

**BOLU ABANT İZZET BAYSAL UNIVERSITY
THE GRADUATE SCHOOL OF NATURAL AND APPLIED
SCIENCES**



FLORA OF ÇALTEPE AND ÇELETEPE (BOLU)

MASTER OF SCIENCE

AYDIN ÇELİK

BOLU, JULY 2019

BOLU ABANT İZZET BAYSAL UNIVERSITY
THE GRADUATE SCHOOL OF NATURAL AND APPLIED
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DEPARTMENT OF BIOLOGY



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APPROVAL OF THE THESIS

Flora of Çaltepe and Çeletepe (Bolu) submitted by Aydın ÇELİK and defended before the below named jury in partial fulfillment of the requirements for the degree of Master of Science in Department of Biology, The Graduate School of Natural and Applied Sciences of Bolu Abant İzzet Baysal University in 25.07.2019 by

Examining Committee Members

Signature

Supervisor
Assoc. Prof. Dr. İsmail EKER
Bolu Abant İzzet Baysal University



Member
Prof. Dr. Arzu TÜRKER
Bolu Abant İzzet Baysal University



Member
Assoc. Prof. Dr. Barış ÖZÜDOĞRU
Hacettepe University



Prof. Dr. Ömer ÖZYURT



Director of Graduate School of Natural and Applied Sciences



To my family

DECLARATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Aydın ÇELİK



ABSTRACT

FLORA OF ÇALTEPE AND ÇELETEPE (BOLU)
MSC THESIS
AYDIN ÇELİK
BOLU ABANT İZZET BAYSAL UNIVERSITY GRADUATE SCHOOL OF
NATURAL AND APPLIED SCIENCES
DEPARTMENT OF BIOLOGY
(SUPERVISOR: ASSOC. PROF. DR. İSMAİL EKER)

BOLU, JULY 2019

This study was carried out to reveal the vascular plant diversity of Çaltepe and Çeletepe. During 2015-2018, 2340 plant specimens were collected from the research area and 363 genera and 768 taxa belonging to 81 families were determined. Of all the collected taxa, 66 are endemic and endemism rate is 8,59%. The IUCN threat categories of endemic and rare plants at global level are as follows: 1 taxon in “CR” category, as well as 4 taxa “EN”, 4 taxa “VU”, 9 taxa “NT”, and 45 taxa “LC”. Also, 3 rare taxa are found in the “VU” category, as well as 1 rare taxon in the “DD” category at regional level. 57 taxa are new records for the province of Bolu. The largest families in the study area are as follows: Asteraceae 97 taxa (%12,63), Fabaceae 62 taxa (%8,07), Lamiaceae 51 taxa (%6,64), Rosaceae 44 taxa (%5,73), Poaceae 37 taxa (%4,82), Brassicaceae 35 taxa (%4,56), Caryophyllaceae 32 taxa (%4,17), Apiaceae 28 taxa (%3,65), Boraginaceae 27 taxa (%3,52) and Orchidaceae 24 taxa (%3,13). The distribution of taxa into phytogeographic regions are as follows: 235 taxa (%30,60) Euro-Siberian, 64 taxa (%8,33) Mediterranean, 46 taxa (%5,98) Irano-Turanian, and 423 taxa (%55,07) multiregional and/or unknown. *Geranium* and *Silene* (12 taxa) are the most common genera in the research area. These genera are followed by *Salvia* (11 taxa), *Trifolium*, *Veronica* and *Campanula* (each with 10 taxa), *Ranunculus* *Euphorbia* and *Vicia* (each with 8 taxa) and *Poa* (7 taxa).

KEYWORDS: Flora, Çaltepe, Çeletepe, A3 Square, Bolu

ÖZET

ÇALTEPE VE ÇELETEPE (BOLU)'NİN FLORASI
YÜKSEK LİSANS TEZİ
AYDIN ÇELİK
BOLU ABANT İZZET BAYSAL ÜNİVERSİTESİ
FEN BİLİMLERİ ENSTİTÜSÜ
BİYOLOJİ ANABİLİM DALI
(TEZ DANIŞMANI: DOÇ. DR. İSMAİL EKER)

BOLU, TEMMUZ - 2019

Bu çalışma Çaltepe ve Çeletepe'nin bitki çeşitliliğinin ortaya çıkarılması amacıyla gerçekleştirilmiştir. 2015-2018 yılları arasında araştırma alanından 2340 örnek toplanmış, 81 familyaya ait 363 cins ve 768 takson tespit edilmiştir. Taksonların 66 tanesi endemik olup endemizm oranı %8,59'tür. Endemik ve nadir bitkilerin küresel düzeyde IUCN tehlike kategorileri şöyledir: 1 takson "CR" kategorisinde, 4 takson "EN", 4 takson "VU", 9 takson "NT" ve 45 takson "LC" kategorisindedir. Aynı zamanda 3 nadir takson bölgesel düzeyde "VU" ve 1 nadir takson "DD" kategorisindedir. 57 takson Bolu ili için yeni kayıttır. Araştırma alanında en fazla takson içeren familyalar: Asteraceae 97 takson (%12,63), Fabaceae 62 takson (%8,07), Lamiaceae 51 takson (%6,64), Rosaceae 44 takson (%5,73), Poaceae 37 takson (%4,82), Brassicaceae 35 takson (%4,56), Caryophyllaceae 32 takson (%4,17), Apiaceae 28 takson (%3,65), Boraginaceae 27 takson (%3,52) ve Orchidaceae 24 takson (%3,13) şeklinde sıralanmaktadır. Taksonların fitocoğrafik bölgelere göre dağılımları ise şöyledir: 235 takson (%30,60) Avrupa-Sibirya, 64 takson (%8,33) Akdeniz, 46 takson (%5,98) İran-Turan ve 423 takson (%55,07) çok bölgeli ve/veya bölgesi belirlenmeyen taksonlardır. Araştırma sahasında en çok takson içeren cinsler *Geranium* ve *Silene* (12 takson)'dir. Bu cinsleri sırasıyla 11 taksonlu *Salvia*, 10 taksonlu *Trifolium*, *Veronica* ve *Campanula*, 8 taksonlu *Ranunculus*, *Euphorbia* ve *Vicia*, 7 taksonlu *Poa* cinsi takip etmektedir.

ANAHTAR KELİMELELER: Flora, Çaltepe, Çeletepe, A3 Karesi, Bolu

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LIST OF ABBREVIATIONS AND SYMBOLS

AIBU	: Herbarium of Abant Izzet Baysal University
A.Çelik	: Aydın ÇELİK
A.Kaya	: Ayşe KAYA ÇELİK
APG	: Angiosperm Phylogeny Group
B.Çingay	: Burçin ÇINGAY
B.Özüdoğru	: Barış ÖZÜDOĞRU
CR	: Critically Endangered
Det.	: Determinative
E	: East
E.Cabi	: Evren CABİ
E.Karabacak	: Ersin KARABACAK
EN	: Endangered
et al.	: İsmail EKER, Ayşe KAYA ÇELİK
ibid.	: In same place
İ.Eker	: İsmail EKER
km	: kilometer
LC	: Least Concern
Leg.	: Collector
m	: meter
M.Sağiroğlu	: Mehmet SAĞIROĞLU
M.Tekşen	: Mehtap TEKŞEN
N	: North
NT	: Near Threatened
R.Binzet	: Rıza BİNZET
subsp.	: Subspecies
T.Körüklü	: Tuğrul KÖRÜKLÜ
var.	: Variety
VU	: Vulnerable
WSpAS	: Winter, Spring, Autumn, Summer

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1. INTRODUCTION

Turkey has a rich variety of flora and vegetation due to its different climate types (continental, ocean and Mediterranean climates), geomorphological diversity, rich water resources (sea, lake and stream), great altitude differences (sea level-5000 m), and a wide variety of habitat types. In addition to this, as a result of the phytogeographical classification conducted on land owned by the whole of Europe and Asia, Turkey is divided into three different phytogeographic regions (Yaltırık and Efe, 1996). Our country is one of the important plant centers of the world in terms of its location at the intersection point of Iran-Turan, Euro-Siberian and Mediterranean phytogeographic regions, its connection of the continents of Europe and Asia which have different climatic and edaphic conditions (Avcı, 2005).

The first registered floristic study in our country was carried out between 1701 and 1702 by the French botanist Joseph Pitton de Tournefort in Northern Anatolia. The work entitled "*Flora Orientalis*" which was published in six volumes by the Swiss botanist Pierre Edmund Boissier between 1867 and 1888 covers the region extending from Greece to Afghanistan and mostly contains plant species of the Anatolian and Middle Eastern countries. The current study which included 6000 plants from Anatolia is the first work written about the flora of Turkey (Eker *et al.*, 2019). Then, the "*Flora of Turkey and the East Aegean Islands*" was written in 10 volumes under the editor-in-chief of English botanist Peter Hadland Davis between 1965 and 1988. It includes the floristic record of approximately 9000 plants from our country, and has become the main book of the researchers dealing with plant taxonomy (Davis, 1965-1988). Afterwards, Güner *et al.*, (2000) wrote the eleventh volume by adding 400 new taxa to Turkey's flora. In the years following the completion of flora-writing, problems were encountered while diagnosing a large number of materials collected, as a result, attention was drawn to problems of some genera. Taxonomic problems persist in some species of many genera, especially large genera. Because of the limited of time and materials in the process of writing the "*Flora of Turkey*", the deficiencies regarding many species and sections has been highlighted in the flora but no adequate solutions have been proposed. In addition, it

was emphasized that detailed floristic studies are needed in many regions of Turkey, especially in Eastern Anatolia. With the publication of the book entitled “*Türkiye Bitkileri Listesi, Damarlı Bitkiler*”, the number of taxa in Turkey has reached 11707 while the endemism rate was 31.82% (Güner, 2012). However, the extraordinary richness and diversity of the flora of Turkey has not yet been fully revealed.

On the other hand, there is a need to carry out regional floristic and revision studies to better understand the distribution boundaries of taxa and determine the variation limits of taxa, in the process of writing the new volumes of the “*Resimli Türkiye Florası* (Güner *et al.*, 2014, 2018)”. The first number of the current study, which was initiated by Turkish botanists, was published in 2014 and the second number was published in 2018. In the following processes, it is planned to be written the other volumes of the book to cover all plants of Turkey. The revisional studies solve some taxonomic problems; however, they cannot sufficiently reveal the geographic distribution and transitions of taxa. Also, the researchers usually do not have time to do it. The serious consideration of regional records based on floristic studies will reveal the true distribution of taxa in that region and ensure that the wrong records are extracted.

1.1 An overview to floristic studies in the province of Bolu

The studies on Bolu's floristic diversity in chronological order are as follows; Gerede and Aktaş Forests, and Köroğlu Mountain by Akman and Ketenoğlu (1979a, 1979b), Bolu and Semen Mountains by Akman and Yurdakulol (1981a; 1981b), Yedigöller Natural Park by Ekim and İlarıslan (1982), campus flora of Abant İzzet Baysal University by Turgut (1996), Gökçeler Mountain by Uluğ (1999), Lake Abant by Türker and Güner (2003), Lake Yeniçağa by Sümer (2002), Lake Gölçük by İkinci and Güner (2007), Karakiriş Mountain by Aksoy (2009), Lake Sünnet by İkinci (2011), Kartalkaya by Sungurlu (2011), Kale-Bolu Hazelnut Nature Reserve Area by Arslan *et al.* (2013), aquatic plants of Gölköy and Yumrukaya by Bayındır (2013), petaloid monocotyledonous flora of Bolu by Demir and Eker (2015), the effect of intense construction and population pressure on flora changes in Gölköy Campus by Doğan *et al.* (2016), Lake Sülüklü by Kanoğlu *et al.* (2016), Taşlıyayla and Kızık

surrounding by Tunçkol and Akkemik (2016), Flora of Argözü Valley (Kıbrısçık-Bolu) by Özkan *et al.* (2016), flora of Gököy Campus by Eker *et al.* (2018), endemic and rare plants of Bolu by Eker *et al.* (2019) were studied. The vegetational studies are as follows: Köroğlu Mountains by Akman and Ketenoğlu (1978), Bolu and Semen Mountains by Akman *et al.* (1983a; 1983b), Gereede-Aktaş forest by Ketenoğlu (1983), Mudurnu surroundings by Akman and İlarıslan (1983) and Plant communities and stand structure characteristics of Bolu-Ayıkaya region by Çoban (2013) were studied.

1.2 General characteristics of research area

Çaltepe and Çeletepe regions, which are selected as a research area, are located in the northeast of the province of Bolu and found in A3 square according to Davis' grid system in the "*Flora of Turkey and East Aegean Islands*" (Figure 1). In the southwest-northeastern direction of Bolu province, Bolu Mountains are located. The highest point of the Bolu Mountains is Çeletepe (Çeledoruğu) in 1987 m. It is the second highest mountain after Köroğlu Hill (2499 m) in Köroğlu Mountains in Bolu Province. Çaltepe has a height of 1890 m. Çeletepe with N 40° 51.940' – E 031° 42.123' coordinates and Çaltepe with N 40° 53.570' – E 031° 46.526' coordinates are integrated with each other. There are Banaz Plateau and Yedi Erenler on Çeletepe, and Merkeşler Plateau on Çaltepe, and Kadıköy Plateau are located between these two peaks. On the south of both hills, the villages of Tetemeçe, Mesciçe, Yeşilçe, Çobankaya and Bağışlar, in the southwest the villages of Gölcük, Yakabayat, Hamzabey and Musluklar, in the southeast the villages of Merkeşler and Avşar, in the west the village of Çukurören, in North towards the Yedigöller mountain ranges Sarımustan, Kapankayası, Gurbettaşı are located. The region has various habitat layers such as damaged forest, steppe, coniferous and mixed forests, subalpine and alpine regions in the height range of 1000–2000 m. It is predominantly under the influence of the Euro-Siberian floristic region from the north and, the Mediterranean floristic region from the south-west. Although the region is one of the rare regions with alpin layer in Bolu, there has not been any floristic work related to Çaltepe and Çeletepe until this study.

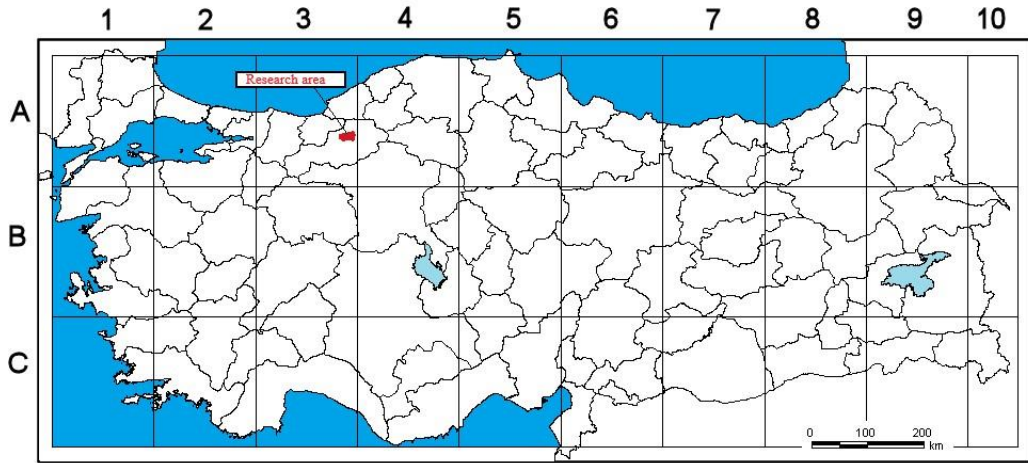


Figure 1: Map for Davis Grid System and the location of the research area in Turkey.

1.3 Climatic characteristics of the research area

Considering temperature and precipitation data of Bolu, either semi-arid moist climate according to the De Martonne method or semi-arid Mediterranean climate according to Emberger drought index are observed (Akman, 2011). There is more rainfall in winter months and less rainfall in summer months in Bolu. Regarding the last 90 years rainfall data, annual mean temperature in Bolu city is 10.5°C. As the same data, mean maximum temperature is 27.9°C in August and mean minimum temperature is -3.6°C in January. Seasonal temperature averages are 9.5°C in spring, 19.03°C in summer, 11.6°C in autumn and 1.7°C in winter (Table 1). According to seasonal distribution of rainfalls, 160.8 mm in spring, 105.4 mm in summer, 115.5 mm in autumn, 164.1 mm in winter and annual mean rainfall is 546.8 mm (Table 2). Depending on these data, the rainfall regime of Bolu city is classified as the 1st Lower Type of East Mediterranean rainfall regime (Akman, 2011) (Figure 2).

Table 1: Meteorological data of Bolu province for the last 90 years.

Meteorologic Elements	Months												Annual
	1	2	3	4	5	6	7	8	9	10	11	12	
Mean Temperature (°C)	0.6	1.9	4.8	9.6	14.1	17.4	19.8	19.9	16.1	11.8	6.9	2.8	10.5
Mean Max. Temperature (°C)	5.2	7.1	11.0	16.7	21.4	24.7	27.4	27.9	24.3	19.2	13.2	7.4	17.1
Mean Min. Temperature (°C)	-3.6	-2.7	-0.5	3.5	7.6	10.3	12.4	12.6	9.4	6.1	2.1	-1.3	4.7
Max. Temperature (°C)	19.8	24.0	29.3	31.8	34.4	37.0	39.3	39.8	37.3	34.4	27.0	22.7	39.8
Min. Temperature (°C)	-31.5	-34.0	-19.8	-11.5	-2.3	0.0	2.8	1.4	-2.5	-5.8	-24.8	-29.1	-34.0
Mean Precipitation (mm)	57.6	48.1	50.4	50.8	59.6	55.3	27.8	22.3	28.6	41.2	45.7	59.4	546.8

Table 2: Precipitation regime of Bolu province for the last 90 years.

Station	Spring		Summer		Autumn		Winter		Annual	Precipitation regime	Precipitation regime type
	Mm	%	mm	%	Mm	%	mm	%			
Bolu	160.8	29.40	105.4	19.27	115.5	21.12	164.1	30.01	546.8	WSpAS	Eastern Mediterranean (First Type)

a: Bolu b: 742.92 m c: 90 d: 10.5 °C e: 546.8 mm f: 17.1 °C g: 4.7 °C

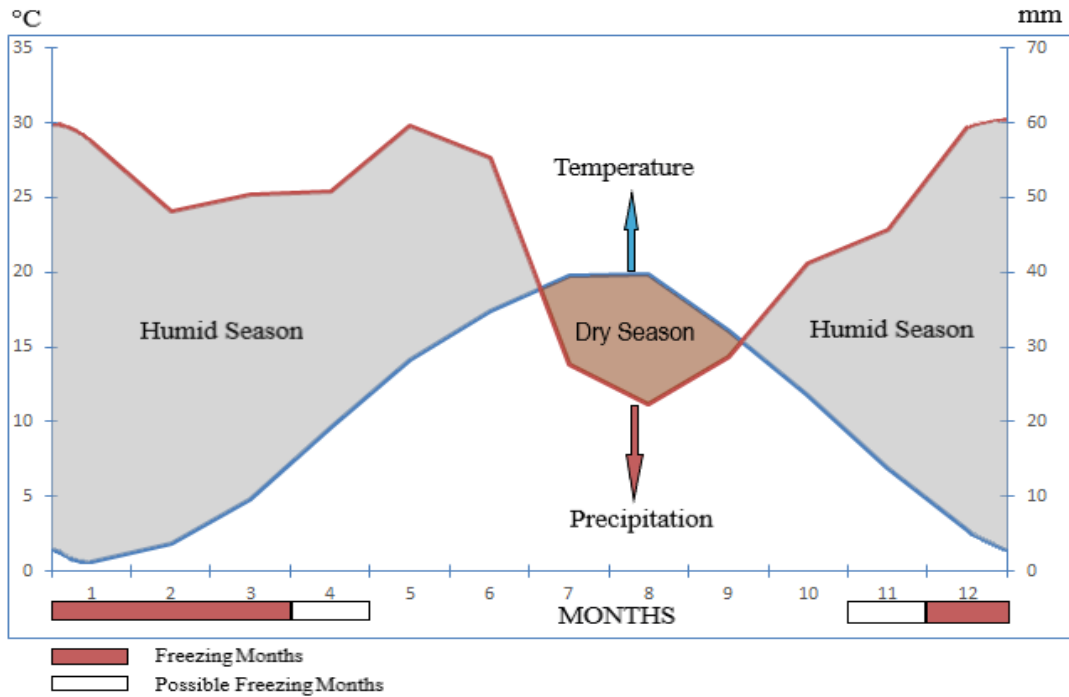


Figure 2: Climatic Diagram of Bolu (for the last 90 years). Explanations: a) Meteorological Station, b) Altitude of Meteorological Station, c) Data Collection Period (last ninety years), d) Mean Annual Temperature, e) Mean Annual Precipitation, f) Mean Maximum Temperature (°C), g) Mean Minimum Temperature (°C).

2. AIM AND SCOPE OF THE STUDY

This study reveals the floristic diversity of Çaltepe and Çeletepe region in Bolu province. The species inventory lists of the research area were prepared, and observations were made regarding the distribution areas and population densities of endemic and rare species. Moreover, recommendations for the development of *in situ* conservation methods are presented.

The reasons for selecting Çaltepe and Çeletepe regions (Bolu) as the study area are as follows:

1. No studies have been conducted on the flora of Çaltepe and Çeletepe. In other words, this region is among the unknown or little-known regions of Turkey in terms of the floristic diversity.
2. The study area is an important region in terms of biodiversity due to the fact that it is under the influence of two different phytogeographic regions, and it has the second highest elevation after Koroğlu Hill in Bolu province.

The objectives of this study are formulated as follows in the order of priority:

1. To reveal the floristic inventory of the region.
2. To reveal the distribution areas and densities of endemic and rare species in the region by population observations.
3. To provide up-to-date regional reports about threat categories of endemic and rare species found in the IUCN Red Data List.
4. To determine the areas where biodiversity is high and to offer suggestions for *in situ* preservation.
5. To provide plant samples for the development of Bolu Abant İzzet Baysal University Herbarium (AIBU).

3. MATERIAL AND METHODS

In the research area, a total of 39 days of field studies were conducted from February 2015 to April 2018 and a total of 2340 flowering and fruiting plant specimens were collected from 19 main stations (Figure 3) and substations. The photographs of taxa were taken in their natural environments (Appendix), GPS coordinates, locality and habitat information were also noted. The collected samples were converted into herbarium material and the collector numbers were given, and then stored at the Bolu Abant İzzet Baysal University Herbarium (AIBU).

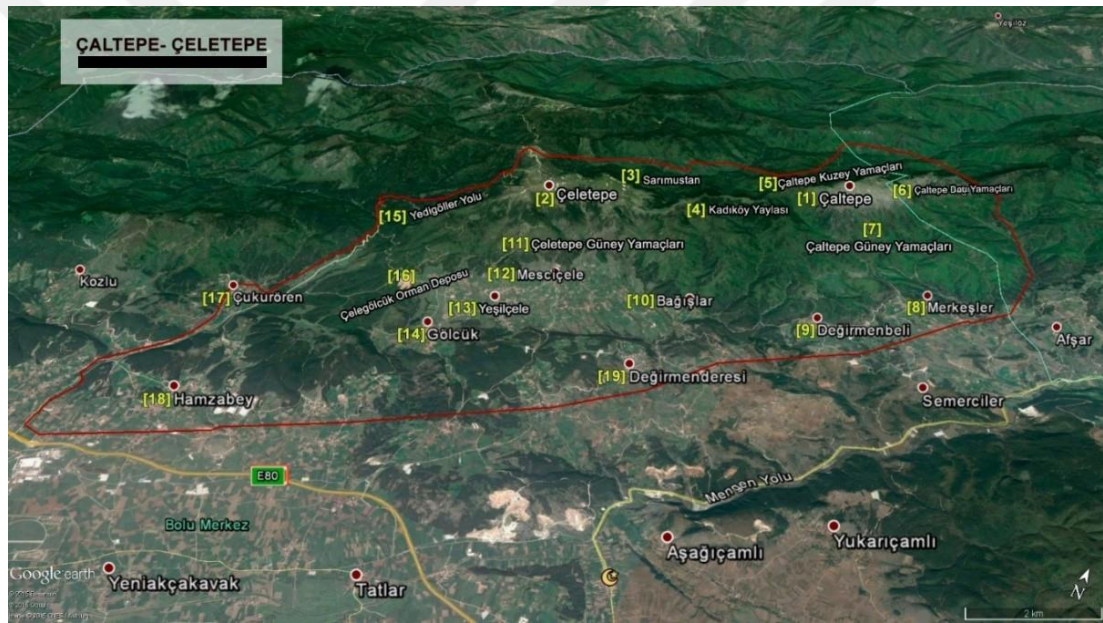


Figure 3: The main stations where fieldwork is carried out in the research area: 1) Çal-tepe summit and its environs, 2) Çeletepe summit and its environs, 3) Sarımustan and its environs, 4) Kadıköy Plateau and its environs, 5) Northern slopes of Çal-tepe, 6) Eastern slopes of Çal-tepe, 7) Southern slopes of Çal-tepe, 8) Merkeşler Village and surroundings, 9) Değirmenbeli Village and surroundings, 10) Bağışlar Village and surroundings, 11) Southern slopes of Çeletepe, 12) Mesciçeşle Village and surroundings, 13) Yeşilçeşle Village and surroundings, 14) Çele Gölcük Village and surroundings, 15) Yedigöller road, 16) Çele Gölcük forest warehouse environment, 17) Çukurören Village and surroundings 18) Hamzabey Village and surroundings, 19) Değirmenderesi Village and surroundings.

The specimens were diagnosed in the light of relevant literatures. Especially, for identification of the plants, 11 volumes of "*Flora of Turkey and East Aegean Islands* (Davis, 1965-1985; Davis *et al.*, 1988; Güner *et al.*, 2000)" were used. To determine the correct and current scientific names of plant names "*Türkiye Bitkileri Listesi* (Güner *et al.*, 2012)" were used as well as web sites "*World Checklist of Selected Plant Families* (Govaerts, 2019)", "*International Plant Name Index* (IPNI, 2019)" and "*the Plant List* (2019)". Author abbreviations were given according to IPNI (2019).

Using "*International Union for Conservation of Nature* (IUCN, 2016)" criteria, in determining of IUCN Red Data Book categories of endangered species of endemic and rare plants, the data in "*Türkiye Bitkileri Kırmızı Kitabı* (Ekim vd., 2000)" were used. The abbreviations and meanings used in the identification of endangered species of plants are as follows: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Not Evaluated (NE), Data Deficient (DD).

The complete floristic list was set out according to the the systematic order in "*Angiosperm Phylogeny Group III* (APG III, 2009)". Enumeration of the taxa are given in the following order:

- Names of division, class, order and family in accordance with the taxonomic hierarchy
- Valid genus name, authors(s)
- Valid species name, author(s); if it is present infraspecific category
- Collection information for specimen examined: location, altitude, habitat, GPS (Global Position System) coordinate, collection date, collector(s) number, identifier(s) and identification date
- If there is, endemism and rarity
- If known, phytogeographic region
- If it is a new record for Bolu, it is specified

In this study, climatic data of Bolu province were received from "*Bolu Meteorology Station* (Bolu Meteoroloji Müdürlüğü, 2019)".

4. RESULTS AND DISCUSSION

4.1 Enumeration of taxa

DIVISION: PTEROPHYTA

CLASS: EQUISETOPSIDA

ORDER: EQUISETALES

FAMILY: EQUISETACEAE

***EQUISETUM* L.**

***Equisetum arvense* L.**

Bolu: Yedigöller road, Çele Gölçük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-143 *et al.*, Det. İ.Eker-2017.

***Equisetum palustre* L.**

Bolu: Çukurören Village and its surroundings, forest clearance, 1088 m, N 40° 48.732' E 031° 38.250', 27.04.2016, Leg. A.Çelik-1631 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-513 *et al.*, Det. A.Çelik-2017; On the Tetemeçele Village, 9 km from Çaltepe-Çeletepe junction to Çaltepe-Kadıköy Upland, roadside and forest clearance, 1504 m, N 40° 52.765' E 031° 44.797', 26.06.2015, Leg. A.Çelik-820 *et al.*, Det. A.Kaya-2017; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1877 *et al.*, Det. A.Çelik-2017.

***Equisetum hyemale* L.**

Bolu: Bağışlar Village, 5 km from Bağışlar Village to Merkeşler Upland, rocky slopes, 1059 m, N 40° 51.605' E 031° 45.825', 16.08.2015, Leg. A.Çelik-1430 *et al.*, Det. A.Çelik-2017; Çaltepe southern slopes, 5 km from Merkeşler Village to Çaltepe

southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-322 *et al.*, Det. A.Çelik-2017; Mengen, Afşar Village, 15.5 km from Afşar Şevkiöglü district to Merkeşler Upland, Çaltepe eastern slopes, roadside and meadows, 1225 m, N 40° 54.190' E 031° 48.213', Leg. A.Çelik-993 *et al.*, Det. A.Çelik-2017.

DIVISION: POLYPODIOPSIDA

ORDER: POLYPODIALES

FAMILY: ASPLENIACEAE

***ASPLENIUM* L.**

***Asplenium adiantum-nigrum* L.**

Bolu: Kadıköy Upland, 7 km from Kadıköy Upland to Gurbettaşı, Sarımustan, rocky area, 1328 m, N 40° 52.990' E 031° 43.953', 24.03.2016, Leg. A.Çelik-1540 *et al.*, Det. A.Kaya-2017.

***Asplenium ceterach* L. (Syn. *Ceterach officinarum* Willd.)**

Bolu: Çaydurt-Mengen road, 24 km from Bolu city center to Taşçılar Village, Taşçılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1663 *et al.*, Det. A.Çelik-2017.

***Asplenium scolopendrium* L. (Syn. *Phyllitis scolopendrium* (L.) Newman)**

Bolu: Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2273 & A.Kaya, Det. A.Kaya-2017.

***Asplenium septentrionale* (L.) Hoffm.**

Bolu: Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2155 *et al.*, Det. A.Çelik-2017.

***Asplenium trichomanes* L.**

Bolu: Yedigöller road, Çaltepe western slopes, 14 km from Gurbettaşı to Sarımustan, rocky areas, 1392 m, N 40° 53.255' E 031° 45.158', 21.06.2015, Leg. A.Çelik-594 *et al.*, Det. İ.Eker-2016; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1235

et al., Det. A.Kaya-2017; Kadıköy Upland, 7 km from Kadıköy Upland to Gurbettaşı, Sarımustan, rocky area, 1328 m, N 40° 52.990' E 031° 43.953', 24.03.2016, Leg. A.Çelik-1538 *et al.*, Det. A.Kaya-2017; Çeletepe, Sarımustan, forest and stream edge, 1264 m, N 40° 53.640' E 031° 43.020', 03.09.2016, Leg. A.Çelik-2167 *et al.*, Det. İ.Eker-2017; Merkezler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2192 *et al.*, Det. A.Kaya-2017; Çaltepe, northern slopes, forest, 1272 m, N 40° 54.742' E 031° 43.478', Leg. A.Çelik-2271 & A.Kaya, Det. A.Çelik-2017.

FAMILY: ATHYRIACEAE

***ATHYRIUM* Roth**

***Athyrium filix-femina* (L.) Roth**

Bolu: Çeletepe, Sarımustan, forests and wetland, 1178 m, N 40° 53.447' E 031° 44.645', 03.09.2016, Leg. A.Çelik-2176 *et al.*, Det. A.Kaya-2017.

FAMILY: POLYPODIACEAE

***POLYPODIUM* L.**

Polypodium vulgare* L. var. *vulgare

Bolu: Çeletepe, İmam Village, around the Çandır Upland, roadside slopes, 1740 m, N 40° 51.602' E 031° 41.452', 11.08.2015, Leg. A.Çelik-1353 *et al.*, Det. İ.Eker-2017; Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2168 *et al.*, Det. A.Çelik-2017; Çaltepe, northern slopes, forest, 1272 m, N 40° 54.742' E 031° 43.478', Leg. A.Çelik-2272 & A.Kaya, Det. A.Çelik-2017.

CLASS: PTERIDOPSIDA

ORDER: ATHYRIALES

FAMILY: CYSTOPTERIDACEAE

CYSTOPTERIS Bernh.

Cystopteris fragilis (L.) Bernh.

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1022 *et al.*, Det. E.Karabacak-2015.

ORDER: DENNSTAEDTIALES

FAMILY: DENNSTAEDTIACEAE

PTERIDIUM L.

Pteridium aquilinum (L.) Kuhn

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-226 *et al.*, Det. E.Karabacak-2015; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-920 *et al.*, Det. E.Karabacak-2015; Mengen, Afşar Village, 13.5 km from Afşar Şevkiöğlü district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-979 *et al.*, Det. E.Karabacak-2015.

ORDER: DRYOPTERIDALES

FAMILY: DRYOPTERIDACEAE

DRYOPTERIS Adans.

Dryopteris filix-mas (L.) Schott

Bolu: Yedigöller road, above Yeniköy Upland, forest clearance, 1133 m, N 40° 49.362' E 031° 39.712', 10.09.2015, Leg. A.Çelik-1435 *et al.*, Det. A.Çelik-2017; Çaltepe,

Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-393 *et al.*, Det. A.Çelik-2017; Çaltepe southern slopes, 6.5 km from Merkeşler Village to Çaltepe southern slopes, roadside and rocky areas, 1194 m, N 40° 53.692' E 031° 48.132', 02.06.2015, Leg. A.Çelik-330 *et al.*, Det. A.Çelik-2017; Yedigöller road, Çaltepe western slopes, 14 km from Gurbettaşı to Sarımustan, rocky areas, 1392 m, N 40° 53.255' E 031° 45.158', 21.06.2015, Leg. A.Çelik-595 *et al.*, Det. A.Çelik-2017; Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2169 *et al.*, Det. A.Çelik-2017.

***POLYSTICHUM* Roth**

***Polystichum aculeatum* (L.) Roth ex Mert.**

Bolu: Tetemeçele Village and its surroundings, stream edge, 1098 m, N 40° 50.892' E 031° 44.055', 04.02.2016, Leg. A.Çelik-1514 *et al.*, Det. İ.Eker-2016.

***Polystichum setiferum* (Forssk.) Moore ex Woyn.**

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1244 *et al.*, Det. A.Kaya-2017.

DIVISION: GYMNOSPERMAE

CLASS: PINOPSIDA

ORDER: PINALES

FAMILY: CUPRESSACEAE

***JUNIPERUS* L.**

***Juniperus communis* L. var. *saxatilis* Pall. (Syn. *Juniperus communis* L. subsp. *nana* Syme)**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-648 *et al.*, Det. İ.Eker-2016; Çeletepe, Çeletepe eastern slopes, subalpine zone, 1868 m, N 40° 52.107' E 031° 43.023', 01.05.2015, Leg. A.Çelik-73 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows,

1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-175 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-388 *et al.*, Det. İ.Eker-2015.

Juniperus oxycedrus* L. subsp. *oxycedrus* var. *oxycedrus

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1334 *et al.*, Det. İ.Eker-2016; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-756 *et al.*, Det. İ.Eker-2016; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-53 *et al.*, Det. İ.Eker-2017; Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-267 *et al.*, Det. İ.Eker-2017.

FAMILY: PINACEAE

***ABIES* Mill.**

Abies nordmanniana (Steven) Spach subsp. *equi-trojani* (Asch. & Sint. ex Boiss.) Coode & Cullen (Syn. *Abies nordmanniana* (Steven) Spach subsp. *bornmuelleriana* (Mattf.) Coode & Cullen)

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1549 m, N 40° 86.419' E 031° 73.492', 01.04.2015, Leg. A.Çelik-6 *et al.*, Det. İ.Eker-2015; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-189 *et al.*, Det. İ.Eker-2015; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-387 *et al.*, Det. İ.Eker-2015; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1874 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

PINUS L.

Pinus nigra J.F.Arnold subsp. ***pallasiana*** (Lamb.) Holmboe (Syn. ***Pinus nigra*** J.F.Arnold var. ***caramanica*** (Loudon) Rehder)

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1549 m, N 40° 86.419' E 031° 73.492', 01.04.2015, Leg. A.Çelik-7 *et al.*, Det. İ.Eker-2015; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-698 *et al.*, Det. İ.Eker-2015; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-765 *et al.*, Det. İ.Eker-2015; Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1028 *et al.*, Det. İ.Eker-2015; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-184 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Pinus sylvestris L. var. ***hamata*** Steven

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1549 m, N 40° 86.419' E 031° 73.492', 01.04.2015, Leg. A.Çelik-5 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-100 *et al.*, Det. İ.Eker-2015; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-432 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

DIVISION: MAGNOLIOPHYTA (ANGIOSPERMAE)

CLASS: MAGNOLIOPSIDA

(EUDICOTYLEDONEAE=DICOTYLEDONEAE)

ORDER: APIALES

FAMILY: APIACEAE (UMBELLIFERAE)

ANGELICA L.

Angelica sylvestris* L. var. *sylvestris

Bolu: Kadıköy Upland, 1.3 km from Kadıköy Upland to Merkeşler Village, forest, 1477 m, N 40° 52.813' E 031° 45.792', 09.08.2015, Leg. A.Çelik-1290 *et al.*, Det. A.Kaya-2017; Yedigöller road, 5 km from Gurbattaşı to Çaltepe Kadıköy Upland, roadside, 1257 m, N 40° 53.310' E 031° 42.557', 10.09.2015, Leg. A.Çelik-1448 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

ANTHRISCUS Pers.

***Anthriscus nemorosa* (M.Bieb.) Spreng.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-399, Det. M.Sağiroğlu-2016; Çaltepe, lower boundary of forest, open forests, 1441 m, N 40° 53.585' E 031° 46.247', 27.07.2015, Leg. A.Çelik-203, Det. M.Sağiroğlu-2016; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-348 *et al.*, Det. M.Sağiroğlu-2016; Çeletepe, Banaz Upland and its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1848 *et al.*, Det. A.Kaya-2017.

***Anthriscus sylvestris* (L.) Hoffm.**

Bolu: Tetemeçele Village, 12 km from Tetemeçele Village to Kadıköy Upland, forest, 1515 m, N 40° 52.692' E 031° 44.722', 27.07.2015, Leg. A.Çelik-1124 *et al.*, Det. A.Kaya-2017.

New record

ASTRANTIA L.

***Astrantia maxima* Pall. subsp. *haradjianii* (Grintz) Rech.f.**

Bolu: Çaltepe and its surroundings, alpine meadows, 1824 m, N 40° 53.785' E 031° 46.765', 27.07.2015, Leg. A.Çelik-1132 *et al.*, Det. İ.Eker-2015; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E

031° 46.922', 09.08.2015, Leg. A.Çelik-1239 *et al.*, Det. İ.Eker-2015; Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2036 *et al.*, Det. A.Çelik-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2108 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, meadows, 1723 m, N 40° 54.000' E 031° 46.898', 21.07.2017, Leg. A.Çelik-2242 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

Endemic

BUPLEURUM L.

***Bupleurum falcatum* L. subsp. *cernuum* (Ten.) Arcang.**

Bolu: Çaltepe summit, above Merkeşler Upland, alpine meadows, 1889 m, N 40° 53.603' E 031° 46.543', 27.07.2015, Leg. A.Çelik-1127 *et al.*, Det. A.Kaya-2017; Çaltepe, 3 km from Kadıköy Upland to Merkeşler Upland, forest clearance, 1678 m, N 40° 53.705' E 031° 46.302', Leg. A.Çelik-2240 & A.Kaya, Det. A.Çelik-2017.

***Bupleurum rotundifolium* L.**

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1793 *et al.*, Det. A.Kaya-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1937 *et al.*, Det. A.Kaya-2017.

CAUCALIS L.

***Caucalis platycarpos* L.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-314 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 1 km from Merkeşler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-937 *et al.*, Det. A.Kaya-2017.

Mediterranean element

CHAEROPHYLLUM L.

***Chaerophyllum aureum* L.**

Bolu: Çeletepe, 8 km from Gurbettaşı to Sarımustan, stony and rocky areas, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1871 *et al.*, Det. A.Kaya-2017.

New record

CNIDIUM Cusson

***Cnidium silaifolium* (Jacq.) Simonk. subsp. *orientale* (Boiss.) Tutin**

Bolu: Mengen, Merkezler Upland, 22 km from Afşar Village to Merkezler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1015 *et al.*, Det. M. Sağıroğlu-2018.

New record

CONIUM L.

***Conium maculatum* L.**

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1950 *et al.*, Det. A.Kaya-2017.

DAUCUS L.

***Daucus carota* L.**

Bolu: Merkezler Village, near the sand depo on Mengen road, fields and meadows, 678 m, N 40° 48.174' E 031° 46.307', 12.07.2015, Leg. A.Çelik-944 *et al.*, Det. M.Sağıroğlu-2016.

ECHINOPHORA L.

***Echinophora tenuifolia* L. subsp. *sibthorpiana* (Guss.) Tutin**

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1315 *et al.*, Det. A.Çelik & A.Kaya-2017.

Irano-Turanian element

ERYNGIUM L.

Eryngium bithynicum Boiss.

Bolu: Banaz Village, 9 km from Bolu city center to Banaz Village, meadows and forest clearance, 867 m, N 40° 47.608' E 031° 42.785', 27.07.2015, Leg. A.Çelik-1046 *et al.*, Det. İ.Eker-2015.

Endemic, Irano-Turanian element

Eryngium campestre L. var. ***virens*** (Link) Weins

Bolu: Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2066 *et al.*, Det. A.Çelik-2016.

Eryngium giganteum M.Bieb.

