south slopes
16.	Alacayer village, Çemik district - Bilgi village, 3 km later from Çemik district, north slope
17.	Alacayer village, Çemik district - Bilgi village, 5 km later from Çemik district, south slope
18.	Alacayer village, Çemik district - Bilgi village, surroundings of Grinder
19.	Alacayer village, Çemik district - Bilgi village, 1 km from to Bilgi village
20.	Bilgi village, north slopes
21.	Bilgi village, south slopes
22.	Bilgi village - Üçüzler district
23.	Bilgi village, surroundings of Üçüzler district

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- Yıldırım, Ş. 2009 a. The Chorology of the Turkish species of *Paeoniaceae*, *Papaveraceae*, *Parnassiaceae*, *Passifloraceae*, *Pedaliaceae*, *Phytolaccaceae*, *Piperaceae*, *Pittosporaceae*, *Plantaginaceae* and *Platanaceae* families. OT Sistematik Botanik Dergisi. 16/1: 171-186.

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APPENDIX

The Floristic list

PTERIDOPHYTA

EQUISETACEAE

Equisetum ramosissimum Desf.

20, streamside, 1600 m, 25.08.2002, *M.P.* 1229; **22**, streamside, 1700 m, 18.05.2003, *M.P.* 1507; **1**, streamside, 1600 m, 02.07.2003, *M.P.* 2118.

E. arvense L.

22, streamside, 1700 m, 18.05.2003, *M.P.* 1501; **4**, wet place, 2100 m, 19.07.2003, *M.P.* 2392; **7**, wet place, 1650 m, 08.08.2004, *M.P.* 2646.

SPERMATOPHYTA

GYMNOSPERMAE

CUPRESSACEAE

Juniperus oxycedrus L. subsp. *oxycedrus*

14, rocky slope, 1900 m, 26.06.2004, *M.P.* 2516, *M.P.* 2526.

J. excelsa M. Bieb. subsp. *excelsa*

20, rocky place, 2000 m, 25.08.2002, *M.P.* 1195, *M.P.* 1197; **18**, rocky slope, 2000 m, 03.05.2003, *M.P.* 1320.

EPHEDRACEAE

Ephedra major Host

6, rocky place, 1900 m, 01.06.2002, *M.P.* 1173; **22**, rocky place, 2000 m, 10.05.2003, *M.P.* 1371; **23**, rocky slope, 2000 m, 08.08.2004, *M.P.* 2711.

ANGIOSPERMAE

DICOTYLEDONEAE

RANUNCULACEAE

Nigella oxypetala Boiss.

4, stony slope, 1700 m, 09.06.2003, *M.P.* 1748. Ir.-Tur. element.

N. latisecta P. H. Davis

10, roadside, 1700 m, 20.07.2003, *M.P.* 2452. Ir.-Tur. element.

Delphinium cf. carduchorum Chowdhuri & P. H. Davis

10, steppe, 2100 m, 20.07.2003, *M.P.* 2404. **End.**, Ir.-Tur. element, "NT".

D. cyphoplectrum Boiss. var. *vanense* (Rech. f.) P. H. Davis

5, rocky place, 2000 m, 21.06.2003, *M.P.* 1956; **13**, steppe, 1800 m, 23.06.2003, *M.P.* 2024. **End.**, "NT".

D. macrostachyum Boiss. ex Huth

16, rocky place, 2000 m, 13.07.2003, *M.P.* 2326. Ir.-Tur. element, "VU".

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

20, rocky place, 1700 m, 25.08.2002, *M.P.* 1184.

C. oliveriana (DC.) Schröd.

3, steppe, 2000 m, 12.07.2003, *M.P.* 2290. Ir.-Tur. element.

Clematis orientalis L.

17, streamside, 1600 m, 25.08.2002, *M.P.* 1253; **4**, roadside, 1650 m, 19.07.2003, *M.P.* 2398; **5**, roadside, 1600 m, 08.09.2003, *M.P.* 2456.

Adonis aestivalis L. subsp. *aestivalis*

5, steppe, 1750 m, 23.05.2002, *M.P.* 1057; **22**, rocky place, 1700 m, 18.05.2003, *M.P.* 1519.

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

5, steppe, 1700 m, 23.05.2002, *M.P.* 1083.

Ranunculus bulbiferus Boiss. et Hoh.

18, on rock, 1800 m, 19.04.2003, *M.P.* 1284; **20**, rocky place, 1900 m, 17.05.2003, *M.P.* 1435; **22**, on rock, 1750 m, 18.05.2003, *M.P.* 1470.

R. polyanthemos L.

1, streamside, 1600 m, 02.07.2003, *M.P.* 2089.

R. kotschy Boiss.

18, wet place, 1700 m, 03.05.2003, *M.P.* 1323; **20**, rocky place, 2500 m, 17.05.2003, *M.P.* 1385; **11**, rocky place, 2200 m, 24.05.2003, *M.P.* 1557.

R. damascenus Boiss. & Gaill.

5, steppe, 1750 m, 27.04.2002, *M.P.* 1001; **1**, rocky place, 1800 m, 04.05.2002, *M.P.* 1021, *M.P.* 1045; **22**, rocky place, 1800 m, 18.05.2003, *M.P.* 1527. Ir.-Tur. element.

R. cf. argyreus Boiss.

11, steppe, 2100 m, 24.05.2003, *M.P.* 1643.

R. munzurenensis Erik & Yild.

20, rocky place, 2500 m, 17.05.2003, *M.P.* 1405. **End.**, Ir.-Tur. element, "NT".

R. aucheri Boiss.

20 rocky place, 2500 m, 17.05.2003, *M.P.* 1387, *M.P.* 1402, *M.P.* 1429; **11**, steppe, 2200 m, 24.05.2003, *M.P.* 1644.

R. macrorhynchus Boiss. subsp. *trigonocarpus* (Boiss.) P. H. Davis

1, rocky place, 1900 m, 04.05.2002, *M.P.* 1049; **22**, steppe, 2800 m, 10.05.2003, *M.P.* 1345; **17**, streamside, 1700 m, 10.05.2003, *M.P.* 1377; **22**, rocky place, 1800 m, 18.05.2003, *M.P.* 1480; **22**, streamside, 1650 m, 18.05.2003, *M.P.* 1488. Ir.-Tur. element.

R. arvensis L.

5, steppe, 1800 m, 23.05.2002, *M.P.* 1092; **22**, cultivated field, 1650 m, 18.05.2003, *M.P.* 1502; **13**, steppe, 2300 m, 23.06.2003, *M.P.* 2036.

R. kochii Ledeb.

1, rocky place, 1700 m, 12.04.2003, *M.P.* 1270; **20**, rocky place, 2500 m, 17.05.2003, *M.P.* 1389; **14**, rocky place, 1900 m, 26.06.2004, *M.P.* 2530. Ir.-Tur. element.

Ceratocephalus falcatus (L.) Pers.

22, rocky place, 1700 m, 18.05.2003, *M.P.* 1455.

C. testiculatus (Crantz) Roth

5, steppe, 1700 m, 27.04.2002, *M.P.* 1004; **20**, rocky place, 1750 m, 19.04.2003, *M.P.* 1298.

Aquilegia olympica Boiss.

1, shady-wet place, 1850 m, 23.05.2002, *M.P.* 1110; **21**, shady-wet place, 1800 m, 10.06.2003, *M.P.* 1790.

Thalictrum sultanabadense Stapf

1, rocky place, 1750 m, 12.04.2003, *M.P.* 1269; **22**, rocky place, 1800 m, 18.05.2003, *M.P.* 1472. Ir.-Tur. element, "VU".

T. minus L. var. *majus* (Crantz) Crép.

5, cultivated field, 1750 m, 21.06.2003, *M.P.* 1928.

T. flavum L.

1, streamside, 1650 m, 02.07.2003, *M.P.* 2105.

PAPAVERACEAE

Glaucium corniculatum (L.) Rud. subsp. *corniculatum*

20, rocky place, 1900 m, 25.08.2002, *M.P.* 1187.

G. grandiflorum Boiss. & Huet var. *grandiflorum*

1, steppe, 1850 m, 23.05.2002, *M.P.* 1106. Ir.-Tur. element.

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

22, cultivated field, 1700 m, 18.05.2003, *M.P.* 1503.

R. refracta DC. subsp. *occidentalis* Kadereit

22, rocky place, 1800 m, 18.05.2003, *M.P.* 1525; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2604, *M.P.* 2610. Ir.-Tur. element.

Papaver cf. persicum Lindl. subsp. *persicum*

15, steppe, 1900 m, 03.06.2003, *M.P.* 1688, *M.P.* 1727; **21**, steppe, 2100 m, 26.06.2004, *M.P.* 2621.

P. fugax Poir. var. *fugax*

20, steppe, 2500 m, 05.07.2003, *M.P.* 2148.

P. macrostomum Boiss. & Huet ex Boiss.

21, steppe, 2500 m, 10.06.2003, *M.P.* 1831; **21**, steppe, 2400 m, 06.07.2003, *M.P.* 2245; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2447. **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2607. Ir.-Tur. element.

P. dubium L.

1, steppe, 1800 m, 23.05.2002, *M.P.* 1134.

P. arenarium M. Bieb.

6, steppe 1900 m, 01.06.2002, *M.P.* 1163.

Corydalis integra Barbey & Fors.-Major

17, open oak forest, 1900 m, 19.04.2003, *M.P.* 1292; **14**, open oak forest, 1800 m, 03.05.2003, *M.P.* 1303; **4**, open oak forest, 1850 m, 29.09.2003. *M.P.* 2524.

C. oppositifolia DC. subsp. *oppositifolia*

20, rocky place, 2500 m, 17.05.2003, *M.P.* 1382. **End.**

Fumaria microcarpa Boiss. ex Hausskn.

19, cultivated field, 1750 m, 18.05.2003, *M.P.* 1530.

F. asepalata Boiss.

1, rocky place, 1800 m, 04.05.2002, *M.P.* 1040; **22**, steppe, 1700 m, 10.05.2003, *M.P.* 1349. Ir.-Tur. element.

BRASSICACEAE (CRUCIFERAE)

Brassica elongata Ehrh.

21, steppe, 2200 m, 06.07.2003, *M.P.* 2229. Ir.-Tur. element.

Sinapis arvensis L.

3, streamside, 1600 m, 21.06.2003, *M.P.* 1985; **13**, cultivated field, 1650 m, 23.06.2003, *M.P.* 2005; **1** streamside, 1600 m, 02.07.2003, *M.P.* 2072; **4**, streamside, 1600 m, 19.07.2003, *M.P.* 2368; **10**, cultivated field, 1750 m, 20.07.2003, *M.P.* 2402.

Eruca sativa Mill.

13, steppe, 1800 m, 23.06.2003, *M.P.* 2002; **10**, cultivated field, 1850 m, 20.07.2003, *M.P.* 2400.

Raphanus raphanistrum L.

4, cultivated field, 1750 m, 19.07.2003, *M.P.* 2352.

Crambe orientalis L. var. *orientalis*

4, stony slope, 1700 m, 09.06.2003, *M.P.* 1742; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2234. Ir.-Tur. element.

Conringia orientalis (L.) Andr.

22, steppe, 2000 m, 16.06.2003, *M.P.* 1847.

C. planisiliqua Fisch. & C. A. Mey.

22, on rock, 1600 m, 18.05.2003, *M.P.* 1452, *M.P.* 1520. Ir.-Tur. element.

C. persica Boiss.

22, steppe, 1700 m, 10.05.2003, *M.P.* 1353/a; **20**, steppe, 1850 m, 17.05.2003, *M.P.* 1432; **20**, steppe, 2400 m, 16.06.2003, *M.P.* 1885; **21**, steppe, 2600 m, 26.06.2004, *M.P.* 2624.

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

5, steppe, 1610 m, 27.04.2002, *M.P.* 1016; **18**, steppe, 1700 m, 03.05.2003, *M.P.* 1313; **22**, steppe, 1700 m, 10.05.2003, *M.P.* 1353/b.

Lepidium sativum L. subsp. *sativum*

4, streamside, 1600 m, 19.07.2003, *M.P.* 2357.

L. perfoliatum L.

20, streamside, 1650 m, 25.08.2002, *M.P.* 1225; **22**, steppe, 1700 m, 10.05.2003, *M.P.* 1351; **22**, rocky place, 1650 m, 18.05.2003, *M.P.* 1522.

L. latifolium L.

3, wet place, 2000 m, 12.07.2003, *M.P.* 2260.

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

21, steppe, 2500 m, 10.06.2003, *M.P.* 1835.

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

11, steppe, 1900 m, 24.05.2003, *M.P.* 1582; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2241; **16**, stony slope, 1900 m, 13.07.2003, *M.P.* 2338.

Isatis steveniana (Trautv.) P. H. Davis

23, steppe, 1900 m, 08.08.2004, *M.P.* 2726.

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

20, steppe, 1700 m, 25.08.2002, *M.P.* 1214; **17**, streamside, 1680 m, 25.08.2002, *M.P.* 1236; **23**, rocky place, 2000 m, 08.08.2004, *M.P.* 2722. Ir.-Tur. element.

* *I. cappadocica* Desv. subsp. *macrocarpa* (Jaub. & Spach) P. H. Davis

20, steppe, 1800 m, 25.08.2002, *M.P.* 1201; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2188. Ir.-Tur. element, "VU".

I. aucheri Boiss.

11, steppe, 2100 m, 24.05.2003, *M.P.* 1629; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1802; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2535. **End.**, Ir.-Tur. element, "LC".

I. cochlearis Boiss.

15, rocky place, 2100 m, 03.06.2003, *M.P.* 1705; **13**, steppe, 1750 m, 23.06.2003, *M.P.* 2027, *M.P.* 2030.

Aethionema carneum (Banks & Sol.) B. Fedtsch.

20, steppe, 2400 m, 16.06.2003, *M.P.* 1872. Ir.-Tur. element.

Ae. heterocarpum J. Gay

5, rocky place, 1700 m, 23.05.2002, *M.P.* 1071; **1**, rocky place, 1700 m, 04.05.2002, *M.P.* 1037; **20**, rocky place, 2000 m, 17.05.2003, *M.P.* 1427.

Ae. froedinii Rech. f.

5, rocky place, 1750 m, 23.05.2002, *M.P.* 1093; **4**, stony slope, 1800 m, 09.06.2003, *M.P.* 1757. "LC".

Ae. arabicum (L.) Andr. ex DC.

18, rocky slope, 1750 m, 03.05.2003, *M.P.* 1318; **12**, rocky slope, 1700 m, 03.05.2003, *M.P.* 1333; **22**, steppe, 1850 m, 10.05.2003, *M.P.* 1364; **22**, steppe, 1800 m, 18.05.2003, *M.P.* 1494, *M.P.* 1517.

Ae. fimbriatum Boiss.

15, steppe, 1800 m, 03.06.2003, *M.P.* 1686; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1807; **20**, steppe, 2400 m, 16.06.2003, *M.P.* 1883. Ir.-Tur. element.

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

5, steppe, 1750 m, 23.05.2002, *M.P.* 1084; **20**, stony steppe, 1900 m, 17.05.2003, *M.P.* 1422; **11**, steppe, 2200 m, 24.05.2003, *M.P.* 1540, *M.P.* 1590; **21**, stony-steppe, 2500 m, 10.06.2003, *M.P.* 1803; **5**, rocky place, 1700 m, 21.06.2003, *M.P.* 1923; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2430. Ir.-Tur. element.

Ae. trinervium (DC.) Boiss.

20, rocky place, 2600 m, 17.05.2003, *M.P.* 1384; **11**, steppe, 2200 m, 24.05.2003, *M.P.* 1628; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1825, *M.P.* 1828.

Ae. membranaceum DC.

11, steppe, 2200 m, 24.05.2003, *M.P.* 1603; **15**, steppe, 1800 m, 03.06.2003, *M.P.* 1681; 2100 m, *M.P.* 1719; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1816; **20**, steppe, 2400 m, 16.06.2003, *M.P.* 1900; **5**, rocky slope, 1700 m, 21.06.2003, *M.P.* 1921, 1927; **13**, steppe, 2500 m, 23.06.2003, *M.P.* 2044; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2149; **10**, steppe, 2100 m, 20.07.2003, *M.P.* 2437. Ir.-Tur. element.

Ae. grandiflorum Boiss. & Hohen.

20, steppe, 2400 m, 16.06.2003, *M.P.* 1858, *M.P.* 1870, *M.P.* 1887; **5**, rocky place, 2000 m, 21.06.2003, *M.P.* 1948. Ir.-Tur. element.

Thlaspi arvense L.

22, steppe, 2100 m, 16.06.2003, *M.P.* 1844; **5**, cultivated field, 1600 m, 21.06.2003, *M.P.* 1920; **13**, cultivated field, 1700 m, 23.06.2003, *M.P.* 2006, *M.P.* 2008; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2418.

T. kotschyianum Boiss. & Hohen.

20, cultivated field, 1800 m, 17.05.2003, *M.P.* 1412; **20**, rocky place, 1900 m, 17.05.2003, *M.P.* 1433; **22**, cultivated field, 1600 m, 18.05.2003, *M.P.* 1483; **11**, steppe, 2200 m, 24.05.2003, *M.P.* 1594, *M.P.* 1653.

T. perfoliatum L.

5, steppe, 1650 m, 27.04.2002, *M.P.* 1006; **1**, steppe, 1650 m, 12.04.2003, *M.P.* 1271, *M.P.* 1273; **17**, wet place, 1600 m, 10.05.2003, *M.P.* 1378.

Capsella bursa-pastoris (L.) Medik.

