



Research Article

Vascular plant diversity of Mount Akdağ in Amasya, Turkey

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Abstract

Geographically, Mt. Akdağ is located between the Central Anatolia and Black Sea Regions of Turkey and its summit is approximately 2060 meters. In this study, the vascular plant diversity of Mt. Akdağ in Amasya Province of Turkey, and the floristic and chorological analysis of this diversity were documented. Family numbers, species and subspecies taxa numbers, endemism rate, and Raunkiaer's life form spectra were determined. A total of 705 taxa were identified and classified and 699 of them belong to Magnoliophyta and 6 to Pteridophyta. Euro-Siberian and Irano-Turanian elements were dominant in the chorological spectrum. The rate of endemic taxa (74) was found to be 10.49% in the flora.

Keywords: Akdağ, biodiversity, endemism, flora, life form, Turkey

Akdağ'ın (Amasya, Türkiye) Damarlı Bitki Çeşitliliği

Özet

Akdağ, coğrafi olarak Türkiye'nin İç Anadolu ile Karadeniz Bölgeleri arasında yer alır ve zirvesi yaklaşık 2060 metredir. Bu çalışmada Akdağ (Amasya, Türkiye)'nin damarlı bitki çeşitliliği, bu çeşitliliğin floristik ve korolojik analizleri verilmiştir. Familya sayıları, tür ve türaltı takson sayıları, endemizm oranı ve Raunkiaer hayat formu dağılışı belirlenmiştir. Teşhis edilen ve sınıflandırılan toplam 705 taksonun 699'u Magnoliophyta'ya ve 6'sı Pteridophyta'ya aittir. Avrupa-Sibirya ve İran-Turan elementleri korolojik spektrumda baskındır. Endemik taksonların (74) floraya oranı %10.49'dur.

Anahtar kelimeler: Akdağ, biyoçeşitlilik, endemizm, flora, hayat formu, Türkiye

INTRODUCTION

Biodiversity is the variety of life forms and habitat types on earth. In today's world, habitat destruction and fragmentation have become the main factors in the extinction of local vascular flora. Local vascular flora is a vital part of the natural web of life. The loss of a species from local flora can quickly affect an entire ecosystem (Hillaert et al. 2020). Implementing the national plant biodiversity conservation strategy also depends on the discovery of the local flora (Urgamal et al. 2019). Consequently, local floristic research studies are important.

The province, known as Amasya, ever since the famous geographer Strabo (Kuş 2016), has many large and small mountains, an important river such as the Yeşilirmak, fertile plains, and plateaus where agriculture and animal husbandry have been made (Ergen 2016). The diversity of its

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topographic and geological structure (Toprak & Akyazı 2018) also causes plant diversity. Amasya has become a center where many floristic, phytosociological and ecological research studies have been carried out in recent decades (Cansaran & Aydoğdu 1998; Cansaran 2002; Korkmaz et al. 2005; Celep et al. 2006; Cansaran et al. 2007; 2010; Kaya et al. 2009; Yıldırım & Kılınç 2010; Yıldırım et al. 2019). Mt. Akdağ is one of the most important geographical structures in Amasya Province due to its plant inventory. Moreover, Mt. Akdağ was accepted as an important plant area in 2005 (Özhatay et al. 2005).

In the second half of the 1970s, Kerim Alpınar collected plant samples from Amasya and its surroundings and named them in his doctoral dissertation called Amasya (Akdağ) plants. However, a significant part of the localities where plant samples were collected in Alpınar's doctoral dissertation were outside the borders of Mt. Akdağ. Moreover, Baytop and Alpınar (1980) also published an article titled, "New observations on the flora of Amasya and Akdağ". Unfortunately, this publication did not include a complete plant list, floristic and chorological analyzes of the vascular flora of Mt. Akdağ. Between 2016 and 2019, a significant number of plant taxa were collected and identified in the project carried out by the other authors of this study on the vegetation of Mt. Akdağ. The authors contacted Alpınar to create a complete list of the Mt. Akdağ vascular plant diversity and to share it with the scientific world. Thereby, they collaborated to combine the taxa list in Alpınar's doctoral dissertation with their findings and to reveal a complete list of the vascular flora of Mt. Akdağ. This study aims to reveal the vascular plant diversity of Mt. Akdağ in Amasya Province of Turkey and to determine the floristic and chorological analyses of this diversity.

MATERIAL AND METHOD

Geographically, Mt. Akdağ is located between the Central Anatolia and Black Sea Regions of Turkey (between 35°45'00"–36°03'00"E and 40°42'00"–40°54'00"N) and its summit is approximately 2060 meters. The Yeşilirmak River, which is one of Turkey's largest rivers, flows to the southeast of Mt. Akdağ. Mt. Karaömer is the sister of Mt. Akdağ, which lies to the northwest of Mt. Akdağ. The Derinöz fault line, which is a branch of the Northern Anatolian fault systems, separates these sister mountains and creates a natural border between them. The dominant lithology of Mt. Akdağ is the Permian age fusulinid limestone blocks (Erturaç 2009). Annual precipitation and mean annual temperature are 334.24 mm and 10.32°C according to the state meteorological station data.

Biogeographically, Mt. Akdağ is located between the Euro-Siberian and Irano-Turanian floristic regions (Kaya et al. 2009). The forest, riparian, steppe, and subalpine meadow vegetations are mainly distributed at Mt. Akdağ. In addition to plants, Mt. Akdağ also contains an important fauna. It is also home to some large mammals, such as lynx, roe deer, wolf, and marten, which are under threat.

Plant samples belonging to the Mt. Akdağ vascular flora were collected at different times. Kerim Alpınar is a botanist who made the first plant collections in the region in the last half of the 1970s. After Alpınar, the other authors of this study determined between 2016 and 2019 the remainder of vascular flora in their field studies carried out to reveal the vegetation of Mt. Akdağ. The findings of the two studies were combined and a complete plant list of the Mt. Akdağ vascular flora was created. The voucher specimens are deposited in the Herbarium of the Faculty of

Pharmacy of Istanbul University (ISTE) and the Herbarium of the Faculty of Arts-Sciences of Ondokuz Mayıs University (OMUB).

Flora of Turkey and the East Aegean Islands (Davis 1965–1985; Davis et al. 1988; Güner et al. 2000), and other related literature (Tutin et al. 1964–1980; Güner et al. 2012; 2018) were followed to identify plant samples. *Plants of the World Online*, *Kew Sciences Data Online* (PWO 2020) and the *International Plant Name Index* (IPNI 2020) were also checked to determine and compare names of plant species. The name of the plant families is ordered on the APG IV system (Byng et al. 2016). Threatened categories of endemic taxa in the flora list were determined according to Ekim et al. (2000). The locality and habitat numbers (in square brackets), collection dates, collectors and their numbers, life forms, phytogeographic positions, endemism status and threatened categories of endemics were given after the taxa names in the vascular flora list Appendix 1).

The following abbreviations were used in the floristic list; **Ch**: Chamaephyte, **DD**: Data Deficient, **E.Medit.**: East Mediterranean, **End.**: Endemic, **Euro.-Sib**: Euro-Siberian, **G**: Geophyte, **H**: Hemicryptophyte, **Ir.-Tur.**: Irano-Turanian, **LC**: Least Concern, **Medit.**: Mediterranean, **NT**: Near Threatened, **P**: Phanerophyte, **T**: Therophyte, **VU**: Vulnerable.

Localities of Collected Plant Samples

1. Amasya, Suluova, around Kıranbaşıalan villlage, *Pinus nigra* forests, 1240 m.
2. Amasya, Suluova, Kapaklı recreation area, *Pinus nigra* forests, 1110 m.
3. Amasya, Suluova, Seyfe villlage, around Derinöz Dam, *Pinus nigra* forests, 1150 m.
4. Amasya, Suluova, around Derebaşıalan villlage, *Quercus cerris* forests, 1035 m.
5. Amasya, Suluova, between Soku and Kuzalan villages, *Fagus orientalis* forests, 1500 m.
6. Amasya, around Ormanözü villlage, *Pinus sylvestris* forests, 1600 m.
7. Amasya, around Kızılkışlacık villlage, *Pinus brutia* forests, 450 m.
8. Amasya, Suluova, between Seyfe and Karakese villages, riparian vegetation, 1250 m.
9. Amasya, between Ormanözü villlage and TV station, *Juniperus communis* bushes, 1700 m.
10. Amasya, around TV station, steppes, 1750 m.
11. Amasya, Suluova, between Seyfe and Aktaş villages, roadsides, steppes, 1750 m.
12. Amasya, Suluova, Sugözü plateau, steppes, 1520 m.
13. Amasya, Suluova, between Kuzalan and Aktaş villages, roadsides, steppes, 1250 m.
14. Amasya, around TV station, *Festuca* grasslands, 2045 m.
15. Amasya, around Kocacık hill, stony ground, 1750 m.
16. Amasya, around Egribük villlage, 1600 m.
17. Amasya, around Boyalı villlage, 1500 m.
18. Amasya, Suluova, around of Akören villlage, 1500 m.
19. Amasya, between Boğazköy and Değirmendere villages, hills, 500 m.
20. Amasya, Çalardı plateau, 1500 m.
21. Amasya, Değirmendere plateau, wet ground, 1400 m.
22. Amasya, around Ormanözü villlage, open fields, 1200 m.
23. Amasya, Ardıç plateau, wet ground, 1300 m.
24. Amasya, Akdağ summits, rocky ground, 2060 m.
25. Amasya, around Aydınlık villlage, roadsides, 850 m.
26. Amasya, Suluova, Sugözü plateau, streamsides, 1600 m.

27. Amasya, around Saracıkagılı district, Alanoğlu locality, 1450 m.
 28. Amasya, Har plateau, 1300 m.
 29. Amasya, Uzunoba plateau, wetlands, 1500 m.

RESULTS AND DISCUSSION

A total of 705 taxa were identified and classified and 699 of them belong to *Magnoliophyta* and 6 to *Pteridophyta* (Appendices 1 and 2, Table 1). When cosmopolitans and others are excluded, the Euro-Siberian and Irano-Turanian elements are dominant in the chorological spectrum of the study area, respectively (Table 2).

Table 1. General statistics of plant taxa in the study.

	Number of Families	Number of Genera	Number of Taxa
Pteridophyta	5	5	6
Magnoliophyta	69	324	699
Pinopsida	3	3	8
Magnoliopsida	66	321	691
Total	74	329	705

Table 2. Chorological spectrum of taxa in the study.

Phytogeographic elements	Number of Taxa	Rate (%)
Euro-Siberian	103	14.61
Irano-Turanian	93	13.19
Mediterranean	38	5.39
East Mediterranean	29	4.11
Cosmopolitan and others	442	62.70
Total	705	100

When compared with the previous studies in the region for the chorological spectrum and endemism rate, it is seen that Mt. Akdağ has a similar percentage distribution (Table 3). According to the findings obtained, the study area has a transition zone feature between the Euro-Siberian and Irano-Turanian floristic regions and the effect of the Euro-Siberian floristic region is more dominant. In this respect, Mt. Akdağ is similar to the Karaömer, Sakarat and Tavşan Mountains. The climatic gradient exists between the Central Anatolia and Black Sea regions transition zones, which creates the Xero-Euxinian vegetation belt, consists largely of deciduous oak, pine, and mixed pine and oak (Yıldırım et al. 2019). These vegetation types partially create humid-temperate microclimate conditions and contain more species of Euro-Siberian origin. Also, it should be taken into consideration that the historical distribution patterns and fragmentation of the plant taxa caused different floristic changes in the Euro-Siberian and Irano-Turanian transition regions.

The number of endemic taxa and endemism rate are 74 and 10.49%, respectively. *Epipactis helleborine* (L.) Crantz subsp. *bithynica* (Robatsch) Kreutz, *Iris histrioides* (G.F.Wilson) S.Arn., *Astragalus syringus* D.F.Chamb., *Alyssum bornmuelleri* Hausskn. ex Degen, *Minuartia corymbulosa* (Boiss. & Balansa) McNeill var. *breviflora* (Boiss.) McNeill, *Galium bornmuelleri* Hausskn. ex Bornm. and *Veronica gentianoides* Vahl subsp. *gentianoides* var. *alpina* (Hausskn. ex

Öztürk & M.A.Fisch. are included in the threat category as *Vulnerable* (VU). *Malus sylvestris* (L.) Mill. subsp. *orientalis* (A.Uglitzkich) Browicz var. *microphylla* Browicz is in the threat category as *Data Deficient* (DD) according to the latest version of the International Union for Conservation of Nature (IUCN) Red Data Book. The rate of endemic taxa at Mt. Akdağ is lower compared to the average of the Euro-Siberian floristic regions of Turkey (Şenkul & Kaya 2017). Topographic complexity, isolation and diverse micro-climates support high biodiversity and endemism (Noroozi et al. 2019). Consequently, the endemism rate of Mt. Akdağ may have differed from other studies in its immediate vicinity.

Table 3. Comparison of chorological spectrum and endemism rates between Mt. Akdağ and its immediate surroundings (Taxon number / Ratio to entire flora).

Studies	Irano - Turanian	Euro - Siberian	Mediterranean	Endemism
Mt. Akdağ (this study)	93/13.20	103/14.60	67/9.50	75/10.64
Mt. İnegöl (Yıldırım & Kılınç 2010)	99/15.00	103/15.60	43/6.50	77/11.65
Mt. Sakarat (Cansaran et al. 2010)	43/8.70	127/25.71	24/4.86	40/8.10
Mt. Karaömer (Kaya et al. 2009)	41/18.60	54/24.50	11/5.00	29/13.10
Between Direkli, Yassıçal and Abacı Mountains (Cansaran et al. 2007)	51/13.40	45/11.80	35/9.20	44/11.60
Lower Tersakan Valley (Celep et al. 2006)	77/16.80	39/8.50	35/7.60	50/10.94
Mt. Çakır (Yücel 2005)	23/11.79	12/6.15	10/5.12	18/9.23
Mt. Tavşan (Korkmaz et al. 2005)	71/11.95	141/23.73	30/5.04	65/10.94
Mt. Eğerli (Cansaran 2002)	102/15.69	97/14.92	46/7.07	80/12.30
Between Vermiş, Yuvacık Villages and Amasya Castle (Cansaran & Aydoğdu 1998)	70/15.71	31/7.38	40/9.52	46/11.00
Between Amasya, Yozgat and Çorum (Kurt et al. 1998)	100/18.65	71/13.25	41/7.65	38/7.09
Kuşpınartepesi (Peker 1988)	43/8.98	51/10.64	45/9.39	33/6.89

The first three families with the most taxa in family ranking are Asteraceae, Fabaceae and Brassicaceae, respectively (Table 4). However, the genus with the highest number of species is *Astragalus* L. with 14 species. *Euphorbia* L., *Galium* L., *Veronica* L., *Alyssum* L., *Trifolium* L., *Geranium* L. and *Stachys* L. follow *Astragalus* for number of species. *Asteraceae* has the highest number of taxa in family ranking. Among the studies carried out in its vicinity, Mt. Akdağ is the area with the highest taxa numbers belonging to the *Asteraceae* family. The *Asteraceae* family has the maximum number of taxa both in the world and in the flora of Turkey (Güner et al. 2012; PWO 2020). Among of *Asteraceae* members, anemocory and epizoochory are common seed distribution mechanisms. Flower structure, pollination and seed distribution mechanisms led to the success of the *Asteraceae* family members in increasing diversity compared to other families (Andersen 1993). In this study, *Astragalus* has the highest number of species. *Astragalus* increases its diversity at the species and subspecies taxon level due to its flower structure, pollination characteristics, and its

distribution in both steppes and woodland areas (Samad et al. 2014). *Astragalus* has also over 400 species and subspecies in the *Flora of Turkey* (Güner et al. 2012).

Table 4. Comparison of the first three families and genera in the Mt. Akdağ research area and its immediate surroundings for species richness.