Bolu: Kadıköy Upland, 1 km from Kadıköy Upland to Çeletepe, forest clearance and meadow, 1636 m, N 40° 52.740' E 031° 44.478', 09.08.2015, Leg. A.Çelik-1280 *et al.*, Det. İ.Eker-2015; Yedigöller road, 10 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and rocky area, 1095 m, N 40° 53.618' E 031° 43.780', 03.08.2015, Leg. A.Çelik-1204 *et al.*, Det. A.Çelik-2016.

Euro-Siberian element

GASPARRINIA Bertol.

Gasparrinia peucedanoides Thell. (Syn. ***Seseli peucedanoides*** (M.Bieb.) Koso-Pol.)

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1195 *et al.*, Det. M. Sağıroğlu-2017; Çaltepe, alpine meadows, 1820 m, N 40° 53.913' E 031° 47.183', 09.08.2015, Leg. A.Çelik-1259 *et al.*, Det. M.Sağıroğlu-2016.

Euro-Siberian element

HERACLEUM L.

***Heracleum platytaenium* Boiss.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-313 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-280 *et al.*, Det. A.Kaya-2017; Çeletepe, 8 km from Gurbettaşı to Sarımustan, stony and rocky areas, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1869 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

LASER Borkh.

***Laser trilobum* (L.) Borkh.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-310 *et al.*, Det. M.Sağiroğlu-2016.

LASERPITIUM L.

***Laserpitium hispidum* M.Bieb.**

Bolu: Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-903 *et al.*, Det. M.Sağiroğlu-2016; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1381 *et al.*, Det. M.Sağiroğlu-2016.

Euro-Siberian element

OENANTHE L.

***Oenanthe fistulosa* L.**

Bolu: Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2296 & A.Kaya, Det. M. Sağıroğlu-2018.

ORLAYA Hoffm.

***Orlaya grandiflora* (L.) Hoffm. (Syn. *Orlaya daucooides* (L.) Greuter)**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-305 *et al.*, Det. M.Sağıroğlu-2016.

MALABAILA Tausch

Malabaila secacul* (Mill.) Boiss. subsp. *secacul

Bolu: Bolu-Mengen road, Müstakimler Village, roadside, 733 m, N 40° 47.778' E 031° 45.582', 9.06.2017, Leg. A.Çelik-2223 & A.Kaya, Det. M. Sağıroğlu-2018.

PRANGOS Lindl.

***Prangos ferulacea* (L.) Lindl.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-278 *et al.*, Det. A.Kaya-2017; Çaltepe, Kadıköy Upland, meadows, 1539 m, N 40° 52.945' E 031° 45.315', 11.08.2016, Leg. A.Çelik-2131 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2314 & A.Kaya, Det. A.Kaya-2017.

New record

SANICULA L.

***Sanicula europaea* L.**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-246 *et al.*, Det. M.Sağiroğlu-2016; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-377 *et al.*, Det. A.Kaya-2017; Yedigöller road, Çaltepe western slopes, 14 km from Gurbettaşı to Sarımustan, rocky areas, 1392 m, N 40° 53.255' E 031° 45.158', 21.06.2015, Leg. A.Çelik-596 *et al.*, Det. İ.Eker-2017; Banaz Upland, 10 km from Çele Gölcük warehouse to Çeletepe, Banaz Upland, roadside, 1609 m, N 40° 51.338' E 031° 42.207', 16.06.2016, Leg. A.Çelik-1840 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

SCANDIX L.

***Scandix iberica* M.Bieb.**

Bolu: Semerciler Village, 1.4 km from Semerciler Village to Merkeşler Village, forest, 870 m, N 40° 51.097' E 031° 48.312', 08.04.2016, Leg. A.Çelik-1551 *et al.*, Det. M.Sağiroğlu-2016; Banaz Village, above Banaz district, around the cemetery, 998 m, N 40° 48.828' E 031° 43.405', Leg. A.Çelik-1604 *et al.*, Det. M.Sağiroğlu-2016.

SESELI L.

***Seseli tortuosum* L.**

Bolu: Tetemeçele Village, above Tetemeçele Village, roadside and meadows, 1305 m, N 40° 51.503' E 031° 44.583', 08.04.2018, Leg. A.Çelik-2336 & A.Kaya, Det. A.Kaya-2017.

SMYRNIUM L.

***Smyrniium perfoliatum* L.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-311 *et al.*, Det. M.Sağiroğlu-2016; Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760'

E 031° 43.787', 27.05.2015, Leg. A.Çelik-152 *et al.*, Det. M.Sağiroğlu-2016; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky areas, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-425 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 1 km from Merkeşler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-942 *et al.*, Det. A.Kaya-2017; Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2012 *et al.*, Det. A.Kaya-2017.

TORILIS Adans.

Torilis leptophylla (L.) Rchb.f.

Bolu: Merkeşler Village, 1 km from Merkeşler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-936 *et al.*, Det. M. Sağiroğlu-2018.

FAMILY: ARALIACEAE

HEDERA L.

Hedera helix L.

Bolu: Merkeşler Village, 3 km from Merkeşler Village to Çaltepe, Kazalan, stream edge, 1041 m, N 40° 52.212' E 031° 46.922', 08.04.2016, Leg. A.Çelik-1569 *et al.*, Det. A.Çelik-2016.

ORDER: ASTERALES

FAMILY: ASTERACEAE (COMPOSITAE)

ACHILLEA L.

Achillea grandifolia Friv.

Bolu: Çaltepe northern mountains, Kapankayası, forests and stony area, 1192 m, N 40° 55.115' E 031° 42.642', 29.07.2017, Leg. A.Çelik-2282 & A.Kaya, Det. A.Çelik-2017.

Achillea millefolium* L. subsp. *millefolium* var. *millefolium

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1227 *et al.*, Det. İ.Eker-2015; Çaltepe, Çaltepe Summit, alpine meadows, 1887 m, N 40° 53.550' E 031° 46.543', 11.08.2016, Leg. A.Çelik-2125 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, meadows, 1723 m, N 40° 54.000' E 031° 46.898', 21.07.2017, Leg. A.Çelik-2244 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

***Achillea nobilis* L. subsp. *neilreichii* (A.Kern.) Velen.**

Bolu: Çeletepe summit, alpine meadows, 1987 m, N 40° 51.940' E 031° 42.123', 03.08.2015, Leg. A.Çelik-1221 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, Gurbettaşı road, rocky area, 1670 m, N 40° 51.648' E 031° 41.387', 09.06.2017, Leg. A.Çelik-2257 & A.Kaya, Det. A.Çelik-2017, *ibid.*, 09.06.2017, Leg. A.Çelik-2258 & A.Kaya, Det. A.Çelik-2017; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-565 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Achillea setacea* Waldst. & Kit.**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-663 *et al.*, Det. İ.Eker-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1063 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1779 *et al.*, Det. İ.Eker-2017; Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2009 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***ANTHEMIS* L.**

***Anthemis cotula* L.**

Bolu: Merkezler Village, 1 km from Merkezler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-935 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkezler Village, 4 km from Merkezler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 26.06.2015, Leg. A.Çelik-889 *et al.*, Det. A.Çelik & A.Kaya-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1951 *et al.*, Det. İ.Eker-2016.

***Anthemis cretica* L. subsp. *anatolica* (Boiss.) Grierson**

Bolu: Bolu-Mengen road, Müstakimler Village, roadside, 733 m, N 40° 47.778' E 031° 45.582', 9.06.2017, Leg. A.Çelik-2225 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

***Anthemis cretica* L. subsp. *pontica* (Willd.) Grierson**

Bolu: Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', Leg. A.Çelik-1453 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-362 *et al.*, Det. U. Özbek-2017; Çaltepe southern slopes, 6 km from Merkezler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-324 *et al.*, Det. A.Çelik-2017; Çeletepe Summit, alpine meadows, 1975 m, N 40° 51.945' E 031° 42.122', 21.06.2015, Leg. A.Çelik-651 *et al.*, Det. U. Özbek-2017; Çeletepe, Çeletepe summit, alpine meadows, 1982 m, N 40° 51.892' E 031° 42.103', Leg. A.Çelik-1858, Det. U. Özbek-2017; Çeletepe, Çeletepe summit, alpine meadows, 1962 m, N 40° 51.883' E 031° 41.997', 21.07.2017, Leg. A.Çelik-2254 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

***Anthemis pseudocotula* Boiss.**

Bolu: Mengen, Merkezler Upland, 22 km from Afşar Village to Merkezler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1010 *et al.*, Det. A.Çelik & A.Kaya-2017; Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-846 *et al.*, Det. A.Çelik-2017;

Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2154 *et al.*, Det. A.Çelik-2017.

ARCTIUM L.

Arctium minus (Hill) Bernh.

Bolu: Bağışlar Village, 4 km from Bağışlar Village to Merkezler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1427 *et al.*, Det. İ.Eker-2015; Merkezler Village, 4 km from Merkezler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-885 *et al.*, Det. A.Çelik-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-958 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

BELLIS L.

Bellis perennis L.

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-140 *et al.*, Det. İ.Eker-2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-48 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe eastern slopes, subalpine zone, 1868 m, N 40° 52.107' E 031° 43.023', 01.05.2015, Leg. A.Çelik-74 *et al.*, Det. A.Çelik-2017; Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-242 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

CARDUUS L.

Carduus acanthoides L. subsp. *acanthoides*

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1927 *et al.*, Det. A.Çelik-2017;

Mengen road, Taşcılar Village and its surroundings, meadows, 688 m, N 40° 48.118' E 031° 46.094', 23.06.2016, Leg. A.Çelik-1882 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Carduus adpressus C.A.Mey.

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1238 *et al.*, Det. A.Çelik-2016; *ibid.*, 12.08.2016, Leg. A.Çelik-2115 *et al.*, Det. A.Çelik-2017; Merkeşler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2191 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Carduus nutans L. subsp. *nutans*

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-573 *et al.*, Det. İ.Eker-2015; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-696 *et al.*, Det. A.Çelik-2017.

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

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1932 *et al.*, Det. İ.Eker-2017.

CARLINA L.

Carlina vulgaris L.

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1155 *et al.*, Det. A.Çelik-2017; Yedigöller road, Banaz and Çandır Upland below, stony area, 1648 m, N 40° 51.757' E 031° 41.212', Leg. A.Çelik-2307 & A.Kaya, Det. A.Çelik-2017.

CARTHAMUS L.

***Carthamus lanatus* L.**

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-568 *et al.*, Det. A.Çelik-2016.

CENTAUREA L.

***Centaurea consanguinea* DC.**

Bolu: Bağışlar Village, village cemetery, in the cemetery, 958 m, N 40° 50.228' E 031° 45.362', 16.08.2015, Leg. A.Çelik-1411 *et al.*, Det. A.Çelik-2017; Mengen, 2 km from Aşşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2058 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1304 *et al.*, Det. A.Çelik-2017.

Endemic, Irano-Turanian element

***Centaurea iberica* Trevir. ex Spreng.**

Bolu: Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1366 *et al.*, Det. İ.Eker-2015; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-732 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 2.5 km from Merkeşler Village to Çaltepe, meadows, 1029 m, N 40° 52.257' E 031° 47.108', 09.08.2015, Leg. A.Çelik-1298 *et al.*, Det. A.Çelik-2017.

***Centaurea kotschyi* (Boiss. & Heldr.) Hayek var. *persica* (Boiss.) Wagenitz**

Bolu: Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2299 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

New record

Centaurea phrygia L. subsp. *stenolepis* (A.Kern.) Gugler (Syn. *Centaurea stenolepis* A.Kern.)

Bolu: Yakabayat Village, 3 km from Yakabayat Village to Gölcük Village, roadside slopes, 1058 m, N 40° 48.442' E 031° 41.760', 16.08.2015, Leg. A.Çelik-1391 *et al.*, Det. İ.Eker-2015; *ibid.*, 16.08.2015, Leg. A.Çelik-1386 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Centaurea solstitialis L. subsp. *solstitialis*

Bolu: Bağışlar Village, village cemetery, in the cemetery, 958 m, N 40° 50.228' E 031° 45.362', 16.08.2015, Leg. A.Çelik-1409 *et al.*, Det. İ.Eker-2015; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1946 *et al.*, Det. İ.Eker-2016.

CHONDRILLA L.

Chondrilla juncea L.

Bolu: Mengen, 4.5 km from Avşar Village to Çaltepe eastern slopes, rocky slopes and stream edge, 918 m, N 40° 53.840' E 31° 49.490', 11.08.2016, Leg. A.Çelik-2079 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1327 *et al.*, Det. A.Çelik-2017.

CICHORIUM L.

Cichorium intybus L.

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1933 *et al.*, Det. A.Çelik-2016; Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-836 *et al.*, Det. A.Çelik-2017; Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-852 *et al.*, Det. A.Çelik-2017; *ibid.* 12.07.2015, Leg. A.Çelik-853 *et al.*, Det. A.Çelik-2017.

***CIRSIUM* Mill.**

***Cirsium arvense* (L.) Scop. (Syn. *Cirsium arvense* (L.) Scop. subsp. *vestitum* (Wimm. & Grab.) Petr.)**

Bolu: Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1145 *et al.*, Det. İ.Eker-2015; Mengen, Afşar Village, 10.5 km from Afşar Village to Çaltepe, roadside, 1065 m, N 40° 53.775' E 031° 49.307', 23.07.2015, Leg. A.Çelik-967 *et al.*, Det. A.Çelik-2017.

***Cirsium hypoleucum* DC.**

Bolu: Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-768 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-249 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-462 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-882 *et al.*, Det. İ.Eker-2017; Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2014 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Cirsium ligulare* Boiss.**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1154 *et al.*, Det. A.Çelik-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1378 *et al.*, Det. İ.Eker-2017; Mengen, Hayranlar Village and its surroundings, forest, 864 m, N 40° 53.128' E 031° 49.970', 11.08.2016, Leg. A.Çelik-2075 *et al.*, Det. A.Çelik-2017; Yedigöller road, 1 km from Çukurören Village to Çele Gölcük forestry warehouse, serpentine slopes, 1031 m, N 40° 49.042' E 031° 39.657', 03.09.2016, Leg. A.Çelik-2143 *et al.*, Det. A.Çelik-2017; Çeletepe, 2 km from Gurbettaşı to Sarımustan,

forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2156 *et al.*, Det. A.Çelik-2017; Çeletepe, above İmam Village Candır Upland, meadows, 1862 m, N 40° 52.022' E 031° 42.978', 03.09.2016, Leg. A.Çelik-2181 *et al.*, Det. A.Çelik-2017

***Cirsium sintenisii* Freyn**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1887 m, N 40° 53.550' E 031° 46.543', 11.08.2016, Leg. A.Çelik-2130 *et al.*, Det. A.Çelik-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2096 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, alpine meadows, 1972 m, N 40° 51.895' E 031° 42.097', 26.08.2017, Leg. A.Çelik-2310 & A.Kaya, Det. İ.Eker-2017.

Endemic, New record

***Cirsium vulgare* (Savi) Ten.**

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1335 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1376 *et al.*, Det. İ.Eker-2017; Mengen, Hayranlar Village and its surroundings, forest, 864 m, N 40° 53.128' E 031° 49.970', 11.08.2016, Leg. A.Çelik-2073 *et al.*, Det. A.Kaya-2017.

***CONYZA* Less.**

***Conyza canadensis* (L.) Cronquist (Syn. *Erigeron canadensis* L.)**

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1316 *et al.*, Det. A.Çelik-2017; Tetemeçele Village, cultivated fields, 975 m, N 40° 50.473' E 031° 44.552', 07.10.2016, Leg. A.Çelik-2195 *et al.*, Det. A.Çelik-2017.

COTA J.Gay

Cota tinctoria (L.) J.Gay var. **pallida** (DC.) U.Özbek & Vural

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1240 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1165 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, roadside, 1745 m, N 40° 53.990' E 031° 46.857', Leg. A.Çelik-1255 *et al.*, Det. A.Çelik-2017; Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-2119 *et al.*, Det. A.Çelik-2017.

Cota tinctoria (L.) J.Gay var. **discoidea** (All.) Özbek & Vural

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1959 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-473 *et al.*, Det. İ.Eker-2017.

CREPIS L.

Crepis foetida L. subsp. **foetida**

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller, 3 km from Dumantepe villas, roadside and rocky slopes, 913 m, N 40° 47.372' E 031° 38.218' Leg. A.Çelik-716 *et al.*, Det. A.Çelik-2017.

Crepis reuterana Boiss. subsp. **reuterana** Boiss.

Bolu: Semerciler Village, 1.4 km from Semerciler Village to Merkeşler Village, forest, 870 m, N 40° 51.097' E 031° 48.312', 08.04.2016, Leg. A.Çelik-1552 *et al.*, Det. A.Çelik-2016; Çaydurt-Mengen road, 24 km from Bolu city center to Taşçılar Village, Taşçılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1673 *et al.*, Det. A.Çelik-2017; Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and

forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1326 *et al.*, Det. A.Çelik-2017.

New record, Mediterranean element

Crepis sancta (L.) Bornm.

Bolu: Semerciler Village, 1.4 km from Semerciler Village to Merkeşler Village, forest, 870 m, N 40° 51.097' E 031° 48.312', 08.04.2016, Leg. A.Çelik-1557 *et al.*, Det. A.Çelik-2017; Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2013 *et al.*, Det. A.Çelik-2017; Mengen, 4.5 km from Avşar Village to Çaltepe eastern slopes, rocky slopes and stream edge, 918 m, N 40° 53.840' E 31° 49.490', 11.08.2016, Leg. A.Çelik-2077 *et al.*, Det. A.Çelik-2017.

CRUPINA (Pers.) DC.

Crupina crupinastrum (Moris) Vis.

Bolu: Merkeşler village, 2 km from Değirmenbeli Village to Merkeşler Village, forest clearance, 909 m, N 40° 51.662' E 031° 47.037' 25.06.2016, Leg. A.Çelik-2003 *et al.*, Det. A.Çelik-2017.

CYANUS Mill.

Cyanus depressus (M.Bieb.) Soják (Syn. *Centaurea depressa* M.Bieb.)

Bolu: Merkeşler Village, 35 km from Bolu to Merkeşler Village, cultivated fields, 883 m, N 40° 51.215' E 031° 48.165', 06.05.2016, Leg. A.Çelik-1682 *et al.*, Det. A.Çelik-2017.

Cyanus pichleri (Boiss.) Holub subsp. *extrarosularis* (Hayek & Siehe) Wagenitz & Greuter

Bolu: Çeletepe, above İmam Village Candır Upland, meadows, 1862 m, N 40° 52.022' E 031° 42.978', 03.09.2016, Leg. A.Çelik-2179 *et al.*, Det. A.Çelik-2017.

Endemic

Cyanus pichleri (Boiss.) Holub subsp. *pichleri* (Syn. *Centaurea pichleri* Boiss.)

Bolu: Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-343 *et al.*, Det. İ.Eker-2015; Çaltepe, Çaltepe eastern slopes, subalpine meadows, 1802 m, N 40° 53.890' E 031° 47.092', 11.08.2016, Leg. A.Çelik-2122 *et al.*, Det. A.Çelik-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-418 *et al.*, Det. İ.Eker-2017; Çeletepe, Banaz Upland and its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1846 *et al.*, Det. İ.Eker-2017.

Cyanus thirkei (Sch.Bip.) Holub

Bolu: Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1814 *et al.*, Det. A.Çelik-2017.

Mediterranean element

Cyanus triumfettii (All.) Dostál ex Á.Löve & D.Löve subsp. *triumfettii* (Syn. *Centaurea triumfettii* All.)

Bolu: Mengen, Çaltepe eastern slopes, forest, 1759 m, N 40° 54.310' E 031° 47.492', 09.08.2015, Leg. A.Çelik-1246 *et al.*, Det. İ.Eker-2015; Çaltepe, Merkezler Village and its surroundings, forest clearance and meadow, 1717 m, N 40° 54.002' E 031° 46.898', 09.06.2017, Leg. A.Çelik-2221 & A.Kaya, Det. A.Çelik-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1190 *et al.*, Det. İ.Eker-2017.

DORONICUM L.

Doronicum orientale Hoffm.

Bolu: Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-75 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-117 *et al.*, Det. A.Çelik-2017; Bolu Çaltepe, Merkezler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863',

27.05.2015, Leg. A.Çelik-196 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-395 *et al.*, Det. A.Çelik-2017.

***ECHINOPS* L.**

***Echinops microcephalus* Sm.**

Bolu: Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2065 *et al.*, Det. A.Çelik-2016.

Mediterranean element

Echinops sphaerocephalus* L. subsp. *sphaerocephalus

Bolu: Çukurören Village, around the Sakintepe, rocky slope, 1040 m, N 40° 48.230' E 031° 39.078', 11.08.2015, Leg. A.Çelik-1343 *et al.*, Det. A.Çelik-2017; Çukurören Village, around the Sakintepe, rocky slope, 975 m, N 40° 48.437' E 031° 38.967', 03.09.2016, Leg. A.Çelik-2135 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Echinops spinosissimus* Turra subsp. *bithynicus* (Boiss.) Greuter (Syn. *Echinops viscosus* DC. subsp. *bithynicus*)**

Bolu: Değirmenbeli Village and its surroundings, roadside, 856 m, N 40° 50.610' E 031° 47.060', 09.08.2015, Leg. A.Çelik-1300 *et al.*, Det. İ.Eker-2015; Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2228 & A.Kaya, Det. A.Çelik-2017.

New record, Irano-Turanian element

***FILAGO* Loefl.**

***Filago arvensis* L. (Syn. *Logfia arvensis* (L.) Holub)**

Bolu: Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1139 *et al.*, Det. A.Çelik-2017.

***ERIGERON* L.**

***Erigeron acris* L. subsp. *acris* (Syn. *Erigeron acer* L. subsp. *acer*)**

Bolu: Çaltepe, Merkezler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1242 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Erigeron acris* subsp. *pycnotrichus* (Vierh.) Grierson**

Bolu: Çeletepe, Banaz Upland road, 5 km from Kadıköy Upland to Çeletepe, roadside and rocky area, 1687 m, N 40° 51.858' E 031° 42.612', 03.08.2015, Leg. A.Çelik-1215 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkezler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2311 & A.Kaya, Det. İ.Eker-2017.

New record, Euro-Siberian element

***EUPATORIUM* L.**

***Eupatorium cannabinum* L.**

Bolu: Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2085 *et al.*, Det. A.Çelik-2017; Bağışlar Village, 5 km from Bağışlar Village to Merkezler Upland, rocky slopes, 1059 m, N 40° 51.605' E 031° 45.825', 16.08.2015, Leg. A.Çelik-1428 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***HELICHRYSUM* Mill.**

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

Bolu: Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1078 *et al.*, Det. İ.Eker-2015.

Endemic, Irano-Turanian element

Helichrysum plicatum* DC. subsp. *plicatum

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1189 *et al.*, Det. A.Kaya-2017; Çeletepe, above İmam Village Candır Upland, meadows, 1862 m, N 40° 52.022' E 031° 42.978', 03.09.2016, Leg. A.Çelik-2180 *et al.*, Det. A.Çelik-2017; Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-2110 *et al.*, Det. A.Çelik-2017; Çeletepe, Yedierenler Hill surroundings, alpine meadows, 1930 m, N 40° 52.135' E 031° 42.485', 03.08.2015, Leg. A.Çelik-1225 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe summit, alpine meadows, 1962 m, N 40° 51.883' E 031° 41.997', 21.07.2017, Leg. A.Çelik-2255 & A.Kaya, Det. İ.Eker-2017.

***HELMINTHOTHECA* Zinn**

***Helminthotheca echioides* (L.) Holub**

Bolu: Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2320 & A.Kaya, Det. A.Çelik-2017.

***HIERACIUM* L.**

***Hieracium oblongum* Jord. (Syn. *Hieracium murorum* C.B.Clarke subsp. *oblongum* (Jord.) Zahn)**

Bolu: Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1811 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-233 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-470 *et al.*, Det. A.Çelik-2017; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-527 *et al.*, Det. İ.Eker-2017; Yedigöller road, Çaltepe western slopes, 14 km from Gurbettaşı to Sarımustan, rocky areas, 1392 m, N 40° 53.255' E 031° 45.158', 21.06.2015, Leg. A.Çelik-593 *et al.*, Det. İ.Eker-2017; Çukurören Village, 4 km from Çukurören Village to Yeniköy Upland, roadside,

1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1820 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Hieracium paphlagonicum Freyn & Sint.

Bolu: Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2290 & A.Kaya, Det. A.Çelik-2017.

Endemic, Euro-Siberian element

Hieracium vagum Jord.

Bolu: Çeletepe, 2 km from Gurbetteşi to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2150 *et al.*, Det. İ.Eker-2017; Çaltepe, Sarımustan, forest and stream edge, 1264 m, N 40° 53.640' E 031° 43.020', 03.09.2016, Leg. A.Çelik-2166 *et al.*, Det. İ.Eker-2017; Çaltepe, Sarımustan, forest and slopes, 1323 m, N 40° 53.518' E 031° 44.975', 07.10.2016, Leg. A.Çelik-2207 *et al.*, Det. İ.Eker-2017; Mengen, Avşar Village, Avşar Upland, Çaltepe eastern slopes, forest, 1027 m, N 40° 53.737' E 031° 49.125', 20.10.2017, Leg. A.Çelik-2328 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

INULA L.

Inula britannica L.

Bolu: Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2088 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Inula oculus-christi L.

Bolu: Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1374 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Inula salicina* L.**

Bolu: Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, forest, 723 m, N 40° 48.925' E 031° 47.110', 21.07.2017, Leg. A.Çelik-2235 & A.Kaya, Det. A.Çelik-2017.

Euro-Siberian element

***JURINEA* Cass.**

***Jurinea alpigena* K.Koch**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1887 m, N 40° 53.550' E 031° 46.543', 11.08.2016, Leg. A.Çelik-2129 *et al.*, Det. A.Çelik-2017; Çaltepe, alpine meadows, 1820 m, N 40° 53.913' E 031° 47.183', 09.08.2015, Leg. A.Çelik-1260 *et al.*, Det. İ.Eker-2017; *ibid.*, 09.08.2015, Leg. A.Çelik-1261 *et al.*, Det. İ.Eker-2017; Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', 17.09.2015, Leg. A.Çelik-1471 *et al.*, Det. İ.Eker-2017; Çaltepe summit, above Merkeşler Upland, alpine meadows, 1889 m, N 40° 53.603' E 031° 46.543', 27.07.2015, Leg. A.Çelik-1128 *et al.*, Det. İ.Eker-2015; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-546 *et al.*, Det. A.Çelik-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1188 *et al.*, Det. İ.Eker-2017; Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2035 *et al.*, Det. A.Çelik-2017; Çaltepe, 3 km from Kadıköy Upland to Merkeşler Upland, forest clearance, 1678 m, N 40° 53.705' E 031° 46.302', Leg. A.Çelik-2241 & A.Kaya, Det. İ.Eker-2017; Tetemeçele Village, 5 km from Çaltepe-Çeltepe road to Çeletepe, serpentine slopes, 1608 m, N 40° 52.223' E 031° 44.092', 21.07.2017, Leg. A.Çelik-2250 & A.Kaya, Det. A.Çelik-2017; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2293 & A.Kaya, Det. A.Çelik-2017.

Endemic, Euro-Siberian element

Jurinea pontica Hausskn. & Freyn ex Hausskn.

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-850 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1303 *et al.*, Det. A.Çelik-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1380 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

LACTUCA L.

Lactuca muralis (L.) Gaertn. (Syn. ***Mycelis muralis*** (L.) Dumort.)

Bolu: Mengen, 4.5 km from Avşar Village to Çaltepe eastern slopes, rocky slopes and stream edge, 918 m, N 40° 53.840' E 31° 49.490', 11.08.2016, Leg. A.Çelik-2078 *et al.*, Det. A.Çelik-2017; Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-841 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Lactuca saligna L.

Bolu: Yedigöller road, 3 km from Gurbattaşı to Çele Gölcük forestry warehouse, forest, 1557 m, N 40° 51.070' E 031° 40.768', 17.09.2015, Leg. A.Çelik-1473 *et al.*, Det. A.Çelik-2017.

Lactuca serriola L.

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1301 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Lactuca viminea* (L.) J.Presl & C.Presl**

Bolu: Tetemeçele Village, 2 km from Tetemeçele Village to Çaltepe-Çetepe, forest clearance, 1225 m, N 40° 51.285' E 031° 44.177', 27.07.2015, Leg. A.Çelik-1106 *et al.*, Det. İ.Eker-2017.

LAPSANA L.

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

Bolu: Mengen, Avşar Village and its surroundings, forests and stream edge, 893 m, N 40° 52.743' E 031° 50.555', 23.06.2016, Leg. A.Çelik-1924 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-504 *et al.*, Det. A.Çelik-2017; Mengen, Çaltepe eastern slopes, forest clearance, 1263 m, N 40° 53.900' E 031° 48.148', 25.06.2016, Leg. A.Çelik-2052 *et al.*, Det. A.Çelik-2017; Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-2118 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Lapsana communis* L. subsp. *pisidica* (Boiss. & Heldr.) Rech.f.**

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-946 *et al.*, Det. İ.Eker-2017; Banaz Village, 2 km from Banaz Village to Çobankaya Village, rocky slopes, 1054 m, N 40° 49.587' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1056 *et al.*, Det. İ.Eker-2017.

LEONTODON L.

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

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1795 *et al.*, Det. A.Çelik-2017; Çele Gölçük forestry warehouse surroundings, slopes, 1205, N 40° 49.910' E 031° 40.985', 26.06.2015, Leg. A.Çelik-779 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1710 *et al.*, Det. A.Çelik-2017.

Leontodon hispidus* L. subsp. *hispidus

Bolu: Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1810 *et al.*, Det. A.Çelik-2017; Banaz Village, 2 km from Banaz Village to Çobankaya Village, rocky slopes, 1054 m, N 40° 49.587' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1059 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkezler Upland, around the lake, meadows, 1793 m, N 40° 53.780' E 031° 47.068', 07.10.2016, Leg. A.Çelik-2204 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***PILOSELLA* Hill**

***Pilosella hoppeana* (Schult.) F.W.Schultz & Sch.Bip. subsp. *testimonialis* (Nägeli ex Nägeli & Peter)**

Bolu: Tetemeçele Village, 20 km from Bolu city center to Çeletepe southern slopes, meadows, 1072 m, N 40° 50.560' E 031° 43.572', 26.06.2015, Leg. A.Çelik-806 *et al.*, Det. A.Çelik & A.Kaya-2017; Mengen, Afşar Village, 10.5 km from Afşar Village to Çaltepe, roadside, 1065 m, N 40° 53.775' E 031° 49.307', 23.07.2015, Leg. A.Çelik-962 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1171 *et al.*, Det. A.Çelik & A.Kaya-2017; Bolu. Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1087 *et al.*, Det. A.Çelik-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1981 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Pilosella piloselloides* (Vill.) Soják subsp. *magyarica* (Peter) S.Bräut. & Greuter (Syn.**

***Pilosella piloselloides* (Vill.) Soják subsp. *megalomastix* (Nägeli & Peter) P.D.Sell & C.West)**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1963 *et al.*, Det. A.Çelik-2017.

ONOPORDUM L.

***Onopordum tauricum* Willd.**

Bolu: Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-837 *et al.*, Det. İ.Eker-2015; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1921 *et al.*, Det. A.Çelik-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1928 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

PETASITES Mill.

***Petasites hybridus* (L.) G.Gaertn., B.Mey. & Scherb.**

Bolu: Yakabayat Village, 3 km from Yakabayat Village to Gölcük Village, roadside slopes, 1387 m, N 40° 86.366' E 031° 74.172', 01.04.2015, Leg. A.Çelik-14 *et al.*, Det. İ.Eker-2015; Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-81 *et al.*, Det. İ.Eker-2015; Çaltepe, Kadıköy Upland surroundings, roadside, 1535 m, N 40° 53.020' E 031° 45.333', 16.06.2015, Leg. A.Çelik-454 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 7.5 km from Kadıköy Upland to Gurbettaşı, Sarımustan, stream edge, 1411 m, N 40° 52.838' E 031° 44.037', 24.03.2016, Leg. A.Çelik-1545 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

PTILOSTEMON Cass.

***Ptilostemon afer* (Jacq.) Greuter subsp. *eburneus* Greuter**

Bolu: Bağışlar Village, Yedierenler Hill surroundings, roadside and stony areas, 1313 m, N 40° 50.672' E 031° 42.132', 26.06.2015, Leg. A.Çelik-798 *et al.*, Det. A.Çelik-2017.

Endemic

SCOLYMUS L.Tourn. ex L.

Scolymus hispanicus L. subsp. *hispanicus*

Bolu: Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2064 *et al.*, Det. A.Çelik-2016.

Mediterranean element

SCORZONERA L.

Scorzonera cana (C.A.Mey.) Griseb. var. *jacquiniana* (W.Koch) D.F.Chamb.

Bolu: Merkezler Village, Upper Merkezler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-268 *et al.*, Det. A.Çelik-2017; Yedigöller road, 9 km from Bolu city center to Yedigöller road, Dumantepe Villas below, forest and cultivated fields, 856 m, N 40° 46.173' E 031° 37.982', Leg. A.Çelik-1628 *et al.*, Det. A.Çelik-2017.

SENECIO L.

Senecio othannae M.Bieb.

Bolu: Çaltepe and Çeletepe, Sarımustan road, Çaltepe, forest clearance, 1550 m, N 40° 52.945' E 031° 45.237', 29.07.2017, Leg. A.Çelik-2287 & A.Kaya, Det. A.Kaya-2017.

New record, Euro-Siberian element

Senecio vernalis Waldst. & Kit.

Bolu: Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1583 *et al.*, Det. A.Çelik-2017; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-32 *et al.*, Det. İ.Eker-2017.

Senecio vulgaris L.

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-137 *et al.*, Det. İ.Eker-2015.

***Senecio viscosus* L.**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1156 *et al.*, Det. A.Çelik-2017.

New record

SONCHUS L.

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

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1942 *et al.*, Det. İ.Eker-2016.

***Sonchus oleraceus* (L.) L.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-512 *et al.*, Det. A.Çelik-2017; Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-842 *et al.*, Det. A.Çelik-2017; Mengen, Çaltepe eastern slopes, forest, 1759 m, N 40° 54.310' E 031° 47.492', 09.08.2015, Leg. A.Çelik-1252 *et al.*, Det. A.Çelik-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1947 *et al.*, Det. İ.Eker-2017.

TANACETUM L.

***Tanacetum corymbosum* (L.) Sch.Bip. subsp. *cinereum* (Griseb.) Grierson**

Bolu: Yedigöller road, 10 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and rocky area, 1095 m, N 40° 53.618' E 031° 43.780', 03.08.2015, Leg. A.Çelik-1205 *et al.*, Det. İ.Eker-2016.

Euro-Siberian element

***Tanacetum parthenium* (L.) Sch.Bip.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-488 *et*

al., Det. A.Çelik-2017; Tetemeçele Village, 6 km from Tetemeçele Village to Kadıköy Upland, roadside slopes, 1416 m, N 40° 52.007' E 031° 44.433', 27.07.2015, Leg. A.Çelik-1110 *et al.*, Det. A.Çelik-2017; Mengen, Çaltepe eastern slopes, forest clearance, 1201 m, N 40° 54.070' E 031° 48.157', 25.06.2016, Leg. A.Çelik-2048 *et al.*, Det. A.Çelik-2017.

Tanacetum poterifolium Grierson

Bolu: Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1809 *et al.*, Det. A.Çelik & A.Kaya-2017.

Euro-Siberian element

TARAXACUM Weber ex Wigg.

Taraxacum butleri Soest

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-30 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-112 *et al.*, Det. İ.Eker-2017; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-29 *et al.*, Det. A.Çelik-2017.

Taraxacum macrolepium Schischk.

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-142 *et al.*, Det. İ.Eker-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', 26.06.2015, Leg. A.Çelik-748 *et al.*, Det. A.Çelik-2017.

TELEKIA Baumg.

Telekia speciosa (Schreb.) Baumg.

Bolu: Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2263 & A.Kaya, Det. A.Çelik-2017; Çaltepe, northern slopes, forest, 1272 m, N 40° 54.742' E 031° 43.478', Leg. A.Çelik-2269 & A.Kaya, Det. A.Çelik-2017.

Euro-Siberian element

TEPHROSERIS (Rchb.) Rchb.

Tephroseris integrifolia (L.) Holub subsp. ***aucheri*** (DC.) B.Nord. (Syn. ***Senecio integrifolius*** (L.) Clairv. subsp. ***aucheri*** (DC.) V.A.Matthews)

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-174 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-402 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-618 *et al.*, Det. İ.Eker-2017; Banaz Upland, 10 km from Çele Gölcük warehouse to Çeletepe, Banaz Upland, roadside, 1609 m, N 40° 51.338' E 031° 42.207', 16.06.2016, Leg. A.Çelik-1836 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1717 m, N 40° 54.002' E 031° 46.898', Leg. A.Çelik-2217 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

TRAGOPOGON L.

Tragopogon coloratus C.A. Mey.

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-541 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-287 *et al.*, Det. A.Çelik-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m,

N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1909 *et al.*, Det. A.Çelik-2017.

Irano-Turanian element

***Tragopogon dubius* Scop.**

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1775 *et al.*, Det. A.Çelik-2017; Çaydurt-Mengen road, 24 km from Bolu city center to Taşcılar Village, Taşcılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1665 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-670 *et al.*, Det. A.Çelik-2017; Mengen, Afşar Village, 13.5 km from Afşar Şevkioğlu district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-981 *et al.*, Det. A.Çelik-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1905 *et al.*, Det. İ.Eker-2017; Tetemeçele Village, 5 km from Çaltepe-Çeltepe road to Çeltepe, serpentine slopes, 1608 m, N 40° 52.223' E 031° 44.092', 21.07.2017, Leg. A.Çelik-2247 & A.Kaya, Det. A.Çelik-2017.

***Tragopogon porrifolius* L. subsp. *longirostris* (Sch.Bip.) Greuter**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1909 *et al.*, Det. İ.Eker-2016; Çaydurt-Mengen road, 24 km from Bolu city center to Taşcılar Village, Taşcılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1667 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-234 *et al.*, Det. A.Çelik-2017; Tetemeçele Village, 6 km from Tetemeçele Village to Çeltepe, stony slopes, 1617 m, N 40° 52.237' E 031° 44.088', 09.06.2017, Leg. A.Çelik-2215 & A.Kaya, Det. A.Çelik-2017.

TRIPLEUROSPERMUM Sch.Bip.

Tripleurospermum oreades (Boiss.) Rech.f. var. ***oreades*** (Syn. ***Matricaria breviradiata*** (Ledeb.) Rauschert)

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, alpin bölge, alpine meadows, 1878 m, N 40° 53.608' E 031° 46.625', 04.06.2016, Leg. A.Çelik-1749 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-111 *et al.*, Det. A.Çelik-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-170 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-136 *et al.*, Det. A.Çelik & A.Kaya-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-342 *et al.*, Det. A.Çelik-2017.

Tripleurospermum rosellum (Boiss. & Orph.) Hayek var. ***album*** E. Hossain

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, forest clearance, 1525 m, N 40° 52.708' E 031° 42.143', 27.04.2016, Leg. A.Çelik-1635 *et al.*, Det. A.Çelik-2017; Yedigöller road, 3 km from Gurbettaşı to Sarımustan, roadside and rocky slopes, 1329 m, N 40° 52.982' E 031° 43.955', 27.04.2016, Leg. A.Çelik-1638 *et al.*, Det. A.Çelik-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-552 *et al.*, Det. A.Çelik-2017; Çeletepe, Banaz Upland ant its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1846 *et al.*, Det. A.Çelik-2017; Yedigöller road, Gurbettaşı, 24 km from Bolu city center to Gurbettaşı, roadside and rocky slopes, 1648 m, N 40° 52.582' E 031° 41.403' 09.05.2015, Leg. A.Çelik-2212 & A.Kaya, Det. A.Çelik-2017.

Endemic

Tripleurospermum tenuifolium (Kit.) Freyn ex Freyn

Bolu: Merkezler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2010 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5

km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-664 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

TURANECIO Hamzaoglu

Turanecio hypochionaeus (Boiss.) Hamzaoglu (Syn. ***Senecio hypochionaeus*** Boiss.)

Bolu: Çaltepe and its surroundings, alpine meadows, 1824 m, N 40° 53.785' E 031° 46.765', 27.07.2015, Leg. A.Çelik-1136 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1237 *et al.*, Det. İ.Eker-2017.

Endemic

TUSSILAGO L.

Tussilago farfara L.

Bolu: Kadıköy Upland, 7.5 km from Kadıköy Upland to Gurbettaşı, Sarımustan, stream edge, 1411 m, N 40° 52.838' E 031° 44.037', 24.03.2016, Leg. A.Çelik-1546 *et al.*, Det. A.Çelik-2016.

Euro-Siberian element

XANTHIUM L.

Xanthium strumarium L. subsp. ***strumarium***

Bolu: Değirmenderesi Village, between Değirmebeli and Değirmenderesi Villages, ruderal area, 856 m, N 40° 49.747' E 031° 45.440', 20.10.2017, Leg. A.Çelik-2323 & A.Kaya, Det. A.Çelik-2017.

XERANTHEMUM Tourn. ex L.

Xeranthemum annum L.

Bolu: Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2056 *et al.*, Det. A.Çelik-2016;

Değirmenderesi Village and its surroundings, rocky slopes, 865 m, N 40° 49.278' E 031° 44.658', 25.06.2016, Leg. A.Çelik-1990 *et al.*, Det. A.Çelik-2017; Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-838 *et al.*, Det. A.Çelik-2015.

ORDER: BRASSICALES

FAMILY: BRASSICACEAE (CRUCIFERAE)

ALLIARIA Heist. ex Fabr.

Alliaria petiolata (M.Bieb.) Cavara & Grande

Bolu: Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-82 *et al.*, Det. A.Kaya-2017; Çaltepe, lower boundary of forest, open forests, 1441 m, N 40° 53.585' E 031° 46.247', 27.07.2015, Leg. A.Çelik-202 *et al.*, Det. A.Kaya-2017.