- 1, rocky place, 1700 m, 04.05.2002, *M.P. 1031*; **20**, streamside, 1650 m, 25.08.2002, *M.P. 1227*; **17**, streamside, 1650 m, 25.08.2002, *M.P. 1246*; **1**, steppe, 1700 m, 12.04.2003, *M.P. 1267*; **18**, steppe, 1700 m, 03.05.2003, *M.P. 1305*; 10.05.2003, *M.P. 1373*; **22**, steppe, 1800 m, 10.05.2003, *M.P. 1344*; **11**, steppe, 2100 m, 24.05.2003, *M.P. 1577*.
- Boreava orientalis* Jaub. & Spach
22, steppe, 1750 m, 16.06.2003, *M.P. 1837*. Ir.-Tur. element.
- Euclidium syriacum* (L.) R. Braga
15, stony slope, 1700 m, 03.06.2003, *M.P. 1723*; **22**, steppe, 1750 m, 16.06.2003, *M.P. 1841*.
- Neslia paniculata* (L.) Desv.
5, streamside, 1600 m, 23.05.2002, *M.P. 1089*.
- Bunias orientalis* L.
13, cultivated field, 1700 m, 23.06.2003, *M.P. 2007*.
- Fibigia macrocarpa* (Boiss.) Boiss.
11, on rock, 2200 m, 24.05.2003, *M.P. 1647*.
- F. suffruticosa* (Vent.) Sweet
15, rocky place, 2100 m, 03.06.2003, *M.P. 1717*; **21**, steppe, 2500 m, 10.06.2003, *M.P. 1813*; **20**, steppe, 2400 m, 16.06.2003, *M.P. 1867*; **13**, steppe, 1800 m, 23.06.2003, *M.P. 2018*; **20**, steppe, 2500 m, 05.07.2003, *M.P. 2173*.
- Alyssum desertorum* Stapf var. *desertorum*
5, steppe, 1700 m, 27.04.2002, *M.P. 1013*; **22**, steppe, 1800 m, 10.05.2003, *M.P. 1359*; **22**, rocky place, 1700 m, 18.05.2003, *M.P. 1460*, *M.P. 1474*, *M.P. 1516*.
- A. szowitsianum* Fisch. & C. A. Mey.
22, steppe, 1800 m, 10.05.2003, *M.P. 1350*; **11**, steppe, 2200 m, 24.05.2003, *M.P. 1568*, *M.P. 1593*.
- A. minus* (L.) Rothm. var. *minus*
20, steppe, 1900 m, 17.05.2003, *M.P. 1430*; **22**, steppe, 1700 m, 18.05.2003, *M.P. 1508*.
- A. stapfii* Vierh.
20, steppe, 1900 m, 17.05.2003, *M.P. 1426*; **19**, stony slope, 1650 m, 18.05.2003, *M.P. 1529*. Ir.-Tur. element.
- A. strigosum* Banks & Sol. subsp. *strigosum*
5, steppe, 1650 m, 27.04.2002, *M.P. 1007*; **1**, rocky place, 1700 m, 04.05.2002, *M.P. 1032*; **22**, steppe, 1800 m, 10.05.2003, *M.P. 1357*, *M.P. 1362*; **22**, rocky place, 1700 m, 18.05.2003, *M.P. 1505*; **11**, on rock, 2000 m, 24.05.2003, *M.P. 1646*, *M.P. 1648*; **22**, steppe, 2200 m, 16.06.2003, *M.P. 1845*; **2**, roadside, 1600 m, 21.06.2003, *M.P. 1917*.
- A. pateri* Nyár. subsp. *pateri*
20, steppe, 2400 m, 16.06.2003, *M.P. 1859*; **21**, steppe, 2800 m, 26.06.2004, *M.P. 2623*. **End.**, Ir.-Tur. element, “**LC**”.
- A. pateri* Nyár. subsp. *prostratum* (Nyár.) Dudley
21, steppe, 2200 m, 06.07.2003, *M.P. 2226*. **End.**, Ir.-Tur. element, “**LC**”.
- A. filiforme* Nyár.
3, steppe, 1800 m, 21.06.2003, *M.P. 1973*. **End.**, Ir.-Tur. element, “**LC**”.
- A. murale* Waldst. & Kit. var. *murale*
3, open oak forest, 2100 m, 12.07.2003, *M.P. 2297*.
- Clypeola jonthlaspi* L.
5, steppe, 1700 m, 27.04.2002, *M.P. 1009*; **1**, rocky place, 1800 m, 04.05.2002, *M.P. 1023*; **22**, on rock, 1750 m, 18.05.2003, *M.P. 1440*.
- Draba bruniifolia* Stev. subsp. *kurdica* Coode & Cullen
20, on rock, 2700 m, 17.05.2003, *M.P. 1396*.
- D. nemorosa* L.
5, rocky place, 1700 m, 27.04.2002, *M.P. 1011*; **1**, steppe, 1750 m, 04.05.2002, *M.P. 1039*; **18**, meadow, 1800 m, 19.04.2003, *M.P. 1288*, *M.P. 1310*; **8**, cultivated field, 1650 m, 03.05.2003, *M.P. 1338*.
- D. huetii* Boiss.
20, on rock, 2500 m, 17.05.2003, *M.P. 1407*; **22**, rocky place, 1750 m, 18.05.2003, *M.P. 1476*, *M.P. 1518*.
- Erophila verna* (L.) Chevall. subsp. *verna*
5, steppe, 1700 m, 27.04.2002, *M.P. 1012*; **12**, rocky place, 1700 m, 03.05.2003, *M.P. 1332*.
- Arabis caucasica* Willd. subsp. *caucasica*
14, on rock, 1700 m, 03.05.2003, *M.P. 1302*; **20**, on rock, 2000 m, 17.05.2003, *M.P. 1431*; **11**, on rock, 2100 m, 24.05.2003, *M.P. 1636*.
- A. nova* Vill.
5, steppe, 1650 m, 27.04.2002, *M.P. 1005*, *M.P. 1017*; **1**, rocky place, 1700 m, 04.05.2002, *M.P. 1028*, *M.P. 1030*, *M.P. 1035*, *M.P. 1048*; **18**, on rock, 1800 m, 03.05.2003, *M.P. 1314*, *M.P. 1316*; **8**, cultivated field, 1650 m, 03.05.2003, *M.P. 1340*; **22**, steppe, 1850 m, 10.05.2003, *M.P. 1346*, *M.P. 1368*; **11**, on rock, 2000 m, 24.05.2003, *M.P. 1649*.
- A. montbretiana* Boiss.
22, on rock, 1700 m, 18.05.2003, *M.P. 1446*. Ir.-Tur. element.
- Barbarea plantaginea* DC.
20, cultivated field, 2000 m, 17.05.2003, *M.P. 1400*; **22**, meadow, 1700 m, 18.05.2003, *M.P. 1467*, *M.P. 1497*.
- **Cardamine bulbifera* (L.) Crantz
21, sandy place, 1600 m, 10.06.2003, *M.P. 1791*. Euro-Sib. element.
- C. uliginosa* M. Bieb.
15, meadow, 1650 m, 03.06.2003, *M.P. 1728*.
- Drabopsis verna* C. Koch
5, steppe, 1700 m, 27.04.2002, *M.P. 1010*; **18**, wet place, 1700 m, 19.04.2003, *M.P. 1289*; **20**, rocky place, 1750 m, 19.04.2003, *M.P. 1297*; **12**, rocky place, 1900 m, 03.05.2003, *M.P. 1329*; **20**, steppe, 2500 m, 17.05.2003, *M.P. 1391*, **14**, streamside, 1650 m, 26.06.2004, *M.P. 2521*. Ir.-Tur. element.
- Aubrieta parviflora* Boiss.
1, rocky place, 1700 m, 04.05.2002, *M.P. 1029*; **22**, on rock, 1800 m, 18.05.2003, *M.P. 1451*; **4**, stony slope, 1700 m, 09.06.2003, *M.P. 1739*. Ir.-Tur. element, “**VU**”.
- **Chorispora syriaca* Boiss.
19, cultivated field, 1600 m, 18.05.2003, *M.P. 1531*.
- C. tenella* (Pall.) DC.
22, rocky place, 1800 m, 18.05.2003, *M.P. 1473*.
- Hesperis persica* Boiss.
5, steppe, 1800 m, 23.05.2002, *M.P. 1079*. Ir.-Tur. element.
- Malcolmia africana* (L.) R. Braga
1, rocky place, 1700 m, 04.05.2002, *M.P. 1026*; **12**, rocky place, 1800 m, 03.05.2003, *M.P. 1328*; **11**, steppe, 1700 m, 24.05.2003, *M.P. 1656*; **20**, steppe, 2400 m, 16.06.2003, *M.P. 1886*.
- Erysimum cf. goniocaulon* Boiss.
15, steppe, 1900 m, 03.06.2003, *M.P. 1672*, *M.P. 1685*.
- E. sintenianum* Bornm.
20, steppe, 2700 m, 17.05.2003, *M.P. 1390*; **11**, steppe, 2500 m, 24.05.2003, *M.P. 1625*. **End.**, Ir.-Tur. element, “**LC**”.
- E. smyrnaeum* Boiss. & Balansa
21, steppe, 2500 m, 10.06.2003, *M.P. 1798*, *M.P. 1821*; **21**, steppe, 2000 m, 26.06.2004, *M.P. 2595*.
- Goldbachia laevigata* (M. Bieb.) DC.
22, rocky place, 1700 m, 18.05.2003, *M.P. 1481*. Ir.-Tur. element.
- Alliaria petiolata* (M. Bieb.) Cavara & Grande
1, meadow, 1700 m, 04.05.2002, *M.P. 1042*; **18**, streamside, 1700 m, 19.04.2003, *M.P. 1285*; **20**, cultivated field, 1800 m, 17.05.2003, *M.P. 1414*; **11**, wet place, 2100 m, 24.05.2003, *M.P. 1583*.
- Sisymbrium altissimum* L.
22, cultivated field, 1600 m, 18.05.2003, *M.P. 1490*, *M.P. 1492*, *M.P. 1495*; **11**, steppe, 1600 m, 24.05.2003, *M.P. 1657*; **15**, steppe, 1800 m, 03.06.2003, *M.P. 1664*. Ir.-Tur. element.
- S. orientale* L.
22, rocky place, 1800 m, 18.05.2003, *M.P. 1463*.
- S. loeselii* L.
22, streamside, 1600 m, 18.05.2003, *M.P. 1486*; **11**, steppe, 2000 m, 24.05.2003, *M.P. 1536*, *M.P. 1552*, *M.P. 1584*; **13**, rocky place, 2100 m, 23.06.2003, *M.P. 2035*; **16**, wet place, 1800 m, 13.07.2003, *M.P. 2329*; **5**, steppe, 1700 m, 08.09.2003, *M.P. 2460*, *M.P. 2461*.
- Descurainia sophia* (L.) Webb ex Prantl

20, wet place, 1600 m, 25.08.2002, *M.P.* 1228; **22**, stony slope, 1700 m, 18.05.2003, *M.P.* 1509; **20**, wet place, 2000 m, 05.07.2003, *M.P.* 2131.

Arabidopsis pumila (Steppeh.) Busch

22, rocky place, 1800 m, 10.05.2003, *M.P.* 1360, *M.P.* 1366; **22**, rocky place, 1900 m, 18.05.2003, *M.P.* 1471.

Camelina rumelica Vel.

1, rocky place, 1750 m, 04.05.2002, *M.P.* 1025, *M.P.* 1033; **5**, steppe, 1800 m, 23.05.2002, *M.P.* 1060; **18**, wet place, 1750 m, 10.05.2003, *M.P.* 1374; **22**, rocky place, 1750 m, 18.05.2003, *M.P.* 1441, *M.P.* 1510.

CAPPARACEAE

**Cleome iberica* DC.

5, roadside, 1700 m, 08.09.2003, *M.P.* 2459. E. Medit. element.

RESEDACEAE

Reseda lutea L. var. *lutea*

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1111; **20**, rocky place, 1900 m, 01.06.2002, *M.P.* 1204.

CISTACEAE

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

5, steppe, 1800 m, 23.05.2002, *M.P.* 1058.

H. ledifolium (L.) Mill. var. *microcarpum* Willk.

15, steppe, 1850 m, 03.06.2003, *M.P.* 1697.

VIOLACEAE

Viola odorata L.

20, wet place, 1700 m, 19.04.2003, *M.P.* 1290; **14**, wet place, 1900 m, 26.06.2004, *M.P.* 2533.

**V. jordanii* Henry

1, streamside, 1600 m, 01.06.2002, *M.P.* 1127.

V. occulta Lehm.

5 steppe, 1800 m, 27.04.2002, *M.P.* 1014; **1**, steppe, 1900 m, 04.05.2002, *M.P.* 1047; **22**, rocky place, 1750 m, 18.05.2003, *M.P.* 1442.

V. kitaibeliana Roem. & Schult.

1, rocky place, 1700 m, 05.04.2003, *M.P.* 1260.

POLYGALACEAE

Polygala anatolica Boiss. & Heldr.

1, streamside, 1600 m, 01.06.2002, *M.P.* 1130; **6**, steppe, 1800 m, 01.06.2002, *M.P.* 1158; **4**, meadow, 1600 m, 09.06.2003, *M.P.* 1773.

CARYOPHYLLACEAE

Arenaria cucubaloides Sm.

21, rocky place, 2500 m, 10.06.2003, *M.P.* 1809. Ir.-Tur. element.

A. gypsophiloides LMant. var. *gypsophiloides*

20, rocky place, 2400 m, 16.06.2003, *M.P.* 1869; **5**, steppe, 1850 m, 21.06.2003, *M.P.* 1932; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2446; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2613; **23**, steppe, 2100 m, 08.08.2004, *M.P.* 2680. Ir.-Tur. element.

Minuartia juniperina (L.) Maire & Petitm.

22, on rock, 1800 m, 18.05.2003, *M.P.* 1456; **11**, on rock, 2200 m, 24.05.2003, *M.P.* 1645; **15**, rocky place, 2000 m, 03.06.2003, *M.P.* 1695.

M. lineata Bornm.

22, rocky place, 1800 m, 18.05.2003, *M.P.* 1479; **11**, on rock, 2200 m, 24.05.2003, *M.P.* 1650; **15**, rocky place, 2100m, 03.06.2003, *M.P.* 1709; **21**, steppe, 2300 m, 26.06.2004, *M.P.* 2626. Ir.-Tur. element.

M. hamata (Hausskn.) Mattf.

11, rocky place, 2200 m, 24.05.2003, *M.P.* 1592.

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

11, rocky place, 2100 m, 24.05.2003, *M.P.* 1570.

S. kotschyana Fenzl

13, rocky place, 2300 m, 23.06.2003, *M.P.* 2052; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2444.

Cerastium kotschyi Boiss.

22, rocky place, 1850 m, 10.05.2003, *M.P.* 1363. "VU".

C. perfoliatum L.

1, wet place, 1700 m, 04.05.2002, *M.P.* 1043.

C. dichotomum L. subsp. *dichotomum*

22, rocky place, 1800 m, 18.05.2003, *M.P.* 1466/b.

Holosteum umbellatum L. var. *umbellatum*

5, rocky place, 1800 m, 27.04.2002, *M.P.* 1002; **18**, wet place, 1750 m, 19.04.2003, *M.P.* 1286.

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

4, wet place, 2100 m, 19.07.2003, *M.P.* 2394.

Bufonia oliveriana Ser.

23, rocky place, 1700 m, 08.08.2004, *M.P.* 2702.

Telephium oligospermum Steud. ex Boiss.

13, rocky place, 2000 m, 23.06.2003, *M.P.* 2048. Ir.-Tur. element.

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

3, steppe, 2100 m, 12.07.2003, *M.P.* 2283.

D. floribundus Boiss.

10, steppe, 2000 m, 20.07.2003, *M.P.* 2429. Ir.-Tur. element.

D. tabrisianus Bien. ex Boiss.

3, steppe, 2000 m, 12.07.2003, *M.P.* 2280; **10**, steppe, 1850 m, 20.07.2003, *M.P.* 2405. Ir.-Tur. element.

**D. recognitus* Schischk.

20, rocky place, 2100 m, 05.07.2003, *M.P.* 2163. **End.**, "NT".

D. libanotis Labill.

21, steppe, 2100 m, 06.07.2003, *M.P.* 2210; **16**, rocky place, 2200 m, 13.07.2003, *M.P.* 2323. Ir.-Tur. element.

D. orientalis Adams

6, rocky place, 1750 m, 01.06.2002, *M.P.* 1177; **20**, rocky place, 2400 m, 16.06.2003, *M.P.* 1878; **5**, on rock, 2000 m, 21.06.2003, *M.P.* 1953; **13**, rocky place, 2300 m, 23.06.2003, *M.P.* 2045; **10**, rocky place, 1900 m, 20.07.2003, *M.P.* 2403; **23**, rocky place, 2000 m, 08.08.2004, *M.P.* 2686.

D. hymenolepis Boiss.

5, rocky place, 1800 m, 21.06.2003, *M.P.* 1930; **21**, steppe, 2300 m, 06.07.2003, *M.P.* 2211; **3**, steppe, 2000 m, 12.07.2003, *M.P.* 2265; **23**, rocky place, 2000 m, 08.08.2004, *M.P.* 2710. Ir.-Tur. element.

Petrrhagia cretica (L.) Ball & Heywood

1, steppe, 1750 m, 02.07.2003, *M.P.* 2115.

Velezia rigida L.

4, on rock, 1750 m, 09.06.2003, *M.P.* 1778; **13**, rocky place, 1900 m, 23.06.2003, *M.P.* 2016.

Gypsophila ruscifolia Boiss.

13, rocky place, 2400 m, 23.06.2003, *M.P.* 2061; **21**, steppe, 2000 m, 06.07.2003, *M.P.* 2206. Ir.-Tur. element.

G. pallida Stapf

20, rocky place, 1900 m, 25.08.2002, *M.P.* 1196; **16**, steppe, 2200 m, 13.07.2003, *M.P.* 2315; **4**, steppe, 2000 m, 19.07.2003, *M.P.* 2376; **23**, rocky place, 1800 m, 08.08.2004, *M.P.* 2690. Ir.-Tur. element.

G. bitlisensis W. F. Barker

13, steppe, 1800 m, 23.06.2003, *M.P.* 2003. **End.**, Ir.-Tur. element, "NT".

G. pilosa Hudson

21, rocky place, 1700 m, 26.06.2004, *M.P.* 2602. Ir.-Tur. element.

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

6, steppe, 1800 m, 01.06.2002, *M.P.* 1159; **21**, steppe, 2000 m, 10.06.2003, *M.P.* 1832.

Silene marschallii C. A. Mey.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2184. Ir.-Tur. element.

S. capitellata Boiss.

11, rocky place, 2300 m, 24.05.2003, *M.P.* 1630. **End.**, Ir.-Tur. element, "LC".

S. laxa Boiss. & Kotschy

17, steppe, 1800 m, 25.08.2002, *M.P.* 1211. Ir.-Tur. element.

S. sclerophylla Chowdh.

21, steppe, 2400 m, 06.07.2003, *M.P.* 2205; **3**, steppe, 2000 m, 12.07.2003, *M.P.* 2278. **End.**, Ir.-Tur. element, "LC".

S. cappadocica Boiss. & Heldr.

5, rocky place, 1750 m, 23.05.2002, *M.P.* 1072/a; **11**, rocky place, 2200 m, 24.05.2003, *M.P.* 1637. Ir.-Tur. element.

- S. spergulifolia* (Desf.) M. Bieb.
5, rocky place, 1750 m, 23.05.2002, *M.P.* 1072/b; **22**, rocky place, 1850 m, 18.05.2003, *M.P.* 1478. Ir.-Tur. element.
- S. arguta* Fenzl
5, rocky place, 1800 m, 23.05.2002, *M.P.* 1062; **21**, steppe, 2500 m, 26.06.2004, *M.P.* 2625. Ir.-Tur. element.
- S. ampullata* Boiss.
20, rocky place, 2400 m, 16.06.2003, *M.P.* 1895. Ir.-Tur. element.
- S. odontopetala* Fenzl
20, on rock, 2600 m, 05.07.2003, *M.P.* 2171; **21**, on rock, 2900 m, 26.06.2004, *M.P.* 2634.
- S. vulgaris* (Moench) Garcke var. *vulgaris*
11, roadside, 1700 m, 24.05.2003, *M.P.* 1660.
- S. vulgaris* (Moench) Garcke var. *commutata* (Guss.) Coode & Cullen
21, meadow, 1700 m, 26.06.2004, *M.P.* 2567.
- S. rhynhocarpa* Boiss.
11, rocky place, 2400 m, 24.05.2003, *M.P.* 1619.
- S. compacta* Fisch.
6, rocky place, 1750 m, 01.06.2002, *M.P.* 1147; **9**, rocky place, 1700 m, 16.06.2003, *M.P.* 1914; **4**, streamside, 1600 m, 19.07.2003, *M.P.* 2351.
- S. alba* (Mill.) Krause subsp. *divaricata* (Reichb.) Walters
20, streamside, stony slope, 1650 m, 17.05.2003, *M.P.* 1397; **21**, meadow, 1700 m, 26.06.2004, *M.P.* 2569.
- S. noctiflora* L.
21, meadow, 1700 m, 26.06.2004, *M.P.* 2565.
- S. aegyptiaca* (L.) L. f. subsp. *ruderalis* Coode & Cullen
1, rocky place, 1700 m, 04.05.2002, *M.P.* 1024, *M.P.* 1044; **12**, rocky place, 1800 m, 03.05.2003, *M.P.* 1334.
- S. dichotoma* Ehrh. subsp. *sibthorpiana* (Reichb.) Rech.
21, cultivated field, 1800 m, 06.07.2003, *M.P.* 2203.
- S. conica* L.
1, streamside, 1600 m, 01.06.2002, *M.P.* 1133.
- S. subconica* Friv.
11, rocky place, 1700 m, 24.05.2003, *M.P.* 1658/a.
- S. conoidea* L.
11, rocky place, 1700 m, 24.05.2003, *M.P.* 1658/b.
- ILLECEBRACEAE**
Paronychia kurdica Boiss. subsp. *kurdica* var. *kurdica*
4 rocky place, 1900 m, 09.06.2003, *M.P.* 1779; **3**, rocky place, 2000 m, 12.07.2003, *M.P.* 2276; **4**, rocky place, 1900 m, 29.09.2003, *M.P.* 2512.
- P. kurdica* Boiss. subsp. *haussknechtii* Chaudhri
22, on rock, 2000 m, 18.05.2003, *M.P.* 1459. **End.**, “*LC*”.
- POLYGONACEAE**
Atraphaxis spinosa L.
23, rocky place, 2000 m, 08.08.2004, *M.P.* 2717. Ir.-Tur. element.
- A. billardieri* Jaub. & Spach var. *billardieri*
6, rocky place, 1800 m, 01.06.2002, *M.P.* 1170. Ir.-Tur. element.
- Rheum ribes* L.
11, rocky place, 2500 m, 24.05.2003, *M.P.* 1662. Ir.-Tur. element.
- Polygonum cognatum* Meisn.
22, rocky place, 2200 m, 16.06.2003, *M.P.* 1840.
- P. arenastrum* Bor.
17, streamside, 1650 m, 25.08.2002, *M.P.* 1247.
- P. polycnemoides* Jaub. & Spach
23, rocky place, 2000 m, 08.08.2004, *M.P.* 2718. Ir.-Tur. element.
- **P. rottboellioides* Jaub. & Spach
13, rocky place, 2000 m, 23.06.2003, *M.P.* 2060. Ir.-Tur. element, “*VU*”.
- P. bellardii* All.
21, rocky place, 1900 m, 10.06.2003, *M.P.* 1833.
- Rumex scutatus* L.
6, rocky place, 1850 m, 01.06.2002, *M.P.* 1156; **13**, steppe, 1800 m, 23.06.2003, *M.P.* 2028.
- R. tuberosus* L. subsp. *horizontalis* (Koch) Rech.
11, rocky slope, 2000 m, 24.05.2003, *M.P.* 1532.
- R. caucasicus* Rech.
17, streamside, 1650 m, 25.08.2002, *M.P.* 1248; **11**, rocky slope, 2200 m, 24.05.2003, *M.P.* 1609. Euxine element.
- CHENOPODIACEAE**
Chenopodium botrys L.
5, roadside, 1650 m, 08.09.2003, *M.P.* 2454.
- C. foliosum* (Moench) Asch.
21, cultivated field, 2500 m, 06.07.2003, *M.P.* 2253.
- C. album* L. subsp. *album* var. *album*
5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2478.
- Noaea mucronata* (Forssk.) Asch. & Schweinf. subsp. *tournefortii* (Spach) Aellen
5, rocky place, 2100 m, 08.09.2003, *M.P.* 2493; **4**, rocky place, 1850 m, 29.09.2003, *M.P.* 2511, *M.P.* 2513.
- AMARANTHACEAE**
Amaranthus albus L.
5, steppe, 2000 m, 08.09.2003, *M.P.* 2469.
- TAMARICACEAE**
Tamarix smyrnensis Bunge
5, streamside, 1600 m, 23.05.2002, *M.P.* 1070; **6**, streamside, 1600 m, 01.06.2002, *M.P.* 1172; **1**, streamside, 1600 m, 02.07.2003, *M.P.* 2111; **7**, wet place, 1700 m, 08.08.2004, *M.P.* 2642.
- 15. HYPERICACEAE (GUTTIFERAE)**
Hypericum lysimachioides Boiss. & Noë var. *lysimachioides*
3, steppe, 1750 m, 21.06.2003, *M.P.* 1966. Ir.-Tur. element.
- H. lysimachioides* Boiss. & Noë var. *spathulatum* Robson
3, streamside, 1600 m, 21.06.2003, *M.P.* 1979. Ir.-Tur. element.
- H. elongatum* Ledeb. subsp. *apiculatum* Robson
20, steppe, 2400 m, 16.06.2003, *M.P.* 1865; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2574. Ir.-Tur. element.
- H. lyidium* Boiss.
11, rocky slope, 2000 m, 24.05.2003, *M.P.* 1556, *M.P.* 1634; **21**, rocky place, 2500 m, 10.06.2003, *M.P.* 1805; **13**, rocky place, 2100 m, 23.06.2003, *M.P.* 2038. Ir.-Tur. element.
- H. pseudolaeye* Robson
6, steppe, 1700 m, 01.06.2002, *M.P.* 1154/b. **End.**, Ir.-Tur. element, “*LC*”.
- H. helianthemoides* (Spach) Boiss.
5, rocky place, 1700 m, 21.06.2003, *M.P.* 1926. Ir.-Tur. element.
- H. scabrum* L.
6, steppe, 1700 m, 01.06.2002, *M.P.* 1151; **15**, rocky place, 1800 m, 03.06.2003, *M.P.* 1673, *M.P.* 1690; **13**, steppe, 2100 m, 23.06.2003, *M.P.* 2046. Ir.-Tur. element.
- H. perforatum* L.
6, steppe, 1700 m, 01.06.2002, *M.P.* 1154/a; **1**, streamside, 1600 m, 02.07.2003, *M.P.* 2098; **4**, streamside, 1600 m, 19.07.2003, *M.P.* 2350.
- MALVACEAE**
Malva neglecta Wallr.
21, steppe, 2100 m, 06.07.2003, *M.P.* 2244; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2619.
- Alcea hohenackeri* (Boiss. & Huet) Boiss.
6, rocky place, 1800 m, 01.06.2002, *M.P.* 1180.
- LINACEAE**
Linum mucrotanum Bertol. subsp. *orientale* (Boiss.) P. H. Davis
6, steppe, 1800 m, 01.06.2002, *M.P.* 1150; **1**, rocky place, 1800 m, 02.07.2003, *M.P.* 2117. “*VU*”.
- L. mucrotanum* Bertol. subsp. *armenum* (Bordz.) P. H. Davis
1, streamside, 1600 m, 01.06.2002, *M.P.* 1121; **22**, steppe, 1800 m, 18.05.2003, *M.P.* 1504; **15**, rocky place, 1800 m, 03.06.2003, *M.P.* 1671. Ir.-Tur. element.
- L. densiflorum* P. H. Davis
10, steppe, 2200 m, 20.07.2003, *M.P.* 2421. Ir.-Tur. element.
- GERANIACEAE**
Geranium rotundifolium L.
12, rocky place, 1800 m, 03.05.2003, *M.P.* 1330; **4**, stony-rocky place, 1750 m, 09.06.2003, *M.P.* 1750.
- G. tuberosum* L. subsp. *tuberosum*