Studies	The largest three families (Family/Taxon number/Ratio to whole flora)	The largest three genera (Taxon number)
Mt. Akdağ (this study)	Asteraceae/88/12.48 Fabaceae/66/9.36 Brassicaceae/59/8.37	<i>Astragalus</i> (14), <i>Euphorbia</i> (11), <i>Galium</i> (11), <i>Veronica</i> (11), <i>Alyssum</i> (11), <i>Trifolium</i> (9), <i>Geranium</i> (9), <i>Stachys</i> (9)
Mt. Inegöl (Yıldırım & Kılınç 2010)	Asteraceae/87/13.20 Fabaceae/69/10.40 Lamiaceae/60/9.10	<i>Astragalus</i> (17), <i>Verbascum</i> (12), <i>Centaurea</i> (12), <i>Silene</i> (10), <i>Salvia</i> (10)
Mt. Sakarat (Cansaran et al. 2010)	Asteraceae/70/14.17 Fabaceae/46/9.31 Poaceae/37/7.49	<i>Astragalus</i> (8), <i>Veronica</i> (7), <i>Bromus</i> (7), <i>Galium</i> (7), <i>Campanula</i> (6), <i>Verbascum</i> (6), <i>Rumex</i> (6), <i>Trifolium</i> (6)
Mt. Karaömer (Kaya et al. 2009)	Fabaceae/34/15.45 Lamiaceae/21/9.55 Asteraceae/17/7.72	<i>Astragalus</i> (9), <i>Silene</i> (5), <i>Lathyrus</i> (5), <i>Trifolium</i> (5), <i>Quercus</i> (4)
Between Direkli, Yassıçal and Abacı Mountains (Cansaran et al. 2007)	Asteraceae/47/12.60 Fabaceae/38/10.20 Lamiaceae/36/9.70	<i>Astragalus</i> (8), <i>Silene</i> (8), <i>Centaurea</i> (7), <i>Lathyrus</i> (6)
Lower Tersakan Valley (Celep et al. 2006)	Asteraceae/56/12.20 Fabaceae/42/9.20 Lamiaceae/35/7.60	<i>Astragalus</i> (7), <i>Alyssum</i> (7), <i>Vicia</i> (6), <i>Salvia</i> (6), <i>Centaurea</i> (5)
Mt. Çakır (Yücel 2005)	Asteraceae/33/16.92 Fabaceae/27/13.84 Lamiaceae/7/8.71	<i>Astragalus</i> (6), <i>Centaurea</i> (6), <i>Ornithogalum</i> (4), <i>Onobrychis</i> (4), <i>Dianthus</i> (3)
Mt. Tavşan (Korkmaz et al. 2005)	Asteraceae/78/12.90 Fabaceae/56/9.20 Lamiaceae/53/8.80	<i>Veronica</i> (13), <i>Salvia</i> (11), <i>Alyssum</i> (11), <i>Centaurea</i> (10)
Mt. Eđerli (Cansaran 2002)	Asteraceae/78/12.60 Fabaceae/77/12.40 Poaceae/42/ 6.70	<i>Astragalus</i> (23), <i>Silene</i> (10), <i>Lathyrus</i> (10), <i>Trifolium</i> (8), <i>Galium</i> (8), <i>Onosma</i> (8), <i>Salvia</i> (8)
Between Vermiş, Yuvacık Villages and Amasya Castle (Cansaran & Aydođdu 1998)	Asteraceae/46/11.10 Lamiaceae/38/9.20 Fabaceae/33/8.00	<i>Astragalus</i> (10), <i>Salvia</i> (9), <i>Convolvulus</i> (5), <i>Euphorbia</i> (5), <i>Silene</i> (5), <i>Verbascum</i> (5)
Between Amasya, Yozgat and Çorum (Kurt et al.	Fabaceae/85/15.85 Asteraceae/82/15.29	<i>Astragalus</i> (29), <i>Trifolium</i> (12), <i>Silene</i> (7), <i>Lathyrus</i> (7)

1998)	Poaceae/39/7.27	
Kuşpınartep (Peker 1988)	Asteraceae/58/12.10 Fabaceae/54/11.30 Lamiaceae/33/6.90	<i>Astragalus</i> (10), <i>Vicia</i> (7), <i>Trifolium</i> (7), <i>Ranunculus</i> (7), <i>Geranium</i> (6), <i>Alyssum</i> (6)

In the life form distributions of taxa, hemicryptophytes and therophytes are the most dominant growth forms in this study, respectively (Figure 1). In this study area, hemicryptophytes are the most common life form. This result is compatible with the normal spectrum. The life form spectrum of a geographical area reflects the adaptation of plants to the general climate types (Yıldırım et al. 2019). Therophytes are the second abundant life form in the study area. Therophytes have a high rate in the life form spectrum in semi-arid climates (Neffar et al. 2018).

This study has provided an important comparison in part for the conservation of biodiversity. In Table 5, taxa re-collected from the study area by the other authors of this study are seen after Alpınar (1979). Accordingly, 159 taxa belonging to 45 families were re-collected from Mt. Akdağ after a period of 40 years and their ratio to the entire flora is about 22.00%. The highest taxa numbers among the re-collected families are *Fabaceae*, *Asteraceae*, *Lamiaceae* and *Brassicaceae*, respectively. The fact that taxa belonging to these families are resistant to disturbances and survival may depend on their synthesis of secondary compounds, the dispersal mechanisms of fruits and seeds, and their mutualistic relationships with microorganisms for many years (Wink 2013).

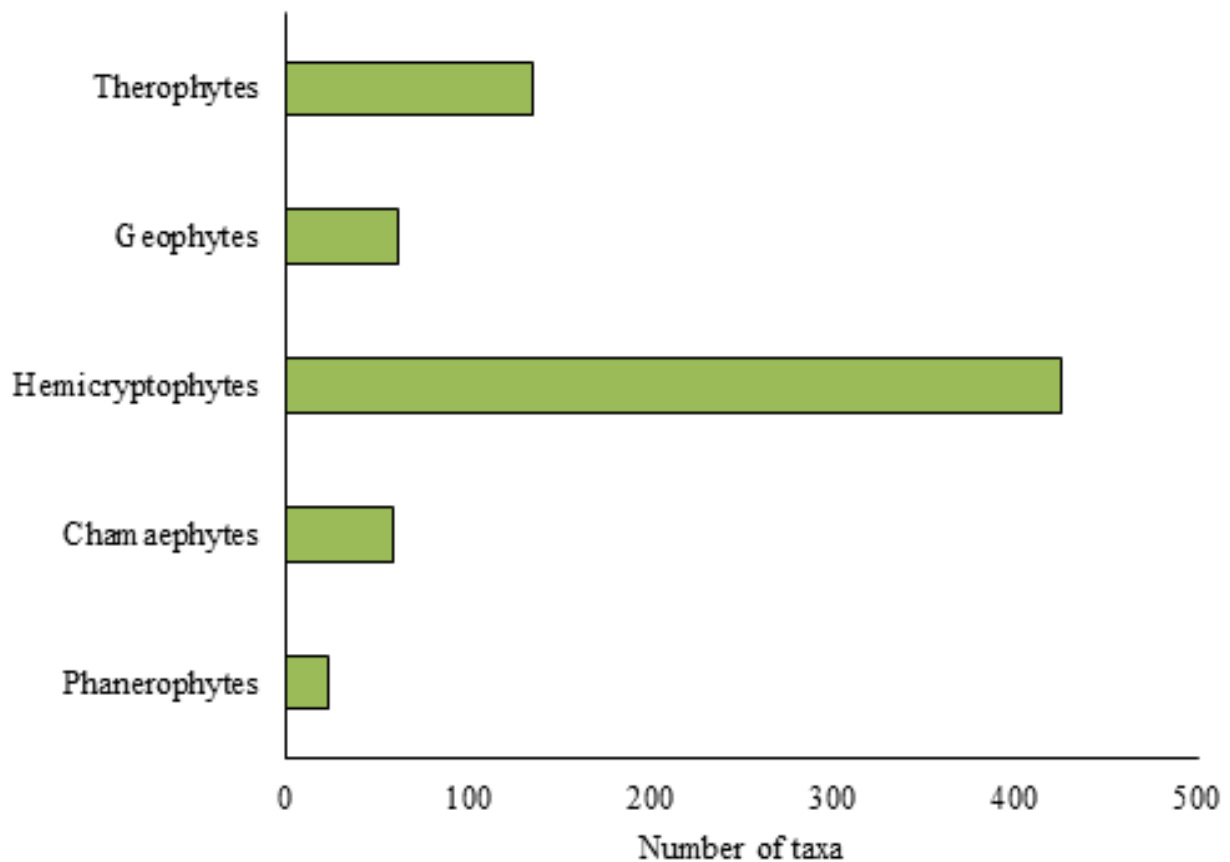


Figure 1. Life forms spectra of plant taxa in the study.

Table 5. Taxa re-collected by the other authors from Mt. Akdağ after Alpınar (1979).

Families	Taxa
Pinaceae	<i>Pinus nigra</i> J.F.Arnold subsp. <i>pallasiana</i> (Lamb.) Holmboe var. <i>pallasiana</i>
	<i>Pinus sylvestris</i> L. var. <i>hamata</i> Steven
Cupressaceae	<i>Juniperus communis</i> L. var. <i>saxatilis</i> Pall.
Colchicaceae	<i>Colchicum manissadjianii</i> (Azn.) K.Perss.
	<i>Colchicum umbrosum</i> Steven
Orchidaceae	<i>Epipactis helleborine</i> (L.) Crantz subsp. <i>bithynica</i> (Robatsch) Kreutz
	<i>Orchis mascula</i> L. subsp. <i>pinetorum</i> (Boiss. & Kotschy) G.Camus
	<i>Orchis punctulata</i> Steven ex Lindley
Iridaceae	<i>Crocus ancyrensis</i> (Herb.) Maw
	<i>Crocus speciosus</i> M.Bieb. subsp. <i>ilgazensis</i> B.Mathew
Amaryllidaceae	<i>Allium rotundum</i> L.
Asparagaceae	<i>Polygonatum orientale</i> Desf.
	<i>Muscari armeniacum</i> Leichtlin ex Baker
	<i>Scilla bifolia</i> L.
Juncaceae	<i>Luzula forsteri</i> (Sm.) DC. subsp. <i>caspica</i> Novikov
Poaceae	<i>Briza media</i> L.
	<i>Cynosurus cristatus</i> L.
Papaveraceae	<i>Corydalis erdelii</i> Zucc.
	<i>Corydalis solida</i> (L.) Clairv. subsp. <i>solida</i>
	<i>Papaver rhoeas</i> L.
Berberidaceae	<i>Epimedium pubigerum</i> (DC.) C.Morren & Decne.
Ranunculaceae	<i>Clematis vitalba</i> L.
	<i>Ranunculus brutius</i> Ten.
Crassulaceae	<i>Sedum acre</i> L. subsp. <i>acre</i>
	<i>Sedum album</i> L.
	<i>Sedum pallidum</i> M.Bieb.
Fabaceae	<i>Lotus corniculatus</i> L. var. <i>corniculatus</i>
	<i>Medicago lupulina</i> L.
	<i>Medicago x varia</i> Martyn
	<i>Onobrychis oxyodonta</i> Boiss. var. <i>armena</i> (Boiss. & Huet) Aktoklu
	<i>Genista albida</i> Willd.
	<i>Anthyllis vulneraria</i> L. subsp. <i>boissieri</i> (Sagorski) Bornm.
	<i>Astragalus angustifolius</i> Lam. subsp. <i>angustifolius</i> (Willd.) Hayek
	<i>Astragalus plumosus</i> Willd.
	<i>Astragalus strigillosus</i> Bunge
	<i>Trifolium pratense</i> L. var. <i>pratense</i>
	<i>Trifolium repens</i> L. var. <i>repens</i>
	<i>Coronilla scorpioides</i> (L.) W.D.J.Koch
<i>Argyrolobium biebersteinii</i> P.W.Ball	
<i>Dorycnium pentaphyllum</i> Scop. subsp. <i>anatolicum</i> (Boiss.) Gams	

	<i>Bituminaria bituminosa</i> (L.) C.H.Stirt.
	<i>Hedysarum varium</i> Willd. subsp. <i>varium</i>
	<i>Ononis spinosa</i> L. subsp. <i>leiosperma</i> (Boiss.) Sirj.
	<i>Cytisus pygmaeus</i> Willd.
	<i>Securigera varia</i> (L.) Lassen
	<i>Lathyrus aureus</i> (Steven) D.Brandza
	<i>Lathyrus laxiflorus</i> (Desf.) O.Kuntze subsp. <i>laxiflorus</i>
	<i>Lathyrus tukhtensis</i> Czechtz
	<i>Melilotus officinalis</i> (L.) Desr.
Polygalaceae	<i>Polygala pruinosa</i> Boiss. subsp. <i>pruinosa</i>
	<i>Polygala supina</i> Schreb. subsp. <i>supina</i>
Rosaceae	<i>Crataegus tanacetifolia</i> (Poir.) Pers.
	<i>Pyracantha coccinea</i> M.Roem.
	<i>Rubus canescens</i> DC. var. <i>canescens</i>
	<i>Alchemilla caucasica</i> Buser
	<i>Alchemilla holocycla</i> Rothm.
	<i>Rosa canina</i> L.
Rhamnaceae	<i>Paliurus spina-christi</i> P.Mill.
Urticaceae	<i>Urtica dioica</i> L. subsp. <i>dioica</i>
Betulaceae	<i>Corylus avellana</i> L. var. <i>avellana</i>
Fagaceae	<i>Fagus orientalis</i> Lipsky
	<i>Quercus cerris</i> L.
Hypericaceae	<i>Hypericum linarioides</i> Bosse subsp. <i>linarioides</i>
	<i>Hypericum organifolium</i> Willd. var. <i>organifolium</i>
Violaceae	<i>Viola sieheana</i> W.Becker
Euphorbiaceae	<i>Euphorbia amygdaloides</i> L. subsp. <i>amygdaloides</i>
Geraniaceae	<i>Geranium pyrenaicum</i> Burm.f.
Onagraceae	<i>Epilobium montanum</i> L.
Anacardiaceae	<i>Pistacia palaestina</i> Boiss.
Malvaceae	<i>Malva neglecta</i> Wallr.
Thymelaeaceae	<i>Daphne oleoides</i> Schreb. subsp. <i>oleoides</i>
	<i>Daphne pontica</i> L. subsp. <i>pontica</i>
Cistaceae	<i>Helianthemum nummularium</i> (L.) Mill. subsp. <i>nummularium</i>
	<i>Helianthemum oelandicum</i> (L.) DC. subsp. <i>incanum</i> (Willk.) G.López
	<i>Helianthemum tomentosum</i> Gray
Brassicaceae	<i>Cardamine bulbifera</i> (L.) Crantz
	<i>Thlaspi arvense</i> L.
	<i>Microthlaspi perfoliatum</i> (L.) F.K.Mey.
	<i>Erysimum cuspidatum</i> (M.Bieb.) DC.
	<i>Erysimum pulchellum</i> (Willd.) J. Gay subsp. <i>pulchellum</i>
	<i>Alyssum strigosum</i> Banks & Sol. subsp. <i>strigosum</i>
	<i>Noccaea annua</i> (K.Koch) F.K. Mey.