ALYSSUM L.

Alyssum armenum Boiss.

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-144 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-180 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-288 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-544 *et al.*, Det. A.Kaya-2017.

Alyssum minutum Schldl. ex DC.

Bolu: Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1581 *et al.*, Det. A.Kaya-2017.

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

Bolu: Merkezler Village, 11 km from Merkezler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-281 *et al.*, Det. A.Kaya-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-436 *et al.*, Det. A.Kaya-2017.

Alyssum obtusifolium Steven ex DC. (Syn: *Alyssum borzaeanum* Nyár)

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-956 *et al.*, Det. A.Kaya-2017; Bağışlar Village, village cemetery, in the cemetery, 958 m, N 40° 50.228' E 031° 45.362', 16.08.2015, Leg. A.Çelik-1410 *et al.*, Det. A.Kaya-2017.

Alyssum sibiricum Willd.

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-624 *et al.*, Det. A.Kaya-2017.

ARABIS L.

Arabis alpina L. subsp. *alpina* (Syn. *Arabis caucasica* Willd. subsp. *caucasica*)

Bolu: Çaltepe, Merkezler Upland, Northeastern Merkezler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-370 *et al.*, Det. A.Kaya-2017; Çeletepe, Yedierenler Hill and its surroundings, subalpine meadows, 1960 m, N 40° 52.172' E 031° 42.827', 16.06.2016, Leg. A.Çelik-1853 *et al.*, Det. A.Kaya-2017; Çeletepe, around the Çeletepe Çandır Upland, rocky slopes, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1867 *et al.*, Det. A.Kaya-2017.

Arabis hirsuta (L.) Scop.

Bolu: Yedigöller road, Çele Gölcük forestry warehouse surroundings, roadside, 1222 m, N 40° 50.678' E 031° 39.727', 21.06.2015, Leg. A.Çelik-516 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-553 *et al.*, Det. A.Kaya-2017; Çeletepe, 8 km from Gurbettaşı to Sarımustan, stony and rocky areas, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1868 *et al.*, Det. A.Kaya-2017.

***Arabis nova* L.**

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-555 et. al., Det. A.Kaya-2017.

***Arabis sagittata* (Bertol.) DC.**

Bolu: Yedigöller road, 1 km before Yığılca road crossroad, roadside, 1681 m, N 40° 86.722' E 031° 69.040', 09.05.2015, Leg. A.Çelik-93 et al., Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-171 et al., Det. A.Kaya-2017; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-355 et al., Det. A.Kaya-2017; Çaltepe, Merkezler Upland, roadside, 1745 m, N 40° 53.990' E 031° 46.857', Leg. A.Çelik-1256 et al., Det. A.Kaya-2017.

***ARABIDOPSIS* Heynh.**

***Arabidopsis thaliana* (L.) Heynh.**

Bolu: Banaz Upland, 10 km from Çele Gölcük warehouse to Çeletepe, Banaz Upland, roadside, 1609 m, N 40° 51.338' E 031° 42.207', 16.06.2016, Leg. A.Çelik-1838 et al., Det. B.Özüdoğru-2017.

***AUBRIETA* Adans.**

***Aubrieta olympica* Boiss.**

Bolu: Yedigöller road, Gurbettaşı, 24 km from Bolu city center to Gurbettaşı, roadside and rocky slopes, 1648 m, N 40° 52.582' E 031° 41.403' 09.05.2015, Leg. A.Çelik-2210 & A.Kaya, Det. İ.Eker-2017.

Endemic, New record

***CAPSELLA* Medik.**

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

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-129 et al.,

Det. İ.Eker-2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-31 *et al.*, Det. A.Kaya-2017; Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-133 *et al.*, Det. A.Kaya-2017.

***CARDAMINE* L.**

***Cardamine bulbifera* (L.) Crantz**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-312 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-556 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Cardamine hirsuta* L.**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-46 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-76 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-83 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-116 *et al.*, Det. A.Kaya-2017.

***Cardamine lazica* Boiss. & Balansa ex Boiss.**

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-558 *et al.*, Det. A.Kaya-2017; Banaz Upland, 10 km from Çele Gölcük warehouse to Çeletepe, Banaz Upland, roadside, 1609 m, N 40° 51.338' E 031° 42.207', 16.06.2016, Leg. A.Çelik-1839 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

CONRINGIA Heist. ex Fabr.

Conringia orientalis (L.) Dumort.

Bolu: Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-353 *et al.*, Det. A.Kaya-2017.

DRABA L.

Draba heterocoma Fenzl (Syn. ***Draba bruniifolia*** Steven subsp. ***heterocoma*** (Fenzl) Coode & Cullen)

Bolu: Çaltepe, 900 m to Merkezler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2302 & A.Kaya, Det. A.Kaya-2017.

Draba muralis L.

Bolu: Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-604 *et al.*, Det. A.Kaya-2017.

Draba verna L. (Syn. ***Erophila verna*** (L.) DC. subsp. ***verna***)

Bolu: Merkezler Village, above Merkezler Village, forest clearance and meadow, 1047 m, N 40° 52.218' E 031° 47.220', 08.04.2016, Leg. A.Çelik-1564 *et al.*, Det. İ.Eker-2017; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-45 *et al.*, Det. A.Kaya-2017; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-49 *et al.*, Det. A.Kaya-2017; Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-130 *et al.*, Det. A.Kaya-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-599 *et al.*, Det. A.Kaya-2017.

ERUCA Mill.

Eruca vesicaria (L.) Cav. (Syn. ***Eruca sativa*** Mill.)

Bolu: Tetemeçele Village and its surroundings, roadside, 975 m, N 40° 50.473' E 031° 44.552', 08.04.2016, Leg. A.Çelik-1620 *et al.*, Det. A.Kaya-2017.

New record

ERYSIMUM L.

Erysimum uncinatifolium Boiss. & A.Huet (Syn. ***Erysimum thyrsoideum*** Boiss. subsp. ***ponticum*** (Hauskn. & Bornm.) Cullen)

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-168 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-414 *et al.*, Det. B.Özüdoğru-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-435 *et al.*, Det. B.Özüdoğru-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-639 *et al.*, Det. B.Özüdoğru-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1878 m, N 40° 53.608' E 031° 46.625', 04.06.2016, Leg. A.Çelik-1748 *et al.*, Det. B.Özüdoğru-2017.

New record, Euro-Siberian element

LEPIDIDIUM L.

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

Bolu: Değirmenderesi Village and its surroundings, roadside, 857 m, N 40° 49.488' E 031° 44.823', 08.04.2016, Leg. A.Çelik-1599 *et al.*, Det. A.Kaya-2017.

MICROTHLASPI F.K.Mey

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

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-125 *et al.*,

Det. İ.Eker-2015; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-364 *et al.*, Det. İ.Eker-2017.

MYAGRUM L.

Myagrum perfoliatum L.

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', 26.06.2015, Leg. A.Çelik-747 *et al.*, Det. A.Kaya-2017.

NASTURTIUM W.T.Aiton

Nasturtium officinale R.Br.

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1803 *et al.*, Det. A.Kaya-2017.

NOCCAEA Kuntze

***Noccaea iberidea* (Boiss.) Al-Shehbaz & Menke (Syn. *Aethionema iberideum* (Boiss.) Boiss.)**

Bolu: Çeletepe, Yedierenler Hill and its surroundings, subalpine meadows, 1960 m, N 40° 52.172' E 031° 42.827', 16.06.2016, Leg. A.Çelik-1852 *et al.*, Det. A.Kaya-2017.

Endemic

***Noccaea ochroleuca* (Boiss. & Heldr.) F.K.Mey.**

Bolu: Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-104 *et al.*, Det. A.Kaya-2017; Bolu Çaltepe, Merkeşler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-191 *et al.*, Det. A.Kaya-2017.

RAPISTRUM Crantz

Rapistrum rugosum (L.) All.

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-675 *et al.*, Det. A.Kaya-2017.

RORIPPA L.

Rorippa amphibia (L.) Besser

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-659 *et al.*, Det. A.Kaya-2017.

Rorippa sylvestris (L.) Besser subsp. *sylvestris*

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-743 *et al.*, Det. İ.Eker-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1949 *et al.*, Det. A.Çelik-2016.

SISYMBRIUM L.

Sisymbrium loeselii L.

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1773 *et al.*, Det. A.Kaya-2017; Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1325 *et al.*, Det. A.Kaya-2017.

Sisymbrium officinale (L.) Scop.

Bolu: Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1062 *et al.*, Det. A.Kaya-2017.

***TURRITIS* L.**

***Turritis glabra* L.**

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-567 *et al.*, Det. A.Kaya-2017; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-791 *et al.*, Det. A.Kaya-2017.

***Turritis laxa* (Sm.) Hayek**

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-138 *et al.*, Det. İ.Eker-2017; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-532 *et al.*, Det. İ.Eker-2017; Çaltepe, northern slopes, forest, 1272 m, N 40° 54.742' E 031° 43.478', Leg. A.Çelik-2270 & A.Kaya, Det. A.Kaya-2017.

FAMILY: RESEDACEAE

***RESEDA* L.**

Reseda lutea* L. var. *lutea

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1323 *et al.*, Det. A.Çelik-2017; Hamzabey Village, 1 km from Hamzabey Village to Yakabayat Vilalge, roadside, 963 m, N 40° 47.292' E 031° 40.090', 16.08.2015, Leg. A.Çelik-1360 *et al.*, Det. İ.Eker-2017; Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1813 *et al.*, Det. İ.Eker-2017.

ORDER: BORAGINALES

FAMILY: BORAGINACEAE

***ANCHUSA* L.**

Anchusa azurea* Mill. var. *azurea

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1786 *et al.*, Det. A.Kaya-2017.

***Anchusa hybrida* Ten. (Syn. *Anchusa undulata* L. subsp. *hybrida* (Ten.) Cout.)**

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller, 3 km from Dumantepe villas, roadside and rocky slopes, 913 m, N 40° 47.372' E 031° 38.218' Leg. A.Çelik-714 *et al.*, Det. A.Kaya-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1065 *et al.*, Det. A.Kaya-2017.

Mediterranean element

Anchusa leptophylla* Roem. & Schult. subsp. *leptophylla

Bolu: Merkezler Village, Keller Street, 37 km from Bolu to Merkezler Village, meadow, 964 m, N 40° 51.887' E 031° 47.885', 06.05.2016, Leg. A.Çelik-1677 *et al.*, Det. A.Kaya-2017.

***BUGLOSSOIDES* Moench**

***Buglossoides arvensis* (L.) I.M.Johnst. subsp. *sibthorpiana* (Griseb.) R.Fern. (Syn. *Lithospermum arvense* L.)**

Bolu: Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1582 *et al.*, Det. A.Kaya-2017.

Buglossoides purpurocaerulea (L.) I.M.Johnst. (Syn. *Lithospermum purpurocaeruleum* L.- *Aegonychon purpurocaeruleum* (L.) Holub)

Bolu: Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-257 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

CERINTHE L.

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

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-687 *et al.*, Det. A.Kaya-2017; Çaltepe, lower boundary of forest, open forests, 1441 m, N 40° 53.585' E 031° 46.247', 27.07.2015, Leg. A.Çelik-199 *et al.*, Det. A.Kaya-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-434 *et al.*, Det. A.Kaya-2017; Kadıköy Upland, 1 km to Çaltepe, roadside, 1857 m, N 40° 53.665' E 031° 45.565', 21.06.2015, Leg. A.Çelik-622a *et al.*, Det. A.Kaya-2017.

CYNOGLOSSUM L.

Cynoglossum creticum Mill.

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', 26.06.2015, Leg. A.Çelik-733 *et al.*, Det. A.Kaya-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1767 *et al.*, Det. A.Kaya-2017.

Cynoglossum montanum L.

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-165 *et al.*, Det. A.Kaya-2017; Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-244 *et al.*, Det. A.Kaya-2017; Merkezler Village, 11 km from Merkezler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-289 *et al.*, Det. A.Kaya-2017; Mesciçele

Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1064 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

ECHIUM L.

***Echium italicum* L.**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1185 *et al.*, Det. A.Kaya-2017; Tetemeçele Village, 20 km from Bolu city center to Çeletepe southern slopes, meadows, 1072 m, N 40° 50.560' E 031° 43.572', 26.06.2015, Leg. A.Çelik-803 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 2.5 km from Merkeşler Village to Çaltepe, meadows, 1029 m, N 40° 52.257' E 031° 47.108', 09.08.2015, Leg. A.Çelik-1297 *et al.*, Det. İ.Eker-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 688 m, N 40° 48.118' – E 031° 46.094', 23.06.2016, Leg. A.Çelik-1881 *et al.*, Det. A.Kaya-2017.

Mediterranean element

Echium vulgare* L. subsp. *vulgare

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-291 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-456 *et al.*, Det. A.Kaya-2017; Tetemeçele Village, 2 km from Tetemeçele Village to Çaltepe-Çeletepe, forest clearance, 1225 m, N 40° 51.285' E 031° 44.177', 27.07.2015, Leg. A.Çelik-1108 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

HELIOTROPIUM L.

***Heliotropium europaeum* L.**

Bolu: Yakabayat Village and its surroundings, roadside, 958 m, N 40° 47.277' E 031° 40.283', 16.08.2015, Leg. A.Çelik-1364 *et al.*, Det. A.Kaya-2017.

Irano-Turanian element

MYOSOTIS L.

Myosotis arvensis* (L.) Hill subsp. *arvensis

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-634 *et al.*, Det. A.Kaya-2017; Çele Gölcük forestry warehouse surroundings, slopes, 1205 m, N 40° 49.910' E 031° 40.985', Leg. A.Çelik-783 *et al.*, Det. A.Kaya-2017; Mengen, Çaltepe eastern slopes, forest, 1759 m, N 40° 54.310' E 031° 47.492', 09.08.2015, Leg. A.Çelik-1253 *et al.*, Det. A.Kaya-2017

Euro-Siberian element

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

Bolu: Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-77 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-110 *et al.*, Det. A.Kaya-2017; Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-123 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-169 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkezler Upland, Northeastern Merkezler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-376 *et al.*, Det. A.Kaya-2017; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-357 *et al.*, Det. A.Kaya-2017.

***Myosotis heteropoda* Trautv.**

Bolu: Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2149 *et al.*, Det. A.Kaya-2017.

Irano-Turanian element

Myosotis lithospermifolia (Willd.) Hornem.

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-547 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-551 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

Myosotis ramosissima Rochel

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-43 *et al.*, Det. A.Kaya-2017.

Myosotis rivularis (Vestergr.) A.P. Khokhr. (Syn. ***Myosotis sylvatica*** Hoffm. subsp. *rivularis* Vestergr.)

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-466 *et al.*, Det. A.Kaya-2017.

Myosotis sylvatica Hoffm. subsp. *cyanea* (Hayek) Vestergr.

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-166 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-214 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

ONOSMA L.

Onosma aucherana DC.

Bolu: Tetemeçele Village, 5 km from Tetemeçele Village to Kadıköy Upland, roadside and meadows, 1625 m, N 40° 52.268' E 031° 44.067', 17.09.2015, Leg. A.Çelik-1484 *et al.*, Det. A.Kaya-2017; Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-210 *et al.*, Det. R.Binzet-2017; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow,

1717 m, N 40° 54.002' E 031° 46.898', 09.06.2017, Leg. A.Çelik-2220 & A.Kaya, Det. A.Kaya-2017.

New record, Mediterranean element

Onosma bourgaei Boiss.

Bolu: Merkezler Village, 11 km from Merkezler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-293 *et al.*, Det. R.Binzet-2017; Bağışlar Village, Yedierenler Hill surroundings, roadside and stony areas, 1313 m, N 40° 50.672' E 031° 42.132', 26.06.2015, Leg. A.Çelik-800 *et al.*, Det. R.Binzet-2017.

New record, Irano-Turanian element

Onosma bornmuelleri Hausskn. & Bornm.

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-419 *et al.*, Det. A.Kaya-2017; Çaltepe, on the Çaltepe-Tetemeçele Village road, 3 km to Tetemeçele Village, woodland, 1537 m, N 40° 51.691' E 031° 44.507', 26.05.2015, Leg. A.Çelik-823 *et al.*, Det. A.Kaya-2017; Çeletepe, around the Çeletepe Çandır Upland, rocky slopes, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1861 *et al.*, Det. A.Kaya-2017.

Endemic, Irano-Turanian element

Onosma bracteosa Hausskn. & Bornm.

Bolu: Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-338 *et al.*, Det. A. Kaya-2017.

Endemic, New record, Irano-Turanian element

Onosma heterophylla Griseb.

Bolu: Yedigöller road, around the Gurbettaşı, rocky slopes, 1663 m, N 40° 52.548' E 031° 41.340', 04.06.2016, Leg. A.Çelik-1757 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

Onosma taurica Willd. var. *taurica*

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1892 *et al.*, Det. R.Binzet-2017.

PARACARYUM Boiss.

Paracaryum paphlagonicum (Bornm.) R.R.Mill

Bolu: Merkezler Village, 1 km from Dereköy district to Karahisnler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1699 *et al.*, Det. A.Çelik & A.Kaya-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1893 *et al.*, Det. A.Kaya-2016; Mengen, Hayranlar Village and its surroundings, meadows, 856 m, N 40° 52.747' E 031° 50.030', 11.08.2016, Leg. A.Çelik-2071 *et al.*, Det. A.Kaya-2017.

Endemic, Irano-Turanian element

PHACELIA Juss.

Phacelia tanacetifolia Benth.

Bolu: Merkezler Village, Keller Street, 37 km from Bolu to Merkezler Village, meadow, 964 m, N 40° 51.887' E 031° 47.885', 06.05.2016, Leg. A.Çelik-1674 *et al.*, Det. A.Kaya-2017.

New record

TRACHYSTEMON D.Don.

Trachystemon orientalis (L.) D.Don

Bolu: Kadıköy Upland, 800 m to Çeletepe from Kadıköy Upland, forests, 1547 m, N 40° 53.172' E 031° 45.387', 28.04.2015, Leg. A.Çelik-22 *et al.*, Det. İ.Eker-2015; Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-85 *et al.*, Det. İ.Eker-2015; Merkezler Village, 11 km from Merkezler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-286 *et al.*, Det.

İ.Eker-2015; Bolu Çaltepe, Merkeşler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-197 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

FAMILY: CAMPANULACEAE

ASYNEUMA Griseb. & Schenk.

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

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1243 *et al.*, Det. İ.Eker-2016.

Asyneuma limonifolium (L.) Janch. subsp. *limonifolium*

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1232 *et al.*, Det. İ.Eker-2016; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-439 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-628 *et al.*, Det. A.Kaya-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1762 *et al.*, Det. A.Kaya-2017; Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2229 & A.Kaya, Det. A.Çelik-2017; Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2230 & A.Kaya, Det. A.Kaya-2017.

Asyneuma rigidum (Willd.) Grossh. subsp. *sibtharpianum* (Schult.) Damboldt

Bolu: Çeletepe summit, alpine meadows, 1987 m, N 40° 51.940' E 031° 42.123', 03.08.2015, Leg. A.Çelik-1220 *et al.*, Det. İ.Eker-2017; Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-2116 *et al.*, Det. İ.Eker-2017.

Endemic

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

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-673 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1887 m, N 40° 53.550' E 031° 46.543', 11.08.2016, Leg. A.Çelik-2126 *et al.*, Det. A.Çelik-2017; Tetemeçele Village, 5 km from Çaltepe-Çeltepe road to Çeltepe, serpentine slopes, 1608 m, N 40° 52.223' E 031° 44.092', 21.07.2017, Leg. A.Çelik-2251 & A.Kaya, Det. A.Kaya-2017.

Irano-Turanian element

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

Bolu: Çaltepe summit, above Merkeşler Upland, alpine meadows, 1889 m, N 40° 53.603' E 031° 46.543', 27.07.2015, Leg. A.Çelik-1126 *et al.*, Det. A.Kaya-2017.

New record

CAMPANULA L.

Campanula cymbalaria Sm.

Bolu: Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2319 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

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

Bolu: Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-901 *et al.*, Det. İ.Eker-2016; Mengen, Çaltepe eastern slopes, forest, 1759 m, N 40° 54.310' E 031° 47.492', 09.08.2015, Leg. A.Çelik-1247 *et al.*, Det. A.Çelik & A.Kaya-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1974 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2102 *et al.*, Det. A.Çelik & A.Kaya-2017; Çeltepe,

Banaz Upland road, 5 km from Kadıköy Upland to Çeletepe, roadside and rocky area, 1687 m, N 40° 51.858' E 031° 42.612', 03.08.2015, Leg. A.Çelik-1216 *et al.*, Det. A.Çelik-2017; *ibid.*, 03.08.2015, Leg. A.Çelik-1217 *et al.*, Det. A.Çelik & A.Kaya-2017.

Campanula grandis Fisch. & C.A.Mey. subsp. ***grandis***

Bolu: Çaltepe and Çeletepe, Sarımustan, Çaltepe road, forest and wetland, 1387 m, N 40° 53.150' E 031° 45.125', 29.07.2017, Leg. A.Çelik-2286 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

Endemic

Campanula latifolia L. subsp. ***latifolia***

Bolu: Çaltepe, 1 km from Merkeşler Upland to Bolu, roadside and rocky slopes, 1711 m, N 40° 53.762' E 031° 46.330', 09.08.2015, Leg. A.Çelik-1265 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe, Merkeşler Upland road, forest, 1257 m, N 40° 53.033' E 031° 45.952', Leg. A.Çelik-2236 & A.Kaya, Det. A.Kaya-2017.

Campanula lyrata Lam. subsp. ***lyrata***

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-739 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-788 *et al.*, Det. A.Çelik & A.Kaya-2017; Çukurören Village, 4 km from Çukurören Village to Yeniköy Upland, roadside, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1818 *et al.*, Det. A.Çelik & A.Kaya-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2027 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 1 km from Çukurören Village to Çele Gölcük forestry warehouse, serpentine slopes, 1031 m, N 40° 49.042' E 031° 39.657', 03.09.2016, Leg. A.Çelik-2142 *et al.*, Det. A.Çelik & A.Kaya-2017; Tetemeçele Village, 2 km from Tetemeçele Village to Çeletepe, forest, 1215 m, N 40° 51.290' E 031° 44.260', 09.06.2017, Leg. A.Çelik-2214 & A.Kaya, Det. A.Çelik & A.Kaya-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky

areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-303 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe southern slopes, 6 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1168 m, N 40° 53.568' E 031° 48.017', 02.06.2015, Leg. A.Çelik-325 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-253 *et al.*, Det. İ.Eker-2017.

Endemic

***Campanula olympica* Boiss.**

Bolu: Yedigöller road, 1 km from Yığılca road crossroad to Yedigöller, roadside and forest clearance, 1399 m, N 40° 51.332' E 031° 40.600', 10.09.2015, Leg. A.Çelik-1441 *et al.*, Det. İ.Eker-2016; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-581 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Campanula persicifolia* L. subsp. *persicifolia

Bolu: Mengen, Afşar Vilalge, 12.5 km from Bolu-Mengen road to Afşar Şevkioğlu district, forests, 1100 m, N 40° 53.645' E 031° 48.897', 23.07.2015, Leg. A.Çelik-972 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-910 *et al.*, Det. A.Çelik & A.Kaya-2017; Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1271 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 2.3 km from Çukurören Village to Çele Gölcük forestry warehouse, forest, 1053 m, N 40° 49.155' E 031° 39.950', 17.09.2015, Leg. A.Çelik-1479 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2008 *et al.*, Det. A.Çelik & A.Kaya-2017.

Euro-Siberian element

***Campanula rapunculoides* L.**

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-878 *et al.*, Det. İ.Eker-2016; Mengen, Afşar Village, 13.5 km from Afşar Şevkioglu district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-980 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe, Merkeşler Upland road, roadside slopes, 1492 m, N 40° 51.812' E 031° 44.185', 27.07.2015, Leg. A.Çelik-1137 *et al.*, Det. A.Çelik & A.Kaya-2017; Bağışlar Village, 4 km from Bağışlar Village to Merkeşler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1426 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller, roadside and rocky slopes, 926 m, N 40° 47.375' E 031° 38.223' 10.09.2015, Leg. A.Çelik-1432 *et al.*, Det. A.Çelik & A.Kaya-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1983 *et al.*, Det. A.Çelik & A.Kaya-2017.

Euro-Siberian element

***Campanula rapunculus* L. subsp. *lambertiana* (A.DC.) Rech.f.**

Bolu: Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2103 *et al.*, Det. A.Çelik & A.Kaya-2017.

***LEGOUSIA* Durande**

***Legousia pentagonia* (L.) Thell.**

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller, 3 km from Dumantepe villas, roadside and rocky slopes, 913 m, N 40° 47.372' E 031° 38.218' Leg. A.Çelik-718 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1716 *et al.*, Det. A.Çelik & A.Kaya-2017.

Mediterranean element

ORDER: CARYOPHYLLALES

FAMILY: AMARANTHACEAE

***CHENOPODIUM* L.**

***Chenopodium album* L.**

Bolu: Değirmenderesi Village, between Değirmebeli and Değirmenderesi Villages, ruderal area, 856 m, N 40° 49.747' E 031° 45.440', 20.10.2017, Leg. A.Çelik-2324 & A.Kaya, Det. A.Çelik-2017.

***Chenopodium foliosum* Asch.**

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', 26.06.2015, Leg. A.Çelik-750 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkezler Upland, roadside, 1745 m, N 40° 53.990' E 031° 46.857', Leg. A.Çelik-1254 *et al.*, Det. İ.Eker-2017.

***BETA* L.**

***Beta trigyna* Waldst. & Kit.**

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-571 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-612 *et al.*, Det. İ.Eker-2017.

FAMILY: CARYOPHYLLACEAE

***AGROSTEMMA* L.**

***Agrostemma githago* L.**

Bolu: Merkezler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1715 *et al.*, Det. A.Kaya-2017.

***CERASTIUM* L.**

***Cerastium brachypetalum* Desp. ex Pers. subsp. *roeseri* (Boiss. & Heldr.) Nyman**

Bolu: Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1574 *et al.*, Det. İ.Eker-2017.

***Cerastium glomeratum* Thuill.**

Bolu: Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1584 *et al.*, Det. İ.Eker-2017.

DIANTHUS L.

***Dianthus balansae* Boiss.**

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1231 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe summit, above Merkeşler Upland, alpine meadows, 1889 m, N 40° 53.603' E 031° 46.543', 27.07.2015, Leg. A.Çelik-1130 *et al.*, Det. A.Çelik-2017; Çeletepe summit, alpine meadows, 1987 m, N 40° 51.940' E 031° 42.123', 03.08.2015, Leg. A.Çelik-1218 *et al.*, Det. A.Çelik-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2095 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1234 *et al.*, Det. A.Çelik-2016; *ibid.*, 12.08.2016, Leg. A.Çelik-2114 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, meadows, 1723 m, N 40° 54.000' E 031° 46.898', 21.07.2017, Leg. A.Çelik-2243 & A.Kaya, Det. A.Çelik-2017; Çeletepe, Çaltepe southern slopes, subalpine meadows, 1860 m, N 40° 51.523' E 031° 41.658', 26.08.2017, Leg. A.Çelik-2309 & A.Kaya, Det. A.Kaya-2017.

Endemic,

***Dianthus carmelitarum* Reut. ex Boiss.**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1178 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-540 *et al.*, Det. A.Çelik & A.Kaya-2017.

Endemic, Euro-Siberian element

***Dianthus carthusianorum* L.**

Bolu: Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', 17.09.2015, Leg. A.Çelik-1466 *et al.*, Det. İ.Eker-2015; Bağışlar Village, village cemetery, in the cemetery, 958 m, N 40° 50.228' E 031° 45.362', 16.08.2015, Leg. A.Çelik-1403 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-564 *et al.*, Det. İ.Eker-2015; Mengen, 5 km from Avşar Village to Hayranlar Village, roadside and slopes, 919 m, N 40° 52.910' E 031° 50.473', 11.08.2016, Leg. A.Çelik-2067 *et al.*, Det. A.Çelik-2017; Çeletepe, 2 km from Gurbettaşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2159 *et al.*, Det. A.Çelik-2017.

***Dianthus calocephalus* Boiss.**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1980 *et al.*, Det. İ.Eker-2016; Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-851 *et al.*, Det. İ.Eker-2017.

***Dianthus leucophaeus* Sm.**

Bolu: Çeletepe, around the Çeletepe Çandır Upland, rocky slopes, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1864 *et al.*, Det. A.Çelik & A.Kaya-2017.

Endemic

***MINUARTIA* Loefl.**

***Minuartia erythrosepala* Hand.-Mazz. var. *cappadocica* (Boiss.) McNeill**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-647 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

Minuartia hirsuta (M.Bieb.) Hand.-Mazz. subsp. ***falcata*** (Griseb.) Mattf.

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-41 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe summit, alpine meadows, 1982 m, N 40° 51.892' E 031° 42.103', Leg. A.Çelik-1859, Det. İ.Eker-2017.

Minuartia juressi (Willd.) Lacaita subsp. ***asiatica***

Bolu: Çeletepe, Çeletepe summit, Gurbettaşı road, rocky area, 1670 m, N 40° 51.648' E 031° 41.387', 09.06.2017, Leg. A.Çelik-2260 & A.Kaya, Det. İ.Eker-2017.

New record, Mediterranean element

MYOSOTON Moench

Myosoton aquaticum (L.) Moench

Bolu: Çukurören Village, around the Sakintepe, rocky slope, 975 m, N 40° 48.437' E 031° 38.967', 03.09.2016, Leg. A.Çelik-2138 *et al.*, Det. İ.Eker-2017.

MOENCHIA Ehrh.

Moenchia mantica (L.) Bartl.

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-237 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-616 *et al.*, Det. İ.Eker-2017.

PETRORHAGIA Link

Petrorhagia prolifera (L.) P.W.Ball & Heywood

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-862 *et al.*, Det. A.Çelik & A.Kaya-2017.

SAPONARIA L.

***Saponaria glutinosa* M.Bieb.**

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-955 *et al.*, Det. İ.Eker-2015; Çukurören Village, around the Sakintepe, rocky slope, 1040 m, N 40° 48.230' E 031° 39.078', 11.08.2015, Leg. A.Çelik-1342 *et al.*, Det. İ.Eker-2015; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2029 *et al.*, Det. İ.Eker-2017.

SCLERANTHUS L.

Scleranthus annuus* L. subsp. *annuus

Bolu: Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-345 *et al.*, Det. İ.Eker-2017.

***Scleranthus perennis* L. subsp. *dichotomus* (Schur) Nyman**

Bolu: Çeletepe, İmam Village, Çandır Upland, roadside slopes, 1674 m, N 40° 51.717' E 031° 41.367', 11.08.2015, Leg. A.Çelik-1346 *et al.*, Det. İ.Eker-2017; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-795 *et al.*, Det. A.Kaya-2017.

***Scleranthus perennis* L. subsp. *marginatus* (Guss.) Nyman**

Bolu: Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-115 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-259 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-562 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-344 *et al.*, Det. İ.Eker-2017; Yedigöller road, Gurbettaşı, 24

km from Bolu city center to Gurbettaşı, roadside and rocky slopes, 1648 m, N 40° 52.582' E 031° 41.403' 09.05.2015, Leg. A.Çelik-2211 & A.Kaya, Det. İ.Eker-2017.

New record

SILENE L.

Silene armeria L.

Bolu: Merkezler Village, 11 km from Merkezler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-301 *et al.*, Det. İ.Eker-2017.

New record, Euro-Siberian element.

***Silene argentea* Ledeb. (Syn. *Silene cappadocica* Boiss. & Heldr.)**

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-857 *et al.*, Det. İ.Eker-2017; Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-858 *et al.*, Det. İ.Eker-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1913 *et al.*, Det. İ.Eker-2017.

Irano-Turanian element

***Silene compacta* Fisch.**

Bolu: Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2024 *et al.*, Det. İ.Eker-2016; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-579 *et al.*, Det. İ.Eker-2017; Çaltepe, 4 km from Kadıköy Upland to Merkezler Village, woodland, 1163 m, N 40° 52.840' E 031° 46.652', 26.06.2015, Leg. A.Çelik-829 *et al.*, Det. İ.Eker-2017; Merkezler Village, 5.5 km from Merkezler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-902 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 3.5 km from Kadıköy Upland to Merkezler Village, roadside and

slopes, 1157 m, N 40° 52.825' E 031° 46.765', 09.08.2015, Leg. A.Çelik-1293 *et al.*, Det. İ.Eker-2017.

Silene coronaria (Desr.) Clairv. ex Rchb. (Syn. *Lychnis coronaria* Desr.)

Bolu: Çaltepe northern mountains, Kapankayası, forests and stony area, 1192 m, N 40° 55.115' E 031° 42.642', 29.07.2017, Leg. A.Çelik-2279 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

Silene dichotoma Ehrh. subsp. *dichotoma*

Bolu: Çeletepe, Çeletepe western slopes, roadside and rocky areas, 1255 m, N 40° 51.548' E 031° 44.440', 02.06.2015, Leg. A.Çelik-365 *et al.*, Det. İ.Eker-2017; Bağışlar Village, Yedierenler Hill surroundings, roadside and stony areas, 1313 m, N 40° 50.672' E 031° 42.132', 26.06.2015, Leg. A.Çelik-801 *et al.*, Det. İ.Eker-2017.

Silene gallica L.

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-869 *et al.*, Det. İ.Eker-2017.

Silene italica (L.) Pers. subsp. *italica*

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1029 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-282 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe western slopes, roadside and rocky areas, 1255 m, N 40° 51.548' E 031° 44.440', 02.06.2015, Leg. A.Çelik-366 *et al.*, Det. İ.Eker-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1175 *et al.*, Det. İ.Eker-2015; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1177 *et al.*, Det. İ.Eker-2017; Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1272 *et al.*, Det. İ.Eker-2017.

Mediterranean element

Silene latifolia Poir. subsp. ***alba*** (Mill.) Greuter & Burdet

Bolu: Hamzabey Village, roadside, 966 m, N 40° 47.243' E 031° 39.365', 11.08.2015, Leg. A.Çelik-1336 *et al.*, Det. İ.Eker-2017.

Silene noctiflora L.

Bolu: Yedigöller road, 10 km from Gurbettaşı to Çaltepe Kadıköy Upland, roadside and marsh, 1290 m, N 40° 53.267' E 031° 44.683', 10.09.2015, Leg. A.Çelik-1451 *et al.*, Det. İ.Eker-2017.

Silene olympica Boiss. var. ***olympica***

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-632 *et al.*, Det. A.Çelik & A.Kaya-2017; Çaltepe, Merkezler Upland, meadows, 1723 m, N 40° 54.000' E 031° 46.898', 21.07.2017, Leg. A.Çelik-2246 & A.Kaya, Det. A.Kaya-2017.

Endemic, Irano-Turanian element

Silene otites (L.) Wibel

Bolu: Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2060 *et al.*, Det. İ.Eker-2017.

New record

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

Bolu: Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-787 *et al.*, Det. İ.Eker-2015; Yedigöller road, Çele Gölcük forestry warehouse surroundings, roadside, 1222 m, N 40° 50.678' E 031° 39.727', 21.06.2015, Leg. A.Çelik-514 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-563 *et al.*, Det. İ.Eker-2017; Merkezler Village, 1 km from Dereköy district to Karahisnler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1718 *et al.*, Det. İ.Eker-2017; Bahçeköy Village and its surroundings,

roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1941 *et al.*, Det. İ.Eker-2016.

STELLARIA L.

***Stellaria media* (L.) Vill.**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-38 *et al.*, Det. İ.Eker-2017; Yedigöller road, 4 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, forests, 1434 m, N 40° 52.970' E 031° 42.550', 09.05.2015, Leg. A.Çelik-118 *et al.*, Det. A.Kaya-2017; Yedigöller road, Çele Gölçük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-126 *et al.*, Det. İ.Eker-2017.

VACCARIA Wolf

***Vaccaria hispanica* (Mill.) Rauschert (Syn. *Vaccaria pyramidata* Medik. var. *grandiflora* Cullen)**

Bolu: Merkezler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1712 *et al.*, Det. İ.Eker-2017.

FAMILY: POLYGONACEAE

RUMEX L.

***Rumex acetosella* L.**

Bolu: Çeletepe, İmam Village, Çandır Upland, roadside slopes, 1674 m, N 40° 51.717' E 031° 41.367', 11.08.2015, Leg. A.Çelik-1345 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-507 *et al.*, Det. İ.Eker-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1187 *et al.*, Det. İ.Eker-2017; Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1277 *et al.*, Det. İ.Eker-2017.

***Rumex crispus* L.**

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1948 *et al.*, Det. İ.Eker-2017; Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-274 *et al.*, Det. İ.Eker-2017; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-523 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-886 *et al.*, Det. İ.Eker-2017.

***Rumex nepalensis* Spreng.**

Bolu: Kadıköy Upland, 2 km from Kadıköy Upland to Merkeşler Village, roadside, 1400 m, N 40° 52.888' E 031° 46.018', 16.10.2015, Leg. A.Çelik-1501 *et al.*, Det. İ.Eker-2017.

***Rumex obtusifolius* L. subsp. *subalpinus* (Schur) Celak**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-505 *et al.*, Det. İ.Eker-2017.

Rumex pulcher* L. subsp. *pulcher

Bolu: Merkeşler Village, around the village cemetery, meadows, 909 m, N 40° 51.883' E 031° 48.188', 23.07.2015, Leg. A.Çelik-1037 *et al.*, Det. İ.Eker-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1073 *et al.*, Det. İ.Eker-2017.

New record

Rumex tuberosus* L. subsp. *tuberosus

Bolu: Çaltepe, alpine meadows, 1820 m, N 40° 53.913' E 031° 47.183', 09.08.2015, Leg. A.Çelik-1263 *et al.*, Det. İ.Eker-2017.

FAMILY: TAMARICACEAE

***TAMARIX* L.**

Tamarix parviflora DC.

Bolu: Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2233 & A.Kaya, Det. İ.Eker-2017.

Mediterranean element

ORDER: CELASTRALES

FAMILY: CELASTRACEAE

EUONYMUS L.

Euonymus europaeus L.

Bolu: Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-764 *et al.*, Det. İ.Eker-2017; Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2053 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Euonymus latifolius (L.) Mill. subsp. *latifolius*

Bolu: Bağışlar Village, 4 km from Bağışlar Village to Merkeşler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1419 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

ORDER: CORNALES

FAMILY: CORNACEAE

CORNUS L.

Cornus mas L.

Bolu: Bağışlar Village, 4 km from Bağışlar Village to Merkeşler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1418 *et al.*, Det. İ.Eker-2015; Yedigöller road, 5 km from Bolu city center to Yedigöller, around

Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-700 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

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

Bolu: Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2055 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

ORDER: CROSSOSOMATALES

FAMILY: STAPHYLEACEAE

STAPHYLEA L.

Staphylea pinnata L.

Bolu: Çeletepe, Sarımustan, forest, 1100 m, N 40° 53.663' E 031° 44.090', 04.08.2018, Leg. A.Çelik-2339 *et al.*, Det. İ.Eker-2019.

Euro-Siberian element

ORDER: CUCURBITALES

FAMILY: DATISCACEAE

DATISCA L.

Datisca cannabina L.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-489 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-884 *et al.*, Det. İ.Eker-2015; Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1138 *et al.*, Det. İ.Eker-2015; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2084 *et al.*, Det. A.Kaya-2017.

ORDER: DIOSCOREALES

FAMILY: DIOSCOREACEAE

***DIOSCOREA* L.**

Dioscorea communis (L.) Caddick & Wilkin (Syn. *Tamus communis* L.)

Bolu: Çaltepe southern slopes, 5 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-319 *et al.*, Det. İ.Eker-2015; Tetemeçele Village and its surroundings, wet meadows, 958 m, N 40° 50.613' E 031° 44.638', 16.08.2015, Leg. A.Çelik-1397 *et al.*, Det. İ.Eker-2016; Çeletepe, Sarımustan, forests and wetland, 1178 m, N 40° 53.447' E 031° 44.645', 03.09.2016, Leg. A.Çelik-2175 *et al.*, Det. İ.Eker-2017; Mengen, Çaltepe eastern slopes, forest, 1324 m, N 40° 54.745' E 031° 48.670', 20.10.2017, Leg. A.Çelik-2330 & A.Kaya, Det. İ.Eker-2017.

ORDER: DIPSACALES

FAMILY: ADOXACEAE

***SAMBUCUS* L.**

Sambucus ebulus L.

Bolu: Kadıköy Upland, 2 km from Kadıköy Upland to Merkeşler Village, roadside, 1400 m, N 40° 52.888' E 031° 46.018', 16.10.2015, Leg. A.Çelik-1500 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-947 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Sambucus nigra L.

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-159 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-585 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-620 *et al.*,

Det. İ.Eker-2017; Çaltepe, 46 km from Kadıköy Upland to Merkeşler Village, woodland, 1163 m, N 40° 52.840' E 031° 46.652', 26.06.2015, Leg. A.Çelik-828 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 3 km from Yakabayat Village to Gölcük Village, roadside slopes, 1058 m, N 40° 48.442' E 031° 41.760', 16.08.2015, Leg. A.Çelik-1390 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

VIBURNUM L.

***Viburnum lantana* L.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-185 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-621 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1229 *et al.*, Det. İ.Eker-2017; Hamzabey Village, 1.3 km from Hamzabey Village to Çukurören Village, cultivated field, 1076 m, N 40° 47.745' E 031° 39.317', 11.08.2015, Leg. A.Çelik-1339 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 3 km from Yakabayat Village to Gölcük Village, roadside slopes, 1058 m, N 40° 48.442' E 031° 41.760', 16.08.2015, Leg. A.Çelik-1385 *et al.*, Det. İ.Eker-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2092 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

FAMILY: CAPRIFOLIACEAE

CENTRANTHUS L.