1, cultivated field, 1750 m, 04.05.2002, *M.P.* 1041.

G. steppeporum P. H. Davis

22, rocky place, 1850 m, 10.05.2003, *M.P.* 1358. Ir.-Tur. element.

G. macrostylum Boiss.

15, steppe, 2000 m, 24.05.2003, *M.P.* 1564. E. Medit. element.

G. collinum Steppenh. ex Willd.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1249; **3**, streamside, 1600 m, 21.06.2003, *M.P.* 1984; **16**, meadow, 1750 m, 13.07.2003, *M.P.* 2328.

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

1, steppe, 1800 m, 12.04.2003, *M.P.* 1266; **1**, rocky place, 1750 m, 19.04.2003, *M.P.* 1280.

ZYGOPHYLLACEAE

Tribulus terrestris L.

5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2483.

RUTACEAE

**Haplophyllum buxbaumii* (Poir.) G. Don subsp. *buxbaumii*

5, steppe, 2000 m, 08.09.2003, *M.P.* 2473. Ir.-Tur. element.

H. schelkownikovii Grossh.

4, rocky place, 1800 m, 09.06.2003, *M.P.* 1747. Ir.-Tur. element, "VU".

ACERACEAE

Acer monspessulanum L. subsp. *ibericum* (M. Bieb.) Yalt.

20, rocky place, 2000 m, 16.06.2003, *M.P.* 1891.

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

22, rocky place, 1750 m, 18.05.2003, *M.P.* 1453; **23**, rocky place, 1900 m, 08.08.2004, *M.P.* 2713. Ir.-Tur. element.

VITACEAE

Vitis vinifera L.

5, rocky place, 1900 m, 08.09.2003, *M.P.* 2472.

RHAMNACEAE

Paliurus spina-christi Mill.

6, streamside, 1600 m, 01.06.2002, *M.P.* 1174; **2**, rocky place, 1700 m, 21.06.2003, *M.P.* 1915; **5**, rocky place, 1800 m, 29.09.2003, *M.P.* 2496.

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

5, streamside, 1650 m, 29.09.2003, *M.P.* 2507. **End.**, "LC".

Rhamnus orbiculatus Bornm.

10, steppe, 2200 m, 20.07.2003, *M.P.* 2422.

R. kurdicus Boiss. & Hohen.

22, rocky place, 1900 m, 18.05.2003, *M.P.* 1447; **23**, rocky place, 2000 m, 08.08.2004, *M.P.* 2720. Ir.-Tur. element.

ANACARDIACEAE

Rhus coriaria L.

5, roadside, 1650 m, 08.09.2003, *M.P.* 2455.

Pistacia eurycarpa Yalt.

20, rocky place, 1800 m, 25.08.2002, *M.P.* 1199; **20**, rocky place, 2300 m, 16.06.2003, *M.P.* 1882; **4**, steppe, 2000 m, 19.07.2003, *M.P.* 2372; **23**, rocky place, 2000 m, 08.08.2004, *M.P.* 2676. Ir.-Tur. element.

FABACEAE (LEGUMINOSAE)

Colutea cilicica Boiss. & Balansa

9, roadside, 1650 m, 03.06.2003, *M.P.* 1737; **5**, steppe, 1800 m, 21.06.2003, *M.P.* 1933.

**Astragalus cretaceus* Boiss. & Kotschy

5, steppe, 1800 m, 23.05.2002, *M.P.* 1086. Ir.-Tur. element.

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

11, steppe, 2200 m, 24.05.2003, *M.P.* 1580, *M.P.* 1615; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1799, *M.P.* 1806, *M.P.* 1824, *M.P.* 1826; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2545. Ir.-Tur. element.

A. pulchellus Boiss.

20, steppe, 2400 m, 16.06.2003, *M.P.* 1902. Ir.-Tur. element, "VU".

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

6, steppe, 1700 m, 01.06.2002, *M.P.* 1143; **21**, steppe, 2400 m, 10.06.2003, *M.P.* 1836; **20**, steppe, 2300 m, 16.06.2003, *M.P.* 1901. Ir.-Tur. element.

A. gummifer Labill.

10, steppe, 2000 m, 20.07.2003, *M.P.* 2410. Ir.-Tur. element.

A. microcephalus Willd.

23, steppe, 2100 m, 08.08.2004, *M.P.* 2734. Ir.-Tur. element.

A. amblolepis Fisch.

17, steppe, 25.08.2002, *M.P.* 1210. Ir.-Tur. element.

A. cf. wartsensis Boiss.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2175. Ir.-Tur. element.

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

10, steppe, 2000 m, 20.07.2003, *M.P.* 2427. Ir.-Tur. element.

A. persicus (DC.) Fisch. & C. A. Mey.

20, steppe, 2400 m, 16.06.2003, *M.P.* 1888. **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2225. Ir.-Tur. element.

A. halicacabus Lam.

1, rocky place, 1800 m, 01.06.2002, *M.P.* 1117, *M.P.* 1119; **20**, steppe, 2400 m, 16.06.2003, *M.P.* 1904. Ir.-Tur. element.

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

5, steppe, 2000 m, 21.06.2003, *M.P.* 1946, *M.P.* 1954; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2238. Ir.-Tur. element.

A. odoratus Lam.

3, steppe, 1900 m, 21.06.2003, *M.P.* 1987; **21**, steppe, 2500 m, 06.07.2003, *M.P.* 2252.

A. ascicalyx Bunge

21, steppe, 2500 m, 10.06.2003, *M.P.* 1815; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2231; **21**, steppe, 2100 m, 26.06.2004, *M.P.* 2539. Ir.-Tur. element.

A. aduncus Willd.

1, streamside, 1600 m, 01.06.2002, *M.P.* 1122; **9**, steppe, 1750 m, 03.06.2003, *M.P.* 1730; **4**, steppe, 2000 m, 19.07.2003, *M.P.* 2378. Ir.-Tur. element.

A. bicolor Lam.

21, steppe, 2500 m, 26.06.2004, *M.P.* 2547, *M.P.* 2549. Ir.-Tur. element.

A. fragrans Willd.

20, rocky place, 2500 m, 17.05.2003, *M.P.* 1392, *M.P.* 1428; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1818. Ir.-Tur. element.

A. elongatus Willd. subsp. *elongatus*

11, steppe, 2200 m, 24.05.2003, *M.P.* 1598. Ir.-Tur. element.

A. brachycarpus M. Bieb.

20, steppe, 2500 m, 17.05.2003, *M.P.* 1394; **22**, rocky place, 1750 m, 18.05.2003, *M.P.* 1465; **15**, rocky place, 1800 m, 03.06.2003, *M.P.* 1683; **21**, rocky place, 2500 m, 10.06.2003, *M.P.* 1787. "VU".

A. subrobustus Boriss.

20, rocky place, 2700 m, 17.05.2003, *M.P.* 1401; **11**, steppe, 2200 m, 24.05.2003, *M.P.* 1542, *M.P.* 1553. Ir.-Tur. element.

**A. robustus* Bunge

11, steppe, 2000 m, 24.05.2003, *M.P.* 1537. Ir.-Tur. element.

A. subsecundus Boiss. & Hoh.

21, steppe, 2600 m, 10.06.2003, *M.P.* 1801. "VU".

A. davisii D. F. Chamb. & Matthews

21, steppe, 2600 m, 10.06.2003, *M.P.* 1810; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2169; **3**, open oak forest, 2100 m, 12.07.2003, *M.P.* 2296; **10**, steppe, 1900 m, 20.07.2003, *M.P.* 2407. **End.**, Ir.-Tur. element, "NT".

Vicia cracca L. subsp. *cracca*

17, streamside, 1650 m, 25.08.2002, *M.P.* 1234. Euro-Sib. element.

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

20, steppe, 2300 m, 05.07.2003, *M.P.* 2146.

V. cracca L. subsp. *stenophylla* Vel.

22, steppe, 2000 m, 16.06.2003, *M.P.* 1851, *M.P.* 1854.

V. villosa Roth subsp. *villosa*

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1101; **20**, rocky place, 1900 m, 16.06.2003, *M.P.* 1866.

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

4, rocky place, 1700 m, 09.06.2003, *M.P.* 1758.

V. ervilia (L.) Willd.

4, roadside, 1600 m, 09.06.2003, *M.P.* 1751.

V. anatolica Turrill

4, stony slope, 1750 m, 09.06.2003, *M.P.* 1753. Ir.-Tur. element.

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

4, stony slope, 1750 m, 09.06.2003, *M.P.* 1755.

- Lathyrus boissieri* Širj.
3, streamside, 1600 m, 21.06.2003, *M.P.* 1990; 3, shady-wet place, 2000 m, 12.07.2003, *M.P.* 2268. Ir.-Tur. element.
- L. pratensis* L.
13, steppe, 2300 m, 23.06.2003, *M.P.* 2037; 4, wet place, 2100 m, 19.07.2003, *M.P.* 2388. Euro-Sib. element.
- L. rotundifolius* Willd. subsp. *miniatus* (M. Bieb. ex Stev.) P. H. Davis
3, rocky place, 1750 m, 21.06.2003, *M.P.* 1972; 13, steppe, 1850 m, 23.06.2003, *M.P.* 2022, *M.P.* 2040; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2362.
- L. cicera* L.
5, rocky place, 1700 m, 23.05.2002, *M.P.* 1056; 4, stony slope, 1700 m, 09.06.2003, *M.P.* 1759, *M.P.* 1761.
- L. chloranthus* Boiss.
3, wet place, 1750 m, 12.07.2003, *M.P.* 2307. Ir.-Tur. element.
- Pisum sativum* L. subsp. *elatius* (M. Bieb.) Asch. & Graebn. var. *pumilio* Meikle
9, roadside, 1700 m, 03.06.2003, *M.P.* 1733; 4, rocky place, 1700 m, 09.06.2003, *M.P.* 1777.
- Ononis arvensis* L.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2122. Euro-Sib. element.
- O. spinosa* L. subsp. *leiosperma* (Boiss.) Širj.
5, streamside, 1600 m, 29.09.2003, *M.P.* 2508.
- Trifolium repens* L. var. *giganteum* Lag.-Foss.
4, streamside, 1600 m, 09.06.2003, *M.P.* 1770.
- T. campestre* Schreb.
3, meadow, 1700 m, 21.06.2003, *M.P.* 1962, *M.P.* 1974.
- T. pratense* L. var. *pratense*
17, streamside, 1650 m, 25.08.2002, *M.P.* 1220; 4, streamside, 1600 m, 09.06.2003, *M.P.* 1768.
- T. longidentatum* Nábělek
10, meadow, 2100 m, 20.07.2003, *M.P.* 2433; 21, meadow, 2000 m, 26.06.2004, *M.P.* 2563, *M.P.* 2568. **End.**, Ir.-Tur. element, “**NT**”.
- Melilotus officinalis* (L.) Desr.
21, steppe, 2100 m, 10.06.2003, *M.P.* 1829.
- M. alba* Desr.
22, steppe, 1900 m, 16.06.2003, *M.P.* 1849; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2088.
- **Trigonella plicata* (Boiss. & Balansa) Boiss.
1, rocky place, 1650 m, 04.05.2002, *M.P.* 1022/b. **End.**, Ir.-Tur. element, “**LC**”.
- T. brachycarpa* (Fisch.) Moris
15, rocky place, 2100 m, 03.06.2003, *M.P.* 1718. Ir.-Tur. element.
- T. monantha* C. A. Mey. subsp. *monantha*
22, rocky place, 1700 m, 18.05.2003, *M.P.* 1444/b. Ir.-Tur. element.
- T. monantha* C. A. Mey. subsp. *noeana* (Boiss.) Hub.-Mor.
1, rocky place, 1650 m, 04.05.2002, *M.P.* 1022/a; 22, steppe, 1800 m, 10.05.2003, *M.P.* 1370; 22, steppe, 1700 m, 18.05.2003, *M.P.* 1493. Ir.-Tur. element.
- T. orthoceras* Kar.&Kir.
22, rocky place, 1700 m, 18.05.2003, *M.P.* 1444/a. Ir.-Tur. element.
- Medicago radiata* L.
15, steppe, 1800 m, 03.06.2003, *M.P.* 1678. Ir.-Tur. element.
- M. lupulina* L.
17, streamside, 1650 m, 25.08.2002, *M.P.* 1252.
- M. sativa* L. subsp. *sativa*
20, cultivated field, 1750 m, 25.08.2002, *M.P.* 1192; 17, streamside, 1650 m, 25.08.2002, *M.P.* 1240, *M.P.* 1251; 5, wet place, 1700 m, 21.06.2003, *M.P.* 1937.
- M. minima* (L.) Bartal. var. *minima*
4, rocky place, 1750 m, 09.06.2003, *M.P.* 1741.
- M. rigidula* (L.) All. var. *rigidula*
4, rocky place, 1750 m, 09.06.2003, *M.P.* 1746.
- Lotus corniculatus* L. var. *corniculatus*
4, streamside, 1600 m, 09.06.2003, *M.P.* 1766; 3, streamside, 1600 m, 21.06.2003, *M.P.* 1980.
- L. corniculatus* L. var. *tenuifolius* L.
17, streamside, 1650 m, 25.08.2002, *M.P.* 1221; 3, wet place, 1750 m, 21.06.2003, *M.P.* 1977.
- L. gebelia* Vent. var. *gebelia*
6, rocky place, 1700 m, 01.06.2002, *M.P.* 1165, *M.P.* 1168; 4, stony slope, 1750 m, 09.06.2003, *M.P.* 1744; 3, steppe, 1750 m, 21.06.2003, *M.P.* 1967.
- Coronilla orientalis* Mill. var. *orientalis*
1, streamside, 1600 m, 01.06.2002, *M.P.* 1129; 15, steppe, 1850 m, 03.06.2003, *M.P.* 1687; 21, steppe, 2400 m, 10.06.2003, *M.P.* 1789; 20, steppe, 2400 m, 16.06.2003, *M.P.* 1861, *M.P.* 1893; 13, steppe, 1900 m, 23.06.2003, *M.P.* 2019.
- C. varia* L. subsp. *varia*
6, rocky place, 1750 m, 01.06.2002, *M.P.* 1161; 5, steppe, 2000 m, 21.06.2003, *M.P.* 1959; 13, rocky place, 2100 m, 23.06.2003, *M.P.* 2033; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2094.
- Hedysarum vanense* Hedge & Hub.-Mor.
5, rocky place, 1800 m, 21.06.2003, *M.P.* 1944; 3, streamside, 1600 m, 21.06.2003, *M.P.* 1981; 3, open oak forest, 2100 m, 12.07.2003, *M.P.* 2298; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2375. **End.**, “**VU**”.
- Onobrychis cornuta* (L.) Desv.
20, rocky place, 2100 m, 17.05.2003, *M.P.* 1403; 11, steppe, 2200 m, 24.05.2003, *M.P.* 1626; 21, rocky place, 2000 m, 10.06.2003, *M.P.* 1808. Ir.-Tur. element.
- O. carduchorum* C. C. Towns.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2109. Ir.-Tur. element.
- O. sulphurea* Boiss. & Balansa var. *sulphurea*
21, steppe, 2000 m, 26.06.2004, *M.P.* 2611. **End.**, “**VU**”.
- O. sulphurea* Boiss. & Balansa var. *vanensis* Hedge
20, steppe, 2500 m, 05.07.2003, *M.P.* 2196. **End.**, Ir.-Tur. element, “**NT**”.
- O. altissima* Grossh.
13, cultivated field, 1750 m, 23.06.2003, *M.P.* 2004.
- O. radiata* (Desf.) M. Bieb.
9, rocky place, 1700 m, 03.06.2003, *M.P.* 1735.
- ROSACEAE**
- Cerasus brachypetala* Boiss. var. *bornmuelleri* (Schneider) Browicz
11, stony slope, 2100 m, 24.05.2003, *M.P.* 1651. Ir.-Tur. element.
- C. microcarpa* (C. A. Mey.) Boiss. subsp. *tortuosa* (Boiss. & Hausskn.) Browicz
18, rocky place, 1800 m, 03.05.2003, *M.P.* 1321; 4, rocky place, 2000 m, 19.07.2003, *M.P.* 2387. Ir.-Tur. element.
- C. mahaleb* (L.) Mill. var. *mahaleb*
20, rocky place, 2000 m, 16.06.2003, *M.P.* 1863.
- C. mahaleb* (L.) Mill. var. *alpina* Browicz
22, rocky place, 1800 m, 10.05.2003, *M.P.* 1372. **End.**, “**VU**”.
- Armeniaca vulgaris* Lam. (cv.)
21, cultivated field, 1900 m, 06.07.2003, *M.P.* 2242.
- Amygdalus communis* L.
5, steppe, 1700 m, 27.04.2002, *M.P.* 1018; 18, rocky place, 1700 m, 03.05.2003, *M.P.* 1319.
- A. trichamygdalus* (Hand.-Mazz.) Woronow var. *trichamygdalus*
5, steppe, 1800 m, 23.05.2002, *M.P.* 1069. Ir.-Tur. element.
- **Rubus saxatilis* L.
20, sandy slope, 2100 m, 05.07.2003, *M.P.* 2132.
- R. sanctus* Schreb.
5, rocky place, 1750 m, 29.09.2003, *M.P.* 2495.
- Potentilla lignosa* Willd.
15, on rock, 2100 m, 03.06.2003, *M.P.* 1711. Ir.-Tur. element.
- P. bifurca* L.
15, steppe, 1800 m, 03.06.2003, *M.P.* 1726; 13, steppe, 1800 m, 23.06.2003, *M.P.* 2010.
- P. inclinata* Vill.
4, stony slope, 1750 m, 09.06.2003, *M.P.* 1740; 5, cultivated field, 1700 m, 21.06.2003, *M.P.* 1918; 13, meadow, 2200 m,

23.06.2003, *M.P.* 2064; **21**, cultivated field, 2200 m, 06.07.2003, *M.P.* 2228; **21**, steppe, 2100 m, 26.06.2004, *M.P.* 2618.