	<i>Arabis alpina</i> L. subsp. <i>alpina</i>
	<i>Fibigia clypeata</i> (L.) Medik. subsp. <i>clypeata</i> var. <i>eriocarpa</i> (DC.) Post
	<i>Capsella bursa-pastoris</i> (L.) Medik.
Polygonaceae	<i>Rumex acetosella</i> L.
	<i>Rumex crispus</i> L.
Caryophyllaceae	<i>Stellaria holostea</i> L.
	<i>Silene italica</i> (L.) Pers. subsp. <i>italica</i>
	<i>Silene latifolia</i> Poir. subsp. <i>ericalycinae</i> (Boiss.) Greuter & Burdet
	<i>Silene olympica</i> Boiss. var. <i>olympica</i>
	<i>Dianthus leptopetalus</i> Willd.
Cornaceae	<i>Cornus mas</i> L.
	<i>Cornus sanguinea</i> L. subsp. <i>australis</i> (C.A.Mey.) Jáv.
Primulaceae	<i>Cyclamen coum</i> Mill. subsp. <i>coum</i>
Rubiaceae	<i>Galium tricornutum</i> Dandy
	<i>Galium verum</i> L. subsp. <i>verum</i>
	<i>Asperula involucrata</i> Wahlenb
	<i>Asperula pestalozzae</i> Boiss.
	<i>Cruciata laevipes</i> Opiz
Boraginaceae	<i>Cerithe minor</i> L. subsp. <i>auriculata</i> (Ten.) Domac
	<i>Anchusa azurea</i> Mill. var. <i>azurea</i>
	<i>Echium italicum</i> L.
	<i>Myosotis lithospermifolia</i> Hornem.
Convolvulaceae	<i>Convolvulus arvensis</i> L.
	<i>Convolvulus assyricus</i> Griseb.
Oleaceae	<i>Phillyrea latifolia</i> L.
Plantaginaceae	<i>Linaria corifolia</i> Desf.
	<i>Digitalis ferruginea</i> L. subsp. <i>ferruginea</i>
	<i>Digitalis lamarckii</i> Ivanina
	<i>Globularia trichosantha</i> Fisch. & C.A.Mey. subsp. <i>trichosantha</i>
	<i>Plantago lanceolata</i> L.
	<i>Veronica gentianoides</i> Vahl subsp. <i>gentianoides</i> var. <i>alpina</i> (Hauskn. ex) Öztürk & M.A.Fisch.
	<i>Veronica multifida</i> L.
Lamiaceae	<i>Prunella laciniata</i> (L.) L.
	<i>Prunella vulgaris</i> L.
	<i>Scutellaria orientalis</i> L. subsp. <i>pinnatifida</i> J.R.Edm.
	<i>Mentha longifolia</i> (L.) L. subsp. <i>longifolia</i>
	<i>Salvia tomentosa</i> Mill.
	<i>Salvia verticillata</i> L. subsp. <i>amasiaca</i> (Freyn & Bornm.) Bornm.
	<i>Teucrium chamaedrys</i> L. subsp. <i>sypshirense</i> (K.Koch) Rech.f.
	<i>Lamium album</i> L. subsp. <i>crinitum</i> (Montbret & Aucher ex Benth.) Mennema

	<i>Ajuga chamaepitys</i> (L.) Schreb. subsp. <i>chia</i> (Schreb.) Arcang.
	<i>Ajuga orientalis</i> L.
	<i>Marrubium astracanicum</i> Jacq. subsp. <i>astracanicum</i>
	<i>Nepeta nuda</i> L. subsp. <i>albiflora</i> (Boiss.) Gams
Campanulaceae	<i>Campanula involucrata</i> Aucher ex A.DC.
	<i>Campanula rapunculoides</i> L.
	<i>Campanula saxonorum</i> Gand.
	<i>Asyneuma rigidum</i> (Willd.) Grossh. subsp. <i>rigidum</i>
Asteraceae	<i>Tripleurospermum oreades</i> (Boiss.) Rech.f. var. <i>oreades</i>
	<i>Cyanus depressus</i> (M.Bieb.) Soják
	<i>Cyanus triumfettii</i> (All.) Dostál ex Á.Löve & D.Löve subsp. <i>triumfettii</i>
	<i>Onopordum acanthium</i> L.
	<i>Tanacetum armenum</i> (DC.) Sch.Bip.
	<i>Tanacetum parthenium</i> (L.) Sch.Bip.
	<i>Tanacetum poteriifolium</i> (Ledeb.) Grierson
	<i>Lapsana communis</i> L. subsp. <i>intermedia</i> (M.Bieb.) Hayek var. <i>intermedia</i>
	<i>Scorzonera cana</i> (C.A.Mey.) Griseb. var. <i>cana</i>
	<i>Doronicum orientale</i> Hoffm.
	<i>Crepis sancta</i> (L.) Bornm. subsp. <i>nemausensis</i> (P.Fourn.) Babç.
	<i>Pilosella hoppeana</i> (Schult.) F.W.Schultz & Sch.Bip. subsp. <i>troica</i> (Zahn) P.D.Sell & C.West
	<i>Psephellus hypoleucus</i> (DC.) Boiss.
	<i>Cota tinctoria</i> (L.) J.Gay ex Guss. var. <i>tinctoria</i>
	<i>Taraxacum microcephaloides</i> Soest
	<i>Taraxacum serotinum</i> (Waldst. & Kit.) Fisch.
	<i>Centaurea virgata</i> Lam.
	<i>Petasites hybridus</i> (L.) G.Gaertn., B.Mey. & Scherb.
Adoxaceae	<i>Viburnum lantana</i> L.
	<i>Sambucus ebulus</i> L.
Caprifoliaceae	<i>Lonicera orientalis</i> Lam.
	<i>Morina persica</i> L. var. <i>persica</i>
Apiaceae	<i>Laser trilobum</i> (L.) Borkh.
	<i>Bupleurum falcatum</i> L. subsp. <i>persicum</i> (Boiss.) Koso-Pol.
	<i>Bunium microcarpum</i> (Boiss.) Freyn & Bornm. subsp. <i>bourgaei</i> (Boiss.) Hedge & Lamond
	<i>Eryngium campestre</i> L. var. <i>virens</i> (Link) Weins
	<i>Eryngium giganteum</i> M.Bieb.
	<i>Torilis leptophylla</i> (L.) Rech.f.

Local vascular flora in general biological richness is an important database. Local plant biodiversity is shaped by climate, soil and historical processes. Local flora guides researchers in studying plant taxonomy, genetics and evolution. The present study shows how plant diversity and

chorology change in a floristic transition zone between the Euro-Siberian and Irano-Turanian floristic regions. In this study, the taxa ranking was conducted according to the APG IV system (Byng et al. 2016) and these arrangements may also contribute to the *Illustrated Flora of Turkey*, which has been re-written.

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Appendix 1. The Classification of Vascular Flora at Mt. Akdağ (Amasya, Turkey).

PLANTAE

PTERIDOPHYTA

EQUISETOPHYTINA

EQUISETOPSIDA

EQUISETIDAE

EQUISETALES

EQUISETACEAE

Equisetum telmateia Ehrh. [6], 23.05.1977, Alpınar 36981, H.

PTERIDOPHYTINA

PTERIDOPSIDA

PTERIDIDAE

PTERIDALES

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) Kuhn [1, 2, 3], 21.06.2016, Yalçın 569a, 569b, 569c, H.

CYSTOPTERIDACEAE

Cystopteris fragilis (L.) Bernh. [15], 22.05.1977, Alpınar 36930, H.

ASPENIACEAE

Asplenium ruta-muraria L. [6], 29.03.1977, Alpınar 36608, H.*Asplenium trichomanes* L. [11], 27.03.1977, Alpınar 36608, H.

DRYOPTERIDACEAE

Polystichum aculeatum (L.) Roth [16], 14.08.1977, Alpınar 38478, H.

MAGNOLIOPHYTA

PINOPHYTINA

PINOPSIDA

PINIDAE

PINALES

PINACEAE

Pinus brutia Ten. var. *brutia* [7], 23.06.2016, Yalçın 650, P, E. Medit.*Pinus nigra* J.F.Arnold subsp. *pallasiana* (Lamb.) Holmboe var. *pallasiana* [1, 2, 3], 21.06.2016, Yalçın 516a, 516b, 516c, P.*Pinus sylvestris* L. var. *hamata* Steven [6], 22.06.2016, Yalçın 676, P, Euro.-Sib.

CUPRESSALES

CUPRESSACEAE

Juniperus communis L. var. *saxatilis* Pall. [6, 9, 11], 22.06.2016, Yalçın 643a, 643b, 643c, Ch.*Juniperus excelsa* M.Bieb. subsp. *excelsa* [6], 23.11.1976, Alpınar 36306, P.*Juniperus foetidissima* Willd. [17], 29.03.197, Alpınar 36602, P.*Juniperus oxycedrus* L. subsp. *oxycedrus* var. *oxycedrus* [1, 2, 3, 4, 5, 6, 7], 19.09.2019, Yalçın 529a, 529b, 529c, 529d, 529e, 529f, 529g, Ch.

TAXACEAE

Taxus baccata L. [16], 14.08.1977, Alpınar 38450, P.

MAGNOLIOPHYTINA

MAGNOLIOPSIDA

ALISMATALES

ARACEAE

Arum hygrophilum Boiss. subsp. *euxinum* (R.R.Mill) Alpınar [5], 22.06.2015, Yalçın 612, G, Euro.-Sib., End., LC.

Arum orientale M.Bieb. [10], 23.05.1977, Alpınar 36984, G, Euro.-Sib.

LILIALES

COLCHICACEAE

Colchicum manissadjianii (Azn.) K.Perss. [14], 01.05.2019, Yalçın 694, G, Euro.-Sib., End., NT.

Colchicum speciosum Steven [21], 31.08.1978, Alpınar 38979, G, Euro.-Sib.

Colchicum umbrosum Steven [6], 19.09.2019, Yalçın 507, G, Euro.-Sib.

Colchicum triphyllum Kunze [21], 09.04.1977, Alpınar 36623, G, Medit.

LILIACEAE

Tulipa armena Boiss. var. *armena* [20], 22.05.1977, Alpınar 36942 a, G, Ir.-Tur.

Gagea glacialis K.Koch [9, 14], 01.05.2019, Yalçın 698a, 698b, G, Ir.-Tur.

Gagea liotardii (Sternb.) Schult. & Schult.f. [21], 29.03.1977, Alpınar 36603, G.

ASPARAGALES

ORCHIDACEAE

Anacamptis pyramidalis (L.) Rich. [16], 19.05.1978, Alpınar 39745, G.

Neottia nidus-avis (L.) Rich. [18], 26.05.1977, Alpınar 37115, G, Euro.-Sib.

Epipactis helleborine (L.) Crantz subsp. *bithynica* (Robatsch) Kreutz [1, 2, 3], 21.06.2016, Yalçın 567a, 567b, 567c, G, End., VU.

Epipactis microphylla (Ehrh.) Sw. [16], 24.06.1977, Alpınar 37919 a, G, Euro.-Sib.

Epipactis pontica Taubenheim [5, 7], 22.06.2016, Yalçın 409a, 409b, G.

Platanthera bifolia (L.) Rich. [1, 2, 3], 21.06.2016, Yalçın 418, G, Euro.-Sib.

Dactylorhiza iberica (M.Bieb. ex Willd.) Soó [26], 12.08.1977, Alpınar 38394, G, E.Medit.

Dactylorhiza osmanica (Klinge) P.F.Hunt & Summerh. var. *anatolica* (Nelson) Renz & Taubenheim [1, 2, 3], 21.06.2016, Yalçın 549a, 549b, 549c, G, Ir.-Tur., End., NT.

Dactylorhiza romana (Seb.) Soó subsp. *romana* [2], 27.05.1977, Alpınar 37125, G, Ir.-Tur. Medit.

Dactylorhiza urvilleana (Steudel) Baumann & Künkele subsp. *urvilleana* [11], 27.05.1977, Alpınar 37135, G.

Cephalanthera damasonium (Mill.) Druce [18], 26.05.1977, Alpınar 37089, G, Euro.-Sib.

Cephalanthera rubra (L.) Rich. [1, 2, 3, 4], 21.06.2016, Yalçın 554a, 554b, 554c, 554d, G.

Himantoglossum caprinum (M.Bieb.) Spreng. [1, 2, 3], 21.06.2016, Yalçın 416a, 416b, 416c, G, E.Medit.

Orchis mascula L. subsp. *pinetorum* (Boiss. & Kotschy) G.Camus [4], 23.06.2016, Yalçın 347, G, E.Medit.

Orchis pallens L. [10], 22.05.1977, Alpınar 36919, G, Euro.-Sib.

Orchis punctulata Steven ex Lindley [4], 23.06.2016, Yalçın 346, G, E.Medit.

Orchis spitzelii Sauter ex W.D.J.Koch. [22], 23.05.1977, Alpınar 36997, G, Medit.

Orchis tridentata Scop. [11], 27.05.1977, Alpınar 37141, G, Medit.

Limodorum abortivum (L.) SW. var. *abortivum* [1, 2, 3], 21.06.2016, Yalçın 417a, 417b, 417c, G.

IRIDACEAE

Crocus ancyrensis (Herb.) Maw [10], 01.05.2019, Yalçın 484, G, Ir.-Tur.

Crocus speciosus M.Bieb. subsp. *ilgazensis* B.Mathew [6, 9, 14], 19.09.2019, Yalçın 506a, 506b, 506c, G, Euro.-Sib., End., NT.

Iris histrioides (G.F.Wilson) S. Arn. [20], 22.05.1977, Alpınar 37322, G, End., VU.

Iris orientalis Mill. [29], 24.05.1978, Alpınar 39867, G.

Iris suaveolens Boiss. & Reut. [16], 09.05.1977, Alpınar 36628a, G, Euro.-Sib.

AMARYLLIDACEAE

Sternbergia colchiciflora Waldst. & Kit. [10], 02.10.1976, Alpınar 36171, G.

Allium moschatum L. [10], 01.10.1976, Alpınar 36146, G, Medit.

Allium paniculatum L. subsp. *paniculatum* [10], 01.10.1976, Alpınar 36150, G, Medit.

Allium rotundum L. [4], 19.09.2019, Yalçın 510, G.

Allium tauricola Boiss. [24], 02.10.1976, Alpınar 36188, G, Ir.-Tur., End., LC.

Galanthus fosteri Baker [27], 30.03.1977, Alpınar 36618, G.

ASPARAGACEAE

Ornithogalum nivale Boiss. [9], 01.05.2019, Yalçın 475, G, E.Medit., End., LC.

Ornithogalum oligophyllum E.D.Clarke [21], 29.03.1977, Alpınar 36604, G.

Ornithogalum orthophyllum Ten. subsp. *kochii* (Parl.) Maire & Weiller [9], 01.05.2019, Yalçın 476, G.

Ornithogalum pyramidale L. [25], 05.06.1974, Alpınar 29519, G.

Ornithogalum umbellatum L. [11], 27.05.1977, Alpınar 37107, G.

Polygonatum orientale Desf. [5], 22.06.2016, Yalçın 618, H.

Muscari armeniacum Leichtlin ex Baker [22], 01.05.2019, Yalçın 489, G.

Muscari aucheri (Boiss.) Baker [9, 14], 01.05.2019, Yalçın 487a, 487b, G., End., LC.

Muscari azureum Fenzl [21], 31.03.1978, Alpınar 38956, G., End., LC.

Muscari botryoides (L.) Mill. [20], 02.05.1977, Alpınar 36942, G.

Muscari neglectum Guss. ex Ten. [1, 2, 3, 4, 7], 01.05.2019, Yalçın 489b, 489c, 489d, 489e, 489f, G.

Muscari racemosum Mill. [9], 05.06.1974, Alpınar 29473, G, E.Medit., End., LC.

Scilla bifolia L. [5, 6], 01.05.2019, Yalçın 621a, 621b, G, Medit.

POALES

JUNCACEAE

Juncus articulatus L. subsp. *articulatus* [9], 11.08.1977, Alpınar 38359, H, Euro.-Sib.

Juncus inflexus L. subsp. *inflexus* [9], 11.08.1977, Alpınar 38358, H.

Luzula forsteri (Sm.) DC. subsp. *caspica* Novikov [5, 6], 22.06.2016, Yalçın 623a, 623b, H, Euro.-Sib.

Luzula stenophylla Steud. [9], 05.06.1974, Alpınar 29433, H.

CYPERACEAE

Carex atrata L. subsp. *atrata* [1, 2, 3], 21.06.2016, Yalçın 543a, 543b, 543c, H, Euro.-Sib.

Carex cuprina (Sándor ex Heuff.) Nendtv. ex A. Kern. [6], 22.06.2016, Yalçın 677, H.

Carex divulsa Stokes [22], 05.06.1974, Alpınar 29507, H.

Carex flacca Schreb. subsp. *erythrostachys* (Hoppe) Holub [1, 2, 3, 4, 9], 21.06.2016, Yalçın 420a, 420b, 420c, 420d, 420e, H, Medit.

Carex panicea L. [11], 23.06.2016, Yalçın 341, H, Euro.-Sib.

