



The flora of Kırmızı Tuzla (Karaçoban, Erzurum/Turkey) and Bahçe Tuzlası (Malazgirt, Muş/Turkey) and their environment

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Abstract

This research was carried out in 2006 and 2007 in order to determine the flora of Kırmızı Tuzla (Karaçoban/Erzurum) and Bahçe Tuzlası (Malazgirt/Muş) and their environs. In the area, 1056 taxa belonging to 75 families, and 374 genera were determined. Of all the collected specimens, 70 taxa are new records for B9 square; four taxa belong to Cryptogamae and 1052 taxa belong to Phanerogamae. A total of 101 (% 9.56) endemic species were collected from the area. The distributions of the endemic and rare taxa according to the red data is as follows: 2 taxa in critically "CR", 8 taxa in endangered "EN", 30 taxa in vulnerable "VU", 16 taxa in near threatened "NT", 63 taxa in least concern "LC" and 2 taxa (*Inula discoidea* Boiss. and *Cicuta virosa* L.) in data deficient "DD". It has been categorised *Inula discoidea* Boiss. as VU instead of DD. The largest families are Asteraceae (170), Brassicaceae (97), Fabaceae (84). The largest genera are *Astragalus*, *Centaurea* and *Silene*.

Key words: Bahçe Tuzlası, Kırmızı Tuzla, Flora, Variation, Red data categories, Endemic

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Kırmızı Tuzla (Karaçoban/Erzurum) ve Bahçe Tuzlası (Malazgirt / Muş) çevrelerinin florası

Özet

Bu araştırma 2006-2007 yılları arasında, Kırmızı Tuzla (Karaçoban/Erzurum) ile Bahçe Tuzlası (Malazgirt/Muş) ve çevrelerinin florasını tespit etmek üzere yapılmıştır. Araştırma bölgesinde 75 familyaya bağlı 374 cins ve 1056 tür ve türaltı takson tespit edilmiştir. Bunlardan 70 takson B9 karesi için yeni kayıt, 4 takson kriptogam grubuna ve 1052 takson ise fanerogam grubuna aittir. Alandan toplam 101 (% 9.56) endemik takson belirlenmiştir. Endemik ve nadir olan taksonların tehlike kategorilerine dağılımları: 2 takson kritik "CR", 8 takson tehlikede "EN", 30 takson zarar görebilir "VU", 16 takson tehdit altına girebilir "NT", 63 takson az endişe verici "LC" ve 2 takson (*Inula discoidea* Boiss. ve *Cicuta virosa* L.) veri yetersiz "DD" şeklindedir. *Inula discoidea* Boiss. türü veri yetersiz kategorisinden (DD) çıkarılarak zarar görebilir (VU) kategorisine konuldu. En büyük üç familya; Asteraceae (170), Brassicaceae (97) ve Fabaceae (84)'dir. En büyük cinsler; *Astragalus*, *Centaurea* ve *Silene*'dir.

Anahtar kelimeler: Bahçe Tuzlası, Kırmızı Tuzla, Flora, Varyasyon, Tehlike kategorileri, Endemik

1. Introduction

This research was carried out to determine the flora of Kırmızı Tuzla (Karaçoban-Erzurum) and Bahçe Tuzlası (Malazgirt-Muş) and their environs in the East Anatolia. According to the Flora of Turkey (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000), some foreign researchers, such as Aucher-Eloy, Aznavour, Bornmueller, Donner, Handel-Mazetti, Haussknecht, Huber-Morath, Kotschy, Krause, Manisadjian, Noë, Nabelek, Olivier, Rix, Schischkin, Sorger, Sosnovsky, Tchihatcheff, Tournefort, Uotila and Walter collected specimens in East Anatolia. Some floristic investigations (Tatlı & Altan, 1987; Tatlı, 1989; Gümüş, 1992; Ögün & Altan, 1992; Behçet & Altan, 1993; Özçelik & Babaç, 1993; Demirkuş, 1994; Altan & Behçet, 1995; Yıldırım, 1995; Kaya, 1996; Öztürk & Behçet, 1998; Altan ve Uğurlu, 2000; Altok & Behçet, 2005; Karabacak & Behçet, 2007; Ünal & Behçet, 2007;) have been made recently. However East Anatolia is still a "little known" or "unknown" region for floristic structure of Turkey, with regard to floristic studies (Çırpıcı 1987). The research area is "little known" area. The aim of this research is to determine the flora of the Kırmızı Tuzla and Bahçe Tuzlası surroundings, and to determine the endemic and rare plant species. This study is expected to contribute to the flora of Turkey.

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The research area is located in the Irano-Turanian phytogeographic region and is situated in the B9 square and located within the province of Muş and Erzurum. The research area is surrounded in the east by Dikbıyık and Güleç villages, in the south-east by Kadıköy, Gölağlı, Nurettin and Konakkuran villages, in the north-east by Doğantaş and Tıkızlı villages, in the west by Karaçoban town and Binpınar village, in the south-west by Kurganlı and Erence villages, in the north by Çiçekveren and Ulucanlar villages and in the south by Aktuzla and Alikalkan villages. Kocası (Hınıs river), Sarıtaş, Bilala, Çatal and Şor are the main streams in the study area. Kazgölü, Kurt lake (Sarıgöl), Doğanbey pond, Seydan (Bahçe) lake and Kuruca rush-bed are the other wetlands in the area. The altitude varies between 1500 and 2150 m. In the research area, the highest point is Laladağ (2113 m) and the lowest hill is Hanımköşkü (1853 m). The other important peaks are Güzelbaba (2044 m) mountain and Ziyaret (1957 m) hill (Figure 1).

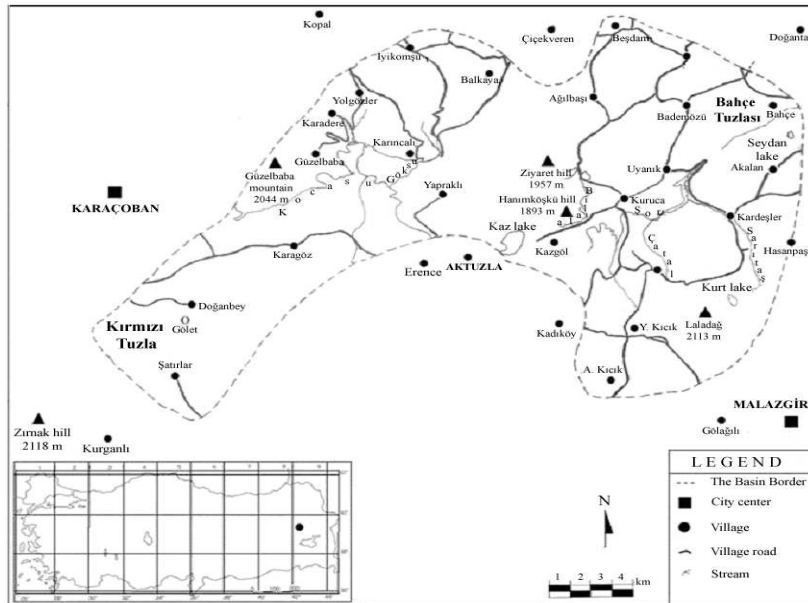


Figure 1. Geographic map of the study area.

The climate of the research area was examined using data obtained from the meteorology stations in Malazgirt, Muş, Erzurum and Patnos (DMIGM, 2005). According to the precipitation-temperature quotient of Emberger (1955), the area is described bioclimatically as a semiarid, iced type of Mediterranean climate (Table 1).

Table 1. Climatic data of the meteorological stations

Station	h	P	M	m	Q	PE	PE/M	Precip. regime	Bioclimate
Malazgirt	1565	451.4	31.6	-14.2	34.98	44.7	1.41	Sp.A.W.Sm	Semi-arid glacial
Muş	1284	778.1	33.2	-11.0	61.96	40.9	1.23	Sp.W.A.Sm	Semi-arid glacial
Erzurum	1757	411.1	27.6	-15.0	34.55	82.6	2.99	Sp.A.Sm.W	Semi-arid glacial
Patnos	1650	468.3	30.2	-14.3	37.45	44.7	1.48	Sp.W.A.Sm	Semi-arid glacial

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

Steppe formation is the main vegetation type in the area. In the area rarely some shrub and tree form species are distributed. In addition hydrophytic and hygrophytic vegetation are developed in the aquatic and humidity habitats of area. The vegetation of the area has been almost markedly destroyed by anthropogenic factors such as early and extreme overgrazing and collection of plant material for fuel.

Pyrus elaeagnifolia subsp. *kotschyana* formed small tree-shrub community in W slopes between Sümbüllü and Uyanık villages and around Kuruca and Kazgölü villages. The length of *P. elaeagnifolia* subsp. *kotschyana* reaches approximately 6-7 m. The shrub form of *P. elaeagnifolia* subsp. *kotschyana* and *Crataegus orientalis* var. *orientalis* are seen sparsely scattered in the area. A dense shrub community developed approximately 100 ha in SE of Karınca village around the way towards Kazgölü village facing the N side of valley. *Cotonoaster nummularia* is a dominant species in this shrub formation (Figure 2). *C. nummularia* is under risk. Therefore, the occurrence density of the species in the area indicates the importance of the area in terms of protection of the area. In addition to *C. nummularia* species, the other shrub forms in the area are: *Rhamnus catharticus* L. var. *catharticus*, *Prunus divaricata*, *Pyrus elaeagnifolia* subsp. *kotschyana*, *Rosa canina* and *R. pulverulenta*.



Figure 2. Community of *Cotonoaster nummularia* Fisch. & C. A. Mey.

Salix caprea community develops in some places along side Kocasu stream, around Balkaya village and in the N of Hasanpaşa village in streambed and in 30 ha humidity area of SE of Laladağ village in the study area. *S. alba* community is available in the area in tree form approximately 40-50 m in length and in shrub form in Kocasu streamside. *Populus tremula*, *Cerasus mahaleb* var. *mahaleb*, *Rhamnus catharticus* var. *catharticus*, *Salix caprea*, *S. alba*, *Rosa pisiformis* and *R. canina* shrub forms are observed in the slopes of stream in the S of Kardeşler village.

The salt pools in Bahçe Tuzlası and Kırmızı Tuzla are constructed in narrow stream beds. The area is exposed to flooding a few times in a year. The violent flood of water forces and moves the vegetation and the salty soils from the area and the area is covered with mud. Therefore, the area is poor in terms of plants. The plant species developed in saline area are; *Salicornia europaea*, *Puccinellia gigantea*, *Petrosimonia squarrosa*, *Salsola kali* subsp. *tragus*, *Atriplex laevis*, *Lepidium ruderales*, *L. pinnatifidum*, *Euclidium syriacum*, *Eremopyrum bonaepartis* subsp. *hirsutum*, *Crypsis alopecuroides*, *C. aculeata*.

In the research area, steppe vegetation is characterised by Fabaceae, Asteraceae and Poaceae members. *Thymus transcaucasicus*, *T. praecox* subsp. *caucasicus* var. *grossheimii*, *Globularia trichosantha* subsp. *trichosantha*, *Polygala papilionacea*, *P. anatolica*, *Veronica orientalis* subsp. *orientalis*, *Anthemis tinctoria* subsp. *tinctoria*, *A. tinctoria* subsp. *discoidea*, *Bromus. tectorum* subsp. *tectorum*, *B. tomentellus*, *Achillea biebersteinii*, *Hordeum bulbosum*, *Rindera albida*, *Centaurea virgata*, *C. polypodiifolia* var. *polypodiifolia*, *C. pseudoscabiosa* subsp. *pseudoscabiosa*, *C. schischkinii*, *C. saligna*, *Catabrosella parviflora* subsp. *calvertii*, *Scutellaria orientalis* L. subsp. *orientalis*, *Astragalus pycnocephalus* var. *pycnocephalus*, *A. gummifer*, *A. microcephalus*, *A. subrobustus*, *A. onobrychioides*, *A. lagurus*, *A. campylosema* subsp. *campylosema*, *Dianthus eythrocoleus*, *D. orientalis*, *Stipa ehrenbergiana*, *Koeleria cristata*, *Acantholimon venustum* var. *venustum*, *A. bracteatum* var. *capitatum*, *A. caryophyllaceum*, *Gundelia tournefortii* var. *tournefortii*, *Nepeta betonicifolia*, *Helichrysum plicatum* subsp. *plicatum*, *H. pallasii*, *Hypericum scabrum*, *Chardinia orientalis*, *Teucrium polium*, *T. chamaedrys* subsp. *chamaedrys*, *Phleum montanum* subsp. *montanum*, *Verbascum oreophilum* var. *oreophilum*, *Marrubium parviflorum*, subsp. *parviflorum*, *Phlomis pungens* var. *seticalycina*, *P. kurdica*, *Stachys cretica* subsp. *garana*, *Achillea schischkinii*, *Artemisia austriaca*, *A. absinthium*, *A. spicigera*, *Silene marschallii*, *S. montbretiana*, *Senecio racemosus*, *Euphorbia cheiradenia*, *Ziziphora clinipodioides*, *Dactylis glomerata* subsp. *hispanica*, *Coronilla orientalis* var. *orientalis*, *Inula oculus-christi*, *Thalictrum flavum*, *Cirsium lappaceum* subsp. *tenuilobum*, *Chondrilla juncea* var. *juncea*, *Salvia multicaulis*, *S. virgata*, *S. brachyantha*, *S. pocolata* taxa are dominant.

Hydrophytic vegetation is found in the streamside (as Kocasu (Hınıs river), Sarıtaş, Bilala, Çatal and Şor streams) and lakeside (as Kazgölü, Kurt lake (Sarıgöl), Doğanbey göleti, Seydan (Bahçe) lakes and Kuruca rush-bed) formations. *Orchis palustris*, *Eleocharis uniglumis*, *E. palustris*, *Barbarea vulgaris*, *B. plantaginea*, *B. minor* var. *robusta*, *Carex hordeistichos*, *C. divisa*, *Scytenoplectus lacustris* subsp. *tabernamontani*, *Rorippa austriaca*, *R. islandica*, *Equisetum ramosissimum*, *Crypsis alopecuroides*, *Elatine alsinastrum*, *Beckmannia eruciformis*, *Ranunculus lateriflorus*, *Alopecurus arundinaceus*, *Lepidium perfoliatum*, *Juncus inflexus*, *J. bufonius*, *Alisma lanceolatum*, *Colchicum szovitsii*, *C. kotschyi*, *Catabrosa aquatica*, *Polygonum amphibium*, *Lathyrus pratensis*, *Butomus umbellatus*, *Bolboschoenus maritimus* var. *maritimus*, *Prunella laciniata*, *Inula helenium* subsp. *pseudohelenium*, *Cirsium canum*, *Lythrum hyssopifolia*, *L. salicaria*, *Myriophyllum spicatum*, *Pulicaria vulgaris*, *P. armena*, *P. dysenterica*, *Psychrogeton nigromontanus*, *Senecio othonnae*, *Tussilago farfara*, *Tanacetum balsamita* subsp. *balsamitoides*, *Veronica anagallis-aquatica* subsp. *anagallis-aquatica*, *V. anagallis-aquatica* subsp. *oxycarpa*, *Filipendula vulgaris*, *Agrostis stolonifera*, *Phleum pratense*, *Spartanium erectum* subsp. *microcarpum*, *Carex melanostachya*, *C. riparia*, *Cirsium rhizocephalum* subsp. *sinuatum*, *Scorzonera parviflora*, *Teucrium scordium* subsp. *scordoides*, *Utricularia vulgaris*, *Scrophularia umbrosa*, *Allium vineale*, *Pedicularis comosa* var. *acmodonta*, *Cyperus longus*, *C. glaber*, *C. fuscus*, *Lysimachia vulgaris*, *Phragmites australis*, *Calamagrostis epigejos*, *Trifolium trichocephalum*, *T. campestre*, *Glyceria plicata*, *Rhinanthus angustifolius* subsp. *grandiflorus*, *Mentha longifolia* subsp. *typhoides* var. *calliantha*, *Phalaris arundinacea*, *Festuca arundinacea* subsp. *arundinacea*, *Potamogeton nodosus*, *P. lucens*, *P. panormitanus*, *P. berchtoldii*, *P. trichoides*, *P. pectinatus*, *Groenlandia densa*, *Lemna minor*, *L. turionifera*, *Zannichelia palustris* L. subsp. *repens*, *Echinocloa colonum* dominate in this formation.

Artemisia incana, *Ephedra major*, *Parietaria judaica*, *Scrophularia libanotica* subsp. *libanotica* var. *nevshihirensis*, *Arabis caucasica* subsp. *caucasica*, *Cystopteris fragilis*, *Campanula crispa*, *Achillea nobilis* subsp. *neilreichii*, *Melica persica* subsp. *inaequiglumis*, *Ceterach officinarum*, *Salsola canescens*, *Stachys lavandulifolia* var. *lavandulifolia* are commonly found in the rocky parts of the research area.

1. Materials and Methods

The materials of the study consisting of 3830 vascular plant specimens were collected between 2006 and 2007. These specimens were identified basically with the help of the Flora of Turkey (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000) and the other floras (Rechinger, 1965-1977; Townsend & Guest, 1966-1985; Zohary, 1966-1986; Tutin et al., 1964-1981; Komarov &

Shishkin, 1933-1964), some revisions (Aytaç, 1997; Ekici & Ekim, 2004) and articles (Behçet, 1989; Behçet & Almanar, 2004; Sutory, 2005). Threatened categories are proposed for some endemic and non-endemic taxa according to IUCN risk categories (IUCN, 2001; Ekim et al., 2000). The flora of the area is analyzed by Raunkiaer' life form system (Raunkiaer, 1934).

The order of plant taxa follows that of the Flora of Turkey (Davis, 1965-1988). The floristic list is given as appendix. The list first gives the localities of the taxa (the area lies entirely within "B9", which is omitted from the citation), followed by habitats, collection date, GPS, altitude, collectors' names, numbers, endemism, threat categories, their phytogeographical regions and life form. The symbol (▲) in front of a plant name indicates a new record for the B9 square. The authors of the plant names were checked (Brummitt & Powell 1992). All the specimens are deposited in VANF herbarium. The abbreviations used in the text and the floristic list are as follows: END.: endemic; NT: near threatened; LC: least concern; VU: vulnerable; EN: endangered; DD: data deficient E. Medit.: East Mediterranean element; Medit.: Mediterranean element; Euro-Sib.: Euro-Siberian element; Eux.: Euxin element; H. Eux.: Hyrcano-Euxin element; Ir.-Tur.: Irano-Turanian element; Th: therophyte, Hc: hemicryptophyte, Cr: cryptophyte, Kh: chamaephyte, Fh: phanarophyte, E: east; N: north; S: south; W: west; LFM: Lütfi BEHÇET-Fevzi ÖZGÖKÇE-Murat ÜNAL; VANF: Yüzüncü Yıl University Faculty of Art and Sciences, Department of Biology Herbarium in Van.

2. Results and Discussion

At the end of this study, 3830 vascular plant specimens were collected from the research area, and 879 species (1056 taxa) and 374 genera belonging to 75 families were established. In the flora of research area, it is determined that Pteridophyta with four taxa, Gymnospermae with one taxon while Angiospermae with 1051 taxa. 880 taxa of Angiospermae members are belong to dicots whereas 171 taxa are belong to monocots. *Lepidium pinnatifidum* Ledeb. (Ünal et al., 2007) and *Crambe orientalis* L. var. *sulphurea* Stapf distribution in Turkey is first recorded in our study area. Distribution of taxa into the large taxonomical groups in the study is shown in table 2.

Table 2. The dispersion of taxa into the large taxonomical groups

Plant Group	Number of Families	Number of Genera	Number of taxa
<i>Pteridophyta</i>	3	3	4
<i>Spermatophyta</i>	72	371	1052
<i>Gymnospermae</i>	1	1	1
<i>Angiospermae</i>	71	370	1051
<i>Dicotyledones</i>	56	293	880
<i>Monocotyledones</i>	15	77	171
Total	75	374	1056

The largest families based on their species number in the area are *Asteraceae* (170 spp.), *Brassicaceae* (97 spp.), *Fabaceae* (84 spp.), *Poaceae* (77 spp.) and *Lamiaceae* (76 spp.) respectively. In comparison with the Flora of Turkey (Davis et al., 1988), the order of the families is approximately the same in this study. Comparison of first 10 families with highest taxa show that our floristic study have important similarity with floristic studies carried out on East Anatolia region, even the range changes. The ten largest families according to the number of species are shown in table 3.

Table 3. Comparison of the 10 families containing the most species in studies conducted in nearby region (abbreviations are below the table)

Study areas	Total taxa										
		<i>Asteraceae</i> %	<i>Brassicaceae</i> %	<i>Fabaceae</i> %	<i>Poaceae</i> %	<i>Lamiaceae</i> %	<i>Caryophyllaceae</i> %	<i>Apiaceae</i>	<i>Liliaceae</i> %	<i>Scrophulariaceae</i>	<i>Ranunculaceae</i> %
Kır. and Bah. Tuz	1056	16.08	9.17	7.94	7.28	7.19	5.77	5.67	4.25	4.16	2.93
Akçadağ	891	15.90	7.70	7.60	7.60	6.30	5.70	2.80	4.60	4.70	3.14
Pirreşit	828	15.00	7.20	8.90	10.70	5.70	7.00	3.50	4.30	3.90	3.50
Erek Dağı	574	16.50	6.90	8.70	6.10	6.60	3.60	4.10	2.80	3.80	4.10
Bitlis River	925	11.70	5.70	10.90	8.30	7.00	4.30	3.50	3.50	3.78	3.50
Hizan	627	11.50	5.26	11.30	9.00	8.45	5.58	4.78	2.70	5.20	4.78
Süphan	780	15.60	7.40	10.30	9.20	6.90	5.10	4.40	3.20	3.50	4.40
Kurubaş	418	15.07	12.20	9.33	8.13	5.74	4.78	4.06	2.87	2.87	3.58
Toprakkale	249	18.00	7.60	8.80	6.00	11.00	5.20	4.40	2.80	3.61	4.40
Çakmak	381	10.50	6.20	6.60	9.70	6.60	5.50	---	---	4.90	---
Terc.Bağır.	862	11.00	7.00	9.50	7.70	8.30	4.80	---	---	2.90	---
Munzur	1518	12.90	8.80	9.20	4.80	8.10	5.60	---	---	4.40	---
Çiçek	780	15.10	4.70	6.30	4.70	5.70	4.70	4.20	2.80	5.30	3.00
Allahuekber	368	12.40	4.00	5.70	7.40	10.10	7.30	7.73	2.71	3.50	7.73
Iğdır	144	15.20	11.80	9.00	10.40	2.08	1.38	2.08	0.69	0.69	0.69

Abbreviations:

- Kır. and Bah. Tuz: The Flora of Kırmızı Tuzla (Karaçoban/Erzurum) and Bahçe Tuzlası (Malazgirt / Muş) and their Environment
- Akçadağ : The Flora of Akçadağ (Van-Turkey) (Karabacak & Behçet, 2007)
- Pirreşit : Flora of Pirreşit Mountain (Van, Turkey) (Ünal & Behçet, 2007)
- Erek Dağı : Erek Dağı (Van) Florası Üzerinde Çalışmalar (III) (Özçelik & Babaç, 1993)
- Bitlis River : The Flora of Bitlis River Valley (Altıok & Behçet, 2005)
- Hizan : Hizan (Bitlis) Florası (Altan & Behçet, 1995)
- Süphan : Süphan Dağı (Bitlis) Florası (Behçet, 1991)
- Kurubaş : Kurubaş Geçidi (Van) Florası (Öztürk & Behçet, 1998)
- Toprakkale : Toprakkale (Van) Florası (Öğün & Altan, 1992)
- Çakmak : Çakmak Dağları (Ağrı) Florası (Gümüş, 1992)
- Terc.-Bağır. : Tercan Çevresi ve Şengül (Erzincan) ve Bağırba (Tunceli) Dağlarının Florası (Kaya, 1996)
- Munzur : Munzur Dağları (Erzincan-Tunceli) Florası (Yıldırım, 1995)
- Çiçek : Çiçek Dağı (Posof-Kars) Florası (Demirkuş, 1994)
- Allahuekber : Allahuekber Dağları (Erzurum) Florasına Katkıları (Tatlı, 1989)
- Iğdır : Iğdır Ovası (Iğdır) Florasına Katkıları (Tatlı & Altan, 1989)

The richest genera in terms of the number of taxa are *Astragalus* L. (31), *Centaurea* L. (18) and *Silene* L. (16). Genus *Astragalus* as one of the largest genera of flowering plants contains c.2500 taxa in the world and 446 taxa in Turkey (Ekici & Ekim, 2004). The study area is mostly in steppe character. In our study, the genus *Astragalus* ranks first due to ecological factors, and the habitat of the species, which are known as steppic plants of Irano-Turanian phytogeographic regions. Following *Astragalus*, the genus *Centaurea* is represented by 18 taxa. The genera *Centaurea* and *Silene* are the third and fifth largest genera in Turkey, respectively. *Silene* is also relatively widespread throughout Turkey. The genera with the largest number of species in the research area are shown in table 4.