P. recta L.

1, streamside, 1600 m, 01.06.2002, *M.P.* 1124.

P. anatolica Peşmen

13, steppe, 2400 m, 23.06.2003, *M.P.* 2059; **21**, steppe, 2500 m, 06.07.2003, *M.P.* 2249. **End.**, Ir.-Tur. element, “**LC**”.

P. reptans L.

1, streamside, 1600 m, 02.07.2003, *M.P.* 2081.

Geum urbanum L.

20, wet place, 2200 m, 05.07.2003, *M.P.* 2134. Euro-Sib. element.

Agrimonia eupatoria L.

3, meadow, 2000 m, 12.07.2003, *M.P.* 2261.

Sanguisorba minor Scop. subsp. *minor*

15, rocky place, 2100 m, 03.06.2003, *M.P.* 1707; **21**, steppe, 2100 m, 26.06.2004, *M.P.* 2605.

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

21, steppe, 2000 m, 26.06.2004, *M.P.* 2601.

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

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1105.

Alchemilla persica Rothm.

13, wet place, 1900 m, 23.06.2003, *M.P.* 2031; **4**, wet place, 2100 m, 19.07.2003, *M.P.* 2390. Ir.-Tur. element.

Rosa pulverulenta M. Bieb.

15, rocky place, 2100 m, 03.06.2003, *M.P.* 1715; **10**, steppe, 1850 m, 20.07.2003, *M.P.* 2411; **21**, steppe, 2100 m, 26.06.2004, *M.P.* 2592.

R. canina L.

5, streamside, 1600 m, 29.09.2003, *M.P.* 2509; **21**, rocky place, 2100 m, 26.06.2004, *M.P.* 2582.

Cotoneaster nummularia Fisch. & C. A. Mey.

13, steppe, 1800 m, 23.06.2003, *M.P.* 2025; **21**, rocky place, 2200 m, 26.06.2004, *M.P.* 2576.

Crataegus pseudoheterophylla Pojark.

4, steppe, 2000 m, 19.07.2003, *M.P.* 2380; **5**, rocky place, 1900 m, 29.09.2003, *M.P.* 2497. Ir.-Tur. element.

C. monogyna Jacq. subsp. *monogyna*

1, rocky place, 1750 m, 01.06.2002, *M.P.* 1138; **17**, streamside, 1650 m, 25.08.2002, *M.P.* 1237.

Sorbus kusnetzovii Zinslerl.

20, wet place, 2200 m, 05.07.2003, *M.P.* 2135.

Malus sylvestris Mill. subsp. *mitis* (Wallr.) Mansf. (cv.)

22, streamside, 1650 m, 18.05.2003, *M.P.* 1514.

Pyrus syriaca Boiss. var. *syriaca*

17, rocky place, 1700 m, 25.08.2002, *M.P.* 1256.

LYTHRACEAE

Lythrum salicaria L.

3, wet place, 1800 m, 12.07.2003, *M.P.* 2262; **4**, wet place, 1900 m, 19.07.2003, *M.P.* 2393. Euro-Sib. element.

**L. anatolicum* Leblebici & Seçmen

20, streamside, 1500 m, 25.08.2002, *M.P.* 1229. **End.**, Euxine element, “**CR**”.

ONAGRACEAE

Epilobium roseum Schreb. subsp. *subsessile* (Boiss.) P.H. Raven

20, wet place, 1800 m, 05.07.2003, *M.P.* 2133.

CRASSULACEAE

Prometheum sempervivoides (Fisch. ex M.Bieb.) H.Ohba

13, steppe, 2200 m, 23.06.2003, *M.P.* 2071; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2144.

Rosularia sempervivum (M. Bieb.) A. Berger subsp. *kurdica* Eggl

15, on rock, 2100 m, 03.06.2003, *M.P.* 1702; **21**, on rock, 2900 m, 26.06.2004, *M.P.* 2636/a. Ir.-Tur. element.

R. sempervivum (M. Bieb.) subsp. *persica* (Boiss.) Eggl

21, on rock, 2900 m, 26.06.2004, *M.P.* 2636/b. Ir.-Tur. element.

Sedum album L.

13, rocky place, 2400 m, 23.06.2003, *M.P.* 2047; **21**, on rock, 2900 m, 26.06.2004, *M.P.* 2635.

APIACEAE (UMBELLIFERAE)

**Eryngium bornmuelleri* Nábělek

20, meadow, 2500 m, 05.07.2003, *M.P.* 2194. Ir.-Tur. element, “**NT**”.

E. cf. pyramidale Boiss. & Hausskn.

5, streamside, 1600 m, 08.08.2004, *M.P.* 2639. Ir.-Tur. element.

E. wanaturi Woron.

21, steppe, 2500 m, 06.07.2003, *M.P.* 2247. Ir.-Tur. element, “**VU**”.

E. billardieri Delarbre

3, steppe, 2000 m, 12.07.2003, *M.P.* 2273. Ir.-Tur. element.

E. campestre L. var. *campestre*

20, steppe, 1800 m, 25.08.2002, *M.P.* 1208; **23**, rocky place, 2000 m, 08.08.2004, *M.P.* 2692.

Chaerophyllum macropodium Boiss.

6, steppe, 1750 m, 01.06.2002, *M.P.* 1171; **20**, steppe, 2400 m, 16.06.2003, *M.P.* 1864; **13**, steppe, 1900 m, 23.06.2003, *M.P.* 2012; **21**, steppe, 2400 m, 06.07.2003, *M.P.* 2254. Ir.-Tur. element.

C. bulbosum L.

5, streamside, 1600 m, 23.05.2002, *M.P.* 1142. Euro-Sib. element.

C. crinitum Boiss.

11, steppe, 2100 m, 24.05.2003, *M.P.* 1550; **20**, steppe, 2400 m, 16.06.2003, *M.P.* 1862; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2586. Ir.-Tur. element.

Grammosciadium daucooides DC.

11, steppe, 2100 m, 24.05.2003, *M.P.* 1554. Ir.-Tur. element.

G. cornutum (Nábělek) C. C. Towns.

11, rocky place, 2200 m, 24.05.2003, *M.P.* 1631; **21**, rocky place, 1900 m, 26.06.2004, *M.P.* 2596. Ir.-Tur. element, “**VU**”.

Anthriscus nemorosa (M. Bieb.) Spreng.

11, steppe, 2100 m, 24.05.2003, *M.P.* 1573.

Scandix stellata Banks & Sol.

5, wet place, 1650 m, 23.05.2002, *M.P.* 1073.

S. iberica M. Bieb.

1, rocky place, 1850 m, 01.06.2002, *M.P.* 1115.

S. pecten-veneris L.

1, rocky place, 1700 m, 12.04.2003, *M.P.* 1268.

Smyrniium cordifolium Boiss.

15, rocky place, 1700 m, 03.06.2003, *M.P.* 1722. Ir.-Tur. element.

Bunium microcarpum (Boiss.) Freyn. subsp. *microcarpum*

15, rocky place, 1750 m, 03.06.2003, *M.P.* 1674; **21**, steppe, 2000m, 26.06.2004, *M.P.* 2608. E. Medit. element.

Pimpinella peregrina L.

18, wet place, 1650 m, 08.08.2004, *M.P.* 2669.

P. kotschyana Boiss.

3, steppe, 2000 m, 12.07.2003, *M.P.* 2275; **23**, steppe, 1850 m, 08.08.2004, *M.P.* 2728. Ir.-Tur. element.

P. tragium Vill. subsp. *lithophila* (Schischk.) Tutin

3, streamside, 1600 m, 12.07.2003, *M.P.* 2302.

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

16, wet place, 1700 m, 13.07.2003, *M.P.* 2327. “**VU**”.

Prangos pabularia Lindl.

13, steppe, 2000 m, 23.06.2003, *M.P.* 2070; **21**, steppe, 2100 m, 26.06.2004, *M.P.* 2580. Ir.-Tur. element.

P. uloptera DC.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2200. Ir.-Tur. element.

P. peucedanifolia Fenzl

15, rocky place, 1800 m, 03.06.2003, *M.P.* 1684, *M.P.* 1693; **13**, steppe, 2200 m, 23.06.2003, *M.P.* 2009. Ir.-Tur. element.

P. ferulacea (L.) Lindl.

11, rocky place, 2500 m, 24.05.2002, *M.P.* 1663; **15**, rocky place, 1800 m, 03.06.2003, *M.P.* 1700.

Heptaptera anisoptera (DC.) Tutin

4, steppe, 1900 m, 19.07.2003, *M.P.* 2382.

Hippomarathrum microcarpum (M. Bieb.) Fedtsch.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2201.

**Bupleurum croceum* Fenzl

21, steppe, 2000 m, 06.07.2003, *M.P.* 2219. Ir.-Tur. element.

Falcaria vulgaris Bernh.

20, rocky place, 1750 m, 25.08.2002, *M.P.* 1194; 17, rocky place, 1750 m, 25.08.2002, *M.P.* 1215; 16, rocky place, 1900 m, 13.07.2003, *M.P.* 2345; 23, rocky place, 2000 m, 08.08.2004, *M.P.* 2694.

Xanthogalum purpurascens Lallemand.

20, wet place, 1700 m, 05.07.2003, *M.P.* 2177.

Ferula orientalis L.

1, streamside, 1600 m, 02.07.2003, *M.P.* 2123. Ir.-Tur. element.

Ferulago stellata Boiss.

23, rocky place, 2200 m, 08.08.2004, *M.P.* 2738. Ir.-Tur. element.

F. bernardii L.

5, rocky place, 1700 m, 21.06.2003, *M.P.* 1934; 3, rocky place, 1650 m, 12.07.2003, *M.P.* 2305; 23, steppe, 1900 m, 08.08.2004, *M.P.* 2735. Ir.-Tur. element, "VU".

F. angulata (Schltr.) Boiss.

23, rocky place, 2000 m, 08.08.2004, *M.P.* 2730. Ir.-Tur. element, "VU".

Opopanax hispidus (Friv.) Gris

3, rocky place, 1650 m, 12.07.2003, *M.P.* 2304.

Malabaila lasiocarpa Boiss.

1, rocky place, 1750 m, 23.05.2002, *M.P.* 1104; 15, rocky place, 1800 m, 03.06.2003, *M.P.* 1691. **End.**, Ir.-Tur. element, "LC".

Heracleum crenatifolium Boiss.

4, streamside, 2100 m, 19.07.2003, *M.P.* 2397. **End.**, "NT".

Zosima absinthifolia (Vent.) Link

4, stony slope, 1750 m, 09.06.2003, *M.P.* 1781; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2125.

Laserpitium carduchorum Hedge & Lamond

20, rocky place, 2500 m, 05.07.2003, *M.P.* 2199; 21, steppe, 1900 m, 26.06.2004, *M.P.* 2537. **End.**, Ir.-Tur. element, "NT".

Torilis leptophylla (L.) Reichb.

15, rocky place, 1850 m, 03.06.2003, *M.P.* 1701; 4, stony slope, 1750 m, 09.06.2003, *M.P.* 1745; 5, cultivated field, 1700 m, 21.06.2003, *M.P.* 1919.

Astrodaucus orientalis (L.) Drude

1, streamside, 1600 m, 02.07.2003, *M.P.* 2120; 23, steppe, 1800 m, 08.08.2004, *M.P.* 2732. Ir.-Tur. element.

Turgenia latifolia (L.) Hoffm.

15, rocky place, 1850 m, 03.06.2003, *M.P.* 1676; 21, steppe, 2200 m, 10.06.2003, *M.P.* 1830.

Daucus carota L.

4, streamside, 1600 m, 19.07.2003, *M.P.* 2359; 5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2470, *M.P.* 2485; 5, streamside, 1600 m, 29.09.2003, *M.P.* 2505.

CORNACEAE

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

3, wet place, 1800 m, 12.07.2003, *M.P.* 2266. Euro-Sib. element.

CAPRIFOLIACEAE

Lonicera caucasica Pallas subsp. *caucasica*

10, rocky place, 2000 m, 20.07.2003, *M.P.* 2442.

L. nummulariifolia Jaub & Spach subsp. *nummulariifolia*

20, rocky place, 2100 m, 16.06.2003, *M.P.* 1874; 20, steppe, 2300 m, 05.07.2003, *M.P.* 2178.

VALERIANACEAE

Valeriana alliariifolia Adams

10, meadow, 2100 m, 20.07.2003, *M.P.* 2419.

V. sisymbriifolia Vahl

22, kaya içleri, 1800 m, 18.05.2003, *M.P.* 1464; 11, rocky place, 2200 m, 24.05.2003, *M.P.* 1608, *M.P.* 1642; 20, rocky place, 2400 m, 16.06.2003, *M.P.* 1881. Ir.-Tur. element.

V. dioscoridis Sm.

15, rocky place, 1900 m, 03.06.2003, *M.P.* 1682. E. Medit. element.

V. leucophaea DC.

20, on rock, 2000 m, 17.05.2003, *M.P.* 1425. Hyrcano-Euxine element.

Centranthus longiflorus Stev. subsp. *longiflorus*

6, rocky place, 1750 m, 01.06.2002, *M.P.* 1155; 17, rocky place, 1800 m, 25.08.2002, *M.P.* 1255. Ir.-Tur. element.

Valerianella dactylophylla Boiss. & Hohen.

11, on rock, 2100 m, 24.05.2003, *M.P.* 1633.

V. cymbicarpa C. A. Mey.

22, rocky place, 1700 m, 10.05.2003, *M.P.* 1352. Ir.-Tur. element.

V. coronata (L.) DC.

22, rocky place, 1800 m, 18.05.2003, *M.P.* 1506.

DIPSACACEAE

Cephalaria setosa Boiss. & Hohen.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1235; 4, roadside, 1650 m, 19.07.2003, *M.P.* 2399. Ir.-Tur. element.

C. hirsuta Stapf

16, on rock, 2200 m, 13.07.2003, *M.P.* 2317; 23, steppe, 2100 m, 08.08.2004, *M.P.* 2737. Ir.-Tur. element.

C. procera Fisch. & Lall

21, steppe, 2200 m, 06.07.2003, *M.P.* 2233. Ir.-Tur. element.

C. microcephala Boiss.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2185. Ir.-Tur. element.

Scabiosa argentea L.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1241.

S. bicolor Kotschy

22, rocky place, 2000 m, 16.06.2003, *M.P.* 1856, *M.P.* 1898. Ir.-Tur. element.

S. persica Boiss.

1, streamside, 1600 m, 01.06.2002, *M.P.* 1132; 9, roadside, 1650 m, 03.06.2003, *M.P.* 1729; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2091; 21, steppe, 2100 m, 26.06.2004, *M.P.* 2598. Ir.-Tur. element.

Pterocephalus plumosus (L.) Coult.

13, steppe, 1900 m, 23.06.2003, *M.P.* 2026.

P. kurdicus Vatke var. *kurdicus*

23, rocky place, 2100 m, 08.08.2004, *M.P.* 2736. "VU".

P. kurdicus Vatke var. *viscosissimus* Bornm.

21, steppe, 2300 m, 06.07.2003, *M.P.* 2240. Ir.-Tur. element, "VU".

P. szovitsii Boiss.

3, steppe, 2000 m, 12.07.2003, *M.P.* 2259. Ir.-Tur. element.

ASTERACEAE (COMPOSITAE)

Chrysophthalmum montanum (DC.) Boiss.

16, on rock, 2200 m, 13.07.2003, *M.P.* 2316. Ir.-Tur. element.

Inula helenium L. subsp. *vanensis* Grierson

4, wet place, 2100 m, 19.07.2003, *M.P.* 2396; 7, waterfalls around, wet place, 1650 m, 08.08.2004, *M.P.* 2650; 18, wet place, 1650 m, 08.08.2004, *M.P.* 2672. **End.**, Ir.-Tur. element, "NT".

I. peacockiana (Aitch. & Hemsl.) Korovin

5, rocky place, 2000 m, 21.06.2003, *M.P.* 1960. Ir.-Tur. element.

I. salicina L.

1, streamside, 1600 m, 02.07.2003, *M.P.* 2103; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2147. Euro-Sib. element.

I. viscidula Boiss. & Kotschy

18, meadow, 1650 m, 08.08.2004, *M.P.* 2667. Ir.-Tur. element.

I. oculus-christi L.

20, steppe, 2500 m, *M.P.* 2162, *M.P.* 2165; 3, steppe, 2000 m, 12.07.2003, *M.P.* 2277; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2363; 23, steppe, 2000 m, 08.08.2004, *M.P.* 2698. Euro-Sib. element.

I. britannica L.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1223; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2386/b. Euro-Sib. element.

I. montbretiana DC.

3, shady-wet place, 2000 m, 12.07.2003, *M.P.* 2267. Ir.-Tur. element.

I. thapsoides (M. Bieb. ex Willd.) Spreng. subsp. *australis* Grierson

20, steppe, 2500 m, 05.07.2003, *M.P.* 2150; 3, shady-wet place, 2000 m, 12.07.2003, *M.P.* 2270.

Pulicaria dysenterica (L.) Bernh.

5, rocky place, 1600 m, 08.09.2003, *M.P.* 2458.

Helichrysum pallasii (Spreng.) Ledeb.