POACEAE

- Hordeum bulbosum* L. [8], 22.06.2016, Yalçın 685, G.
Calamagrostis epigeios (L.) Roth [8], 22.06.2016, Yalçın 395, H, Euro.-Sib.
Vulpia ciliata Dumort. subsp. *ciliata* [12], 22.06.2016, Yalçın 396, H.
Alopecurus vaginatus (Willd.) Kunth [9], 23.06.2016, Yalçın 337, H.
Festuca heterophylla Lam. [4], 23.06.2016, Yalçın 609, H, Euro.-Sib.
Festuca valesiaca Schleich. ex Gaudin [11], 23.06.2016, Yalçın 334, H.
Festuca woronowii Hack. subsp. *turcica* Markgr.-Dann. [14], 23.06.2016, Yalçın 362, H, End., NT.
Briza media L. [1, 2, 3, 4, 9], 21.06.2016, Yalçın 555a, 555b, 555c, 555d, 555e, H.
Chrysopogon gryllus (L.) Trin. subsp. *gryllus* [7], 22.06.2016, Yalçın 394, H.
Bromus arvensis L. [13], 22.06.2016, Yalçın 609, T.
Bromus tectorum L. [22], 05.06.1974, Alpınar 29488, H.
Bromus tomentellus Boiss. subsp. *tomentellus* [4, 9, 10, 11, 12, 13], 23.06.2016, Yalçın 355a, 355b, 355c, 355d, 355e, 355f, H, Ir.-Tur.
Bromus variegatus M.Bieb. subsp. *variegatus* [6], 23.06.2016, Yalçın 339, H, Ir.-Tur.
Melica ciliata L. subsp. *ciliata* [9, 13], 22.06.2016, Yalçın 660a, 660b, H.
Melica uniflora Retz. [16], 14.08.1977, Alpınar 38477, H, Euro.-Sib.
Trisetum flavescens (L.) P.Beauv. [14], 23.06.2016, Yalçın 363, H, Euro.-Sib.
Stipa holosericea Trin. [13], 22.06.2016, Yalçın 392, H, Euro.-Sib.
Aegilops triuncialis L. subsp. *triuncialis* [4], 21.06.2016, Yalçın 597, T.
Holcus lanatus L. [26], 12.08.1977, Alpınar 38388, H, Euro.-Sib.
Poa angustifolia L. [14], 23.06.2016, Yalçın 364, H.
Poa bulbosa L. [1, 2, 3, 5, 6, 9, 10, 12, 14], 21.06.2016, Yalçın 580a, 580b, 580c, 580d, 580e, 580f, 580g, 580h, 580j, G.
Poa pratensis L. [5, 6, 8, 9, 10, 12], 21.06.2016, Yalçın 620a, 620b, 620c, 620d, 620e, 620f, H.
Poa trivialis L. [1, 2, 3, 4, 6], 21.06.2016, Yalçın 544a, 544b, 544c, 544d, 544e, H.
Cynosurus cristatus L. [6, 8], 22.06.2016, Yalçın 681a, 681b, H, Euro.-Sib.
Cynosurus echinatus L. [1, 2, 3], 21.06.2016, Yalçın 579a, 579b, 579c, T, Medit.
Agrostis capillaris L. var. *capillaris* [9], 01.10.1976, Alpınar 36152, H.
Brachypodium pinnatum (L.) P. Beauv. [9], 23.06.2016, Yalçın 336, H, Euro.-Sib.
Brachypodium sylvaticum (Huds.) P. Beauv. [7], 22.06.2016, Yalçın 393, H, Euro.-Sib.
Sesleria alba Sm. [6], 23.06.2016, Yalçın 338, H.
Elymus elongatiformis (Drobow) Assadi [8], 22.06.2016, Yalçın 465, H, Ir.-Tur.
Dactylis glomerata L. subsp. *glomerata* [1, 2, 3, 4, 5, 6, 8], 21.06.2016, Yalçın 552a, 552b, 552c, 552d, 552e, 552f, 552g, H, Euro.-Sib.
Dactylis glomerata L. subsp. *hispanica* (Roth) Nyman [28], 07.08.1978, Alpınar 41654, H.
Helictotrichon versicolor (Vill.) Schult. & Schult.f. [10], 23.06.2016, Yalçın 365, H, Euro.-Sib.
- RANUNCULALES
PAPAVERACEAE
Roemeria hybrida (L.) DC. subsp. *hybrida* [19], 25.05.1977, Alpınar 37044, T.
Corydalis erdelii Zucc. [6], 01.05.2019, Yalçın 705, G.
Corydalis solida (L.) Clairv. subsp. *solida* [5, 6, 7], 01.05.2019, Yalçın 522a, 522b, 522c, G.
Glaucium corniculatum (L.) Rudolph var. *corniculatum* [19], 25.05.1977, Alpınar 37072, T.
Papaver dubium L. subsp. *dubium* [19], 25.05.1977, Alpınar 37019, T.

- Papaver hybridum* L. [19], 25.05.1977, Alpınar 37002, T.
Papaver lacerum Popov [19], 25.05.1977, Alpınar 37011, T.
Papaver rhoeas L. [8, 13], 22.06.2016, Yalçın 662a, 662b, T.
Papaver somniferum L. var. *somniferum* [19], 24.05.1978, Alpınar 39862, T, Ir.-Tur.
Fumaria asepalae Boiss. [22], 05.06.1974, Alpınar 29459a, T, Ir.-Tur.
Fumaria vaillantii Loisel. [22], 05.06.1974, Alpınar 29459, T.
Hypecoum pendulum L. [19], 25.05.1977, Alpınar 37015a, T.
Hypecoum pseudograndiflorum Petrovic [19], 25.05.1977, Alpınar 37015, T.

BERBERIDACEAE

- Berberis vulgaris* L. [12], 12.08.1977, Alpınar 38421, Ch.
Epimedium pubigerum (DC.) C.Morren & Decne. [1, 2, 3], 21.06.2016, Yalçın 570a, 570b, 570c, Ch.

RANUNCULACEAE

- Clematis vitalba* L. [4, 13], 21.06.2016, Yalçın 584a, 584b, L.
Nigella orientalis L. [19], 25.05.1977, Alpınar 37027, T.
Anemone blanda Schott & Kotschy [15], 22.05.1977, Alpınar 36927, G.
Consolida orientalis (J.Gay) Schrödinger [19], 25.05.1977, Alpınar 37043, T.
Thalictrum minus L. var. *minus* [12], 12.08.1977, Alpınar 38414, H.
Adonis aestivalis L. subsp. *aestivalis* [6], 05.06.1974, Alpınar 29465, T.
Adonis flammea Jacq. [18], 26.05.1977, Alpınar 37084, T.
Ranunculus argyreus Boiss. [20], 22.05.1977, Alpınar 36949, H.
Ranunculus arvensis L. [19], 25.05.1977, Alpınar 37004, T.
Ranunculus brutius Ten. [5], 22.06.2016, Yalçın 616, H, Ir.-Tur.
Ranunculus dissectus M.Bieb. subsp. *sibthorpii* P.H. Davis [16], 19.05.1978, Alpınar 39741, H.
Ranunculus ficaria subsp. *calthifolius* (Rehb.) Arcang. [21], 29.03.1977, Alpınar 36605, H.
Ranunculus kotschyi Boiss. [16], 19.05.1978, Alpınar 39742, H.

SAXIFRAGALES

SAXIFRAGACEAE

- Saxifraga cymbalaria* L. [16], 08.10.1978, Alpınar 41590, T.
Saxifraga rotundifolia L. subsp. *rotundifolia* [8], 22.06.2016, Yalçın 691, H, Ir.-Tur.

CRASSULACEAE

- Sedum acre* L. subsp. *acre* [13], 21.06.2016, Yalçın 646, H.
Sedum album L. [4], 21.06.2016, Yalçın 598, H.
Sedum alpestre Vill. [14], 23.06.2016, Yalçın 696, H.
Sedum hispanicum L. [25], 25.05.1977, Alpınar 37005, H, Ir.-Tur.
Sedum pallidum M.Bieb. [6, 8, 13], 22.06.2016, Yalçın 456a, 456b, 456c, H.
Phedimus stoloniferus (S.G.Gmel.) t'Hart [16], 14.08.1977, Alpınar 38465, H.
Sempervivum brevipilum Muirhead [16], 10.08.1978, Alpınar 41594, H, Ir.-Tur., End., NT.

FABALES

FABACEAE

- Lotus corniculatus* L. var. *alpinus* Ser. [16], 24.06.1977, Alpınar 37887, H.
Lotus corniculatus L. var. *corniculatus* [10], 23.06.2016, Yalçın 699, H.
Lotus corniculatus L. var. *tenuifolius* L. [8, 11], 23.06.2016, Yalçın 312a, 312b, H.

- Medicago fischeriana* (Ser.) Trautv. [16], 07.10.1978, Alpınar 41569, T, Ir.-Tur.
- Medicago lupulina* L. [4, 6, 8, 10, 12, 14], 23.06.2016, Yalçın 308a, 308b, 308c, 308d, 308e, 308f, H.
- Medicago monantha* (C.A.Mey.) Trautv. [19], 25.05.1977, Alpınar 37039, T, Ir.-Tur.
- Medicago phrygia* (Boiss. & Balansa) E. Small [26], 28.06.1977, Alpınar 38035, T.
- Medicago x varia* Martyn [4], 23.06.2016, Yalçın 307, H
- Onobrychis cornuta* (L.) Desv. [24], 23.05.1977, Alpınar 36992, Ch, Ir.-Tur.
- Onobrychis huetiana* Boiss. [19], 25.05.1977, Alpınar 37067, H, Ir.-Tur., End., NT.
- Onobrychis oxyodonta* Boiss. var. *armena* (Boiss. & Huet) Aktoklu [4, 8], 21.06.2016, Yalçın 593a, 593b, H.
- Genista albida* Willd. [4, 6], 23.06.2016, Yalçın 309a, 309b, Ch.
- Genista januensis* Viv. subsp. *lydia* (Boiss.) Kit Tan & Ziel. [7, 9, 13], 01.05.2019, Yalçın 482a, 482b, 482c, Ch, E.Medit.
- Anthyllis vulneraria* L. subsp. *boissieri* (Sagorski) Bornm. [1, 2, 3, 4, 6], 21.06.2016, Yalçın 582a, 582b, 582c, 582d, 582e, H.
- Anthyllis vulneraria* L. subsp. *praepropera* (Kerner) Bornm. [18], 26.05.1977, Alpınar 37111, H, Medit.
- Astragalus angustifolius* Lam. subsp. *angustifolius* (Willd.) Hayek [11], 21.06.2016, Yalçın 701, Ch.
- Astragalus amoenus* Fenzl [16], 19.05.1978, Alpınar 39757, H, Ir.-Tur., End., LC.
- Astragalus barba-jovis* DC. [22], 11.08.1977, Alpınar 38367 Ch, Ir.-Tur.
- Astragalus brachypterus* Fisch. [16], 24.06.1977, Alpınar 37866, Ch, Ir.-Tur.
- Astragalus densifolius* (Sm.) Torr. subsp. *amasiensis* (Freyn) Aytaç & Ekim [18], 25.05.1977, Alpınar 37086, H, Ir.-Tur.
- Astragalus leucothrix* Freyn & Bornm. [7], 22.06.2016, Yalçın 402, H, Ir.-Tur., End., LC.
- Astragalus macrocephalus* Willd. subsp. *macrocephalus* [19], 25.05.1977, Alpınar 37077, H, Ir.-Tur.
- Astragalus microcephalus* Willd. subsp. *microcephalus* [11, 13], 21.06.2016, Yalçın 642a, 642b, Ch, Ir.-Tur.
- Astragalus micropterus* Fisch. [13], 22.06.2016, Yalçın 658, Ch, Ir.-Tur., End., LC.
- Astragalus plumosus* Willd. [9, 11], 23.06.2016, Yalçın 310a, 310b, Ch, Ir.-Tur.
- Astragalus spruneri* Boiss. [16], 18.05.1978, Alpınar 39738, H, Medit.
- Astragalus strigillosus* Bunge [4], 01.05.2019, Yalçın 466, H, Ir.-Tur.
- Astragalus syringus* D.F.Chamb. [16], 19.05.1978, Alpınar 39740, H, End., VU.
- Astragalus vaginans* DC. [7], 16.06.2020, Yalçın 708, Ch, End., LC.
- Glycyrrhiza glabra* L. var. *glandulifera* (Waldst. & Kit.) Regel & Herder [1, 2, 3], 21.06.2016, Yalçın 571a, 571b, 571c, Ch.
- Colutea cilicica* Boiss. & Balansa [7], 23.06.2016, Yalçın 653, Ch.
- Trifolium arvense* L. var. *arvense* [1, 2, 3, 11, 13], 01.05.2019, Yalçın 575a, 575b, 575c, 575d, 575e, T.
- Trifolium campestre* Schreb. subsp. *campestre* var. *campestre* [1, 2, 3, 4], 21.06.2016, Yalçın 581a, 581b, 581c, 581d, T.
- Trifolium elongatum* Willd. [1, 2, 3, 4], 21.06.2016, Yalçın 548a, 548b, 548c, 548d, H, End., LC.

- Trifolium hirtum* All. [19], 25.05.1977, Alpınar 37007, T, Medit.
- Trifolium hybridum* var. *anatolicum* (Boiss.) Boiss. [14], 23.06.2016, Yalçın 366, H.
- Trifolium patens* Schreb. [19], 25.05.1977, Alpınar 37006, T.
- Trifolium pratense* L. var. *pratense* [1, 2, 3, 4, 5, 6, 8], 21.06.2016, Yalçın 537a, 537b, 537c, 537d, 537e, 537f, 537g, H.
- Trifolium purpureum* Lois. var. *purpureum* [19], 25.05.1977, Alpınar 37026, T, E.Medit.
- Trifolium repens* L. var. *repens* [1, 2, 3, 5, 6, 8, 10, 11, 12, 13], 23.06.2016, Yalçın 367a, 367b, 367c, 367d, 367e, 367f, 367g, 367h, 367i, 367j, H.
- Trifolium tumens* Steven & M.Bieb. var. *tumens* [11], 23.06.2016, Yalçın 313, H.
- Coronilla scorpioides* (L.) W.D.J.Koch [13], 22.06.2016, Yalçın 659, T.
- Trigonella spicata* Sibth. & Sm. [7], 22.06.2016, Yalçın 401, T.
- Trigonella spruneriana* Boiss. [19], 25.05.1977, Alpınar 37022, T.
- Argyrobium biebersteinii* P.W.Ball [1, 2, 3, 4, 6], 21.06.2016, Yalçın 576a, 576b, 576c, 576d, 576e, H.
- Vicia cracca* L. subsp. *cracca* [1, 2, 3, 4, 6,], 21.06.2016, Yalçın 539a, 539b, 539c, 539d, 539e, H, Ir.-Tur.
- Vicia cracca* L. subsp. *tenuifolia* (Roth) Gaudin [22], 05.06.1974, Alpınar 29455, H.
- Vicia crocea* (Desf.) B.Fedtsch. [11], 27.05.1977, Alpınar 37138, H.
- Vicia peregrina* L. [25], 05.06.1974, Alpınar 29516, T.
- Vicia sativa* L. subsp. *sativa* [19], 25.05.1977, Alpınar 37017, T.
- Vicia truncatula* Fisch. ex M.Bieb. [18], 26.05.1977, Alpınar 37117, H, Euro.-Sib.
- Vicia villosa* Roth subsp. *dasycarpa* (Ten.) Cav. [22], 05.06.1974, Alpınar 29504, H.
- Dorycnium graecum* (L.) Ser. [3, 22,], 22.05.1977, Alpınar 37154, 29506, H.
- Dorycnium pentaphyllum* Scop. subsp. *anatolicum* (Boiss.) Gams [1, 2, 3, 4, 6,], 21.06.2016, Yalçın 538a, 538b, 538c, 538d, 538e, H.
- Dorycnium pentaphyllum* Scop. subsp. *herbaceum* (Vill.) Rouy [16], 14.08.1977, Alpınar 38443, H.
- Bituminaria bituminosa* (L.) C.H.Stirt. [4, 7], 21.06.2016, Yalçın 590a, 590b, H, Medit.
- Hedysarum varium* Willd. subsp. *varium* [4], 21.06.2016, Yalçın 601, H, Ir.-Tur.
- Ononis spinosa* L. subsp. *leiosperma* (Boiss.) Sirj. [8], 22.06.2016, Yalçın 692, H.
- Cytisus pygmaeus* Willd. [1, 2, 3, 4], 21.06.2016, Yalçın 550a, 550b, 550c, 550d, Ch, Euro.-Sib.
- Cytisus hirsutus* L. [16], 24.06.1977, Alpınar 37925, Ch.
- Securigera varia* (L.) Lassen [1, 2, 3, 4, 8], 21.06.2016, Yalçın 583a, 583b, 583c, 583d, 583e, H, E.Medit.
- Lathyrus aphaca* L. var. *biflorus* Post [7], 01.05.2016, Yalçın 657, T, Medit.
- Lathyrus aureus* (Steven) D.Brandza [1, 2, 3, 4], 21.06.2016, Yalçın 546a, 546b, 546c, 546d, H.
- Lathyrus cicera* L. [19], 25.05.1977, Alpınar 37029, T, Medit.
- Lathyrus laxiflorus* (Desf.) O.Kuntze subsp. *laxiflorus* [1, 2, 3, 5, 6], 21.06.2016, Yalçın 536a, 536b, 536c, 536d, 536e, H.
- Lathyrus roseus* Steven subsp. *roseus* [16], 14.08.1977, Alpınar 38461, H.
- Lathyrus tukhtensis* Czechtz [1, 2, 3, 4, 6, 9], 21.06.2016, Yalçın 554a, 554b, 554c, 554d, 554e, 554f, H, Euro.-Sib., End., LC.
- Melilotus officinalis* (L.) Desr. [4], 21.06.2016, Yalçın 588, T.