Centranthus longiflorus* Steven subsp. *longiflorus

Bolu: Değirmenderesi Village and its surroundings, rocky slopes, 865 m, N 40° 49.278' E 031° 44.658', 25.06.2016, Leg. A.Çelik-1992 *et al.*, Det. A.Çelik-2016.

Irano-Turanian element

CEPHALARIA L.

***Cephalaria gigantea* (Ledeb.) Bobrov**

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1014 *et al.*, Det. A.Kaya-2018; Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2152 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

DIPSACUS L.

***Dipsacus laciniatus* L.**

Bolu: Kadıköy Upland, 3 km from Kadıköy Upland to Merkeşler Village, roadside, 1223 m, N 40° 52.948' E 031° 46.217', 09.8.2015, Leg. A.Çelik-1291 *et al.*, Det. İ.Eker-2016; Mengen, Hayranlar Village and its surroundings, forest, 864 m, N 40° 53.128' E 031° 49.970', 11.08.2016, Leg. A.Çelik-2076 *et al.*, Det. A.Kaya-2017.

KNAUTIA L.

***Knautia involucrata* Sommier & Levier**

Bolu: Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1276 *et al.*, Det. A.Kaya-2017; Banaz Village, above Banaz district, around the cemetery, 998 m, N 40° 48.828' E 031° 43.405', Leg. A.Çelik-1605 *et al.*, Det. A.Kaya-2017; Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-2120 *et al.*, Det. A.Kaya-2017; Merkeşler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2187 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

LONICERA L.

Lonicera orientalis Lam. (Syn. ***Lonicera caucasica*** Pall. subsp. ***orientalis*** (Lam.) Chamb. et Long)

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-389 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky slopes, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-298 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-463 *et al.*, Det. İ.Eker-2017; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-774 *et al.*, Det. İ.Eker-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2104 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2317 & A.Kaya, Det. İ.Eker-2017.

Endemic, Mediterranean element

MORINA L.

Morina persica L. var. ***persica***

Bolu: Değirmenderesi Village and its surroundings, rocky slopes, 865 m, N 40° 49.278' E 031° 44.658', 25.06.2016, Leg. A.Çelik-1993 *et al.*, Det. A.Çelik-2016.

Irano-Turanian element

SCABIOSA L.

Scabiosa argentea L.

Bolu: Banaz Village, 9 km from Bolu city center to Banaz Village, meadows and forest clearance, 867 m, N 40° 47.608' E 031° 42.785', 27.07.2015, Leg. A.Çelik-1047 *et al.*, Det. A.Kaya-2017.

Scabiosa atropurpurea L.

Bolu: Kadıköy Upland, 1 km to Çaltepe, roadside, 1857 m, N 40° 53.665' E 031° 45.565', 21.06.2015, Leg. A.Çelik-622b *et al.*, Det. A.Kaya-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-662 *et al.*, Det. A.Kaya-2017; Merkezler Village, Merkezler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-866 *et al.*, Det. A.Kaya-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1302 *et al.*, Det. A.Kaya-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1929 *et al.*, Det. A.Kaya-2017.

Scabiosa columbaria* L. subsp. *ochroleuca* (L.) Celák var. *ochroleuca

Bolu: Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2097 *et al.*, Det. A.Kaya-2017; Çeletepe, Çeletepe summit, Gurbettaşı road, rocky area, 1670 m, N 40° 51.648' E 031° 41.387', 09.06.2017, Leg. A.Çelik-2259 *et al.*, Det. A.Kaya-2017.

***Scabiosa micrantha* Desf.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1919 *et al.*, Det. A.Kaya-2017.

***Scabiosa rotata* M.Bieb.**

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Dereceören Village, meadows, 780 m, N 40° 50.193' E 031° 46.898', 25.06.2016, Leg. A.Çelik-1999 *et al.*, Det. A.Çelik-2016.

Irano-Turanian element

VALERIANA L.

***Valeriana alliariifolia* Vahl.**

Bolu: Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2022 *et al.*, Det. İ.Eker-2016; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031°

39.515', 21.06.2015, Leg. A.Çelik-524 *et al.*, Det. A.Kaya-2017; Mengen, Afşar Village, 14.5 km from Afşar Şevkioğlu district to Merkeşler Upland, Çaltepe eastern slopes, roadside and stony places, 1200 m, N 40° 54.025' E 031° 48.415', Leg. A.Çelik-987 *et al.*, Det. A.Kaya-2017; Çeletepe, 8 km from Gurbettaşı to Sarımustan, stony and rocky areas, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1872 *et al.*, Det. A.Kaya-2017.

VALERIANELLA Mill.

Valerianella locusta (L.) Laterr.

Bolu: Merkeşler Village, above Merkeşler Village, forest clearance and meadow, 1047 m, N 40° 52.218' E 031° 47.220', 08.04.2016, Leg. A.Çelik-1566 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

Valerianella turgida (Steven) Betcke

Bolu: Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-617 *et al.*, Det. İ.Eker-2017.

ORDER: ERICALES

FAMILY: ERICACEAE

ERICA L.

Erica arborea L.

Bolu: Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2090 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 11 km from Bolu-Mengen road to Afşar Şevkioğlu district, roadside slopes, 1043 m, N 40° 53.618' E 031° 49.267', 23.07.2015, Leg. A.Çelik-969 *et al.*, Det. İ.Eker-2017.

MONOTROPA L.

Monotropa hypopitys L.

Bolu: Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-525 *et al.*, Det. İ.Eker-2016; Yedigöller road, 14

km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1292 m, N 40° 53.362' E 031° 44.835', 03.08.2015, Leg. A.Çelik-1211 *et al.*, Det. İ.Eker-2017.

ORTHILIA Raf.

Orthilia secunda (L.) House

Bolu: Mengen, Mamatlar Upland, 17.5 km from Afşar Village to Mamatlar Upland, Çaltepe eastern slopes, meadows, 1265 m, N 40° 53.937' E 031° 48.008', Leg. A.Çelik-1000 *et al.*, Det. İ.Eker-2017.

RHODODENDRON L.

Rhododendron ponticum L.

Bolu: Yedigöller road, 5 km from Gurbettaşı to Sarımustan, open forests, 1254 m, N 40° 53.268' E 031° 42.370', 21.06.2015, Leg. A.Çelik-578 *et al.*, Det. İ.Eker-2015; Mengen, Çaltepe eastern slopes, forest clearance, 1201 m, N 40° 54.070' E 031° 48.157', 25.06.2016, Leg. A.Çelik-2051 *et al.*, Det. İ.Eker-2016; Mengen, Mamatlar Upland, 17.5 km from Afşar Village to Mamatlar Upland, Çaltepe eastern slopes, meadows, 1265 m, N 40° 53.937' E 031° 48.008', Leg. A.Çelik-995 *et al.*, Det. İ.Eker-2017; Yedigöller road, 4.5 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1229 m, N 40° 53.258' E 031° 42.355', 03.08.2015, Leg. A.Çelik-1201 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

FAMILY: PRIMULACEAE

ANAGALLIS L.

Anagallis arvensis L. var. *arvensis*

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-848 *et al.*, Det. A.Çelik & A.Kaya-2017.

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

Bolu: Mengen, Hayranlar Village and its surroundings, forest, 864 m, N 40° 53.128' E 031° 49.970', 11.08.2016, Leg. A.Çelik-2074 *et al.*, Det. İ.Eker-2017.

***Anagallis foemina* Mill.**

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1321 *et al.*, Det. İ.Eker-2017; Hamzabey Village, 1 km from Hamzabey Village to Yakabayat Vilalge, roadside, 963 m, N 40° 47.292' E 031° 40.090', 16.08.2015, Leg. A.Çelik-1361 *et al.*, Det. İ.Eker-2017.

Mediterranean element

CYCLAMEN L.

Cyclamen coum* Mill. subsp. *coum

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1522 m, N 40° 86.363' E 031° 73.591', 01.04.2015, Leg. A.Çelik-1 *et al.*, Det. İ.Eker-2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-57 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-284 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-229 *et al.*, Det. İ.Eker-2017.

LYSIMACHIA L.

***Lysimachia punctata* L.**

Bolu: Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2019 *et al.*, Det. İ.Eker-2016.

***Lysimachia verticillaris* Spreng.**

Bolu: Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2087 *et al.*, Det. İ.Eker-2016; Yedigöller road, 10 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and rocky area, 1095 m, N 40° 53.618' E 031° 43.780', 03.08.2015, Leg. A.Çelik-1206 *et al.*, Det. İ.Eker-2016.

New record, Euro-Siberian element

***Lysimachia vulgaris* L.**

Bolu: Mengen, Afşar Village, 13.5 km from Afşar Şevkioğlu district to Merkezler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-974 *et al.*, Det. İ.Eker-2017.

***PRIMULA* L.**

***Primula acaulis* (L.) L. subsp. *acaulis* (Syn. *Primula vulgaris* Huds.)**

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1530 m, N 40° 86.376' E 031° 73.565', 01.04.2015, Leg. A.Çelik-3 *et al.*, Det. İ.Eker-2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-56 *et al.*, Det. İ.Eker-2017; Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-63 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe eastern slopes, subalpine zone, 1868 m, N 40° 52.107' E 031° 43.023', 01.05.2015, Leg. A.Çelik-70 *et al.*, Det. İ.Eker-2017; Bolu Çaltepe, Merkezler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-195 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

ORDER: FABALES

FAMILY: FABACEAE (LEGUMINOSAE)

ARGYROLOBIUM Eckl. & Zeyh.

Argyrolobium biebersteinii P.W.Ball

Bolu: Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-520 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 5 km from Merkeşler Village to Çaltepe, forest, 1046 m, N 40° 52.425' E 031° 47.448', 16.10.2015, Leg. A.Çelik-1499 *et al.*, Det. İ.Eker-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1984 *et al.*, Det. İ.Eker-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2025 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

ANTHYLLIS L.

Anthyllis vulneraria L. subsp. *boisseri* (Sagorski) Bornm.

Bolu: Merkeşler village, 2 km from Değirmenbeli Village to Merkeşler Village, forest clearance, 909 m, N 40° 51.662' E 031° 47.037', 25.06.2016, Leg. A.Çelik-2005 *et al.*, Det. İ.Eker-2016; Çaltepe, Çaltepe road, 4 km to Tetemeçele Village, roadside and stony places, 1476 m, N 40° 51.743' E 031° 44.138', 21.06.2015, Leg. A.Çelik-655 *et al.*, Det. A.Çelik-2017; Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1020 *et al.*, Det. İ.Eker-2017.

ASTRAGALUS L.

Astragalus amoenus Fenzl (Syn. *Astragalus squalidus* Boiss.)

Bolu: Çeletepe, around the Çeletepe Çandır Upland, rocky slopes, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1860 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

Astragalus angustifolius Lam. subsp. *pungens* (Willd.) Hayek

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-623 *et al.*, Det. İ.Eker-2017.

Astragalus condensatus Ledeb. (Syn. *Astracantha condensata* (Ledeb.) Podlech)

Bolu: Bağışlar Village and its surroundings, forest, 976 m, N 40° 50.738' E 031° 44.917', 16.08.2015, Leg. A.Çelik-1400 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

Astragalus glycyphylloides DC.

Bolu: Çeletepe, İmam Village, Çandır Upland, roadside slopes, 1674 m, N 40° 51.717' E 031° 41.367', 11.08.2015, Leg. A.Çelik-1348 *et al.*, Det. İ.Eker-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2100 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-597 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-445 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-241 *et al.*, Det. A.Kaya-2017; Kadıköy Upland, 1.3 km from Kadıköy Upland to Merkeşler Village, forest, 1477 m, N 40° 52.813' E 031° 45.792', 09.08.2015, Leg. A.Çelik-1289 *et al.*, Det. A.Kaya-2017; Yedigöller road, 14 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1292 m, N 40° 53.362' E 031° 44.835', 03.08.2015, Leg. A.Çelik-1212 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-890 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

Astragalus mesogitanus Boiss. (Syn. *Astragalus lydius* Boiss.)

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Merkeşler Village, roadside and forest clearance, 909 m, N 40° 51.662' E 031° 47.037' 25.06.2016, Leg. A.Çelik-2001 *et al.*, Det. İ.Eker-2016; Bolu-Mengen road, 1 km

before from Semerciler Village, forests, 667 m, N 40° 49.138' E 031° 47.697', 02.06.2015, Leg. A.Çelik-211 *et al.*, Det. A.Kaya-2017; Mengen road, Taşçılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1896 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1722 *et al.*, Det. A.Çelik & A.Kaya-2017; Bolu-Mengen road, Müstakimler Village, roadside, 733 m, N 40° 47.778' E 031° 45.582', 9.06.2017, Leg. A.Çelik-2222 & A.Kaya, Det. A.Çelik-2017; Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-854 *et al.*, Det. A.Kaya-2017; Çaydurt-Mengen road, 24 km from Bolu city center to Taşçılar Village, Taşçılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1657 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

***Astragalus panduratus* Bunge**

Bolu: Merkeşler Village, near the sand depo on Mengen road, fields and meadows, 678 m, N 40° 48.174' E 031° 46.307', 12.07.2015, Leg. A.Çelik-943 *et al.*, Det. A.Çelik & A.Kaya-2017.

Endemic, New record, Irano-Turanian element

***Astragalus ponticus* Pall.**

Bolu: Değirmenderesi Village and its surroundings, rocky slopes, 865 m, N 40° 49.278' E 031° 44.658', 25.06.2016, Leg. A.Çelik-1996 *et al.*, Det. İ.Eker-2017; Mengen, Avşar Village and its surroundings, meadows, 768 m, N 40° 51.758' E 031° 50.117', 23.6.2016, Leg. A.Çelik-1922 *et al.*, Det. İ.Eker-2017.

***BITUMINARIA* C.H.Stirt.**

***Bituminaria bituminosa* (L.) C.H.Stirt**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1957 *et al.*, Det. İ.Eker-2016; Yedigöller road, 5 km from Bolu city center to Yedigöller, around

Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-682 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 1 km from Merkeşler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-933 *et al.*, Det. İ.Eker-2017; Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2059 *et al.*, Det. İ.Eker-2017.

Mediterranean element

COLUTEA L.

Colutea cilicica Boiss. & Balansa

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1897 *et al.*, Det. İ.Eker-2016; Merkeşler village, 2 km from Değirmenbeli Village to Merkeşler Village, forest clearance, 909 m, N 40° 51.662' E 031° 47.037' 25.06.2016, Leg. A.Çelik-2002 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-881 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-950 *et al.*, Det. İ.Eker-2017.

CORONILLA L.

Coronilla scorpioides (L.) W.D.J.Koch

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-686 *et al.*, Det. A.Kaya-2017;

CYTISUS L.

Cytisus austriacus L. subsp. *pygmaeus* (Willd.) Briq. (Syn. *Chamaecytisus pygmaeus* (Willd.) Rothm.)

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-178 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg.

A.Çelik-360 *et al.*, Det. İ.Eker-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-539 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe summit, alpine meadows, 1982 m, N 40° 51.892' E 031° 42.103', Leg. A.Çelik-1857 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Cytisus hirsutus* L.**

Bolu: Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2025 *et al.*, Det. İ.Eker-2016; Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-120 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-252 *et al.*, Det. İ.Eker-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-538 *et al.*, Det. İ.Eker-2017; Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1151 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1772 *et al.*, Det. İ.Eker-2017; Merkeşler Village, above Merkeşler Village, Dereköy district, roadside, 806 m, N 40° 52.402' E 031° 48.653', 04.06.2016, Leg. A.Çelik-1686 *et al.*, Det. İ.Eker-2017.

***DORYCNIUM* Mill.**

***Dorycnium graecum* (L.) Ser.**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-247 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-471 *et al.*, Det. İ.Eker-2017; Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1144 *et al.*, Det. A.Kaya-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970

m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2021 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Dorycnium pentaphyllum Scop. subsp. *anatolicum* (Boiss.) Gams

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-680 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-953 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1307 *et al.*, Det. İ.Eker-2017.

Dorycnium pentaphyllum Scop. subsp. *herbaceum* (Vill.) Rouy

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1784 *et al.*, Det. İ.Eker-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1960 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-922 *et al.*, Det. İ.Eker-2017.

Dorycnium rectum (L.) Ser.

Bolu: Mengen, Mamatlar Upland, 17.5 km from Afşar Village to Mamatlar Upland, Çaltepe eastern slopes, meadows, 1265 m, N 40° 53.937' E 031° 48.008', Leg. A.Çelik-996 *et al.*, Det. İ.Eker-2017.

Mediterranean element

GALEGA L.

Galega officinalis L.

Bolu: Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1141 *et al.*, Det. İ.Eker-2017; Kadıköy

Upland, forest, 1519 m, N 40° 53.335' E 031° 45.592', 27.07.2015, Leg. A.Çelik-1122 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

GENISTA L.

Genista januensis Viv. subsp. *lydia* (Boiss.) Kit Tan & Ziel. (Syn. *Genista lydia* Boiss.)

Bolu: Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-251 *et al.*, Det. İ.Eker-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1181 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-472 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller, around Dumantepe villas, forest, 913 m, N 40° 46.818' E 031° 38.135', 11.08.2015, Leg. A.Çelik-1309 *et al.*, Det. İ.Eker-2017.

Mediterranean element

Genista tinctoria L.

Bolu: Mengen, Afşar Village, 10.5 km from Afşar Village to Çaltepe, roadside, 1065 m, N 40° 53.775' E 031° 49.307', 23.07.2015, Leg. A.Çelik-963 *et al.*, Det. İ.Eker-2017; Merkezler Village, Merkezler Village and its surroundings, roadside slopes, 1077 m, N 40° 53.007' E 031° 47.735', 12.07.2015, Leg. A.Çelik-905 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

LATHYRUS L.

Lathyrus aureus (Steven) D.Brandza

Bolu: Mengen, Çaltepe eastern slopes, forest clearance, 1201 m, N 40° 54.070' E 031° 48.157', 25.06.2016, Leg. A.Çelik-2047 *et al.*, Det. İ.Eker-2016; Yedigöller road, Çele Gölçük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E

031° 39.925', 09.05.2015, Leg. A.Çelik-139 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-220 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-452 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-465 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Lathyrus czeczottianus Bässler

Bolu: Çaltepe, lower boundary of forest, open forests, 1441 m, N 40° 53.585' E 031° 46.247', 27.07.2015, Leg. A.Çelik-200 *et al.*, Det. İ.Eker-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-422 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

Lathyrus corniculatus L. var. *corniculatus*

Bolu: Çukurören Village, around the Sakintepe, rocky slope, 975 m, N 40° 48.437' E 031° 38.967', 03.09.2016, Leg. A.Çelik-2139 *et al.*, Det. İ.Eker-2017.

New record

Lathyrus laxiflorus (Desf.) Kuntze subsp. *laxiflorus*

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-121 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-225 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-464 *et al.*, Det. İ.Eker-2017.

***Lathyrus nissolia* L.**

Bolu: Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-255 *et al.*, Det. İ.Eker-2015.

***Lathyrus tukhtensis* Czeaczott**

Bolu: Mengen, Merkezler Upland, 22 km from Afşar Village to Merkezler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1019 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

***Lathyrus undulatus* Boiss.**

Bolu: Tetemeçele Village, 7 km from Tetemeçele Village to Kadıköy Upland, roadside and rocky areas, 1320 m, N 40° 51.998' E 031° 44.802', 26.06.2015, Leg. A.Çelik-816 *et al.*, Det. İ.Eker-2015; *ibid.*, 27.07.2015, Leg. A.Çelik-1111 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 3.5 km from Kadıköy Upland to Merkezler Village, roadside and slopes, 1157 m, N 40° 52.825' E 031° 46.765', 09.08.2015, Leg. A.Çelik-1292 *et al.*, Det. İ.Eker-2015; Merkezler Village, 11 km from Merkezler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-290 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

***LENS* Mill.**

***Lens ervoides* (Brign.) Grande**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-482 *et al.*, Det. İ.Eker-2017.

New record, Mediterranean element

LOTUS L.

***Lotus corniculatus* L. var. *alpinus* Ser. (Syn. *Lotus alpinus* (DC.) Ramond)**

Bolu. Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1079 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1373 *et al.*, Det. İ.Eker-2017.

Lotus corniculatus* L. var. *corniculatus

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-417 *et al.*, Det. İ.Eker-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-665 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1785 *et al.*, Det. İ.Eker-2017.

MEDICAGO L.

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

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-870 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1701 *et al.*, Det. İ.Eker-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1899 *et al.*, Det. İ.Eker-2017.

***Medicago orbicularis* (L.) Bartal.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1900 *et al.*, Det. İ.Eker-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1944 *et al.*, Det. İ.Eker-2016.

Medicago rigidula* (L.) All. var. *rigidula

Bolu: Mesciele Village, Mesciele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.elik-1076 *et al.*, Det. İ.Eker-2017.

New record

Medicago sativa* L. subsp. *sativa

Bolu: altepe, 900 m to Merkeşler Upland, altepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.elik-2294 & A.Kaya, Det. İ.Eker-2017; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.elik-860 *et al.*, Det. A.Kaya-2017; altepe, 900 m to Merkeşler Upland, altepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.elik-2295 & A.Kaya, Det. İ.Eker-2017.

***Medicago x varia* Martyn**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.elik-1956 *et al.*, Det. İ.Eker-2016; Mesciele Village, Mesciele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.elik-1070 *et al.*, Det. İ.Eker-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.elik-1967 *et al.*, Det. İ.Eker-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 688 m, N 40° 48.118' – E 031° 46.094', 23.06.2016, Leg. A.elik-1888 *et al.*, Det. İ.Eker-2017.

***MELILOTUS* L.**

***Melilotus albus* Medik. (Syn. *Melilotus alba* Medik.)**

Bolu: Merkeşler Village, around the Merkeşler Dere district, roadside, 767 m, N 40° 52.410' E 031° 48.768', 12.07.2015, Leg. A.elik-932 *et al.*, Det. İ.Eker-2015.

***Melilotus officinalis* (L.) Pall.**

Bolu: altepe, altepe road, 4 km to Tetemeele Village, roadside and stony places, 1476 m, N 40° 51.743' E 031° 44.138', 21.06.2015, Leg. A.elik-653 *et al.*, Det.

İ.Eker-2016; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-695 *et al.*, Det. İ.Eker-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1938 *et al.*, Det. İ.Eker-2017.

Melilotus spicatus (Sm.) Breistr. (Syn. ***Melilotus neapolitanus*** Ten.)

Bolu: Mengen, Avşar Village and its surroundings, forests and stream edge, 893 m, N 40° 52.743' E 031° 50.555', 23.06.2016, Leg. A.Çelik-1923 *et al.*, Det. İ.Eker-2017.

ONOBRYCHIS Mill.

Onobrychis oxyodonta Boiss.

Bolu: Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1093 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-644 *et al.*, Det. İ.Eker-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-689 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1383 *et al.*, Det. İ.Eker-2016; Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2313 & A.Kaya, Det. İ.Eker-2017.

ONONIS L.

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

Bolu: Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1074 *et al.*, Det. İ.Eker-2017.

SCORPIURUS L.

Scorpiurus subvillosus L. var. *subvillosus* (Syn. *Scorpiurus muricatus* L. var. *subvillosus* (L.) Fiori)

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1904 *et al.*, Det. İ.Eker-2017.

SECURIGERA DC.

Securigera varia (L.) Lassen (Syn. *Coronilla varia* L.)

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-296 *et al.*, Det. İ.Eker-2015. Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-477 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-909 *et al.*, Det. İ.Eker-2015; Tetemeçele Village, 20 km from Bolu city center to Çeletepe southern slopes, meadows, 1072 m, N 40° 50.560' E 031° 43.572', 26.06.2015, Leg. A.Çelik-804 *et al.*, Det. İ.Eker-2017; Çeletepe, 2 km from Gurbetteşi to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2158 *et al.*, Det. A.Çelik-2017.

Mediterranean element

TRIFOLIUM L.

Trifolium arvense L. var. *arvense*

Bolu: Merkeşler Village, around the village cemetery, meadows, 909 m, N 40° 51.883' E 031° 48.188', 23.07.2015, Leg. A.Çelik-1043 *et al.*, Det. İ.Eker-2017; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-871 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 2 km from Kadıköy Upland to Çeletepe, roadside and rocky slopes, 1605 m, N 40° 52.735' E 031° 44.583', 09.08.2015, Leg. A.Çelik-1268 *et al.*, Det. İ.Eker-2016.

Trifolium aureum Pollich subsp. ***barbulatum*** Freyn & Sint. ex Freyn

Bolu: Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2171 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

Trifolium campestre Schreb. subsp. ***campestre*** var. ***campestre***

Bolu: Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-589 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Çukürören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-475 *et al.*, Det. İ.Eker-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-671 *et al.*, Det. İ.Eker-2017; Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1140 *et al.*, Det. İ.Eker-2017.

Trifolium dubium Sibth.

Bolu: Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2015 *et al.*, Det. İ.Eker-2017.

Trifolium elongatum Willd. (Syn. ***Trifolium pannonicum*** Jacq. subsp. ***elongatum*** (Willd.) Zohary)

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-254 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-561 *et al.*, Det. İ.Eker-2017; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-775 *et al.*, Det. A.Çelik-2017; Çaltepe, on the Çaltepe-Tetemeçele Village road, 3 km to Tetemeçele Village, woodland, 1537 m, N 40° 51.691' E 031° 44.507', 26.05.2015, Leg. A.Çelik-826 *et al.*, Det. A.Çelik-2017; Yedigöller road, 10 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and rocky area, 1095 m, N 40° 53.618' E 031° 43.780', 03.08.2015, Leg. A.Çelik-1207 *et al.*, Det. İ.Eker-2016.

Endemic

***Trifolium hybridum* L. subsp. *anatolicum* (Boiss.) Hossain**

Bolu: Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1143 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-500 *et al.*, Det. İ.Eker-2017.

***Trifolium patens* Schreb.**

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-145 *et al.*, Det. İ.Eker-2017; Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-272 *et al.*, Det. İ.Eker-2017.

Trifolium pratense* L. var. *pratense

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-235 *et al.*, Det. İ.Eker-2015; Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-209 *et al.*, Det. İ.Eker-2017; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-521 *et al.*, Det. İ.Eker-2017; Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1798 *et al.*, Det. İ.Eker-2017; Çeletepe, Çaltepe southern slopes, subalpine meadows, 1860 m, N 40° 51.523' E 031° 41.658', 26.08.2017, Leg. A.Çelik-2308 & A.Kaya, Det. İ.Eker-2017.

Trifolium repens* L. var. *repens

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-258 *et al.*, Det. İ.Eker-2015; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-705 *et al.*, Det. İ.Eker-2017.

Trifolium resupinatum* L. var. *resupinatum

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-729 *et al.*, Det. İ.Eker-2017.

VICIA L.

***Vicia abbreviata* Spreng. (Syn. *Vicia truncatula* M.Bieb.)**

Bolu: Çaltepe, lower boundary of forest, open forests, 1441 m, N 40° 53.585' E 031° 46.247', 27.07.2015, Leg. A.Çelik-201 *et al.*, Det. İ.Eker-2017; Çaltepe, 16 km from Tetemecele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-437 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Vicia cassubica* L.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-487 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Vicia cracca* L. subsp. *cracca

Bolu: Merkezler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1714 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Vicia freyniana* Bornm.**

Bolu: Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-449 *et al.*, Det. İ.Eker-2017; Yedigöller road, 5 km from Yığılca crossroad to Yedigöller, rocky slopes, 1394 m, N 40° 51.602' E 031° 40.843', 21.06.2015, Leg. A.Çelik-534 *et al.*, Det. İ.Eker-2016.

Endemic, Euro-Siberian element

***Vicia lathyroides* L.**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-47 *et al.*, Det. İ.Eker-2017.

New record

Vicia pannonica* Crantz var. *pannonica

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1805 *et al.*, Det. İ.Eker-2017; Mengen, Avşar Village, Avşar Upland, Çaltepe eastern slopes, forest, 1027 m, N 40° 53.737' E 031° 49.125', 20.10.2017, Leg. A.Çelik-2329 & A.Kaya, Det. A.Kaya-2017.

***Vicia sepium* L.**

Bolu: Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2038 *et al.*, Det. İ.Eker-2017.

New record, Euro-Siberian element

Vicia villosa* Roth subsp. *villosa

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1934 *et al.*, Det. İ.Eker-2017; Mengen, Çaltepe eastern slopes, forest clearance, 1201 m, N 40° 54.070' E 031° 48.157', 25.06.2016, Leg. A.Çelik-2046 *et al.*, Det. İ.Eker-2017.

New record

FAMILY: POLYGALACEAE

***POLYGALA* L.**

***Polygala alpestris* Rchb.**

Bolu: Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-894 *et al.*, Det. İ.Eker-2017.

New record, Euro-Siberian element

Polygala anatolica Boiss. & Heldr.

Bolu: Çaltepe, Merkezler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1241 *et al.*, Det. A.Çelik-2017; Bağışlar Village, village cemetery, in the cemetery, 958 m, N 40° 50.228' E 031° 45.362', 16.08.2015, Leg. A.Çelik-1404 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-181 *et al.*, Det. İ.Eker-2017; Merkezler Village, Upper Merkezler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-271 *et al.*, Det. A.Kaya-2017; Çaydurt-Mengen road, 24 km from Bolu city center to Taşçılar Village, Taşçılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1671 *et al.*, Det. A.Kaya-2017.

Polygala major Jacq.

Bolu: Çaydurt-Mengen road, 24 km from Bolu city center to Taşçılar Village, Taşçılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1670 *et al.*, Det. İ.Eker-2017.

New record, Euro-Siberian element

Polygala pruinosa Boiss. subsp. *pruinosa* Boiss.

Bolu: Merkezler Village, Upper Merkezler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-266 *et al.*, Det. İ.Eker-2017.

New record

ORDER: FAGALES

FAMILY: BETULACEAE

ALNUS L.

Alnus glutinosa (L.) Gaertn. subsp. *glutinosa*

Bolu: Çukurören Village, stream edge, 971 m, N 40° 48.467' E 031° 38.988', 11.08.2015, Leg. A.Çelik-1344 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

CARPINUS L.

***Carpinus betulus* L.**

Bolu: Bağışlar Village, 4 km from Bağışlar Village to Merkeşler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1420 *et al.*, Det. İ.Eker-2015; Yedigöller road, 10 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and rocky area, 1095 m, N 40° 53.618' E 031° 43.780', 03.08.2015, Leg. A.Çelik-1209 *et al.*, Det. A.Çelik-2016; Çeletepe, 8 km from Gurbettaşı to Sarımustan, stony and rocky areas, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1870 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 5 km from Merkeşler Village to Çaltepe, forests, 1230 m, N 40° 52.955' E 031° 46.078', 11.08.2016, Leg. A.Çelik-2099 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

CORYLUS L.

Corylus avellana* L. var. *avellana

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1031 *et al.*, Det. İ.Eker-2016; Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-164 *et al.*, Det. İ.Eker-2017; Çaltepe southern slopes, 5 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-317 *et al.*, Det. İ.Eker-2017; *ibid.*, 02.06.2015, Leg. A.Çelik-318 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Corylus colurna* L.**

Bolu: Mengen, Afşar Village, Afşar Hayranlar district and its surroundings, roadside and rocky areas, 936 m, N 40° 54.622' E 031° 49.613', 23.07.2015, Leg. A.Çelik-1036 *et al.*, Det. İ.Eker-2016.

Euro-Siberian element

FAMILY: FAGACEAE

FAGUS L.

***Fagus orientalis* Lipsky**

Bolu: Çaltepe eastern slopes, forest clearance, 1104 m, 40° 53.570' E 031° 48.773', 11.08.2016, Leg. A.Çelik-2082 *et al.*, Det. A.Çelik-2016; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-222 *et al.*, Det. İ.Eker-2017; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-770 *et al.*, Det. İ.Eker-2017; Bağışlar Village, 5 km from Bağışlar Village to Merkeşler Upland, rocky slopes, 1059 m, N 40° 51.605' E 031° 45.825', 16.08.2015, Leg. A.Çelik-1431 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

QUERCUS L.

Quercus infectoria* G.Oliver subsp. *infectoria

Bolu: Bağışlar Village, village cemetery, in the cemetery, 958 m, N 40° 50.228' E 031° 45.362', 16.08.2015, Leg. A.Çelik-1407 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017.

Euro-Siberian element

***Quercus macranthera* Fisch. & C.A.Mey. ex Hohen. subsp. *sypirensis* (K.Koch) Menitsky**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-224 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-960 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Değirmenbeli Village, roadside, 888 m, N 40° 50.664' E 031° 47.085', 20.10.2017, Leg. A.Çelik-2327 & A.Kaya, Det. M. Tekin Babaç & E. Uslu-2017.

Endemic

Quercus petraea (Matt.) Liebl. subsp. *iberica* (Steven ex M.Bieb.) Krassiln.

Bolu: Merkezler Village, Merkezler Village and its surroundings, roadside slopes, 1077 m, N 40° 53.007' E 031° 47.735', 12.07.2015, Leg. A.Çelik-906 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Merkezler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-914 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Bolu. Mesciçele Village, Mesciçele Kamsuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1084 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Kadıköy Upland, 3.5 km from Kadıköy Upland to Merkezler Village, roadside and slopes, 1157 m, N 40° 52.778' E 031° 46.787', 09.08.2015, Leg. A.Çelik-1296 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017, *ibid.*, 09.08.2015, Leg. A.Çelik-1294 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2054 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Değirmenbeli Village, roadside, 888 m, N 40° 50.664' E 031° 47.085', 20.10.2017, Leg. A.Çelik-2326 & A.Kaya, Det. İ.Eker-2017; Tetemeçele Village, above Tetemeçele Village, forest, 1305 m, N 40° 51.503' E 031° 44.583', 20.10.2017, Leg. A.Çelik-2333 & A.Kaya, Det. M. Tekin Babaç & E. Uslu-2017.

Quercus pubescens Willd. subsp. *pubescens*

Bolu: Bağışlar Village and its surroundings, forest, 976 m, N 40° 50.738' E 031° 44.917', 16.08.2015, Leg. A.Çelik-1401 *et al.*, Det. M. Tekin Babaç & E. Uslu-2017; Değirmenderesi Village, above Değirmenderesi Village, scrub and step, 844 m, N 40° 49.612' E 031° 45.010', 20.10.2017, Leg. A.Çelik-2321 & A.Kaya, Det. İ.Eker-2017; *ibid.*, 20.10.2017, Leg. A.Çelik-2322 & A.Kaya, Det. İ.Eker-2017; Değirmenbeli Village, roadside, 888 m, N 40° 50.664' E 031° 47.085', 20.10.2017, Leg. A.Çelik-2325 & A.Kaya, Det. İ.Eker-2017.

ORDER: GENTIANALES

FAMILY: APOCYNACEAE

VINCA L.

***Vinca minor* L.**

Bolu: Tetemeçele Village, above Tetemeçele Village, roadside and meadows, 1305 m, N 40° 51.503' E 031° 44.583', 08.04.2018, Leg. A.Çelik-2237 & A.Kaya, Det. A.Kaya-2017.

Vinca major* L. subsp. *major

Bolu: Çukurören Village and its surroundings, forest clearance, 1088 m, N 40° 48.732' E 031° 38.250', 27.04.2016, Leg. A.Çelik-1629 *et al.*, Det. A.Kaya-2017.

Mediterranean element

VINCETOXICUM N. M. Wolf

***Vincetoxicum fuscatum* subsp. *fuscatum* (Hornem.) Endl.**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1305 *et al.*, Det. İ.Eker-2015.

Irano-Turanian element

FAMILY: GENTIANACEAE

BLACKSTONIA A.Juss.

Blackstonia perfoliata* (L.) Huds. subsp. *perfoliata

Bolu: Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2264 & A.Kaya, Det. A.Kaya-2017.

CENTAURIUM Haller

Centaurium erythraea* Rafn subsp. *erythraea

Bolu: Mengen, Afşar Village, 13.5 km from Afşar Şevkioglu district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-977 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

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

Bolu. Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1082 *et al.*, Det. İ.Eker-2017.

Mediterranean element

GENTIANA L.

Gentiana asclepiadea L.

Bolu: Yedigöller road, 1 km from Yığılca road crossroad to Yedigöller, roadside and forest clearance, 1399 m, N 40° 51.332' E 031° 40.600', 10.09.2015, Leg. A.Çelik-1439 *et al.*, Det. A.Kaya-2017; Çaltepe, 7 km from Merkezler Village to Merkezler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1234 *et al.*, Det. A.Çelik-2016; *ibid.*, 12.08.2016, Leg. A.Çelik-2113 *et al.*, Det. A.Kaya-2016.

Euro-Siberian element

Gentiana cruciata L.

Bolu: Mengen, Çaltepe eastern slopes, forest, 1759 m, N 40° 54.310' E 031° 47.492', 09.08.2015, Leg. A.Çelik-1248 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

FAMILY: GERANIACEAE

ERODIUM L'Hér.

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

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1945 *et al.*, Det. İ.Eker-2016; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-509 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-607 *et al.*, Det. İ.Eker-2017; Mesciçele Village,

Mesciele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.elik-1071 *et al.*, Det. İ.Eker-2017.

Erodium acaule (L.) Bech. & Thell.

Bolu: Yedigöller road, ele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.elik-135 *et al.*, Det. İ.Eker-2017; Between Yeşilele Village and Mesciele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.elik-34 *et al.*, Det. İ.Eker-2017.

Mediterranean element

GERANIUM L.

Geranium asphodeloides Burm.f. subsp. *asphodeloides*

Bolu: Tetemeele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.elik-162 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to altepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.elik-238 *et al.*, Det. İ.Eker-2017; Yedigöller road, ele Gölcük forestry warehouse surroundings, roadside, 1222 m, N 40° 50.678' E 031° 39.727', 21.06.2015, Leg. A.elik-517 *et al.*, Det. İ.Eker-2017; altepe, Merkeşler Upland, around the lake, meadows, 1793 m, N 40° 53.780' E 031° 47.068', 07.10.2016, Leg. A.elik-2203 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Geranium bohemicum L.

Bolu: altepe southern slopes, roadside, 1204 m, N 40° 53.027' E 031° 48.458', Leg. A.elik-331 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from ukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.elik-479 *et al.*, Det. İ.Eker-2017.

Geranium columbinum L.

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.elik-1975 *et al.*, Det. İ.Eker-2017

***Geranium dissectum* L.**

Bolu: Merkezler Village, Upper Merkezler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-275 *et al.*, Det. İ.Eker-2017.

***Geranium tuberosum* L.**

Bolu Çaltepe, Merkezler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-193 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1878 m, N 40° 53.608' E 031° 46.625', 04.06.2016, Leg. A.Çelik-1753 *et al.*, Det. İ.Eker-2017.

Irano-Turanian element

***Geranium purpureum* Vill.**

Bolu: Çaltepe, Merkezler Upland, Northeastern Merkezler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-392 *et al.*, Det. M.Sağiroğlu-2016; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-588 *et al.*, Det. İ.Eker-2017; Çaltepe southern slopes, 5 km from Merkezler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-320 *et al.*, Det. İ.Eker-2015; Mengen, Afşar Village, Afşar Hayranlar district and its surroundings, roadside and rocky areas, 936 m, N 40° 54.622' E 031° 49.613', 23.07.2015, Leg. A.Çelik-1033 *et al.*, Det. İ.Eker-2016.

***Geranium pusillum* Burm J.**

Bolu: Banaz Village, above Banaz district, around the cemetery, 998 m, N 40° 48.828' E 031° 43.405', Leg. A.Çelik-1607 *et al.*, Det. İ.Eker-2017.

New record

***Geranium pyrenaicum* Burm.f.**

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-153 *et al.*, Det. A.Çelik-2017; *ibid.*, 27.05.2015, Leg. A.Çelik-160 *et al.*, Det. A.Çelik-2017; Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg.

A.Çelik-215 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-243 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-335 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-508 *et al.*, Det. İ.Eker-2017; Çeletepe, 2 km from Gurbettesi to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2153 *et al.*, Det. İ.Eker-2017.

***Geranium robertianum* L.**

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-157 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-216 *et al.*, Det. İ.Eker-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-421 *et al.*, Det. İ.Eker-2017; Merkeşler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2190 *et al.*, Det. İ.Eker-2017.

***Geranium rotundifolium* L.**

Bolu: Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-606 *et al.*, Det. İ.Eker-2017.

New record

***Geranium macrostylum* Boiss.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-176 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-386 *et al.*, Det. İ.Eker-2017; Çeletepe, Banaz Upland and its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1842 *et al.*, Det. İ.Eker-2017.

Mediterranean element

***Geranium molle* L.**

Bolu: Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-276 *et al.*, Det. İ.Eker-2017; Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1576 *et al.*, Det. İ.Eker-2017.

FAMILY: RUBIACEAE

***ASPERULA* L.**

***Asperula involucrata* Wahlenb.**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-217 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-460 *et al.*, Det. A.Kaya-2017; Çukurören Village, 4 km from Çukurören Village to Yeniköy Upland, roadside, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1822 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Asperula pestalozzae* Boiss.**

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-868 *et al.*, Det. A.Kaya-2017.

Endemic, Euro-Siberian element

***Asperula taurina* L.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-374 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-448 *et al.*, Det. A.Kaya-2017.

***CRUCIATA* Mill.**

***Cruciata laevipes* Opiz**

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-163 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

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

Bolu: Yedigöller road, 1 km before Yığılca road crossroad, roadside, 1681 m, N 40° 86.722' E 031° 69.040', 09.05.2015, Leg. A.Çelik-91 *et al.*, Det. İ.Eker-2015; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-359 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-638 *et al.*, Det. A.Kaya-2017.

Irano-Turanian element

GALIUM L.

***Galium aparine* L.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-315 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-493 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-598 *et al.*, Det. İ.Eker-2017.