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

Genus	Number of Taxa
<i>Astragalus</i>	31 (2.93 %)
<i>Centaurea</i>	18 (1.70 %)
<i>Silene</i>	16 (1.51 %)
<i>Veronica</i>	15 (1.41 %)
<i>Alyssum</i>	15 (1.41 %)
<i>Dianthus</i>	14 (1.32 %)
<i>Salvia</i>	14 (1.32 %)
<i>Allium</i>	14 (1.32 %)
<i>Ranunculus</i>	13 (1.22 %)
<i>Stachys</i>	13 (1.22 %)

The number of endemic taxa in the study area is 101 and endemism ratio is 9.65%. The proportion of endemism in the area is low (9.65%), below the average of Turkey (34%) (Ekim, 2005).

A total of 121 taxa, all endemics, and 20 non endemics were evaluated according to IUCN risk categories. The results are summarized in table 5. Sixty-three taxa are placed in the least concern categories, while 30 taxa in the vulnerable, 16 taxa in the near threatened, 8 taxa in the endangered, 2 taxa in the critically and 2 taxa are put in the data deficient categories.

Table 5. Risk categories of endangered taxa, most of them being endemics.

Categories	LC	VU	NT	EN	CR	DD	Total
Taxa	63	30	16	8	2	2	121

Inula discoidea Boiss., is a local endemic and included in **DD** category. The species was recorded only in B8 square in Bingöl up to now. We have determined that the species has distribution in 8 different localities in our study area (B9 square). Therefore, we have categorised the species as **VU** instead of **DD**.

There is not a certain information in the flora of Turkey about the distribution and locality of *Cicuta virosa* L. which belongs to the threat category of **DD** according to the red data book of Turkish plants. According to The Flora of Turkey, it was probably collected between Erzurum and Trabzon. In the present study we have first reported the definite locality of species. The species is also suitable to be included in **DD** category due to restricted distribution.

On the other hand, the main problems causing the taxa to be categorised in the least concern, vulnerable and near threatened is excess collection of plant material, clearing and over-grazing on the steppe. An updated version of the Red Data Book for the vascular plants of Turkey was published by Ekim et al., (2000). There are some disagreements among the authors of the risk categories for some taxa. This is because of considering the Turkish flora as a whole while our observations are based only on the study area. Meanwhile, further floristic studies in Turkish flora would contribute more to the Red Data Book in the future. Another reason for disagreement is that they have used the criteria of IUCN 1994. However, new criteria have been used in this paper.

The species of the study area, categorized according to phytogeographic regions, can be listed as follows: Irano-Turanian elements 327 (30.84%) (47 endemics), Euro-Siberian elements 89 (14 Eux., 4 H.Eux.) (8.42%) (4 endemics) and Mediterranean elements 24 (2.27%) (2 endemics). The remaining 616 (58.42%) taxa are cosmopolitan or of unknown phytogeographic origin (Table 6). The dominance of the Irano-Turanian elements would be expected because the study area lies in the Irano-Turanian region. Similar results were obtained from other floristic studies in East Anatolia close to Kırmızı Tuzla and Bahçe Tuzlası (Table 6). Irano-Turanian elements seems to be dominant in all areas studied while Euro-Siberian elements come the second except for Allahuekber Mountains (Tatlı, 1989), Bitlis River valley (Altıok & Behçet, 2005), and Toprakkale (Öğün & Altan, 1992).

Table 6. The comparison of the distribution of phytogeographical elements and endemism ratio (%) in the study area and near regions (abbreviations are below table 3)

Study areas	Irano-Turanian	Euro-Siberian	Mediterranean	Cosmopolitan and others	Endemism
Kır. and Bah. Tuz	30.84	8.42	2.27	58.42	9.65
Akçadağ	35.4	9.9	2.9	51.6	7.5
Pirreşit	38.4	2.6	9.5	49.5	9.0
Erek Dağı	42.8	9.9	3.1	44.2	7.8
Bitlis River	31.8	4.8	8.7	54.6	6.8
Hizan	34.9	6.2	4.7	54.2	7.9
Süphan	37	8.7	2	52.3	8.5
Kurubaş	44	7	1	47	7
Toprakkale	44	4.4	4.8	46.8	4
Çakmak	33.9	20	2.6	37.2	6.5
Terc.Bağır.	25	10.7	4.4	59.9	6.5
Munzur	45.7	8	4.4	41.9	19.9
Çiçek	12.6	29.6	1	56.8	3
Allahuekber	37	41.3	1.6	20.1	4.6
Iğdır	44.4	7.7	3.5	44.4	1.4

Interesting distributed taxa in study area:

Hesperis kitiiana has been collected between Patnos and Tutak (Ağrı) at 1750 m altitude and published at 1988 as new taxon for science. Our study clarified distribution area of this taxon has been widened after collection of type material second time at 4 different localities.

Distribution of *Petrosimonia squarrosa* was now only in one locality of Iğdır (B10) and Kars (A9) at Turkey. Our record exhibited that distribution of the plant is going to be widened in middle part of East Anatolia region.

Crinitaria villosa, an element of Euro-Siberian phytogeographic region, was known to be present in colder and moister environment of Erzurum. It is interesting to see the distribution of this species in steppe part of our quite drought study area.

Type specimens of *Tragopogon fibrosus* was founded previously in Gümüşhane (A7), collected second time in study area.

Also distribution of *Centaurium erythraea* subsp. *rumelicum*, known in west parts of Turkey (A2, B2, C2 squares), in the study area is interesting.

Distribution of *Polypogon maritimus* subsp. *subspathaceus* in our study area is very interesting. The taxon differs easily from other *Polypogon* members by some characters those are 6-7 mm length of gluma awn, gluma 2-fid at apex and lemma awnless. The subspecies was known present on sandy habitats at 40 m altitude from sea coast (A2, B1, C2, C3, C4 squares). Also the plant is an E. Mediterranean element. Our specimens collected in our study area were affected by harsh winter condition in Iran-Turan phytogeographic region. In contrary, the habitats are meadow not sandy.

Eremopoa attalica is endemic and an E. Mediterranean element. The species was known only in C3 square (Antalya and Burdur around). Distribution of species in our study area having different ecology is interesting from point view of plant geography.

The taxa can also be classified according to their life forms. Raunkiaer's life forms spectrum acts as an indicator of the climate or region (Raunkiaer, 1934; Akman & Ketenoğlu, 1992). The life forms of the taxa according to Raunkiaer are represented in the area as follows: hemicryptophytes 571 (54.07%), therophytes 259 (24.52%), cryptophytes (also called geophytes) 111 (10.51%), chamaephytes 89 (8.42%) and phanerophytes 26 (2.46%).

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APPENDIX

The Floristic List

PTERIDOPHYTA

EQUISETACEAE

Equisetum ramosissimum Desf.

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1325, Hc.

E. arvense L.

Muş: Malazgirt, Karıncalı village, humid places, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 630, Hc.

ASPLENIACEAE

Ceterach officinarum DC.

Erzurum: NE of Karaçoban, Kırımkaşa villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 908, Hc.

ATHYRIACEAE

Cystopteris fragilis (L.) Bernh.

Muş: Malazgirt, A. Kıcık village surroundings, rocky places, 12.05.2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2616, Hc.

SPERMATOPHYTA

GYMNOSPERMAE

EPHEDRACEAE

Ephedra major Host.

Muş: Malazgirt, Karıncalı valley, rocky places, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2541, Kh.

ANGIOSPERMAE

RANUNCULACEAE

Nigella oxypetal Boiss.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1514, Ir.-Tur., Th.

N. latisecta P.H. Davis

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2901, Ir.-Tur., Th.

N. segetalis M. Bieb.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2278a, Th.

Delphinium albiflorum DC.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1740, Hc.

D. cyphoplectrum Boiss. var. *stenophyllum* Boiss.

Muş: Malazgirt, between Sarıgöl and Gölağlı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3597, Hc. "VU"

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

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1076, END., Hc, "NT"

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

Muş: Malazgirt, between Uyanık and Bahçe villages, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1451, Th.

C. regalis S.F. Gray subsp. *paniculata* (Host) Soó var. *divaricata* (Ledeb.) P.H. Davis

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2226b, Th.

▲ *C. cornuta* (P.H. Davis & Hossain) P.H. Davis

Muş: Malazgirt, Bahçe tuzlası surroundings, steppe, 06 vii 2006, 39° 25' 035" N 42° 27' 201" E, 1724 m, LFM 1398, END., Ir.-Tur., Th. "EN"

C. oliveriana (DC.) Schröd.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1741, Ir.-Tur., Th.

Clematis orientalis L.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3658, Hc.

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

Muş: Malazgirt, Karıncalı village, fields, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 682, Th.

A. eriocalycina Boiss.

Muş: Malazgirt, Beşdam village surroundings, meadows, 21.05.2007, 39° 26' 072" N 42° 22' 445" E, 1823 m, LFM 2714, Ir.-Tur., Th.

A. flammea Jacq.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2846, Th.

Ranunculus sericeus Banks & Sol.

Muş: Malazgirt, Kazgölü village surroundings, meadow 23 vi 2006, 39° 20' 004" N 42° 20' 648" E, 1800 m, LFM 1138, Ir.-Tur., Hc.

R. poluninii P.H. Davis

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2897, END., Ir.-Tur., Hc.

"EN"

R. repens L.

Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3018, Hc.

R. bulbosus L. subsp. *aleae* (Willk.) Rouy & Fouc

Muş: Malazgirt, N of Ağılbaşı village, humid places, 21.05.2007, 39° 23' 910" N 42° 22' 483" E, 1801 m, LFM 2725, Hc.

R. constantinopolitanus (DC.) d' Urv.

Muş: Malazgirt, Bademözü village surroundings, meadows, 21.05.2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2994, Hc.

R. oxyspermus Willd.

Muş: Malazgirt, Yolgözler plateau, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 610, Cr.

R. illyricus L. subsp. *illyricus*

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 218, Cr.

▲ *R. sintensisii* Freyn

Muş: Malazgirt, NE of A. Kıcık village, steppe, 12.05.2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2683, END., Ir.-Tur., Hc. "VU"

R. macrorhynchus Boiss. subsp. *macrorhynchus*

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2757, Ir.-Tur., Hc.

R. arvensis L.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 752b, Th.

R. sceleratus L.

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, streamside, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2454, Th.

R. kochii Ledeb.

Muş: Malazgirt, N of Hasanpaşa village, fields, 2 iv 2006, 39° 19' 550" N 42° 30' 219" E, 1539 m, LFM 012, Ir.-Tur., Cr.

R. lateriflorus DC.

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadows drying up in summer 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3577, Th.

Ceratocephalus testiculatus (Crantz) Roth

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 93, Th.

Thalictrum minus L. var. *minus*

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2814, Hc.

T. flavum L.

Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2514, Hc.

T. simplex L.

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, humid places, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2907, Hc.

BERBERIDACEAE

Leontice leontopetalum L. subsp. *leontopetalum*

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2771, Cr.

L. leontopetalum L. subsp. *ewersmannii* (Bunge) Coode

Muş: Malazgirt, Karıncalı valley, steppe, 23.04.2007, 39° 21' 067" N 42° 15' 587" E, 1537 m, LFM 2593, Cr.

PAPAVERACEAE

Glaucium corniculatum L. subsp. *corniculatum*

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2262, Hc.

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

Muş: Malazgirt, Karıncalı village, fields, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 660, Ir.-Tur., Hc.

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

Erzurum: N of Karaçoban, Kırımkaşa villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 844, Th.

Papaver fugax Poir. var. *fugax*

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1964, Hc.

P. cylindricum Cullen

Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1845, Ir.-Tur., Hc.

P. macrostomum Boiss. & Huet ex Boiss.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2801, Ir.-Tur., Th.

P. rhoeas L.

Muş: Malazgirt, Yapraklı village surroundings, streamside, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 765, Th.

P. dubium L. subsp. *dubium*

Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 20' 692" N 42° 23' 296" E, 1705 m, LFM 1765, Th.

P. minus (Boiv.) Meikle

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 241, E. Medit., Th.

Hypecoum pendulum L.

Muş: Malazgirt, 1 km to A. Kıcık village, steppe, 12.05.2007, 39° 14' 899" N 42° 22' 092" E, 1589 m, LFM 2651, Th.

Corydalis oppositifolia DC. subsp. *oppositifolia*

Muş: Malazgirt, Laladağ, N of A. Kıcık village, humid slopes, 14.04.2007, 39° 16' 593" N 42° 23' 447" E, 1772 m, LFM 2579, Cr.

Fumaria schleicheri Soy.-Will.

Muş: Malazgirt, Yapraklı village surroundings, streamside, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 758, Eu.-Sib., Th.

F. asepalae Boiss.

Muş: Malazgirt, 2 km S of Laladağı village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1272, Ir.-Tur., Th.

BRASSICACEAE

Brassica elongata Ehrh.

Muş: Malazgirt, A. Kıcık village, fields, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, Hc.

Sinapis arvensis L.

Erzurum: N of Karaçoban, steppe, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2163, Th.

Crambe orientalis L. var. *orientalis*

Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1990, Ir.-Tur., Hc.

C. orientalis L. var. *sulphurea* Stapf

Muş: Malazgirt, E of Yolgözler village (Yolgözler Plateau) steppe, 27 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 249; Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3206, Hc.

This taxon is a new record for Turkey

Conringia orientalis (L.) Andr.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1542, Th.

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

Muş: Malazgirt, 2 km to A. Kıcık village, steppe, 12.05.2007, 39° 14' 749" N 42° 22' 661" E, 1584 m, LFM 2668, Ir.-Tur., Th.

C. persica Boiss.

Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2223, Th.

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

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 460a, Th.

Lepidium ruderalis L.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, salty places, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2230, Th.

L. pinnatifidum Ledeb.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 742-LFM 792; Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3221, Th. "VU"

L. perfoliatum L.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 763, Th.

L. latifolium L.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3682, Hc.

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

Muş: Malazgirt, 2 km S of Laladağı village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1271, Hc.

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

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 100, Hc.

Isatis erzurumica P.H. Davis & Trautv.

Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2974, **END.**, Ir.-Tur., Hc. "NT"

I. glauca Aucher ex Boiss. subsp. *iconia* (Boiss. & Heldr.) P.H. Davis

Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3462, **END.**, Ir.-Tur., Hc. "LC"

I. glauca Aucher ex Boiss. subsp. *exauriculata* (Bornm.) P.H. Davis

Muş: Malazgirt, Y. Kıcık village 1 km forward, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1851, Ir.-Tur., Hc.

I. kotschyana Boiss & Hohen.

Muş: Malazgirt, between Karıncalı and Yolgözler villages, steppe, 14.07.2007, 39° 23' 133" N 42° 16' 042" E, 1625 m, LFM 3314, Ir.-Tur., Hc. "VU"

I. tinctoria L. subsp. *tinctoria*

Muş: Malazgirt, between İyikomuşu and Kırımkaaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3365, Hc. "VU"

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

Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1837, Hc.

▲ *I. spectabilis* P.H. Davis

Muş: Malazgirt, between Laladağ and Kuruca villages, roadside-steppe, 23 vi 2006, 39° 19' 064" N 42° 24' 094" E, 1850 m, LFM 1206, **END.**, Ir.-Tur., Hc. "VU"

I. takhtajanii Avet.

Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2339, Ir.-Tur., Hc.

I. cochlearis Boiss.

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 868, Ir.-Tur., Hc.

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

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2753, Hc.

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

Muş: Malazgirt, SE of Balkaya village, fields, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1657 m, LFM 057, Ir.-Tur., Th.

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

Muş: Malazgirt, between Hasanpaşa and Koçalı villages, steppe, 29 iv 2006, 39° 08' 797" N 42° 32' 533" E, 1531 m, LFM 118, Th.

Ae. speciosum Boiss. & A. Huet

Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2308, Ir.-Tur., Hc.

Ae. trinervium (DC.) Boiss.

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2759, Hc.

Ae. membranaceum DC.

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, Ir.-Tur., Hc.

Ae. armenum Boiss.

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 180, Ir.-Tur., Hc.

Ae. coridifolium DC.

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2963, Hc.

Thlaspi huetii Boiss.

Muş: Malazgirt, NW of Koçalı village, steppe, 16 iv 2006, 39° 21' 925" N 42° 29' 772" E, 1785 m, LFM 051, Th.

T. perfoliatum L.

Muş: Malazgirt, Laladağ, N of A. Kıcık village, humid slopes, 14.04.2007, 39° 16' 593" N 42° 23' 447" E, 1772 m, LFM 2581, Th.

T. ceratocarpon Murray

Muş: Malazgirt, Kaz lake surroundings, steppe, 17 vii 2006, 39° 20' 604" N 42° 19' 882" E, 1731 m, LFM 2014, Th.

T. bornmuelleri (Rech.) Hedge

Muş: Malazgirt, Yolgözler plateau surroundings, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 476, **END.**, Ir.-Tur., Th. "VU"

Capsella bursa-pastoris (L.) Medik.

Muş: Malazgirt, Yapraklı village surroundings, meadow, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 184, Th.

Euclidium syriacum (L.) R. Br.

- Muş: Malazgirt, between Aktuzla and Yapraklı village, steppe, 26.05.2007, 39° 20' 895" N 42° 15' 945" E, 1577 m, LFM 2792, Th.
Neslia paniculata (L.) Desv.
 Muş: Malazgirt, Yapraklı village surroundings, fields, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 360, Th.
N. apiculata Fisch.
 Muş: Malazgirt, Karıncalı valley, fields, 26.05.2007, 39° 22' 587" N 42° 17' 506" E, 1623 m, LFM 2877, Th.
Bunias orientalis L.
 Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1337, Hc.
Fibigia eriocarpa (DC.) Boiss.
 Muş: Malazgirt, NE of A. Kıcık village, steppe, 12.05.2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2682, Hc.
F. suffruticosa (Vent.) Sweet
 Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgözü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1117, Hc.
Bornmuellera glabrescens (Boiss. & Bal.) Cullen & Dudley
 Muş: Malazgirt, A. Kıcık village surroundings, steppe, 12.05.2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2634, **END.**, Hc. "EN"
Alyssum linifolium Stephan ex Willd. var. *linifolium*
 Muş: Malazgirt, Bahçe tuzlası surroundings, fields, 2 iv 2006, 39° 14' 016" N 42° 28' 351" E, 1572 m, LFM 040, Th.
A. menicoides Boiss.
 Muş: Malazgirt, 5 km to Hasanpaşa village, fields, 23 v 2007, 39° 12' 857" N 42° 29' 526" E, 1561 m, LFM 2613, Ir.-Tur., Th.
A. desertorum Stapf var. *desertorum*
 Muş: Malazgirt, W of Kaz gölü village, meadows, 10.06.2007, 39° 20' 706" N 42° 21' 500" E, 1764 m, LFM 3028, Th.
A. desertorum Stapf var. *prostratum* T.R. Dudley
 Muş: Malazgirt, SE of Bahçe village, fields, 2 iv 2006, 39° 23' 578" N 42° 28' 993" E, 1668 m, LFM 037, Th.
A. strictum Willd.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 650, Ir.-Tur., Th.
A. szowitzianum Fisch. & C.A. Mey.
 Muş: Malazgirt, Güzelbaba mountain, steppe, 29 v 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 510, Th.
A. minus (L.) Rothm. var. *minus*
 Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 27 v 2006, 39° 25' 138" N 42° 13' 697" E, 1743 m, LFM 349, Th.
A. minus (L.) Rothm. var. *micranthum* (Meyer) T.R. Dudley
 Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 983, Th.
A. strigosum Banks & Sol. subsp. *strigosum*
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3174, Th.
A. hirsutum M. Bieb.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 554, Th.
A. callichorum Boiss. & Bal.
 Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 2001, **END.**, Hc. "LC"
A. pateri Nyár subsp. *pateri*
 Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3402, **END.**, Ir.-Tur., Hc. "LC"
A. pateri Nyár subsp. *prostratum* (Nyár) T.R. Dudley
 Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m 918, **END.**, Ir.-Tur., Hc. "LC"
A. filiforme Nyár
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3170, **END.**, Ir.-Tur., Hc. "LC"
A. murale Waldst. & Kit. var. *murale*
 Muş: Malazgirt, between Sarıgöl and Gölağılı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3592, Hk.
Clypeola aspera (Grauer) Turrill
 Muş: Malazgirt, Karıncalı valley, fields, 26.05.2007, 39° 22' 587" N 42° 17' 506" E, 1623 m, Ir.-Tur., Th.
Draba nemorosa L.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 667, Th.
D. huetii Boiss.
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 750, Th.
Erophila verna (L.) Chevall. subsp. *verna*
 Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 069, Th.
E. minima C.A.Mey.
 Muş: Malazgirt, Karıncalı valley, steppe, 23.04.2007, 39° 21' 067" N 42° 15' 587" E, 1537 m, LFM 2595, Th.
Arabis caucasica Willd. subsp. *caucasica*
 Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 061, Hc.
A. nova Vill.
 Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 077a, Th.
Rorippa islandica (Oeder) Borbás
 Muş: Malazgirt, Kaz lake surroundings, streamside, 17 vii 2006, 39° 20' 604" N 42° 19' 882" E, 1731 m, LFM 2017, Th.
R. austriaca (Crantz) Besser
 Erzurum: SE of Karaçoban, river surroundings, meadows drying up in summer, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2142, Hc. (Hidrofit)
▲R. amphibia (L.) Besser
 Erzurum: between Karaçoban and Kırmızı Tuzla, before arriving the bridge, wet-humid meadow places, 03 vi 2006, 39° 18' 545" N 42° 06' 151" E, 1673 m, LFM 732b, Hc. (Hidrofit)
R. sylvestre (L.) Besser
 Erzurum: between Karaçoban and Kırmızı Tuzla, before arriving the bridge, wet-humid meadow places, 03 vi 2006, 39° 18' 545" N 42° 06' 151" E, 1673 m, LFM 732a, Hc. (Hidrofit)
Barbarea vulgaris R. Br.
 Muş: Malazgirt, Yapraklı village surroundings, streamside, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 280a, Hc. (Hidrofit)
B. plantaginea DC.
 Muş: Malazgirt, W of Kazgözü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1265, Hc. (Hidrofit)
B. minor K. Koch var. *robusta* Cullen & Coode
 Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1009, **END.**, Hc. "LC" (Hidrofit)
B. minor K. Koch var. *eripoda* Busch
 Muş: Malazgirt, Yolgözler plateau surroundings, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 478, Hc. (Hidrofit)
Cardamine uliginosa M. Bieb.
 Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3005, Hc. (Hidrofit)
Drabopsis verna K.Koch
 Muş: Malazgirt, NE of A. Kıcık village, steppe, 12.05.2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2674, Ir.-Tur., Th.
Chorispora tenella (Pall.) DC.
 Muş: Malazgirt, 1 km to A. Kıcık village, steppe, 12.05.2007, 39° 14' 899" N 42° 22' 092" E, 1589 m, LFM 2635, Th.
Hesperis bicuspidata (Willd.) Poir.
 Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2908, Hc.
H. persica Boiss.
 Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 463, Ir.-Tur., Hc.
H. kitiana P.H. Davis