- 20, steppe, 2500 m, 05.07.2003, *M.P.* 2156; 3, steppe, 2100 m, 12.07.2003, *M.P.* 2287. Ir.-Tur. element.
- H. plicatum* DC. subsp. *plicatum*
20, steppe, 2500 m, 05.07.2003, *M.P.* 2186; 3, steppe, 2100 m, 12.07.2003, *M.P.* 2258; 23, steppe, 2000 m, 08.08.2004, *M.P.* 2674.
- H. plicatum* DC. subsp. *polyphyllum* (Ledeb.) P. H. Davis & Kupicha
20, steppe, 2500 m, 05.07.2003, *M.P.* 2152, *M.P.* 2179.
- H. armeniacum* DC. subsp. *armeniaceum*
20, steppe, 1800 m, 25.08.2002, *M.P.* 1198. Ir.-Tur. element.
- Filago pyramidata* L.
21, steppe, 1700 m, 06.07.2003, *M.P.* 2207; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2356.
- Logfia arvensis* (L.) Holub
4, stony slope, 1700 m, 09.06.2003, *M.P.* 1749; 13, steppe, 1900 m, 23.06.2003, *M.P.* 2065; 21, steppe, 1850 m, 26.06.2004, *M.P.* 2566.
- Cymbalaena griffithii* (A. Gray) Wagenitz
4, streamside, 1600 m, 19.07.2003, *M.P.* 2355. Ir.-Tur. element.
- Erigeron acer* L. subsp. *pycnotrichus* (Vierh.) Grierson
13, rocky place, 1800 m, 23.06.2003, *M.P.* 2014; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2084. Euro-Sib. element.
- Senecio mollis* Willd.
5, streamside, 1600 m, 29.09.2003, *M.P.* 2506. Ir.-Tur. element.
- S. eriospermus* DC. var. *eriospermus*
21, steppe, 2500 m, 10.06.2003, *M.P.* 1822; 20, rocky place, 2500 m, 05.07.2003, *M.P.* 2189; 10, rocky place, 2000 m, 20.07.2003, *M.P.* 2431. Ir.-Tur. element.
- S. cilicium* Boiss.
20, rocky place, 2500 m, 05.07.2003, *M.P.* 2193; 10, rocky place, 2000 m, 20.07.2003, *M.P.* 2441. **End.**, Ir.-Tur. element, "LC".
- S. paucilobus* DC.
20, rocky place, 2500 m, 05.07.2003, *M.P.* 2191; 16, rocky place, 2200 m, 13.07.2003, *M.P.* 2318. Ir.-Tur. element, "VU".
- S. vernalis* Waldst. & Kit.
12, rocky place, 1700 m, 03.05.2003, *M.P.* 1327; 11, steppe, 1900 m, 24.05.2003, *M.P.* 1561; 3, shady-wet place, 2000 m, 12.07.2003, *M.P.* 2269; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2385.
- Tussilago farfara* L.
13, meadow, 1700 m, 03.05.2003, *M.P.* 1325. Euro-Sib. element.
- Anthemis cretica* L. subsp. *pontica* (Willd.) Grierson
15, rocky place, 2100 m, 03.06.2003, *M.P.* 1713; 21, rocky place, 2000 m, 26.06.2004, *M.P.* 2591.
- A. cretica* L. subsp. *albida* (Boiss.) Grierson
20, rocky place, 2400 m, 16.06.2003, *M.P.* 1907.
- A. cretica* L. subsp. *anatolica* (Boiss.) Grierson
20, steppe, 2500 m, 16.06.2003, *M.P.* 1894; 5, steppe, 1900 m, 21.06.2003, *M.P.* 1929.
- A. altissima* L.
4, stony slope, 1750 m, 09.06.2003, *M.P.* 1764; 3, streamside, 1600 m, 21.06.2003, *M.P.* 1986.
- A. austriaca* Jacq.
5, steppe, 1750 m, 23.05.2002, *M.P.* 1051, *M.P.* 1059; 5, rocky place, 1800 m, 23.05.2002, *M.P.* 1094.
- Achillea vermicularis* Trin.
21, rocky place, 2000 m, 10.06.2003, *M.P.* 1784; 3, rocky place, 1750 m, 21.06.2003, *M.P.* 1971; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2183; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2434. Ir.-Tur. element.
- A. schischkinii* Sosn.
5, rocky place, 1700 m, 21.06.2003, *M.P.* 1939. **End.**, Ir.-Tur. element, "LC".
- A. tenuifolia* Lam.
6, rocky place, 1750 m, 01.06.2002, *M.P.* 1146; 20, steppe, 1750 m, 25.08.2002, *M.P.* 1185, *M.P.* 1203; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2374; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2414. Ir.-Tur. element.
- A. millefolium* L. subsp. *millefolium*
3, streamside, 1600 m, 21.06.2003, *M.P.* 1988; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2172; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2366; 5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2486. Euro-Sib. element.
- A. nobilis* L. subsp. *neilreichii* (A. Kern.) Formánek
6, rocky place, 1700 m, 01.06.2002, *M.P.* 1149; 20, steppe, 2400 m, 16.06.2003, *M.P.* 1903. Euro-Sib. element.
- A. biebersteinii* Afan.
6, rocky place, 1700 m, 01.06.2002, *M.P.* 1144; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2379. Ir.-Tur. element.
- A. cappadocica* Hausskn. & Bornm.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2095. **End.**, Ir.-Tur. element, "LC".
- Tanacetum zahlbruckneri* (Nábělek) Grierson
1, steppe, 1750 m, 23.05.2002, *M.P.* 1078, *M.P.* 1098, *M.P.* 1139; 20, steppe, 1800 m, 17.05.2003, *M.P.* 1415; 22, rocky place, 1800 m, 18.05.2003, *M.P.* 1453; 11, steppe, 2000 m, 24.05.2003, *M.P.* 1605. **End.**, Ir.-Tur. element, "LC".
- T. kotschyi* (Boiss.) Grierson
15, on rock, 2100 m, 03.06.2003, *M.P.* 1704. Ir.-Tur. element.
- T. nitens* (Boiss. & Noë) Grierson
21, meadow, 2200 m, 26.06.2004, *M.P.* 2561. **End.**, "LC".
- T. chiliophyllum* (Fisch. & C. A. Mey.) Sch. Bip. var. *chiliophyllum*
20, steppe, 2500 m, 05.07.2003, *M.P.* 2176; 21, steppe, 2200 m, 26.06.2004, *M.P.* 2554, *M.P.* 2557, *M.P.* 2559, 2900 m, *M.P.* 2632.
- T. argyrophyllum* (C. Koch) Tzvel. var. *argyrophyllum*
17, rocky place, 1800 m, 25.08.2002, *M.P.* 1218; 5, rocky place, 1800 m, 21.06.2003, *M.P.* 1936; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2174; 16, on rock, 2200 m, *M.P.* 2325. Ir.-Tur. element.
- T. argyrophyllum* (C. Koch) Tzvel. var. *subvirescens* (DC.) Grierson
20, steppe, 2500 m, 05.07.2003, *M.P.* 2164. Ir.-Tur. element.
- Tripleurospermum oreades* (Boiss.) Rech.f. var. *oreades*
1, rocky place, 1750 m, 01.06.2002, *M.P.* 1120.
- T. callosum* (Boiss. & Heldr.) E. Hossain
22, steppe, 2000 m, 16.06.2003, *M.P.* 1850. **End.**, "LC".
- T. transcausicum* (Manden.) Pobed.
3, streamside, 1600 m, 21.06.2003, *M.P.* 1989.
- T. microcephalum* (Boiss.) Bornm.
3, steppe, 2100 m, 12.07.2003, *M.P.* 2286. Ir.-Tur. element.
- T. disciforme* (C. A. Mey.) Sch. Bip.
21, steppe, 2000 m, 10.06.2003, *M.P.* 1783; 13, cultivated field, 1750 m, 16.06.2003, *M.P.* 1912. Ir.-Tur. element.
- Artemisia incana* (L.) Druce
4, on rock, , 2000 m, 19.07.2003, *M.P.* 2384; 7, on rock, 1650 m, 08.08.2004, *M.P.* 2654. Ir.-Tur. element.
- Gundelia tournefortii* L. var. *tournefortii*
9, roadside, 1700 m, 03.06.2003, *M.P.* 1738; 16, stony slope, 1900 m, 13.07.2003, *M.P.* 2347. Ir.-Tur. element.
- Cousinia bicolor* Freyn & Sint.
23, steppe, 2000 m, 08.08.2004, *M.P.* 2739. **End.**, Ir.-Tur. element, "LC".
- C. vanensis* Hub.-Mor.
3, streamside, 1600 m, 12.07.2003, *M.P.* 2300; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2414. **End.**, Ir.-Tur. element, "LC".
- Arctium tomentosum* Mill. var. *glabrum* (Körn.) Arénes
4, streamside, 1600 m, 19.07.2003, *M.P.* 2349.
- Onopordum candidum* Nábělek
20, steppe, 2000 m, 20.07.2003, *M.P.* 2416. Ir.-Tur. element.
- O. sirsangense* Rech. f.
21, steppe, 2000 m, 06.07.2003, *M.P.* 2255. Ir.-Tur. element.
- O. acanthium* L.
10, roadside, 1700 m, 13.07.2003, *M.P.* 2348.
- Cirsium congestum* Fisch. & C. A. Mey. ex DC.
17, roadside, 1700 m, 25.08.2002, *M.P.* 1258; 5, streamside, 1600 m, 08.09.2003, *M.P.* 2453. Ir.-Tur. element.
- C. karduchorum* Petr.
4, steppe, 2000 m, 19.07.2003, *M.P.* 2371; 23, rocky place, 1900 m, 08.08.2004, *M.P.* 2704. Ir.-Tur. element.

- C. vulgare* (Savi) Ten.
5, streamside, 1600 m, 29.09.2003, *M.P.* 2510.
- C. echinus* (M. Bieb.) Hand.-Maz.
13, wet place, 1900 m, 23.06.2003, *M.P.* 2041. Ir.-Tur. element.
- C. elodes* M. Bieb.
20, streamside, 1650 m, 25.08.2002, *M.P.* 1230; 17, roadside, 1700 m, 25.08.2002, *M.P.* 1257. Ir.-Tur. element.
- C. arvense* (L.) Scop. subsp. *vestitum* (Wimm. & Grab.) Petr.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2124.
- Picnomon acarna* (L.) Cass.
20, rocky place, 1700 m, 25.08.2002, *M.P.* 1188. Medit. element.
- Carduus hamulosus* Ehrh. subsp. *hystrix* (C. A. Mey.) Kazmi
13, cultivated field, 1650 m, 16.06.2003, *M.P.* 1913; 13, cultivated field, 1900 m, 23.06.2003, *M.P.* 2039. Ir.-Tur. element.
- C. pycnocephalus* L. subsp. *albidus* (M. Bieb.) Kazmi
13, rocky slope, 2100 m, 23.06.2003, *M.P.* 2032.
- Jurinea cataonica* Boiss. & Hausskn.
17, rocky place, 1800 m, 25.08.2002, *M.P.* 1216; 5, steppe, 1800 m, 08.09.2003, *M.P.* 2464. **End.**, Ir.-Tur. element, “**LC**”.
- Serratula cerinthifolia* (Sm.) Boiss.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2104.
- S. radiata* (Waldst. & Kit.) M. Bieb. subsp. *biebersteiniana* Iljin ex Grossh.
20, steppe, 2500 m, 05.07.2003, *M.P.* 2190; 3, open oak forest, 2100 m, 12.07.2003, *M.P.* 2294; 10, steppe, 1900 m, 20.07.2003, *M.P.* 2408. Ir.-Tur. element.
- S. coriacea* Fisch. & C. A. Mey. ex DC.
20, rocky place, 1800 m, 25.08.2002, *M.P.* 1186; 5, roadside, 1600 m, 08.09.2003, *M.P.* 2466. Ir.-Tur. element.
- Acroptilon repens* (L.) DC.
21, roadside, 1650 m, 06.07.2003, *M.P.* 2202. Ir.-Tur. element.
- Centaurea virgata* Lam.
20, steppe, 1800 m, 25.08.2002, *M.P.* 1193; 17, steppe, 1900 m, 25.08.2002, *M.P.* 1212; 23, steppe, 2000 m, 08.08.2004, *M.P.* 2708. Ir.-Tur. element.
- C. saligna* (C. Koch) Wagenitz
3, steppe, 2000 m, 12.07.2003, *M.P.* 2289; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2381. **End.**, Ir.-Tur. element, “**LC**”.
- C. pterocaula* Trautv.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2101; 3, meadow, 2100 m, 12.07.2003, *M.P.* 2299. Ir.-Tur. element.
- C. spectabilis* (Fisch. & C. A. Mey.) Sch. Bip. var. *spectabilis*
5, rocky place, 2000 m, 21.06.2003, *M.P.* 1947; 13, steppe, 1900 m, 23.06.2003, *M.P.* 2043; 20, steppe, 2400 m, 05.07.2003, *M.P.* 2151, *M.P.* 2157, *M.P.* 2187; 21, steppe, 2500 m, 06.07.2003, *M.P.* 2209, *M.P.* 2212; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2406, *M.P.* 2436, *M.P.* 2449. Ir.-Tur. element.
- C. spectabilis* (Fisch. & C. A. Mey.) Sch. Bip. var. *araneosa* (Boiss.) Wagenitz
5, rocky place, 2000 m, 21.06.2003, *M.P.* 1955; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2154; 16, stony slope, 1900 m, 13.07.2003, *M.P.* 2337. Ir.-Tur. element.
- **C. nemecii* Nábělek
3, steppe, 2100 m, 12.07.2003, *M.P.* 2291. Ir.-Tur. element, “**VU**”.
- C. polypodiifolia* Boiss. var. *polypodiifolia*
4, streamside, 1600 m, 19.07.2003, *M.P.* 2360. Ir.-Tur. element.
- C. polypodiifolia* Boiss. var. *szovitsiana* (Boiss.) Wagenitz
3, steppe, 1800 m, 21.06.2003, *M.P.* 2000. Ir.-Tur. element.
- C. solstitialis* L. subsp. *solstitialis*
20, steppe, 1700 m, 25.08.2002, *M.P.* 1191; 20, streamside, 1650 m, 25.08.2002, *M.P.* 1224; 5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2484.
- C. iberica* Trev. ex Spreng.
10, steppe, 2000 m, 20.07.2003, *M.P.* 2417.
- C. urvillei* DC. subsp. *urvillei*
13, rocky place, 2100 m, 23.06.2003, *M.P.* 2054. E. Medit. element.
- C. urvillei* DC. subsp. *nimrodii* (Boiss. & Hausskn.) Wagenitz
6, rocky place, 1700 m, 01.06.2002, *M.P.* 1183; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2128. Ir.-Tur. element.
- **C. carduiiformis* DC. subsp. *carduiiformis* var. *carduiiformis*
3, streamside, 1600 m, 21.06.2003, *M.P.* 1993; 23, steppe, 1900 m, 08.08.2004, *M.P.* 2700, *M.P.* 2719. Ir.-Tur. element.
- C. persica* Boiss.
20, rocky place, 1800 m, 25.08.2002, *M.P.* 1207; 21, steppe, 2200 m, 06.07.2003, *M.P.* 2220; 3, steppe, 2100 m, 12.07.2003, *M.P.* 2285; 16, steppe, 2000 m, 13.07.2003, *M.P.* 2320, *M.P.* 2332; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2364; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2432, *M.P.* 2438. Ir.-Tur. element, “**VU**”.
- C. pseudoscabiosa* Boiss. & Buhse subsp. *pseudoscabiosa*
13, rocky slope, 2100 m, 23.06.2003, *M.P.* 2069; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2170; 21, steppe, 2200 m, 06.07.2003, *M.P.* 2216; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2450. Ir.-Tur. element.
- C. pseudoscabiosa* Boiss. & Buhse subsp. *araratica* (Azn.) Wagenitz
20, steppe, 2500 m, 05.07.2003, *M.P.* 2143; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2423, *M.P.* 2443. Ir.-Tur. element.
- C. karduchorum* Boiss.
1, on rock, 1900 m, 01.06.2002, *M.P.* 1135; 15, on rock, 2100 m, 03.06.2003, *M.P.* 1703. **End.**, Ir.-Tur. element, “**NT**”.
- C. triumfettii* All.
5, steppe, 1750 m, 23.05.2002, *M.P.* 1081; 11, rocky slope, 2000 m, 24.05.2003, *M.P.* 1551, *M.P.* 1555, *M.P.* 1627; 21, steppe, 2500 m, 10.06.2003, *M.P.* 1785, *M.P.* 1819; 21, steppe, 1900 m, 06.07.2003, *M.P.* 2214.
- Crupina vulgaris* Cass.
5, rocky place, 1650 m, 23.05.2002, *M.P.* 1095; 22, rocky place, 1700 m, 18.05.2003, *M.P.* 1500; 11, roadside, 1700 m, 24.05.2003, *M.P.* 1659; 15, rocky place, 1750 m, 03.06.2002, *M.P.* 1669.
- Cnicus benedictus* L. var. *kotschy* Boiss.
4, steppe, 1700 m, 09.06.2003, *M.P.* 1760.
- Carlina oligocephala* Boiss. & Kotschy subsp. *oligocephala*
4, steppe, 1900 m, 29.09.2003, *M.P.* 2515.
- Xeranthemum annuum* L.
20, rocky place, 1750 m, 25.08.2002, *M.P.* 1202; 16, steppe, 2000 m, 13.07.2003, *M.P.* 2311; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2353.
- Chardinia orientalis* (L.) Kuntze
5, rocky place, 1800 m, 23.05.2002, *M.P.* 1091; 15, steppe, 1850 m, 03.06.2003, *M.P.* 1689. Ir.-Tur. element.
- Echinops pungens* Trautv. var. *pungens*
23, steppe, 2000 m, 08.08.2004, *M.P.* 2727. Ir.-Tur. element.
- E. pungens* Trautv. var. *adenocladus* Hedge
23, steppe, 2100 m, 08.08.2004, *M.P.* 2696. **End.**, Ir.-Tur. element, “**NT**”.
- E. orientalis* Trautv.
20, rocky place, 1750 m, 25.08.2002, *M.P.* 1209. Ir.-Tur. element.
- Cichorium intybus* L.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2100; 21, cultivated field, 2000 m, 06.07.2003, *M.P.* 2250.
- Koelipinia linearis* Pall.
21, steppe, 1800 m, 06.07.2003, *M.P.* 2218; 21, steppe, 2600 m, 26.06.2004, *M.P.* 2629. Ir.-Tur. element.
- Scorzonera cana* (C. A. Mey.) Hoffm. var. *jacquiniana* (W. Koch) D. F. Chamb.
21, steppe, 2500 m, 10.06.2003, *M.P.* 1800; 5, rocky place, 1750 m, 21.06.2003, *M.P.* 1940; 3, streamside, 1600 m, 21.06.2003, *M.P.* 1983.
- S. suberosa* C. Koch subsp. *suberosa*
11, rocky slope, 2000 m, 24.05.2003, *M.P.* 1586. Ir.-Tur. element.
- S. mollis* M. Bieb. subsp. *mollis*
4, steppe, 2000 m, 19.07.2003, *M.P.* 2377.
- S. mollis* M. Bieb. subsp. *szowitzii* (DC.) D. F. Chamb.

- 1, rocky place, 1800 m, 23.05.2002, *M.P. 1103*; **20**, steppe, 2100 m, 17.05.2003, *M.P. 1409*, *M.P. 1437*; **15**, steppe, 1850 m, 03.06.2003, *M.P. 1692*. Ir.-Tur. element.
- S. semicana* DC.
22, streamside, 1650 m, 18.05.2003, *M.P. 1487*; **22**, steppe, 1750 m, 18.05.2003, *M.P. 1513*. **End.**, Ir.-Tur. element, “**LC**”.
- S. incisa* DC.
21, steppe, 2500 m, 06.07.2003, *M.P. 2213*. Ir.-Tur. element.
- S. rigida* Aucher
15, on rock, 2100 m, 03.06.2003, *M.P. 1710*; **13**, on rock, 2500 m, 23.06.2003, *M.P. 2056*. Ir.-Tur. element.
- S. latifolia* (Fisch. & C. A. Mey.) DC. var. *latifolia*
3, rocky place, 1800 m, 21.06.2003, *M.P. 1998*; **20**, steppe, 2500 m, 05.07.2003, *M.P. 2181*; **3**, steppe, 2000 m, 12.07.2003, *M.P. 2256*. Ir.-Tur. element.
- S. veratrifolia* Fenzl
1, stony slope, 1750 m, 02.07.2003, *M.P. 2112*. Ir.-Tur. element.
- Tragopogon pterocarpus* DC.
13, steppe, 2400 m, 23.06.2003, *M.P. 2055*. Ir.-Tur. element.
- T. pratensis* L. subsp. *pratensis*
16, steppe, 2200 m, 13.07.2003, *M.P. 2314/a*. Euro-Sib. element.
- T. buphthalmoides* (DC.) Boiss. var. *buphthalmoides*
3, shady-wet place, 2000 m, 12.07.2003, *M.P. 2272*; **23**, steppe, 1900 m, 08.08.2004, *M.P. 2731*. Ir.-Tur. element.
- T. buphthalmoides* (DC.) Boiss. var. *latifolius* Boiss.
16, steppe, 2200 m, 13.07.2003, *M.P. 2314/b*. Ir.-Tur. element.
- T. aureus* Boiss.
21, steppe, 2200 m, 10.06.2003, *M.P. 1793*. **End.**, “**LC**”.
- Leontodon asperrimus* (Willd.) J. Ball
21, steppe, 2200 m, 06.07.2003, *M.P. 2239*; **10**, steppe, 2000 m, 20.07.2003, *M.P. 2428*. Ir.-Tur. element.
- L. crispus* Vill. subsp. *asper* (Waldst. & Kit.) Rohl. var. *asper*
20, rocky place, 2400 m, 16.06.2003, *M.P. 1868*; **5**, steppe, 1800 m, 21.06.2003, *M.P. 1942*; **13**, steppe, 1850 m, 23.06.2003, *M.P. 2017*; **20**, meadow, 2000 m, 05.07.2003, *M.P. 2138*; **21**, steppe, 2100 m, 26.06.2004, *M.P. 2616*.
- Picris strigosa* M. Bieb. subsp. *strigosa*
23, rocky place, 2000 m, 08.08.2004, *M.P. 2729*. Ir.-Tur. element.
- Rhagadiolus angulosus* (Jaub. & Spach) Kupicha
5, rocky place, 1750 m, 23.05.2002, *M.P. 1052*; **11**, steppe, 2000 m, 24.05.2003, *M.P. 1547*, *M.P. 1562*; **15**, rocky place, 1800 m, 03.06.2003, *M.P. 1679*. Ir.-Tur. element.
- Sonchus asper* (L.) Hill subsp. *glaucescens* (Jord.) Ball
10, cultivated field, 1800 m, 20.07.2003, *M.P. 2401*.
- Reichardia glauca* Matthews
21, steppe, 2500 m, 06.07.2003, *M.P. 2248*; **10**, steppe, 2100 m, 20.07.2003, *M.P. 2445*. Ir.-Tur. element.
- Hieracium umbellatum* L.
4, steppe, 2000 m, 19.07.2003, *M.P. 2386/b*.
- Pilosella piloselloides* (Vill.) Soják subsp. *megalomastix* (NP.) Sell & Wet
1, streamside, 1600 m, 02.07.2003, *M.P. 2082*.
- P. x fallax* (Willd.) Arv.-Touv.
13, steppe, 2000 m, 23.06.2003, *M.P. 2062*; **16**, stony slope, 1900 m, 13.07.2003, *M.P. 2330*.
- P. echioides* (Lumn.) C. H. & F. W. Schultz subsp. *procera* (Fr.) Sell & Wet
20, steppe, 2500 m, 05.07.2003, *M.P. 2145*.
- P. verruculata* (Link) Soják
5, rocky place, 2000 m, 21.06.2003, *M.P. 1958*; **3**, streamside, 1600 m, 21.06.2003, *M.P. 1991*; **10**, cultivated field, 1800 m, 20.07.2003, *M.P. 2412*.
- Cephalorrhynchus rechingeranus* Tuisl
15, rocky place, 1750 m, 03.06.2003, *M.P. 1694*; **20**, rocky place, *M.P. 2136*; **21**, rocky place, 1850 m, 26.06.2004, *M.P. 2587*. Ir.-Tur. element, “**VU**”.
- Steptorhamphus tuberosus* (Jacq.) Grossh.
21, steppe, 2200 m, 06.07.2003, *M.P. 2237*.
- Lactuca saligna* L.
5, cultivated field, 2000 m, 08.09.2003, *M.P. 2477*.
- L. serriola* L.
5, cultivated field, 2000 m, 08.09.2003, *M.P. 2479*, *M.P. 2491*. Euro-Sib. element.
- L. sativa* L. (cv.)
5, cultivated field, 2000 m, 08.09.2003, *M.P. 2487*.
- Lapsana communis* L. subsp. *intermedia* (M. Bieb.) Hayek
4, roadside, 1650 m, 09.06.2003, *M.P. 1776*; **5**, cultivated field, 2000 m, 08.09.2003, *M.P. 2489*.
- Taraxacum montanum* (C. A. Mey.) DC.
17, rocky place, 1900 m, 25.08.2002, *M.P. 1213*. Ir.-Tur. element.
- T. kurdiciforme* G. Hagl.
17, streamside, 1650 m, 25.08.2002, *M.P. 1245*; **11**, wet place, 1900 m, 24.05.2003, *M.P. 1558*. Ir.-Tur. element.
- T. cf. fedtschenkoi* Hand.-Mazz.
11, rocky place, 2000 m, 24.05.2003, *M.P. 1538*. “**VU**”.
- T. butleri* van Soest
5, rocky place, 1700 m, 27.04.2002, *M.P. 1000*.
- Chondrilla juncea* L. var. *juncea*
20, cultivated field, 1750 m, 25.08.2002, *M.P. 1205*; **5**, roadside, 1650 m, 08.09.2003, *M.P. 2457*.
- Crepis hakkarica* Lamond
20, steppe, 2500 m, 05.07.2003, *M.P. 2195*; **21**, steppe, 2600 m, 26.06.2004, *M.P. 2633*. **End.**, Ir.-Tur. element, “**EN**”.
- C. bupleurifolia* (Boiss.) Freyn & Sint.
21, steppe, 2100 m, 26.06.2004, *M.P. 2534*. **End.**, Ir.-Tur. element, “**LC**”.
- C. alpina* L.
1, steppe, 1750 m, 23.05.2002, *M.P. 1102*; **9**, roadside, 1700 m, 03.06.2003, *M.P. 1732*; **4**, stony slope, 1700 m, 09.06.2003, *M.P. 1756*.
- C. foetida* L. subsp. *rhoeadifolia* (M. Bieb.) Čelak.
4, stony slope, 1700 m, 09.06.2003, *M.P. 1743*; **1**, streamside, 1600 m, 02.07.2003, *M.P. 2108*.
- C. foetida* L. subsp. *commutata* (Spreng.) Babč.
21, steppe, 2500 m, 10.06.2003, *M.P. 1804*.
- C. sancta* (L.) Babč.
1, rocky place, 1750 m, 04.05.2002, *M.P. 1027*; **1**, streamside, 1600 m, 12.04.2003, *M.P. 1278*; **12**, rocky place, 1800 m, 03.05.2003, *M.P. 1335*; **22**, rocky place, 1700 m, 18.05.2003, *M.P. 1469*, *M.P. 1515*; **11**, steppe, 2200 m, 24.05.2003, *M.P. 1560*.
- CAMPANULACEAE**
- Campanula rapunculoides* L. subsp. *cordifolia* (C. Koch) Damboldt
3, wet place, 1800 m, 21.06.2003, *M.P. 1970*.
- C. glomerata* L. subsp. *hispida* (Witasek) Hayek
5, meadow, 2000 m, 21.06.2003, *M.P. 1951*; **3**, streamside, 1600 m, 21.06.2003, *M.P. 1982*. Euro-Sib. element.
- C. involucrata* Aucher ex A. DC.
11, rocky slope, 2200 m, 24.05.2003, *M.P. 1541*. Ir.-Tur. element.
- C. sclerotricha* Boiss.
17, streamside, 1650 m, 25.08.2002, *M.P. 1232*; **20**, wet place, 2200 m, 05.07.2003, *M.P. 2129*; **3**, shady-wet place, 1600 m, 12.07.2003, *M.P. 2306*. Ir.-Tur. element.
- C. coriacea* P. H. Davis
5, on rock, 2200 m, 08.09.2003, *M.P. 2494*; **23**, rocky place, 2000 m, 08.08.2004, *M.P. 2723*. **End.**, Ir.-Tur. element, “**LC**”.
- C. conferta* A. DC.
20, steppe, 2400 m, 16.06.2003, *M.P. 1880*. Ir.-Tur. element.
- C. stricta* L. var. *stricta*
20, steppe, 2500 m, 05.07.2003, *M.P. 2140*; **16**, rocky place, 2300 m, 13.07.2003, *M.P. 2319*; **23**, rocky place, 2000 m, 08.08.2004, *M.P. 2725*. Ir.-Tur. element.
- C. reuterana* Boiss. & Balansa
1, rocky place, 1800 m, 01.06.2002, *M.P. 1099*; **9**, roadside, 1650 m, 03.06.2003, *M.P. 1731*. Ir.-Tur. element.
- C. stevenii* M. Bieb. subsp. *beauverdiana* (Fomin) Rech. f. & Schiman - Czeika