POLYGALACEAE

Polygala anatolica Boiss. & Heldr. [16], 24.05.1977, Alpınar 37880, H.

Polygala pruinosa Boiss. subsp. *pruinosa* [1, 2, 3, 5, 9], 21.06.2016, Yalçın 556a, 556b, 556c, 556d, 556e, H.

Polygala supina Schreb. subsp. *supina* [1, 2, 3, 4, 5, 9], 21.06.2016, Yalçın 557a, 557b, 557c, 557d, 557e, 557f, H.

ROSALES

ROSACEAE

Potentilla crantzii (Crantz) Fritsch [14], 23.06.2016, Yalçın 697, H, Euro.-Sib.

Potentilla micrantha Ramond ex DC. [6], 22.06.2016, Yalçın 679, H.

Potentilla recta L. [5, 7, 11], 22.06.2016, Yalçın 614a, 614b, 614c, H.

Fragaria vesca L. [5], 22.06.2016, Yalçın 615, H, Euro.-Sib.

Geum urbanum L. [3], 27.06.1977, Alpınar 37132, H, Euro.-Sib.

Crataegus meyeri Pojark. [16], 07.10.1978, Alpınar 41562, Ch.

Crataegus microphylla K.Koch [16], 07.10.1978, Alpınar 41561, Ch.

Crataegus monogyna Jacq. var. *monogyna* [4, 6, 7], 22.06.2016, Yalçın 410a, 410b, 410c, Ch.

Crataegus tanacetifolia (Poir.) Pers. [6], 22.06.2016, Yalçın 454, Ch, End., LC.

Pyracantha coccinea M.Roem. [1, 2, 3, 6], 19.09.2019, Yalçın 526a, 526b, 526c, 526d, Ch, Euro.-Sib.

Rubus canescens DC. var. *canescens* [1, 2, 3, 4, 5, 6], 19.09.2019, Yalçın 531a, 531b, 531c, 531d, 531e, 531f, Ch, Euro.-Sib.

Rubus hirtus Waldst. & Kit. [16], 24.06.1977, Alpınar 37863, Ch, Euro.-Sib.

Rubus sanctus Schreb [22], 08.10.1977, Alpınar 38679, Ch.

Cotoneaster nummularius Fisch. & C.A.Mey. [6], 22.06.2016, Yalçın 680, Ch.

Pyrus amygdaliformis Vill. var. *amygdaliformis* [16], 14.08.1977, Alpınar 38454, P, E.Medit.

Pyrus communis L. subsp. *communis* [16], 08.10.1978, Alpınar 41593, P.

Sanguisorba minor L. subsp. *minor* [1, 2, 3, 4, 11, 12], 21.06.2016, Yalçın 565a, 565b, 565c, 565d, 565e, 565f, H.

Malus sylvestris (L.) Mill. subsp. *orientalis* (A. Uglitzkich) Browicz var. *microphylla* Browicz [16], 19.05.1978, Alpınar 39746, P, End., DD.

Agrimonia eupatoria subsp. *asiatica* (Juz.) Skalicky [22], 11.08.1977, Alpınar 38339, H.

Agrimonia repens L. [22], 11.08.1977, Alpınar 38330, H.

Sorbus aucuparia L. [7], 22.06.2016, Yalçın 412, Ch, Euro.-Sib.

Sorbus kusnetzovii Zinserl. [1, 2, 3, 4], 19.09.2019, Yalçın 524a, 524b, 524c, 524d, Ch.

Sorbus taurica Zinserl. [15], 07.10.1978, Alpınar 41586, Ch.

Alchemilla caucasica Buser [6], 23.06.2016, Yalçın 320, H.

Alchemilla compactilis Juz. [15], 05.06.1974, Alpınar 29414, H.

Alchemilla grossheimii Juz. [5], 22.06.2016, Yalçın 433, H.

Alchemilla holocycla Rothm. [8], 22.06.2016, Yalçın 403, H, Ir.-Tur., End., LC.

Alchemilla mollis (Buser) Rothm. [22], 11.08.1977, Alpınar 38338, H.

Filipendula vulgaris Moench [27], 28.06.1977, Alpınar 38041, H, Euro.-Sib.

Rosa canina L. [1, 2, 3, 4, 6, 7], 19.09.2019, Yalçın 530a, 530b, 530c, 530d, 530e, 530f, Ch.

Rosa mollis Sm. [16], 14.08.1977, Alpınar 38464, Ch.

RHAMNACEAE

Rhamnus cathartica L. [22], 23.11.1976, Alpınar 36307, P, Euro.-Sib.

Rhamnus lycioides L. subsp. *oleoides* (L.) Jahandiez & Maire [22], 23.11.1976, Alpınar 36304, Ch.

Paliurus spina-christi P.Mill. [7], 23.06.2016, Yalçın 654, Ch.

URTICACEAE

Parietaria judaica L. [26], 12.08.1977, Alpınar 38415, H.

Urtica dioica L. subsp. *dioica* [5, 6, 8, 12], 23.06.2016, Yalçın 375a, 375b, 375c, 375d, H, Euro.-Sib.

FAGALES

BETULACEAE

Corylus avellana L. var. *avellana* [1, 2, 3, 4, 8], 22.06.2016, Yalçın 457a, 457b, 457c, 457d, 457e, Ch, Euro.-Sib.

Carpinus orientalis Miller subsp. *orientalis* [1, 2, 3, 4], 21.06.2016, Yalçın 517a, 517b, 517c, 517d, P.

Carpinus betulus L. [18], 02.10.1976, Alpınar 36174, P.

FAGACEAE

Fagus orientalis Lipsky [5], 22.06.2016, Yalçın 519, P, Euro.-Sib.

Quercus cerris L. [1, 2, 3, 4], 21.06.2016, Yalçın 518a, 518b, 518c, 518d, P, Medit.

Quercus infectoria Oliv. subsp. *infectoria* [1, 2, 3], 19.09.2019, Yalçın 525a, 525b, 525c, Ch, Euro.-Sib.

Quercus pubescens Willd. subsp. *pubescens* [4, 7], 23.06.2016, Yalçın 652a, 652b, P.

CELASTRALES

CELASTRACEAE

Euonymus verrucosus Scop. [1, 2, 3], 21.06.2016, Yalçın 568a, 568b, 568c, Ch.

Parnassia palustris L. [26], 12.08.1977, Alpınar 38386, H.

ALPIGHIALES

HYPERICACEAE

Hypericum linarioides Bosse subsp. *linarioides* [9], 23.06.2016, Yalçın 330, H.

Hypericum orientale L. [5, 6], 22.06.2016, Yalçın 619a, 619b, H.

Hypericum organifolium Willd. var. *organifolium* [13], 22.06.2016, Yalçın 668, H.

Hypericum perforatum L. [8], 22.06.2016, Yalçın 704, H, Medit.

Hypericum perforatum L. subsp. *veronense* (Schrank) H.Linb. [12], 12.08.1977, Alpınar 38406, H.

VIOLACEAE

Viola gracilis Sibth. & Sm. [15], 22.05.1977, Alpınar 36923, H.

Viola parvula Tineo [20], 22.05.1977, Alpınar 36946, T.

Viola sieheana W.Becker [1, 2, 3, 5], 01.05.2019, Yalçın 477a, 477b, 477c, 477d, H.

Viola suavis M.Bieb. [22], 27.03.1977, Alpınar 36564, H.

SALICACEAE

Populus tremula L. subsp. *tremula* [1, 2, 3], 19.09.2019, Yalçın 528a, 528b, 528c, P.

Salix alba L. subsp. *alba* [8], 22.06.2016, Yalçın 459, P, Euro.-Sib.

EUPHORBIACEAE

Euphorbia amygdaloides L. subsp. *amygdaloides* [1, 2, 3, 5], 01.05.2019, Yalçın 479a, 479b, 479c, 479d, Ch, Euro.-Sib.

Euphorbia apios L. [10], 27.03.1977, Alpınar 36562, G, E.Medit.

Euphorbia condylocarpa M.Bieb. [1, 2, 3, 4, 9], 01.05.2019, Yalçın 468a, 468b, 468c, 468d, 468e, G.

Euphorbia herniariifolia Willd. var. *herniariifolia* [16], 19.05.1978, Alpınar 39753, H.

Euphorbia myrsinites L. subsp. *myrsinites* [26], 12.08.1977, Alpınar 38398, H.

Euphorbia peplus L. var. *minima* DC. [16], 14.08.1977, Alpınar 38448, T.

Euphorbia petrophila C.A.Mey. [18], 26.05.1977, Alpınar 37085, H, Euro.-Sib.

Euphorbia rigida M.Bieb. [7, 10, 11, 12, 13], 21.06.2016, Yalçın 629a, 629b, 629c, 629d, 629e, H, Medit.

Euphorbia seguieriana Neck. subsp. *seguieriana* [10], 11.08.1977, Alpınar 38364, H, Euro.-Sib.

Euphorbia stricta L. [4], 23.06.2016, Yalçın 607, H, Euro.-Sib.

Euphorbia szovitsii Fisch. & C.A.Mey. var. *szovitsii* [13], 22.06.2016, Yalçın 384, T, Ir.-Tur.

LINACEAE

Linum austriacum L. subsp. *austriacum* [4], 23.06.2016, Yalçın 608, H.

Linum nodiflorum L. [19], 25.05.1977, Alpınar 36998, T, Medit.

Linum tenuifolium L. [18], 26.05.1977, Alpınar 37093, H.

PHYLLANTHACEAE

Andrachne telephioides L. [13], 22.06.2016, Yalçın 383, H.

GERANIALES

GERANIACEAE

Erodium cicutarium (L.) L Hér. subsp. *cutarium* [19], 25.05.1977, Alpınar 3700, T.

Geranium asphodeloides Burm.f. subsp. *asphodeloides* [24], 02.10.1976, Alpınar 36191, H, Euro.-Sib.

Geranium dissectum L. [13], 22.06.2016, Yalçın 451, T.

Geranium purpureum Vill. [20], 22.05.1977, Alpınar 36960, T.

Geranium pyrenaicum Burm.f. [13], 23.06.2016, Yalçın 376, H.

Geranium robertianum L. [16], 14.08.1977, Alpınar 38469, T.

Geranium rotundifolium L. [12], 21.06.2016, Yalçın 632, T.

Geranium subcaulescens L Hér. ex DC. [8], 22.06.2016, Yalçın 398, P.

Geranium sylvaticum L. [4], 21.06.2016, Yalçın 592, H, Euro.-Sib.

Geranium tuberosum L. [20], 22.05.1977, Alpınar 36937, G, Ir.-Tur.

MYRTALES

LYTHRACEAE

Lythrum salicaria L. [12], 12.08.1977, Alpınar 38395, H, Euro.-Sib.

ONAGRACEAE

Epilobium montanum L. [6], 22.06.2016, Yalçın 455, H, Euro.-Sib.

SAPINDALES

ANACARDIACEAE

Pistacia palaestina Boiss. [7], 23.06.2016, Yalçın 651, Ch, E.Medit.

SAPINDACEAE

Acer campestre L. subsp. *campestre* [26], 12.08.1977, Alpınar 38412, P, Euro.-Sib.

Acer hyrcanum Fisch. & C.A.Mey. subsp. *hyrcanum* [16], 14.08.1977, Alpınar 38451, P, Euro.-Sib.

Acer platanoides L. [1, 2, 3, 6], 21.06.2016, Yalçın 520a, 520b, 520c, 520d, P, Euro.-Sib.

MALVALES

MALVACEAE

Alcea biennis Winterl [12], 12.08.1977, Alpınar 38422, H.

Malva neglecta Wallr. [12], 21.06.2016, Yalçın 631, T.

Tilia rubra subsp. *caucasica* (Rupr.) V. Engl. [16], 19.05.1978, Alpınar 39751, P.

THYMELAEACEAE

Daphne oleoides Schreb. subsp. *oleoides* [6, 9, 11, 12], 21.06.2016, Yalçın 638a, 638b, 638c, 638d, Ch.

Daphne pontica L. subsp. *pontica* [1, 2, 3, 5], 21.06.2016, Yalçın 522a, 522b, 522c, 522d, Ch.

CISTACEAE

Helianthemum nummularium (L.) Mill. subsp. *nummularium* [6, 7], 23.06.2016, Yalçın 656a, 656b, H.

Helianthemum oelandicum (L.) DC. subsp. *incanum* (Willk.) G.López [4, 13], 23.06.2016, Yalçın 348a, 348b, H.

Helianthemum tomentosum Gray [1, 2, 3, 9], 21.06.2016, Yalçın 561a, 561b, 561c, 561d, H.

Fumana procumbens (Dunal) Gren. & Godr. [19], 25.05.1977, Alpınar 37053, H.

Cistus creticus L. [7], 23.06.2016, Yalçın 655, Ch, Medit.

BRASSICALES

RESEDACEAE

Reseda lutea L. var. *lutea* [19], 25.05.1977, Alpınar 37023, H.

BRASSICACEAE

Cardamine bulbifera (L.) Crantz [4], 21.06.2016, Yalçın 611, G, Euro.-Sib.

Cardamine hirsuta L. [11], 27.05.1977, Alpınar 37149, T.

Cardamine impatiens L. subsp. *pectinata* (Pall. ex DC.) Stoj. & Stef. [23], 09.10.1977, Alpınar 38686, T, Euro.-Sib.

Cardamine quinquefolia (M.Bieb.) Schmalh. [20], 22.05.1977, Alpınar 36977, H, Euro.-Sib.

Cardamine tenera S.G. Gmel. ex C.A.Mey. [15], 05.06.1974, Alpınar 36181, H.

Cardamine uliginosa M.Bieb. [20], 22.05.1977, Alpınar 36976, H.

Hesperis bicuspidata (Willd.) Poir. [20], 22.05.1977, Alpınar 36978, H, Ir.-Tur., End., LC.

Sisymbrium altissimum L. [22], 05.06.1974, Alpınar 29497, H.

Sisymbrium loeselii L. [21], 08.10.1977, Alpınar 3668, H.

Thlaspi arvense L. [12], 21.06.2016, Yalçın 641, T.

Schivereckia doerfleri (Wettst.) Bornm. [20], 22.05.1977, Alpınar 36938, H.

Microthlaspi perfoliatum (L.) F.K. Mey. [4, 6, 14], 22.06.2016, Yalçın 469a, 469b, 469c, T.

Draba bruniifolia Steven subsp. *bruniifolia* [24], 23.05.1977, Alpınar 36990, H.

Draba huetii Boiss. [16], 19.05.1978, Alpınar 39759, T.

Draba rigida Willd. [16], 19.05.1978, Alpınar 39754, H.

Draba verna L. [15], 19.05.1978, Alpınar 39758, H.

Matthiola longipetala (Vent.) DC. subsp. *bicornis* (Sibth. & Sm.) P.W.Ball [19], 25.05.1977, Alpınar 37071, T.

Hornungia petraea (L.) R.Br. [4], 01.05.2019, Yalçın 471, T.

Erysimum crassipes Fisch. & C.A.Mey. [6], 22.06.2016, Yalçın 448, H.