- Muş: Malazgirt, Yolgözler plateau, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 603, **END.**, Ir.-Tur., Hc. “**CR**” Det: A. Duran
Sterigmostemum incanum M. Bieb.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 724, Ir.-Tur., Hc.
Erysimum cuspidatum (M. Bieb.) DC.
 Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, steppe, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3453, Hc.
▲E. goniocaulon Boiss.
 Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 965b, Hk.
E. passgalense Boiss.
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2280, Hc.
▲E. leucanthemum (Stephan) B. Fedtsch
 Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1864, Hc.
E. caespitosum DC. (Syn: *E. macrostigma* Boiss.-in Flora of Turkey)
 Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1933, Hc. Det: I.C. Hedge
E. pulchellum (Willd.) Gay
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 29 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 591, Hc.
E. alpestre Kotschy ex Boiss.
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3176, Hc.
E. crassipes Fisch. & C.A. Mey.
 Erzurum: N of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 821, Hc.
E. eginense Hausskn. ex Bornm.
 Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2857, **END.**, Hc. “**VU**”
E. leptocarpum Gay
 Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2968, **END.**, Hc. “**EN**”
E. smyrnaeum Boiss. & Bal.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, Hc.
Sisymbrium loeselii L.
 Muş: Malazgirt, between Karıncalı and Yolgözler villages, steppe, 14.07.2007, 39° 23' 133" N 42° 16' 042" E, 1625 m, LFM 3313, Th.
Descurania sophia (L.) Webb. ex Prantl
 Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 27 v 2006, 39° 25' 138" N 42° 13' 697" E, 1743 m, LFM 339, Th.
Arabidopsis pumila (Stephan) Busch
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 084, Th.
Camelina rumelica Velen.
 Muş: Malazgirt, N of Ağılbaşı village, steppe, 21.05.2007, 39° 23' 910" N 42° 22' 483" E, 1801 m, LFM 2720; 200, LFM 2821, Th.
C. hispida Boiss. var. *hispida*
 Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1640, Th.
▲C. hispida Boiss. var. *grandiflora* (Boiss.) Hedge
 Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2896b, **END.**, Th. “**LC**”

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

- Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2331, Hc.

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

- Muş: Malazgirt, Yolgözler village, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 524, Th.

VIOLACEAE*Viola occulta* Lehm.

- Muş: Malazgirt, SE of Bahçe village, fields, 2 iv 2006, 39° 23' 578" N 42° 28' 993" E, 1668 m, Th.

POLYGALACEAE*Polygala anatolica* Boiss. & Heldr.

- Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 657, Hc.

P. papilionacea Boiss.

- Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 416, Ir.-Tur., Ch.

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

- Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2768, Ch.

CARYOPHYLLACEAE*Arenaria serpyllifolia* L.

- Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 703, Th.

A. leptocladus (Rchb.) Guss.

- Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 631, Th.

A. gypsophiloides LMant var. *gypsophiloides*

- Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3181, Ir.-Tur., Hc.

A. gypsophiloides LMant var. *glabra* Fenzl.

- Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3550, Ir.-Tur., Hc.

Minuartia juniperina (L.) Maire & Petitm.

- Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2943, Ch.

M. glandulosa (Boiss. & A. Huet) Bornm.

- Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3167, **END.**, Ir.-Tur., Ch. “**LC**”

M. umbellulifera (Boiss.) McNeill subsp. *umbellulifera* var. *umbellulifera*

- Erzurum: NE of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 864a, **END.**, Ch. “**LC**”

M. verna (L.) Hiern

- Erzurum: N of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 838, Ch.

M. hamata (Hausskn.) Mattf.

- Muş: Malazgirt, 1 km N of Kazgölü, meadows, 23 vi 2006, 39° 20' 572" N 42° 21' 708" E, 1730 m, LFM 1216, Th.

M. micrantha Schischk.

- Erzurum: NE of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 864b, Ch.

M. subtilis (Fenzl) Hand.-Mazz.

- Erzurum: SE of Karaçoban, river surroundings, meadows drying up in summer, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2145, Ir.-Tur., Th.

Cerastium dahuricum Fisch.

- Muş: Malazgirt, Karıncalı village, humid places, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 644, Eu.-Sib., Hc.

C. armeniacum Gren.

- Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2761, **END.**, Th. “**LC**”

C. perfoliatum L.

- Muş: Malazgirt, Hacılar village surroundings, steppe, 21.05.2007, 39° 17' 463" N 42° 19' 986" E, 1723 m, LFM 2704, Th.
C. dichotomum L. subsp. *dichotomum*
 Muş: Malazgirt, Sırdüzü village surroundings, steppe, 21.05.2007, 39° 27' 105" N 42° 23' 465" E, 1851 m, LFM 2743, Th.
C. longifolium Willd.
 Muş: Malazgirt, N of Ağılbaşı village, humid places, 21.05.2007, 39° 23' 910" N 42° 22' 483" E, 1801 m, LFM 2724, Ir.-Tur., Th.
C. illyricum Ard. subsp. *comatum* (Desv.) P.D. Sell & Whitehead
 Muş: Malazgirt, NE of A. Kıcık village, steppe, 12.05.2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2675, E. Medit., Th.
Holosteum umbellatum L. var. *glutinatum* (M.Bieb.) Gay
 Muş: Malazgirt, Bahçe tuzlası surroundings, fields, 2 iv 2006, 39° 14' 016" N 42° 28' 351" E, 1572 m, LFM 041, Th.
Spergularia bocconi (Scheele) Asch. & Graebn.
 Erzurum: N of Karaçoban, steppe, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2149, Medit., Th.
Telephium oligospermum Steud. ex Boiss.
 Erzurum: NE of Karaçoban, Kırım kaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 915, Ir.-Tur., Hc.
Dianthus strictus Banks & Sol. var. *strictus*
 Muş: Malazgirt, Y. Kıcık village surroundings, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1904, Hc.
D. strictus Banks & Sol. var. *subnervis* (Boiss.) Reeve
 Muş: Malazgirt, between Sarıgöl and Gölağlı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3600, Hc.
D. strictus Banks & Sol. var. *axilliflorus* (Fenzl) Reeve
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2277, Hc.
D. strictus Banks & Sol. var. *gracilior* (Boiss.) Reeve
 Muş: Malazgirt, Karagöz lake surroundings, steppe, 30 vii 2006, 39° 19' 651" N 42° 13' 112" E, 1647 m, Hc.
D. zederbaueri Vierh.
 Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2307a, **END.**, Ir.-Tur., Hc. "NT"
D. lactiflorus Fenzl
 Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2118b, **END.**, Hc. "NT"
▲D. balansae Boiss.
 Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3401, **END.**, Hc. "LC"
D. tabrisianus Bien. ex Boiss.
 Muş: Malazgirt, Çat village surroundings, steppe, 14.07.2007, 39° 22' 399" N 42° 16' 677" E, 1535 m, LFM 3232, Ir.-Tur., Hc.
D. orientalis Adams
 Erzurum: NE of Karaçoban, Kırım kaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 865, Hc.
D. eythrocoleus Boiss.
 Erzurum: N of Karaçoban, Kırım kaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 820, **END.**, Ir.-Tur., Hc. "LC"
D. masmenaeus Boiss. var. *glabrescens* Boiss.
 Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1614, **END.**, Ir.-Tur., Hc. "LC"
▲D. brevicaulis Fenzl subsp. *brevicaulis*
 Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1308, Hc.
D. calocephalus Boiss.
 Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3213, Hc.
▲D. capitatus Balb. ex DC.
 Muş: Malazgirt, 1 km SW of Kuruca village, humid meadows, 23 vi 2006, 39° 21' 177" N 42° 21' 813" E, 1830 m, LFM1190a, Eu.-Sib., Hc.
Petrorhagia alpina (Habl.) Ball & Heywood subsp. *alpina*
 Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1303, Th.
Velezia rigida L.
 Erzurum: NE of Karaçoban, Kırım kaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 922, Th.
Gypsophila sphaerocephala Fenzl ex Tchihat. var. *cappadocica* Boiss.
 Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1872, **END.**, Hc. "LC"
G. bicolor (Frey & Sint.) Grossh.
 Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1989, Hc.
G. perfoliata L.
 Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2194, Hc.
G. ruscifolia Boiss.
 Muş: Malazgirt, İyikomşu village surroundings, humid slopes, 14.07.2007, 39° 26' 255" N 42° 13' 997" E, 1707 m, LFM 3328, Ir.-Tur., Hc.
G. glandulosa (Boiss.) Walp.
 Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1824, **END.**, Eux. (mt.), Hc. "LC"
G. büllisenis Bark.
 Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2852, **END.**, Ir.-Tur., Th. "NT"
▲G. hispida Boiss.
 Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgözü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1065, Ir.-Tur., Hc.
G. pilosa Hudson
 Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1530, Ir.-Tur., Th.
Vaccaria pyramidata Medik. var. *grandiflora* (Fisch. ex DC.) Cullen
 Muş: Malazgirt, between Erence and Karagöz villages, fields, 30 vii 2006, 39° 19' 751" N 42° 14' 632" E, 1686 m, LFM 2076, Th.
Silene marschallii C.A. Mey.
 Muş: Malazgirt, 3 km to Karagöz village, roadside, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2101, Ir.-Tur., Hc.
S. capitellata Boiss.
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3143, **END.**, Ir.-Tur., Hc. "LC"
S. laxa Boiss. & Kotschy
 Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1448 Ir.-Tur., Hc.
S. chlorifolia Sm.
 Muş: Malazgirt, between Aktuzla and Yapraklı village, steppe, 26.05.2007, 39° 20' 895" N 42° 15' 945" E, 1577 m, LFM 2791, Ir.-Tur., Hc.
S. sclerophylla Chowdhuri
 Muş: Malazgirt, between İyikomşu and Kırım kaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3340, **END.**, Ir.-Tur., Hc. "LC"
S. oites (L.) Wibel
 Muş: Malazgirt, Hasanpaşa village 3 km forward, stream-bed, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2481, Hk.
S. spargulifolia (Desf.) M. Bieb.
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3161, Ir.-Tur., Hc.
S. montbretiana Boiss.
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3151, Ir.-Tur., Hc.
S. ampullata Boiss.
 Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3078, Ir.-Tur., Hc.
S. odontopetala Fenzl
 Muş: Malazgirt, 2 km S of Laladağı village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1281, Hc.
S. vulgaris (Moench) Garcke var. *vulgaris*
 Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3155, Hc.

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

Erzurum: N of Karaçoban, steppe, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2174, Hc.

S. alba (Miller) E.H.L. Krause subsp. *ericalcynica* (Boiss.) Walters

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, humid places, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2954, Hc.

S. noctiflora L.

Muş: Malazgirt, İyikömşü village surroundings, humid slopes, 14.07.2007, 39° 26' 255" N 42° 13' 997" E, 1707 m, LFM 3331, Th.

S. dichotoma Ehrh. subsp. *sibthorpiana* (Rehb.) Rech.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1723, Hc.

S. conoidea L.

Muş: Malazgirt, Karıncalı valley, fields, 26.05.2007, 39° 22' 587" N 42° 17' 506" E, 1623 m, LFM 2879, Th.

Agrostemma gühago L.

Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 659, Th.

ILLECEBRACEAE

Herniaria glabra L.

Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, steppe, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2059, Th.

H. hirsuta L.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2210, Th.

H. incana Lam.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3687, Hc.

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

Erzurum: NE of Karaçoban, Kırımkaça villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 884, Hc.

Scleranthus uncinatus Schur

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18.08.2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3620, Th.

POLYGONACEAE

Polygonum amphibium L.

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadow-swamp, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3428, Hc.

P. lapathifolium L.

Muş: Malazgirt, Y.Kıcık village surroundings, weeds, 18.08.2007, 39° 17' 541" N 42° 23' 465" E, 1917 m, LFM 3645, Hc.

P. setosum Jacq.

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3737, Ir.-Tur., Hc.

P. aviculare L.

Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3481, Th.

Rumex acetosella L.

Muş: Malazgirt, between İyikömşü and Kırımkaça village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3347, Hc.

R. scutatus L.

Muş: Malazgirt, Karıncalı valley, steppe, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2522; 243, LFM 3772, Hc.

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

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1006, Cr.

R. ponticus E.H.L. Krause

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1617, END., Ir.-Tur., Hc. "LC"

R. angustifolius Campd. subsp. *macranthus* (Boiss.) Rech.

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, streamside, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2455, Hc.

CHENOPODIACEAE

Polycnemum arvense L.

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3730, Th.

Beta lomatogona Fisch. & C.A. Mey.

Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1445, Ir.-Tur., Hc.

Chenopodium botrys L.

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2452, Th.

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

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, salty places, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2269, Th. (Halofit)

C. album L. subsp. *album* var. *microphyllum* (Boenn) Aellen

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, sandy places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2461, Th. (Halofit)

C. album L. subsp. *iranicum* Aellen

Muş: Malazgirt, Bahçe Tuzlası, salty places, 23 viii 2006, 39° 24' 018" N 42° 28' 179" E, 1579 m, LFM 2403a, Th. (Halofit)

▲*Atriplex laevis* C.A. Mey.

Muş: Malazgirt, Bahçe Tuzlası, salty places, 23 viii 2006, 39° 24' 018" N 42° 28' 179" E, 1579 m, LFM 2403b, Th. (Halofit)

A. pungens Trautv.

Muş: Malazgirt, between Sarıgöl and Gölağılı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3607, Th. (Halofit)

Salicornia europaea L.

Muş: Malazgirt, Bahçe Tuzlası, salty places, 06 vii 2006, 39° 23' 977" N 42° 28' 114" E, 1587 m, LFM 1377, Th. (Halofit)

Salsola kali L. subsp. *tragus* (L.) Nyman

Muş: Malazgirt, Bahçe Tuzlası, salty places, 06 vii 2006, 39° 23' 977" N 42° 28' 114" E, 1587 m, LFM 1378, Th. (Halofit)

S. ruthenica Iljin

Muş: Malazgirt, Bahçe Tuzlası, salty places, 23 viii 2006, 39° 24' 018" N 42° 28' 179" E, 1579 m, LFM 2402, Hc.

S. canescens (Moq.) Boiss.

Muş: Malazgirt, Karıncalı valley, rocky places, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2538, Ir.-Tur., Kh.

▲*Petrosimonia squarrosa* (Schrenk) Bunge

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2274, Th. (Halofit)

AMARANTHACEAE

Amaranthus retroflexus L.

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, sandy places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2460, Th.

A. albus L.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3664, Th.

ELATINACEAE

Elatine alsinastrum L.

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadow-swamp, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3427, Cr.

HYPERICACEAE (GUTTIFERAE)

Hypericum lysimachioides Boiss. & Noë var. *lysimachioides*

Muş: Malazgirt, Karıncalı village surroundings, steppe, 14.07.2007, 39° 22' 564" N 42° 15' 556" E, 1598 m, LFM 3290, Ir.-Tur., Hc.

H. elongatum Ledeb. subsp. *elongatum*

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 22' 796" N 42° 17' 676" E, 1769 m, LFM 2895, Ir.-Tur., Hc.

H. lydium Boiss.

Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2203, Hc.

H. helianthemoides (Spach) Boiss.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2276, Ir.-Tur., Hc.

H. scabrum L.

Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3546, Ir.-Tur., Kh.

H. formosissimum Takht.

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1315, Ir.-Tur., Kh.

H. tetrapterum Fr.

Muş: Malazgirt, between Y. Kıcık and A. Kıcık villages, steppe, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2055, Hc.

H. perforatum L.

Erzurum: NE of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 883, Hc.

MALVACEAE***Malva sylvestris*** L.

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), stream bed, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3769, Hc.

Aleca setosa (Boiss.) Alef.

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2432, E. Med., Hc.

A. apterocarpa (Fenzl) Boiss.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, steppe, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3713, **END.**, Ir.-Tur., Hc. "LC"

A. kurdica (Schltr) Alef.

Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1439, Ir.-Tur., Hc. "VU"

LINACEAE***Linum mucronatum*** Bertol subsp. *orientale* (Boiss.) P.H. Davis

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2900, Kh. "VU"

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

Muş: Malazgirt, 10 km to to Aktuzla, steppe, 05 vi 2006, 39° 16' 666" N 42° 17' 276" E, 1612 m, LFM 797, Ir.-Tur., Kh.

L. flavum L. subsp. *scabrinerve* (P.H. Davis) P.H. Davis

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1082, **END.**, Ir.-Tur., Kh. "LC"

▲*L. unguiculatum* P.H. Davis

Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1123, **END.**, Ir.-Tur., Hc. "LC"

L. meletonis Hand.-Mazz.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2808, Ir.-Tur., Hc.

L. austriacum L. subsp. *austriacum*

Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2120, Hc.

GERANIACEAE***Geranium lucidum*** L.

Muş: Malazgirt, NW of Koçalı village ,fields, 2 iv 2006, 39° 21' 925" N 42° 29' 772" E, 1742 m, LFM 026, Th.

G. tuberosum L. subsp. *tuberosum*

Muş: Malazgirt, Yapraklı village surroundings, fields, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 311, Cr.

G. stepporum P.H. Davis

Muş: Malazgirt, Bademözü village surroundings, meadows, 21.05.2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2687, Ir.-Tur., Cr.

G. sylvaticum L.

Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2192, Eu.-Sib., Hc.

G. collinum Stephan ex Willd.

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18.08.2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3627, Cr.

G. pratense L. subsp. *finitimum* (Woronow) Knuth

Muş: Malazgirt, 3 km NW of Hasanpaşa village, streamside, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2355, Hc.

Erodium absinthoides Willd. subsp. *absinthoides*

Muş: Malazgirt, Bepınarı village surroundings, steppe, 21.05.2007, 39° 24' 310" N 42° 23' 563" E, 1751 m, LFM 2778, **END.**, Ir.-Tur., Hc. "LC"

E. absinthoides Willd. subsp. *armenum* (Trautv.) P.H.Davis

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2767, Ir.-Tur., Hc.

ZYGOPHYLLACEAE***Tribulus terrestris*** L.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3663, Th.

RUTACEAE***Haplophyllum ptilostylum*** Spach

Muş: Malazgirt, Bahçe tuzlası surroundings, steppe, 06 vii 2006, 39° 25' 035" N 42° 27' 201" E, 1724 m, LFM 1389, Ir.-Tur., Kh.

ACERACEAE***Acer tataricum*** L.

Muş: Malazgirt, Karıncalı valley, streamside, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2574, Fh.

RHAMNACEAE**▲*Frangula alnus*** Mill. subsp. *alnus*

Muş: Malazgirt, Kardeşler village, Sarıtaş stream, streamside, 08.09.2007, 39° 20' 827" N 42° 27' 080" E, 1696 m, LFM 3797, Eu.-Sib., Fh.

Rhamnus catharticus L. var. *catharticus*

Muş: Malazgirt, S of Kardeşler village, inside of the valley-humid places, 06 vii 2006, 39° 19' 088" N 42° 26' 703" E, 1800 m, LFM 1684, Eu.-Sib., Fh.

R. kurdicus Boiss. & Hohen.

Muş: Malazgirt, Karıncalı village valleys, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1914, Ir.-Tur., Fh.

FABACEAE**▲*Genista tinctoria*** L.

Muş: Malazgirt, between Yolgözler and İyikomuşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3246, Eu.-Sib., Kh.

Astragalus densifolius Lam. subsp. *densifolius*

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1658, Ir.-Tur., Kh. Det: Z. Aytaç & M. Ekici

A. macrostachys DC.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1011, Ir.-Tur., Hc.

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

Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3139, Ir.-Tur., Hc. Det: Z. Aytaç & M. Ekici

A. fraxinifolius DC.

Muş: Malazgirt, between Kuşluca village and Zirnak hill, steppe, 16.06.2007, 39° 15' 34" N 42° 03' 837" E, 2133 m, LFM 3142, Ir.-Tur., Kh.

A. christianus L.

Muş: Malazgirt, 1 km to A. Kıcık village, steppe, 12.05.2007, 39° 14' 899" N 42° 22' 092" E, 1589 m, LFM 2654, Kh.

A. angustiflorus K. Koch subsp. *angustiflorus*

Muş: Malazgirt, W of Kazgölü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1800 m, LFM 1230, Ir.-Tur., Kh.

A. fraxinella Bunge

Muş: Malazgirt, W of Kaz gölü village, steppe, 10.06.2007, 39° 20' 706" N 42° 21' 500" E, 1764 m, LFM 3031, Ir.-Tur., Kh.

A. brachycalyx Fisch.

Muş: Malazgirt, between İyikomşu and Kırımka village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3362, Ir.-Tur., Kh.

A. gummifer Labill.

Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2317, Ir.-Tur., Kh.

A. microcephalus Willd.

Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1126, Ir.-Tur., Kh.

A. pycnocephalus Fisch. var. *pycnocephalus*

Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1438, Ir.-Tur., Kh.

A. amblolepis Fisch.

Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2110, Ir.-Tur., Kh.

A. wartsensis Boiss.

Muş: Malazgirt, 2 km to A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1696, Kh.

▲ *A. lagowskii* Trautv.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1607, Kh.