11, rocky place, 2100 m, 24.05.2003, *M.P.* 1545; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1792. Ir.-Tur. element.

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

20, steppe, 2500 m, 05.07.2003, *M.P.* 2167; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2424. Ir.-Tur. element.

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

5, rocky place, 1750 m, 21.06.2003, *M.P.* 1924. Ir.-Tur. element.

A. virgatum (Labill.) Bornm. subsp. *virgatum*

20, steppe, 2500 m, 05.07.2003, *M.P.* 2141; **23**, steppe, 2100 m, 26.06.2004, *M.P.* 2721.

PRIMULACEAE

Androsace maxima L.

1, rocky place, 1750 m, 12.04.2003, *M.P.* 1272; **1**, steppe, 1800 m, 19.04.2003, *M.P.* 1281; **22**, rocky place, 1700 m, 10.05.2003, *M.P.* 1343.

Lysimachia vulgaris L.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1222; **1**, streamside, 1600 m, *M.P.* 2106.

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

1, streamside, 1600 m, 02.07.2003, *M.P.* 2079.

OLEACEAE

Fraxinus angustifolia J. Vahl subsp. *angustifolia*

3, streamside, 1600 m, 21.06.2003, *M.P.* 1969. Ir.-Tur. element.

APOCYNACEAE

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

(Woodson) Avetisian

17, streamside, 1650 m, 25.08.2002, *M.P.* 1233; **1**, streamside, 1600 m, 02.07.2003, *M.P.* 2102. E. Medit element.

GENTIANACEAE

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

1, streamside, 1600 m, 02.07.2003, *M.P.* 2074.

Gentiana cruciata L.

13, streamside, 2100 m, 23.06.2003, *M.P.* 2034. Euro-Sib. element.

G. olivieri Griseb.

1, streamside, 1600 m, 01.06.2002, *M.P.* 1131; **4**, wet place, 1700 m, 09.06.2003, *M.P.* 1774. Ir.-Tur. element.

CONVOLVULACEAE

Convolvulus cf. calvertii Boiss.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2166. Ir.-Tur. element.

C. arvensis L.

21, cultivated field, 1700 m, 06.07.2003, *M.P.* 2204.

C. betonicifolia Mill. subsp. *peduncularis* (Boiss.) Parris

4, rocky place, 1800 m, 09.06.2003, *M.P.* 1762. Ir.-Tur. element.

CUSCUTACEAE

Cuscuta kurdica Engelmann

1, streamside, 1600 m, 02.07.2003, *M.P.* 2126. Ir.-Tur. element. This species grows on *Serratula coriacea*.

C. monogyna Vahl subsp. *monogyna*

20, rocky place, 1750 m, 25.08.2002, *M.P.* 1206. This species grows on *Celtis glabrata*.

BORAGINACEAE

Heliotropium europaeum L.

20, streamside, 1650 m, 25.08.2002, *M.P.* 1226; **3**, streamside, 1600 m, 21.06.2003, *M.P.* 1994. Medit. element.

Lappula sinaica (DC.) Asch. & Schweinf.

22, rocky place, 1700 m, 18.05.2003, *M.P.* 1462. Ir.-Tur. element.

Heterocaryum szovitsianum (Fisch. & C. A. Mey.) A. DC.

22, rocky place, 2000 m, 16.06.2003, *M.P.* 1838. Ir.-Tur. element.

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

5, rocky place, 1700 m, 23.05.2002, *M.P.* 1054.

R. disperma (L. f.) C. Koch var. *microcalycina* (Bornm.) J. R. Edm.

22, rocky place, 1800 m, 10.05.2003, *M.P.* 1347, *M.P.* 1356, *M.P.* 1361, *M.P.* 1369; **11**, rocky slope, 2000 m, 24.05.2003, *M.P.* 1571. **End.**, Ir.-Tur. element, "LC".

R. cardiosepala Bunge

11, rocky slope, 2100 m, 24.05.2003, *M.P.* 1563. Ir.-Tur. element.

Asperogo procumbens L.

1, rocky place, 1700 m, 04.05.2002, *M.P.* 1038; **1**, streamside, 1600 m, 01.06.2002, *M.P.* 1112; **22**, rocky place, 1750 m, 10.05.2003, *M.P.* 1342. Euro-Sib. element.

Myosotis stricta Link ex Roem. & Schult.

5, rocky place, 1700 m, 23.05.2002, *M.P.* 1053; **18**, rocky place, 1700 m, 03.05.2003, *M.P.* 1307. Euro-Sib. element.

M. refracta Boiss. subsp. *refracta*

11, rocky place, 1800 m, 24.05.2003, *M.P.* 1567. Medit. element.

M. sylvatica Ehrh. ex Hoffm. subsp. *rivularis* Vestergren

11, steppe, 2000 m, 24.05.2003, *M.P.* 1546. Hyrcano-Euxine element.

M. alpestris F. W. Schmidt subsp. *alpestris*

21, steppe, 2000 m, 26.06.2004, *M.P.* 2572, *M.P.* 2593.

M. lithospermifolia (Willd.) Hornem.

5, rocky place, 1700 m, 23.05.2002, *M.P.* 1077; **20**, rocky place, 2000 m, 17.05.2003, *M.P.* 1398.

M. propinqua Fisch. & C. A. Mey. ex DC.

18, rocky place, 1750 m, 03.05.2003, *M.P.* 1309/b; **11**, rocky slope, 1850 m, 24.05.2003, *M.P.* 1572. Euxine element.

Paracaryum cristatum (Schreb.) Boiss. subsp. *cristatum*

16, stony slope, 1900 m, 13.07.2003, *M.P.* 2342. **End.**, Ir.-Tur. element, "LC".

P. cristatum (Schreb.) Boiss. subsp. *carduchorum* R. R. Mill

22, steppe, 1750 m, 18.05.2003, *M.P.* 1498; **15**, rocky place, 1700 m, 03.06.2003, *M.P.* 1725; **3**, rocky place, 1700 m, 21.06.2003, *M.P.* 1961; **16**, stony slope, 1900 m, 13.07.2003, *M.P.* 2342. Ir.-Tur. element.

Rindera lanata (Lam.) Bunge var. *lanata*

20, cultivated field, 1800 m, 17.05.2003, *M.P.* 1413; **11**, steppe, 1900 m, 24.05.2003, *M.P.* 1614; **21**, steppe, 2000 m, 10.06.2003, *M.P.* 1794; **10**, steppe, 2100 m, 20.07.2003, *M.P.* 2435; **21**, rocky place, 2000 m, 26.06.2004, *M.P.* 2577, *M.P.* 2583, *M.P.* 2615. Ir.-Tur. element.

R. lanata (Lam.) Bunge var. *canescens* (A. DC.) Kusn.

20, cultivated field, 1600 m, 17.05.2003, *M.P.* 1419. Ir.-Tur. element.

R. albida (Wettst.) Kusn.

21, steppe, 2500 m, 26.06.2004, *M.P.* 2573. Ir.-Tur. element.

Solenanthes circinnatus Ledeb.

5, streamside, 1600 m, 23.05.2002, *M.P.* 1141; **17**, meadow, 1700 m, 10.05.2003, *M.P.* 1380; **11**, steppe, 2100 m, 24.05.2003, *M.P.* 1576, *M.P.* 1578; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1797. Ir.-Tur. element.

S. stamineus (Desf.) Wettst.

20, cultivated field, 1800 m, 17.05.2003, *M.P.* 1417; **21**, steppe, 2500 m, 26.06.2004, *M.P.* 2570.

Buglossoides arvensis (L.) Johnston

1, steppe, 1650 m, 19.04.2003, *M.P.* 1282; **14**, steppe, 1700 m, 03.05.2003, *M.P.* 1299; **18**, rocky place, 1700 m, 03.05.2003, *M.P.* 1306; **22**, rocky place, 1700 m, 18.05.2003, *M.P.* 1477; **11**, rocky place, 2000 m, 24.05.2003, *M.P.* 1569, *M.P.* 1589.

Echium italicum L.

6, steppe, 1750 m, 01.06.2002, *M.P.* 1153; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2415. Medit. element.

Onosma lanceolatum Boiss. & Hausskn.

15, rocky place, 2100 m, 03.06.2003, *M.P.* 1716. Ir.-Tur. element.

O. bracteosum Hausskn. & Bornm.

11, on rock, 2200 m, 24.05.2003, *M.P.* 1610. **End.**, Ir.-Tur. element, "LC".

O. rascheyanum Boiss.

17, on rock, 2200 m, 24.05.2003, *M.P.* 1212. Ir.-Tur. element.

O. tauricum Pallas ex Willd. subsp. *tauricum*

11, on rock, 2200 m, 24.05.2003, *M.P.* 1635.

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

11, rocky slope, 2000 m, 24.05.2003, *M.P.* 1574; **21**, cultivated field, 2000 m, 26.06.2004, *M.P.* 2588.

C. glabra Mill.

22, streamside, 1650 m, 18.05.2003, *M.P.* 1482. Euro-Sib. element.

Anchusa azurea Mill. var. *azurea*

21, steppe, 2000 m, 10.06.2003, *M.P.* 1834.

A. azurea Mill. var. *macrocarpa* (Boiss. & Hohen.) D. F. Chamb.

18, roadside, 1650 m, 10.05.2003, *M.P.* 1375.

A. strigosa Labill.

22, rocky place, 1750 m, 18.05.2003, *M.P.* 1496.

A. arvensis (L.) M. Bieb. subsp. *orinetalis* (L.) Nordh.

18, rocky place, 1750 m, 03.05.2003, *M.P.* 1309/a; 8, cultivated field, 1600 m, 03.05.2003, *M.P.* 1339.

Nonea melanocarpa Boiss.

5, rocky place, 1700 m, *M.P.* 1090. Ir.-Tur. element.

N. pulla (L.) DC. subsp. *scabrisquamata* A. Baytop

22, cultivated field, 1650 m, 18.05.2003, *M.P.* 1484, *M.P.* 1526. Ir.-Tur. element.

N. macrantha (H. Riedl) A. Baytop

20, rocky place, 2500 m, 17.05.2003, *M.P.* 1383. Ir.-Tur. element.

N. anchusoides Boiss. & Buhse

21, rocky place, 2500 m, 10.06.2003, *M.P.* 1812. Ir.-Tur. element.

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

5, steppe, 2000 m, 27.24.2002, *M.P.* 1015. Ir.-Tur. element.

A. froedinii Rech. f.

1, rocky place, 1900 m, 01.06.2002, *M.P.* 1116; 22, rocky place, 1700 m, 18.05.2003, *M.P.* 1524; 11, rocky place, 2000 m, 24.05.2003, *M.P.* 1587. **End.**, Ir.-Tur. element, “**LC**”.

SOLANACEAE

Hyoscyamus niger L.

18, rocky slope, 1750 m, 10.05.2003, *M.P.* 1376; 11, steppe, 2000 m, 24.05.2003, *M.P.* 1581; 15, rocky place, 2100 m, 03.06.2003, *M.P.* 1710.

SCROPHULARIACEAE

Verbascum agrimoniifolium (C. Koch) Hub.-Mor. subsp. *agrimoniifolium*

3, shady-wet place, 1700 m, 12.07.2003, *M.P.* 2309; 21, streamside, 1650 m, 26.06.2004, *M.P.* 2597. Ir.-Tur. element.

V. oreophilum C. Koch var. *joannis* (Bardz.) Hub.-Mor.

20, steppe, 2500 m, 05.07.2003, *M.P.* 2197; 16, stony slope, 1900 m, 13.07.2003, *M.P.* 2331; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2440. Ir.-Tur. element.

V. macrocarpum Boiss.

3, wet place, 1700 m, 12.07.2003, *M.P.* 2308. Ir.-Tur. element.

V. phoeniceum L.

21, steppe, 2500 m, 10.06.2003, *M.P.* 1817.

V. kurdicum Hub.-Mor.

13, steppe, 1850 m, 23.06.2003, *M.P.* 2020; 16, rocky place, 1900 m, 13.07.2003, *M.P.* 2341, *M.P.* 2346. **End.**, Ir.-Tur. element, “**LC**”.

V. cheiranthifolium Boiss. var. *cheiranthifolium*

1, streamside, 1600 m, 02.07.2003, *M.P.* 2127.

Scrophularia ilwensis C. Koch

18, değirmen civarı, wet place, 1650 m, 08.08.2004, *M.P.* 2671. Ir.-Tur. element.

S. libanotica Boiss. var. *urartuënsis* R. R. Mill

22, on rock, 1700 m, 18.05.2003, *M.P.* 1449; 22, on rock, 1800 m, 16.06.2003, *M.P.* 1842. **End.**, Ir.-Tur. element, “**LC**”.

S. striata Boiss.

6, rocky place, 1800 m, 01.06.2002, *M.P.* 1164. Ir.-Tur. element.

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

5, wet place, 1750 m, 23.05.2002, *M.P.* 1074; 22, rocky place, 1800 m, 18.05.2003, *M.P.* 1445. *Medit.* element.

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

3, steppe, 1900 m, 21.06.2003, *M.P.* 1975; 16, rocky place, 2000 m, 13.07.2003, *M.P.* 2343; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2451. Ir.-Tur. element.

L. kurdica Boiss. & Hohen. subsp. *pyncophylla* (Boiss. & Balansa) P. H. Davis

20, streamside, 1700 m, 16.06.2003, *M.P.* 1875.

L. simplex (Willd.) DC.

22, steppe, 2000 m, 10.05.2003, *M.P.* 1352; 4, stony slope, 1900 m, 09.06.2003, *M.P.* 1754. *Medit.* element.

Veronica bozakmanii M. A. Fisch.

5, rocky place, 1750 m, 23.05.2002, *M.P.* 1055; 12, rocky place, 1800 m, 03.05.2003, *M.P.* 1331. Ir.-Tur. element.

V. bornmuelleri Hausskn.

22, steppe, 1700 m, 18.05.2003, *M.P.* 1491/b. Ir.-Tur. element.

V. polita Fr.

1, steppe, 1750 m, 05.04.2003, *M.P.* 1261; 14, steppe, 1800 m, 26.06.2004, *M.P.* 2523.

V. persica Poir.

11, steppe, 2100 m, 24.05.2003, *M.P.* 1565.

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

13, steppe, 1900 m, 23.06.2003, *M.P.* 2013.

V. anagallis-aquatica L. subsp. *michauxii* (Lam.) Elenevsky

7, wet place, 1650 m, 08.08.2004, *M.P.* 2666. Ir.-Tur. element.

V. orientalis Mill. subsp. *orientalis*

5, rocky place, 1800 m, 23.05.2002, *M.P.* 1064; 22, steppe, 1700 m, 18.05.2003, *M.P.* 1491/a; 15, steppe, 2000 m, 03.06.2003, *M.P.* 1698.

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

22, steppe, 2000 m, 10.05.2003, *M.P.* 1365; 11, steppe, 2100 m, 24.05.2003, *M.P.* 1549, *M.P.* 1640. **End.**, Ir.-Tur. element, “**NT**”.

Euphrasia pectinata Ten.

13, steppe, 2200 m, 23.06.2003, *M.P.* 2066; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2078. Euro-Sib. element.

Odontites aucheri Boiss.

5, steppe, 1800 m, 21.06.2003, *M.P.* 1938; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2155; 21, steppe, 1900 m, 26.06.2004, *M.P.* 2609; 23, steppe, 2000 m, 08.08.2004, *M.P.* 2716. Ir.-Tur. element.

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

5, wet place, 2000 m, 08.09.2003, *M.P.* 2490. Euro-Sib. element.

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

11, steppe, 2200 m, 24.05.2003, *M.P.* 1613.

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

18, streamside, 1650 m, 16.06.2003, *M.P.* 1910.

Rhynchosorys kurdica Nábělek

21, meadow, 2500 m, 26.06.2004, *M.P.* 2538. **End.**, Ir.-Tur. element, “**NT**”.

Bungea trifida (Vahl) C. A. Mey.

11, on rock, 2100 m, 24.05.2003, *M.P.* 1632; 5, on rock, 2000 m, 21.06.2003, *M.P.* 1950. Ir.-Tur. element.

OROBANCHACEAE

Phelypea coccinea (M. Bieb.) Poir.

11, steppe, 2300 m, 24.05.2003, *M.P.* 1655. Ir.-Tur. element.

Orobanche aegyptiaca Pers.

21, meadow, 2400 m, 10.06.2003, *M.P.* 1795; 21, steppe, 2100 m, 26.06.2004, *M.P.* 2575.