- Erysimum cuspidatum* (M.Bieb.) DC. [11], 23.06.2016, Yalçın 327, H.
Erysimum leptophyllum (M.Bieb.) Andr. [5], 22.06.2016, Yalçın 613, H.
Erysimum pulchellum (Willd.) J.Gay subsp. *pulchellum* [6, 11, 12, 14], 21.06.2016, Yalçın 439a, 439b, 439c, 439d, H.
Erysimum scabrum DC. [16], 24.05.1977, Alpınar 37890, H.
Erysimum sintenisianum Bornm. [24], 05.06.1977, Alpınar 36928, H, Ir.-Tur., End., LC.
Erysimum smyrnaeum Boiss. & Balansa [16], 26.05.1977, Alpınar 37094, H.
Erysimum uncinatifolium Boiss. [20], 22.05.1977, Alpınar 36966, H, Euro.-Sib.
Rorippa sylvestris (L.) Besser subsp. *sylvestris* [23], 09.10.1977, Alpınar 38694, H.
Arabidopsis thaliana (L.) Heynh. [18], 26.05.1977, Alpınar 37123, T.
Aethionema arabicum (L.) Andr. ex DC. [13], 22.06.2016, Yalçın 666, T.
Aethionema armenum Boiss. [18], 26.05.1977, Alpınar 37100, H, Ir.-Tur.
Aethionema caespitosum (Boiss.) Boiss. [20], 22.05.1977, Alpınar 36939, H, End., NT.
Aethionema iberideum (Boiss.) Boiss. [15], 23.05.1977, Alpınar 36993, Ch.
Alyssum bornmuelleri Hausskn. ex Degen [4], 23.06.2016, Yalçın 326, H, Ir.-Tur., End., VU.
Alyssum condensatum Boiss. & Hausskn. subsp. *condensatum* [4, 13], 22.06.2016, Yalçın 406a, 406b, H.
Alyssum hirsutum M.Bieb. subsp. *hirsutum* [18], 26.05.1977, Alpınar 37103, T.
Alyssum minutum Schlecht. ex DC. [20], 22.05.1977, Alpınar 36965, T.
Alyssum murale Waldst. & Kit. subsp. *murale* var. *murale* [16], 14.08.1977, Alpınar 38468, H
Alyssum pateri Nyár. subsp. *pateri* [9], 23.06.2016, Yalçın 328, H, Ir.-Tur., End., LC.
Alyssum praecox Boiss. & Balansa [15], 05.06.1974, Alpınar 29386, H, End., LC.
Alyssum sibiricum Willd. [19], 25.05.1977, Alpınar 37042, H
Alyssum strigosum Banks & Sol. subsp. *strigosum* [4], 01.05.2019, Yalçın 472, T.
Alyssum trichostachyum Rupr. [11], 22.05.1977, Alpınar 37157, H
Alyssum xanthocarpum Boiss. [20], 22.05.1977, Alpınar 36961, T.
Noccaea annua (K.Koch) F.K. Mey. [1, 2, 3, 4], 01.05.2019, Yalçın 480a, 480b, 480c, 480d, T.
Clypeola jonthlaspi L. [18], 26.05.1977, Alpınar 37108, T.
Arabis alpina L. subsp. *alpina* [14], 23.06.2016, Yalçın 369, H.
Arabis sagittata (Bertol.) DC. [16], 14.03.1977, Alpınar 38455, H.
Brassica elongata Ehrh. [7], 22.06.2016, Yalçın 400, H.
Barbarea plantaginea DC. [18], 26.05.1977, Alpınar 37124, H.
Barbarea vulgaris R.Br. subsp. *vulgaris* [20], 22.05.1977, Alpınar 36962, H.
Fibigia clypeata (L.) Medik. subsp. *clypeata* var. *eriocarpa* (DC.) Post [4], 01.05.2019, Yalçın 469, H.
Conringia orientalis (L.) Dumort. [6], 05.06.1974, Alpınar 29487, T.
Capsella bursa-pastoris (L.) Medik. [12], 21.06.2016, Yalçın 630, T.
Iberis simplex DC. [18], 26.05.1977, Alpınar 37082, H.
Strigosella africana (L.) Botsch. [19], 25.05.1977, Alpınar 37069, T.
Descurainia sophia (L.) Webb ex Prantl subsp. *bartschii* (O.E. Schulz) C. Vural [22], 25.05.1977, Alpınar 37036, H, End., LC.
Alliaria petiolata (M.Bieb.) Cavara & Grande [20], 22.05.1977, Alpınar 36970, H.
Lepidium chalepense L. [10], 23.06.2016, Yalçın 370, H.

Neslia paniculata (L.) Desv. subsp. *thracica* (Velen.) Bornm. [22], 05.06.1974, Alpınar 29464, T.

SANTALALES

SANTALACEAE

Thesium billardieri Boiss. [1, 2, 3, 7], 22.06.2016, Yalçın 385a, 385b, 385c, 385d, H, Ir.-Tur.

CARYOPHYLLALES

TAMARICACEAE

Tamarix tetrandra Pall. ex M.Bieb. [8], 22.06.2016, Yalçın 458, Ch.

PLUMBAGINACEAE

Acantholimon acerosum (Willd.) Boiss. subsp. *acerosum* var. *acerosum* [10], 11.08.1977, Alpınar 38376, Ch, Ir.-Tur.

Acantholimon lycaonicum Boiss. & Heldr. subsp. *lycaonicum* [10], 11.08.1977, Alpınar 38333, Ch, E. Medit, End., LC.

Acantholimon venustum Boiss. var. *venustum* [9, 11], 19.09.2019, Yalçın 509a, 509b, Ch.

POLYGONACEAE

Polygonum arenastrum Boreau [7], 06.10.1978, Alpınar 41526, T.

Polygonum convolvulus L. [22], 05.06.1974, Alpınar 29489, H.

Rumex acetosella L. [6, 10, 11, 12, 13], 21.06.2016, Yalçın 627a, 627b, 627c, 627d, 627e, H.

Rumex crispus L. [8], 22.06.2016, Yalçın 453, H.

CARYOPHYLLACEAE

Petrorhagia alpina subsp. *olympica* (Boiss.) P.W.Ball & Heywood [6], 22.06.2016, Yalçın 460, T.

Petrorhagia saxifraga (L.) Link [13], 22.06.2016, Yalçın 405, H, Euro.-Sib.

Stellaria holostea L. [1, 2, 3, 4, 6], 21.06.2016, Yalçın 551a, 551b, 551c, 551d, 551e, H.

Saponaria prostrata Willd. subsp. *prostrata* [19], 25.05.1977, Alpınar 37063, H, Ir.-Tur., End., LC.

Herniaria micrantha A.K.Jacks. & Turrill [6, 12], 21.06.2016, Yalçın 634a, 634b, T, E.Medit.

Eremogone ledebouriana (Fenzl) Ikonn. [12], 12.08.1977, Alpınar 38402, H, End., LC.

Silene bupleuroides L. subsp. *bupleuroides* [16], 14.08.1977, Alpınar 38485, H.

Silene dichotoma Ehrh. subsp. *dichotoma* [19], 05.06.1977, Alpınar 397871, H.

Silene italica (L.) Pers. subsp. *italica* [1, 2, 3], 21.06.2016, Yalçın 541a, 541b, 541c, H, Medit.

Silene latifolia Poir. subsp. *eriocalycinae* (Boiss.) Greuter & Burdet [8], 22.06.2016, Yalçın 693, H.

Silene olympica Boiss. var. *olympica* [9], 23.06.2016, Yalçın 344, H, Ir.-Tur., End., LC.

Silene spergulifolia (Desf.) M.Bieb. [13], 22.06.2016, Yalçın 462, H, Ir.-Tur.

Silene vulgaris (Moench) Garcke var. *vulgaris* [1, 2, 3, 4], 21.06.2016, Yalçın 533a, 533b, 533c, 533d, H.

Holosteum marginatum C.A.Mey. [16], 19.05.1978, Alpınar 39756, H.

Holosteum tenerrimum Boiss. [16], 19.05.1978, Alpınar 39739, T.

Holosteum umbellatum L. var. *glutinosum* (M.Bieb.) Gay [18], 26.05.1977, Alpınar 37104, T.

Holosteum umbellatum L. var. *umbellatum* [10], 23.06.2016, Yalçın 373, T.

Minuartia anatolica (Boiss.) Woronow var. *anatolica* [12], 12.08.1977, Alpınar 38406, H, Ir.-Tur., End., LC.

Minuartia anatolica (Boiss.) Woronow var. *polymorpha* McNeill [19], 25.05.1977, Alpınar 37051, H.

Minuartia corymbulosa (Boiss. & Balansa) McNeill var. *breviflora* (Boiss.) McNeill [13], 22.06.2016, Yalçın 674, H, End., VU.

Minuartia juniperina (L.) Maire & Petitm. [9, 10, 11, 13, 14], 22.06.2016, Yalçın 649a, 649b, 649c, 649d, 649e, H.

Minuartia umbellulifera (Boiss.) McNeill subsp. *pontica* (Bornm.) McNeill [24], 02.10.1976, Alpınar 36186, H, End., LC.

Cerastium chlorifolium Fisch. & C.A.Mey. [16], 19.05.1978, Alpınar 39752, T.

Cerastium fontanum Baumg. subsp. *vulgare* (Hartm.) Greuter & Burdet [12], 12.08.1977, Alpınar 38407, H.

Cerastium glomeratum Thuill. [11, 12], 21.06.2016, Yalçın 440a, 440b, T.

Dianthus anatolicus Boiss. [16], 14.08.1977, Alpınar 38446, H.

Dianthus balansae Boiss. [16], 14.08.1977, Alpınar 38487, H, End., LC.

Dianthus calocephalus Boiss. [16], 24.06.1977, Alpınar 37920, H.

Dianthus carmelitarum Reut. ex Boiss. [4], 23.06.2016, Yalçın 606, H, Euro.-Sib., End., LC.

Dianthus leptopetalus Willd. [7, 9], 22.06.2016, Yalçın 399a, 399b, H.

Dianthus micranthus Boiss. & Heldr. [16], 24.06.1977, Alpınar 37894, H.

Dianthus zonatus Fenzl var. *aristatus* (Boiss.) Reeve [12], 01.10.1976, Alpınar 36145, H.

Arenaria serpyllifolia L. subsp. *leptocladus* (Rchb.) Nyman [6], 22.06.2016, Yalçın 461, T.
AMARANTHACEAE

Chenopodium botrys L. [25], 05.06.1974, Alpınar 29525, T.

Chenopodium foliosum Asch. [12], 02.10.1976, Alpınar 36199, H.

CORNALES

CORNACEAE

Cornus mas L. [1, 2, 3, 4], 21.06.2016, Yalçın 523a, 523b, 523c, 523d, Ch, Euro.-Sib.

Cornus sanguinea L. subsp. *australis* (C.A.Mey.) Jáv. [4], 21.06.2016, Yalçın 585, Ch, Euro.-Sib.

ERICALES

PRIMULACEAE

Primula acaulis Hill subsp. *rubra* (Sm.) Greuter & Burdet [1, 2, 3, 5, 6], 22.06.2016, Yalçın 558a, 558b, 558c, 558d, 558e, H.

Androsace maxima L. [20], 22.05.1977, Alpınar 36947, T.

Androsace villosa L. [24], 23.05.1977, Alpınar 36991, H, Euro.-Sib.

Anagallis foemina Mill. [19], 25.05.1977, Alpınar 37008, T, Medit.

Lysimachia verticillaris Spreng. [26], 12.08.1977, Alpınar 38399, H.

Lysimachia vulgaris L. [8], 22.06.2016, Yalçın 408, H.

Cyclamen coum Mill. subsp. *coum* [1, 2, 3, 4, 5, 6], 21.06.2016, Yalçın 534a, 534b, 534c, 534d, 534e, 534f, G.

ERICACEAE

Vaccinium myrtillus L. [1, 2, 3], 21.06.2016, Yalçın 419a, 419b, 419c, Ch, Euro.-Sib.

Rhododendron luteum Sweet [23], 09.10.1977, Alpınar 38699, Ch.

GENTIANALES

GENTIANACEAE

Centaurium erythraea Rafn subsp. *turcicum* (Velen.) Melderis [6], 23.06.2016, Yalçın 678, H.

RUBIACEAE

- Crucianella angustifolia* L. [7], 22.06.2016, Yalçın 408, T, Medit.
Crucianella gilanica Trin. subsp. *pontica* (Ehrend.) Ehrend. [26], 12.08.1977, Alpınar 38417, H.
Galium album Mill. subsp. *prusense* (K.Koch) Ehrend. & Krendl [16], 24.06.1977, Alpınar 37902, H.
Galium aparine L. [22], 05.06.1974, Alpınar 29468a, T.
Galium bornmuelleri Hausskn. ex Bornm. [14], 23.06.2016, Yalçın 377, H, End., VU.
Galium incanum Sm. subsp. *elatus* (Boiss.) Ehrend. [19], 25.05.1977, Alpınar 37046, H, Ir.-Tur.
Galium odoratum (L.) Scop. [11], 27.05.1977, Alpınar 37140, H, Euro.-Sib.
Galium paschale Forssk. [16], 14.08.1977, Alpınar 38457, H, E.Medit.
Galium rotundifolium L. [6], 22.06.2016, Yalçın 434, H, Euro.-Sib.
Galium spurium L. subsp. *spurium* [5, 6, 8, 11], 21.06.2016, Yalçın 436a, 436b, 436c, 436d, T, Euro.-Sib.
Galium tenuissimum M.Bieb. [1, 2, 3], 21.06.2016, Yalçın 435a, 435b, 435c, T, Ir.-Tur.
Galium tricornutum Dandy [22], 06.06.1974, Alpınar 29468, T, Ir.-Tur.
Galium verum L. subsp. *verum* [4, 9], 21.06.2016, Yalçın 605a, 605b, H, Euro.-Sib.
Asperula arvensis L. [25], 25.05.1977, Alpınar 37012, T.
Asperula involucrata Wahlenb [1, 2, 3, 4], 21.06.2016, Yalçın 542a, 542b, 542c, 542d, H.
Asperula pestalozzae Boiss. [9], 23.06.2016, Yalçın 345, H, End., LC.
Cruciata laevipes Opiz [1, 2, 3, 12], 01.05.2019, Yalçın 481a, 481b, 481c, 481d, H.
Cruciata taurica (Pall. ex Willd.) Ehrend. [4, 10, 11, 12, 13, 14], 21.06.2016, Yalçın 599a, 599b, 599c, 599d, 599e, 599f, H, Ir.-Tur.
- APOCYNACEAE
- Cionura erecta* (L.) Griseb. [19], 25.05.1977, Alpınar 37061, Ch, E.Medit.
Vincetoxicum fuscatum Rchb.f. subsp. *fuscatum* [16], 14.08.1977, Alpınar 38483, H.
Vinca herbacea Waldst. & Kit. [20], 22.05.1977, Alpınar 36975, H.
- BORAGINALES
- BORAGINACEAE
- Cerintho minor* L. subsp. *auriculata* (Ten.) Domac [1, 2, 3], 21.06.2016, Yalçın 562a, 562b, 562c, H.
Aegonychon purpurocaeruleum (L.) Holub [18], 26.05.1977, Alpınar 37118, T, Euro.-Sib.
Moltkia coerulea (Willd.) Lehm. [16], 19.05.1977, Alpınar 39763, H, Ir.-Tur.
Cynoglossum montanum L. [16], 24.06.1977, Alpınar 37908, H, Euro.-Sib.
Paracaryum ancyritanum Boiss. [19], 25.05.1977, Alpınar 37059, H, Ir.-Tur., End., LC.
Lappula barbata (M.Bieb.) Gürke [19], 25.05.1977, Alpınar 37013, H, Ir.-Tur.
Asperugo procumbens L. [22], 05.06.1974, Alpınar 29463, T, Euro.-Sib.
Buglossoides arvensis (L.) I.M.Johnst. subsp. *sibthorpiana* (Griseb.) R.Fern. [18], 26.05.1977, Alpınar 37092, T.
Onosma ambigens Lacaita [13], 22.06.2016, Yalçın 407, H, Ir.-Tur., End., LC.
Onosma aucheriana DC. [18], 05.06.1974, Alpınar 29513, H, E.Medit.
Onosma bracteosa Hausskn. & Bornm. [20], 22.05.1977, Alpınar 36953, H, Ir.-Tur., End., LC.
Onosma isaurica Boiss. & Heldr. [1, 2, 3], 21.06.2016, Yalçın 423a, 423b, 423c, H, Ir.-Tur., End., LC.
Onosma sericea Willd. [19], 25.08.1977, Alpınar 37028, H, Ir.-Tur.