***Galium odoratum* (L.) Scop. (Syn. *Asperula odorata* L.)**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-378 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland surroundings, roadside, 1535 m, N 40° 53.020' E 031° 45.333', 16.06.2015, Leg. A.Çelik-455 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-550 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Galium palustre* L.**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1168 *et al.*, Det. İ.Eker-2019; Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1807 *et al.*, Det. İ.Eker-2019.

Euro-Siberian element

***Galium paschale* Forssk.**

Bolu: Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-883 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-915 *et al.*, Det. A.Kaya-2017; Bağışlar Village, 4 km from Bağışlar Village to Merkeşler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1424 *et al.*, Det. A.Kaya-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2030 *et al.*, Det. İ.Eker-2017.

Mediterranean element

***Galium rotundifolium* L.**

Bolu: Banaz Upland, 10 km from Çele Gölcük warehouse to Çeletepe, Banaz Upland, roadside, 1609 m, N 40° 51.338' E 031° 42.207', 16.06.2016, Leg. A.Çelik-1837 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Galium tricornutum* Dandy**

Bolu: Değirmenbeli Village, 2 km from Değirmenbeli Village to Değirmenderesi Village, cultivated fields, 816 m, N 40° 50.365' E 031° 47.207', 08.04.2016, Leg. A.Çelik-1591 *et al.*, Det. A.Çelik-2017.

Irano-Turanian element

Galium verum* L. subsp. *verum

Bolu: Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-611 *et al.*, Det. A.Kaya-2017; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-861 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 14.5 km from Afşar Şevkioğlu district to Merkeşler Upland, Çaltepe eastern slopes, roadside and stony places, 1200 m, N 40° 54.025' E 031° 48.415', Leg. A.Çelik-984 *et al.*, Det. A.Kaya-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1194 *et al.*, Det. A.Kaya-2017; Çeletepe summit, alpine meadows, 1987 m, N 40° 51.940' E 031° 42.123', 03.08.2015, Leg. A.Çelik-1219 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

ORDER: LAMIALES

FAMILY: LAMIACEAE (LABIATAE)

***AJUGA* L.**

***Ajuga reptans* L.**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-263 *et al.*, Det. İ.Eker-2015; Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-153 & Leg. A.Çelik-154 *et al.*, Det. A.Çelik-2017; Çukurören Village and its surroundings, forest clearance, 1088 m, N 40° 48.732' E 031° 38.250', 27.04.2016, Leg. A.Çelik-1630 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

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

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1319 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-694 *et al.*, Det. A.Çelik-2017.

Mediterranean element

***Ajuga orientalis* L.**

Bolu: Yedigöller road, 1 km before Yığılca road crossroad, roadside, 1681 m, N 40° 86.722' E 031° 69.040', 09.05.2015, Leg. A.Çelik-89 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-398 *et al.*, Det. A.Çelik-2017.

BALLOTA L.

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

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-849 *et al.*, Det. A.Çelik-2017.

Irano-Turanian element

CLINIPODIUM L.

***Clinopodium grandiflorum* (L.) Kuntze**

Bolu: Mengen, Mamatlar Upland, 17.5 km from Afşar Village to Mamatlar Upland, Çaltepe eastern slopes, meadows, 1265 m, N 40° 53.937' E 031° 48.008', Leg. A.Çelik-1004 *et al.*, Det. A.Çelik-2017; Çeletepe, Sarımustan, subalpine meadows, 1110 m, N 40° 52.623' E 031° 42.262', 16.10.2015, Leg. A.Çelik-1511 *et al.*, Det. A.Çelik-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2101 *et al.*, Det. A.Çelik-2017; Çeletepe, 2 km from Gurbetteşi to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2148 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Clinopodium graveolens* (M.Bieb.) Kuntze subsp. *graveolens

Bolu: Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1706 *et al.*, Det. A.Çelik-2017.

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

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-727 *et al.*, Det. A.Çelik-2017; Çele Gölçük forestry warehouse surroundings, slopes, 1205 m, N 40° 49.910' E 031° 40.985', Leg. A.Çelik-781 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-911 *et al.*, Det. A.Çelik-2017.

Clinopodium vulgare* L. subsp. *vulgare

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1917 *et al.*, Det. A.Çelik-2017; Çukurören Village, around the Sakintepe, rocky slope, 975 m, N 40° 48.437' E 031° 38.967', 03.09.2016, Leg. A.Çelik-2136 *et al.*, Det. A.Çelik-2017

***GALEOPSIS* Hill**

***Galeopsis bifida* Boenn.**

Bolu: Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2172 *et al.*, Det. İ.Eker-2017.

New record, Euro-Siberian element

***GLECHOMA* L.**

***Glechoma hederacea* L.**

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-155 *et al.*, Det. A.Çelik-2017; Tetemeçele Village and its surroundings, roadside and cultivated fields, 1090 m, N 40° 50.752' E 031° 43.880', 8.04.2016, Leg. A.Çelik-1621 *et al.*, Det. A.Çelik-2017.

New record, Euro-Siberian element

***LAMIUM* L.**

Lamium album L. subsp. *crinitum* (Montbret & Aucher ex Benth.) Mennema (Syn. *Lamium crinitum* Montbret & Aucher ex Benth. -*Lamium leucolophum* Hausskn. ex R.R.Mill)

Bolu: Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-204 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-349 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Lamium garganicum L. subsp. *garganicum* (Syn. *Lamium garganicum* L. subsp. *laevigatum* (Ces., Pass. & Gibelli) Arcang.)

Bolu: Kadıköy Upland, 7 km from Kadıköy Upland to Gurbettaşı, Sarımustan, rocky area, 1328 m, N 40° 52.990' E 031° 43.953', 24.03.2016, Leg. A.Çelik-1542 *et al.*, Det. A.Çelik-2017; Yedigöller road, 3 km from Gurbettaşı to Sarımustan, roadside and rocky slopes, 1329 m, N 40° 52.982' E 031° 43.955', 27.04.2016, Leg. A.Çelik-1636 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Lamium garganicum L. subsp. *striatum* (Sm.) Hayek var. *striatum* (Syn. *Lamium garganicum* L. subsp. *reniforme* (Montbret & Aucher ex Benth.) R.R.Mill)

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-423 *et al.*, Det. A.Çelik-2017.

Mediterranean element

Lamium maculatum (L.) L.

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, open forests and meadows, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-369, A.Çelik-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-554 *et al.*, Det. A.Çelik-2017.

Lamium purpureum* L. var. *purpureum

Bolu: Tetemeçele Village, 9 km from Tetemeçele Village to Çeletepe, roadside slopes, 1724 m, N 40° 51.777' E 031° 43.236', 24.03.2016, Leg. A.Çelik-1529 *et al.*, Det. İ.Eker-2016; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-28 *et al.*, Det. A.Çelik-2017; Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-66 *et al.*, Det. A.Çelik-2017; Bolu Çaltepe, Merkeşler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-194 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Lamium purpureum* L. var. *aznavourii* Gand. ex Aznav.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-299 *et al.*, Det. İ.Eker-2018.

Endemic, Euro-Siberian element

LEONURUS L.

***Leonurus quinquelobatus* Gilib.**

Bolu: Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1234 *et al.*, Det. A.Çelik-2016; *ibid.*, 12.08.2016, Leg. A.Çelik-2109 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

MENTHA L.

Mentha longifolia* (L.) L. subsp. *longifolia

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-735 *et al.*, Det. A.Çelik & A.Kaya-2017.

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

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1331 *et al.*, Det. A.Çelik-2016.

NEPETA L.

Nepeta italica L.

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1916 *et al.*, Det. A.Çelik-2017.

Mediterranean element

ORIGANUM L.

Origanum vulgare L. subsp. ***vulgare***

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-949 *et al.*, Det. A.Çelik-2017; Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1016 *et al.*, Det. A.Çelik-2018; Yedigöller road, 10 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and rocky area, 1095 m, N 40° 53.618' E 031° 43.780', 03.08.2015, Leg. A.Çelik-1208 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1306 *et al.*, Det. A.Çelik-2017; Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2062 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

PRUNELLA L.

Prunella vulgaris L.

Bolu: Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-583 *et al.*, Det. A.Çelik-2017;

Çaltepe, Çaltepe road, 4 km to Tetemeçe Village, roadside and stony places, 1476 m, N 40° 51.743' E 031° 44.138', 21.06.2015, Leg. A.Çelik-656 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-896 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Prunella laciniata* (L.) L.**

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1777 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-690 *et al.*, Det. İ.Eker-2017; Bolu. Mesciçe Village, Mesciçe Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1080 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***PHLOMIS* L.**

***Phlomis pungens* Willd. var. *pungens* (Syn. *Phlomis herba-venti* L. subsp. *pungens* (Willd.) Maire ex DeFilipps)**

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1931 *et al.*, Det. İ.Eker-2016.

***Phlomis russeliana* (Sims) Lag. ex Benth.**

Bolu: Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-891 *et al.*, Det. İ.Eker-2015; Merkeşler Village, roadside, 949 m, N 40° 51.933' E 031° 48.073', 23.06.2016, Leg. A.Çelik-2007 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-300 *et al.*, Det. A.Çelik-2018; Banaz Upland, 10 km from Çele Gölcük warehouse to Çeletepe, Banaz Upland, roadside, 1609 m, N 40° 51.338' E 031° 42.207', 16.06.2016, Leg. A.Çelik-1841 *et al.*, Det. A.Çelik-2017.

Endemic, Euro-Siberian element

SALVIA L.

***Salvia aethiopsis* L.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1902 *et al.*, Det. İ.Eker-2016; Çaltepe, Merkezler Village and its surroundings, forest clearance and meadow, 1717 m, N 40° 54.002' E 031° 46.898', 09.06.2017, Leg. A.Çelik-2218 & A.Kaya, Det. A.Çelik-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-645 *et al.*, Det. A.Çelik-2017.

***Salvia forskahlei* L.**

Bolu: Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-590 *et al.*, Det. İ.Eker-2015; Mengen, Afşar Village, 10.5 km from Afşar Village to Çaltepe, roadside, 1065 m, N 40° 53.775' E 031° 49.307', 23.07.2015, Leg. A.Çelik-966 *et al.*, Det. İ.Eker-2015; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1161 *et al.*, Det. E.Karabacak-2015.

Euro-Siberian element

***Salvia glutinosa* L.**

Bolu: Merkezler Village, 5 km from Merkezler Village to Çaltepe, forests, 1230 m, N 40° 52.955' E 031° 46.078', 11.08.2016, Leg. A.Çelik-2098 *et al.*, Det. A.Çelik-2017; Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2277 & A.Kaya, Det. A.Çelik-2017.

Euro-Siberian element

***Salvia sclarea* L.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1903 *et al.*, Det. İ.Eker-2016; Değirmenderesi Village, 2 km from Değirmenderesi Village to Dereceören Village,

meadows, 780 m, N 40° 50.193' E 031° 46.898', 25.06.2016, Leg. A.Çelik-2000 *et al.*, Det. A.Çelik-2016; Merkezler Village, around the Merkezler Dere district, roadside, 767 m, N 40° 52.410' E 031° 48.768', 12.07.2015, Leg. A.Çelik-925 *et al.*, Det. E.Karabacak-2015; Mengen, Afşar Village, Afşar Hayranlar district and its surroundings, roadside and rocky areas, 936 m, N 40° 54.622' E 031° 49.613', 23.07.2015, Leg. A.Çelik-1032 *et al.*, Det. A.Çelik-2017.

Salvia tobeyi Hedge

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1878 m, N 40° 53.608' E 031° 46.625', 04.06.2016, Leg. A.Çelik-1752 *et al.*, Det. İ.Eker-2018.

Endemic, New record, Euro-Siberian element

Salvia tomentosa Mill.

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-952 *et al.*, Det. İ.Eker-2015; Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1095 *et al.*, Det. A.Çelik-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1954 *et al.*, Det. A.Çelik-2017; Mengen, 2 km from Afşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2063 *et al.*, Det. A.Çelik-2017.

Mediterranean element

Salvia verbenaca L.

Bolu: Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1379 *et al.*, Det. İ.Eker-2017.

New record, Mediterranean element

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

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg.

A.Çelik-667 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1787 *et al.*, Det. A.Çelik-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1901 *et al.*, Det. İ.Eker-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1907 *et al.*, Det. A.Çelik-2017.

Irano-Turanian element

Salvia verticillata* L. subsp. *verticillata

Bolu: Merkeşler village, Dere district, forest clearance, 803 m, N 40° 52.362' E 031° 48.520', 25.06.2016, Leg. A.Çelik-2011 *et al.*, Det. A.Çelik-2017; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-587 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Salvia virgata* Jacq.**

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-847 *et al.*, Det. İ.Eker-2017; Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2061 *et al.*, Det. İ.Eker-2017.

Irano-Turanian element

***Salvia viridis* L.**

Bolu: Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1705 *et al.*, Det. A.Çelik-2017.

Mediterranean element

SCUTELLARIA L.

Scutellaria albida* L. subsp. *albida

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1911 *et al.*, Det. A.Çelik-2017; Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2234 & A.Kaya, Det. A.Kaya-2017.

Mediterranean element

***Scutellaria albida* L. subsp. *velenovskiyi* (Rech.f.) Greuter & Burdet**

Bolu: Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2026 *et al.*, Det. İ.Eker-2017.

Mediterranean element

SIDERITIS L.

Sideritis montana* L. subsp. *montana

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1328 *et al.*, Det. A.Çelik-2017.

Mediterranean element

***Sideritis taurica* Steph. ex Willd.**

Bolu: Çaltepe, 1 km from Merkeşler Upland to Bolu, roadside and rocky slopes, 1711 m, N 40° 53.762' E 031° 46.330', 09.08.2015, Leg. A.Çelik-1264 *et al.*, Det. A.Çelik-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1887 m, N 40° 53.550' E 031° 46.543', 11.08.2016, Leg. A.Çelik-2128 *et al.*, Det. A.Çelik-2017; Çaltepe, 3 km from Kadıköy Upland to Merkeşler Upland, forest clearance, 1678 m, N 40° 53.705' E 031° 46.302', Leg. A.Çelik-2239 & A.Kaya, Det. A.Çelik-2017; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2289 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

STACHYS L.

***Stachys annua* sl.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-279 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-951 *et al.*, Det. A.Çelik-2017; B Merkeşler Village, above Merkeşler Village, Dereköy district, roadside, 806 m, N 40° 52.402' E 031° 48.653', 04.06.2016, Leg. A.Çelik-1688 *et al.*, Det. A.Çelik-2017.; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-490 *et al.*, Det. A.Çelik-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2028 *et al.*, Det. A.Çelik-2017.

***Stachys byzantina* K.Koch**

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1770 *et al.*, Det. A.Çelik-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-443 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Stachys iberica* M.Bieb. subsp. *iberica* var. *iberica

Bolu: Çeletepe, Çeletepe summit, alpine meadows, 1962 m, N 40° 51.883' E 031° 41.997', 21.07.2017, Leg. A.Çelik-2253 & A.Kaya, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1173 *et al.*, Det. İ.Eker-2017.

Irano-Turanian element

***Stachys sylvatica* L.**

Bolu: Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2037 *et al.*, Det. A.Çelik-2017; Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2278 & A.Kaya, Det. A.Çelik-2017.

Euro-Siberian element

***Stachys thirkei* K.Koch**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-703 *et al.*, Det. İ.Eker-2015; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1884 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-510 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-569 *et al.*, Det. İ.Eker-2017.

TEUCRIUM L.

Teucrium chamaedrys* L. subsp. *chamaedrys

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1894 *et al.*, Det. A.Çelik-2017; Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1027 *et al.*, Det. A.Çelik-2017; Banaz Village, 2 km from Banaz Village to Çobankaya Village, rocky slopes, 1054 m, N 40° 49.587' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1058 *et al.*, Det. A.Çelik-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1966 *et al.*, Det. A.Çelik-2016; Merkeşler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2189 *et al.*, Det. A.Çelik-2017.

Teucrium polium* L. subsp. *polium

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-681 *et al.*, Det. A.Çelik-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1955 *et al.*, Det. A.Çelik-2016; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-864 *et al.*, Det. A.Çelik-2017.

THYMUS L.

***Thymus longicaulis* C.Presl subsp. *chaubardii* (Rchb.f.) Jalas**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1180 *et al.*, Det. A.Çelik-2017; Çaydurt-Mengen road, 24 km from Bolu city center to Taşcılar Village, Taşcılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1656 *et al.*, Det. A.Çelik-2017.

Mediterranean element

Thymus longicaulis* C.Presl subsp. *longicaulis

Bolu: Çeletepe, İmam Village, around the Çandır Upland, roadside slopes, 1740 m, N 40° 51.602' E 031° 41.452', 11.08.2015, Leg. A.Çelik-1355 *et al.*, Det. A.Çelik-2017; Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-265 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Thymus praecox* Opiz subsp. *jankae* (Celak) Jalas**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 688 m, N 40° 48.118' – E 031° 46.094', 23.06.2016, Leg. A.Çelik-1883 *et al.*, Det. A.Çelik-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-543 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-570 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

ZIZIPHORA L.

***Ziziphora capitata* L.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1912 *et al.*, Det. A.Çelik-2016.

FAMILY: OLEACEAE

LIGUSTRUM L.

***Ligustrum vulgare* L.**

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller, 3 km from Dumantepe villas, roadside and rocky slopes, 913 m, N 40° 47.372' E 031° 38.218', 26.06.2015, Leg. A.Çelik-713 *et al.*, Det. A.Çelik-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1761 *et al.*, Det. İ.Eker-2017; Mengen, 2 km from Avşar Village to Hayranlar Village, meadows, 659 m, N 40° 51.620' E 031° 50.447', 11.08.2016, Leg. A.Çelik-2057 *et al.*, Det. A.Kaya-2016.

Euro-Siberian element

FAMILY: RUTACEAE

RUTA Juss.

***Ruta thesioides* Fisch. ex DC. (Syn. *Haplophyllum thesioides* (Fisch. ex DC.) G.Don)**

Bolu: Bolu-Mengen road, Müstakimler Village, roadside, 733 m, N 40° 47.778' E 031° 45.582', 9.06.2017, Leg. A.Çelik-2224 & A.Kaya, Det. A.Kaya-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1918 *et al.*, Det. A.Kaya-2017.

FAMILY: OROBANCHACEAE

EUPHRASIA L.

Euphrasia pectinata Ten.

Bolu: Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1090 *et al.*, Det. İ.Eker-2017; Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1806 *et al.*, Det. A.Kaya-2017; Merkeşler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2193 *et al.*, Det.. A.Kaya-2017.

Euro-Siberian element

LATHRAEA L.

Lathraea squamaria L.

Bolu: Çaltepe, 2.5 km from Kadıköy Upland to Çaltepe, forests, 1614 m, N 40° 53.553' E 031° 45.790', 09.05.2015, Leg. A.Çelik-149 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

MACROSYRINGION Rothm.

Macrosyringion glutinosum (M.Bieb) Rothm. (Syn. *Odontites glutinosa* Benth.)

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1196 *et al.*, Det. İ.Eker-2017; Çaltepe, alpine meadows, 1820 m, N 40° 53.913' E 031° 47.183', 09.08.2015, Leg. A.Çelik-1257 *et al.*, Det. İ.Eker-2017; Çeletepe, above İmam Village Candır Upland, meadows, 1862 m, N 40° 52.022' E 031° 42.978', 03.09.2016, Leg. A.Çelik-2177 *et al.*, Det. İ.Eker-2017.

MELAMPYRUM L.

Melampyrum arvense L. var. *arvense*

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1018 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

Melampyrum arvense* L. var. *elatius

Bolu: Merkezler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-907 *et al.*, Det. İ.Eker-2016; Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1273 *et al.*, Det. İ.Eker-2017.

Endemic, New record, Euro-Siberian element

***OROBANCHE* L.**

***Orobanche elatior* Sutton**

Bolu: Mengen, Merkezler Upland, 22 km from Afşar Village to Merkezler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1017 *et al.*, Det. İ.Eker-2017.

***Orobanche purpurea* Jacq.**

Bolu: Çeletepe, İmam Village, around the Çandır Upland, roadside slopes, 1740 m, N 40° 51.602' E 031° 41.452', 11.08.2015, Leg. A.Çelik-1350 *et al.*, Det. İ.Eker-2017.

***Orobanche gracilis* Sm.**

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-566 *et al.*, Det. İ.Eker-2016; Çaltepe, on the Çaltepe-Tetemeçele Village road, 3 km to Tetemeçele Village, woodland, 1537 m, N 40° 51.691' E 031° 44.507', 26.05.2015, Leg. A.Çelik-825 *et al.*, Det. İ.Eker-2017; Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1103 *et al.*, Det. İ.Eker-2017.

New record

***Orobanche minor* Sm.**

Bolu: Merkezler Village, Upper Merkezler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-273 *et al.*, Det. İ.Eker-2016; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-661 *et al.*, Det. İ.Eker-2016; Yedigöller road, 5 km from Bolu city center to Yedigöller,

around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-691 *et al.*, Det. İ.Eker-2017.

Orobanche nana (Reut.) Beck

Bolu: Merkezler Village, Keller Street, 37 km from Bolu to Merkezler Village, meadow, 964 m, N 40° 51.887' E 031° 47.885', 06.05.2016, Leg. A.Çelik-1678 *et al.*, Det. İ.Eker-2017.

PARENTUCELLIA Viv.

Parentucellia latifolia Caruel subsp. *latifolia*

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-42 *et al.*, Det. İ.Eker-2017; Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-248 *et al.*, Det. A.Kaya-2017.

Mediterranean element

PEDICULARIS L.

Pedicularis condensata M.Bieb.

Bolu: Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-444 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-536 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

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

Bolu: Yedigöller road, 1 km from Gurbettaşı to Çaltepe Kadıköy Upland, roadside slopes, 1590 m, N 40° 52.398' E 031° 41.873', 16.08.2015, Leg. A.Çelik-1445 *et al.*, Det. A.Kaya-2017; Çaltepe and its surroundings, alpine meadows, 1824 m, N 40° 53.785' E 031° 46.765', 27.07.2015, Leg. A.Çelik-1135 *et al.*, Det. A.Kaya-2017; Çeletepe, Yedierenler Hill and its surroundings, subalpine meadows, 1960 m, N 40° 52.172' E 031° 42.827', 16.06.2016, Leg. A.Çelik-1851 *et al.*, Det. A.Kaya-2017.

***RHINANTHUS* L.**

***Rhinanthus angustifolius* C.C.Gmel. subsp. *grandiflorus* (Wallr.) D.A.Webb (Syn. *Rhinanthus serotinus* (Schönh.) Oborny subsp. *aestivalis* (N.W.Zinger) Dostál)**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1962 *et al.*, Det. İ.Eker-2016; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-608 *et al.*, Det. İ.Eker-2017.

***RHYNCHOCORYS* Griseb.**

Rhynchocorys elephas* (L.) Griseb. subsp. *elephas

Bolu: Çaltepe southern slopes, 5 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-316 *et al.*, Det. A.Kaya-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2020 *et al.*, Det. İ.Eker-2016; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1875 *et al.*, Det. A.Çelik-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2106 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

FAMILY: SCROPHULARIACEAE

***SCROPHULARIA* L.**

***Scrophularia canina* L. subsp. *bicolor* (Sm.) Greuter**

Bolu: Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1713 *et al.*, Det. İ.Eker-2017; Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1816 *et al.*, Det. İ.Eker-2017; Çeletepe, Banaz Upland and its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1849 *et al.*, Det. İ.Eker-2017; Mengen, Hayranlar

Village and its surroundings, meadows, 856 m, N 40° 52.747' E 031° 50.030', 11.08.2016, Leg. A.Çelik-2068 *et al.*, Det. İ.Eker-2017.

Mediterranean element

Scrophularia scopolii Hoppe ex Pers. var. ***adenocalyx*** Sommier & Levier

Bolu: Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-240 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-334 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-492 *et al.*, Det. İ.Eker-2017; Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2039 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Scrophularia umbrosa Dumort.

Bolu: Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2173 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

VERBASCUM L.

Verbascum abieticola Bornm.

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-438 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe, meadows, 1498 m, N 40° 53.358' E 031° 45.580', 04.06.2016, Leg. A.Çelik-1734 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

***Verbascum bithynicum* Boiss.**

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-734 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-918 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 13.5 km from Afşar Şevkioğlu district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-978 *et al.*, Det. İ.Eker-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1964 *et al.*, Det. İ.Eker-2017; Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2266 & A.Kaya, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

***Verbascum caudatum* Post**

Bolu: Çeletepe, around the Çeletepe Çandır Upland, rocky slopes, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1866 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

Verbascum cheiranthifolium* Boiss. var. *cheiranthifolium

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1885 *et al.*, Det. İ.Eker-2017; Yedigöller road, 1 km from Çukurören Village to Çele Gölcük forestry warehouse, serpentine slopes, 1031 m, N 40° 49.042' E 031° 39.657', 03.09.2016, Leg. A.Çelik-2140 *et al.*, Det. İ.Eker-2017.

New record,

***Verbascum gnaphalodes* M.Bieb.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-474 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe,

meadows, 1498 m, N 40° 53.358' E 031° 45.580', 04.06.2016, Leg. A.Çelik-1735 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Verbascum phlomoides* L.**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-712 *et al.*, Det. İ.Eker-2017; Çeletepe, around the Çeletepe Çandır Upland, rocky slopes, 1741 m, N 40° 51.545' E 031° 41.428', 16.06.2016, Leg. A.Çelik-1864 *et al.*, Det. İ.Eker-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1930 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

FAMILY: VERBENACEAE

***VERBENA* L.**

Verbena officinalis* L. var. *officinalis

Bolu: Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-895 *et al.*, Det. İ.Eker-2017.

ORDER: MALPIGHIALES

FAMILY: EUPHORBIACEAE

***EUPHORBIA* L.**

***Euphorbia aleppica* L.**

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1320 *et al.*, Det. A.Çelik-2017.

Euphorbia amygdaloides* L. var. *amygdaloides

Bolu: Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe, meadows, 1498 m, N 40° 53.358' E 031° 45.580', 04.06.2016, Leg. A.Çelik-1742 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***Euphorbia amygdaloides* L. var. *robbiae* (Turrill) Stace**

Bolu: Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-79 *et al.*, Det. A.Çelik-2017; Yedigöller road, 3 km from Gurbettaşı to Sarımustan, roadside and rocky slopes, 1329 m, N 40° 52.982' E 031° 43.955', 27.04.2016, Leg. A.Çelik-1639 *et al.*, Det. A.Çelik-2017; Kadıköy Upland, 800 m to Çeletepe from Kadıköy Upland, forests, 1547 m, N 40° 53.172' E 031° 45.387', 28.04.2015, Leg. A.Çelik-21 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-232 *et al.*, Det. A.Çelik-2017.

Endemic, Euro-Siberian element

Euphorbia falcata* L. subsp. *falcata* var. *falcata

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1322 *et al.*, Det. A.Çelik-2017.

***Euphorbia glareosa* Pall. ex M.Bieb. (Syn. *Euphorbia nicaeensis* All. subsp. *glareosa* (Pall. ex M.Bieb.) Radcl.-Sm.)**

Bolu: Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1369 *et al.*, Det. A.Çelik-2015.

Euphorbia helioscopia* L. subsp. *helioscopia

Bolu: Değirmenderesi Village and its surroundings, roadside, 857 m, N 40° 49.488' E 031° 44.823', 08.04.2016, Leg. A.Çelik-1598 *et al.*, Det. A.Çelik-2017; Yedigöller

road, Sariyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-746 *et al.*, Det. A.Çelik-2017.

Euphorbia pannonica Host (Syn. *Euphorbia nicaeensis* All. var. *lasiocarpa* (Boiss.) Radcl.-Sm. & Govaerts)

Bolu: Yedigöller road, Çele Gölçük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-131 *et al.*, Det. A.Çelik-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-603 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-679 *et al.*, Det. A.Kaya-2017; Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2040 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Euphorbia seguieriana Neck. subsp. *niciciana* (Borbás ex Novák) Rech.f.

Bolu: Merkeşler Village, around the village cemetery, meadows, 909 m, N 40° 51.883' E 031° 48.188', 23.07.2015, Leg. A.Çelik-1039 *et al.*, Det. İ.Eker-2017; Merkeşler village, 2 km from Değirmenbeli Village to Merkeşler Village, forest clearance, 909 m, N 40° 51.662' E 031° 47.037' 25.06.2016, Leg. A.Çelik-2004 *et al.*, Det. İ.Eker-2017.

Euphorbia seguieriana Neck. subsp. *seguieriana*

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-236 *et al.*, Det. A.Çelik-2017; Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1091 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-476 *et al.*, Det. A.Çelik-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1768 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Euphorbia stricta* L.**

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-150 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-230 *et al.*, Det. A.Çelik-2017 Mengen, Afşar Village, Afşar Hayranlar district and its surroundings, roadside and rocky areas, 936 m, N 40° 54.622' E 031° 49.613', 23.07.2015, Leg. A.Çelik-1034 *et al.*, Det. A.Çelik-2017; Çukurören Village, around the Sakintepe, rocky slope, 1040 m, N 40° 48.230' E 031° 39.078', 11.08.2015, Leg. A.Çelik-1341 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

***MERCURIALIS* L.**

***Mercurialis annua* L.**

Bolu: Müstakimler Village and its surroundings, roadside and meadows, 799 m, N 40° 48.640' E 031° 44.945', 08.04.2016, Leg. A.Çelik-1613 *et al.*, Det. İ.Eker-2017.

***Mercurialis perennis* L.**

Bolu: Çaltepe, 2.5 km from Kadıköy Upland to Çaltepe, forests, 1614 m, N 40° 53.553' E 031° 45.790', 09.05.2015, Leg. A.Çelik-148 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

FAMILY: HYPERICACEAE

***HYPERICUM* L.**

***Hypericum bithynicum* Boiss.**

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-726 *et al.*, Det. A.Kaya-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1192 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Hypericum montbretii* Spach**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-295 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-458 *et al.*, Det. A.Kaya-2017; Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1152 *et al.*, Det. A.Kaya-2017.

Hypericum origanifolium* Willd. var. *origanifolium

Bolu: Merkeşler Village, 1 km from Dereköy district to Karahisnler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1700 *et al.*, Det. A.Kaya-2017; Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1812 *et al.*, Det. İ.Eker-2017.

Hypericum perforatum* L. subsp. *perforatum

Bolu: Çeletepe, above Çandır Upland, alpine meadows, 1872 m, N 40° 51.690' E 031° 41.717', 11.08.2015, Leg. A.Çelik-1356 *et al.*, Det. İ.Eker-2016; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-531 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1377 *et al.*, Det. A.Kaya-2017.

Hypericum tetrapterum* Fr. var. *tetrapterum

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-875 *et al.*, Det. A.Kaya-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2089 *et al.*, Det. İ.Eker-2017.

FAMILY: LINACEAE

***LINUM* L.**

***Linum bienne* Mill.**

Bolu: Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-867 *et al.*, Det. İ.Eker-2016; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1982 *et al.*, Det. İ.Eker-2016; Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-269 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-629 *et al.*, Det. A.Kaya-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1075 *et al.*, Det. A.Kaya-2017.

Linum hirsutum* L. subsp. *anatolicum* (Boiss.) Hayek var. *anatolicum

Bolu: Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-844 *et al.*, Det. A.Kaya-2017; Banaz Village, 9 km from Bolu city center to Banaz Village, meadows and forest clearance, 867 m, N 40° 47.608' E 031° 42.785', 27.07.2015, Leg. A.Çelik-1050 *et al.*, Det. A.Kaya-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1914 *et al.*, Det. A.Kaya-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1769 *et al.*, Det. A.Kaya-2017.

Endemic, Irano-Turanian element

***Linum tenuifolium* L.**

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1766 *et al.*, Det. A.Çelik-2016; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-685 *et al.*, Det. A.Kaya-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1908 *et al.*, Det. A.Kaya-2017.

***Linum trigynum* L.**

Bolu: Merkezler Village, Merkezler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-873 *et al.*, Det. A.Kaya-2017.

Mediterranean element

FAMILY: SALICACEAE

***POPULUS* L.**

Populus nigra* L. subsp. *nigra

Bolu: Çaltepe southern slopes, 6 km from Merkezler Village to Çaltepe southern slopes, roadside, 1168 m, N 40° 53.568' E 031° 48.017', 02.06.2015, Leg. A.Çelik-329 *et al.*, Det. İ.Eker-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-741 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Populus tremula* L. subsp. *tremula

Bolu: Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-769 *et al.*, Det. İ.Eker-2017.

***SALIX* L.**

Salix alba* L. subsp. *alba

Bolu: Yedigöller road, 9 km from Bolu city center to Yedigöller road, Dumantepe Villas below, forest and cultivated fields, 856 m, N 40° 46.173' E 031° 37.982', Leg. A.Çelik-1627 *et al.*, Det. İ.Eker-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-736 *et al.*, Det. A.Çelik & İ.Eker-2017.

Euro-Siberian element

***Salix caprea* L.**

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-433 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

FAMILY: VIOLACEAE

***VIOLA* L.**

***Viola arvensis* Murray**

Bolu: Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-605 *et al.*, Det. A.Kaya-2017.

***Viola canina* L.**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-58 *et al.*, Det. A.Kaya-2017.

***Viola gracilis* Sibth. et Sm. (Syn. *Viola olympica* Boiss.)**

Bolu: Tetemeçele Village, 6 km from Tetemeçele Village to Çeletepe, subalpine meadows, 1628 m, N 40° 52.298' E 031° 44.093', 23.04.2016, Leg. A.Çelik-1516 *et al.*, Det. A.Kaya-2016; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1162 *et al.*, Det. İ.Eker-2017; Yedigöller road, 1 km before Yığılca road crossroad, roadside, 1681 m, N 40° 86.722' E 031° 69.040', 09.05.2015, Leg. A.Çelik-88 *et al.*, Det. A.Kaya-2017; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-351 *et al.*, Det. A.Kaya-2017; *ibid.*, 02.06.2015, Leg. A.Çelik-354 *et al.*, Det. A.Kaya-2017.

***Viola odorata* L.**

Bolu: Semerciler Village, 1.4 km from Semerciler Village to Merkezler Village, forest, 870 m, N 40° 51.097' E 031° 48.312', 08.04.2016, Leg. A.Çelik-1553 *et al.*, Det. A.Çelik-2017; Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-86

et al., Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-186 *et al.*, Det. A.Kaya-2017.

***Viola parvula* Tineo**

Bolu: Çeletepe, above Banaz Upland, meadows, 1772 m, N 40° 51.788' E 031° 43.028', 27.04.2016, Leg. A.Çelik-1648 *et al.*, Det. A.Çelik-2017.

***Viola sieheana* W.Becker**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-50 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-384 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-537 *et al.*, Det. A.Kaya-2017.

***Viola suavis* M.Bieb.**

Bolu: Merkeşler Village, 1 km from Merkeşler Village to Çaltepe, forest clearance, 981 m, N 40° 52.155' E 031° 47.803', 08.04.2016, Leg. A.Çelik-1560 *et al.*, Det. A.Kaya-2017; Kadıköy Upland, 800 m to Çeletepe from Kadıköy Upland, forests, 1547 m, N 40° 53.172' E 031° 45.387', 28.04.2015, Leg. A.Çelik-20 *et al.*, Det. A.Kaya-2017.

ORDER: MALVALES

FAMILY: CISTACEAE

***CISTUS* L.**

***Cistus creticus* L.**

Bolu: Çele Gölcük forestry warehouse surroundings, slopes, 1205 m, N 40° 49.910' E 031° 40.985', Leg. A.Çelik-778 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-872 *et al.*, Det. A.Kaya-2017; Yakabayat Village, 15 km from Bolu city centre to Yakabayat Village, roadside and forest, 1004 m, N 40° 47.563' E 031° 41.092', 16.08.2015, Leg. A.Çelik-1384 *et al.*, Det. A.Kaya-

2016; Çelegölcük orman deposu üstü, orman içi, 1209 m, N 40° 49.870' E 031° 40.997', Leg. A.Çelik-1828 *et al.*, Det. İ.Eker-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1898 *et al.*, Det. A.Kaya-2016.

Mediterranean element

***Cistus laurifolius* L.**

Bolu: Yedigöller road, 16 km from Bolu city center to Çele Gölçük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-777 *et al.*, Det. A.Çelik & A.Kaya-2017.

Mediterranean element

***FUMANA* Spach**

***Fumana procumbens* (Dunal) Gren. & Godr.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1886 *et al.*, Det. A.Kaya-2017.

***HELIANTHEMUM* Mill.**

Helianthemum nummularium* (L.) Mill. subsp. *nummularium

Bolu: Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-264 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe road, 4 km to Tetemeçele Village, roadside and stony places, 1476 m, N 40° 51.743' E 031° 44.138', 21.06.2015, Leg. A.Çelik-658 *et al.*, Det. İ.Eker-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-693 *et al.*, Det. A.Kaya-2017; Banaz Village, 2 km from Banaz Village to Çobankaya Village, rocky slopes, 1054 m, N 40° 49.587' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1060 *et al.*, Det. İ.Eker-2017.

Helianthemum ovatum Dun. (Syn. *Helianthemum nummularium* (L.) Mill. subsp. *ovatum*)

Bolu: Çaltepe, Merkeşler Upland road, 3 km from Kadıköy Upland to Merkeşler Upland, rocky slopes, 1683 m, N 40° 53.710' E 031° 46.300', 07.10.2016, Leg. A.Çelik-2202 *et al.*, Det. A.Kaya-2017.

New record

FAMILY: MALVACEAE

ALCEA L.

Alcea apterocarpa Boiss.

Bolu: Çaltepe northern mountains, Kapankayası, forests and stony area, 1192 m, N 40° 55.115' E 031° 42.642', 29.07.2017, Leg. A.Çelik-2283 & A.Kaya, Det. A.Kaya-2017.

Irano-Turanian element

Alcea pallida (Willd.) Waldst. & Kit.

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1906 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-923 *et al.*, Det. A.Kaya-2017.

ALTHAEA L.

Althaea hirsuta L.

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1797 *et al.*, Det. A.Kaya-2017.

MALVA L.

***Malva neglecta* Wallr.**

Bolu: Çeletepe, 4 km from Gurbettaşı to Çele Gölçük forestry warehouse, sandy area, 1694 m, N 40° 51.742' E 031° 41.352', 07.10.2016, Leg. A.Çelik-2209 *et al.*, Det. A.Kaya-2017.

***Malva sylvestris* L.**

Bolu: Merkeşler Village, roadside, 949 m, N 40° 51.933' E 031° 48.073', 23.06.2016, Leg. A.Çelik-2006 *et al.*, Det. İ.Eker-2016; Merkeşler Village, around the Merkeşler Dere district, roadside, 767 m, N 40° 52.410' E 031° 48.768', 12.07.2015, Leg. A.Çelik-928 *et al.*, Det. A.Çelik-2017.

TILIA L.

***Tilia rubra* DC. subsp. *caucasica* (Rupr.) V. Engl.**

Bolu: Mesciçele Village and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 04.08.2018, Leg. A.Çelik-2338 *et al.*, Det. İ.Eker-2019.

Euro-Siberian element

FAMILY: PLANTAGINACEAE

DIGITALIS L.

Digitalis ferruginea* L. subsp. *ferruginea

Bolu: Merkeşler Village, Merkeşler Dere district, roadside and rocky slopes, 1051 m, N 40° 52.723' E 031° 47.388', 12.07.2015, Leg. A.Çelik-924 *et al.*, Det. İ.Eker-2015; Mengen, Afşar Village, 11 km from Bolu-Mengen road to Afşar Şevkioğlu district, roadside slopes, 1043 m, N 40° 53.618' E 031° 49.267', 23.07.2015, Leg. A.Çelik-971 *et al.*, Det. İ.Eker-2017; Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1083 *et al.*, Det. İ.Eker-2017; Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1269 *et al.*, Det. İ.Eker-2017; Çaltepe northern mountains, above Kapankayası, forests, 1293 m,

N 40° 55.170' E 031° 43.242', 29.07.2017, Leg. A.Çelik-2284 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

Digitalis lamarckii Ivan.

Bolu: Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1094 *et al.*, Det. İ.Eker-2015; Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-855 *et al.*, Det. İ.Eker-2016; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1895 *et al.*, Det. İ.Eker-2016; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1910 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

KICKXIA Dumort.

Kickxia elatine (L.) Dumort. subsp. ***crinita*** (Mabille) Greuter

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1329a *et al.*, Det. İ.Eker-2017.

Mediterranean element

Kickxia spuria (L.) Dumort. subsp. ***integrifolia*** (Brot.) R.Fern.

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1329b *et al.*, Det. İ.Eker-2017.

LINARIA Mill.

Linaria genistifolia (L.) Mill. Cf. subsp. ***confertiflora*** (Boiss.) P.H.Davis

Bolu: Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1274 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe

summit, Gurbettaşı road, rocky area, 1670 m, N 40° 51.648' E 031° 41.387', 09.06.2017, Leg. A.Çelik-2256 & A.Kaya, Det. İ.Eker-2017; Çaltepe, 5 km from Gurbettaşı to Sarımustan, forest clearance, 1260 m, N 40° 53.275' E 031° 42.343', 03.09.2016, Leg. A.Çelik-2162 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

GLOBULARIA L.

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

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-635 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-188 *et al.*, Det. İ.Eker-2017.

Mediterranean element

PLANTAGO L.

Plantago lanceolata L.

Bolu: Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-529 *et al.*, Det. İ.Eker-2016; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-668 *et al.*, Det. İ.Eker-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-740 *et al.*, Det. İ.Eker-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1069 *et al.*, Det. A.Kaya-2017.

Irano-Turanian element

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

Bolu: Merkeşler Village, 5 km from Merkeşler Village to Çaltepe, forest, 1046 m, N 40° 52.425' E 031° 47.448', 16.10.2015, Leg. A.Çelik-1498 *et al.*, Det. İ.Eker-2017.