A. lagurus Willd.

Muş: Malazgirt, between İyikomşu and Kırımka village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3360, Ir.-Tur., Kh.

A. brachypodus Boiss.

Muş: Malazgirt, S of Kardeşler village, steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1304, Ir.-Tur., Kh.

A. halicacabus Lam.

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3080, Ir.-Tur., Kh.

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

Muş: Malazgirt, 1 km N of Kuruca village, steppe, 10.06.2007, 39° 21' 838" N 42° 24' 046" E, 1710 m, LFM 3061, Ir.-Tur., Kh.

A. echinops Aucher ex Boiss.

Muş: Malazgirt, S of Laladağ village, roadside-meadow, 23 vi 2006, 39° 18' 450" N 42° 25' 098" E, 1650 m, LFM 1148b, Kh.

A. odoratus Lam.

Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3110, Kh.

A. xylobasis Freyn & Bornm. var. *angustus* (Freyn & Sint.) Freyn & Bornm.

Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3096, **END.**, Ir.-Tur., Kh. "LC"

A. onobrychioides M. Bieb.

Muş: Malazgirt, 10 km to Aktuzla, steppe, 05 vi 2006, 39° 16' 666" N 42° 17' 276" E, 1612 m, LFM 805, Kh. "VU"

A. arguricus Bunge

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1115, Ir.-Tur., Kh. "VU"

A. xerophilus Ledeb.

Erzurum: NE of Karaçoban, Kırımka villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 872, **END.**, Ir.-Tur., Kh. "LC"

A. bicolor Lam.

Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2967, Ir.-Tur., Kh.

A. fragrans Willd.

Muş: Malazgirt, Sirtüzü village surroundings, steppe, 21.05.2007, 39° 27' 105" N 42° 23' 465" E, 1851 m, LFM 2747, Ir.-Tur., Kh.

A. tigridis Boiss.

Muş: Malazgirt, 2 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 651" N 42° 13' 112" E, 1647 m, LFM 2250, Ir.-Tur., Kh.

A. campylosema Boiss. subsp. *campylosema*

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1592; Muş: Malazgirt, Y. Kıcık village surroundings, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1903, **END.**, Ir.-Tur., Kh. "LC"

A. campylosema Boiss. subsp. *nigripilis* Hub.-Mor. & Chamb.

Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3189, **END.**, Ir.-Tur., Kh. "LC"

A. subrobustus Boriss.

Muş: Malazgirt, Hasanpaşa village surroundings, steppe, 21.05.2007, 39° 21' 834" N 42° 29' 758" E, 1746 m, LFM 2728, Ir.-Tur., Kh.

A. aucheri Boiss.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2842, Ir.-Tur., Kh.

Oxytropis lupinoides Grossh.

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1052, Ir.-Tur., Kh.

Glycyrrhiza glabra L. var. *glabra*

Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1348a, Hc.

G. glabra L. var. *glandulifera* (Waldst. & Kit Tan) Boiss.

Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1348b; Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2290, Hc.

Cicer echinospermum P.H. Davis

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1518, **END.**, Ir.-Tur., Th. "VU"

Vicia cracca L. subsp. *cracca*

Muş: Malazgirt, SE of Laladağ village, *Salix caprea* community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3532, Eu.-Sib., Hc.

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

Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3547, Hc.

V. cappadocica Boiss. & Bal.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2802, Th.

▲ *V. assyriaca* Boiss.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1609, Ir.-Tur., Th.

▲ *V. michauxii* Spreng. var. *stenophylla* Boiss.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2797, Ir.-Tur., Th.

▲ *V. pannonica* Crantz var. *pannonica*

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2755, Th.

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

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1732, Th.

Lens montbretii (Fisch. & C.A. Mey.) P.H. Davis

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1591, Th.

L. orientalis (Boiss.) Hand.-Mazz.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 951, Th.

Lathyrus pallescens (M. Bieb.) K. Koch

Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2991, Hc.

- L. cyaneus* (Steven) K. Koch var. *pinnatus* P.H. Davis
Muş: Malazgirt, Sirtüzü village surroundings, steppe, 21.05.2007, 39° 27' 105" N 42° 23' 465" E, 1851 m, LFM 2738, **END.**, Hc. "NT"
- L. boissieri* Sirj.
Muş: Malazgirt, Bahçe (Seydan) lake surroundings, meadow, 05.09.2007, 39° 23' 294" N 42° 28' 775" E, 1638 m, LFM 3779, Ir.-Tur., Hc.
- L. layardii* J. Ball ex Boiss.
Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2996, **END.**, Ir.-Tur., Hc. "VU"
- L. cicera* L.
Muş: Malazgirt, W of Kaz gölü village, meadows, 10.06.2007, 39° 20' 706" N 42° 21' 500" E, 1764 m, LFM 3033, Th.
- ▲*L. sativus* L.
Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1539, Th.
- Pisum sativum* L. subsp. *sativum* var. *arvense* (L.) Poir.
Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2867, Th.
- Ononis arvensis* L.
Muş: Malazgirt, Kardeşler village, humid alluvial places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1496, Eu.-Sib., Hc.
- Trifolium repens* L. var. *repens*
Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18.08.2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3621, Hc.
- T. ambiguum* M. Bieb.
Muş: Malazgirt, S of Kuruca village, rush bed-marshy place, 23 vi 2006, 39° 19' 950" N 42° 23' 749" E, 1670 m, LFM 1160, Hc.
- T. campestre* Schreb.
Muş: Malazgirt, W of Kazgölü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1256, Th.
- T. fragiferum* L. var. *fragiferum*
Muş: Malazgirt, N of Bahçe village 300 m, streamside, 23 viii 2006, 39° 21' 542" N 42° 27' 897" E, 1637 m, LFM 2415, Hc.
- T. fragiferum* L. var. *pulchellum* Lange
Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadow-swamp, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3432, Hc.
- T. pratense* L. var. *pratense*
Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3013, Hc.
- T. trichocephalum* M. Bieb.
Muş: Malazgirt, 1 km SW of Kuruca village, humid meadows, 23 vi 2006, 39° 21' 177" N 42° 21' 813" E, 1830 m, LFM 1194, Hc.
- T. arvense* L. var. *arvense*
Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3258b, Th.
- Melilotus officinalis* (L.) Desr.
Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 964, Hc.
- M. alba* Desr.
Muş: Malazgirt, 2 km SW of Kuruca village, stream side, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1821, Hc.
- Trigonella velutina* Boiss.
Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 828, Ir.-Tur., Th.
- T. astroides* Fisch. & C.A. Mey.
Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2459, Ir.-Tur., Th.
- T. monantha* C.A. Mey. subsp. *monantha*
Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2799, Ir.-Tur., Th.
- Medicago lupulina* L.
Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 2002, Hc.
- M. x varia* Martyn
Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3424, Hc.
- ▲*Dorycnium pentaphyllum* Scop subsp. *haussknechtii* (Boiss.) Gams
Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3254, **END.**, Ir.-Tur., Kh. "LC"
- Lotus corniculatus* L. var. *corniculatus*
Muş: Malazgirt, Laladağ, humid places, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3496, Hc.
- L. corniculatus* L. var. *tenuifolius* L.
Muş: Malazgirt, Karagöz lake surroundings, steppe, 30 vii 2006, 39° 19' 651" N 42° 13' 112" E, 1647 m, LFM 2085, Hc.
- Coronilla orientalis* Miller var. *orientalis*
Muş: Malazgirt, 2 km S of Laladağı village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1276, Hc.
- C. varia* L. subsp. *varia*
Muş: Malazgirt, S of Kuruca village, rush bed-marshy place, 23 vi 2006, 39° 19' 950" N 42° 23' 749" E, 1670 m, LFM 1161, Hc.
- Hedysarum varium* Willd.
Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2978, Ir.-Tur., Kh.
- H. syriacum* Boiss.
Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1125, Ir.-Tur., Kh.
- H. nitidum* Willd.
Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1066, **END.**, Ir.-Tur., Kh. "LC"
- Onobrychis cornuta* (L.) Desv.
Muş: Malazgirt, W of Kaz gölü village, meadows, 10.06.2007, 39° 20' 706" N 42° 21' 500" E, 1764 m, LFM 3034, Ir.-Tur., Kh.
- O. stenostachya* Freyn subsp. *sosnowskyi* (Grossh.) Hedge
Muş: Malazgirt, 1 km N of Uyanık village, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1720 m, LFM 1487, **END.**, Ir.-Tur., Hc. "VU"
- O. fallax* Freyn & Sint.
Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 21' 232" N 42° 22' 749" E, 1682 m, LFM 1805, **END.**, Hc. "LC"
- ▲*O. pisdica* Boiss.
Muş: Malazgirt, between İyikomşu and Kırımkaaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3348, **END.**, Ir.-Tur., Hc. "NT"
- O. hajastana* Grossh.
Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1091, Ir.-Tur., Hc.
- O. altissima* Grossh.
Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 943, Hc.
- O. galegifolia* Boiss.
Muş: Malazgirt, between Karıncalı and Yolgözler villages, steppe, 14.07.2007, 39° 23' 133" N 42° 16' 042" E, 1625 m, LFM 3312, Ir.-Tur., Hc.
- O. radiata* (Desf.) M. Bieb.
Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1827, Hc.
- ROSACEAE**
- Cerasus microcarpa* (C.A. Mey.) Boiss. subsp. *tortuosa* (Boiss. & Hausskn.) Browicz
Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1882, Ir.-Tur., Fh.
- C. mahaleb* (L.) Mill. var. *mahaleb*
Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 05.09.2007, 39° 23' 294" N 42° 28' 775" E, 1638 m, LFM 3777, Fh.
- Filipendula vulgaris* Moench.
Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2371, Eu.-Sib., Hc.
- F. ulmaria* (L.) Maxim

- Muş: Malazgirt, S of Kuruca village, rush bed-marshy place, 23 vi 2006, 39° 19' 950" N 42° 23' 749" E, 1670 m, LFM 1148a, Eu.-Sib., Hc.
Rubus idaeus L.
 Muş: Malazgirt, S of Kardeşler village, steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1421, Kh.
Potentilla recta L.
 Muş: Malazgirt, Bastem village surroundings, humid places, 10.06.2007, 39° 22' 155" N 42° 24' 391" E, 1642 m, LFM 3065, Hc.
P. supina L.
 Muş: Malazgirt, Kardeşler village, humid alluvial places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1477, Hc.
P. pannosa Boiss. & Hausskn.
 Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 847, Ir.-Tur., Hc. **"VU"**
P. reptans L.
 Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 987, Cr.
Agrimonia eupatoria L.
 Muş: Malazgirt, 2 km SW of Kuruca village, humid meadows, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1812, Hc.
Sanguisorba officinalis L.
 Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 988, Hc. (hidrofit)
S. minor Scop. subsp. **minor**
 Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 911, Hc.
S. minor Scop. subsp. **muricata** (Spach.) Briq
 Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3226, Hc.
Rosa pisiformis (Christ.) D. Sosn
 Muş: Malazgirt, İyikomşu village surroundings, humid slopes, 14.07.2007, 39° 26' 255" N 42° 13' 997" E, 1707 m, LFM 3330, **END.**, Ir.-Tur., Fh. **"NT"**
R. foetida J.Herm.
 Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3395, Fh.
R. hemisphaerica J.Herm.
 Muş: Malazgirt, between İyikomşu and Kırımkaaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3351, Fh.
R. pimpinellifolia L.
 Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1963, Fh.
R. pulverulenta M.Bieb.
 Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3736, Fh.
R. iberica Steven
 Muş: Malazgirt, Karıncalı valley, steppe, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2550, Fh.
R. montana Chaix subsp. **woronowii** (Lonacz.) Ö.Nilson
 Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1882, Fh.
R. canina L.
 Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3694, Fh.
Cotoneaster nummularia Fisch. & C.A. Mey.
 Muş: Malazgirt, Karıncalı valley, steppe, 08.09.2007, 39° 22' 275" N 42° 17' 757" E, 1729 m, LFM 3828, Fh.
Crataegus pentagyna Waldst. & Kit. ex Willd.
 Muş: Malazgirt, 2 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 651" N 42° 13' 112" E, 1647 m, LFM 2235, Eu.-Sib., Fh.
C. meyeri Pojark
 Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2912, Ir.-Tur., Fh.
C. monogyna Jacq.subsp. **monogyna**
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2216, Fh.
C. monogyna Jacq.subsp. **azarella** (Gris.) Franco
 Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3475, Fh.
Malus sylvestris Mill. subsp. **orientalis** (A. Uglitzkich) Browicz var. **orientalis**
 Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2470, Fh.
Pyrus elaeagnifolia Pall. subsp. **kotschyana** (Boiss.) Browicz
 Muş: Malazgirt, Sırdüzü village surroundings, steppe, 21.05.2007, 39° 27' 105" N 42° 23' 465" E, 1851 m, LFM 2744, Fh.

LYTHRACEAE**Lythrum salicaria** L.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3668, Eu.-Sib., Hc.

L. hyssopifolia L.

Erzurum: 2 km to Kırmızı Tuzla, edge of pool, 30 vii 2006, 39° 17' 947" N 42° 06' 245" E, 1669 m, LFM 2168, Th.

ONAGRACEAE**Epilobium angustifolium** L.

Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2477, Hc.

E. hirsutum L.

Muş: Malazgirt, 3 km NW of Hasanpaşa village, streamside, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2357, Hc.

E. minutiflorum Hausskn.

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18.08.2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3623, Hc.

HALORAGIDACEAE**Myriophyllum spicatum** L.

Muş: Malazgirt, Bahçe (Seydan) lake, in the water, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2429, Hc. (Hidrofit)

CUCURBITACEAE**Bryonia aspera** Steven ex Ledeb.

Muş: Malazgirt, between Sarıgöl and Gölağılı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3602, Hc.

CRASSULACEAE**Pheidimus obtusifolius** (C.A. Mey.) † Hart

Muş: Malazgirt, Yolgözler plateau, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 622b, Cr.

Sedum subulatum (C.A. Mey.) Boiss.

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 891, Hc.

S. lydium Boiss.

Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 825, Hc.

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

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 906, Ir.-Tur., Hc.

APIACEAE**Actinolema macrolema** Boiss.

Muş: Malazgirt, between Uyanık and Bahçe villages, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1472, Ir.-Tur., Th.

A. eryngioides Fenzl

- Muş: Malazgirt, W of Kazgözü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1730 m, LFM 1184, Ir.-Tur., Th.
- Eryngium wanaturii* Woronow
- Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2128a, Ir.-Tur., Hc. "VU"
- E. billardieri* Delar.
- Erzurum: N of Karaçoban, steppe, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2178, Ir.-Tur., Hc.
- Chaerophyllum macrospermum* (Spreng.) Fisch. & C.A. Mey.
- Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3483, Ir.-Tur., Hc.
- C. bulbosum* L.
- Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1580, Eu.-Sib., Cr.
- C. angelicifolium* M. Bieb.
- Muş: Malazgirt, road surroundings from Karıncalı village to Kaz Lake, stream side, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1920, Eux., Hc.
- C. crinitum* Boiss.
- Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3387, Ir.-Tur., Cr.
- Grammosciadium daucoides* DC.
- Muş: Malazgirt, Laladağ surroundings, meadows, 12.05.2007, 39° 18' 261" N 42° 23' 248" E, 1989 m, LFM 2664, Ir.-Tur., Hc.
- G. platycarpum* Boiss. & Hausskn.
- Muş: Malazgirt, N of Kazgözü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1129, Ir.-Tur., Hc.
- G. pterocarpum* Boiss.
- Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, stony slopes, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2061, Ir.-Tur., Hc.
- Anthriscus nemorosa* (M. Bieb.) Spreng.
- Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 091, Hc.
- Scandix iberica* M. Bieb.
- Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2984, Th.
- S. pecten-veneris* L.
- Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3551, Th.
- Bifora radians* M. Bieb.
- Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 960, Th.
- Scaligeria glaucescens* (DC.) Boiss.
- Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2215, Hc.
- Smyrniopsis aucheri* Boiss.
- Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 21' 232" N 42° 22' 749" E, 1682 m, LFM 1802, Ir.-Tur., Hc.
- Bunium paucifolium* DC. var. *paucifolium*
- Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1589, Cr.
- B. microcarpum* (Boiss.) Freyn subsp. *microcarpum*
- Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1870, Hc.
- B. microcarpum* (Boiss.) Freyn subsp. *bourgai* (Boiss.) Hedge & Lamond
- Muş: Malazgirt, 3 km NW of Hasanpaşa village, humid slopes, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2322, Hc.
- Pimpinella corymbosa* Boiss.
- Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1825, Ir.-Tur., Hc.
- P. oliveroides* Boiss. & Hausskn.
- Muş: Malazgirt, 2 km S of Laladağ village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1283, Hc.
- P. saxifraga* L.
- Muş: Malazgirt, between İyikomuşu and Kırmkaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3342, Hc.
- P. anthriscoides* Boiss. var. *anthriscoides*
- B9 Muş: Malazgirt, S of Laladağ village, meadow, 23 vi 2006, 39° 18' 450" N 42° 25' 098" E, 2000 m, LFM 1169; B9 Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1423, Ir.-Tur., Hc.
- P. peucedanifolia* Fisch. ex Ledeb.
- Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 18.08.2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3634, Ir.-Tur., Hc.
- Sium sisarum* L. var. *lancifolium* (M.Bieb.) Thell.
- Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18.08.2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3622, Hc.
- Seseli petraeum* M. Bieb.
- Muş: Malazgirt, 2 km to A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1697, Eux (mt.), Hc. "VU" Det: H. Duman
- S. peucedanoides* (M. Bieb.) Koso-Pol.
- Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1929, Eu.-Sib., Hc.
- Oenanthe silaifolia* M. Bieb.
- Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadow-swamp, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3435, Hc.
- Oe. sophiae* Schischk.
- Muş: Malazgirt, SE of Laladağ village, Salix caprea community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3516, Hc.
- Prangos pabularia* Lindl.
- Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1336, Hc.
- Heptaptera anisoptera* (DC.) Tutin
- Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1541, Hc.
- H. anatolica* (Boiss.) Tutin
- Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1999, Hc.
- Hippomarathrum microcarpum* (M. Bieb.) Fedtsch.
- Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2372, Hc.
- Bupleurum rotundifolium* L.
- Muş: Malazgirt, between Uyanık and Bahçe villages, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1463, Th.
- B. croceum* Fenzl
- Muş: Malazgirt, Laladağ, humid places, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3492, Ir.-Tur., Th.
- Apium nodiflorum* (L.) Lang
- Muş: Malazgirt, Hasanpaşa village 3 km forward, stream-bed, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2489, Hc.
- ▲ *Cicuta virosa* L.
- Muş: Malazgirt, Kazgözü village surroundings, meadow 23 vi 2006, 39° 20' 004" N 42° 20' 648" E, 1800 m, LFM 1139, Hc. "DD" Det: H. Duman
- There is not a certain information in the flora of Turkey about the distribution and locality of *C. virosa*. According to The Flora of Turkey, it was probably collected between Erzurum and Trabzon. In the present study we have first reported the certain locality of species .
- Falcaria vulgaris* Bernh.
- Muş: Malazgirt, 3 km to Karagöz village, roadside, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2122, Hc.
- F. falcarioides* (Bormm. & Wolff) Wolff
- Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 20' 692" N 42° 23' 296" E, 1705 m, LFM 1767, Hc.
- Ferula communis* L. subsp. *communis*
- Muş: Malazgirt, 3 km to Karagöz village, roadside, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2107, Hc.
- F. orientalis* L.
- Muş: Malazgirt, 1 km N of Uyanık village, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1720 m, LFM 1482, Ir.-Tur., Hc.
- F. rigidula* DC.
- Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2195, Ir.-Tur., Hc.

▲F. huber-morathii Peşmen

Muş: Malazgirt, S of Kardeşler village, inside of the valley-humid places, 06 vii 2006, 39° 19' 088" N 42° 26' 703" E, 1800 m, LFM 1687, **END.**, Ir.-Tur., Hc. "EN" Det: A. Duran

▲Ferulago setifolia K. Koch

Muş: Malazgirt, between Sarıgöl and Gölağlı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3601, Ir.-Tur., Hc.

F. platycarpa Boiss. & Bal.

Muş: Malazgirt, Karıncalı village surroundings, steppe, 11 vii 2006, 39° 22' 216" N 42° 18' 024" E, 1794 m, LFM 1749, **END.**, Ir.-Tur., Hc. "LC"

Opopanax hispidus (Friv.) Gris.

Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2106, Hc.

Malabaila pastinacifolia Boiss. & Bal.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 954, Hc.

M. dasyantha (K. Koch) Grossh.

Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2969, Ir.-Tur., Hc.

M. secacul Banks & Sol.

Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3188, Cr.

Heracleum crenatifolium Boiss.

Muş: Malazgirt, S of Kardeşler village, steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1431, **END.**, Hc. "NT"

H. persicum Desf.

Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1443, Ir.-Tur., Hc.

H. apiifolium Boiss.

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 882, Hc.

Torilis arvensis (Huds.) Link subsp. *arvensis*

Muş: Malazgirt, Bahçe (Syedan) lake surroundings, steppe, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2475, Th.

T. leptophylla (L.) Rchb.

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1046, Th.

Astrodaucus orientalis (L.) Drude

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1675, Th.

Caucalis platycarpus L.

Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1833, Th.

Turgenia latifolia (L.) Hoffm.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1733, Th.

Lisaea papyracea Boiss.

Muş: Malazgirt, Bahçe tuzlası surroundings, steppe, 06 vii 2006, 39° 25' 035" N 42° 27' 201" E, 1724 m, LFM 1395, Ir.-Tur., Th.

L. strigosa (Banks & Sol.) Eig

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1663, Ir.-Tur., Th.

Daucus carota L.

Muş: Malazgirt, 3 km W of Hasanpaşa village, Salix caprea community, wet meadows, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2423, Hc.

VALERIANACEAE**Valeriana sisymbriifolia** Vahl.

Muş: Malazgirt, 1 km SW of Kuruca village, humid meadows, 23 vi 2006, 39° 21' 177" N 42° 21' 813" E, 1830 m, LFM 1204, Hc.

V. officinalis L.

Muş: Malazgirt, S of Laladağ village (1 km), meadows, 23 vi 2006, 39° 18' 450" N 42° 25' 095" E, 2000 m, LFM 1164, Hc.

Valerianella oxyrhyncha Fisch. & C.A. Mey.

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 161, Th.

V. cymbicarpa C.A. Mey.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2849, Ir.-Tur., Th.

DIPSACACEAE**Dipsacus laciniatus** L.

Muş: Malazgirt, Kardeşler village, Sarıtaş stream, streamside, 08.09.2007, 39° 20' 827" N 42° 27' 080" E, 1696 m, LFM 3802, Hc.

Cephalaria aristata K. Koch

Muş: Malazgirt, SE of Laladağ village, Salix caprea community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3533, Th.

C. syriaca (L.) Schrader

Muş: Malazgirt, W of Kazgölü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1730 m, LFM 1181, Th.

C. speciosa Boiss. & Kotschy

Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2313, **END.**, Ir.-Tur., Hc. "LC"

C. hirsuta Stapf

Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 21' 232" N 42° 22' 749" E, 1682 m, LFM 1799, Ir.-Tur., Hc.