- Anchusa azurea* Mill. var. *azurea* [1, 2, 3], 21.06.2016, Yalçın 560a, 560b, 560c, H.
Anchusa leptophylla Roem. & Schult. subsp. *leptophylla* [13], 22.06.2016, Yalçın 450, H.
Echium italicum L. [8], 22.06.2016, Yalçın 684, H, Medit.
Symphytum bornmuelleri Buckn. [20], 22.05.1977, Alpınar 36968, H, End., LC.
Nonea caspica G.Don [19], 28.05.1977, Alpınar 37038, T.
Myosotis lithospermifolia Hornem. [1, 2, 3, 5, 10, 11, 12, 13], 21.06.2016, Yalçın 578a, 578b, 578c, 578d, 578e, 578f, 578g, 578h, H.
Myosotis olympica Boiss. [14], 23.06.2016, Yalçın 378, H.

SOLANALES

CONVOLVULACEAE

- Cuscuta europaea* L. [22], 11.08.1977, Alpınar 38374, H.
Cuscuta planiflora Ten. [16], 14.08.1977, Alpınar 38486, H.
Convolvulus arvensis L. [13], 22.06.2016, Yalçın 665, Ch.
Convolvulus assyricus Griseb. [9], 21.06.2016, Yalçın 700, Ch, Ir.-Tur., End., LC.
Convolvulus cantabrica L. [27], 28.06.1977, Alpınar 38030, Ch, Medit.
Convolvulus scammonia L. [19], 05.06.1974, Alpınar 29515, H, E.Medit.

SOLANACEAE

- Datura stramonium* L. [7], 06.10.1978, Alpınar 41531, T.

LAMIALES

OLEACEAE

- Phillyrea latifolia* L. [7], 22.06.2016, Yalçın 411, Ch, Medit.
Jasminum fruticans L. [19], 25.05.1977, Alpınar 37056, Ch, Medit.
Ligustrum vulgare L. [1, 2, 3], 21.06.2016, Yalçın 572a, 572b, 572c, Ch, Euro.-Sib.

PLANTAGINACEAE

- Linaria chalepensis* (L.) Mill. var. *chalepensis* [19], 25.05.1977, Alpınar 37074, T, E.Medit.
Linaria corifolia Desf. [11, 13], 21.06.2016, Yalçın 647a, 647b, H, Ir.-Tur., End., LC.
Digitalis ferruginea L. subsp. *ferruginea* [5, 6, 12], 22.06.2016, Yalçın 617a, 617b, 617c, H, Euro.-Sib.
Digitalis lamarckii Ivanina [4, 6, 8], 21.06.2016, Yalçın 587a, 587b, 587c, H, Ir.-Tur., End., LC.
Globularia trichosantha Fisch. & C.A.Mey. subsp. *trichosantha* [1, 2, 3, 4, 6, 9], 01.05.2019, Yalçın 574a, 574b, 574c, 574d, 574e, 574f, H, Ir.-Tur.
Plantago lanceolata L. [4, 5, 6, 8, 10, 11, 12, 13], 21.06.2016, Yalçın 604a, 604b, 604c, 604d, 604e, 604f, 604g, 604h, H.
Chaenorhinum litorale (Bernh. ex Willd.) Rouy subsp. *pterosporum* (Fisch. & C.A.Mey.) P.H. Davis [7], 06.10.1978, Alpınar 41534, T, E.Medit., End., LC.
Veronica anagallis-aquatica L. [29], 02.10.1976, Alpınar 36196a, T.
Veronica arvensis L. [12], 21.06.2016, Yalçın 427, T, Euro.-Sib.
Veronica beccabunga L. subsp. *beccabunga* [29], 02.10.1976, Alpınar 36196, H.
Veronica bozakmanii M.A.Fisch. [20], 22.05.1977, Alpınar 36951, T, Ir.-Tur.
Veronica campylopoda Boiss. [22], 05.06.1974, Alpınar 29456, T, Ir.-Tur.
Veronica chamaedrys L. [8], 27.05.1977, Alpınar 37143, H, Euro.-Sib.
Veronica filiformis Sm. [20], 22.05.1977, Alpınar 36952, H.

Veronica gentianoides Vahl subsp. *gentianoides* var. *alpina* (Hausskn. ex) Öztürk & M.A.Fisch. [14], 23.06.2016, Yalçın 695, H, End., LC.

Veronica multifida L. [4, 6, 10, 11, 12, 13], 01.05.2019, Yalçın 374a, 374b, 374c, 374d, 374e, 374f, H, Ir.-Tur.

Veronica polita Fr. [22], 05.06.1974, Alpınar 29470a, T.

Veronica reuterana Boiss. [9], 05.06.1974, Alpınar 29419, T.

SCROPHULARIACEAE

Verbascum orientale (L.) All. subsp. *orientale* [19], 25.05.1977, Alpınar 37010, H, E.Medit.

Verbascum phlomoides L. [13], 22.06.2016, Yalçın 425, H, Euro.-Sib.

Verbascum pyramidatum M.Bieb. [27], 28.06.1977, Alpınar 38028, H.

Verbascum speciosum Schrad. [12, 13], 21.06.2016, Yalçın 426a, 426b, H.

Verbascum varians Freyn & Sint. var. *variens* [19], 25.05.1977, Alpınar 37055, H.

Verbascum wiedemannianum Fisch. & C.A.Mey. [27], 17.05.1978, Alpınar 39682, H, Ir.-Tur., End., LC.

Scrophularia scopolii Hoppe ex Pers. var. *scopolii* [20], 22.05.1977, Alpınar 36956, H.

LAMIACEAE

Prunella laciniata (L.) L. [4], 21.06.2016, Yalçın 602, H, Euro.-Sib.

Prunella vulgaris L. [8], 22.06.2016, Yalçın 689, H, Euro.-Sib.

Phlomis armeniaca Willd. [13], 22.06.2016, Yalçın 673, H, Ir.-Tur.

Phlomis russeliana (Sims.) Lag. ex Benth. [27], 28.06.1977, Alpınar 38043, H, Euro.-Sib., End., LC.

Scutellaria albida L. subsp. *velenovskiyi* (Rech.f.) Greuter & Burdet [16], 24.05.1977, Alpınar 37889, H, E.Medit.

Scutellaria orientalis L. subsp. *pinnatifida* J.R.Edm. [9], 23.06.2016, Yalçın 702, H.

Scutellaria salviifolia Benth. [18], 26.05.1977, Alpınar 37101, H, End., LC.

Thymus cappadocicus Boiss. [14], 23.06.2016, Yalçın 349, H, Ir.-Tur., End., NT.

Thymus leucotrichus Hal. subsp. *leucotrichus* [14], 23.06.2016, Yalçın 351, H.

Thymus praecox Opiz subsp. *grossheimii* (Ronniger) Jalas [6, 9, 10, 11], 21.06.2016, Yalçın 351a, 351b, 351c, 351d, H.

Thymus sipyleus Boiss. [4, 11], 21.06.2016, Yalçın 600a, 600b, H.

Mentha longifolia (L.) L. subsp. *longifolia* [8], 22.06.2016, Yalçın 690, H.

Clinopodium acinos (L.) Kuntze [11, 13], 21.06.2016, Yalçın 645a, 645b, T, Euro.-Sib.

Clinopodium grandiflorum (L.) Kuntze [16], 24.06.1977, Alpınar 37905, H, Euro.-Sib.

Clinopodium vulgare L. subsp. *arundanum* (Boiss.) Nyman [1, 2, 3, 5, 6], 21.06.2016, Yalçın 553a, 553b, 553c, 553d, 553e, H.

Clinopodium vulgare L. subsp. *vulgare* [16], 24.06.1977, Alpınar 37879, H.

Salvia candidissima Vahl subsp. *occidentalis* Hedge [13], 22.06.2016, Yalçın 413, H.

Salvia sclarea L. [27], 28.06.1977, Alpınar 38015, H.

Salvia tomentosa Mill. [1, 2, 3], 21.06.2016, Yalçın 566a, 566b, 566c, H, Medit.

Salvia verticillata L. subsp. *amasiaca* (Freyn & Bornm.) Bornm. [4, 11], 21.06.2016, Yalçın 591a, 591b, H, Ir.-Tur.

Salvia viridis L. [19], 25.05.1977, Alpınar 37001, T, Medit.

Satureja cuneifolia Ten. [26], 12.08.1977, Alpınar 38424, H, Medit.

- Satureja hortensis* L. [28], 07.10.1978, Alpınar 41559, T.
- Teucrium chamaedrys* L. subsp. *sypsiense* (K.Koch) Rech.f. [4, 7, 9], 23.06.2016, Yalçın 610a, 610b, 610c, H, Ir.-Tur.
- Teucrium orientale* L. var. *orientale* [13], 22.06.2016, Yalçın 675, H, Ir.-Tur.
- Teucrium polium* L. subsp. *polium* [13], 22.06.2016, Yalçın 669, H.
- Lallemantia peltata* (L.) Fisch. & C.A.Mey. [6], 05.06.1974, Alpınar 29495, T, Ir.-Tur.
- Lamium album* L. subsp. *crinitum* (Montbret & Aucher ex Benth.) Mennema [14], 23.06.2016, Yalçın 352, H.
- Lamium garganicum* L. subsp. *striatum* (Sm.) Hayek var. *striatum* [20], 22.05.1977, Alpınar 36943, H, Medit.
- Lamium maculatum* L. [10], 22.05.1977, Alpınar 36922, H.
- Lamium moschatum* Mill. subsp. *micranthum* (Boiss.) Mennema [10], 23.06.2016, Yalçın 354, T.
- Lamium orientale* (Fisch. & C.A.Mey.) E.H.L. Krause [19], 25.05.1977, Alpınar 37009, T, Ir.-Tur.
- Micromeria cristata* (Hampe) Griseb. subsp. *cristata* [7], 22.06.2016, Yalçın 414, H, Euro.-Sib.
- Micromeria graeca* (L.) Benth. ex Reicbh. subsp. *graeca* [22], 08.10.1977, Alpınar 38676, H, Medit.
- Stachys annua* (L.) L. subsp. *annua* var. *annua* [19], 25.05.1977, Alpınar 37030, H.
- Stachys annua* (L.) L. subsp. *annua* var. *lycaonica* [4, 8], 21.06.2016, Yalçın 595a, 595b, H, Ir.-Tur.
- Stachys byzantina* K.Koch [12], 21.06.2016, Yalçın 636, H, Euro.-Sib.
- Stachys iberica* M.Bieb. subsp. *iberica* var. *iberica* [13], 22.06.2016, Yalçın 452, H, Ir.-Tur.
- Stachys iberica* M.Bieb. subsp. *iberica* var. *densipilosa* R. Bhattacharjee [10], 23.06.2016, Yalçın 353, H, Ir.-Tur., End., LC.
- Stachys iberica* M.Bieb. subsp. *stenostachya* (Boiss.) Rech.f. [27], 28.06.1977, Alpınar 38042, H, Ir.-Tur.
- Stachys sylvatica* L. [8], 22.06.2016, Yalçın 415, H, Euro.-Sib.
- Stachys thirkei* K.Koch [16], 24.05.1977, Alpınar 37872, H.
- Stachys viscosa* Montbret & Aucher ex Benth. [19], 25.05.1977, Alpınar 37045, H, Ir.-Tur.
- Ajuga chamaepitys* (L.) Schreb. subsp. *chia* (Schreb.) Arcang. [13], 22.06.2016, Yalçın 671, H.
- Ajuga orientalis* L. [1, 2, 3, 9], 21.06.2016, Yalçın 573a, 573b, 573c, 573d, H.
- Ziziphora capitata* L. [19], 25.05.1977, Alpınar 37024, T.
- Ziziphora taurica* M.Bieb. subsp. *taurica* [19], 25.05.1977, Alpınar 37052, T.
- Marrubium astracanicum* Jacq. subsp. *astracanicum* [10, 12, 13, 14], 21.06.2016, Yalçın 626a, 626b, 626c, 626d, H.
- Marrubium parviflorum* Fisch. & C.A.Mey. subsp. *parviflorum* [19], 25.05.1977, Alpınar 37064, H, Ir.-Tur.
- Sideritis dichotoma* Huter [12, 13], 21.06.2016, Yalçın 640a, 640b, H, End., LC.
- Sideritis libanotica* Labill. subsp. *linearis* (Benth.) Bornm. [10], 11.08.1977, Alpınar 38331, H, Medit.
- Sideritis montana* L. subsp. *montana* [27], 28.06.1977, Alpınar 38049, T, E.Medit.
- Nepeta italica* L. [10, 11], 23.06.2016, Yalçın 355, H, Medit.
- Nepeta nuda* L. subsp. *albiflora* (Boiss.) Gams [11, 12], 21.06.2016, Yalçın 628a, 628b, H.
- Origanum vulgare* L. subsp. *vulgare* [22], 11.08.1977, Alpınar 38368, H, Euro.-Sib.

OROBANCHACEAE

- Pedicularis comosa* L. var. *sibthorpii* (Boiss.) Boiss. [9], 05.06.1974, Alpınar 29437, H.
Macrosyringion glutinosum (M.Bieb.) Rothm. [16], 14.08.1977, Alpınar 38489, T.
Lathraea squamaria L. [16], 19.05.1978, Alpınar 39750, H, Euro.-Sib.
Melampyrum arvense L. var. *arvense* [4], 21.06.2016, Yalçın 586, T, Euro.-Sib.
Orobanche alba Stephan ex Willd. subsp. *alba* [18], 25.05.1977, Alpınar 37087, T.
Orobanche caryophyllacea Sm. [16], 24.05.1977, Alpınar 37881, T.
Orobanche caucasica Beck [16], 08.10.1978, Alpınar 41595, T.
Orobanche grisebachii Reut. [1, 2, 3], 21.06.2016, Yalçın 422a, 422b, 422c, T, E.Medit.
Orobanche minor Sm. [4], 23.06.2016, Yalçın 331, T.
Orobanche ramosa L. [19], 25.05.1977, Alpınar 37068, T.
Euphrasia pectinata Ten. [6], 23.06.2016, Yalçın 333, T, Euro.-Sib.
Euphrasia rostkoviana Hayne subsp. *rostkoviana* [23], 09.10.1977, Alpınar 38691, T, Euro.-Sib.

AQUIFOLIALES

AQUIFOLIACEAE

- Ilex colchica* Pojark. [23], 09.10.1977, Alpınar 38692, Ch.

ASTERALES

CAMPANULACEAE

- Campanula alliariifolia* Willd. [16], 14.08.1977, Alpınar 38488, H.
Campanula glomerata L. subsp. *hispida* (Witasek) Hayek [1, 2, 3], 21.06.2016, Yalçın 421a, 421b, 421c, H, Euro.-Sib.
Campanula involucrata Aucher ex A.DC. [4, 6, 9], 23.06.2016, Yalçın 325a, 325b, 325c, H.
Campanula rapunculoides L. [1, 2, 3, 4, 5, 6], 21.06.2016, Yalçın 533a, 533b, 533c, 533d, 533e, 533f, H.
Campanula saxonorum Gand. [13], 22.06.2016, Yalçın 404, T, End., LC.
Legousia pentagonia (L.) Thell. [19], 25.05.1977, Alpınar 37073, T, E.Medit.
Asyneuma limonifolium (L.) Janch. subsp. *pestalozzae* (Boiss.) Damboldt [19], 25.05.1977, Alpınar 37047, H, End., LC.
Asyneuma rigidum (Willd.) Grossh. subsp. *rigidum* [6], 22.06.2016, Yalçın 682, H, Ir.-Tur.
Asyneuma virgatum (Labill.) Bornm. subsp. *virgatum* [11], 22.05.1977, Alpınar 37152, H.

ASTERACEAE

- Picris strigosa* M.Bieb. subsp. *strigosa* [8], 22.06.2016, Yalçın 391, H, Ir.-Tur.
Tripleurospermum elongatum (DC.) Bornm. [4, 7], 01.05.2019, Yalçın 483a, 483b, H.
Tripleurospermum oreades (Boiss.) Rech.f. var. *oreades* [10, 11, 14], 21.06.2016, Yalçın 431a, 431b, 431c, H.
Cyanus depressus (M.Bieb.) Soják [13], 22.06.2016, Yalçın 388, H.
Cyanus lanigerus (DC.) Holub [14], 23.06.2016, Yalçın 357, H, Ir.-Tur., End., LC.
Cyanus pichleri (Boiss.) Holub subsp. *pichleri* [9, 13], 23.06.2016, Yalçın 324, H.
Cyanus triumfettii (All.) Dostál ex Á.Löve & D.Löve subsp. *triumfettii* [14], 23.06.2016, Yalçın 358, H.
Onopordum acanthium L. [13], 22.06.2016, Yalçın 386, H.
Onopordum tauricum Willd. [12], 21.06.2016, Yalçın 637, H, Euro.-Sib.
Onopordum turcicum Danin [8], 22.06.2016, Yalçın 442, H, Ir.-Tur.