Plantago major L. subsp. *major*

Bolu: Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-450 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-250 *et al.*, Det. İ.Eker-2017; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-528 *et al.*, Det. İ.Eker-2017.

VERONICA L.

Veronica anagallis-aquatica L.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-481 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-333 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-486 *et al.*, Det. İ.Eker-2017; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1878 *et al.*, Det. A.Kaya-2017.

Veronica bozakmanii M.A.Fisch.

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-559 *et al.*, Det. İ.Eker-2017; Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1585 *et al.*, Det. A.Kaya-2017.

Irano-Turanian element

Veronica chamaedrys L.

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-51 *et al.*, Det. A.Kaya-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40°

52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-218 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-381 *et al.*, Det. A.Kaya-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-557 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Veronica gentianoides* sl.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-187 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-346 *et al.*, Det. A.Kaya-2017; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-361 *et al.*, Det. İ.Eker-2017; Çeletepe, Yedierenler Hill and its surroundings, subalpine meadows, 1960 m, N 40° 52.172' E 031° 42.827', 16.06.2016, Leg. A.Çelik-1855 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Veronica hederifolia* L.**

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-127 *et al.*, Det. İ.Eker-2017; Değirmenbeli Village and its surroundings, 25 km from Bolu city center to Değirmenbeli Village, stream edge, 970 m, N 40° 51.115' E 031° 46.715', 08.04.2016, Leg. A.Çelik-1580 *et al.*, Det. A.Kaya-2017.

***Veronica jacquinii* Baumg. (Syn. *Veronica austriaca* L.)**

Bolu: Çaydurt-Mengen road, 24 km from Bolu city center to Taşçılar Village, Taşçılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1655 *et al.*, Det. İ.Eker-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1184 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Veronica officinalis* L.**

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-124 *et al.*, Det. İ.Eker-2017; Mengen, Çaltepe eastern slopes, forest clearance, 1201 m, N 40° 54.070' E 031° 48.157', 25.06.2016, Leg. A.Çelik-2050 *et al.*, Det. A.Kaya-2016.

Euro-Siberian element

Veronica orientalis* Mill. subsp. *orientalis

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-545 *et al.*, Det. A.Kaya-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-643 *et al.*, Det. A.Kaya-2017; Çaltepe, on the Çaltepe-Tetemeçele Village road, 3 km to Tetemeçele Village, woodland, 1537 m, N 40° 51.691' E 031° 44.507', 26.05.2015, Leg. A.Çelik-827 *et al.*, Det. A.Kaya-2017; Çeletepe, Yedierenler Hill and its surroundings, subalpine meadows, 1960 m, N 40° 52.172' E 031° 42.827', 16.06.2016, Leg. A.Çelik-1854 *et al.*, Det. A.Kaya-2017.

New record

***Veronica persica* Poir.**

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-134 *et al.*, Det. A.Çelik-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-742 *et al.*, Det. A.Kaya-2017.

***Veronica serpyllifolia* L.**

Bolu: Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe, meadows, 1498 m, N 40° 53.358' E 031° 45.580', 04.06.2016, Leg. A.Çelik-1743 *et al.*, Det. A.Kaya-2017.

FAMILY: THYMELAEACEAE

***DAPHNE* L.**

Daphne pontica* L. subsp. *pontica

Bolu: Merkezler Village, 2 km from Merkezler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-245 *et al.*, Det. İ.Eker-2015; Çaltepe, Merkezler Upland, Northeastern Merkezler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-385 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe, meadows, 1498 m, N 40° 53.358' E 031° 45.580', 04.06.2016, Leg. A.Çelik-1744 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Daphne oleoides* Schreb. subsp. *oleoides

Bolu: Çaltepe, Merkezler Upland, meadows, 1723 m, N 40° 54.000' E 031° 46.898', 21.07.2017, Leg. A.Çelik-2245 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

ORDER: MYRTALES

FAMILY: LYTHRACEAE

***LYTHRUM* L.**

***Lythrum salicaria* L.**

Bolu: Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2231 & A.Kaya, Det. A.Çelik-2017.

Euro-Siberian element

FAMILY: ONAGRACEAE

***CIRCAEA* L.**

***Circaea lutetiana* L.**

Bolu: Çeletepe, Sarımustan, roadside and forest clearance, 1419 m, N 40° 53.792' E 031° 41.338', 29.07.2017, Leg. A.Çelik-2268 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

***EPILOBIUM* L.**

***Epilobium angustifolium* L.**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1965 *et al.*, Det. İ.Eker-2016; Tetemeçele Village and its surroundings, meadows, 1079 m, N 40° 50.903' E 031° 44.123', Leg. A.Çelik-809 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Epilobium hirsutum* L.**

Bolu: Banaz Village, 9 km from Bolu city center to Banaz Village, meadows and forest clearance, 867 m, N 40° 47.608' E 031° 42.785', 27.07.2015, Leg. A.Çelik-1054 *et al.*, Det. İ.Eker-2017; Yedigöller road, 10 km from Bolu city center to Yedigöller, roadside and forest clearance, 1133 m, N 40° 49.362' E 031° 39.712', 10.09.2015, Leg. A.Çelik-1436 *et al.*, Det. A.Kaya-2017.

***Epilobium lanceolatum* Seb. & Mauri**

Bolu: Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1952 *et al.*, Det. İ.Eker-2016; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', Leg. A.Çelik-459 *et al.*, Det. A.Kaya-2017; Bolu: Tetemeçele Village, 12 km from Tetemeçele Village to Kadıköy Upland, forest, 1515 m, N 40° 52.692' E 031° 44.722', 27.07.2015, Leg. A.Çelik-1123 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Epilobium montanum* L.**

Bolu: Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-549 *et al.*, Det. A.Kaya-2017; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-582 *et al.*, Det. A.Kaya-2017; *ibid.*, 21.06.2015, Leg. A.Çelik-584 *et al.*, Det. A.Kaya-2017; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932',

12.07.2015, Leg. A.Çelik-876 *et al.*, Det. A.Kaya-2017; Yedigöller road, above Sariyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1142 *et al.*, Det. A.Kaya-2017; Mengen, Avşar Village and its surroundings, forests and stream edge, 893 m, N 40° 52.743' E 031° 50.555', 23.06.2016, Leg. A.Çelik-1925 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

Epilobium parviflorum Schreb.

Bolu: Mengen, Afşar Village, 13.5 km from Afşar Şevkiöglü district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-976 *et al.*, Det. A.Kaya-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2086 *et al.*, Det. A.Kaya-2017.

OENOTHERA L.

Oenothera biennis L.

Bolu: Tetemeçele Village and its surroundings, wet meadows, 958 m, N 40° 50.613' E 031° 44.638', 16.08.2015, Leg. A.Çelik-1395 *et al.*, Det. A.Kaya-2017.

New record

ORDER: PIPERALES

FAMILY: ARISTOLOCHIACEAE

ARISTOLOCHIA L.

Aristolochia pallida Willd.

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-283 *et al.*, Det. A.Çelik-2017; Bolu-Mengen road, Müstakimler Village, roadside, 733 m, N 40° 47.778' E 031° 45.582', 9.06.2017, Leg. A.Çelik-2226 & A.Kaya, Det. A.Çelik-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-442 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

ORDER: RANUNCULALES

FAMILY: PAPAVERACEAE

CHELIDONIUM Tourn. ex L.

Chelidonium majus L.

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-158 *et al.*, Det. İ.Eker-2017; Müstakimler Village and its surroundings, roadside and meadows, 799 m, N 40° 48.640' E 031° 44.945', 08.04.2016, Leg. A.Çelik-1612 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

CORYDALIS DC.

Corydalis caucasica DC. subsp. *abantensis* Lidén

Bolu: Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-109 *et al.*, Det. İ.Eker-2015; Çaltepe, 2.5 km from Kadıköy Upland to Çaltepe, forests, 1614 m, N 40° 53.553' E 031° 45.790', Leg. A.Çelik-146 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 800 m to Çeletepe from Kadıköy Upland, forests, 1547 m, N 40° 53.172' E 031° 45.387', 28.04.2015, Leg. A.Çelik-16 *et al.*, Det. A.Kaya-2017; Tetemeçele Village 2.8 km to Çeletepe from Çaltepe Çeletepe crossroad, open forests, 1626 m, N 40° 86.703' E 031° 73.247', 01.04.2015, Leg. A.Çelik-12 *et al.*, Det. A.Kaya-2017; Kadıköy Upland, meadows, 1540 m, N 40° 52.935' E 031° 45.250', 28.04.2015, Leg. A.Çelik-23 *et al.*, Det. A.Kaya-2017.

Endemic

Corydalis caucasica DC. subsp. *caucasica*

Bolu: Kadıköy Upland, 800 m to Çeletepe from Kadıköy Upland, forests, 1547 m, N 40° 53.172' E 031° 45.387', 28.04.2015, Leg. A.Çelik-15 *et al.*, Det. A.Kaya-2017; *ibid.*, 28.04.2015, Leg. A.Çelik-17 *et al.*, Det. A.Kaya-2017; *ibid.*, 28.04.2015, Leg. A.Çelik-18 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

Corydalis wendelboi Lidén subsp. ***congesta*** Lidén & Zetterl.

Bolu: Tetemeçele Village 2.8 km to Çeletepe from Çaltepe Çeletepe crossroad, open forests, 1626 m, N 40° 86.703' E 031° 73.247', 01.04.2015, Leg. A.Çelik-13 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-99 *et al.*, Det. İ.Eker-2015; *ibid.*, 09.05.2015, Leg. A.Çelik-108 *et al.*, Det. İ.Eker-2015; Tetemeçele Village 2.8 km to Çeletepe from Çaltepe Çeletepe crossroad, open forests, 1626 m, N 40° 86.703' E 031° 73.247', 01.04.2015, Leg. A.Çelik-10 *et al.*, Det. A.Kaya-2017; Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-62 *et al.*, Det. A.Kaya-2017; Çeletepe, Çeletepe eastern slopes, subalpine zone, 1868 m, N 40° 52.107' E 031° 43.023', 01.05.2015, Leg. A.Çelik-71 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-108 *et al.*, Det. A.Kaya-2017.

Endemic

FUMARIA L.

Fumaria asepala Boiss.

Bolu: Değirmenbeli Village, 2 km from Değirmenbeli Village to Değirmenderesi Village, cultivated fields, 816 m, N 40° 50.365' E 031° 47.207', 08.04.2016, Leg. A.Çelik-1594 *et al.*, Det. A Kaya-2017.

Irano-Turanian element

Fumaria officinalis L. subsp. ***officinalis***

Bolu: Çaltepe, Çaltepe road, 4 km to Tetemeçele Village, roadside and stony places, 1476 m, N 40° 51.743' E 031° 44.138', 21.06.2015, Leg. A.Çelik-657 *et al.*, Det. A.Kaya-2017; Değirmenbeli Village, 2 km from Değirmenbeli Village to Değirmenderesi Village, cultivated fields, 816 m, N 40° 50.365' E 031° 47.207', 08.04.2016, Leg. A.Çelik-1593 *et al.*, Det. A Kaya-2017.

Irano-Turanian element

GLACIUM Mill.

Glaucium grandiflorum Boiss. & A.Huet subsp. ***refractum*** (Nábělek) Mory

Bolu: Mengen-Çaydurt road, roadside, 733 m, N 40° 47.778' E 031° 45.582', 21.07.2017, Leg. A.Çelik-2227 & A.Kaya, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1804 *et al.*, Det. A.Çelik-2017.

Irano-Turanian element

PAPAVER L.

Papaver lacerum Popov

Bolu: Çaydurt-Mengen road, 24 km from Bolu city center to Taşcılar Village, Taşcılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1668 *et al.*, Det.

A.Çelik-2017.

Papaver pilosum Sibth. & Sm. subsp. ***pilosum***

Bolu: Çeletepe, Banaz Upland and its surroundings, roadside and forests, 1731 m, N 40° 51.772' E 031° 43.227', 21.07.2017, Leg. A.Çelik-2252 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

Endemic

Papaver rhoeas L.

Bolu: Çaltepe southern slopes, 6 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1168 m, N 40° 53.568' E 031° 48.017', 02.06.2015, Leg. A.Çelik-328 *et al.*, Det. A.Çelik-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-711 *et al.*, Det. A.Çelik-2016; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-948 *et al.*, Det. A.Çelik-2017; Tetemeçele Village,

2 km from Tetemeçele Village to Çaltepe-Çeletepe, forest clearance, 1225 m, N 40° 51.285' E 031° 44.177', 27.07.2015, Leg. A.Çelik-1104 *et al.*, Det. A.Kaya-2018; Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1324 *et al.*, Det. A.Çelik-2017; Çaydurt-Mengen road, Taşcılar Village, roadside and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2229 & A.Kaya, Det. A.Çelik-2017.

FAMILY: RANUNCULACEAE

***ADONIS* L.**

***Adonis flammea* Jacq.**

Bolu: Değirmenbeli Village, 2 km from Değirmenbeli Village to Değirmenderesi Village, cultivated fields, 816 m, N 40° 50.365' E 031° 47.207', 08.04.2016, Leg. A.Çelik-1596 *et al.*, Det. A.Çelik-2017.

***CLEMATIS* L.**

***Clematis vitalba* L.**

Bolu: Çeletepe, 2 km from Gurbetteşi to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2157 *et al.*, Det. A.Kaya-2017.

***Clematis viticella* L.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1915 *et al.*, Det. İ.Eker-2017.

***CONSOLIDA* Gray**

Consolida regalis* Gray subsp. *regalis

Bolu: Hamzabey Village, 1 km from Hamzabey Village to Yakabayat Vilalge, roadside, 963 m, N 40° 47.292' E 031° 40.090', 16.08.2015, Leg. A.Çelik-1359 *et al.*, Det. A.Çelik-2017.

Consolida orientalis (J.Gay) Schrödinger

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1790 *et al.*, Det. A.Çelik-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', 26.06.2015, Leg. A.Çelik-749 *et al.*, Det. A.Çelik-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1943 *et al.*, Det. A.Çelik-2017.

DELPHINIUM L.

Delphinium fissum Waldst. & Kit. subsp. *anatolicum* Chowdhuri & P.H.Davis

Bolu: Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1234 *et al.*, Det. A.Çelik-2016; *ibid.*, 12.08.2016, Leg. A.Çelik-2112 *et al.*, Det. A.Çelik-2016; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2292 & A.Kaya, Det. A.Çelik-2017.

Endemic

FICARIA Guett.

Ficaria verna Huds. subsp. *ficariiformis* (Rouy & Foucaud) B.Walln. (Syn. *Ranunculus ficaria* L.)

Bolu: Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-65 *et al.*, Det. A.Çelik-2017; Merkeşler Village, 3 km from Merkeşler Village to Çaltepe, Kazalan, stream edge, 1041 m, N 40° 52.212' E 031° 46.922', 08.04.2016, Leg. A.Çelik-1571 *et al.*, Det. A.Çelik-2017.

HELLEBORUS L.

Helleborus orientalis Lam.

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1520 m, N 40° 86.371' E 031° 73.581', 01.04.2015, Leg. A.Çelik-2 *et al.*, Det. İ.Eker- 2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140

m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-59 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52 E 031° 47.388', 02.06.2015, Leg. A.Çelik-260 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

NIGELLA L.

***Nigella arvensis* L. subsp. *glauca* (Boiss.) N.Terracc.**

Bolu: Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1318 *et al.*, Det. A.Çelik-2017.

RANUNCULUS L.

***Ranunculus arvensis* L.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-371 *et al.*, Det. A.Çelik-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky areas, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-426 *et al.*, Det. A.Çelik-2017.

***Ranunculus brutius* Ten.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, open forests and meadows, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-367 *et al.*, Det. A.Çelik-2017; Yedigöller road, 500 m from Gurbettaşı to Sarımustan, roadside slopes, 1660 m, N 40° 52.453' E 031° 41.633', 21.06.2015, Leg. A.Çelik-548 *et al.*, Det. A.Çelik-2017; Yedigöller road, around the Gurbettaşı, rocky slopes, 1663 m, N 40° 52.548' E 031° 41.340', 04.06.2016, Leg. A.Çelik-1759 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

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

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-141 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests,

1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-239 *et al.*, Det. A.Çelik-2017.

Ranunculus dissectus M.Bieb. subsp. *sibthorpii* Davis

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-33 *et al.*, Det. A.Çelik-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-103 *et al.*, Det. A.Çelik-2017; Bolu Çaltepe, Merkeşler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-192 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, slopes close to summit, subalpine meadows, 1666 m, N 40° 52.018' E 031° 43.550', 02.06.2015, Leg. A.Çelik-347 *et al.*, Det. A.Çelik-2017; Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-363 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, around the lake, meadows, 1793 m, N 40° 53.780' E 031° 47.068', 07.10.2016, Leg. A.Çelik-2205 *et al.*, Det. A.Çelik-2017.

Ranunculus gracilis E.D.Clarke

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-132 *et al.*, Det. A.Çelik-2017.

Ranunculus marginatus d'Urv.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-480 *et al.*, Det. İ.Eker-2017; Yedigöller road, Çele Gölcük forestry warehouse surroundings, roadside, 1222 m, N 40° 50.678' E 031° 39.727', 21.06.2015, Leg. A.Çelik-518 *et al.*, Det. A.Çelik-2017.

Ranunculus neapolitanus Ten.

Bolu. Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1086 *et al.*, Det. A.Çelik-2017; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1880 *et al.*, Det. A.Çelik-2017.

***Ranunculus repens* L.**

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-744 *et al.*, Det. A.Çelik-2017.

ORDER: ROSALES

FAMILY: MORACEAE

***FICUS* L.**

Ficus carica* L. subsp. *carica

Bolu: Çaydurt-Mengen road, Taşcılar Village, stream edge and ruderal area, 657 m, N 40° 48.505' E 031° 46.943', 21.07.2017, Leg. A.Çelik-2232 & A.Kaya, Det. İ.Eker-2017.

Mediterranean element

FAMILY: ROSACEAE

***AGRIMONIA* L.**

Agrimonia eupatoria* L. subsp. *eupatoria

Bolu: Mengen, Hayranlar Village and its surroundings, forest, 864 m, N 40° 53.128' E 031° 49.970', 11.08.2016, Leg. A.Çelik-2072 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 12.07.2015, Leg. A.Çelik-887 *et al.*, Det. İ.Eker-2017.

***Agrimonia repens* L.**

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-945 *et al.*, Det. İ.Eker-2017; Mengen, 3 km from Afşar Village to Çaltepe, Çaltepe eastern slopes, forest clearance, 782 m, N 40° 52.308' E 031° 49.327', 25.06.2016, Leg. A.Çelik-2016 *et al.*, Det. İ.Eker-2017; Yakabayat Village, 3 km from Yakabayat Village to Gölcük Village, roadside slopes, 1058 m, N 40° 48.442' E 031° 41.760', 16.08.2015, Leg. A.Çelik-1392 *et al.*, Det. İ.Eker-2017.

***ALCHEMILLA* L.**

***Alchemilla erythropoda* Juz.**

Bolu: On the Tetemeçele Village, 9 km from Çaltepe-Çeletepe junction to Çaltepe-Kadıköy Upland, roadside and forest clearance, 1504 m, N 40° 52.765' E 031° 44.797', 26.06.2015, Leg. A.Çelik-818 *et al.*, Det. A.Kaya-2017; Yedigöller road, 4.5 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1229 m, N 40° 53.258' E 031° 42.355', 03.08.2015, Leg. A.Çelik-1200 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Alchemilla mollis* (Buser) Rothm.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-167 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-375 *et al.*, Det. A.Kaya-2017.

***Alchemilla porrectidens* Juz.**

Bolu: Çeletepe, Çeletepe summit, alpine meadows, 1978 m, N 40° 51.943' E 031° 42.122', 12.06.2015, Leg. A.Çelik-356 *et al.*, Det. A.Kaya-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-615 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Alchemilla pseudocartalinica* Juz.**

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky areas, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-427 *et al.*, Det. A.Çelik-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-382 *et al.*, Det. A.Çelik-2017.

COTONEASTER Medik.

Cotoneaster integerrimus Medik.

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-753 *et al.*, Det. A.Çelik-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1193 *et al.*, Det. A.Çelik-2017; Yedigöller road, 7.5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated field and forest clearance, 948 m, N 40° 46.812' E 031° 38.310', 11.08.2015, Leg. A.Çelik-1333 *et al.*, Det. A.Çelik-2018.

Cotoneaster nummularius Fisch. & C.A.Mey.

Bolu: Banaz Village, 9 km from Bolu city center to Banaz Village, meadows and forest clearance, 867 m, N 40° 47.608' E 031° 42.785', 27.07.2015, Leg. A.Çelik-1052 *et al.*, Det. A.Çelik & A.Kaya-2017; Çeletepe, Çeletepe summit, Gurbettaşı road, rocky area, 1670 m, N 40° 51.648' E 031° 41.387', 09.06.2017, Leg. A.Çelik-2262 & A.Kaya, Det. A.Çelik & A.Kaya-2017.

CRATAEGUS L.

Crataegus microphylla K.Koch subsp. *microphylla*

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-223 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-763 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

Crataegus monogyna Jacq. var. *monogyna*

Bolu: Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe, meadows, 1498 m, N 40° 53.358' E 031° 45.580', 04.06.2016, Leg. A.Çelik-1733 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-899 *et al.*, Det. İ.Eker-2017.

Crataegus orientalis Pall. ex M.Bieb. subsp. ***orientalis***

Bolu: Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1771 *et al.*, Det. A.Çelik & A.Kaya-2017.

Crataegus tanacetifolia (Poir.) Pers.

Bolu: Çukurören Village, around the Sakintepe, rocky slope, 975 m, N 40° 48.437' E 031° 38.967', 03.09.2016, Leg. A.Çelik-2134 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-697 *et al.*, Det. İ.Eker-2017; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-865 *et al.*, Det. A.Çelik-2017.

Endemic

Crataegus x bornmuelleri Zabel ex K.I.Chr. & Ziel.

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1164 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', Leg. A.Çelik-1456 *et al.*, Det. A.Çelik & A.Kaya-2017; Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2161 *et al.*, Det. A.Çelik-2017.

Endemic

FILIPENDULA Mill.

Filipendula vulgaris Moench

Bolu: Çaltepe, 1 km to Merkeşler Upland, Çaltepe southern slopes, forest clearance, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2304 & A.Kaya, Det. A.Çelik-2017.

Euro-Siberian element

FRAGARIA L.

***Fragaria vesca* L.**

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-122 *et al.*, Det. İ.Eker-2017; Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-153 & Leg. A.Çelik-161 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52 E 031° 47.388', 02.06.2015, Leg. A.Çelik-261 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-469 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-898 *et al.*, Det. İ.Eker-2017; Çeletepe, northeastern slopes of Çeletepe, meadow, 1692 m, N 40° 52.467' E 031° 43.612', 09.08.2015, Leg. A.Çelik-1270 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

GEUM L.

***Geum urbanum* L.**

Bolu: Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-156 *et al.*, Det. A.Çelik-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-420 *et al.*, Det. A.Çelik-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-633 *et al.*, Det. A.Kaya-2017; Çeletepe, Banaz Upland ant its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1844 *et al.*, Det. A.Kaya-2017; Çaltepe, 2 km from Kadıköy Upland to Çaltepe, forests, 1580 m, N 40° 53.663' E 031° 45.458', 11.08.2016, Leg. A.Çelik-2105 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

MALUS Mill.

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

Bolu: Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1101 *et al.*, Det. İ.Eker-2017.

MESPILUS Bosc ex Spach

Mespilus germanica L.

Bolu: Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-731 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

POTENTILLA L.

Potentilla argentea L.

Bolu: Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-270 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-304 *et al.*, Det. İ.Eker-2017.

Potentilla astracanica Jacq. subsp. **astracanica**

Bolu: Çaydurt-Mengen road, 24 km from Bolu city center to Taşcılar Village, Taşcılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1662 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Potentilla calabra Ten.

Bolu: Tetemeçele Village, 20 km from Bolu city center to Çeletepe southern slopes, meadows, 1072 m, N 40° 50.560' E 031° 43.572', 26.06.2015, Leg. A.Çelik-805 *et al.*, Det. İ.Eker-2017.

Mediterranean element

Potentilla crantzii (Crantz) Beck ex Fritsch

Bolu: Merkezler Village, Merkezler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-874 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Potentilla micrantha Ramond ex DC.

Bolu: Tetemeçele Village, from Çaltepe-Çeletepe road 1.5 km to Çeletepe, forest and stony places, 1536 m, N 40° 86.384' E 031° 73.551', 01.04.2015, Leg. A.Çelik-4 *et al.*, Det. İ.Eker- 2015; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-107 *et al.*, Det. İ.Eker-2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-60 *et al.*, Det. İ.Eker-2017.

Potentilla recta L.

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-577 *et al.*, Det. İ.Eker-2017; Merkezler Village, 5.5 km from Merkezler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-900 *et al.*, Det. İ.Eker-2017; Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1796 *et al.*, Det. İ.Eker-2017; Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2023 *et al.*, Det. İ.Eker-2017.

Potentilla reptans L.

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky areas, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-428 *et al.*, Det. A.Kaya-2017; Yakabayat Village, 3 km from Yakabayat Village to Gölcük Village, roadside slopes, 1058 m, N 40° 48.442' E 031° 41.760', 16.08.2015, Leg. A.Çelik-1387 *et al.*, Det. İ.Eker-2015; Mengen, Çaltepe eastern slopes, roadside, 1110 m, N 40° 54.752' E 031° 49.540', 25.06.2016, Leg. A.Çelik-2033 *et al.*, Det. İ.Eker-2017.

PRUNUS L.

***Prunus avium* (L.) L. (Syn. *Cerasus avium* (L.) Moench)**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-40 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-294 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-391 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 5.5 km from Merkeşler Village to Çaltepe, roadside, 1066 m, N 40° 52.605' E 031° 47.347', 12.07.2015, Leg. A.Çelik-897 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 15.5 km from Afşar Şevkioğlu district to Merkeşler Upland, Çaltepe eastern slopes, roadside and meadows, 1225 m, N 40° 54.190' E 031° 48.213', Leg. A.Çelik-994 *et al.*, Det. İ.Eker-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1061 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Prunus divaricata* Ledeb. var. *divaricata

Bolu: Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-797 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-959 *et al.*, Det. İ.Eker-2017; Yedigöller road, 1 km from Çukurören Village to Çele Gölcük forestry warehouse, serpentine slopes, 1031 m, N 40° 49.042' E 031° 39.657', 03.09.2016, Leg. A.Çelik-2141 *et al.*, Det. İ.Eker-2017.

***Prunus laurocerasus* L. (Syn. *Laurocerasus officinalis* M.Roem.)**

Bolu: Mengen, Çaltepe summit, Çaltepe eastern slopes, forest, 1649 m, N 40° 54.733' E 031° 48.387', 20.10.2017, Leg. A.Çelik-2331 & A.Kaya, Det. T.Körüklü-2017.

***Prunus spinosa* L.**

Bolu: Semerciler Village, 1.4 km from Semerciler Village to Merkeşler Village, forest, 870 m, N 40° 51.097' E 031° 48.312', 08.04.2016, Leg. A.Çelik-1550 *et al.*, Det. İ.Eker-2017; Çukurören Village, around the Sakintepe, rocky slope, 975 m, N 40° 48.437' E 031° 38.967', 03.09.2016, Leg. A.Çelik-2133 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***PYRACANTHA* M.Roem.**

***Pyracantha coccinea* M.Roem.**

Bolu: Yedigöller road, Yiğilca crossroad, forests, 1204 m, N 40° 50.705' E 031° 39.667', 04.02.2016, Leg. A.Çelik-1512 *et al.*, Det. A.Çelik-2016; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-724 *et al.*, Det. İ.Eker-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-755 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***PYRUS* L.**

Pyrus elaeagnifolia* Pall. subsp. *elaegnifolia

Bolu: Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-796 *et al.*, Det. İ.Eker-2017; Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', 17.09.2015, Leg. A.Çelik-1467 *et al.*, Det. İ.Eker-2017.

***ROSA* L.**

***Rosa canina* L.**

Bolu: Çaltepe southern slopes, 6 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1168 m, N 40° 53.568' E 031° 48.017', 02.06.2015, Leg. A.Çelik-327 *et al.*, Det. İ.Eker-2017; Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', 17.09.2015, Leg. A.Çelik-

1472 *et al.*, Det. İ.Eker-2015; Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2160 *et al.*, Det. İ.Eker-2017.

Rosa horrida Fisch.

Bolu: Çaltepe, Merkezler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2316 & A.Kaya, Det. İ.Eker-2017.

RUBUS L.

Rubus caesius L.

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-961 *et al.*, Det. İ.Eker-2017.

Rubus canescens DC. var. *canescens*

Bolu: Mengen, Afşar Village, 14.5 km from Afşar Şevkioğlu district to Merkezler Upland, Çaltepe eastern slopes, roadside and stony places, 1200 m, N 40° 54.025' E 031° 48.415', Leg. A.Çelik-986 *et al.*, Det. İ.Eker-2017; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-754 *et al.*, Det. İ.Eker-2017; Mengen, Çaltepe eastern slopes, roadside, 1110 m, N 40° 54.752' E 031° 49.540', 25.06.2016, Leg. A.Çelik-2034 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Rubus hirtus Waldst. & Kit.

Bolu: Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-576 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Rubus idaeus L. subsp. *idaeus*

Bolu: Çeletepe, İmam Village, around the Çandır Upland, roadside slopes, 1740 m, N 40° 51.602' E 031° 41.452', 11.08.2015, Leg. A.Çelik-1354 *et al.*, Det. İ.Eker-2015;

Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1186 *et al.*, Det. İ.Eker-2017; Çeletepe, Sarımustan, roadside and forest clearance, 1419 m, N 40° 53.792' E 031° 41.338', 29.07.2017, Leg. A.Çelik-2267 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

***Rubus ulmifolius* Schott.**

Bolu: Merkezler Village, Merkezler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-863 *et al.*, Det. İ.Eker-2017; Tetemeçele Village and its surroundings, wet meadows, 958 m, N 40° 50.613' E 031° 44.638', 16.08.2015, Leg. A.Çelik-1399 *et al.*, Det. İ.Eker-2016; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1920 *et al.*, Det. İ.Eker-2017.

SANGUISORBA L.

***Sanguisorba minor* Scop. subsp. *balearica* (Bourg. ex Nyman) Muñoz Garm. & C.Navarro**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-692 *et al.*, Det. A.Çelik-2016; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1183 *et al.*, Det. İ.Eker-2017.

SORBUS L.

***Sorbus aucuparia* L.**

Bolu: Çaltepe, Merkezler Upland, Northeastern Merkezler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-396 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-619 *et al.*, Det. İ.Eker-2017; Çeletepe, İmam Village, around the Çandır Upland, roadside slopes, 1740 m, N 40° 51.602' E 031° 41.452', 11.08.2015, Leg. A.Çelik-1352 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 2 km to Çaltepe, roadside, 1600 m, N 40° 53.488' E 031° 45.818', Leg. A.Çelik-2216 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

Sorbus domestica L. (Syn. *Cormus domestica* (L.) Spach)

Bolu: Değirmenbeli Village and its surroundings, roadside, 970 m, N 40° 51.122' E 031° 46.712', 09.08.2015, Leg. A.Çelik-1299 *et al.*, Det. A.Çelik-2016.

Euro-Siberian element

Sorbus kusnetzovii Zinserl.

Bolu: Mengen, Çaltepe summit, Çaltepe eastern slopes, forest, 1685 m, N 40° 54.442' E 031° 47.722', 20.10.2017, Leg. A.Çelik-2332 & A.Kaya, Det. T.Körüklü-2017.

Sorbus torminalis (L.) Crantz var. *torminalis*

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky slopes, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-297 *et al.*, Det. İ.Eker-2017.

Sorbus umbellata (Desf.) Fritsch

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1021 *et al.*, Det. İ.Eker-2017; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-766 *et al.*, Det. A.Çelik-2017; Çaltepe, Çaltepe eastern slopes, subalpine meadows, 1802 m, N 40° 53.890' E 031° 47.092', 11.08.2016, Leg. A.Çelik-2121 *et al.*, Det. İ.Eker-2017.

FAMILY: ULMACEAE

ULMUS L.

Ulmus glabra Huds.

Bolu: Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 04.08.2018, Leg. A.Çelik-2340 *et al.*, Det. İ.Eker-2019.

Euro-Siberian element

FAMILY: URTICACEAE

***URTICA* L.**

Urtica dioica* L. subsp. *dioica

Bolu: Yedigöller road, 4 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, forests, 1434 m, N 40° 52.970' E 031° 42.550', 09.05.2015, Leg. A.Çelik-119 *et al.*, Det. İ.Eker-2015; Çeletepe, Banaz Upland ant its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1845 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland surroundings, roadside, 1535 m, N 40° 53.020' E 031° 45.333', 16.06.2015, Leg. A.Çelik-453 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

ORDER: SANTALALES

FAMILY: SANTALACEAE

***THESIUM* L.**

***Thesium arvense* Horv.**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-44 *et al.*, Det. İ.Eker-2017; Değirmenbeli Village, 2 km from Değirmenbeli Village to Değirmenderesi Village, cultivated fields, 816 m, N 40° 50.365' E 031° 47.207', 08.04.2016, Leg. A.Çelik-1592 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***VISCUM* L.**

Viscum album* L. subsp. *album

Bolu: Gölcük Village, 1 km from Çele Gölcük forestry warehouse to Yeşilçele Village, forests, 1167 m, N 40° 49.943' E 031° 41.507', 04.02.2016, Leg. A.Çelik-1513 *et al.*, Det. A.Çelik-2016; Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2174 *et al.*, Det. İ.Eker-2017.

ORDER: SAPINDALES

FAMILY: ANACARDIACEAE

***RUHUS* L.**

***Rhus coriaria* L.**

Bolu: Mengen, Afşar Village, Afşar Hayranlar district and its surroundings, roadside and rocky areas, 936 m, N 40° 54.622' E 031° 49.613', 23.07.2015, Leg. A.Çelik-1035 *et al.*, Det. İ.Eker-2016.

FAMILY: SAPINDACEAE

ACER L.

Acer campestre* L. subsp. *campestre

Bolu: Bağışlar Village, 4 km from Bağışlar Village to Merkeşler Upland, stream edge, 966 m, N 40° 51.087' E 031° 45.628', 16.08.2015, Leg. A.Çelik-1421 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

***Acer heldreichii* Orph. ex Boiss. subsp. *trautvetteri* (Medw.) A.E.Murray**

Bolu: Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-758 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, around the lake, meadows, 1793 m, N 40° 53.780' E 031° 47.068', 07.10.2016, Leg. A.Çelik-2206 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Acer platanoides* L.**

Bolu: Çaltepe northern mountains, above Kapankayası, forests, 1293 m, N 40° 55.170' E 031° 43.242', 29.07.2017, Leg. A.Çelik-2285 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

ORDER: SAXIFRAGALES

FAMILY: CRASSULACEAE

***PHEDIMUS* Raf.**

***Phedimus stoloniferus* (S.G.Gmel.) 't Hart (Syn. *Sedum stoloniferum* S.G.Gmel.)**

Bolu: Çeletepe, Sarımustan, forest and stream edge, 1100 m, N 40° 53.663' E 031° 44.090', 03.09.2016, Leg. A.Çelik-2170 *et al.*, Det. A.Kaya & A.Çelik-2017; Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2275 & A.Kaya, Det. A.Çelik-2017.

New record, Euro-Siberian element

***SEDUM* L.**

Sedum acre* L. subsp. *acre

Bolu: Değirmenderesi Village, 2 km from Değirmenderesi Village to Tetemeçele Village, stony and rocky areas, 854 m, N 40° 49.942' E 031° 45.048', 12.07.2015, Leg. A.Çelik-856 *et al.*, Det. İ.Eker-2016.

***Sedum album* L.**

Bolu: Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', 17.09.2015, Leg. A.Çelik-1470 *et al.*, Det. İ.Eker-2015; Merkezler Upland, meadows, 1717 m, N 40° 54.002' E 031° 46.898', 11.08.2016, Leg. A.Çelik-2117 *et al.*, Det. A.Çelik-2016; Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-845 *et al.*, Det. A.Kaya-2017.

***Sedum pallidum* M.Bieb.**

Bolu: Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2274 & A.Kaya, Det. A.Kaya-2017; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1979 *et al.*, Det. A.Kaya-2017; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488 m, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-574 *et al.*, Det. A.Kaya-2017; Değirmenderesi

Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-840 *et al.*, Det. A.Kaya-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2094 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

***Sedum urvillei* DC.**

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1891 *et al.*, Det. A.Çelik-2016.

SEMPERVIVUM L.

***Sempervivum gillianiae* Muirhead**

Bolu: Çaltepe, alpine meadows, 1820 m, N 40° 53.913' E 031° 47.183', 09.08.2015, Leg. A.Çelik-1258 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe eastern slopes, subalpine meadows, 1802 m, N 40° 53.890' E 031° 47.092', 11.08.2016, Leg. A.Çelik-2124 & A.Kaya, Det. İ.Eker-2017; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2300 & A.Kaya, Det. İ.Eker-2017; Çeletepe Summit, alpine meadows, 1975 m, N 40° 51.945' E 031° 42.122', 21.06.2015, Leg. A.Çelik-652 *et al.*, Det. İ.Eker-2017; Çaltepe'nin doğusu, Merkeşler Yaylası üzeri, subalpin bölge, 1802 m, N 40° 53.890' E 031° 47.092', 11.08.2016, Leg. A.Çelik-2124 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2318 & A.Kaya, Det. İ.Eker-2017.

Endemic, New record, Euro-Siberian element

FAMILY: GROSSULARIACEAE

RIBES L.

***Ribes uva-crispa* L.**

Bolu: Merkeşler Village, above Merkeşler Village, Dereköy district, roadside, 806 m, N 40° 52.402' E 031° 48.653', 04.06.2016, Leg. A.Çelik-1684 *et al.*, Det. İ.Eker-2017.

New record

FAMILY: SAXIFRAGACEAE

SAXIFRAGA L.

Saxifraga cymbalaria L.

Bolu: Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-586 *et al.*, Det. İ.Eker-2016; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-784 *et al.*, Det. A.Çelik-2017; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1876 *et al.*, Det. A.Çelik-2017.

Saxifraga exarata Vill.

Bolu: Çaltepe, Merkezler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1236 *et al.*, Det. A.Kaya-2017.

Saxifraga rotundifolia L. subsp. *rotundifolia*

Bolu: Yedigöller road, 5 km from Yığılca crossroad to Yedigöller, rocky slopes, 1394 m, N 40° 51.602' E 031° 40.843', 21.06.2015, Leg. A.Çelik-535 *et al.*, Det. İ.Eker-2016; Yedigöller road, 3 km from Gurbettaşı to Sarımustan, roadside and rocky slopes, 1525 m, N 40° 52.708' E 031° 42.143', 27.04.2016, Leg. A.Çelik-1637 *et al.*, Det. A.Çelik-2017.

Euro-Siberian element

ORDER: SOLANALES

FAMILY: CONVULVACEAE

CALYSTEgia R.Br.

Calystegia silvatica (Kit.) Griseb.

Bolu: Mengen, 8 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2031 *et al.*, Det.

A.Kaya-2016; Yedigöller road, 2 km from Gurbettaşı to Sarımustan, rocky areas, 1488, N 40° 52.637' E 031° 41.848', 21.06.2015, Leg. A.Çelik-572 *et al.*, Det. İ.Eker-2017; Yedigöller road, 16 km from Bolu city center to Çele Gölçük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-771 *et al.*, Det. İ.Eker-2017; Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-954 *et al.*, Det. İ.Eker-2017.

CONVOLVULUS L.

***Convolvulus arvensis* L.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-506 *et al.*, Det. A.Çelik & A.Kaya-2017; Hamzabey Village, 1 km from Hamzabey Village to Yakabayat Vilalge, roadside, 963 m, N 40° 47.292' E 031° 40.090', 16.08.2015, Leg. A.Çelik-1357 *et al.*, Det. A.Çelik-2017; Merkezler Village, 1 km from Dereköy district to Karahisnler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 04.06.2016, Leg. A.Çelik-1698 *et al.*, Det. A.Çelik & A.Kaya-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1935 *et al.*, Det. A.Çelik & A.Kaya-2017; *ibid.*, 25.06.2016, Leg. A.Çelik-1936 *et al.*, Det. A.Çelik & A.Kaya-2017.

***Convolvulus cantabrica* L.**

Bolu: Tetemeçele Village and its surroundings, meadows, 1079 m, N 40° 50.903' E 031° 44.123', Leg. A.Çelik-807 *et al.*, Det. A.Çelik & A.Kaya-2017; Değirmenderesi Village, around the mosque, roadside slopes, 877 m, N 40° 49.532' E 031° 42.840', 12.07.2015, Leg. A.Çelik-843 *et al.*, Det. A.Çelik & A.Kaya-2017; Çeletepe, 20 km from Bolu city center to Çeletepe, meadows, 1076 m, N 40° 50.920' E 031° 44.022', Leg. A.Çelik-1098 *et al.*, Det. A.Çelik & A.Kaya-2017; Çukurören Village, around the Sakintepe, rocky slope, 1040 m, N 40° 48.230' E 031° 39.078', 11.08.2015, Leg. A.Çelik-1340 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1765 *et al.*, Det. A.Çelik & A.Kaya-2017; Mengen, Hayranlar Village and its surroundings, meadows, 856 m, N

40° 52.747' E 031° 50.030', 11.08.2016, Leg. A.Çelik-2070 *et al.*, Det. A.Çelik & A.Kaya-2017; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-306 *et al.*, Det. A.Kaya-2017.

Mediterranean element

CUSCUTA L.

Cuscuta europaea L.

Bolu: Mengen, Afşar Village, 4.6 km from Afşar Village to Çaltepe, forest clearance, 950 m, N 40° 53.893' E 031° 49.520', 23.07.2015, Leg. A.Çelik-957 *et al.*, Det. İ.Eker-2017.