C. procera Fisch. & Lall.

Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1364, Ir.-Tur., Hc.

C. sparsipilosa Matthews

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, steppe, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3448, **END.**, Ir.-Tur., Th. "NT"

C. microcephala Boiss.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2219, Ir.-Tur., Hc.

Scabiosa argentea L.

Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, steppe, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2071, Hc.

S. micrantha Desf.

Muş: Malazgirt, Karıncalı valley, steppe, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2523, Hc.

S. bicolor Kotschy

Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1127, Th.

S. persica Boiss.

Muş: Malazgirt, 10 km to to Aktuzla, steppe, 05 vi 2006, 39° 16' 666" N 42° 17' 276" E, 1612 m, LFM 813, Th.

S. rotata M. Bieb.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 980, Th.

▲Ptercephalus brevis Coulter

Muş: Malazgirt, between Aktuzla and Yapraklı village, steppe, 26.05.2007, 39° 20' 895" N 42° 15' 945" E, 1577 m, LFM 2785, Th. "VU"

ASTERACEAE (COMPOSITAE)**Bidens tripartita** L.

Muş: Malazgirt, Kardeşler village, Sarıtaş stream, streamside, 08.09.2007, 39° 20' 827" N 42° 27' 080" E, 1696 m, LFM 3791, Hc.

Xanthium spinosum L.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1605, Th.

X. strumarium L. subsp. *strumarium*

Muş: Malazgirt, 300 m N of Bahçe village, streamside, 23 viii 2006, 39° 21' 542" N 42° 27' 897" E, 1637 m, LFM 2407, Th.

X. strumarium L. subsp. *cavanillesii* (Shouw) D.Löve & P.Danserau

Muş: Malazgirt, Y. Kıcık village surroundings, weeds, 18.08.2007, 39° 17' 541" N 42° 23' 465" E, 1917 m, LFM 3647, Th.

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

Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2479, **END.**, Eux., Hc. “**NT**”

I. helenium L. subsp. *pseudohelenium* Grierson

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1338; Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1710, Ir.-Tur., Hc.

I. macrocephala Boiss & Kotschy

Muş: Malazgirt, N of Kuruca village, drying meadows, yol kenarı, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2304, **END.** Ir.-Tur., Hc. “**VU**”

I. discoidea Boiss.

Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3252; Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, steppe, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3444; Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3482; Muş: Malazgirt, SE of Laladağ village, Salix caprea community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3508; Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3542-LFM 3553; Muş: Malazgirt, between Sarıgöl and Gölağılı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3595; Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3729; Muş: Malazgirt, 1 km to Kuruca village, steppe, 08.09.2007, 39° 21' 831" N 42° 23' 812" E, 1711 m, LFM 3817, **END.**, Ir.-Tur., Hc. “**VU**”

The species was recorded only in B8 square in Bingöl up to now. We have determined that the species has distribution in 8 different localities in our study area (B9 square). Therefore, we have categorised the species as VU instead of DD.

I. salicina L.

Muş: Malazgirt, 2 km SW of Kuruca village, humid meadows, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1811; Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2513, Euro-Sib., Hc.

I. oculus-christi L.

Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3545, Euro-Sib.?, Hc.

I. britannica L.

Muş: Malazgirt, 300 m N of Bahçe village, steppe, 23 viii 2006, 39° 21' 542" N 42° 27' 897" E, 1637 m, LFM 2414, Eu.-Sib., Hc.

I. aucherana DC.

Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2189, Ir.-Tur., Hc.

Pulicaria vulgaris (L.) Gaertner

Muş: Malazgirt, Kardeşler village surroundings, stream bed, 08.09.2007, 39° 21' 037" N 42° 26' 662" E, 1669 m, LFM 3783, Eu.-Sib., Th.

P. armena Boiss. & Kotschy

Erzurum: SE of Karaçoban, river surroundings, meadows drying up in summer, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2153 Muş: Malazgirt, Bahçe (Sydan) lake surroundings, streamside, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2507, **END.**?, Ir.-Tur., Th. “**LC**”

Helichrysum pallasii (Spreng.) Ledeb.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1727; Muş: Malazgirt, 3 km to Karagöz village, roadside, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2129, Ir.-Tur., Kh.

H. plicatum DC. subsp. *plicatum*

Muş: Malazgirt, 3 km to Karagöz village, roadside, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2128; Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3556, Kh.

H. plicatum DC. subsp. *pseudoplicatum* (Nábélek) P.H. Davis & Kupicha

Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1347, Kh.

H. armenium DC. subsp. *armenium*

Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2344, Ir.-Tur., Kh.

H. arenarium (L.) Moench. subsp. *aucheri* (Boiss.) P.H. Davis & Kupicha

Erzurum: NE of Karaçoban, Kırımıkaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 880, **END.**?, Ir.-Tur., Kh. “**LC**”

Logfia arvensis (L.) Holub.

Muş: Malazgirt, Kardeşler village, Sarıtaş stream, streamside, 08.09.2007, 39° 20' 827" N 42° 27' 080" E, 1696 m, LFM 3798, Th.

Evax anatolica Boiss. & Heldr.

Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3260, Ir.-Tur., Th.

Aster amellus L. subsp. *ibericus* (Steven) Avet.

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1939, Eux., Hc.

Galatella punctata (Waldst. & Kit.) Nees

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2213; Muş: Malazgirt, 3 km W of Hasanpaşa village, Salix caprea community, wet meadows, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2417; Muş: Malazgirt, SE of Laladağ village, Salix caprea community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3517, Eu.-Sib.?, Hc.

▲ *Crinitaria villosa* (L.) Grossh.

Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2136; Muş: Malazgirt, Karıncalı valley, steppe, 08.09.2007, 39° 22' 275" N 42° 17' 757" E, 1729 m, LFM 3829, Eu.-Sib., Hc.

Erigeron acer L. subsp. *acer*

Muş: Malazgirt, Hasanpaşa village 3 km forward, stream-bed, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2490, Hc.

E. acer L. subsp. *pycnotrichus* (Vierh.) Grierson

Muş: Malazgirt, above Y. Kıcık village, fields, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1860, Eu.-Sib., Hc.

Laenophyllum noeanum Boiss.

Muş: Malazgirt, between Sarıgöl and Gölağılı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3596, Ir.-Tur., Hc.

Psychrogeton nigromontanus (Boiss. & Buhse) Grierson

Muş: Malazgirt, Laladağ, humid places, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3490, Ir.-Tur., Hc.

Senecio erucifolius L.

Muş: Malazgirt, 3 km NW of Hasanpaşa village, streamside, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2329, Hc.

S. mollis Willd.

Muş: Malazgirt, between Hasanpaşa and Kardeşler village, streamside-rocky, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2381, Ir.-Tur.?, Hc.

S. eriospermus DC. var. *eriospermus*

Muş: Malazgirt, İyikomşu village surroundings, humid slopes, 14.07.2007, 39° 26' 255" N 42° 13' 997" E, 1707 m, LFM 3324, Ir.-Tur., Hc.

S. lorentii Hochst.

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1059, Ir.-Tur., Hc.

S. racemosus (M. Bieb.) DC.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1728, Ir.-Tur., Hc.

S. doriiformis DC. subsp. *orientalis* (Fenzl) Mathews

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1007, Ir.-Tur.?, Hc.

S. fluviatilis Wallr.

Muş: Malazgirt, between Hasanpaşa and Kardeşler village, streamside-rocky, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2376, Eu.-Sib., Hc. “**VU**”

S. othonnae M. Bieb.

Muş: Malazgirt, SE of Laladağ village, Salix caprea community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3511, Eu.-Sib., Hc.

S. vernalis Waldst. & Kit.

Erzurum: NE of Karaçoban, Kırımıkaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 897, Th.

Tussilago farfara L.

Muş: Malazgirt, Güzelbaba mountain slopes, steppe, 29.04.2007, 39° 24' 562" N 42° 14' 536" E, 1702 m, LFM 2604, Eu.-Sib., Hc.

Eupatorium cannabinum L.

- Muş: Malazgirt, 3 km NW of Hasanpaşa village, streamside, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2356, Eu.-Sib., Hc.
Anthemis cretica L. subsp. *pontica* (Willd.) Grierson
 Muş: Malazgirt, SE of Laladağ village, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3537, Hc.
A. cretica L. subsp. *albida* (Boiss.) Grierson
 Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 22' 796" N 42° 17' 676" E, 1769 m, LFM 2888, Hc.
▲A. cretica L. subsp. *umblicata* (Boiss. & A. Huet) Grierson
 Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, humid places, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2941, Hc.
A. armeniaca Freyn & Sint.
 Muş: Malazgirt, N of Kaz lake, steppe, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2992, **END.**, Ir.-Tur., Th. "LC"
A. tinctoria L. var. *tinctoria*
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2295, Hc.
▲A. tinctoria L. var. *discoidea* (All.) DC.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 641, Hc.
A. triumfettii (L.) All.
 Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 412, Hc.
▲A. melanoloma Trautv. subsp. *melanoloma*
 Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2754, **END.**, Eux., Hc. "LC"
A. coelepoda Boiss. var. *bourgaei* Boiss.
 Muş: Malazgirt, 1 km N of Kuruca village, steppe, 10.06.2007, 39° 21' 838" N 42° 24' 046" E, 1710 m, LFM 3060, Th.
Anacyclus anaticus L. Behçet & S. Almanar
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 15' 092" N 42° 18' 410" E, 1550 m, LFM 130, **END.**, Ir.-Tur., Th. "CR"
Achillea schischkinii Sosn.
 Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1054, **END.**, Ir.-Tur., Hc. "LC"
A. millefolium L. subsp. *millefolium*
 Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1956a, Eu.-Sib., Hc.
A. nobilis L. subsp. *neireichii* (A. Kern.) Formánek
 Erzurum: N of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 835, Eu.-Sib., Hc.
A. Biebersteinii Afan.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 370, Ir.-Tur., Hc.
Tanacetum balsamita L. subsp. *balsamita*
 Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3407, Hc.
T. balsamita L. subsp. *balsamitoides* (Sch. Bip.) Grierson
 Muş: Malazgirt, Kardeşler village, humid alluvial places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1678, Hc.
▲T. aucheranum (DC.) Sch. Bip.
 Erzurum: NE of Karaçoban, Kırmıkaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 859, Ir.-Tur., Hc.
▲T. cadmeum (Boiss.) Heywood subsp. *cadmeum*
 Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1563, **END.**?, Hc. "LC"
T. vulgare L.
 Muş: Malazgirt, road surroundings from Karıncalı village to Kaz Lake, meadow, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1940, Hc.
T. argyrophyllum (K. Koch) Tzvel. var. *argyrophyllum*
 Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3082, Ir.-Tur., Hc.
T. abrotanifolium (L.) Druce
 Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1113, Ir.-Tur., Hc.
Tripleurospermum melanolepis (Boiss. & Buhse) Pobed
 Muş: Malazgirt, N of Ağılbaşı village, humid places, 21.05.2007, 39° 23' 910" N 42° 22' 483" E, 1801 m, LFM 2716, Hc.
T. oreades (Boiss.) Rech.f.
 Muş: Malazgirt, Karagöz lake surroundings, steppe, 30 vii 2006, 39° 19' 651" N 42° 13' 112" E, 1647 m, LFM 2090, Hc.
T. transcaucasicum (Manden.) Pobed.
 Erzurum: Karaçoban, Karakol, Karagöz village surrounding, meadow, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1005, Hc.
T. monticolum (Boiss. & Huet) Bornm.
 Muş: Malazgirt, Yolgözler plateau surroundings, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 475, **END.**, Hc. "LC"
T. decipiens (Fisch. & C.A. Mey.) Bornm.
 Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadows drying up in summer 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3579, Hc.
T. microcephalum (Boiss.) Bornm.
 Muş: Malazgirt, Bahçe tuzlası surroundings, streamside, 06 vii 2006, 39° 25' 035" N 42° 27' 201" E, 1724 m, LFM 1403, Ir.-Tur., Hc.
Artemisia vulgaris L.
 Muş: Malazgirt, Karıncalı valley, rocky places, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2564, Kh.
A. abrotanum L.
 Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3673, Kh.
A. austriaca Jacq.
 Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3738, Hc.
A. incana (L.) Druce
 Muş: Malazgirt, Kazgölü village surroundings, steppe, 26.10.2006, 39° 20' 628" N 42° 19' 962" E, 1728 m, LFM 2517, Ir.-Tur., Kh.
A. absinthium L.
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2218, Hc.
A. scoparia Waldst & Kit Tan
 Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3667, Hc.
A. taurica Willd.
 Muş: Malazgirt, Karıncalı valley, rocky places, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2558, Kh.
A. spicigera K. Koch.
 Muş: Malazgirt, Karıncalı valley, rocky places, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2535, Ir.-Tur., Kh.
Gundelia tournefortii L. var. *tournefortii*
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 216, Hc.
Cousinia bicolor Freyn & Sint.
 Muş: Malazgirt, between İyikomuşu and Kırmıkaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3357, **END.**, Ir.-Tur., Hc. "LC"
▲Onopordum armenum Grossh.
 Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1595, Ir.-Tur., Hc.
Cirsium ciliatum (Murr.) Moench subsp. *szovitsii* (K. Koch) Petr.
 Muş: Malazgirt, 3 km NW of Hasanpaşa village, steppe, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2342, Ir.-Tur., Hc.
C. cephalotes Boiss.
 Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2360, Eux. (mt.), Hc.
C. macrobotrys (K. Koch) Boiss.
 Muş: Malazgirt, 1 km to Kuruca village, steppe, 08.09.2007, 39° 21' 831" N 42° 23' 812" E, 1711 m, LFM 3814, Hc.
C. lappaceum (M. Bieb.) Fisch. subsp. *anatolicum* Petrak
 Muş: Malazgirt, Y.Kıcık village surroundings, weeds, 18.08.2007, 39° 17' 541" N 42° 23' 465" E, 1917 m, LFM 3650, Ir.-Tur., Hc.

- C. lappaceum* (M. Bieb.) Fisch. subsp. *tenuilobum* (K. Koch) P.H. Davis & Parris
Muş: Malazgirt, Hasanpaşa village 3 km forward, stream-bed, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2501, **END.**, Ir.-Tur., Hc. "LC"
- C. echinus* (M. Bieb.) Hand.-Mazz.
Muş: Malazgirt, Y. Kıcık village surroundings, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 2037, Ir.-Tur., Hc.
- C. canum* (L.) All.
Muş: Malazgirt, Yeniköy surroundings, meadows, 11 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1680 m, LFM 1700, Eu.-Sib., Hc.
- C. rhizocephalum* C.A. Mey. subsp. *rhizocephalum*
Muş: Malazgirt, Laladağ, humid places, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3489, Hc.
- C. rhizocephalum* C.A. Mey. subsp. *sinuatum* (Boiss.) P.H. Davis & Parris
Muş: Malazgirt, S of Bastem (Uyanık) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2370, Hc.
- C. elodes* M. Bieb.
Muş: Malazgirt, Yeniköy surroundings, wet meadows, 11 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1680 m, LFM 1711, Ir.-Tur., Hc.
- C. arvense* (L.) Scop. subsp. *vestitum* (Wimm. & Grab.) Petr.
Muş: Malazgirt, Karıncalı village surroundings, steppe, 14.07.2007, 39° 22' 564" N 42° 15' 556" E, 1598 m, LFM 3276, Hc.
- Picnoman acarna* (L.) Cass.
Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3416, Medit., Th.
- Carduus nutans* L. subsp. *nutans*
Muş: Malazgirt, 1 km N of Kuruca village, steppe, 10.06.2007, 39° 21' 838" N 42° 24' 046" E, 1710 m, LFM 3060, Hc.
- Jurinea consanguinea* DC.
Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1047, Hc.
- ▲*J. pontica* DC.
Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2838, **END.**, Ir.-Tur., Hc. "LC"
- ▲*J. cataonica* Boiss. & Hausskn.
Muş: Malazgirt, Karıncalı valley, steppe, 08.09.2007, 39° 22' 275" N 42° 17' 757" E, 1729 m, LFM 3827, **END.**, Ir.-Tur., Hc. "LC"
- Serratula radiata* (Waldst. & Kit.) M. Bieb. subsp. *biebersteiniana* Iljin ex Grossh.
Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1104, Ir.-Tur.?, Hc.
- S. serratulooides* (DC.) Takht.
Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1085, Ir.-Tur., Hc.
- Centaurea amasiensis* Bornm.
Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1101; Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1967, **END.**, Hc. "LC"
- C. aggregata* Fisch. & C.A. Mey. ex DC. subsp. *aggregata*
Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1435, Hc.
- C. virgata* Lam.
Muş: Malazgirt, between Yolgözüler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3245, Hc.
- C. saligna* (K. Koch) Wagenitz
Muş: Malazgirt, between Sarıgöl and Gölağlı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3598, **END.**, Ir.-Tur., Hc. "LC"
- C. armena* Boiss.
Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2940, **END.**, Ir.-Tur., Hc. "LC"
- C. glastifolia* L.
Muş: Malazgirt, 1 km N of Uyanık village, streamside, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1720 m, LFM 1489, Ir.-Tur., Hc.
- C. pterocaula* Trautv.
Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 21' 232" N 42° 22' 749" E, 1682 m, LFM 1807, Ir.-Tur., Hc.
- C. spectabilis* (Fisch. & C.A. Mey.) Sch. Bip. var. *spectabilis*
Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 944, Ir.-Tur., Hc.
- C. fenzi* Reichardt
Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1124, **END.**, Ir.-Tur., Hc. "LC"
- C. polypodiifolia* Boiss. var. *polypodiifolia*
Muş: Malazgirt, between Kuruca and Kazgölü villages, steppe, 08.09.2007, 39° 20' 836" N 42° 21' 845" E, 1763 m, LFM 3826, Ir.-Tur., Hc.
- C. polypodiifolia* Boiss. var. *szovitsiana* (Boiss.) Wagenitz
Muş: Malazgirt, S of Laladağ village, roadside-meadow, 23 vi 2006, 39° 18' 450" N 42° 25' 098" E, 1650 m, LFM 1149, Hc.
- C. solstitialis* L. subsp. *solstitialis*
Muş: Malazgirt, Karagöz lake surroundings, steppe, 30 vii 2006, 39° 19' 651" N 42° 13' 112" E, 1647 m, LFM 2091, Hc.
- C. iberica* Trev. ex Spreng.
Muş: Malazgirt, 2 km to A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1688, Hc.
- C. pseudoscabiosa* Boiss. & Buhse subsp. *pseudoscabiosa*
Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3409, Ir.-Tur., Hc.
- C. pseudoscabiosa* Boiss. & Buhse subsp. *araratica* (Azn.) Wagenitz
Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1358, Ir.-Tur., Hc.
- C. schischkinii* Tzvel.
Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1031, **END.**, Ir.-Tur., Hc. "NT"
- C. triumfettii* All.
Muş: Malazgirt, Yolgözüler plateau surroundings, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 487, Hc.
- C. depressa* M. Bieb.
Muş: Malazgirt, Karıncalı valley, fields, 26.05.2007, 39° 22' 587" N 42° 17' 506" E, 1623 m, LFM 2874, Th.
- Crupina vulgaris* Cass.
Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 194, Th.
- C. crupinastrum* (Moris) Vis.
Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2856, Th.
- Xeranthemum annuum* L.
Muş: Malazgirt, Y. Kıcık village surroundings, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1887, Th.
- Sieberia nana* (DC.) Bornm.
Muş: Malazgirt, between Uyanık and Bahçe villages, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1457, Ir.-Tur., Th.
- Chardinia orientalis* (L.) Kuntze
Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 669, Ir.-Tur., Th.
- Echinops pungens* Trautv. var. *pungens*
Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, steppe, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3584, Ir.-Tur., Hc.
- Cichorium intybus* L.
Muş: Malazgirt, Y. Kıcık village surroundings, humid places, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1907, Hc.
- ▲*C. endivia* L.
Muş: Malazgirt, Laladağ, steppe-following lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3574, Th.
- C. glandulosum* Boiss. & Huet
Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1499, Ir.-Tur., Th.
- Scorzonera cana* (C.A. Mey) Hoffm. subsp. *jacquiniana* (W. Koch) D.F. Chamb.
Muş: Malazgirt, Yapraklı village surroundings, meadow, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 153, Hc.

S. suberosa K. Koch subsp. *suberosa*

Muş: Malazgirt, between Yolğözler and İyikömşü villages, steppe, 27 v 2006, 39° 25' 138" N 42° 13' 697" E, 1743 m, LFM 350; Muş: Malazgirt, Hacilar village surroundings, steppe, 21.05.2007, 39° 17' 463" N 42° 19' 986" E, 1723 m, LFM 2707, Ir.-Tur., Hc.

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

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3070, Hc.

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

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 105, Ir.-Tur., Hc.

S. semicana DC.

Muş: Malazgirt, Sırdüzü village surroundings, steppe, 21.05.2007, 39° 27' 105" N 42° 23' 465" E, 1851 m, LFM 2779, Ir.-Tur., Hc.

S. incisa DC.

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, humid places, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2957, Ir.-Tur., Hc.

S. parviflora Jacq.

Muş: Malazgirt, Kuruca village, reedy, 11 vii 2006, 39° 21' 237" N 42° 22' 747" E, 1684 m, LFM 1787, Hc.

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

Muş: Malazgirt, 1 km S of Laladağ village, meadows, 23 vi 2006, 39° 18' 450" N 42° 25' 095" E, 2000 m, LFM 1442, Ir.-Tur., Hc.

Tragopogon coloratus C.A. Mey

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 191, Ir.-Tur., Hc.

T. dubius Scop

Muş: Malazgirt, between Aktuzla and Yapraklı village, steppe, 26.05.2007, 39° 20' 895" N 42° 15' 945" E, 1577 m, LFM 2790, Hc.

T. pratensis L. subsp. *pratensis*

Muş: Malazgirt, Yapraklı village surroundings, sandy places, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 200, Eu-Sib., Hc.

T. pratensis L. subsp. *orientalis* (L.) Vollm.

Muş: Malazgirt, Y. Kıcık village surroundings, meadows, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1888, Hc.

T. latifolius Boiss. var. *latifolius*

Muş: Malazgirt, Karıncalı village surroundings, steppe, 14.07.2007, 39° 22' 564" N 42° 15' 556" E, 1598 m, LFM 3275, Hc.

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

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1511-LFM 1669, Hc.

T. buphthalmoides (DC.) Boiss. var. *latifolius* Boiss.

Muş: Malazgirt, 10 km to Aktuzla, steppe, 05 vi 2006, 39° 16' 666" N 42° 17' 276" E, 1612 m, LFM 814, Ir.-Tur., Hc.

T. reticulatus Boiss. & Huet

Muş: Malazgirt, E of Yolğözler village (Yolğözler Plateau) steppe, 27 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 246, Hc.

▲ *T. fibrosus* Freyn & Sint. ex Freyn

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 984, **END.**, Hc. "EN"

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

Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1291, Hc.

▲ *Picris hieracioides* L.

Muş: Malazgirt, Karıncalı village surroundings, meadows, 11 vii 2006, 39° 22' 216" N 42° 18' 024" E, 1794 m, LFM 1754, Eu-Sib, Hc.