- Cirsium alatum* (S.G.Gmel.) Bobrov M.Bieb. [26], 12.08.1977, Alpınar 38386, H.
- Cirsium echinus* (M.Bieb.) Hand.-Mazz. [12, 13], 21.06.2016, Yalçın 432a, 432b, H, Ir.-Tur.
- Cirsium hypoleucum* DC. [16], 24.06.1977, Alpınar 37900, H, Euro.-Sib.
- Cirsium leucocephalum* (Willd.) Spreng. subsp. *leucocephalum* [22], 11.08.1977, Alpınar 38365, H, Ir.-Tur.
- Cirsium pseudopersonata* Boiss. & Balansa ex Boiss. subsp. *pseudopersonata* [1, 2, 3], 21.06.2016, Yalçın 547a, 547b, 547c, H, End., LC.
- Cirsium rhizocephalum* C.A.Mey. subsp. *sinuatum* (Boiss.) P.H.Davis & Parris [24], 02.10.1976, Alpınar 36202, H.
- Cirsium vulgare* (Savi) Ten. [23], 09.10.1976, Alpınar 38689, H.
- Arctium minus* (Hill) Bernh. [22], 11.08.1977, Alpınar 38363, H, Euro.-Sib.
- Helichrysum arenarium* (L.) Moench subsp. *aucheri* (Boiss.) P.H. Davis & Kupicha [11], 23.06.2016, Yalçın 703, H, Ir.-Tur., End., LC.
- Helichrysum plicatum* DC. subsp. *plicatum* [27], 28.06.1977, Alpınar 38031, H.
- Tanacetum argenteum* (Lam.) Willd. subsp. *canum* (K.Koch) Grierson var. *canum* [27], 28.06.1977, Alpınar 38017, H.
- Tanacetum armenum* (DC.) Sch.Bip. [11], 23.06.2016, Yalçın 323, H.
- Tanacetum parthenium* (L.) Sch.Bip. [8], 22.06.2016, Yalçın 441, H.
- Tanacetum poteriifolium* (Ledeb.) Grierson [1, 2, 3, 4], 21.06.2016, Yalçın 540a, 540b, 540c, 540d, H.
- Hieracium labillardierei* Arv.-Touv. [18], 26.05.1977, Alpınar 37120, H.
- Hieracium pannosum* Boiss. [16], 08.10.1978, Alpınar 41602, H, E.Medit.
- Lapsana communis* L. subsp. *alpina* (Boiss. & Balansa) P.D. Sell [16], 08.10.1978, Alpınar 41599, H.
- Lapsana communis* L. subsp. *intermedia* (M.Bieb.) Hayek var. *intermedia* [1, 2, 3, 4, 5, 6, 8], 21.06.2016, Yalçın 535a, 535b, 535c, 535d, 535e, 535f, 535g, H.
- Scorzonera cana* (C.A.Mey.) Griseb. var. *cana* [14], 19.09.2019, Yalçın 512, H.
- Scorzonera laciniata* L. subsp. *laciniata* [11], 23.06.2016, Yalçın 322, H.
- Inula ensifolia* L. [22], 11.08.1977, Alpınar 38343, H, Euro.-Sib.
- Inula oculus-christi* L. [22], 11.08.1977, Alpınar 38354, H, Euro.-Sib.
- Achillea arabica* Kotschy [8], 22.06.2016, Yalçın 683, H, Ir.-Tur.
- Achillea biserrata* M.Bieb. [16], 14.08.1977, Alpınar 38459, H.
- Achillea grandifolia* Friv. [26], 12.08.1977, Alpınar 38420, H.
- Achillea millefolium* L. subsp. *millefolium* var. *millefolium* [6, 9, 11, 12], 21.06.2016, Yalçın 635a, 635b, 635c, 635d, H, Euro.-Sib.
- Achillea setacea* Waldst. & Kit. [16], 24.06.1977, Alpınar 37883, H, Euro.-Sib.
- Carlina corymbosa* L. [22], 11.08.1977, Alpınar 38370, H, Medit.
- Carlina oligocephala* Boiss. & Kotschy subsp. *oligocephala* [22], 11.08.1977, Alpınar 38370a, H.
- Carlina vulgaris* L. [26], 12.08.1977, Alpınar 38404, H.
- Doronicum orientale* Hoffm. [1, 2, 3, 5, 6], 21.06.2019, Yalçın 531a, 531b, 531c, 531d, 531e, H.
- Crepis alpina* L. [14], 19.09.2019, Yalçın 515, H.
- Crepis armena* DC. [1, 2, 3], 21.06.2019, Yalçın 428a, 428b, 428c, H, Ir.-Tur., End., LC.
- Crepis bithynica* Boiss. [11, 12], 21.06.2019, Yalçın 430a, 430b, H, Euro.-Sib.

- Crepis sancta* (L.) Bornm. subsp. *nemausensis* (P. Fourn.) Babç. [10, 13], 22.06.2016, Yalçın 445a, 445b, T.
- Crepis vesicaria* L. subsp. *vesicaria* [4], 01.05.2019, Yalçın 474, T, Medit.
- Bellis perennis* L. [5, 6, 10, 11], 22.06.2016, Yalçın 624a, 624b, 624c, 624d, H, Euro.-Sib.
- Lactuca muralis* (L.) Gaertn. [23], 09.10.1977, Alpınar 38688, H, Euro.-Sib.
- Lactuca variabilis* Bornm. [16], 24.09.1977, Alpınar 37906, H, End., LC.
- Lactuca viminea* (L.) J.Presl & C.Presl [26], 12.08.1977, Alpınar 38396, H.
- Xanthium spinosum* L. [22], 23.06.1976, Alpınar 36202a, T.
- Echinops ossicus* K.Koch [27], 28.06.1977, Alpınar 38051, H.
- Echinops pungens* Trautv. var. *pungens* [28], 07.08.1978, Alpınar 41572, H, Ir.-Tur.
- Echinops ritro* L. [1, 2, 3, 4], 19.09.2019, Yalçın 707a, 707b, 707c, 707d, H.
- Tragopogon aureus* Boiss. [7], 22.06.2016, Yalçın 389, H, End., LC.
- Tragopogon porrifolius* L. subsp. *longirostris* (Sch.Bip.) Greuter [22], 26.05.1977, Alpınar 37097, H.
- Leontodon asperrimus* (Willd.) Endl. [13], 22.06.2016, Yalçın 444, H, Ir.-Tur.
- Leontodon crispus* Vill. subsp. *asper* (Waldst. & Kit.) Röhl var. *asper* [19], 25.05.1977, Alpınar 37035, H, Euro.-Sib.
- Leontodon hispidus* L. subsp. *hispidus* [7, 10], 22.06.2016, Yalçın 390a, 390b, H, Euro.-Sib.
- Crupina crupinastrum* (Moris) Vis. [19], 25.05.1977, Alpınar 37031, T.
- Xeranthemum annuum* L. [13], 22.06.2016, Yalçın 667, T.
- Filago arvensis* L. [13], 22.06.2016, Yalçın 664, T.
- Filago pyramidata* L. [12], 21.06.2016, Yalçın 633, T.
- Picnomon acarna* (L.) Cass. [22], 11.08.1977, Alpınar 38371, T, Medit.
- Anthemis cretica* L. subsp. *candicans* (Boiss.) Grierson [4], 21.06.2016, Yalçın 603, H.
- Anthemis cretica* L. subsp. *tenuiloba* (DC.) Grierson [10, 13], 22.06.2016, Yalçın 443a, 443b, H.
- Anthemis kotschyana* Boiss. var. *kotschyana* [19], 25.05.1977, Alpınar 37070, H.
- Anthemis sintenisii* Freyn [19], 25.05.1977, Alpınar 37065, T, Ir.-Tur., End., LC.
- Pilosella hoppeana* (Schult.) F.W.Schultz & Sch.Bip. subsp. *testimonialis* (Naegli ex Peter) P.D.Sell & C.West [1, 2, 3, 9, 10, 11], 21.06.2016, Yalçın 563a, 563b, 563c, 563d, 563e, 563f, H.
- Pilosella hoppeana* (Schult.) F.W.Schultz & Sch.Bip. subsp. *troica* (Zahn) P.D.Sell & C.West [11], 23.06.2016, Yalçın 644, H.
- Pilosella piloselloides* (Vill.) Soják subsp. *magyarica* (Peter) S.Bräut. & Greuter [27], 28.06.1977, Alpınar 38036, H.
- Pilosella piloselloides* (Vill.) Soják subsp. *piloselloides* [1, 2, 3, 4, 5, 6,], 21.06.2019, Yalçın 564a, 564b, 564c, 564d, 564e, 564f, H.
- Pilosella* x *ruprechtii* (Boiss.) P.D.Sell & C.West [22], 11.08.1977, Alpınar 38344a, H.
- Psephellus hypoleucus* (DC.) Boiss. [1, 2, 3, 4, 6], 21.06.2016, Yalçın 426a, 426b, 426c, 426d, 426e, H.
- Cota tinctoria* (L.) J.Gay ex Guss. var. *tinctoria* [4, 8], 21.06.2016, Yalçın 589a, 589b, H.
- Ptilostemon afer* (Jacq.) Greuter subsp. *eburneus* Greuter [22], 11.08.1977, Alpınar 38380, H, End., LC.
- Jurinea pontica* Hausskn. & Freyn ex Hausskn. [27], 28.06.1977, Alpınar 38050, H, Ir.-Tur., End., LC.

- Senecio vernalis* Waldst. & Kit. [19], 25.05.1977, Alpınar 37020, T.
Taraxacum butleri Soest [4], 01.05.2019, Yalçın 473, H.
Taraxacum gracilens Dahlst. [18], 26.05.1977, Alpınar 37116, H, Medit.
Taraxacum macrolepium Schischk. [1, 2, 3], 01.05.2019, Yalçın 478a, 478b, 478c, H.
Taraxacum microcephaloides Soest [6, 14], 23.06.2016, Yalçın 356a, 356b, H, Ir.-Tur., End., LC.
Taraxacum serotinum (Waldst. & Kit.) Fisch. [14], 19.09.2019, Yalçın 513, H.
Tussilago farfara L. [10], 27.03.1977, Alpınar 36561, H, Euro.-Sib.
Centaurea urvillei DC. subsp. *armata* Wagenitz [4], 21.06.2016, Yalçın 594, H, E.Medit.
Centaurea urvillei DC. subsp. *stepposa* Wagenitz [13], 22.06.2016, Yalçın 663, H.
Centaurea urvillei DC. subsp. *urvillei* [9], 01.10.1976, Alpınar 36143, H, E.Medit.
Centaurea virgata Lam. [13], 22.06.2016, Yalçın 672, H, Ir.-Tur.
Petasites hybridus (L.) G.Gaertn., B.Mey. & Scherb. [8], 22.06.2016, Yalçın 688, H, Euro.-Sib.

DIPSACALES

ADOXACEAE

- Viburnum lantana* L. [1, 2, 3], 19.09.2019, Yalçın 525a, 525b, 525c, Ch.
Sambucus ebulus L. [6], 21.06.2016, Yalçın 706, Ch.
Sambucus nigra L. [12], 19.09.2019, Yalçın 508, Ch.

CAPRIFOLIACEAE

- Lonicera orientalis* Lam. [1, 2, 3], 21.06.2016, Yalçın 521a, 521b, 521c, H, End., LC.
Knautia involucrata Sommier & Levier [8], 22.06.2016, Yalçın 382, H.
Valeriana alliariifolia Adams [8], 22.06.2016, Yalçın 381, H.
Morina persica L. var. *persica* [13], 22.06.2016, Yalçın 661, H, Ir.-Tur.
Dipsacus laciniatus L. [9], 11.08.1977, Alpınar 38378, H.
Cephalaria paphlagonica Bobrov [19], 14.08.1977, Alpınar 38481, H, End., NT.
Valerianella vesicaria (L.) Moench [25], 05.06.1977, Alpınar 29528, T.
Scabiosa columbaria L. subsp. *ochroleuca* (L.) Čélak. var. *ochroleuca* [9], 11.08.1977, Alpınar 38342, H.
Scabiosa rotata M.Bieb. [19], 25.05.1977, Alpınar 36999, T, Ir.-Tur.

APIALES

ARALIACEAE

- Hedera helix* L. [4], 21.06.2016, Yalçın 596, L.

APIACEAE

- Sium sisarum* L. var. *lancifolium* (M.Bieb.) Thell. [26], 12.08.1977, Alpınar 38385, H.
Daucus carota L. [21], 08.10.1978, Alpınar 38666, H.
Laser trilobum (L.) Borkh. [1, 2, 3], 21.06.2019, Yalçın 437a, 437b, 437c, H.
Anthriscus nemorosa (M.Bieb.) Spreng. [20], 22.05.1977, Alpınar 36948, H.
Caucalis platycarpus L. [19], 25.05.1977, Alpınar 37014, T.
Heracleum platytaenium Boiss. [8], 23.06.2019, Yalçın 687, H.
Zosima absinthifolia (Vent.) Link [27], 28.06.1977, Alpınar 38048, H.
Sanicula europaea L. [8], 27.05.1977, Alpınar 37155, H, Euro.-Sib.
Bupleurum falcatum L. subsp. *persicum* (Boiss.) Koso-Pol. [13], 23.06.2019, Yalçın 648, H.
Bupleurum gerardii All. [13], 22.06.2019, Yalçın 380, T.

- Astrantia maxima* Pall. subsp. *haradjianii* (Grintz.) Rech.f. [16], 24.06.1977, Alpınar 37904, H, End., NT.
- Bunium microcarpum* (Boiss.) Freyn & Bornm. subsp. *bourgaei* (Boiss.) Hedge & Lamond [6, 9, 11, 12, 14], 21.06.2016, Yalçın 438a, 438b, 438c, 438d, 438e, G, Ir.-Tur.
- Eryngium campestre* L. var. *virens* (Link) Weins [12, 13], 21.06.2019, Yalçın 639a, 639b, H.
- Eryngium giganteum* M.Bieb. [1, 2, 3, 6], 21.06.2019, Yalçın 559a, 559b, 559c, 559d, H.
- Scandix iberica* M.Bieb. [22], 05.06.1974, Alpınar 29466, T.
- Scandix pecten-veneris* L. [22], 05.06.1974, Alpınar 29467, T.
- Artemisia squamata* L. [25], 05.06.1974, Alpınar 29527, T.
- Trinia scabra* Boiss. & Noë [10], 23.06.2019, Yalçın 372, H, Ir.-Tur., End., LC.
- Pimpinella tragioides* Vill. subsp. *lithophila* (Schischk.) Tutin [24], 02.10.1976, Alpınar 36193, H.
- Torilis leptophylla* (L.) Rech.f. [10, 13], 22.06.2019, Yalçın 449a, 449b, H.
- Chaerophyllum byzantinum* Boiss. [12], 12.08.1977, Alpınar 38408, H.
- Turgenia latifolia* (L.) Hoffm. [9], 01.10.1976, Alpınar 36161, T.
- Malabaila secacul* (Mill.) Boiss. subsp. *secacul* [25], 25.05.1977, Alpınar 37003, H.

Appendix 2. Photos of some taxa in the Mt. Akdağ study area (Amasya, Turkey).



Arabis alpina subsp. *alpina*



Astragalus vaginans



Colchicum manissadjianii



Colchicum umbrosum



Corydalis erdelii



Crocus speciosus subsp. *ilgazensis*



Cyclamen coum subsp. *coum*



Fagus orientalis



Fibigia clypeata subsp. *clypeata* var. *eriocarpa*



Globularia trichosantha subsp. *trichosantha*



Iris histrioides



Juniperus excelsa subsp. *excelsa*



Limodorum abortivum var. *abortivum*



Pinus sylvestris var. *hamata*



Scilla bifolia



Scutellaria orientalis subsp. *pinnatifida*