FAMILY: SOLANACEAE

ATROPA L.

Atropa belladonna L.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-478 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 2 km from Kadıköy Upland to Çeletepe, roadside and rocky slopes, 1605 m, N 40° 52.735' E 031° 44.583', 09.08.2015, Leg. A.Çelik-1266 *et al.*, Det. İ.Eker-2015; Çaltepe eastern slopes, forest clearance, 1104 m, 40° 53.570' E 031° 48.773', 11.08.2016, Leg. A.Çelik-2080 *et al.*, Det. A.Kaya-2017.

Euro-Siberian element

DATURA L.

Datura stramonium L.

Bolu: Tetemeçele Village, cultivated fields, 975 m, N 40° 50.473' E 031° 44.552', 07.10.2016, Leg. A.Çelik-2194 *et al.*, Det. A.Kaya-2017.

***HYOSCYAMUS* L.**

***Hyoscyamus niger* L.**

Bolu: Çeletepe, Banaz Upland road, 5 km from Kadıköy Upland to Çeletepe, roadside and rocky area, 1687 m, N 40° 51.858' E 031° 42.612', 03.08.2015, Leg. A.Çelik-1214 *et al.*, Det. İ.Eker-2015; Merkeşler Village, Keller Street, 37 km from Bolu to Merkeşler Village, meadow, 964 m, N 40° 51.887' E 031° 47.885', 06.05.2016, Leg. A.Çelik-1676 *et al.*, Det. A.Çelik-2017.

***SOLANUM* L.**

***Solanum dulcamara* L.**

Bolu: Tetemeçele Village and its surroundings, wet meadows, 958 m, N 40° 50.613' E 031° 44.638', 16.08.2015, Leg. A.Çelik-1396 *et al.*, Det. A.Kaya-2016; Merkeşler Village, above Merkeşler Village, Dereköy district, roadside, 806 m, N 40° 52.402' E 031° 48.653', 04.06.2016, Leg. A.Çelik-1685 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

CLASS: LILIOPSIDA (MONOCOTYLEDONEAE)

ORDER: ALISMATALES

FAMILY: ARACEAE Dumort.

***ARUM* L.**

Arum hygrophilum* Boiss. subsp. *euxinum* (R.R.Mill) Alpınar (Syn. *Arum euxinum

R.R.Mill)

Bolu: Banaz Village, above Banaz district, around the cemetery, 998 m, N 40° 48.828' E 031° 43.405', Leg. A.Çelik-1603 *et al.*, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

LEMNA L.

***Lemna minor* L.**

Bolu: Çaltepe, 1 km to Merkeşler Upland, Çaltepe southern slopes, forest clearance and wetland, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2305 & A.Kaya, Det. A.Çelik-2017.

ORDER: ASPARAGALES

FAMILY: AMARYLLIDACEAE

ALLIUM L.

Allium guttatum* Steven subsp. *guttatum

Bolu: Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2301 & A.Kaya, Det. İ.Eker-2017; Çeletepe, Yedierenler Hill surroundings, alpine meadows, 1930 m, N 40° 52.135' E 031° 42.485', 03.08.2015, Leg. A.Çelik-1226 & A.Kaya, Det. İ.Eker-2017; Tetemeçele Village, 5 km from Çaltepe-Çeltepe road to Çeletepe, serpentine slopes, 1608 m, N 40° 52.223' E 031° 44.092', 21.07.2017, Leg. A.Çelik-2248 & A.Kaya, Det. İ.Eker-2017.

***Allium guttatum* Steven subsp. *sardoum* (Moris) Stearn (Syn. *Allium margaritaceum* Sm.)**

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1160 *et al.*, Det. İ.Eker-2017; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1182 *et al.*, Det. İ.Eker-2017.

Mediterranean element

***Allium huber-morathii* Kollmann, Özhatay & Koyuncu**

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1228 *et al.*, Det. İ.Eker-2015; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area,

1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1191 *et al.*, Det. İ.Eker-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2093 *et al.*, Det. İ.Eker-2017.

Endemic, Irano-Turanian element

Allium jubatum J.F.Macbr.

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller, 3 km from Dumantepe villas, roadside and rocky slopes, 913 m, N 40° 47.372' E 031° 38.218' Leg. A.Çelik-717 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1721 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Allium olympicum Boiss.

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1158 *et al.*, Det. İ.Eker-2015.

Endemic, Euro-Siberian element

Allium rotundum L. (Syn. *Allium scorodoprasum* L. subsp. *rotundum* (L.) Stearn)

Bolu: Çaltepe, Çaltepe eastern slopes, subalpine meadows, 1802 m, N 40° 53.890' E 031° 47.092', 11.08.2016, Leg. A.Çelik-2123 *et al.*, Det. İ.Eker-2016; Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1159 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-1230 *et al.*, Det. İ.Eker-2017.

Allium stamineum Boiss.

Bolu: Mengen, Mamatlar Upland, 17.5 km from Afşar Village to Mamatlar Upland, Çaltepe eastern slopes, meadows, 1265 m, N 40° 53.937' E 031° 48.008', 23.07.2015, Leg. A.Çelik-1006 *et al.*, Det. İ.Eker-2015; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190',

29.07.2017, Leg. A.Çelik-2288 & A.Kaya, Det. İ.Eker-2017; Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1030 *et al.*, Det. İ.Eker-2017; Tetemeçele Village, 2 km from Tetemeçele Village to Çaltepe-Çeletepe, forest clearance, 1225 m, N 40° 51.285' E 031° 44.177', 27.07.2015, Leg. A.Çelik-1107 *et al.*, Det. İ.Eker-2017.

Mediterranean element

GALANTHUS L.

Galanthus plicatus* M.Bieb. subsp. *plicatus

Bolu: Çaltepe, 2.5 km from Kadıköy Upland to Çaltepe, forests, 1614 m, N 40° 53.553' E 031° 45.790', 09.05.2015, Leg. A.Çelik-147 *et al.*, Det. İ.Eker-2015.

FAMILY: ASPARAGACEAE

MUSCARI Mill.

***Muscari aucheri* (Boiss.) Baker**

Bolu: Banaz Village, 3 km from Çatakören Village to Banaz Village Çandır district, roadside and stony places, 742 m, N 40° 47.743' E 031° 45.182', 08.04.2018, Leg. A.Çelik-2334 *et al.*, Det. A.Çelik-2017.

Endemic

***Muscari armeniacum* Leichtlin ex Baker**

Bolu: Yedigöller road, 1 km before Yığılca road crossroad, roadside, 1681 m, N 40° 86.722' E 031° 69.040', 09.05.2015, Leg. A.Çelik-90 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 800 m to Çeletepe from Kadıköy Upland, forests, 1547 m, N 40° 53.172' E 031° 45.387', 28.04.2015, Leg. A.Çelik-19 *et al.*, Det. İ.Eker-2017; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-26 *et al.*, Det. İ.Eker-2017; *ibid.*, 01.05.2015, Leg. A.Çelik-27 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölçük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-105 *et al.*, Det. İ.Eker-2017;

Tetemeçele Village surroundings, roadside, 1080 m, N 40° 50.760' E 031° 43.787', 27.05.2015, Leg. A.Çelik-153 & Leg. A.Çelik-151 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-179 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-231 *et al.*, Det. İ.Eker-2017.

***ORNITHOGALUM* L.**

***Ornithogalum alpigenum* Stapf**

Bolu: Çukurören Village, around the Sakintepe, roadside and rocky slope, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1808 *et al.*, Det. İ.Eker-2017.

Endemic, Mediterranean element

***Ornithogalum fimbriatum* Willd.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, alpin bölge, Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-182 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1878 m, N 40° 53.608' E 031° 46.625', 04.06.2016, Leg. A.Çelik-1750 *et al.*, Det. İ.Eker-2017.

Mediterranean element

***Ornithogalum narbonense* L.**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-672 *et al.*, Det. İ.Eker-2016.

Mediterranean element

***Ornithogalum oligophyllum* E.D.Clarke**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-219 *et al.*, Det. İ.Eker-2016; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-55 *et al.*, Det. İ.Eker-2017; Yedigöller road,

500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-80 *et al.*, Det. İ.Eker-2017; *ibid.*, 09.05.2015, Leg. A.Çelik-87 *et al.*, Det. İ.Eker-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-102 *et al.*, Det. İ.Eker-2017; *ibid.*, 09.05.2015, Leg. A.Çelik-106 *et al.*, Det. İ.Eker-2017; Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-87 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-340 *et al.*, Det. İ.Eker-2017.

***Ornithogalum sphaerocarpum* A.Kern.**

Bolu: Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2042 & Leg. A.Çelik-2041 *et al.*, Det. İ.Eker-2017.

***Ornithogalum sigmoideum* Freyn & Sint.**

Bolu: Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-52 *et al.*, Det. İ.Eker-2016; Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-637 *et al.*, Det. İ.Eker-2016.

Euro-Siberian element

***POLYGONATUM* Mill.**

***Polygonatum orientale* Desf.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-397 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-285 *et al.*, Det. İ.Eker-2016; Merkeşler Village, around the village cemetery, meadows, 909 m, N 40° 51.883' E 031° 48.188', 23.07.2015, Leg. A.Çelik-1044 *et al.*, Det. İ.Eker-2016.

Euro-Siberian element

PROSPERO Salisb.

Prospero autumnale (L.) Speta (Syn. ***Scilla autumnalis*** L.)

Bolu: Yedigöller road, above Yeniköy Upland, forest clearance, 1133 m, N 40° 49.362' E 031° 39.712', 10.09.2015, Leg. A.Çelik-1434 *et al.*, Det. İ.Eker-2016; Mesciçele Village and its surroundings, meadows, 1127 m, N 40° 50.572' E 031° 42.950', 17.09.2015, Leg. A.Çelik-1483 *et al.*, Det. İ.Eker-2016; Yedigöller road, 2.3 km from Çukurören Village to Çele Gölcük forestry warehouse, forest, 1053 m, N 40° 49.155' E 031° 39.950', 17.09.2015, Leg. A.Çelik-1480 *et al.*, Det. İ.Eker-2016; Yedigöller road, 1 km from Çukurören Village to Çele Gölcük forestry warehouse, serpentine slopes, 1031 m, N 40° 49.042' E 031° 39.657', 03.09.2016, Leg. A.Çelik-2144 *et al.*, Det. İ.Eker-2017.

Mediterranean element

RUSCUS L.

Ruscus hypoglossum L.

Bolu: Çaltepe, Sarımustan, forest, 1555 m, 08.04.2018, Leg. A.Çelik-2335 & A.Kaya, Det. A.Kaya-2017.

Euro-Siberian element

SCILLA L.

Scilla bifolia L.

Bolu: Tetemeçele Village 2.8 km to Çeletepe from Çaltepe Çeletepe crossroad, open forests, 1626 m, N 40° 86.703' E 031° 73.247', 01.04.2015, Leg. A.Çelik-11 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-94 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, meadows, 1540 m, N 40° 52.935' E 031° 45.250', 28.04.2015, Leg. A.Çelik-24 *et al.*, Det. İ.Eker-2017; Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-61 *et al.*, Det. İ.Eker-2017; Çeletepe, Çeletepe eastern slopes, subalpine zone, 1868 m, N 40° 52.107' E 031° 43.023', 01.05.2015, Leg. A.Çelik-69 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe Summit, alpine meadows,

1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-183 *et al.*, Det. İ.Eker-2017.

Mediterranean element

FAMILY: IRIDACEAE

***CROCUS* L.**

***Crocus ancyrensis* (Herb.) Maw**

Bolu: Tetemeçele Village 2.5 km to Çeletepe from Çaltepe Çeletepe crossroad, roadside and open forests, 1556 m, N 40° 86.477' E 031° 73.407', 01.04.2015, Leg. A.Çelik-8 *et al.*, Det. İ.Eker-2015; Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-68 *et al.*, Det. İ.Eker-2015; Çeletepe, Çeletepe eastern slopes, subalpine zone, 1868 m, N 40° 52.107' E 031° 43.023', 01.05.2015, Leg. A.Çelik-72 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-97 *et al.*, Det. İ.Eker-2015.

Endemic, Irano-Turanian element

Crocus olivieri* J.Gay subsp. *olivieri

Bolu: Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-98 *et al.*, Det. İ.Eker-2017

Crocus speciosus* M.Bieb. subsp. *speciosus

Bolu: Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-114 *et al.*, Det. İ.Eker-2015; Tetemeçele Village, 6 km from Tetemeçele Village to Kadıköy Upland, roadside and meadows, 1649 m, N 40° 52.430' E 031° 44.135', 17.09.2015, Leg. A.Çelik-1486 *et al.*, Det. İ.Eker-2015; Merkezler Village, 5 km from Merkezler Village to Çaltepe, forest, 1046 m, N 40° 52.425' E 031° 47.448', 16.10.2015, Leg. A.Çelik-1495 *et al.*, Det. İ.Eker-2015; Çaltepe, Çaltepe

summit, alpine meadows, 1870 m, N 40° 53.618' E 031° 46.593', 16.10.2015, Leg. A.Çelik-1507 *et al.*, Det. İ.Eker-2015.

GLADIOLUS L.

***Gladiolus italicus* Mill.**

Bolu: Merkeşler Village, 1 km from Dereköy district to Karahisinler district, meadows, 814 m, N 40° 52.358' E 031° 49.518', 4.06.2016, Leg. A.Çelik-1717 *et al.*, Det. İ.Eker-2017.

IRIS L.

***Iris kerneriana* Asch. & Sint. ex Baker**

Bolu: Tetemeçele Village, 2 km from Tetemeçele Village to Çeletepe, forest, 1215 m, N 40° 51.290' E 031° 44.260', 09.06.2017, Leg. A.Çelik-2213 & A.Kaya, Det. İ.Eker-2017.

Endemic, Euro-Siberian element

***Iris sintenisii* Janka**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-302 *et al.*, Det. İ.Eker-2015; Yedigöller road, Sarıyer Upland, 14 km from Bolu city center to Yedigöller, meadows, 1109 m, N 40° 49.807' E 031° 39.667', Leg. A.Çelik-721 *et al.*, Det. İ.Eker-2017; Çaltepe eastern slopes, rocky slopes, 1202 m, N 40° 54.093' E 031° 48.160', 11.08.2016, Leg. A.Çelik-2091 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Iris pumila* L. subsp. *attica* (Boiss. & Heldr.) K.Richt. (Syn. *Iris attica* Boiss. & Heldr.)**

Bolu: Çatakören Village, 2 km from Çatakören Village to Banaz Village Çandır district, roadside and stony places, 742 m, N 40° 47.743' E 031° 45.182', 08.04.2016, Leg. A.Çelik-1611 *et al.*, Det. A.Çelik-2017.

Rare, Euro-Siberian element

ORDER: LILIALES

FAMILY: COLCHICACEAE

***COLCHICUM* L.**

***Colchicum boissieri* Orph.**

Bolu: Tetemeçele Village, 6.5 km from Tetemeçele Village to Çetepe, serpentine slopes, 1608 m, N 40° 52.223' E 031° 44.092', 07.10.2016, Leg. A.Çelik-2200 *et al.*, Det. İ.Eker-2017.

Irano-Turanian element

***Colchicum speciosum* Steven (Syn. *Colchicum bornmuelleri* Freyn)**

Bolu: Yedigöller road, 22 km from Bolu city center to Yedigöller, Gurbettaşı, slopes, 1661 m, N 40° 52.553' E 031° 41.425', Leg. A.Çelik-1465 *et al.*, Det. İ.Eker-2015; Tetemeçele Village, 6 km from Tetemeçele Village to Kadıköy Upland, roadside and meadows, 1669 m, N 40° 52.430' E 031° 44.135', Leg. A.Çelik-1487 *et al.*, Det. İ.Eker-2015; Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2045 *et al.*, Det. İ.Eker-2017; Çaltepe, 7 km from Merkeşler Village to Merkeşler Upland, meadows, 1728 m, N 40° 54.055' E 031° 46.922', 09.08.2015, Leg. A.Çelik-2111 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Colchicum umbrosum* Steven**

Bolu: Yedigöller road, 2.3 km from Çukurören Village to Çele Gölcük forestry warehouse, forest, 1053 m, N 40° 49.155' E 031° 39.950', 17.09.2015, Leg. A.Çelik-1478 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

FAMILY: LILIACEAE

GAGEA Salisb.

Gagea dubia Terracc.

Bolu: Tetemeçele Village 2.8 km to Çeletepe from Çaltepe Çeletepe crossroad, open forests, 1626 m, N 40° 86.703' E 031° 73.247', 01.04.2015, Leg. A.Çelik-9 *et al.*, Det. M.Tekşen-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1655 m, N 40° 51.705' E 031° 41.363', 09.05.2015, Leg. A.Çelik-113 *et al.*, Det. M.Tekşen-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-101 *et al.*, Det. M.Tekşen-2017.

Gagea fragifera (Vill.) E.Bayer & G.López

Kadıköy Upland, meadows, 1540 m, N 40° 52.935' E 031° 45.250', 28.04.2015, Leg. A.Çelik-25 *et al.*, Det. M.Tekşen-2017; Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-96 *et al.*, Det. M.Tekşen-2017; Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-64 *et al.*, Det. M.Tekşen-2017.

New record

Gagea glacialis K.Koch

Bolu: Yedigöller road, 2.5 km from Gurbettaşı Çele Gölcük forestry warehouse road to İmam Village Çandır Upland, roadside, 1648 m, N 40° 51.847' E 031° 41.258', 09.05.2015, Leg. A.Çelik-95 *et al.*, Det. M.Tekşen-2017.

New record, Irano-Turanian element

Gagea villosa (M.Bieb.) Sweet var. *villosa*

Bolu: Çeletepe, Banaz Upland road, roadside and rocky areas, 1697 m, N 40° 54.872' E 031° 42.575', 01.05.2015, Leg. A.Çelik-67 *et al.*, Det. M.Tekşen-2017.

Mediterranean element

FRITILLARIA L.

***Fritillaria pontica* Wahlenb.**

Bolu: Çaltepe, lower boundary of forest, open forests, 1441 m, N 40° 53.585' E 031° 46.247', 27.07.2015, Leg. A.Çelik-198 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-337 *et al.*, Det. İ.Eker-2015; Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-205 *et al.*, Det. İ.Eker-2015; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 02.06.2015, Leg. A.Çelik-441 *et al.*, Det. İ.Eker-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-431 *et al.*, Det. İ.Eker-2015; Mengen, Çaltepe eastern slopes, stream edge, 970 m, N 40° 54.085' E 031° 49.295', 25.06.2016, Leg. A.Çelik-2044 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

LILIUM L.

***Lilium martagon* L.**

Bolu: Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2265 & A.Kaya, Det. A.Çelik-2017; Çaltepe northern slopes, forests and wetland, 1168 m, N 40° 55.077' E 031° 43.057', 29.07.2017, Leg. A.Çelik-2276 & A.Kaya, Det. A.Çelik-2017; Yedigöller road, Ayıkayası hiking trail, roadside and forest, 1506 m, N 40° 54.772' E 031° 39.305', Leg. A.Çelik-2306 & A.Kaya, Det. A.Çelik-2017.

Rare

FAMILY: XANTHORRHOEACEAE

***ASPHODELINE* Rchb.**

***Asphodeline lutea* (L.) Rchb.**

Bolu: Mengen, Afşar Village, 14.5 km from Afşar Şevkiođlu district to Merkeşler Upland, Çaltepe eastern slopes, roadside and stony places, 1200 m, N 40° 54.025' E 031° 48.415', Leg. A.Çelik-989 *et al.*, Det. İ.Eker-2017.

Mediterranean element

ORDER: ORCHIDALES

FAMILY: ORCHIDACEAE

ANACAMPTIS Rich.

Anacamptis coriophora (L.) R.M.Bateman (Syn. *Orchis coriophora* L.)

Bolu: Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-776 *et al.*, Det. İ.Eker-2017.

Anacamptis pyramidalis (L.) Rich.

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-704 *et al.*, Det. İ.Eker-2015; Banaz Village, Around the Banaz Village, fields clearance, 895 m, N 40° 47.807' E 031° 42.918', 12.07.2015, Leg. A.Çelik-833 *et al.*, Det. İ.Eker-2015; Merkeşler Village, Merkeşler Village and its surroundings, meadows, 975 m, N 40° 52.098' E 031° 47.932', 12.07.2015, Leg. A.Çelik-877 *et al.*, Det. İ.Eker-2017; Banaz Village, 9 km from Bolu city center to Banaz Village, meadows and forest clearance, 867 m, N 40° 47.608' E 031° 42.785', 27.07.2015, Leg. A.Çelik-1048 *et al.*, Det. İ.Eker-2015; Değirmenderesi Village and its surroundings, rocky slopes, 865 m, N 40° 49.278' E 031° 44.658', 25.06.2016, Leg. A.Çelik-1991 *et al.*, Det. İ.Eker-2017; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1764 *et al.*, Det. İ.Eker-2017.

CEPHALANTHERA Rich.

Cephalanthera damasonium (Mill.) Druce

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-309 *et al.*, Det. İ.Eker-2015; Çaltepe, Çaltepe road, 4 km to Tetemeçele Village, roadside and stony places, 1476 m, N 40° 51.743' E 031° 44.138', 21.06.2015, Leg. A.Çelik-654 *et al.*, Det. İ.Eker-2015; Yedigöller road, 7 km from Bolu city center to Yedigöller, around Dumantepe villas, forest, 913 m, N 40° 46.818' E 031° 38.135', 11.08.2015, Leg. A.Çelik-1313 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

Cephalanthera epipactoides Fisch. & C.A.Mey.

Bolu: Çaydurt-Mengen road, 1.5 km from Mengen-Akahmetler road to Mengen road, forest, 715 m, N 40° 52.847' E 031° 53.282', 06.05.2016, Leg. A.Çelik-1683 *et al.*, Det. İ.Eker-2017.

Mediterranean element

Cephalanthera rubra (L.) Rich.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-511 *et al.*, Det. İ.Eker-2015; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-683 *et al.*, Det. İ.Eker-2015; Çaltepe, 6 km from Kadıköy Upland to Merkeşler Village, woodland, 1027 m, N 40° 52.320' E 031° 47.597', 26.06.2015, Leg. A.Çelik-831 *et al.*, Det. İ.Eker-2015. Merkeşler Village, 4 km from Merkeşler Village to Çaltepe, roadside slopes, 969 m, N 40° 52.452' E 031° 47.538', 26.06.2015, Leg. A.Çelik-888 *et al.*, Det. İ.Eker-2015; Tetemeçele Village, 7 km from Tetemeçele Village to Kadıköy Upland, forests, 1315 m, N 40° 51.807' E 031° 45.032', 27.07.2015, Leg. A.Çelik-1118 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 1 km from Merkeşler Village to Merkeşler Upland, roadside, 998 m, N 40° 52.108' E 031° 47.850', 04.06.2016, Leg. A.Çelik-1729 *et al.*, Det. İ.Eker-2017; Mengen, 4 km from

Avşar Village to Çaltepe, Çaltepe eastern slopes, forest clearance, 730 m, N 40° 52.642' E 031° 49.817', 25.06.2016, Leg. A.Çelik-2018 *et al.*, Det. İ.Eker-2016.

DACTYLORHIZA Neck.

Dactylorhiza nieschalkiorum H.Baumann & Künkele

Bolu: On the Tetemeçe Village, 9 km from Çaltepe-Çeletepe junction to Çaltepe-Kadıköy Upland, roadside and forest clearance, 1504 m, N 40° 52.765' E 031° 44.797', 26.06.2015, Leg. A.Çelik-817 *et al.*, Det. İ.Eker-2015; Upper Tetemeçe Village, 4 km from Çaltepe-Çeletepe crossroad to Çaltepe-Kadıköy Upland, meadows, 1363 m, N 40° 52.153' E 031° 44.682', 26.06.2015, Leg. A.Çelik-813 *et al.*, Det. İ.Eker-2015.

Endemic

Dactylorhiza romana (Sebast.) Soó subsp. ***romana***

Bolu: Çaltepe, on the Çaltepe-Tetemeçe Village road, 3 km to Tetemeçe Village, woodland, 1537 m, N 40° 51.691' E 031° 44.507', 26.05.2015, Leg. A.Çelik-822 *et al.*, Det. İ.Eker-2017.

Mediterranean element

EPIPACTIS Zinn

Epipactis persica (Soó) Hausskn. ex Nannf.

Bolu: Yedigöller road, 14 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1292 m, N 40° 53.362' E 031° 44.835', 03.08.2015, Leg. A.Çelik-1213 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 1.3 km from Kadıköy Upland to Merkeşler Village, forest, 1477 m, N 40° 52.813' E 031° 45.792', 09.08.2015, Leg. A.Çelik-1284 *et al.*, Det. İ.Eker-2015; Yedigöller road, above Sarıyer Upland, roadside slopes, 1195 m, N 40° 50.200' E 031° 39.740', 03.08.2015, Leg. A.Çelik-1150 *et al.*, Det. İ.Eker-2017.

Epipactis helleborine (L.) Crantz subsp. ***helleborine***

Bolu: Tetemeçe Village, 6 km from Tetemeçe Village to Kadıköy Upland, roadside slopes, 1416 m, N 40° 52.007' E 031° 44.433', 27.07.2015, Leg. A.Çelik-1109 *et al.*, Det. İ.Eker-2017; Çaltepe northern mountains, Kapankayası, forests and stony area,

1192 m, N 40° 55.115' E 031° 42.642', 29.07.2017, Leg. A.Çelik-2280 & A.Kaya, Det. İ.Eker-2017; Tetemeçele Village, 7 km from Tetemeçele Village to Kadıköy Upland, forest, 1315 m, N 40° 51.807' E 031° 45.032', 27.07.2015, Leg. A.Çelik-1116 *et al.*, Det. İ.Eker-2017; Kadıköy Upland, 1.3 km from Kadıköy Upland to Merkeşler Village, forest, 1477 m, N 40° 52.813' E 031° 45.792', 09.08.2015, Leg. A.Çelik-1285 *et al.*, Det. İ.Eker-2017.

Epipactis turcica Kreutz

Bolu: Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1023 *et al.*, Det. İ.Eker-2017; Mengen, Merkeşler Upland, 22 km from Afşar Village to Merkeşler Upland, Çaltepe eastern slopes, meadows, 1214 m, N 40° 54.160' E 031° 48.202', 23.07.2015, Leg. A.Çelik-1024 *et al.*, Det. İ.Eker-2017; Tetemeçele Village, 7 km from Tetemeçele Village to Kadıköy Upland, forests, 1315 m, N 40° 51.807' E 031° 45.032', 27.07.2015, Leg. A.Çelik-1115 *et al.*, Det. İ.Eker-2017.

EPIPOGIUM J.G.Gmel. ex Borkh.

Epipogium aphyllum Sw.

Bolu: Kadıköy Upland, 1.3 km from Kadıköy Upland to Merkeşler Village, forest, 1477 m, N 40° 52.813' E 031° 45.792', 09.08.2015, Leg. A.Çelik-1287 *et al.*, Det. İ.Eker-2016; Yedigöller road, 4.5 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1229 m, N 40° 53.258' E 031° 42.355', 03.08.2015, Leg. A.Çelik-1202 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Village, above Merkeşler Village, forest, 1458 m, N 40° 52.763' E 031° 45.778', Leg. A.Çelik-2237 & A.Kaya, Det. İ.Eker-2017.

Euro-Siberian element

HIMANTOGLOSSUM Spreng.

Himantoglossum caprinum (M.Bieb.) Spreng.

Bolu: Hamzabey Village, 1.3 km from Hamzabey Village to Çukurören Village, cultivated field, 1076 m, N 40° 47.745' E 031° 39.317', 11.08.2015, Leg. A.Çelik-1338

et al., Det. İ.Eker-2015; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-701 *et al.*, Det. İ.Eker-2017; Çaltepe, 6 km from Kadıköy Upland to Merkezler Village, woodland, 1027 m, N 40° 52.320' E 031° 47.597', 26.06.2015, Leg. A.Çelik-830 *et al.*, Det. İ.Eker-2015; Banaz Village, Around the Banaz Village, fields clearance, 895 m, N 40° 47.807' E 031° 42.918', 12.07.2015, Leg. A.Çelik-835 *et al.*, Det. İ.Eker-2017; Banaz Village, 2 km from Banaz Village to Çobankaya Village, rocky slopes, 1054 m, N 40° 49.587' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1055 *et al.*, Det. İ.Eker-2015; Merkezler Village, 1 km from Merkezler Village to Merkezler Upland, roadside, 998 m, N 40° 52.108' E 031° 47.850', 04.06.2016, Leg. A.Çelik-1728 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

LIMODORUM Boehm.

Limodorum abortivum (L.) Sw. var. ***abortivum***

Bolu: Kadıköy Upland, 2 km from Kadıköy Upland to Çeletepe, roadside and rocky slopes, 1605 m, N 40° 52.735' E 031° 44.583', 09.08.2015, Leg. A.Çelik-1267 *et al.*, Det. İ.Eker-2016; Banaz Village, 1 km from Banaz Village to Değirmenderesi Village, meadows, 897 m, N 40° 49.017' E 031° 44.465', 25.06.2016, Leg. A.Çelik-1961 *et al.*, Det. İ.Eker-2016; Merkezler Village, 1 km from Merkezler Village to Merkezler Upland, roadside, 998 m, N 40° 52.108' E 031° 47.850', 04.06.2016, Leg. A.Çelik-1727 *et al.*, Det. İ.Eker-2017; Çelegölcük orman deposu üstü, orman içi, 1209 m, N 40° 49.870' E 031° 40.997', Leg. A.Çelik-1829 *et al.*, Det. İ.Eker-2017.

NEOTINEA Rchb.f.

Neotinea tridentata (Scop.) R.M.Bateman, Pridgeon & M.W.Chase

Bolu: Çaydurt-Mengen road, 24 km from Bolu city center to Taşcılar Village, Taşcılar Village crossroad, rocky slopes, 667 m, N 40° 48.677' E 031° 47.192', 06.05.2016, Leg. A.Çelik-1672 *et al.*, Det. İ.Eker-2017.

Mediterranean element

NEOTTIA Guett.

Neottia nidus-avis (L.) Rich.

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky areas, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-430 *et al.*, Det. İ.Eker-2015; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-468 *et al.*, Det. İ.Eker-2015; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-526 *et al.*, Det. İ.Eker-2015; Yedigöller road, 13 km from Gurbettaşı to eastern Çaltepe, forests, 1295 m, N 40° 53.340' E 031° 45.007', 21.06.2015, Leg. A.Çelik-592 *et al.*, Det. İ.Eker-2015; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-786 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 1 km from Kadıköy Upland to Çaltepe, forest, 1519 m, N 40° 53.335' E 031° 45.592', 27.07.2015, Leg. A.Çelik-1125 *et al.*, Det. İ.Eker-2015; Yedigöller road, 4.5 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1229 m, N 40° 53.258' E 031° 42.355', 03.08.2015, Leg. A.Çelik-1203 *et al.*, Det. İ.Eker-2015; Yedigöller road, 14 km from Gurbettaşı crossroad to Çaltepe-Sarımustan, roadside and forest, 1292 m, N 40° 53.362' E 031° 44.835', 03.08.2015, Leg. A.Çelik-1210 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 1.3 km from Kadıköy Upland to Merkezler Village, forest, 1477 m, N 40° 52.813' E 031° 45.792', 09.08.2015, Leg. A.Çelik-1286 *et al.*, Det. İ.Eker-2015; Kadıköy Upland, 2 km from Kadıköy Upland to Merkezler Village, roadside, 1400 m, N 40° 52.888' E 031° 46.018', 16.10.2015, Leg. A.Çelik-1502 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

OPHRYS L.

Ophrys apifera Huds.

Bolu: Çaltepe, 6 km from Kadıköy Upland to Merkezler Village, woodland, 1027 m, N 40° 52.320' E 031° 47.597', 26.06.2015, Leg. A.Çelik-832 *et al.*, Det. İ.Eker-2015; Banaz Village, Around the Banaz Village, fields clearance, 895 m, N 40° 47.807' E 031° 42.918', 12.07.2015, Leg. A.Çelik-834 *et al.*, Det. İ.Eker-2015; Hamzabey Village, 1.3 km from Hamzabey Village to Çukurören Village, cultivated field, 1076

m, N 40° 47.745' E 031° 39.317', 11.08.2015, Leg. A.Çelik-1337 *et al.*, Det. İ.Eker-2015; Yedigöller road, 7 km from Bolu city center to Yedigöller road, Dumantepe Villas below, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 16.06.2016, Leg. A.Çelik-1763 *et al.*, Det. İ.Eker-2017.

Ophrys oestrifera* M.Bieb. subsp. *oestrifera

Bolu: Mengen, 4 km from Avşar Village to Çaltepe, Çaltepe eastern slopes, forest clearance, 730 m, N 40° 52.642' E 031° 49.817', 25.06.2016, Leg. A.Çelik-2017 *et al.*, Det. İ.Eker-2016; Merkeşler Village, 1 km from Merkeşler Village to Merkeşler Upland, roadside, 998 m, N 40° 52.108' E 031° 47.850', 04.06.2016, Leg. A.Çelik-1726 *et al.*, Det. İ.Eker-2017.

***Ophrys transhyrcana* Czerniak. subsp. *paphlagonica* Kreutz**

Bolu: Yedigöller road, 8 km from Bolu city center to Yedigöller road, roadside, 944 m, N 40° 47.215' E 031° 38.200', Leg. A.Çelik-1799 *et al.*, Det. İ.Eker-2017.

***ORCHIS* Tourn. ex L.**

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

Bolu: Yedigöller road, Çele Gölcük forest warehouse surroundings, roadside and forest, 1252 m, N 40° 50.410' E 031° 39.925', 09.05.2015, Leg. A.Çelik-128 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 06.02.2015, Leg. A.Çelik-262 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-292 *et al.*, Det. İ.Eker-2015; Çaltepe southern slopes, roadside, 1204 m, N 40° 53.027' E 031° 48.458', Leg. A.Çelik-332 *et al.*, Det. İ.Eker-2015; Yedigöller road, Yığılca crossroad, forests, 1184 m, N 40° 50.768' E 031° 39.515', 21.06.2015, Leg. A.Çelik-522 *et al.*, Det. İ.Eker-2015; *ibid.*, 03.08.2015, Leg. A.Çelik-1153 *et al.*, Det. İ.Eker-2015.

Mediterranean element

***Orchis pallens* L.**

Bolu: Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-78 *et al.*, Det. İ.Eker-2015; Bolu Çaltepe, Merkeşler Upland surroundings, alpine meadows, 1786 m, N 40° 53.863' E 031° 46.863', 27.05.2015, Leg. A.Çelik-190 *et al.*, Det. İ.Eker-2015; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-372 *et al.*, Det. İ.Eker-2015; Çaltepe summit, above Merkeşler Upland, alpine meadows, 1824 m, N 40° 53.785' E 031° 46.765', 27.07.2015, Leg. A.Çelik-1131 *et al.*, Det. İ.Eker-2015.

Euro-Siberian element

Orchis purpurea* Huds. subsp. *purpurea

Bolu: Mengen, Afşar Village, 11 km from Bolu-Mengen road to Afşar Şevkioglu district, roadside slopes, 1043 m, N 40° 53.618' E 031° 49.267', 23.07.2015, Leg. A.Çelik-970 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Orchis simia* Lam.**

Bolu: Merkeşler Village, 11 km from Merkeşler Village to Çaltepe, roadside and rocky areas, 1138 m, N 40° 52.792' E 031° 46.718', 02.06.2015, Leg. A.Çelik-308 *et al.*, Det. İ.Eker-2015; Çukurören Village, 4 km from Çukurören Village to Yeniköy Upland, roadside, 1176 m, N 40° 50.165' E 031° 39.732', 16.06.2016, Leg. A.Çelik-1823 *et al.*, Det. İ.Eker-2017.

Mediterranean element

***PLATANThERA* Rich.**

***Platanthera chlorantha* (Custer) Rchb.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-642 *et al.*, Det. İ.Eker-2015; Yedigöller road, 16 km from Bolu city center to Çele Gölcük forestry warehouse, roadside, 1142 m, N 40° 49.572' E 031° 40.708', 26.06.2015, Leg. A.Çelik-773 *et al.*, Det. İ.Eker-2015;

Tetemeçele Village, 7 km from Tetemeçele Village to Kadıköy Upland, forests, 1315 m, N 40° 51.807' E 031° 45.032', 27.07.2015, Leg. A.Çelik-1117 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 5 km from Merkeşler Village to Çaltepe, forest, 1046 m, N 40° 52.425' E 031° 47.448', 16.10.2015, Leg. A.Çelik-1493 *et al.*, Det. İ.Eker-2015; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-212 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 1 km from Merkeşler Village to Merkeşler Upland, roadside, 998 m, N 40° 52.108' E 031° 47.850', 04.06.2016, Leg. A.Çelik-1724 *et al.*, Det. İ.Eker-2017.

SPIRANTHES Rich.

Spiranthes spiralis (L.) Chevall.

Bolu: Yedigöller road, above Yeniköy Upland, forest clearance, 1133 m, N 40° 49.362' E 031° 39.712', 10.09.2015, Leg. A.Çelik-1433 *et al.*, Det. İ.Eker-2015; Mesciçele Village and its surroundings, meadows, 1127 m, N 40° 50.572' E 031° 42.950', 17.09.2015, Leg. A.Çelik-1481 *et al.*, Det. İ.Eker-2015; Tetemeçele Village, 1 km from Tetemeçele Village to Kadıköy Upland, meadows, 1079 m, N 40° 50.925' E 031° 44.105', Leg. A.Çelik-1488 *et al.*, Det. İ.Eker-2017; Yedigöller road, 1 km from Çukurören Village to Çele Gölcük forestry warehouse, serpentine slopes, 1031 m, N 40° 49.042' E 031° 39.657', 03.09.2016, Leg. A.Çelik-2145 *et al.*, Det. İ.Eker-2017.

Mediterranean element

ORDER: POALES

FAMILY: CYPERACEAE

CAREX L.

Carex caryophylla Latourr.

Bolu: Semerciler Village, 1.4 km from Semerciler Village to Merkeşler Village, forest, 870 m, N 40° 51.097' E 031° 48.312', 08.04.2016, Leg. A.Çelik-1556 *et al.*, Det. İ.Eker-2017.

New record, Euro-Siberian element

Carex flacca Schreb. subsp. *erythrostachys* (Hoppe) Holub (Syn. *Carex flacca* Schreb. subsp. *serrulata* (Biv.) Greuter)

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-228 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-412 *et al.*, Det. İ.Eker-2017.

Mediterranean element

Carex pendula Huds.

Bolu: Çaltepe southern slopes, 5 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-321 *et al.*, Det. İ.Eker-2015; Çeletepe, Çeletepe summit, Gurbettaşı road, rocky area, 1670 m, N 40° 51.648' E 031° 41.387', 09.06.2017, Leg. A.Çelik-2261 *et al.*, Det. A.Çelik & A.Kaya-2017; Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-591 *et al.*, Det. İ.Eker-2017; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1873 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

FAMILY: JUNCACEAE

***JUNCUS* L.**

Juncus effusus L. subsp. *effusus*

Bolu: Yedigöller road, 7 km from Gurbettaşı to eastern Çaltepe, forests, 1122 m, N 40° 53.563' E 031° 43.402', 21.06.2015, Leg. A.Çelik-580 *et al.*, Det. İ.Eker-2017; Çeletepe, Sarımustan district, North of Kadıköy Upland, stream edge, 1229 m, N 40° 53.283' E 031° 42.728', Leg. A.Çelik-1879 *et al.*, Det. A.Çelik-2017.

Juncus inflexus L. subsp. *inflexus*

Bolu: Merkeşler Village, Upper Merkeşler Village, open forests, 1040 m, N 40° 52.313' E 031° 47.340', 02.06.2015, Leg. A.Çelik-277 *et al.*, Det. İ.Eker-2017; Bağışlar Village, 5 km from Bağışlar Village to Merkeşler Upland, rocky slopes, 1059

m, N 40° 51.605' E 031° 45.825', 16.08.2015, Leg. A.Çelik-1429 *et al.*, Det. İ.Eker-2017; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-785 *et al.*, Det. İ.Eker-2017; Mengen, Avşar Village and its surroundings, forests and stream edge, 893 m, N 40° 52.743' E 031° 50.555', 23.06.2016, Leg. A.Çelik-1926 *et al.*, Det. İ.Eker-2017.

LUZULA DC.

***Luzula campestris* (L.) DC.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1884 m, N 40° 53.610' E 031° 46.565', 21.06.2015, Leg. A.Çelik-636 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-410 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***Luzula forsteri* (Sm.) DC. subsp. *caspica* Novikov**

Bolu: Merkeşler Village, 1 km from Merkeşler Village to Çaltepe, forest clearance, 981 m, N 40° 52.155' E 031° 47.803', 08.04.2016, Leg. A.Çelik-1562 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

Luzula multiflora* (Ehrh.) Lej. subsp. *multiflora

Bolu: Yedigöller road, 500 m to Çele Gölcük forestry warehouse road crossroad, forests, 867 m, N 40° 50.660' E 031° 39.735', 09.05.2015, Leg. A.Çelik-84 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-411 *et al.*, Det. E.Cabi-2017.

FAMILY: POACEAE (GRAMINEAE)

***AEGILOPS* L.**

***Aegilops geniculata* Roth**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, N 40° 46.213' E 031° 37.988', 26.06.2015, Leg. A.Çelik-702 *et al.*, Det. İ.Eker-2017.

Mediterranean element

***AGROTIS* L.**

***Agrostis stolonifera* L.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-491 *et al.*, Det. E.Cabi-2017; Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-496 *et al.*, Det. E.Cabi-2017; Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-789 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

***AIRA* L.**

Aira elegantissima* Schur subsp. *elegantissima

Bolu: Çeletepe summit, alpine meadows, 1987 m, N 40° 51.940' E 031° 42.123', 03.08.2015, Leg. A.Çelik-1223 *et al.*, Det. E.Cabi-2017.