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

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2299, Ir.-Tur., Hc.

Rhagadiolus angulosus (Jaub. & Spach) Kupicha

Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2997, Ir.-Tur., Th.

R. hamosus (Boiss. & Hausskn.) Kupicha

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 748b, Ir.-Tur., Th.

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

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), stream bed, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3771, Hc.

Hieracium umbellatum L.

Muş: Malazgirt, S of Bastem (Uyamk) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2512, Hc.

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

Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1321, Hc.

P. maschukensis (Litv. & Zahn) Sojak

Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, steppe, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2048, Hc.

P. verruculata (Link) Sojak

Muş: Malazgirt, 1 km SW of Kuruca village, humid meadows, 23 vi 2006, 39° 21' 177" N 42° 21' 813" E, 1830 m, LFM 1192, Hc.

▲ *Lactuca saligna* L.

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, steppe, 18.08.2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3583, Hc.

L. georgica Grossh.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1546, Hyrcano-Eux., Hc.

L. scarioloides Boiss.

Muş: Malazgirt, Karıncalı valley, steppe, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2547, Ir.-Tur., Hc.

L. serriola L.

Muş: Malazgirt, 3 km W of Hasanpaşa village, Salix caprea community, wet meadows, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2419, Eu.-Sib., Hc.

▲ *L. aculeata* Boiss. & Kotschy ex Boiss.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, streamside, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2284, Ir.-Tur., Hc.

Scariola orientalis (Boiss.) Sojak

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3735, Ir.-Tur., Hc.

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

Muş: Malazgirt, S of Bastem (Uyamk) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2478, Th.

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

Muş: Malazgirt, Laladağ, humid places, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3506a, Hc.

Taraxacum bessarabicum (Hornem.) Hand.-Mazz. subsp. *bessarabicum*

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3733, Hc.

T. anatolicum van Soest

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), stream bed, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3750, **END.**, Ir.-Tur., Hc. "EN"

T. assemani Blauche

Muş: Malazgirt, Karıncalı valley, steppe, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2520, Ir.-Tur., Hc.

T. serotinum (Waldst. & Kit.) Poir.

Muş: Malazgirt, Karıncalı village surroundings, steppe, 26.10.2006, 39° 20' 850" N 42° 15' 703" E, 1501 m, LFM 2516, Hc.

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

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 05.09.2007, 39° 23' 294" N 42° 28' 775" E, 1638 m, LFM 3774, Ir.-Tur., Hc.

T. androssovii Schischkin

Muş: Malazgirt, 1 km to A. Kıcık village, steppe, 12.05.2007, 39° 14' 899" N 42° 22' 092" E, 1589 m, LFM 2652, Hc.

T. butleri von Soest

Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 063, Hc.

Chondrilla juncea L. var. *juncea*

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, steppe, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2465, Hc.

Crepis pannonica (Jacq.) K. Koch

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1927; Muş: Malazgirt, 3 km to Karagöz village, roadside, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2109, Hc.

C. pulchra L. subsp. *pulchra*

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1519, Hc.

C. alpina L.

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 369, Th.

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

Muş: Malazgirt, Karıncalı village surroundings, steppe, 14.07.2007, 39° 22' 564" N 42° 15' 556" E, 1598 m, LFM 3286, Th.

C. sancta (L.) Babç.

Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 677, Th.

CAMPANULACEAE

Campanula crispa Lam.

Muş: Malazgirt, between İyikomşu and Kırımkaşa village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3335, Ir.-Tur., Hc.

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

Muş: Malazgirt, W of Kazgözü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1255, Eu.-Sib., Hc.

C. involucrata Aucher ex A. DC.

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2904, Ir.-Tur., Hc.

C. stevenii M. Bieb. subsp. *beauverdiana* (Fomin) Rech.f.

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 438, Ir.-Tur., Hc.

Asyneuma filipes (Nábělek) Damboldt

Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3380, Ir.-Tur., Hc.

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

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1923-LFM 1936-LFM 1955; Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2206; Muş: Malazgirt, S of Bastem (Uyank) village, humid slopes, 23 viii 2006, 39° 22' 139" N 42° 24' 288" E, 1648 m, LFM 2511, Ir.-Tur., Hc.

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

Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1352, Hc.

▲*A. virgatum* (Labill.) Bornm. subsp. *cichoriiforme* (Boiss.) Damboldt

Erzurum: SE of Karaçoban, river surroundings, meadows drying up in summer, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2177, END., E. Medit., Hc. "LC"

LENTIBULARIACEAE

Utricularia vulgaris L.

Muş: Malazgirt, Kuruca village, in the water, 11 vii 2006, 39° 21' 237" N 42° 22' 747" E, 1684 m, LFM 1793, Eu.-Sib., Hc.

PRIMULACEAE

Primula auriculata Lam.

Muş: Malazgirt, Bademözü village surroundings, meadows, 21.05.2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2691, Ir.-Tur.?, Hc.

Androsace maxima L.

Muş: Malazgirt, SE of Bahçe village, fields, 2 iv 2006, 39° 23' 578" N 42° 28' 993" E, 1668 m, LFM 035, Th.

Lysimachia vulgaris L.

Muş: Malazgirt, road surroundings from Karıncalı village to Kaz Lake, stream side, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1930, Hc.

Anagallis foemina Miller

Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 20' 692" N 42° 23' 296" E, 1705 m, LFM 1775a, Th.

APOCYNACEAE

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

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3671, E. Med., Hc.

GENTIANACEAE

Centaurium erythraea Rafn subsp. *erythraea*

Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1992, Th.

▲*C. erythraea* Rafn subsp. *rumelicum* (Velen.) Melders

Erzurum: SE of Karaçoban, river surroundings, meadows drying up in summer, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2144, Medit., Th.

CONVOLVULACEAE

Convolvulus arvensis L.

Muş: Malazgirt, between Erence and Karagöz villages, fields, 30 vii 2006, 39° 19' 751" N 42° 14' 632" E, 1686 m, LFM 2075, Hc.

C. galaticus Rostan ex Choisy

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1582, END., Ir.-Tur., Hc. "LC"

C. lineatus L.

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgözü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1074, Hc.

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

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3688, Hc.

CUSCUTACEAE

Cuscuta campestris Yunck.

Muş: Malazgirt, Y.Kıcık village surroundings, weeds, 18.08.2007, 39° 17' 541" N 42° 23' 465" E, 1917 m, LFM 3648, Th.

C. kurdica Engelm.

Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1349, Ir.-Tur., Parazit. Th.

C. planiflora Ten

Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3465, Th.

C. lupuliformis Krockner

Muş: Malazgirt, SE of Laladağ village, Salix caprea community, 18.08.2007, 39° 18' 931" N 42° 23' 682" E, 1861 m, LFM 3519, Eu.-Sib., Th.

C. monogyna Vahl subsp. *monogyna*

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1875, Th.

BORAGINACEAE

Heliotropium europaeum L.

Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3473, Th.

H. dolosum De Not.

Muş: Malazgirt, 1 km N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 337" E, 1672 m, LFM 1444, Th.

▲*H. lasiocarpum* Fisch. & C.A. Mey.

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, sandy places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2448, Ir.-Tur., Th.

▲*H. supinum* L.

- Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, edge of fields, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2065, Th.
Lappula barbata (M. Bieb.) Gürke
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2222, Ir.-Tur., Hc.
Rochelia disperma (L.f.) K. Koch var. *disperma*
 Muş: Malazgirt, A. Kıcık village surroundings, steppe, 12.05.2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2630a, Th.
R. disperma (L.f.) K. Koch var. *microcalycina* (Bornm.) J.R. Edm. (-216)
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 380; Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 651, END.?, Ir.-Tur., Th. "LC"
Asperugo procumbens L.
 Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2793, Eu.-Sib., Th.
Myosotis heteropoda Trautv.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 163, Ir.-Tur., Th.
M. sicula Guss.
 Muş: Malazgirt, Bahçe (Seydan) lake surroundings, humid places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2441, Th.
M. platyphylla Boiss.
 Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2796-LFM 2803, END., Ir.-Tur., Hc. "VU"
 ▲*Paracaryum montbretii* (H. Riedl.) R.R. Mill.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 273, END., Hc. "DD"
P. cristatum (Schreb.) Boiss. subsp. *cristatum*
 Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3073, END., Ir.-Tur., Hc. "LC"
P. cristatum (Schreb.) Boiss. subsp. *carduchorum* R.R.Mill.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 273, Ir.-Tur., Hc.
Rindera albida (Wettst.) Kusn.
 Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 816, Ir.-Tur., Hc.
Lithospermum officinale L.
 Muş: Malazgirt, Karıncalı valleys, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1915; 161, LFM 2471, Eu.-Sib., Hc.
Buglossoides arvensis (L.) Johnston
 Muş: Malazgirt, Bademözü village surroundings, meadows, 21.05.2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2685, Th.
Onosma sericeum Willd.
 Muş: Malazgirt, between Uyanık and Bahçe villages, steppe, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1468, Ir.-Tur., Kh.
O. nemoricolum Hauskn. & Bornm. ex Bornm.
 Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 469, Ir.-Tur., Kh.
O. aucheranum DC.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 716, E. Medit, Kh.
 ▲*O. roussaei* DC.
 Muş: Malazgirt, 1 km N of Kuruca village, steppe, 10.06.2007, 39° 21' 838" N 42° 24' 046" E, 1710 m, LFM 3052, Ir.-Tur., Kh.
Cerintho minor L. subsp. *auriculata* (Ten.) Domac
 Muş: Malazgirt, Yolgözler village, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 532, Hc.
Anchusa leptophylla Roem. & Schult. subsp. *incana* (Ledeb.) D.F.Chamb.
 Muş: Malazgirt, Bahçe Tuzlası, salty places, 06 vii 2006, 39° 23' 977" N 42° 28' 114" E, 1587 m, LFM 1376, END., Ir.-Tur., Kh. "LC"
A. leptophylla Roem. & Schult. subsp. *tomentosa* (Boiss.) D.F.Chamb.
 Muş: Malazgirt, W of Kazgölü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1800 m, LFM 1229, END., Ir.-Tur., Kh. "LC"
A. azurea Miller var. *azurea*
 Muş: Malazgirt, A. Kıcık village surroundings, steppe, 12.05.2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2624, Hc.
A. arvensis (L.) M. Bieb. subsp. *orientalis* (L.) Nordh.
 Muş: Malazgirt, Karıncalı village, fields, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 658, Hc.
A. aucheri DC.
 Muş: Malazgirt, Yolgözler village, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 527, Th.
Nonea pulla (L.) DC. subsp. *scabrisquamata* A. Baytop
 Muş: Malazgirt, Laladağ, Y. Kıcık village surroundings, roadside, 14.04.2007, 39° 16' 602" N 42° 23' 306" E, 1786 m, LFM 2592, Ir.-Tur., Hc.
Caccinia macranthera (Banks & Sol.) Brand var. *crassifolia* (Vent.) Brand
 Muş: Malazgirt, A. Kıcık village surroundings, steppe, 12.05.2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2615, Ir.-Tur., Hc.
- SOLANACEAE**
Solanum alatum Moench
 Muş: Malazgirt, Karıncalı valley, humid places, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2568, Th.
Hyoscyamus niger L.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 645, Th.
- SCROPHULARIACEAE**
Verbascum agrimoniifolium (K.Koch) Hub.-Mor. subsp. *agrimoniifolium*
 Muş: Malazgirt, 3 km S of Kuruca village, humid-road side, 23 vi 2006, 39° 19' 504" N 42° 23' 649" E, 1850 m, LFM 1211, Ir.-Tur., Hc.
V. oreophilum K. Koch var. *oreophilum*
 Muş: Malazgirt, between Laladağ and Kuruca villages, roadside-steppe, 23 vi 2006, 39° 19' 064" N 42° 24' 094" E, 1850 m, LFM 1207, END., Ir.-Tur. elm, Hc. "LC"
V. oreophilum K. Koch var. *joannis* (Bordz.) Hub.-Mor.
 Muş: Malazgirt, 3 km S of Kuruca village, humid-road side, 23 vi 2006, 39° 19' 504" N 42° 23' 649" E, 1850 m, LFM 1210, Ir.-Tur., Hc.
V. phoenicum L.
 Erzurum: Karaçoban, Kırmızı Tuzla, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 791, Hc.
 ▲*V. pyramidatum* M. Bieb.
 Erzurum: Karaçoban, Kırmızı Tuzla, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 792, Hyrcano-Eux., Hc.
V. armenum Boiss. & Kotschy var. *armenum*
 Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), stream bed, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3760, Ir.-Tur., Hc.
V. armenum Boiss. & Kotschy var. *tempkyanum* (Freyn & Sint.) Murb.
 Erzurum: SE of Karaçoban, river surroundings, meadows drying up in summer, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2166, END., Ir.-Tur., Hc. "LC"
V. tauri Boiss. & Kotschy
 Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 901, END., E. Med. (mt.), Hc. "LC"
V. varians Freyn & Sint var. *variens*
 Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 818, Hc.
Scrophularia ilwensis K. Koch
 Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1132, Ir.-Tur., Hc.
S. umbrosa Dumort.
 Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1701, Eu.-Sib., Hc.(Hidrofit)
S. libanotica Boiss. subsp. *libanotica* var. *libanotica*
 Muş: Malazgirt, between İyikomuşu and Kırımkaaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3336, Hc.
S. libanotica Boiss. subsp. *libanotica* var. *nevshihirensis* R.R. Mill.

- Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 869, Ir.-Tur., Hc.
S. libanotica Boiss. subsp. *libanotica* var. *urartuënsis* R.R. Mill.
 Muş: Malazgirt, between Beşdam and Sirtdüzü villages, steppe, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3701, **END.**, Ir.-Tur., Hc. "LC"
S. lucida L.
 Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 928, Med.?, Hc.
▲ *Chaenorhinum minus* (L.) Lange subsp. *anatolicum* P.H. Davis
 Erzurum: N of Karaçoban, steppe, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2147, **END.**, Th. "LC"
Linaria chalepensis (L.) Mill. var. *chalepensis*
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 587, E. Medit., Th.
L. kurdica Boiss. & Hohen. subsp. *kurdica*
 Muş: Malazgirt, 1 km to Doğanbey village, steppe, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2185, Ir.-Tur., Hc.
L. kurdica Boiss. & Hohen. subsp. *araratica* (Tzvel.) P.H. Davis
 Muş: Malazgirt, W of Hasanpaşa village, steppe, 05.09.2007, 39° 19' 596" N 42° 29' 106" E, 1718 m, LFM 3726, Ir.-Tur., Hc.
L. kurdica Boiss. & Hohen. subsp. *pynophylla* (Boiss. & Balansa) P.H. Davis
 Muş: Malazgirt, 10 km to to Aktuzla, steppe, 05 vi 2006, 39° 16' 666" N 42° 17' 276" E, 1612 m, LFM 806, Ir.-Tur., Hc.
L. pyramidata (Lam.) Spreng.
 Muş: Malazgirt, Karıncalı village surroundings, steppe, 11 vii 2006, 39° 22' 216" N 42° 18' 024" E, 1794 m, LFM 1757, Ir.-Tur., Hc.
Veronica bozakmanii M.A. Fisch.
 Erzurum: between Karaçoban and Kırmızı Tuzla, before arriving the bridge, steppe, 03 vi 2006, 39° 18' 545" N 42° 06' 151" E, 1673 m, LFM 734b, Ir.-Tur., Th.
▲ *V. acinifolia* L.
 Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3084, Th.
V. reuterana Boiss.
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 762, Ir.-Tur., Th.
V. arvensis L.
 Erzurum: between Karaçoban and Kırmızı Tuzla, before arriving the bridge, steppe, 03 vi 2006, 39° 18' 545" N 42° 06' 151" E, 1673 m, LFM 648, Eu.-Sib., Th.
V. praecox All.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 668, Th.
V. biloba Schreb.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 674, Ir.-Tur., Th.
V. bornmuelleri Hausskn.
 Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10.06.2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3072, Ir.-Tur., Th.
V. polita Fries
 Muş: Malazgirt, Bahçe tuzlası surroundings, fields, 2 iv 2006, 39° 14' 016" N 42° 28' 351" E, 1572 m, LFM 039, Th.
V. campylopoda Boiss.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 538, Ir.-Tur., Th.
V. hederifolia L.
 Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 680a, Th.
V. anagallis-aquatica L. subsp. *anagallis-aquatica*
 Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 932, Hc. (Hidrofit)
V. anagallis-aquatica L. subsp. *oxycarpa* (Boiss.) Elenevsky
 Muş: Malazgirt, 3 km NW of Hasanpaşa village, streamside, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 1262, Ir.-Tur., Hc. (Hidrofit)
V. michauxii Lam.
 Muş: Malazgirt, Kaz lake surroundings, streamside, 17 vii 2006, 39° 20' 604" N 42° 19' 882" E, 1731 m, Ir.-Tur., Hc.
V. beccabunga L. subsp. *abscondita* M.A. Fisch.
 Muş: Malazgirt, between Hasanpaşa and Kardeşler village, streamside-rocky, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2389, Ir.-Tur., Hc. (Hidrofit).
V. orientalis Mill. subsp. *orientalis*
 Muş: Malazgirt, NE of A. Kıcık village, steppe, 12.05.2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2676, Ir.-Tur., Kh.
Lagotis stolonifera (K.Koch) Maxim.
 Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 104, Ir.-Tur., Hc.
Euphrasia pectinata Ten
 Muş: Malazgirt, Karıncalı village, humid places, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 649, Eu.-Sib., Th.
Odontites aucheri Boiss.
 Muş: Malazgirt, Karıncalı village surroundings, steppe, 14.07.2007, 39° 22' 564" N 42° 15' 556" E, 1598 m, LFM 3267, Ir.-Tur., Th.
O. verna (Bellardi) Dumort
 Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3467, Th.
Pedicularis comosa L. var. *acomodonta* (Boiss.) Boiss.
 Muş: Malazgirt, N of Kaz lake, meadow, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3016, Hc. (Hidrofit)
Rhinanthus angustifolius C.C. Gmel. subsp. *grandiflorus* (Wallr.) D.A. Webb
 Muş: Malazgirt, W of Kazgözü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1258, Th. (Hidrofit)
Bunaea trifida (Vahl) C.A. Mey.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 567, Ir.-Tur., Hc.

OROBANCHACEAE*Phelypaea tournefortii* Desf.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 770, Ir.-Tur., Hc.

On *Centaurea schischkinii*

Orobanche aegyptiaca Pers.

Muş: Malazgirt, Yapraklı village surroundings, fields, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 188, Hc.

▲ *O. serratocalyx* G. Beck

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1019, Hc.

O. caesia Reichb.

Muş: Malazgirt, Güzelbaba mountain, steppe, 01.08.2007, 39° 23' 722" N 42° 12' 235" E, 1720 m, LFM 3367, Hc.

O. cernua Loeffl.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1010b, Hc.

O. kurdica Boiss. & Hausskn.

Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2977, Ir.-Tur., Hc.

O. armena Tzvelev

Muş: Malazgirt, Yolgözüler village, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 580, **END.**, Ir.-Tur., Hc. "EN"

O. anatolica Boiss. & Reuter

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2829, Hc.

ACANTHACEAE*Acanthus dioscoridis* L. var. *dioscoridis*

Muş: Malazgirt, Laladağ, steppe-fallowing lands, 18.08.2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3570, Hc.

GLOBULARIACEAE

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

Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 085, Hc.

LAMIACEAE (LABIATAE)▲ *Ajuga salicifolia* (L.) Schreb.

Muş: Malazgirt, between Aktuzla and Yapraklı village, steppe, 26.05.2007, 39° 20' 895" N 42° 15' 945" E, 1577 m, LFM 2786, Ir.-Tur., Hc.

A. chamaepitys (L.) Schreb. subsp. *chia* (Schreb.) Arcangeli var. *chia*

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2762, Hc.

A. chamaepitys (L.) Schreb. subsp. *chia* (Schreb.) Arcangeli var. *ciliata* Briq.

Muş: Malazgirt, Karıncalı valley, steppe, 26.10.2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2534, Hc.

Teucrium orientale L. var. *orientale*

Muş: Malazgirt, İyikomşu village surroundings, humid slopes, 14.07.2007, 39° 26' 255" N 42° 13' 997" E, 1707 m, LFM 3317, Ir.-Tur., Hc.

T. parviflorum Schreb.

Muş: Malazgirt, Kardeşler village, humid alluvial places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1502, Ir.-Tur., Hc.

T. scordium L. subsp. *scordium*

Muş: Malazgirt, Laladağ, humid places, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3493, Hc.

T. scordium L. subsp. *scordioides* (Schreb.) Maire & Petitmengin

Muş: Malazgirt, Inside of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1479, Eu.-Sib., Hc.

T. chamaedrys L. subsp. *chamaedrys*

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1962, Eu.-Sib., Kh.

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

Muş: Malazgirt, N of Kuruca village, drying meadows-roadside, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2321, Ir.-Tur., Kh.

T. polium L.

Muş: Malazgirt, Laladağ, steppe, 18.08.2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3477, Hc.

Scutellaria orientalis L. subsp. *orientalis*

Muş: Malazgirt, 1 km N of Kuruca village, steppe, 10.06.2007, 39° 21' 838" N 42° 24' 046" E, 1710 m, LFM 3057, Kh.

S. orientalis L. subsp. *bornmuelleri* (Hauskn. ex Bornm.) J.R. Edmondson

Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3180, Ir.-Tur., Hc.

Phlomis tuberosa L.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1023, Hc.

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

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1616, Hc.

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

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1048, Hc.

P. rigida Labill.

Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1814, Ir.-Tur., Kh.

P. kurdica Rech.f.

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1745, Ir.-Tur., Kh.

Lamium amplexicaule L.

Muş: Malazgirt, NW of Koçalı village, fields, 2 iv 2006, 39° 21' 925" N 42° 29' 772" E, 1742 m, LFM 017, Euro-Sib., Th.

L. macrodon Boiss. & Huet

Muş: Malazgirt, Laladağ, N of A. Kıcık village, humid slopes, 14.04.2007, 39° 16' 593" N 42° 23' 447" E, 1772 m, LFM 2584, Ir.-Tur., Th.

Wiedemannia orientalis Fisch. & Mey.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2828, Ir.-Tur., Th.

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

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1705, Ir.-Tur., Hc.

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

Muş: Malazgirt, between Beşdam and Sırdüzü villages, steppe, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3706, Ir.-Tur., Hc.

M. parviflorum Fisch. & Mey. subsp. *oligodon* (Boiss.) Seybold

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1550, **END.**, Hc. "LC"

M. cordatum Náb.

Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3134, Hc.

Sideritis montana L. subsp. *montana*

Muş: Malazgirt, between Erence and Karagöz villages, fields, 30 vii 2006, 39° 19' 751" N 42° 14' 632" E, 1686 m, LFM 2074, Medit., Th.

Stachys balansae Boiss. & Kotschy subsp. *balansae*

Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2111, Hc.

S. balansae Boiss. & Kotschy subsp. *carduchorum* Bhattacharjee

Muş: Malazgirt, Karıncalı valleys, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1918, Ir.-Tur., Hc.