O. schultzei Mutel

15, steppe, 1800 m, 03.06.2003, *M.P.* 1670/a. *Medit.* element.

O. arenaria Borkh.

15, steppe, 1800 m, 03.06.2003, *M.P.* 1670/b; 20, steppe, 2500 m, 05.07.2003, *M.P.* 2160.

O. crenata Forssk.

21, steppe, 2100 m, 26.06.2004, *M.P.* 2543.

O. lutea Baumg.

20, steppe, 2000 m, 16.06.2003, *M.P.* 1889.

O. kurdica Boiss. & Hausskn.

21, steppe, 2100 m, 26.06.2004, *M.P.* 2551. Ir.-Tur. element.

O. anatolica Boiss. & Reut.

11, steppe, 2000 m, 24.05.2003, *M.P.* 1601; 20, steppe, 2400 m, 16.06.2003, *M.P.* 1905.

ACANTHACEAE

Acanthus dioscoridis L. var. *dioscoridis*

20, rocky place, 2400 m, 16.06.2003, *M.P.* 1896; **3**, steppe, 1700 m, 21.06.2003, *M.P.* 1963; **13**, steppe, 1800 m, 23.06.2003, *M.P.* 2023; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2153.

GLOBULARIACEAE

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

22, rocky place, 2000 m, 10.05.2003, *M.P.* 1354; **20**, steppe, 1900 m, 17.05.2003, *M.P.* 1434, *M.P.* 1439; **11**, rocky place, 2200 m, 24.05.2003, *M.P.* 1617. Ir.-Tur. element.

VERBENACEAE

Verbena officinalis L.

5, rocky place, 2000 m, 08.09.2003, *M.P.* 2468, *M.P.* 2488.

LAMIACEAE (LABIATAE)

Ajuga chamaepitys (L.) Schreb. subsp. *laevigata* (Banks & Sol.) P. H. Davis

17, streamside, 1600 m, 25.08.2002, *M.P.* 1242; **11**, steppe, 2000 m, 24.05.2003, *M.P.* 1616; **5**, cultivated field, 2000 m, 08.09.2002, *M.P.* 2474. Ir.-Tur. element.

Teucrium parviflorum Schreb.

3, steppe, 2000 m, 12.07.2003, *M.P.* 2279. Ir.-Tur. element.

T. chamaedrys L. subsp. *chamaedrys*

20, meadow, 2100 m, 05.07.2003, *M.P.* 2139. Euro-Sib. element.

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

1, streamside, 1600 m, 02.07.2003, *M.P.* 2114. Ir.-Tur. element.

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

3, rocky place, 1800 m, 21.06.2003, *M.P.* 1976. Ir.-Tur. element.

T. polium L.

21, steppe, 2000 m, 06.07.2003, *M.P.* 2208; **4**, steppe, 2000 m, 19.07.2003, *M.P.* 2383.

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

21, wet place, 2400 m, 06.07.2003, *M.P.* 2251. Ir.-Tur. element.

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

10, steppe, 2000 m, 20.07.2003, *M.P.* 2420; **21**, steppe, 2000 m, 26.06.2004, *M.P.* 2552, *M.P.* 2555. Ir.-Tur. element.

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

6, steppe, 1850 m, 01.06.2002, *M.P.* 1152; **3**, streamside, 1600 m, 21.06.2003, *M.P.* 1995; **5**, steppe, 2000 m, 26.06.2004, *M.P.* 2590. Ir.-Tur. element.

Eremostachys moluccelloides Bunge

1, rocky place, 2000 m, 01.06.2002, *M.P.* 1137. Ir.-Tur. element.

Phlomis tuberosa L.

13, steppe, 1900 m, 23.06.2003, *M.P.* 2001; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2198.

P. pungens Willd. var. *pungens*

20, steppe, 2500 m, 05.07.2003, *M.P.* 2158.

P. pungens Willd. var. *seticalycina* (Nábělek) Hub.-Mor.

5, steppe, 1800 m, 21.06.2003, *M.P.* 1935.

P. armeniaca Willd.

23, steppe, 2100 m, 08.08.2004, *M.P.* 2682. **End.**, Ir.-Tur. element, "LC".

P. lanceolata Boiss. & Hohen.

1, streamside, 1600 m, 02.07.2003, *M.P.* 2121; **3**, steppe, 2000 m, 12.07.2003, *M.P.* 2274; **23**, steppe, 2100 m, 08.08.2004, *M.P.* 2688, *M.P.* 2714. Ir.-Tur. element.

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

18, on rock, 1650 m, 03.05.2003, *M.P.* 1322; **22**, rocky place, 1750 m, 18.05.2003, *M.P.* 1468; **11**, rocky place, 2000 m, 24.05.2003, *M.P.* 1641.

L. amplexicaule L.

5, rocky place, 1700 m, 27.04.2002, *M.P.* 1003; **1**, rocky place, 1650 m, 05.04.2003, *M.P.* 1263, *M.P.* 1265; **8**, cultivated field, 1700 m, 03.05.2003, *M.P.* 1337. Euro-Sib. element.

L. macrodon Boiss. & Huert

14, stony slope, 1650 m, 03.05.2003, *M.P.* 1300. Ir.-Tur. element.

Marrubium anisodon C. Koch

21, steppe, 2000 m, 26.06.2004, *M.P.* 2600.

Stachys ballotiformis Vatke

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1109, *M.P.* 1113; **15**, rocky place, 2100 m, 03.06.2003, *M.P.* 1706; **13**, steppe, 1800 m, 23.06.2003, *M.P.* 2011. Ir.-Tur. element.

S. lavandulifolia J. Vahl var. *lavandulifolia*

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1100. Ir.-Tur. element.

S. lavandulifolia J. Vahl var. *glabrescens* Bhattacharjee & Hub.-Mor.

22, on rock, 1700 m, 18.05.2003, *M.P.* 1461. Ir.-Tur. element.

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

3, steppe, 2000 m, 12.07.2003, *M.P.* 2282. **End.**, Ir.-Tur. element, "LC".

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

3, steppe, 1750 m, 21.06.2003, *M.P.* 1999; **20**, steppe, 2500 m, 05.07.2003, *M.P.* 2168; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2243; **21**, roadside, 1650 m, 26.06.2004, *M.P.* 2599. Ir.-Tur. element.

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

21, rocky place, 2100 m, 10.06.2003, *M.P.* 1786. Ir.-Tur. element.

S. satureoides Montbret & Aucher ex Benth

1, streamside, 1600 m, *M.P.* 2096. Ir.-Tur. element.

S. melampyroides Hand.-Mazz.

6, streamside, 1600 m, 01.06.2002, *M.P.* 1182. Ir.-Tur. element.

Nepeta italica L.

13, steppe, 1800 m, 23.06.2003, *M.P.* 2029; **1**, streamside, 1600 m, 02.07.2003, *M.P.* 2110; **16**, stony slope, 1900 m, 13.07.2003, *M.P.* 2333.

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

5, rocky place, 1750 m, 21.06.2003, *M.P.* 1943; **3**, steppe, 1750 m, 21.06.2003, *M.P.* 1997; **4**, meadow, 2100 m, 19.07.2003, *M.P.* 2389.

N. betonicifolia C. A. Mey.

11, rocky place, 2100 m, 24.05.2003, *M.P.* 1579; **21**, steppe, 2200 m, 10.06.2003, *M.P.* 1788; **13**, steppe, 1850 m, 23.06.2003, *M.P.* 2021. Ir.-Tur. element.

N. stenantha Kotschy & Boiss. ex Boiss.

11, rocky place, 2200 m, 24.05.2003, *M.P.* 1606. Ir.-Tur. element.

N. trachonitica Post.

15, rocky place, 2100 m, 03.06.2003, *M.P.* 1720; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2221. Ir.-Tur. element.

N. fissa C. A. Mey.

17, rocky place, 1750 m, 25.08.2002, *M.P.* 1217; **16**, stony slope, 1900 m, 13.07.2003, *M.P.* 2344; **5**, rocky place, 1800 m, 29.09.2003, *M.P.* 2499. Ir.-Tur. element.

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

11, steppe, 1900 m, 24.05.2003, *M.P.* 1596; **21**, steppe, 2500 m, 10.06.2003, *M.P.* 1811. Ir.-Tur. element.

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

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1107; **15**, steppe, 1850 m, 03.06.2002, *M.P.* 1667, *M.P.* 1677. Ir.-Tur. element.

Hymenocrater bituminosus Fisch. & C. A. Mey.

20, rocky place, 1900 m, *M.P.* 1879. Ir.-Tur. element.

Prunella vulgaris L.

13, meadow, 1800 m, 23.06.2003, *M.P.* 2015; **1**, streamside, 1600 m, *M.P.* 2075. Euro-Sib. element.

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

5, meadow, 2000 m, 08.09.2003, *M.P.* 2492. Ir.-Tur. element.

O. vulgare L. subsp. *hirtum* (Link) Ietsw.

10, steppe, 2000 m, 20.07.2003, *M.P.* 2425. E. Medit. element.

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

1, streamside, 1600 m, 02.07.2003, *M.P.* 2090.

Acinos rotundifolius Pers.

22, on rock, 1700 m, 18.05.2003, *M.P.* 1458.

Thymus kotschyanus Boiss. & Hohen. var. *kotschyanus*

6, rocky place, 1800 m, 01.06.2002, *M.P.* 1157; **20**, rocky place, 2400 m, 16.06.2003, *M.P.* 1873; **5**, on rock, 2000 m, 21.06.2003, *M.P.* 1952. Ir.-Tur. element.

T. kotschyanus Boiss. & Hohen. var. *glabrescens* Boiss.

13, rocky place, 2200 m, 23.06.2003, *M.P.* 2053. Ir.-Tur. element.

T. kotschyanus Boiss. & Hohen. var. *eriophorus* (Ronniger) Jalas

5, rocky place, 1850 m, 21.06.2003, *M.P.* 1925; 3, rocky place, 1700 m, 21.06.2003, *M.P.* 1964; 13, rocky place, 2400 m, 23.06.2003, *M.P.* 2068. Ir.-Tur. element.

T. migricus Klokov & Des.-Shost.

20, steppe, 2400 m, 16.06.2003, *M.P.* 1908. Ir.-Tur. element.

T. fedtschenkoi Ronniger var. *handeli* (Ronniger) Jalas

13, rocky slope, 2000 m, 23.06.2003, *M.P.* 2063. **End.**, Ir.-Tur. element, “*NT*”.

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

20, meadow, 2000 m, 05.07.2003, *M.P.* 2142; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2369.

Ziziphora clinopodioides Lam.

20, wet place, 2100 m, 05.07.2003, *M.P.* 2137; 16, steppe, 2200 m, 13.07.2003, *M.P.* 2312; 23, rocky place, 2100 m, 08.08.2004, *M.P.* 2684.

Z. capitata L.

1, rocky place, 1800 m, 23.05.2002, *M.P.* 1108; 11, rocky place, 1900 m, 24.05.2003, *M.P.* 1585. Ir.-Tur. element.

Z. persica Bunge

6, streamside, 1600 m, 01.06.2002, *M.P.* 1176. Ir.-Tur. element.

Salvia macrochlamys Boiss. & Kotschy

17, rocky place, 1750 m, 25.08.2002, *M.P.* 1254; 21, steppe, 2000 m, 06.07.2003, *M.P.* 2215. Ir.-Tur. element.

S. trichoclada Benth

4, stony slope, 1750 m, 09.06.2003, *M.P.* 1763; 20, steppe, 2400 m, 16.06.2003, *M.P.* 1860; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2086. Ir.-Tur. element.

S. multicaulis J. Vahl

1, rocky place, 1800 m, 04.05.2002, *M.P.* 1034; 11, steppe, 2000 m, 24.05.2003, *M.P.* 1588; 15, rocky place, 1850 m, 03.06.2003, *M.P.* 1680. Ir.-Tur. element.

S. sclarea L.

6, steppe, 1700 m, 01.06.2002, *M.P.* 1148; 21, steppe, 2100 m, 26.06.2004, *M.P.* 2603.

S. microstegia Boiss. & Balansa

16, stony slope, 1900 m, 13.07.2003, *M.P.* 2335. Ir.-Tur. element.

S. atropatana Bunge

3, steppe, 2000 m, 12.07.2003, *M.P.* 2263; 4, streamside, 1600 m, 19.07.2003, *M.P.* 2367. Ir.-Tur. element.

S. poculata Nábělek

11, steppe, 2000 m, 24.05.2003, *M.P.* 1534, *M.P.* 1599, *M.P.* 1618; 15, rocky place, 1800 m, 03.06.2003, *M.P.* 1696; 21, steppe, 2500 m, 10.06.2003, *M.P.* 1827; 21, steppe, 2100 m, 26.06.2004, *M.P.* 2579. Ir.-Tur. element.

S. candidissima J. Vahl subsp. *candidissima*

6, streamside, 1600 m, 01.06.2002, *M.P.* 1179; 4, roadside, 1600 m, 09.06.2003, *M.P.* 1775. Ir.-Tur. element.

S. limbata C. A. Mey.

22, steppe, 1800 m, 16.06.2003, *M.P.* 1852; 10, steppe, 2000 m, 20.07.2003, *M.P.* 2439. Ir.-Tur. element.

S. virgata Jacq.

3, steppe, 2100 m, 12.07.2003, *M.P.* 2284, *M.P.* 2303. Ir.-Tur. element.

S. nemorosa L.

6, meadow, 1650 m, 01.06.2002, *M.P.* 1162; 3, streamside, 1600 m, 21.06.2003, *M.P.* 1978.

S. verticillata L. subsp. *verticillata*

22, steppe, 2000 m, 16.06.2003, *M.P.* 1848; 20, wet place, 2100 m, 05.07.2003, *M.P.* 2130; 3, steppe, 2100 m, 12.07.2003, *M.P.* 2288. Euro-Sib. element.

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

6, steppe, 1750 m, 01.06.2002, *M.P.* 1167. Ir.-Tur. element.

PLUMBAGINACEAE

Plumbago europaea L.

5, steppe, 1900 m, 08.09.2003, *M.P.* 2471. Euro-Sib. element.

Acantholimon bracteatum (Girard) Boiss. var. *capitatum* (Sosn.) Bokhari

21, steppe, 3000 m, 26.06.2004, *M.P.* 2628. **End.**, Ir.-Tur. element, “*LC*”.

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

3, steppe, 2000 m, 12.07.2003, *M.P.* 2257. Ir.-Tur. element.

A. caryophyllaceum Boiss. subsp. *caryophyllaceum*

21, steppe, 2000 m, 08.08.2004, *M.P.* 2612.

PLANTAGINACEAE

Plantago major L. subsp. *major*

17, streamside, 1650 m, 25.08.2002, *M.P.* 1259.

P. atrata Hoppe

20, rocky place, 2300 m, 17.05.2003, *M.P.* 1404.

P. lanceolata L.

21, wet place, 1800 m, 26.06.2004, *M.P.* 2612.

THYMELAEACEAE

Thymelaea passerina (L.) Coss. & Germ.

5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2476.

**T. mesopotamica* (Jeffrey) Peterson

13, steppe, 1800 m, 23.06.2003, *M.P.* 2057. Ir.-Tur. element.

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

10, rocky place, 1900 m, 20.07.2003, *M.P.* 2409. Ir.-Tur. element. *D. mucronata* Royle

6, rocky place, 1750 m, 01.06.2002, *M.P.* 1175; 20, rocky place, 1800 m, 25.08.2002, *M.P.* 1189; 4, steppe, 2000 m, 19.07.2003, *M.P.* 2373. Ir.-Tur. element.

ELAEAGNACEAE

Hippophae rhamnoides L. subsp. *caucasica* Rousi

4, streamside, 1600 m, 19.07.2003, *M.P.* 2358.

SANTALACEAE

Thesium billardieri Boiss.

21, steppe, 2000 m, 26.06.2004, *M.P.* 2620; 11, stony slope, 2000 m, 24.05.2003, *M.P.* 1638; 20, steppe, 2100 m, 16.06.2003, *M.P.* 1897; 4, rocky place, 1800 m, 29.09.2003, *M.P.* 2513. Ir.-Tur. element.

ARISTOLOCHIACEAE

Aristolochia bottae Jaub. & Spach

5, cultivated field, 1700 m, 23.05.2002, *M.P.* 1076. Ir.-Tur. element.

EUPHORBIACEAE

Chrozophora tinctoria (L.) Raf.

5, rocky place, 1700 m, 08.09.2003, *M.P.* 2462.

Euphorbia chamaesyce L.

5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2481.

E. macrocarpa Boiss. & Buhse

20, meadow, 2600 m, 17.05.2003, *M.P.* 1399; 11, rocky slope, 2000 m, 24.05.2003, *M.P.* 1533; 15, steppe, 1850 m, 03.06.2002, *M.P.* 1668. Ir.-Tur. element.

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

2, steppe, 1750 m, 21.06.2003, *M.P.* 1916. Ir.-Tur. element.

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

5, cultivated field, 2000 m, 08.09.2003, *M.P.* 2482.

E. denticulata Lam.

11, rocky place, 2100 m, 24.05.2003, *M.P.* 1661. Ir.-Tur. element.

E. macroclada Boiss.

20, steppe, 1900 m, 25.08.2002, *M.P.* 1190; 23, rocky place, 2000 m, 08.08.2004, *M.P.* 2733. Ir.-Tur. element.

E. heteradena Jaub. & Spach

17, streamside, 1650 m, 25.08.2002, *M.P.* 1243; 9, roadside, 1700 m, 03.06.2003, *M.P.* 1734. Ir.-Tur. element.

E. virgata Waldst. & Kit.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1250; 22, steppe, 2100 m, 16.06.2003, *M.P.* 1853; 4, wet place, 2100 m, 19.07.2003, *M.P.* 2391.

E. iberica Boiss.

21, meadow, 2200 m, 06.07.2003, *M.P.* 2235. Ir.-Tur. element.

URTICACEAE

Urtica dioica L.

16, stony slope, 1800 m, 13.07.2003, *M.P.* 2336. Euro-Sib. element.

MORACEAE

Ficus carica L. subsp. *rupestris* (Hausskn.) Browicz
5, steppe, 1900 m, 08.09.2003, *M.P.* 2463. Ir.-Tur. element.

ULMACEAE

Ulmus minor Mill. subsp. *minor*

4, streamside, 1600 m, 09.06.2003, *M.P.* 1771; **1**, streamside, 1600 m, 02.07.2003, *M.P.* 2107.

Celtis glabrata Steven ex Planch.

15, stony slope, 1750 m, 03.06.2003, *M.P.* 1724; **22**, rocky place, 1800 m, 16.06.2003, *M.P.* 1839.

JUGLANDACEAE

Juglans regia L.

6, streamside, 1600 m, 01.06.2002, *M.P.* 1181; **11**, stremside, 1550 m, 24.05.2003, *M.P.* 1559.

FAGACEAE

Quercus robur L. subsp. *pedunculiflora* (C. Koch) Menitsky

20, rocky place, 1800 m, 17.05.2003, *M.P.* 1416; **5**, rocky place, 1800 m, 29.09.2003, *M.P.* 2502; **23**, rocky place, 1800 m, 08.08.2004, *M.P.* 2707. Ir.-Tur. element.

Q. petraea (Mattuschka) Liebl. subsp. *pinnatiflora* (C. Koch) Menitsky

16, stony slope, 1900 m, 13.07.2003, *M.P.* 2339. **End.**, “**LC**”.

Q. infectoria Olivier subsp. *boissieri* (Reut.) O. Schwarz

5, rocky place, 1800 m, 29.09.2003, *M.P.* 2498, *M.P.* 2504.

Q. libani Olivier

3, rocky place, 2000 m, 12.07.2003, *M.P.* 2281, *M.P.* 2293; **5**, rocky place, 1800 m, 29.09.2003, *M.P.* 2500, *M.P.* 2503. Ir.-Tur. element.

SALICACEAE

Salix alba L.

5, streamside, 1600 m, 23.05.2002, *M.P.* 1068; **3**, streamside, 1600 m, 12.07.2003, *M.P.* 2301; **4**, streamside, 1600 m, 19.07.2003, *M.P.* 2361. Euro-Sib. element.

Populus tremula L.

22, streamside, 1650 m, 18.05.2003, *M.P.* 1528. Euro-Sib. element.

RUBIACEAE

Crucianella macrostachya Boiss.

23, rocky place, 1900 m, 08.08.2004, *M.P.* 2706. Euro-Sib. element.

Asperula laxiflora Boiss.

5, on rock, 2000 m, 21.06.2003, *M.P.* 1945. Euxine element.

A. arvensis L.

5, steppe, 1800 m, 23.05.2002, *M.P.* 1061; **1**, streamside, 1600 m, 01.06.2002, *M.P.* 1128; **22**, rocky place, 1900 m, 18.05.2003, *M.P.* 1475. *Medit.* element.

Galium uliginosum L.

17, streamside, 1650 m, 25.08.2002, *M.P.* 1239; **5**, cultivated field, 1800 m, 08.09.2003, *M.P.* 2480. Euro-Sib. element, “**VU**”.

G. humifusum M. Bieb.

1, streamside, 1600 m, 02.07.2003, *M.P.* 2116; **3**, steppe, 2000 m, 12.07.2003, *M.P.* 2264.