▲ *S. cretica* L. subsp. *garana* (Boiss.) Rech.f.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2271, Ir.-Tur., Hc.

▲ *S. byzantina* K. Koch

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1656, Eu.-Sib., Hc.

S. setifera C.A. Mey. subsp. *setifera*

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1293, Ir.-Tur., Hc.

S. kurdica Boiss. & Hohen. var. *brevidens* Bornm. ex Bhattacharjee

Muş: Malazgirt, between Sarıgöl and Gölağlı village, steppe, 18.08.2007, 39° 17' 302" N 42° 26' 470" E, 1950 m, LFM 3604, Ir.-Tur., Hc.

S. lavandulifolia Vahl var. *lavandulifolia*

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 288, Ir.-Tur., Hc.

S. lavandulifolia Vahl var. *brachyodon* Boiss.

Muş: Malazgirt, between Kuşluca village and Zırnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3128, Ir.-Tur., Hc.

S. atherocalyx K. Koch

Muş: Malazgirt, Karıncalı village, fields, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 661, Eu.-Sib., Hc.

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

Muş: Malazgirt, Güzelbaba mountain, steppe, 01.08.2007, 39° 23' 722" N 42° 12' 235" E, 1720 m, LFM 3371, Ir.-Tur., Hc.

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

Muş: Malazgirt, S of Kardeşler village, humid places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1414, Ir.-Tur., Hc.

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

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1706, Ir.-Tur., Hc.

S. macrostachya (Wend.) Briq.

Muş: Malazgirt, between Karıncalı village and Kaz lake surroundings, steppe, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1922, Eux., Hc.

Nepeta racemosa Lam.

Erzurum: NE of Karaçoban, Kırmızı Tuzla villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 862, Ir.-Tur., Hc.

N. betonicifolia C.A. Mey.

Muş: Malazgirt, N of Kaz lake, steppe, 10.06.2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2995, Ir.-Tur., Hc.

N. stenantha Kotschy & Boiss. ex Boiss.

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3734, Ir.-Tur., Hc.

N. aristata Boiss. & Kotschy ex Boiss.

Muş: Malazgirt, 1 km N of Kazgölü, meadows, 23 vi 2006, 39° 20' 572" N 42° 21' 708" E, 1730 m, LFM 1218, END., Ir.-Tur., Hc. "NT"

N. congesta Fisch. & Mey. var. *cryptantha* (Boiss.) Hedge & Lamond

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 967, Hc.

N. stricta (Banks & Sol.) Hedge & Lamond var. *stricta*

Muş: Malazgirt, between Kuşluca village and Zirnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3137, Hc.

N. heliotropifolia Lam. var. *heliotropifolia*

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2906, Ir.-Tur., Hc.

Lallemantia peltata (L.) Fisch. & Mey.

Muş: Malazgirt, between Kuşluca village and Zirnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3157, Ir.-Tur., Th.

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

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2834, Ir.-Tur., Th.

Prunella vulgaris L.

Muş: Malazgirt, between Uyanık and Bahçe villages, humid meadows, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1454, Eu.-Sib., Hc.

P. laciniata (L.) L.

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1310, Eu. Sib., Hc.

Satureja hortensis L.

Muş: Malazgirt, between Kardeşler and Uyanık (Bastem) villages, steppe, 08.09.2007, 39° 21' 443" N 42° 25' 855" E, 1658 m, LFM 3803, Th.

Acinos rotundifolius Pers.

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 903, Th.

Thymus transcaucasicus Ronniger

Muş: Malazgirt, Çat village surroundings, steppe, 14.07.2007, 39° 22' 399" N 42° 16' 677" E, 1535 m, LFM 3235, Kh.

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

Muş: Malazgirt, between Kuşluca village and Zirnak hill, steppe, 16.06.2007, 39° 15' 341" N 42° 03' 837" E, 2133 m, LFM 3168, Kh.

T. migricus Klokov & Des.-Shost

Muş: Malazgirt, Karıncalı village surroundings, steppe, 26.10.2006, 39° 20' 850" N 42° 15' 703" E, 1501 m, LFM 2519, Ir.-Tur., Kh.

T. praecox Opiz subsp. *caucasicus* (Ronniger) Jalas var. *grossheimii* (Ronniger) Jalas

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 875b, Kh.

Mentha longifolia (L.) Hudson subsp. *typhoides* (Briq.) Harley var. *calliantha* (Stapf) Briq.

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), stream bed, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3757, Hc.

M. spicata L. subsp. *spicata*

Muş: Malazgirt, 1 km to Doğanbey village, streamside, 30 vii 2006, 39° 18' 228" N 42° 08' 284" E, 1710 m, LFM 2198, Hc.

Lycopus europaeus L.

Muş: Malazgirt, Kardeşler village, Sarıtaş stream, streamside, 08.09.2007, 39° 20' 827" N 42° 27' 080" E, 1696 m, LFM 3794, Eu.-Sib., Hc.

Ziziphora clinipodioides Lam.

Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1135, Kh.

Z. capitata L.

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 853, Th.

Z. persica Bunge

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 989, Ir.-Tur., Th.

Z. tenuior L.

Muş: Malazgirt, 2 km S of Laladağı village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1273, Ir.-Tur., Th.

Salvia suffruticosa Montbret & Aucher ex Benth

Erzurum: between Karaçoban and Kırmızı Tuzla, before arriving the bridge, steppe, 03 vi 2006, 39° 18' 545" N 42° 06' 151" E, 1673 m, LFM 733b, Ir.-Tur., Hc.

S. multicaulis Vahl

Muş: Malazgirt, 1 km to A. Kıcık village, steppe, 12.05.2007, 39° 14' 899" N 42° 22' 092" E, 1589 m, LFM 2650, Ir.-Tur., Kh.

S. syriaca L.

Erzurum: N of Karaçoban, steppe, 30 vii 2006, 39° 20' 226" N 42° 05' 803" E, 1533 m, LFM 2173, Ir.-Tur., Hc.

S. brachyantha (Bordz.) Pobed.

Muş: Malazgirt, S of Ağılbaşı village, steppe, 21.05.2007, 39° 24' 681" N 42° 21' 974" E, 1798 m, LFM 2776, Ir.-Tur., Hc.

S. aethiopsis L.

Muş: Malazgirt, Karagöz village surroundings, steppe, 16.06.2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3098, Hc.

S. ceratophylla L.

Muş: Malazgirt, Karıncalı valley, steppe, 26.05.2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2827, Ir.-Tur., Hc.

S. microstegia Boiss. & Bal.

Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 819, Ir.-Tur., Hc.

S. xanthocheila Boiss. ex Benth

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 471a, Ir.-Tur., Hc.

S. frigida Boiss.

Muş: Malazgirt, Yolgözler village, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 534, Ir.-Tur., Hc.

S. pocolata Náb.

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 860, Ir.-Tur., Hc.

S. candidissima Vahl

Muş: Malazgirt, Bahçe Tuzlası, salty places, 06 vii 2006, 39° 23' 977" N 42° 28' 114" E, 1587 m, LFM 1382, Ir.-Tur., Hc.

S. virgata Jacq.

Muş: Malazgirt, Karıncalı village surroundings, steppe, 11 vii 2006, 39° 22' 216" N 42° 18' 024" E, 1794 m, LFM 1753, Hc.

S. verticillata L. subsp. *verticillata*

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1513, Eu.-Sib., Hc.

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

Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 21' 232" N 42° 22' 749" E, 1682 m, LFM 1800, Ir.-Tur.?, Hc.

PLUMBAGINACEAE

Plumbago europaea L.

Muş: Malazgirt, Bahçe Tuzlası, salty places, 23 viii 2006, 39° 24' 018" N 42° 28' 179" E, 1579 m, LFM 2405, Eu.-Sib., Hc.

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

Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 839, Ir.-Tur., Hc.

▲*A. venustum* Boiss. var. *venustum*

Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3240, Ir.-Tur., Kh.

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

Muş: Malazgirt, Y. Kıcık village 1 km forward, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1853, Ir.-Tur., Kh.

A. caryophyllaceum Boiss.

Muş: Malazgirt, Karadere village surroundings, steppe, 01.08.2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3414, Kh.

A. dianthifolium Bokhari

Muş: Malazgirt, between İyikomşu and Kırımkaaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3334a, Ir.-Tur., Kh.

“VU”

A. glumaceum (Jaub. & Spach.) Boiss.

Muş: Malazgirt, between İyikomşu and Kırnkaya village surroundings (Radar), steppe, 01.08.2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3334b, Ir.-Tur., Kh.
A. calvertii Boiss. var. *calvertii*
 Muş: Malazgirt, 2 km SW of Kuruca village, steppe, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1842, **END.**, Ir.-Tur., Kh. "LC"

PLANTAGINACEAE

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

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, streamside, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2442, Hc.

P. media L.

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), stream bed, 05.09.2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3747, Hc.

P. atrata Hoppe

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, humid places, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 113, Hc.

P. anatolica Tutel & R.Mill

Muş: Malazgirt, N of Ağılbaşı village, humid places, 21.05.2007, 39° 23' 910" N 42° 22' 483" E, 1801 m, LFM 2727, **END.**, Ir.-Tur., Hc. "NT"

P. lanceolata L.

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1309, Hc.

THYMELAEACEAE

Thymelaea passeriana (L.) Cosson

Muş: Malazgirt, between Beşdam and Sırdüzü villages, steppe, 02.09.2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3707, Th.

Diarthron vesiculosum (Fisch. & Mey. ex Kar. & Kir.) C.A. Mey.

Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, steppe, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2066b, Ir.-Tur., Th. "VU"

SANTALACEAE

Thesium billardieri Boiss.

Muş: Malazgirt, Bademözü village surroundings, meadows, 21.05.2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2684, Hc.

ARISTOLOCHIACEAE

Aristolochia bottae Jaub. & Spach

Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 27 v 2006, 39° 25' 138" N 42° 13' 697" E, 1743 m, LFM 335, Ir.-Tur., Cr.

EUPHORBIAEAE

Euphorbia macrocarpa Boiss. & Buhse

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10.06.2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2913, Ir.-Tur., Hc.

E. eriophora Boiss.

Muş: Malazgirt, Kaz lake surroundings, steppe, 17 vii 2006, 39° 20' 604" N 42° 19' 882" E, 1731 m, LFM 2032, Ir.-Tur., Th.

E. szovitsii Fisch. & Mey. var. *kharputensis* Aznav. ex M.S. Khan

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 186, Ir.-Tur., Th.

▲*E. aulacosperma* Boiss.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 757, Th.

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

Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14.07.2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3259, Th.

E. denticulata Waldst. & Kit Tan

Muş: Malazgirt, A. Kıcık village surroundings, steppe, 12.05.2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2625, Ir.-Tur., Kh.

E. macroclada Boiss.

Muş: Malazgirt, Bahçe Tuzlası, salty places, 02.09.2007, 39° 24' 002" N 42° 28' 249" E, 1580 m, LFM 3725, Ir.-Tur., Hc.

E. cheiradenia Boiss. & Hohen.

Muş: Malazgirt, Karıncalı valleys, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1913, Ir.-Tur., Hc.

E. virgata Waldst. & Kit

Muş: Malazgirt, SE of Karıncalı village, slopes around Kazgölü road, steppe, 23 vi 2006, 39° 21' 216" N 42° 20' 024" E, 1760 m, LFM 1108, Hc.

URTICACEAE

Urtica dioica L.

Muş: Malazgirt, S of Kardeşler village, humid places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1412, Eu.-Sib., Hc.

Parietaria judaica L.

Muş: Malazgirt, between Hasanpaşa and Kardeşler village, streamside-rocky, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2386, Hc.

P. lusitanica L.

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 162, Med., Th.

SALICACEAE

Salix alba L.

Muş: Malazgirt, Karıncalı village, humid places, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 672, Eu.-Sib., Fh.

S. armenorossica A. Skv.

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1322, Eux., Fh.

S. elbursensis Boiss.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02 ix 2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3666a, Hyrcano-Euxin, Fh.

S. caprea L.

Muş: Malazgirt, NW of Koçalı village, stream side, 16 iv 2006, 39° 21' 925" N 42° 29' 772" E, 1785 m, LFM 055, Fh.

S. pseudodepressa A. Skv.

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02 ix 2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3666b, Eux., Fh.

RUBIACEAE

Crucianella gilanica Trin. subsp. *transcaucasica* (Ehrend.) T.N. Papov & Takht ex Takht. & Fed.

Muş: Malazgirt, Laladağ, steppe-following lands, 18 viii 2007, 39° 17' 949" N 42° 23' 599" E, 2055 m, LFM 3557, Ir.-Tur., Hc.

C. macrostachya Boiss.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2272, Th.

Asperula laxiflora Boiss.

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10 vi 2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2927, Eux. (mt.), Hc.

A. glomerata (M. Bieb.) Griseb. subsp. *eriantha* (Hausskn. ex Bornm.) Ehrend.

Muş: Malazgirt, Karıncalı valley, steppe, 26 v 2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2830, Hc.

A. stricta Boiss. subsp. *latibracteata* (Boiss.) Ehrend.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1508, **END.**, Ir.-Tur., Hc. "LC"

A. arvensis L.

Erzurum: between Karaçoban and Kırmızı tuzla, fields, 2 iv 2006, 39° 21' 512" N 42° 15' 442" E, 1500 m, LFM 501, Med., Th.

A. setosa Jaub. & Spach

Muş: Malazgirt, Karagöz village surroundings, steppe, 16 vi 2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3220, Ir.-Tur., Th.

Galium boreale L.

- Muş: Malazgirt, S of Kardeşler village, humid places, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1418, Hc.
G. rivale (Sm.) Griseb.
 Muş: Malazgirt, Bahçe (Seydan) lake surroundings, humid places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2474, Eu.Sib., Hc.
G. verum L. subsp. *verum*
 Muş: Malazgirt, Y. Kıcık village surroundings, steppe, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1944, Eu. Sib., Hc.
G. verum L. subsp. *glabrescens* Ehrend.
 Muş: Malazgirt, S of Kardeşler village, steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1417, Hc.
G. mite Boiss. & Hohen.
 Muş: Malazgirt, between Beşdam and Sırdüzü villages, steppe, 02 ix 2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3712, Ir.-Tur., Hc.
G. spurium L. subsp. *spurium*
 Muş: Malazgirt, Yapraklı village surroundings, streamside, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 390, Eu.-Sib., Th.
G. tricornutum Dandy
 Muş: Malazgirt, Güzelbaba mountain, steppe, 29 v 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 508, Medit., Th.
G. nigricans Boiss.
 Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 841, Ir.-Tur., Th.
Callipeltis cucullaria (L.) Stev.
 Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 553, Th.

MONOCOTYLEDONES**BUTOMACEAE***Butomus umbellatus* L.

- Muş: Malazgirt, S of Kuruca village, rush bed-marshy place, 23 vi 2006, 39° 19' 950" N 42° 23' 749" E, 1670 m, LFM 1152, Eu.-Sib., Cr. (Hidrofit)

ALISMATACEAE*Alisma lanceolatum* With.

- Erzurum: Karaçoban, Kırmızı Tuzla surroundings, streamside, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2258, Cr. (Hidrofit)

Sagittaria sagittifolia L.

- Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadow-swamp, 18 viii 2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3426, Cr. (Hidrofit)

JUNCAGINACEAE*Triglochin palustris* L.

- Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3023, Hc.

POTAMOGETONACEAE*Potamogeton nodosus* Poir.

- Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, in the water, 18 viii 2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3431, Hc.

P. lucens L.

- Muş: Malazgirt, Bahçe (Seydan) lake, in the water, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2428, Hc.

P. panormitanus Biv.

- Muş: Malazgirt, 2 km SW of Kuruca village, in the water, 11 vii 2006, 39° 21' 434" N 42° 21' 448" E, 1850 m, LFM 1818, Hc.

P. berchtoldii Fieber

- Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18 viii 2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3619a, Hc.

P. trichoides Cham. & Schldl.

- Muş: Malazgirt, Kuruca village, in the water, 11 vii 2006, 39° 21' 237" N 42° 22' 747" E, 1684 m, LFM 1795, Hc.

P. pectinatus L.

- Muş: Malazgirt, Doğanbey village lake, in the water, 30 vii 2006, 39° 17' 894" N 42° 08' 915" E, 1585 m, LFM 2170, Hc.

Groenlandia densa (L.) Fourr.

- Erzurum: Karaçoban, 2 km to Kırmızı Tuzla, edge of pool, 30 vii 2006, 39° 18' 537" N 42° 06' 155" E, 1681 m, LFM 2078, Hc.

LEMNACEAE*Lemna minor* L.

- Muş: Malazgirt, SE of Bahçe village, in the water, 2 iv 2006, 39° 23' 578" N 42° 28' 993" E, 1668 m, LFM 034, Cr.

L. turionifera Landolt

- Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18 viii 2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3625, Cr.

ZANNICHELLIACEAE*Zannichellia palustris* L. subsp. *repens* (Boenn.) Uotila

- Muş: Malazgirt, Bahçe (Seydan) lake, in the water, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686, LFM 2449, Cr. (Hidrofit)

ARACEAE*Arum conophalloides* Kotschy ex Schott var. *virescens* (Stapf.) Engl.

- Muş: Malazgirt, Güzelbaba mountain, steppe, 01 viii 2007, 39° 23' 722" N 42° 12' 235" E, 1720 m, LFM 3373, Ir.-Tur., Cr.

LILIACEAE*Asparagus officinalis* L.

- Muş: Malazgirt, Karıncalı valley, streamside, 26 x 2006, 39° 21' 456" N 42° 15' 582" E, 1552 m, LFM 2572, Cr.

A. persicus Baker

- Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 108, Ir.-Tur., Cr.

Eremurus spectabilis M. Bieb.

- Erzurum: S of Karaçoban, Kırmızı Tuzla, steppe, 03 vi 2006, 39° 15' 171" N 42° 06' 431" E, 1555 m, LFM 781, Ir.-Tur., Cr.

Allium callidictyon C.A. Mey.

- Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14 vii 2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3242, Ir.-Tur., Cr.

A. stamineum Boiss.

- Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1979, E. Medit., Cr.

A. charaulicum Fomin

- Muş: Malazgirt, between Yolgözler and İyikomşu villages, steppe, 14 vii 2007, 39° 25' 287" N 42° 13' 621" E, 1744 m, LFM 3241, Ir.-Tur., Cr.

A. atroviolaceum Boiss.

- Muş: Malazgirt, N of Kardeşler village, steppe, 06 vii 2006, 39° 21' 865" N 42° 25' 537" E, 1672 m, LFM 1356, Cr.

A. pustulosum Boiss. & Hauskn.

- Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1639, Ir.-Tur., Cr.

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

- Muş: Malazgirt, Karıncalı village surroundings, steppe, 14 vii 2007, 39° 22' 564" N 42° 15' 556" E, 1598 m, LFM 3288, **END.**, Ir.-Tur., Cr. **"NT"**

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

- Muş: Malazgirt, between Y. Kıcık and A.Kıcık villages, stony slopes, 17 vii 2006, 39° 13' 088" N 42° 24' 073" E 1650 m, LFM 2040, Medit., Cr.

A. artvinense Miscz.

- Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 888, Ir.-Tur., Cr.

A. vineale L.

Muş: Malazgirt, Kuruca village, steppe, 11 vii 2006, 39° 20' 692" N 42° 23' 296" E, 1705 m, LFM 1773, Cr.

A. affine Ledeb.

Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1314, Ir.-Tur., Cr.

▲A. guttatum Steven subsp. **sardoum** (Moris) Stearn

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadows drying up in summer 18 viii 2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3578, Medit., Cr.

A. dictyoprasum C.A. Mey.

Muş: Malazgirt, Karadere village surroundings, steppe, 01 viii 2007, 39° 23' 641" N 42° 12' 306" E, 1750 m, LFM 3421, Ir.-Tur., Cr.

A. cardiostemon Fisch. & C.A. Mey.

Muş: Malazgirt, W of Kaz gölü village, meadows, 10 vi 2007, 39° 20' 706" N 42° 21' 500" E, 1764 m, LFM 3042, Ir.-Tur., Cr.

A. kharputense Freyn & Sint.

Muş: Malazgirt, between Kaz lake and Kuruca village, steppe, 10 vi 2007, 39° 21' 259" N 42° 21' 253" E, 1824 m, LFM 3051, Ir.-Tur., Cr.

Scilla siberica Haw. subsp. **armena** (Grossh) Mordak

Muş: Malazgirt, Laladağ surroundings, meadows, 12 v 2007, 39° 18' 261" N 42° 23' 248" E, 1989 m, LFM 2661, Ir.-Tur., Cr.

Puschkinia scilloides Adams

Muş: Malazgirt, W of Koçali village, fields, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1657 m, LFM 056, Cr.

▲Ornithogalum pyreanicum L.

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, steppe, 10 vi 2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2946, Cr.

O. narbonense L.

Muş: Malazgirt, S of Laladağ village, meadow, 23 vi 2006, 39° 18' 450" N 42° 25' 098" E, 2000 m, LFM 1141, Medit., Cr.

O. arcuatum Steven

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 751a, Ir.-Tur., Cr.

O. oligophyllum E.D. Clarke

Muş: Malazgirt, between A. Kıcık and Y.Kıcık village, meadows, 12 v 2007, 39° 16' 935" N 42° 23' 248" E, 1822 m, LFM 2658, Cr.

O. platyphyllum Boiss.

Muş: Malazgirt, Karıncalı village, steppe, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 729, Ir.-Tur., Cr.

O. armeniacum Baker

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 444, E. Medit., Cr.

Muscari comosum (L.) Mill.

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 453, Medit., Cr.

M. longipes Boiss.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1041, Ir.-Tur., Cr.

M. armeniacum Leichtlin ex Baker

Muş: Malazgirt, E of Karıncalı village, hills around Kazgözü road, steppe, 23 iv 2007, 39° 22' 281" N 42° 17' 756" E, 1732 m, LFM 2598, Cr.

Bellevalia fominii Woronow

Muş: Malazgirt, Yolgözler village, steppe, 29 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 531, Ir.-Tur., Cr. "VU"

B. longistyla (Miscz.) Grossh.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 101, Ir.-Tur., Cr. "VU"

B. pycnantha (K.Koch) Losinsk.

Muş: Malazgirt, between A. Kıcık and Y.Kıcık village, meadows, 12 v 2007, 39° 16' 935" N 42° 23' 248" E, 1822 m, LFM 2659, Cr.

Fritillaria armena Boiss.

Muş: Malazgirt, NE of A. Kıcık village, steppe, 12 v 2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2672, **END.**, Ir.-Tur., Cr. "LC"

F. assyriaca Baker subsp. **assyriaca**

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 097, Ir.-Tur., Cr.

Tulipa armena Boiss. var. **armena**

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 087, **END.**, Ir.-Tur., Cr. "CR"

T. sintenisii Baker

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1018; Muş: Malazgirt, NE of A. Kıcık village, steppe, 12 v 2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2669; 196, LFM 2746, **END.**, Ir.-Tur., Cr. "LC"

▲Gagea reticulata (Pallas) Schult. & Schult.f.