G. verum L. subsp. *verum*

1, streamside, 1600 m, 02.07.2003, *M.P.* 2080; **21**, steppe, 1800 m, 26.06.2004, *M.P.* 2606. Euro-Sib. element.

G. consanguineum Boiss.

16, stony slope, 1900 m, 13.07.2003, *M.P.* 2334. Ir.-Tur. element.

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

21, steppe, 2500 m, 26.06.2004, *M.P.* 2622. Ir.-Tur. element.

G. spurium L. subsp. *spurium*

5, rocky place, 1750 m, 23.05.2002, *M.P.* 1065. Euro-Sib. element.

Callipeltis cucullaria (L.) Steven

22, rocky place, 1800 m, 18.05.2003, *M.P.* 1448; **20**, steppe, 2100 m, 16.06.2003, *M.P.* 1871. Ir.-Tur. element.

Cruciata taurica (Pallas & Willd.) Ehrend.

5, steppe, 1900 m, 23.05.2002, *M.P.* 1085; **11**, steppe, 2000 m, 24.05.2003, *M.P.* 1539. Ir.-Tur. element.

MONOCOTYLEDONEAE

ARACEAE

Arum dentruncatum C.A. Mey. ex Schott subsp. *dentruncatum*
21, shady-wet place, 1650 m, 26.06.2004, *M.P.* 2637.

LILIACEAE

Eremurus spectabilis M. Bieb.

14, streamside, 1650 m, 26.06.2004, *M.P.* 2517. Ir.-Tur. element.

Allium tchihatschewii Boiss.

13, rocky place, 2000 m, 23.06.2003, *M.P.* 2049; **20**, rocky place, 2500 m, 05.07.2003, *M.P.* 2161; **3**, rocky place, 2100 m, 12.07.2003, *M.P.* 2295. **End.**, Ir.-Tur. element, “**LC**”.

A. flavum L. subsp. *tauricum* (Beser ex Reichb.) Stearn var. *tauricum*

16, steppe, 2200 m, 13.07.2003, *M.P.* 2313. *Medit.* element.

A. pseudoflavum Vved.

21, steppe, 2200 m, 06.07.2003, *M.P.* 2217; **10**, steppe, 2000 m, 20.07.2003, *M.P.* 2426. Ir.-Tur. element.

A. pseudoampeloprasum Miscz. ex Grossh.

6, rocky place, 1750 m, 01.06.2002, *M.P.* 1178; **18**, streamside, 1650 m, 16.06.2003, *M.P.* 1911; **16**, rocky place, 1900 m, 13.07.2003, *M.P.* 2340. Ir.-Tur. element, “**VU**”.

A. atroviolaceum Boiss.

10, steppe, 2000 m, 20.07.2003, *M.P.* 2448.

A. stearnianum Koyuncu, N. Özhatay & Kollmann subsp. *vanense* Kollmann & Koyuncu

21, steppe, 2000 m, 26.06.2004, *M.P.* 2638. **End.**, Ir.-Tur. element, “**NT**”.

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

6, rocky place, 1700 m, 01.06.2002, *M.P.* 1145; **20**, rocky place, 2000 m, 16.06.2003, *M.P.* 1899. *Medit.* element.

A. fuscoviolaceum Fomin

4, streamside, 1600 m, 19.07.2003, *M.P.* 2370. Ir.-Tur. element.

A. vineale L.

16, steppe, 2000 m, 13.07.2003, *M.P.* 2321.

A. guttatum Steven subsp. *guttatum*

3, shady-wet place, 2000 m, 12.07.2003, *M.P.* 2271, *M.P.* 2292.

A. akaka S.G. Gmel.

15, rocky place, 2100 m, 03.06.2003, *M.P.* 1720. Ir.-Tur. element.

A. chrysantherum Boiss. & Reut.

5, rocky place, 2000 m, 21.06.2003, *M.P.* 1957; **3**, rocky place, 1700 m, 21.06.2003, *M.P.* 1965; **21**, steppe, 2200 m, 06.07.2003, *M.P.* 2230. Ir.-Tur. element.

A. shatakiense Rech.f.

3, rocky place, 1700 m, 21.06.2003, *M.P.* 1968. **End.**, Ir.-Tur. element, “**NT**”.

Puschkinia scilloides Adams

17, rocky place, 1900 m, 19.04.2003, *M.P.* 1293; **20**, rocky place, 2500 m, 17.05.2003, *M.P.* 1386. Ir.-Tur. element.

Ornithogalum narbonense L.

5, streamside, 1600 m, 23.05.2002, *M.P.* 1088. *Medit.* element.

O. oligophyllum E. D. Clarke

20, rocky place, 2500 m, 17.05.2003, *M.P.* 1408.

O. platyphyllum Boiss.

1, streamside, 1600 m, 01.06.2002, *M.P.* 1125. Ir.-Tur. element.

Muscari comosum (L.) Mill.

22, rocky place, 1750 m, 18.05.2003, *M.P.* 1443. *Medit.* element.

M. tenuiflorum Tausch

11, steppe, 1900 m, 24.05.2003, *M.P.* 1597.

M. longipes Boiss.

15, steppe, 2000 m, 03.06.2003, *M.P.* 1699; **21**, steppe, 2300 m, 26.06.2004, *M.P.* 2627. Ir.-Tur. element.

M. armeniacum Leichtlin ex Baker

8, cultivated field, 1650 m, 03.05.2003, *M.P.* 1341; **20**, cultivated field, 1800 m, 17.05.2003, *M.P.* 1418, *M.P.* 1420; **11**, steppe, 2200 m, 24.05.2003, *M.P.* 1604.

M. neglectum Guss.

5, steppe, 1700 m, 27.04.2002, *M.P.* 1020.

Bellevalia fominii Woronow

11, rocky place, 2200 m, 24.05.2003, *M.P. 1607*. Ir.-Tur. element, “**VU**”.

B. longistyla (Miscz.) Grossh.

5, steppe, 1700 m, 27.04.2002, *M.P. 1019*; **17**, wet place, 1600 m, 10.05.2003, *M.P. 1379*. Ir.-Tur. element, “**VU**”.

B. pycnantha (C. Koch) A. Los.-Los.

1, rocky place, 1800 m, 04.05.2002, *M.P. 1046*. Ir.-Tur. element.

Fritillaria crassifolia Boiss. & Huet. subsp. *kurdica* (Boiss. & Noë) Rix

20, steppe, 2000 m, 17.05.2003, *M.P. 1421*. Ir.-Tur. element.

F. minuta Boiss. & Noë

20, steppe, 2000 m, 17.05.2003, *M.P. 1436*. Ir.-Tur. element.

F. minima Rix

20, rocky place, 2900 m, 17.05.2003, *M.P. 1395*. **End.**, Ir.-Tur. element, “**VU**”.

F. pinardii Boiss.

20, steppe, 2000 m, 17.05.2003, *M.P. 1424*. Ir.-Tur. element.

Tulipa humilis Herb.

20, rocky place, 2700 m, 17.05.2003, *M.P. 1393*; **11**, steppe, 2200 m, 24.05.2003, *M.P. 1594*, *M.P. 1653*.

T. julia C. Koch

20, rocky place, 2600 m, 17.05.2003, *M.P. 1388*; **21**, steppe, 2500 m, 10.06.2003, *M.P. 1823*. Ir.-Tur. element.

Gagea gageoides (Zucc.) Vved.

1, rocky place, 1700 m, 04.05.2002, *M.P. 1036*. Ir.-Tur. element.

G. bulbifera (Pallas) Schult. & Schult. f.

18, steppe, 1650 m, 19.04.2003, *M.P. 1283*. Euro-Sib. element.

G. uliginosa Siehe & Pascher

22, rocky place, 2000 m, 10.05.2003, *M.P. 1355*. Ir.-Tur. element.

G. confusa Terracc.

22, rocky place, 1800 m, 10.05.2003, *M.P. 1348*. Ir.-Tur. element.

G. glacialis C. Koch

1, steppe, 1700 m, 12.04.2003, *M.P. 1275*; **14**, streamside, 1650 m, 26.06.2004, *M.P. 2518*. Ir.-Tur. element.

G. villosa (M. Bieb.) Duby var. *villosa*

1, rocky place, 1650 m, 05.04.2003, *M.P. 1264*; **14**, streamside, 1650 m, 26.06.2004, *M.P. 2522*, *M.P. 2529*. Medit. element.

Colchicum szovitsii Fisch. & C. A. Mey.

1, streamside, 1600 m, 12.04.2003, *M.P. 1276*; **20**, streamside, 1650 m, 19.04.2003, *M.P. 1296*; **4**, streamside, 1600 m, 26.06.2004, *M.P. 2532*. Ir.-Tur. element.

C. kotschyi Boiss.

1, streamside, 1650 m, 25.08.2002, *M.P. 1260*. Ir.-Tur. element.

Merendera sobolifera C. A. Mey.

1, streamside, sandy place, 1600 m, 12.04.2003, *M.P. 1277*; **20**, streamside, 1650 m, 19.04.2003, *M.P. 1295*; **14**, streamside, 1650 m, 26.06.2004, *M.P. 2519*. Ir.-Tur. element.

M. kurdica Bornm.

20, wet place, 1900 m, 17.05.2003, *M.P. 1422*, *M.P. 1423*. Ir.-Tur. element.

AMARYLLIDACEAE

Ixiolirion tataricum (Pall.) Herb. subsp. *montanum* (Labill.) Takht.

5, steppe, 1750 m, 23.05.2002, *M.P. 1050*; **22**, cultivated field, 1600 m, 18.05.2003, *M.P. 1489*. Ir.-Tur. element.

IRIDACEAE

Iris sari Schott ex Baker

5, streamside, 1600 m, 13.05.2002, *M.P. 1097*; **11**, steppe, 2300 m, 24.05.2003, *M.P. 1654*. **End.**, Ir.-Tur. element, “**LC**”.

I. caucasica Hoffm. subsp. *turcica* B. Mathew

21, steppe, 2500 m, 10.06.2003, *M.P. 1814*. Ir.-Tur. element.

Crocus biflorus Mill. subsp. *tauri* (Maw) Mathew

17, rocky place, 1900 m, 19.04.2003, *M.P. 1294*; **14**, rocky place, 1900 m, 26.06.2004, *M.P. 2525*. Ir.-Tur. element.

Gladiolus atroviolaceus Boiss.

5, rocky place, 1650 m, 13.05.2002, *M.P. 1096*; **4**, streamside, 1600 m, 09.06.2003, *M.P. 1772*; **18**, streamside, 1650 m, 16.06.2003, *M.P. 1909*. Ir.-Tur. element.

ORCHIDACEAE

Epipactis veratrifolia Boiss. & Hohen.

7, meadow, 1650 m, 08.08.2004, *M.P. 2640*. Ir.-Tur. element.

E. palustris (L.) Crantz

1, streamside, 1600 m, 02.07.2003, *M.P. 2073*. Euro-Sib. element.

Orchis coriophora L.

1, streamside, 1600 m, 01.06.2002, *M.P. 1123*; **4**, streamside, 1600 m, 09.06.2003, *M.P. 1767*.

O. mascula (L.) L. subsp. *pinetorum* (Boiss. & Kotschy) E. G. Camus

11, meadow, 1900 m, 24.05.2003, *M.P. 1535*. E. Medit. element.

O. palustris Jacq.

4, streamside, 1600 m, 09.06.2003, *M.P. 1765*.

Dactylorhiza umbrosa (Kar. & Kir.) Nevski

5, streamside, 1600 m, 23.05.2002, *M.P. 1140*; **21**, shady-wet place, 1800 m, 10.06.2003, *M.P. 1782*. Ir.-Tur. element.

TYPHACEAE

Typha angustifolia L.

1, streamside, 1600 m, 02.07.2003, *M.P. 2118*.

JUNCACEAE

Juncus compressus Jacq.

17, streamside, 1650 m, 25.08.2002, *M.P. 1244*.

J. bufonius L.

1, streamside, 1600 m, 02.07.2003, *M.P. 2083*.

CYPERACEAE

Eleocharis uniglumis (Link) Schult.

1, streamside, 1600 m, 02.07.2003, *M.P. 2085*.

Scirpoides holoschoenus (L.) Soják

1, streamside, 1600 m, 02.07.2003, *M.P. 2113*.

Carex stenophylla Wahlenb. subsp. *stenophylloides* (V. I. Krecz.) T. V. Egorova

1, streamside, 1600 m, 12.04.2003, *M.P. 1274*. Ir.-Tur. element.

POACEAE (GRAMINEAE)

Brachypodium sylvaticum (Hudson) P. Beauv.

7, wet place, 1650 m, 08.08.2004, *M.P. 2664*. Euro-Sib. element.

Agropyron cristatum (L.) Gaertn. subsp. *incanum* (Nábělek) Melderis

21, steppe, 2900 m, 26.06.2004, *M.P. 2553*. Ir.-Tur. element.

Elymus hispidus (Opiz) Melderis subsp. *podpyrae* (Nábělek) Melderis

7, meadow, 1650 m, 08.08.2004, *M.P. 2645*, *M.P. 2656*; **23**, rocky place, 1800 m, 08.08.2004, *M.P. 2691*. Ir.-Tur. element.

E. hispidus (Opiz) Melderis subsp. *barbulatus* (Schur) Melderis

7, meadow, 1650 m, 08.08.2004, *M.P. 2655*.

E. hispidus (Opiz) Melderis subsp. *pulcherrimus* (Grossh.) Melderis

23, steppe, 1800 m, 08.08.2004, *M.P. 2673*.

Heterantherium piliferum (Sol.) Hochst.

15, steppe, 1800 m, 03.06.2003, *M.P. 1675*. Ir.-Tur. element.

Aegilops cylindrica Host

3, streamside, 1600 m, 21.06.2003, *M.P. 1992*; **1**, streamside, 1600 m, 02.07.2003, *M.P. 2097*. Ir.-Tur. element.

Triticum aestivum L.

5, rocky place, 1900 m, 21.06.2003, *M.P. 1949*; **21**, steppe, 2100 m, 06.07.2003, *M.P. 2227*.

Secale montanum Guss.

7, wet place, 1700 m, *M.P. 2658*. Ir.-Tur. element.

S. anatolicum Boiss.

23, steppe, 1800 m, 08.08.2004, *M.P. 2693*, *M.P. 2703*.

Psathyrostachys fragilis (Boiss.) Nevski subsp. *secaliniformis* Tzvel.

21, steppe, 2100 m, 26.06.2004, *M.P. 2562*. Ir.-Tur. element.

Hordeum bulbosum L.

5, rocky place, 1700 m, 23.05.2002, *M.P. 1075*; **3**, streamside, 1600 m, 21.06.2003, *M.P. 1996*; **21**, steppe, 2000 m, 26.06.2004, *M.P. 2560*.

Taeniatherum caput-medusae (L.) Nevski subsp. *crinitum* (Schreb.) Melderis

23, steppe, 1800 m, 08.08.2004, *M.P. 2689*. Ir.-Tur. element.

Bromus japonicus Thunb. subsp. *japonicus*

23, steppe, 1700 m, 08.08.2004, *M.P. 2695*.

- B. squarrosus* L.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2092.
- B. scoparius* L.
5, rocky place, 1800 m, 23.05.2002, *M.P.* 1067/b.
- B. danthoniae* Trin.
21, steppe, 1750 m, 26.06.2004, *M.P.* 2536.
- B. pumilio* (Trin.) P. M. Sm
23, steppe, 1700 m, 08.08.2004, *M.P.* 2705.
- B. tectorum* L. subsp. *tectorum*
5, rocky place, 1800 m, 23.05.2002, *M.P.* 1066; 23, steppe, 1800 m, 08.08.2004, *M.P.* 2697, *M.P.* 2699.
- B. tomentellus* Boiss.
21, steppe, 2000 m, 26.06.2004, *M.P.* 2548, *M.P.* 2558; 23, steppe, 1800 m, 08.08.2004, *M.P.* 2681, *M.P.* 2683. Ir.-Tur. element.
- Avena wiestii* Steud.
7, wet place, 1650 m, 08.08.2004, *M.P.* 2647.
- Helictotrichon pratense* (L.) Beser ex Schult. & Schult. f.
23, steppe, 1800 m, 08.08.2004, *M.P.* 2687. Euro-Sib. element.
- Trisetum flavescens* (L.) P.Beauv.
23, steppe, 1850 m, 08.08.2004, *M.P.* 2675. Euro-Sib. element.
- Koeleria cristata* (L.) Pers.
21, steppe, 2000 m, 26.06.2004, *M.P.* 2546, *M.P.* 2564.
- Calamagrostis pseudophragmites* (Haller f.) Koeler
1, streamside, 1600 m, 02.07.2003, *M.P.* 2087. Euro-Sib. element.
- Apera intermedia* Hackel apud Zederb.
1, streamside, 1600 m, 02.07.2003, *M.P.* 2119. Ir.-Tur. element.
- Agrostis stolonifera* L.
7, wet place, 1650 m, 08.08.2004, *M.P.* 2663. Euro-Sib. element.
- Polypogon viridis* (Gouan) Breistr.
7, wet place, 1650 m, 08.08.2004, *M.P.* 2662, *M.P.* 2665.
- Phleum pratense* L.
4, streamside, 1600 m, 09.06.2003, *M.P.* 1769; 1, streamside, 1600 m, 02.07.2003, *M.P.* 2099; 7, wet place, 1650 m, 08.08.2004, *M.P.* 2643. Euro-Sib. element.
- Festuca arundinacea* Schreb. subsp. *arundinacea*
1, streamside, 1600 m, 02.07.2003, *M.P.* 2076; 7, wet place, 1650 m, 08.08.2004, *M.P.* 2641, *M.P.* 2661.
- Lolium perenne* L.
7, wet place, 1650 m, 08.08.2004, *M.P.* 2652, *M.P.* 2657. Euro-Sib. element.
- L. multiflorum* Lam.
7, wet place, 1650 m, 08.08.2004, *M.P.* 2659.
- Poa timoleontis* Heldr. ex Boiss.
5, rocky place, 1700 m, 23.05.2002, *M.P.* 1063; 11, rocky place, 2100 m, 24.05.2003, *M.P.* 1544, *M.P.* 1639. E. Medit. element.
- P. bulbosa* L.
11, rocky place, 2100 m, 24.05.2003, *M.P.* 1621.
- Eremopoa songarica* (Schrenk) Roshev.
5, rocky place, 1800 m, 23.05.2002, *M.P.* 1067/a; 7, wet place, 1650 m, 08.08.2004, *M.P.* 2651; 23, steppe, 1750 m, 08.08.2004, *M.P.* 2679. Ir.-Tur. element.
- Puccinellia distans* (Jacq.) Parl. subsp. *sevangensis* (Grossh.) Tzvel.
7, wet place, 1650 m, 08.08.2004, *M.P.* 2648.
- Dactylis glomerata* L. subsp. *hispanica* (Roth) Nyman
11, steppe, 2000 m, 24.05.2003, *M.P.* 1575; 15, rocky place, 2100 m, 03.06.2003, *M.P.* 1714; 20, steppe, 2200 m, 16.06.2003, *M.P.* 1892; 21, steppe, 2000 m, 26.06.2004, *M.P.* 2544; 23, steppe, 1900 m, 08.08.2004, *M.P.* 2685.
- Briza humilis* M. Bieb.
22, rocky place, *M.P.* 1457.
- Melica persica* Kunth subsp. *jacquemontii* (Decne. ex Jacquem.) P. H. Davis
6, rocky place, 1750 m, 01.06.2002, *M.P.* 1160; 21, steppe, 2200 m, 06.07.2003, *M.P.* 2232; 21, steppe, 2000 m, 26.06.2004, *M.P.* 2540, *M.P.* 2550, *M.P.* 2556. Ir.-Tur. element.
- M. persica* Kunth subsp. *inaequiglumis* (Boiss.) Bor
15, rocky place, 2100 m, 03.06.2003, *M.P.* 1712.
- Stipa arabica* Trin. & Rupr.
23, steppe, 1800 m, 08.08.2004, *M.P.* 2701. Ir.-Tur. element.
- S. ehrenbergiana* Trin. & Rupr.
20, steppe, 2200 m, 16.06.2003, *M.P.* 1890. Ir.-Tur. element.
- Piptatherum holciforme* (M. Bieb.) Roem. & Schult. subsp. *holciforme* var. *holciforme*
21, steppe, 2100 m, 26.06.2004, *M.P.* 2542.
- Phragmites australis* (Cav.) Trin. ex Steud.
4, meadow, 2100 m, 19.07.2003, *M.P.* 2395. Euro-Sib. element.
- Eragrostis minor* Host
7, wet place, 1650 m, 08.08.2004, *M.P.* 2649.
- Cynodon dactylon* (L.) Pers. var. *villosus* Regel
5, roadside, 1600 m, 29.09.2003, *M.P.* 2501.
- Echinochloa crus-galli* (L.) P. Beauv.
18, meadow, 1650 m, 08.08.2004, *M.P.* 2668.
- Setaria viridis* (L.) P. Beauv.
4, streamside, 1600 m, 19.07.2003, *M.P.* 2354; 7, wet place, 1650 m, 08.08.2004, *M.P.* 2653.
- Bothriochloa ischaemum* (L.) Keng
5, steppe, 2000 m, 08.09.2003, *M.P.* 2465.

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