Muş: Malazgirt, NE of A. Kıcık village, steppe, 12 v 2007, 39° 16' 628" N 42° 23' 454" E, 1763 m, LFM 2671, Ir.-Tur., Cr.

G. taurica Steven

Muş: Malazgirt, between Hasanpaşa and Koçali villages, humid place, 29 iv 2006, 39° 08' 797" N 42° 32' 533" E, 1531 m, LFM 128, Ir.-Tur., Cr.

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

Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 058, Eu.-Sib., Cr.

G. luteoides Stapf

Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 083, Cr.

G. fistulosa Ker-Gawler

Muş: Malazgirt, Güzelbaba mountain slopes, steppe, 29 iv 2007, 39° 24' 562" N 42° 14' 536" E, 1702 m, LFM 2603, Cr.

G. glacialis C. Koch

Muş: Malazgirt, NW of Beşçatak village, roadside, 2 iv 2006, 39° 12' 582" N 42° 29' 504" E, 1567 m, LFM 001, Cr.

Colchicum szovitsii Fisch. & C.A.Mey.

Muş: Malazgirt, between Beşçatak and Dirimpınar villages, road side, 2 iv 2006, 39° 13' 906" N 42° 27' 827" E, 1558 m, LFM 004, Ir.-Tur., Cr.

C. kotschyi Boiss.

Erzurum: S of Karaçoban, Kırmızı Tuzla, steppe, 03 vi 2006, 39° 15' 171" N 42° 06' 431" E, 1555 m, LFM 786, Ir.-Tur., Cr.

Merendera trigyna (Steven ex Adam) Stapf

Muş: Malazgirt, between Konakkuran and Hasanpaşa villages, fields, 2 iv 2006, 39° 17' 313" N 42° 30' 466" E, 1512 m, LFM 009, Ir.-Tur., Cr.

M. kurdica Bornm.

Muş: Malazgirt, S Hasanpaşa village, fields, 2 iv 2006, 39° 18' 844" N 42° 30' 240" E, 1520 m, LFM 010, Ir.-Tur., Cr.

IRIDACEAE**Iris iberica** Hoffm. subsp. **elegantissima** (Sosn.) Takht. & Fedorov

Muş: Malazgirt, E of Yolgözler village (Yolgözler Plateau) steppe, 27 v 2006, 39° 23' 413" N 42° 15' 562" E, 1691 m, LFM 244, Ir.-Tur., Cr.

I. reticulata M. Bieb. var. **reticulata**

Muş: Malazgirt, between Beşçatak and Dirimpınar villages, road side, 2 iv 2006, 39° 13' 906" N 42° 27' 827" E, 1558 m, LFM 005, Ir.-Tur., Cr.

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

Muş: Malazgirt, A. Kıcık village surroundings, steppe, 12 v 2007, 39° 16' 121" N 42° 22' 928" E, 1742 m, LFM 2626, Ir.-Tur., Cr.

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

Muş: Malazgirt, E of Seydan (Bahçe) Lake, fields, 2 iv 2006, 39° 22' 682" N 42° 29' 890" E, 1808 m, LFM 030, Ir.-Tur., Cr.

C. cancellatus Herb. subsp. **damascenus** (Herb.) B.Mathew

Muş: Malazgirt, between Çat and Karıncalı villages, steppe-rocky places, 16 iv 2006, 39° 21' 925" N 42° 29' 665" E, 1650 m, LFM 073; Muş: Malazgirt, Karıncalı village surroundings, steppe, 26 x 2006, 39° 20' 850" N 42° 15' 703" E, 1501 m, LFM 2515, Ir.-Tur., Cr.

Gladiolus atroviolaceus Boiss.

Muş: Malazgirt, Yapraklı village surroundings, meadow, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 776, Ir.-Tur., Cr.

ORCHIDACEAE

***Orchis palustris* Jacq.**

Erzurum: Karaçoban, Karakol, Karagöz village surrounding, meadow, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1033, Cr.

***Dactylorhiza iberica* (M. Bieb. ex Willd.) Soó**

Muş: Malazgirt, İyikomşu village surroundings, humid slopes, 14 vii 2007, 39° 26' 255" N 42° 13' 997" E, 1707 m, LFM 3332, E. Med., Cr.

D. osmanica* (Kl.) Soó var. *osmanica

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3010, **END.**, Ir.-Tur., Cr. **"LC"**

***D. umbrosa* (Kar. & Kir) Nevski**

Muş: Malazgirt, Bademözü village surroundings, meadows, 21 v 2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2696, Ir.-Tur., Cr.

SPARGANIACEAE***Sparganium erectum* L. subsp. *microcarpum* (Neuman) Domin**

Muş: Malazgirt, 300 m N of Bahçe village, streamside, 23 viii 2006, 39° 21' 542" N 42° 27' 897" E, 1637 m, LFM 2408, Eu.-Sib., Hc.

TYPHACEAE***Typha shuttleworthii* W.Koch & Sond.**

Muş: Malazgirt, between Kardeşler and Uyanık (Bastem) villages, streamside, 08 ix 2007, 39° 22' 309" N 42° 25' 152" E, 1621 m, LFM 3804, Hc. (Hidrofit)

***T. angustifolia* L.**

Muş: Malazgirt, Doğanbey village lake, in the water, 30 vii 2006, 39° 17' 894" N 42° 08' 915" E, 1585 m, LFM 2167, Hc.

JUNCACEAE***Juncus inflexus* L.**

Muş: Malazgirt, 3 km NW of Hasanpaşa village, streamside, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2319, Cr.

***J. bufonius* L.**

Muş: Malazgirt, road surroundings from Karıncalı village to Kaz Lake, stream side, 17 vii 2006, 39° 14' 726" N 42° 24' 165" E, 1646 m, LFM 1801, Th.

***J. articulatus* L.**

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1295, Eu.-Sib., Cr.

CYPERACEAE***Cyperus longus* L.**

Muş: Malazgirt, Y. Kıcık village surroundings, wet places, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1953, Cr.

***C. glaber* L.**

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, streamside, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2430a, Th.

***C. fuscus* L.**

Muş: Malazgirt, between Hasanpaşa and Kardeşler village, streamside-rocky, 23 viii 2006, 39° 21' 826" N 42° 23' 806" E, 1722 m, LFM 2401, Eu.-Sib., Th.

***Eleocharis quinqueflora* (Hartmann) O. Schwarz**

Muş: Malazgirt, Bademözü village surroundings, meadows, 21 v 2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2686, Cr.

***E. palustris* (L.) Roemer & Schultes**

Muş: Malazgirt, Kaz lake surroundings, streamside, 17 vii 2006, 39° 20' 604" N 42° 19' 882" E, 1731 m, LFM 2028, Cr.

***E. mitracarpa* Steudel**

Erzurum: Karaçoban, Kırmızı Tuzla surrounding, meadows, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2266, Cr.

***E. uniglumis* (Link) Schultes**

Muş: Malazgirt, between Uyanık and Bahçe villages, humid meadows, 06 vii 2006, 39° 22' 794" N 42° 24' 602" E, 1737 m, LFM 1466, Cr.

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

Muş: Malazgirt, S of Kuruca village, rush bed-marshy place, 23 vi 2006, 39° 19' 950" N 42° 23' 749" E, 1670 m, LFM 1153, Cr.

Bolboschoenus maritimus* (L.) Palla var. *maritimus

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, streamside, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2260, Cr.

***Scirpoides holoschoenus* (L.) Sojak**

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, humid places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2467, Cr.

***Blysmus compressus* (L.) Panz. ex Link**

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3007a, Cr.

***Carex divisa* Hudson**

Erzurum: S of Karaçoban, Kırmızı Tuzla, steppe, 03 vi 2006, 39° 15' 171" N 42° 06' 431" E, 1555 m, LFM 780, Cr.

***C. stenophylla* Wahlenb. subsp. *stenophylloides* (V.Krecz.) Egorova**

Muş: Malazgirt, Karagöz village surroundings, steppe, 16 vi 2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3104, Euro-Sib., Hc.

***C. melanostachya* M. Bieb. ex Willd.**

Muş: Malazgirt, W of Kazgölü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1249; Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3007b, Cr.

***C. riparia* Curtis**

Muş: Malazgirt, W of Kazgölü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1247a, Hc. (Hidrofit)

***C. hordeistichos* Vill.**

Muş: Malazgirt, 3 km NW of Hasanpaşa village, meadows, 23 viii 2006, 39° 22' 323" N 42° 29' 748" E, 1743 m, LFM 2324, Hc.

▲ *C. elata* All. subsp. *omskiana* (Meinsh.) Jalas

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3014, Eu.-Sib., Hc.

▲ *C. orbicularis* Boot subsp. *kotschyana* (Boiss. & Hohen) Kukkonen var. *caucasica* Ö. Nilsson

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3008, Eux., Cr.

POACEAE***Elymus repens* (L.) Gould subsp. *repens***

Muş: Malazgirt, Laladağ, humid places, 18 viii 2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3497, Cr.

***E. repens* (L.) Gould subsp. *elongatiformis* (Drobov) Melderis**

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 940, Ir.-Tur., Cr.

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

Muş: Malazgirt, between Doğanbey village and Karaçoban town, steppe, 30 vii 2006, 39° 19' 517" N 42° 08' 581" E, 1711 m, LFM 2239, Cr.

***E. hispidus* (Opiz) Melderis subsp. *podpyrae* (Náb.) Melderis**

Muş: Malazgirt, A. Kıcık village, steppe, 11 vii 2006, 39° 15' 220" N 42° 22' 839" E, 1642 m, LFM 1734; Muş: Malazgirt, Y. Kıcık village surroundings, humid places, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1911, Ir.-Tur., Cr.

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

Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1991, Cr.

***Eremopyrum bonaepartis* (Spreng.) Nevski subsp. *hirsutum* (Bertol.) Melderis**

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 745, Th.

▲ *Aegilops tauschii* Cosson subsp. *tauschii*

Muş: Malazgirt, Yapraklı village surroundings, fields, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 298, Ir.-Tur., Th. **"VU"**

***Secale montanum* Guss.**

Muş: Malazgirt, NW of Hasanpaşa village (Karagölmez district), steppe, 05 ix 2007, 39° 19' 936" N 42° 28' 281" E, 1808 m, LFM 3732, Hc.

***S. anatolicum* Boiss.**

Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 2004, Hc.

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

Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10 vi 2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2987, Ir.-Tur., Hc.

Hordeum violaceum Boiss. & Huet

Muş: Malazgirt, W of Kazgözü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1260, Ir.-Tur., Hc.

H. geniculatum All.

Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1329, Eu.-Sib., Th.

H. bulbosum L.

Muş: Malazgirt, W of Kazgözü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1730 m, LFM 1176, Cr.

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

Erzurum: N of Karaçoban, Kırımkaşa villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 841, Th.

Henrardia persica (Boiss.) C.E. Hubbard var. *persica*

Muş: Malazgirt, south slopes in the of the hills eastern of Karıncalı village, steppe, 10 vi 2007, 39° 22' 279" N 42° 17' 748" E, 1760 m, LFM 2975, Ir.-Tur., Th.

Bromus japonicus Thunb subsp. *japonicus*

Muş: Malazgirt, 1 km N of Kazgözü, meadows, 23 vi 2006, 39° 20' 572" N 42° 21' 708" E, 1730 m, LFM 1215; Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1629, Th.

B. scoparius L.

Muş: Malazgirt, N of Kaz lake, steppe, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3020, Th.

B. lanceolatus Roth

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1039, Th.

B. danthoniae Trin

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, steppe, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 958; Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2989; Muş: Malazgirt, Karagöz village surroundings, steppe, 16 vi 2007, 39° 17' 380" N 42° 06' 427" E, 1583 m, LFM 3199, Th.

B. tectorum L. subsp. *tectorum*

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 324, Th.

B. tomentellus Boiss.

Muş: Malazgirt, Karıncalı valley, fields, 26 v 2007, 39° 22' 587" N 42° 17' 506" E, 1623 m, LFM 2878, Ir.-Tur., Kh.

B. riparius Rehm

Muş: Malazgirt, north slopes in the of the hills eastern of Karıncalı village, humid places, 10 vi 2007, 39° 22' 294" N 42° 17' 842" E, 1702 m, LFM 2961, Hc.

B. armenus Boiss.

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10 vi 2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3069, **END.**, Ir.-Tur., Cr. "NT"

B. inermis Leysser

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, wet places, 18 viii 2007, 39° 16' 951" N 42° 23' 140" E, 1848 m, LFM 3618, Cr.

▲ *Avena fatua* L. var. *glabrata* Peterm.

Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1290, Eu.-Sib., Th.

A. sterilis L. subsp. *ludoviciana* (Durieu) Gillet et Magne

Muş: Malazgirt, W of Kazgözü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1800 m, LFM 1240, Th.

Arrhenatherum kotschy Boiss.

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 465, Ir.-Tur., Cr.

Trisetum flavescens (L.) P. Beauv.

Muş: Malazgirt, 1 km S of Laladağ village, meadows, 23 vi 2006, 39° 18' 450" N 42° 25' 095" E, 2000 m, LFM 1166, Eu.-Sib., Hk.

Koeleria cristata (L.) Pers

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 240, Hc.

Deschampsia caespitosa (L.) P. Beauv.

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3009, Hc.

Calamagrostis epigejos (L.) Roth.

Muş: Malazgirt, 1 km S of Laladağ village, meadows, 23 vi 2006, 39° 18' 450" N 42° 25' 095" E, 2000 m, LFM 1167, Eu.-Sib., Cr.

Apera intermedia Hackel

Muş: Malazgirt, Yapraklı village surroundings, streamside, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 572, Ir.-Tur., Th.

Agrostis gigantea Roth

Muş: Malazgirt, S of Kardeşler village, streamside, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1319, Eu.-Sib., Cr.

A. stolonifera L.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 991a, Eu.-Sib., Cr.

▲ *Polyogon maritimus* Willd. subsp. *subspatheus* (Req.) Aschers. & Graebn.

Muş: Malazgirt, 1 km SW of Kuruca village, humid meadows, 23 vi 2006, 39° 21' 177" N 42° 21' 813" E, 1830 m, LFM 1196; Muş: Malazgirt, 1 km N of Kazgözü, meadows, 23 vi 2006, 39° 20' 572" N 42° 21' 708" E, 1730 m, LFM 1225, E. Medit., Th.

P. monspeliensis (L.) Desf.

Erzurum: Karaçoban, Kırmızı Tuzla surrounding, meadows, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2292, Th.

Zingeria biebersteiniana (Claus) P. Smirnov subsp. *trichopoda* (Boiss.) R.R. Mill.

Muş: Malazgirt, between Kaz lake and Kuruca village, steppe, 10 vi 2007, 39° 21' 259" N 42° 21' 253" E, 1824 m, LFM 3049, Ir.-Tur., Th.

Phalaris arundinacea L.

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 3022, Cr.

▲ *Alopecurus bulbosus* Gouan

Muş: Malazgirt, Bademözü village surroundings, meadows, 21 v 2007, 39° 24' 712" N 42° 26' 095" E, 1766 m, LFM 2692, Cr.

A. arundinaceus Poir.

Muş: Malazgirt, W of Kazgözü village, fields, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1800 m, LFM 1246b, Cr.

Beckmannia eruciformis (L.) Host.

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, meadow-swamp, 18 viii 2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3430, Hc.

Phleum pratense L.

Muş: Malazgirt, Laladağ, humid places, 18 viii 2007, 39° 18' 315" N 42° 23' 707" E, 1997 m, LFM 3498, Eu.-Sib., Cr.

▲ *P. bertolonii* DC.

Muş: Malazgirt, Kardeşler village, alluvial steppe, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1811 m, LFM 1634, Hc.

P. montanum K.Koch subsp. *montanum*

Muş: Malazgirt, S of Kardeşler village, fields, 06 vii 2006, 39° 20' 460" N 42° 27' 019" E, 1800 m, LFM 1327, Hc.

P. montanum K.Koch subsp. *serrulatum* (Boiss.) M. Doğan

Muş: Malazgirt, between A.Kıcık and Y.Kıcık villages, steppe, 10 vi 2007, 39° 17' 002" N 42° 23' 245" E, 1830 m, LFM 3076, E. Med., Hc.

P. phleoides (L.) Karsten

Muş: Malazgirt, 3 km to Karagöz village, steppe, 30 vii 2006, 39° 19' 846" N 42° 13' 808" E, 1623 m, LFM 2141, Eu.-Sib., Hc.

▲ *P. exaratum* Hochst. subsp. *exaratum*

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 417a, Th.

▲ *P. boissieri* Bornm.

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 417b, Ir.-Tur., h.

Festuca arundinacea Schreb. subsp. *arundinacea*

Muş: Malazgirt, W of Kazgözü village, streamside-wet places, 23 vi 2006, 39° 20' 004" N 42° 21' 608" E, 1710 m, LFM 1253, Hc.

Lolium persicum Boiss. & Hohen. ex Boiss.

Muş: Malazgirt, N of Kaz lake, meadow, 10 vi 2007, 39° 20' 891" N 42° 19' 449" E, 1775 m, LFM 2990, Ir.-Tur., Th.

Poa trivialis L.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 744b, Hc

P. pratensis L.

Muş: Malazgirt, between Kaz lake and Kuruca village, steppe, 10 vi 2007, 39° 21' 259" N 42° 21' 253" E, 1824 m, LFM 3045, Cr.

P. timoleontis Heldr. ex Boiss.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 29 iv 2006, 39° 41' 765" N 42° 04' 854" E, 1747 m, LFM 110, E. Med., Hc.

P. bulbosa L.

Muş: Malazgirt, Yapraklı village surroundings, steppe, 27 v 2006, 39° 21' 031" N 42° 15' 978" E, 1591 m, LFM 295, Cr.

Eremopoa multiradiata (Trautv.) Roshev.

Erzurum: Karaçoban, Karakol, Karagöz village surroundings, humid place, 20 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 1038, Ir.-Tur., Th. "VU"

▲E. attalica H. Scholz

Erzurum: NE of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 11 vi 2006, 39° 19' 864" N 42° 13' 472" E, 1663 m, LFM 927, END., E. Medit., Th. "VU"

E. songarica (Schrenk) Roshev.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 761b, Ir.-Tur., Th.

Catabrosella parviflora (Boiss. & Buhse) Alexeev ex R.R. Mill subsp. *calvertii* (Boiss.) Alexeev ex R.R. Mill

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 03 vi 2006, 39° 17' 377" N 42° 06' 329" E, 1592 m, LFM 759, Ir.-Tur., Hc.

Catabrosa aquatica (L.) P. Beauv.

Muş: Malazgirt, S of Laladağ village, meadow, 23 vi 2006, 39° 18' 450" N 42° 25' 098" E, 2000 m, LFM 1261, Cr.

Puccinellia grossheimiana (V. Krecz.) V. Krecz.

Muş: Malazgirt, Kuruca village, reedy-bed, 11 vii 2006, 39° 21' 237" N 42° 22' 747" E, 1684 m, LFM 1785, Hc.

P. gigantea (Grossh.) Grossh.

Erzurum: Karaçoban, Kırmızı Tuzla surroundings, steppe, 30 vii 2006, 39° 17' 412" N 42° 06' 330" E, 1576 m, LFM 2214, Hc.

Sclerochloa dura (L.) P. Beauv.

Muş: Malazgirt, Karıncalı village, humid places, 29 v 2006, 39° 22' 485" N 42° 16' 298" E, 1509 m, LFM 693, Eu.-Sib.?, Th.

Dactylis glomerata L. subsp. *hispanica* (Roth.) Nyman

Muş: Malazgirt, 1 km N of Kazgölü, meadows, 23 vi 2006, 39° 20' 572" N 42° 21' 708" E, 1730 m, LFM 1226, Hc.

Briza humilis M. Bieb.

Muş: Malazgirt, between Karıncalı and Yapraklı villages, steppe, 27 v 2006, 39° 21' 706" N 42° 15' 403" E, 1520 m, LFM 414, Th.

Melica persica Kunth subsp. *inaequiglumis* (Boiss.) Bor

Erzurum: N of Karaçoban, Kırımkaaya villages, Güzelbaba mountain, steppe, 05 vi 2006, 39° 21' 663" N 42° 10' 670" E, 1776 m, LFM 848, Hc.

Glyceria plicata (Fries) Fries

Muş: Malazgirt, S of Laladağ village, meadow, 23 vi 2006, 39° 18' 450" N 42° 25' 098" E, 2000 m, LFM 1247b, Hc.

Stipa holosericea Trin.

Muş: Malazgirt, Karıncalı valley, steppe, 26 v 2007, 39° 23' 028" N 42° 17' 045" E, 1590 m, LFM 2864, Ir.-Tur., Hc.

S. arabica Trin. & Rupr.

Muş: Malazgirt, between İyikomuşu and Kırımkaaya village surroundings (Radar), steppe, 01 viii 2007, 39° 15' 250" N 42° 03' 700" E, 2095 m, LFM 3345, Ir.-Tur., Hc.

S. ehrenbergiana Trin. & Rupr.

Muş: Malazgirt, 2 km S of Laladağ village, steppe, 23 vi 2006, 39° 18' 072" N 42° 25' 308" E, 1900 m, LFM 1277, Ir.-Tur., Hc.

S. pontica P. Smirnov

Muş: Malazgirt, N of Kazgölü, steppe, 23 vi 2006, 39° 20' 604" N 42° 21' 882" E, 1830 m, LFM 1124b, Hc.

Phragmites australis (Cav.) Trin. ex Steudel

Muş: Malazgirt, Y. Kıcık village surroundings, wet places, 17 vii 2006, 39° 17' 410" N 42° 23' 353" E, 1904 m, LFM 1952, Eu.-Sib., Cr.

Cynodon dactylon (L.) Pers. var. *villosus* Regel

Muş: Malazgirt, Yeniköy surroundings, steppe, 17 vii 2006, 39° 15' 002" N 42° 24' 173" E, 1904 m, LFM 1978, Hc.

Echinochloa crus-galli (L.) P. Beauv

Muş: Malazgirt, between Beşdam and Sırdüzü villages, streamside, 02 ix 2007, 39° 21' 439" N 42° 15' 293" E, 1489 m, LFM 3661, Th.

E. colonum (L.) Link

Muş: Malazgirt, Bahçe (Seydan) lake surroundings, sandy places, 23 viii 2006, 39° 23' 366" N 42° 29' 082" E, 1686 m, LFM 2456, Th.

Crypsis alopecuroides (Piller & Mitterp.) Schrader

Muş: Malazgirt, between Kardeşler and Uyanık (Bastem) villages, streamside, 08 ix 2007, 39° 22' 309" N 42° 25' 152" E, 1621 m, LFM 3806, Th.

C. acuminata Trin subsp. *acuminata*

Muş: Malazgirt, SE of Laladağ village, around Sarıgöl, steppe, 18 viii 2007, 39° 18' 379" N 42° 25' 858" E, 1969 m, LFM 3455, Th.

C. aculeata (L.) Aiton

Muş: Malazgirt, between Doğanbey village and Karaçoban town, steppe, 30 vii 2006, 39° 19' 517" N 42° 08' 581" E, 1711 m, LFM 2209, Th.

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