Mediterranean element

***ANTHOXANTHUM* L.**

***Anthoxanthum odoratum* L. subsp. *alpinum* (A.Löve & D.Löve) B.M.G.Jones & Melderis**

Bolu: Yedigöller road, 1 km before Yığılca road crossroad, roadside, 1681 m, N 40° 86.722' E 031° 69.040', 09.05.2015, Leg. A.Çelik-92 *et al.*, Det. E.Cabi-2017; Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-177 *et al.*, Det. E.Cabi-2017; Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-208 *et al.*, Det. E.Cabi-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-341 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

***AVENA* L.**

Avena barbata* Pott ex Link subsp. *barbata

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-172 *et al.*, Det. B. Çingay-2015; Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-206 *et al.*, Det. E.Cabi-2017; Kadıköy Upland, between Çaltepe and Çeletepe, meadows, 1556 m, N 40° 52.922' E 031° 45.165', 02.06.2015, Leg. A.Çelik-336 *et al.*, Det. E.Cabi-2017.

Mediterranean element

Avena sterilis* L. subsp. *sterilis

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-669 *et al.*, Det. İ.Eker-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-403 *et al.*, Det. E.Cabi-2017; Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1939 *et al.*, Det. İ.Eker-2017.

BOTHRIOCHLOA Kuntze

Bothriochloa ischaemum (L.) Keng

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-413 *et al.*, Det. E.Cabi-2017.

BRACHYPODIUM P.Beauv.

Brachypodium sylvaticum (Huds.) P.Beauv.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-498 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

BRIZA L.

Briza media L.

Bolu: Yedigöller road, 23 km to Yedigöller around the Gurbettaşı, rocky area, 1648 m, N 40° 52.582' E 031° 41.403', 03.08.2015, Leg. A.Çelik-1174 *et al.*, Det. B. Çingay-2015; Merkeşler Village, Merkeşler Village and its surroundings, roadside slopes, 1077 m, N 40° 53.007' E 031° 47.735', 12.07.2015, Leg. A.Çelik-904 *et al.*, Det. İ.Eker-2017; Merkeşler Upland its surroundings, forest clearance, 1714 m, N 40° 53.977' E 031° 46.838', 06.09.2016, Leg. A.Çelik-2188 *et al.*, Det. İ.Eker-2017; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2297 & A.Kaya, Det. İ.Eker-2017

BROMUS L.

Bromus hordeaceus L. subsp. *hordeaceus*

Bolu: Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1068 *et al.*, Det. E.Cabi-2017.

Bromus japonicus Thunb. subsp. *japonicus*

Bolu: Merkeşler Village, 1 km from Merkeşler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-934 *et al.*, Det. E.Cabi-2017; Çaltepe, Merkeşler Upland, alpine meadows and rocky area, 1743 m, N 40° 51.923' E 031° 46.908', 26.08.2017, Leg. A.Çelik-2315 & A.Kaya, Det. E.Cabi-2017.

Bromus tectorum L.

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-497 *et al.*, Det. E.Cabi-2017.

CALAMAGROSTIS Adans.

Calamagrostis epigejos (L.) Roth

Bolu: Mengen, Afşar Village, 13.5 km from Afşar Şevkioğlu district to Merkeşler Upland, Çaltepe eastern slopes, forests, 1168 m, N 40° 53.675' E 031° 48.555', 23.07.2015, Leg. A.Çelik-982 *et al.*, Det. E.Cabi-2017; Çaltepe eastern slopes, forest clearance, 1104 m, 40° 53.570' E 031° 48.773', 11.08.2016, Leg. A.Çelik-2081 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

CHRYSOPOGON Trin.

Chrysopogon gryllus (L.) Trin.

Bolu: Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1887 *et al.*, Det. E.Cabi-2017.

New record

CYNOSURUS L.

***Cynosurus cristatus* L.**

Bolu. Mesciçele Village, Mesciçele Kansuzlar district and its surroundings, meadows, 1197 m, N 40° 50.738' E 031° 43.110', 27.07.2015, Leg. A.Çelik-1081 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

***Cynosurus echinatus* L.**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-674 *et al.*, Det. E.Cabi-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-601 *et al.*, Det. E.Cabi-2017; Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1066 *et al.*, Det. E.Cabi-2017; Mengen road, Taşcılar Village and its surroundings, meadows, 668 m, N 40° 48.702' E 031° 47.270', 23.06.2016, Leg. A.Çelik-1889 *et al.*, Det. E.Cabi-2017; Merkezler Village, 1 km from Merkezler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-939 *et al.*, Det. E.Cabi-2017.

Mediterranean element

DACTYLIS L.

Dactylis glomerata* L. subsp. *glomerata

Bolu: Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-415 *et al.*, Det. E.Cabi-2017; Çaltepe southern slopes, 6 km from Merkezler Village to Çaltepe southern slopes, roadside, 1168 m, N 40° 53.568' E 031° 48.017', 02.06.2015, Leg. A.Çelik-326 *et al.*, Det. İ.Eker-2017; Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-447 *et al.*, Det. İ.Eker-2017.

Euro-Siberian element

***ELYMUS* L.**

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

Bolu: Mesciçele Village, Mesciçele Madanlar district and its surroundings, meadows, 1057 m, N 40° 49.585' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1067 *et al.*, Det. E.Cabi-2017.

***Elymus repens* (L.) Gould**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-678b *et al.*, Det. E.Cabi-2017.

***FESTUCA* L.**

***Festuca drymeja* Mert. & W.D.J.Koch**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-494 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

***HELICTOTRICHON* Besser**

***Helictotrichon versicolor* (Vill.) Schult. & Schult.f.**

Bolu: Çeletepe, Banaz Upland and its surroundings, meadows, 1671 m, N 40° 51.712' E 031° 42.527', 16.06.2016, Leg. A.Çelik-1843 *et al.*, Det. E.Cabi-2017; Çeletepe, Yedierenler Hill and its surroundings, subalpine meadows, 1960 m, N 40° 52.172' E 031° 42.827', 16.06.2016, Leg. A.Çelik-1856 *et al.*, Det. E.Cabi-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-609 *et al.*, Det. E.Cabi-2017.

New record, Euro-Siberian element

***HORDEUM* L.**

***Hordeum bulbosum* L.**

Bolu: Yedierenler Hill road, 3 km from Çele Gölcük forestry warehouse from Banaz Upland, roadside slopes, 1432 m, N 40° 50.617' E 031° 41.450', 26.06.2015, Leg. A.Çelik-794 *et al.*, Det. E.Cabi-2017; Çaltepe, 16 km from Tetemeçele Village to Çaltepe, stony and rocky slopes, 1761 m, N 40° 54.002' E 031° 46.837', 16.06.2015, Leg. A.Çelik-416 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 8 km from right road on Çaltepe to Çaltepe southern slopes, forests, 1030 m, N 40° 53.048' E 031° 47.980', 12.07.2015, Leg. A.Çelik-917 *et al.*, Det. İ.Eker-2017; Banaz Village, 2 km from Banaz Village to Çobankaya Village, rocky slopes, 1054 m, N 40° 49.587' E 031° 43.235', 27.07.2015, Leg. A.Çelik-1057 *et al.*, Det. İ.Eker-2017.

***Hordeum murinum* L. subsp. *leporinum* (Link) Arcang.**

Bolu: Bahçeköy Village and its surroundings, roadside and cultivated fields, 726 m, N 40° 46.178' E 031° 42.312', 25.06.2016, Leg. A.Çelik-1935 *et al.*, Det. A.Çelik & A.Kaya-2017; *ibid.*, 25.06.2016, Leg. A.Çelik-1940 *et al.*, Det. E.Cabi-2017.

Rare, Irano-Turanian element

***HOLCUS* L.**

***Holcus lanatus* L.**

Bolu: Tetemeçele Village, 2 km from Tetemeçele Village to Çaltepe-Çeletepe, forest clearance, 1225 m, N 40° 51.285' E 031° 44.177', 27.07.2015, Leg. A.Çelik-1105 *et al.*, Det. E.Cabi-2018.

Euro-Siberian element

***KOELERIA* Pers.**

***Koeleria pyramidata* (Lam.) P.Beauv. (Syn. *Koeleria cristata* Pers.)**

Bolu: Merkeşler Village, 1 km from Merkeşler-Dere district to Çaltepe eastern slopes, roadside slopes, 835 m, N 40° 52.572' E 031° 48.163', 12.07.2015, Leg. A.Çelik-938 *et al.*, Det. E.Cabi-2017.

Rare, Euro-Siberian element

LOLIUM L.

***Lolium perenne* L.**

Bolu: Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 835 m, N 40° 46.275' E 031° 37.997', 11.08.2015, Leg. A.Çelik-1308 *et al.*, Det. E.Cabi-2017; Yedigöller road, 5 km from Bolu city center to Yedigöller, around Dumantepe villas, cultivated fields, 847 m, 40° 46.213' N 031° 37.988' E, 26.06.2015, Leg. A.Çelik-678a *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

MELICA L.

Melica ciliata* L. subsp. *ciliata

Bolu: Çeletepe, 2 km from Gurbetteşı to Sarımustan, forests and wetland, 1484 m, N 40° 52.542' E 031° 41.788', 03.09.2016, Leg. A.Çelik-2151 *et al.*, Det. E.Cabi-2017; Çaltepe, 900 m to Merkeşler Upland, Çaltepe southern slopes, rocky area, 1716 m, N 40° 53.415' E 031° 46.190', 29.07.2017, Leg. A.Çelik-2291 & A.Kaya, Det. E.Cabi-2017.

PHLEUM L.

***Phleum alpinum* L.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-406 *et al.*, Det. E.Cabi-2017.

New record, Euro-Siberian element

POA L.

***Poa angustifolia* L.**

Bolu: Yedigöller road, 2.5 km from Çukurören Village to Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-499 *et al.*, Det. E.Cabi-2017.

***Poa annua* L.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-408 *et al.*, Det. B. Çıngay-2015; Tetemeçele Village and its surroundings, roadside, 975 m, N 40° 50.473' E 031° 44.552', 08.04.2016, Leg. A.Çelik-1617 *et al.*, Det. E.Cabi-2017.

***Poa asiaeminoris* H.Scholz & Byfield**

Bolu: Çaltepe, Çaltepe surroundings, meadows, 1632 m, N 40° 53.565' E 031° 46.215', 16.06.2015, Leg. A.Çelik-446 *et al.*, Det. E.Cabi-2017.

Endemic

***Poa bulbosa* L. (Syn. *Poa bulbosa* L. subsp. *vivipara* (Koeler) Arcang.)**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-404 *et al.*, Det. B. Çıngay-2015; Between Yeşilçele Village and Mesciçele Village, meadows, 1140 m, N 40° 50.543' E 031° 43.010', 01.05.2015, Leg. A.Çelik-37 *et al.*, Det. İ.Eker-2017; Çaltepe, Kadıköy Upland surroundings, meadows, 1057 m, N 40° 52.918' E 031° 45.120', 09.05.2015, Leg. A.Çelik-207 *et al.*, Det. İ.Eker-2017; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-213 *et al.*, Det. A.Kaya-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-407 *et al.*, Det. E.Cabi-2017; Çaltepe, Kadıköy Upland, meadows, 1551 m, N 40° 52.915' E 031° 45.147', 21.06.2015, Leg. A.Çelik-600 *et al.*, Det. İ.Eker-2017; *ibid.*, 21.06.2015, Leg. A.Çelik-602 *et al.*, Det. İ.Eker-2017.

***Poa pratensis* L.**

Bolu: Çaltepe, Çaltepe Summit, alpine meadows, 1823 m, N 40° 53.898' E 031° 47.175', 27.05.2015, Leg. A.Çelik-173 *et al.*, Det. E.Cabi-2017.

***Poa sterilis* M.Bieb.**

Bolu: Çaltepe southern slopes, 5 km from Merkeşler Village to Çaltepe southern slopes, roadside, 1159 m, N 40° 53.495' E 031° 47.919', 02.06.2015, Leg. A.Çelik-323 *et al.*, Det. E.Cabi-2017; Yedigöller road, 2.5 km from Çukurören Village to

Yedigöller, roadside and stony slopes, 1325 m, N 40° 50.024' E 031° 39.660', 21.06.2015, Leg. A.Çelik-495 *et al.*, Det. E.Cabi-2017; Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-405 *et al.*, Det. E.Cabi-2017.

New record

***Poa trivialis* L.**

Bolu: Çaltepe, Merkeşler Upland, Northeastern Merkeşler Upland, forests, 1637 m, N 40° 54.265' E 031° 47.070', 16.06.2015, Leg. A.Çelik-409 *et al.*, Det. B. Çingay-2015; Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, N 40° 52.490' E 031° 47.388', 02.06.2015, Leg. A.Çelik-227 *et al.*, Det. E.Cabi-2017.

***SESLERIA* Scop.**

***Sesleria alba* Sm.**

Bolu: Çaltepe, Merkeşler Village and its surroundings, forest clearance and meadow, 1717 m, N 40° 54.002' E 031° 46.898', 09.06.2017, Leg. A.Çelik-2219 & A.Kaya, Det. E.Cabi-2017.

***TRisetum* Pers.**

***Trisetum flavescens* (L.) P.Beauv.**

Bolu: Merkeşler Village, 2 km from Merkeşler Village to Çaltepe, forests, 1048 m, 40° 52.490' N 031° 47.388' E, 02.06.2015, Leg. A.Çelik-221 *et al.*, Det. E.Cabi-2017.

Euro-Siberian element

FAMILY: TYPHACEAE

***TYPHA* L.**

***Typha latifolia* L.**

Bolu: Yedigöller road, 10 km from Gurbattaşı to Çaltepe Kadıköy Upland, roadside and marsh, 1290 m, N 40° 53.267' E 031° 44.683', 10.09.2015, Leg. A.Çelik-1449 *et al.*, Det. İ.Eker-2016.

4.2 Results

In the research area, 39 days of fieldwork was conducted between 2015–2018, and 2340 plant samples were collected from 19 main stations and substations. As a result of the diagnosis of these samples, 768 taxa (746 species) were identified, of which 66 were endemic and 4 rare, belonging to 81 families and 363 genera. 15 of the taxa belong to the division Pteridophyta and the remaining 753 taxa belong to the division Spermatophyta. Five of the spermatophytic taxa are belong to Gymnospermae and 748 belong to Angiospermae. Of the 748 taxa belonging to Angiospermae, 109 belong to Monocotylodoneae and 639 belong to Dicotylodoneae (Figure 4).

In the research area, characteristic vegetation types of Black Sea climate are seen. That is, forest, distorted forest, steppe, subalpine, alpine, rock, river and moist creek vegetation types are seen. Generally, below 1000 m, settlements, culture areas, degraded forests and steppe vegetation are observed. In these altitudes, the forest formation is characterized by the large-leaved *Quercus* spp., *Crataegus* spp., *Prunus* spp., *Corylus* spp., *Salix* spp. and coniferous *Abies nordmanniana* subsp. *equi-trojani* and *Pinus* spp. In the vicinity of the upper Kadıköy Plateau (1000–1500 m high) close to the north facing, the dominant species is Kazdağı fir (*Abies nordmanniana* subsp. *equi-trojani*). Also, beech (*Fagus orientalis*) and hornbeam (*Carpinus betulus*) are intermingled in some places. On the south side, the black pine (*Pinus nigra* subsp. *pallasiana*) and yellow pine (*Pinus sylvestris* var. *hamata*) are dominant, but occasionally beech and hornbeam appear. In the southeastern region, up to 1200 m, mainly the oak species (*Quercus petraea* subsp. *iberica*, *Quercus pubescens* subsp. *pubescens*, *Quercus infectoria* subsp. *infectoria*, *Quercus macranthera* subsp. *sypirensis*) are included in the forest composition. This composition is accompanied by the cade juniper (*Juniperus oxycedrus* subsp. *oxycedrus* var. *oxycedrus*) in the southern and southeastern parts under 1200 m. At the 1700 m elevations where the subalpine zone is observed, dwarf juniper (*Juniperus communis* var. *saxatilis*) is dominant; geophytes, some alpine plants and moist plains dominate the alpine parts of both integrated mountain masses (Çeletepe and Çaltepe). At the creek edges, there are some trees such as poplar (*Populus nigra* subsp. *nigra*, *Populus tremula* subsp. *tremula*), willow (*Salix alba* subsp. *alba*, *Salix caprea*), nut (*Corylus avellana* var. *avellana*), common alder (*Alnus glutinosa* subsp. *glutinosa*) and some hygrophilous

plant species such as horsetails (*Equisetum* spp.) and saxifrages (*Saxifraga* spp.). *Salix caprea*, *Populus nigra* subsp. *nigra*, *Rosa canina*, *Colutea cilicica*, *Rubus* spp. are common tree and shrub species of dry creek bed in summer. On the other hand, common herbaceous species are *Chenopodium album*, *Mentha longifolia*, *Xanthium strumarium* L. subsp. *strumarium*, *Trifolium campastre* subsp. *campestre* var. *campestre*, *Lamium purpureum* var. *purpureum*, *Euphorbia pannonica*.

The distribution of taxa according to phytogeographical regions is as follows: 235 taxa (30.60%) Euro-Siberian, 64 taxa (8.33%) Mediterranean, 46 taxa (5.98%) Irano-Turanian and 423 taxa (55,07%) are the multizone and/or their phytogeographical regions are unknown (Figure 7). Of all the collected taxa, 66 are endemic and endemism rate is %8,59. The IUCN threat categories of endemic and rare plants are as follows: 1 taxon in “CR” category at global level, as well as 4 taxa “EN”, 4 taxa “VU”, 9 taxa “NT”, and 45 taxa “LC” (Table 3). Also there are 3 rare taxa which are found in the “VU” category and 1 rare taxon which is found in the “DD” category at regional level (Table 4). 57 taxa are the new records for the province of Bolu (Table 5).

The largest families in the study area are as follows: Asteraceae (97 taxa / %12,63), Fabaceae (62 taxa / %8,07), Lamiaceae (51 taxa / %6,64), Rosaceae (44 taxa / %5,73), Poaceae (37 taxa / %4,82), Brassicaceae (35 taxa / %4,56), Caryophyllaceae (32 taxa / %4,17), Apiaceae (28 taxa / %3,65), Boraginaceae (27 taxa / %3,52), Orchidaceae (24 taxa / %3,13). The number of plants of the 10 most common families constitutes %56,92 of the total number of plants (Figure 5).

The largest genera in the study area are as follows: the most common two genera are *Geranium* and *Silene* (each 12 taxa). The following genera are *Salvia* (11 taxa), *Trifolium*, *Veronica* and *Campanula* (each with 10 taxa), *Ranunculus*, *Euphorbia* and *Vicia* (each with 8 taxa), and *Poa* (7 taxa) (Figure 6).

Table 3. Endemic plants, IUCN categories and Population frequency identified in the research area.

No	Endemic plants name	IUCN categories	Population frequency
1	<i>Abies nordmanniana</i> subsp. <i>equi-trojani</i>	NT	Common
2	<i>Allium huber-morathii</i>	LC	Medium
3	<i>Allium olympicum</i>	LC	Low
4	<i>Arum hygrophilum</i> subsp. <i>euxinum</i>	LC	Medium
5	<i>Asperula pestalozzae</i>	LC	Rare
6	<i>Astragalus amoenus</i>	LC	Rare
7	<i>Astragalus condensatus</i>	LC	Low
8	<i>Astragalus mesogitanus</i>	LC	Common
9	<i>Astragalus panduratus</i>	EN	Rare
10	<i>Astrantia maxima</i> subsp. <i>haradjianii</i>	NT	Common
11	<i>Asyneuma rigidum</i> subsp. <i>sibtharpianum</i>	LC	Common
12	<i>Aubrieta olympica</i>	EN	Rare
13	<i>Campanula grandis</i> subsp. <i>grandis</i>	LC	Rare
14	<i>Campanula lyrata</i> subsp. <i>lyrata</i>	LC	Common
15	<i>Centaurea consanguinea</i>	LC	Low
16	<i>Cirsium sintenisii</i>	NE	Low
17	<i>Corydalis caucasica</i> subsp. <i>abantensis</i>	EN	Medium
18	<i>Corydalis wendelboi</i> subsp. <i>congesta</i>	EN	Common
19	<i>Crataegus tanacetifolia</i>	LC	Medium
20	<i>Crataegus x bornmuelleri</i>	NE	Rare
21	<i>Crocus ancyrensis</i>	NT	Common
22	<i>Cyanus pichleri</i> subsp. <i>extrarosularis</i>	LC	Rare
23	<i>Dactylorhiza nieschalkiorum</i>	VU	Medium
24	<i>Delphinium fissum</i> subsp. <i>anatolicum</i>	LC	Low
25	<i>Dianthus balansae</i>	LC	Medium
26	<i>Dianthus carmelitarum</i>	LC	Common
27	<i>Dianthus leucophaeus</i>	LC	Rare
28	<i>Digitalis lamarckii</i>	LC	Common
29	<i>Eryngium bithynicum</i>	LC	Common
30	<i>Euphorbia amygdaloides</i> var. <i>robbiae</i>	NT	Medium
31	<i>Helichrysum arenarium</i> subsp. <i>aucheri</i>	LC	Low
32	<i>Hieracium paphlagonicum</i>	LC	Rare
33	<i>Iris kerneriana</i>	LC	Rare
34	<i>Jurinea alpigena</i>	LC	Rare
35	<i>Jurinea pontica</i>	LC	Low
36	<i>Lamium purpureum</i> var. <i>aznavourii</i>	CR	Rare
37	<i>Lathyrus czechottianus</i>	LC	Rare
38	<i>Lathyrus tukhtensis</i>	LC	Rare
39	<i>Lathyrus undulatus</i>	VU	Medium
40	<i>Linaria genistifolia</i> subsp. <i>confertiflora</i>	LC	Low
41	<i>Linum hirsutum</i> subsp. <i>anatolicum</i> var. <i>anatolicum</i>	LC	Common
42	<i>Lonicera orientalis</i>	LC	Medium
43	<i>Melampyrum arvense</i> var. <i>elatius</i>	NT	Rare
44	<i>Minuartia erythrosepala</i> var. <i>cappadocica</i>	LC	Rare
45	<i>Muscari aucheri</i>	LC	Low
46	<i>Noccaea iberidea</i>	NE	Rare
47	<i>Onosma bornmuelleri</i>	LC	Common
48	<i>Onosma bracteosa</i>	LC	Rare
49	<i>Ornithogalum alpigenum</i>	NT	Rare
50	<i>Papaver pilosum</i> subsp. <i>pilosum</i>	LC	Rare
51	<i>Paracaryum paphlagonicum</i>	NT	Low

52	<i>Phlomis russeliana</i>	LC	Common
53	<i>Poa asiaeminoris</i>	NT	Rare
54	<i>Ptilostemon afer</i> subsp. <i>eburneus</i>	LC	Low
55	<i>Quercus macranthera</i> subsp. <i>sypirensis</i>	LC	Low
56	<i>Salvia tobeyi</i>	VU	Rare
57	<i>Sempervivum gillianiae</i>	LC	Medium
58	<i>Silene olympica</i> var. <i>olympica</i>	LC	Rare
59	<i>Trifolium aureum</i> subsp. <i>barbulatum</i>	LC	Rare
60	<i>Trifolium elongatum</i>	LC	Common
61	<i>Tripleurospermum rosellum</i> var. <i>album</i>	VU	Medium
62	<i>Turanecio hypochionaeus</i>	LC	Rare
63	<i>Verbascum abieticola</i>	LC	Low
64	<i>Verbascum bithynicum</i>	NT	Common
65	<i>Verbascum caudatum</i>	LC	Rare
66	<i>Vicia freyniana</i>	LC	Medium

Table 4. Rare plants and IUCN categories identified in the research area.

No	Rare plants name	IUCN categories
1	<i>Hordeum murinum</i> subsp. <i>leporinum</i>	DD
2	<i>Iris pumila</i> subsp. <i>attica</i>	VU
3	<i>Koeleria pyramidata</i>	VU
4	<i>Lilium martagon</i>	VU

Table 5. New records for Bolu determined in the research area.

No	Species name
1	<i>Anthriscus sylvestris</i>
2	<i>Astragalus panduratus</i>
3	<i>Asyneuma virgatum</i> subsp. <i>virgatum</i>
4	<i>Aubrieta olympica</i>
5	<i>Carex caryophyllea</i>
6	<i>Centaurea kotschyi</i> var. <i>persica</i>
7	<i>Chaerophyllum aureum</i>
8	<i>Chrysopogon gryllus</i>
9	<i>Cirsium sintenisii</i>
10	<i>Cnidium silaifolium</i> subsp. <i>orientale</i>
11	<i>Crepis reuterana</i> subsp. <i>reuterana</i>
12	<i>Echinops spinosissimus</i> subsp. <i>bithynicus</i>
13	<i>Erigeron acris</i> subsp. <i>pyncotrichus</i>
14	<i>Eruca vesicaria</i>
15	<i>Erysimum uncinatifolium</i>
16	<i>Gagea glacialis</i>
17	<i>Gagea fragifera</i>
18	<i>Galeopsis bifida</i>
19	<i>Geranium pusillum</i>
20	<i>Geranium rotundifolium</i>
21	<i>Glechoma hederacea</i>
22	<i>Helianthemum ovatum</i>
23	<i>Helictotrichon versicolor</i>
24	<i>Lathyrus corniculatus</i> var. <i>coniculatus</i>
25	<i>Lens ervoides</i>
26	<i>Lysimachia verticillaris</i>
27	<i>Medicago rigidula</i> var. <i>rigidula</i>
28	<i>Melampyrum arvense</i> var. <i>elatus</i>

29	<i>Minuartia juressi</i> subsp. <i>asiatica</i>
30	<i>Oenothera biennis</i>
31	<i>Onosma aucherana</i>
32	<i>Onosma bourgaei</i>
33	<i>Onosma bracteosa</i>
34	<i>Orobanche gracilis</i>
35	<i>Phacelia tanacetifolia</i>
36	<i>Phedimus stoloniferus</i>
37	<i>Phleum alpinum</i>
38	<i>Poa sterilis</i>
39	<i>Polygala alpestris</i>
40	<i>Polygala major</i>
41	<i>Polygala pruinosa</i> subsp. <i>pruinosa</i>
42	<i>Prangos ferulacea</i>
43	<i>Ribes uva-crispa</i>
44	<i>Rumex pulcher</i> subsp. <i>pulcher</i>
45	<i>Salvia tobeyi</i>
46	<i>Salvia verbenaca</i>
47	<i>Scleranthus perennis</i> subsp. <i>marginatus</i>
48	<i>Sempervivum gillianiae</i>
49	<i>Senecio othannae</i>
50	<i>Senecio viscosus</i>
51	<i>Silene armeria</i>
52	<i>Silene otites</i>
53	<i>Verbascum cheiranthifolium</i> var. <i>cheiranthifolium</i>
54	<i>Veronica orientalis</i> subsp. <i>orientalis</i>
55	<i>Vicia lathyroides</i>
56	<i>Vicia sepium</i>
57	<i>Vicia villosa</i> subsp. <i>villosa</i>

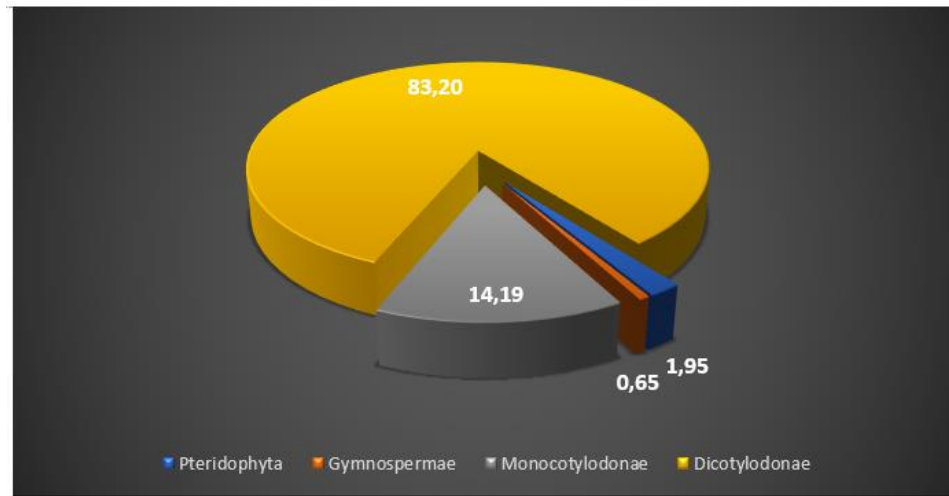


Figure 4. Spectrum of the distribution of species according to major taxa.

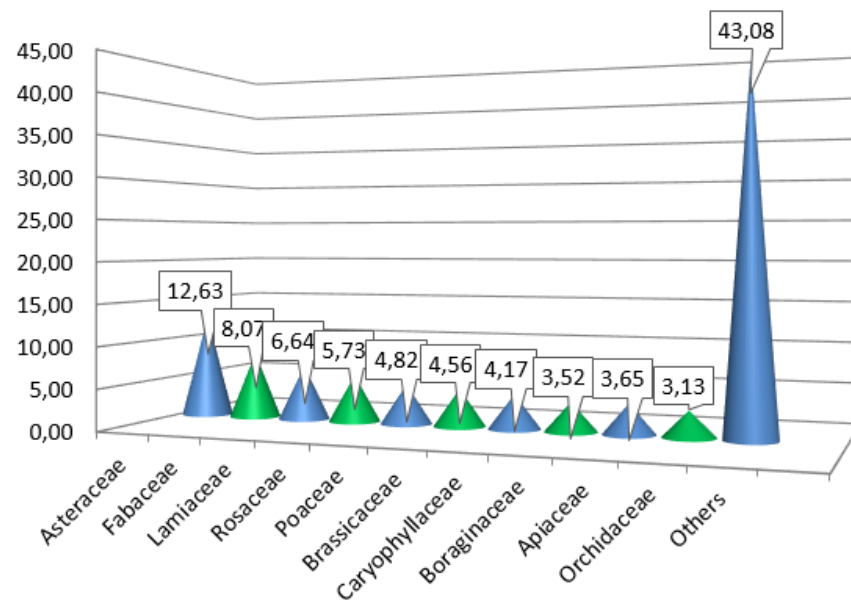


Figure 5. The largest families in the study area.

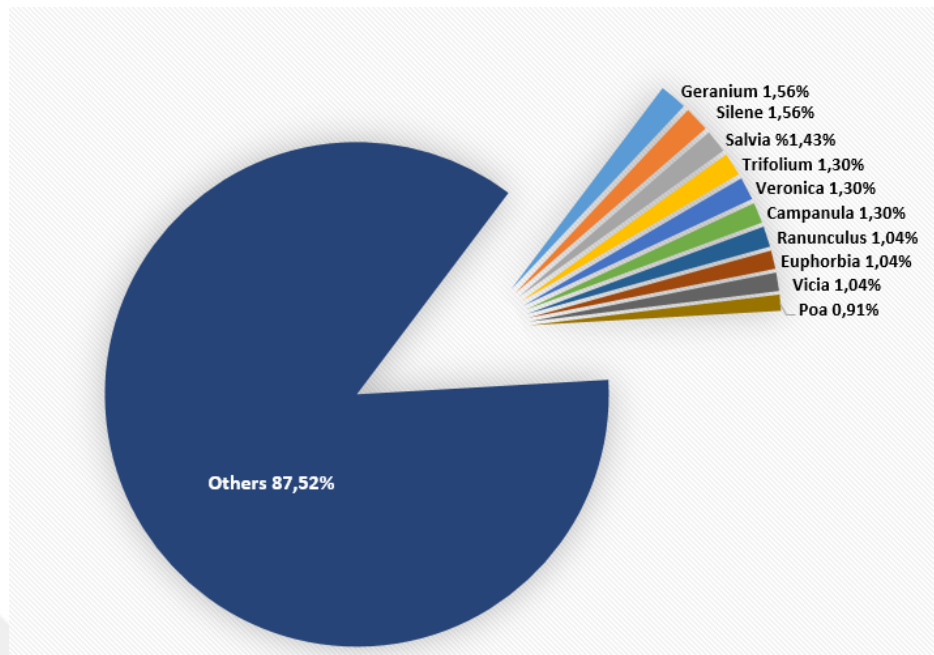


Figure 6. The largest 10 genera in the research area.

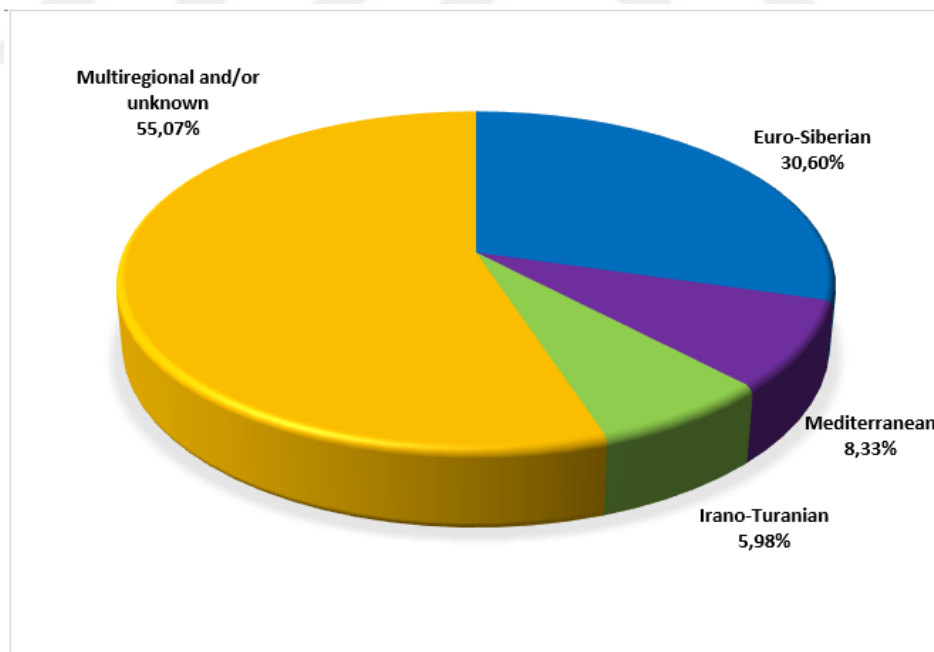


Figure 7. Distribution of species in research area according to phytogeographic regions.

4.3 Discussion

The research area is the place where the highest plant diversity is detected with 768 taxa which are compared with the previous floristic studies conducted in Bolu province. The number of taxa detected in the previous 13 floristic studies is between 174 and 660. The ratio of endemic plants identified in the current research area to the total number of taxa is 8.73%. In previous studies in Bolu, this rate is between 3.5-13.79%. It is observed that the four studies with a relatively higher rate of endemism (Özkan *et al.*, 2016; Aksoy, 2009; İkinci, 2011; Tunçkol and Akkemik, 2016) were conducted in the southern parts of Bolu and the interactions of Iran-Turan and Mediterranean phytogeographic regions are more dominant in these areas. The range of endemism in these four studies is between 10.8% and 13.79%. In two studies in the north of Bolu which are closest to the current research area, the rate of endemism is 5.8%-6.7%. In general, the endemism rate in province of Bolu is below the average of Turkey because Bolu is located in the Euro-Siberian phytogeographic region having the least endemic taxa within the 3 phytogeographic regions of Turkey. However, with a rate of 8.73% endemism, the study area has a higher average of endemism compared to the average of endemism revealed in other studies carried out in the north of Bolu (Table 6).

According to phytogeographical regions, the Euro-Siberian elements are dominant with a ratio of 30.60% in the research area. In 11 of the 13 floristic studies previously conducted in Bolu province, the Euro-Siberian elements are in the first place and the ratio in all studies is found to be between 12,6-37,5%. In only one study (Aksoy, 2009), Irano-Turanian elements are in the first place. Similarly, with the exception of one of the remaining 11 studies (Tunçkol and Akkemik 2016), in 10 studies, the Mediterranean elements are in the second place or have the same ratio with the Irano-Turanian elements. Although Bolu province is mainly under the influence of the Euro-Siberian phytogeographic region, it can be said that, as it moves from north to south, the Irano-Turanian phytogeographic region in the Seben and Kırısıcık districts and the Mediterranean phytogeographic region in the Göynük district have a greater effect. Since the study area is in the north, the Euro-Siberian elements are denser and this result is in line with the range (27.2-37.5%) of the two studies (Arslan *et al.*, 2013; Ekim & İlarslan, 1982) conducted in the north of Bolu (Table 6).

The first three families with the most taxa in the research area are as follow respectively: Asteraceae (12.57%), Fabaceae (8.92%) and Lamiaceae (6.4%). The ordering of these three large families are compatible with the order in the “*Flora of Turkey* (Davis, 1965-1985; Davis *et al.*, 1988; Güner *et al.*, 2000)”. Considering the floristic studies conducted in Bolu, the result of this research is similar to the family ranking in the two studies, the same ranking is 14.1%, 11.8%, 7.5% in Aksoy (2009) and 11.4%, 8.33%, 6.14% in Kanoğlu (2011). In half of the remaining 10 floristic studies (Arslan *et al.*, 2013; İkinci, 2011; Sungurlu, 2011; Tunçkol and Akkemik 2016; Türker & Güner, 2003), Asteraceae ranked first in the 8.3-11.52% range while in other four studies (Akman & Ketenoglu, 1979, 1981; Ekim & İlarıslan, 1982; İkinci & Güner, 2007), Fabaceae ranked first in the 8.48%-11.1% range. In one study (Özkan *et al.*, 2016), Poaceae was the leading with a rate of 9.93%. On the other hand, Asteraceae, Fabaceae and Lamiaceae, which are ranking among the top three in the *Flora of Turkey*, were included in the first six ranking in all studies carried out in Bolu, and at least two of these three families were located in the first three. Poaceae or Rosaceae were sometimes included in the first three rankings. In addition to the three common families mentioned above, Brassicaceae was among the top ten families in all studies. The other families in the top 10 are mainly Caryophyllaceae, Boraginaceae, Apiaceae, Rubiaceae, Ranunculaceae and Plantaginaceae *s.l.* and less frequently Asparagaceae, Campanulaceae, Liliaceae *s.s.* and Ericaceae. In the present study, the ratio of the families in the top 10 in the total plant composition is 57.07%, which overlaps with the range (50.49-58.48%) of the other studies (Table 7).

Geranium (12 taxa), *Silene* (12 taxa) and *Salvia* (11 taxa) are the first three genera that contain the most taxa in the research area. When we look at the floristic studies conducted in Bolu, *Geranium* (7 taxa) is ranked second in Kanoğlu (2011). *Silene* with 6 taxa is ranked second in Arslan *et al.* (2013) while similarly, in Ekim and İlarıslan (1982) it is ranked third with four taxa. However, as illustrated in Table 6, in five of the 12 studies (Özkan *et al.*, 2016; Akman & Ketenoglu, 1979 and 1981; Arslan *et al.*, 2013; Türker & Güner, 2003) *Veronica* is ranked first with the range of 6-15 taxa. In two each studies (Sungurlu, 2011; Ekim & İlarıslan, 1982; İkinci, 2011; İkinci & Güner, 2007) *Trifolium* and *Vicia* are the leading genera with the ranges of 4-9 and 7-9 taxa, respectively. In three separate studies (Tunçkol and Akkemik 2016; Aksoy, 2009; Kanoğlu, 2011), *Astragalus* (14 taxa), *Salvia* (12 taxa) and *Centaurea* (7 taxa)

are the most common genera, respectively. Other genera ranked in the first three apart from those mentioned above are *Allium*, *Ranunculus*, *Hypericum*, *Campanula*, *Lathyrus* and *Galium*. In this study, although the weight of the first three ranks of genera differed significantly from the first three ranks of genera in the previous studies, it is seen that the similarity of the genera composition increased in the first 10 ranks. The ratio of the genera in the top 10 in the total plant composition is 12.48% and overlaps with the intervals in other studies (12.47-21.91%).



Table 6. Comparison of floristic studies.

Abbreviations of studies: Studies: 1. Results of this study; 2. Özkan *et al.* (2016); 3. Akman & Ketenoğlu (1979); 4. Akman & Ketenoğlu (1981); 5. Aksoy (2009); 6. Arslan *et al.* (2013); 7. Ekim & İlarıslan (1982); 8. İkinci & Güner (2007); 9. İkinci (2011); 10. Kanoğlu *et al.* (2016); 11. Sungurlu (2011); 12. Tunçkol & Akkemik (2016); 13. Turker & Güner (2003); 14. Sümer (2002).

Compared Studies	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total Taxa	768	554	315	286	511	240	245	453	324	406	174	573	660	345
Endemic species (%)	%8,59	%11,73	%5	%4,1	%13,5	%5,8	%6,7	%3,5	%10,8	%9,36	%9,7	%13,79	%7,7	%3,5
Euro-Sib. (%)	%30,60	%19,68	%12,6	%19,5	%13,4	%37,5	%27,2	%30,8	%16,4	%19,46	%22,1	%22,5	%23,7	%24,7
Medit. (%)	%8,33	%14,08	%7,6	%7,6	%7,78	%5	%5,5	%5,2	%13,3	%5,91	%4,5	%9,07	%5,7	%3,2
Ir.-Tur. (%)	%5,98	%11,37	%7,6	%3,8	%26,1	%2,5	%2,3	%1,5	%10,2	%4,93	%4,5	%9,94	%4,8	%4,6
Multi-regional or phytogeographic region unknown (%)	%55,07	%54,87	%67,2	%65	%52,7	%55	%55,5	%58,4	%60,1	%69,7	%68,9	%58,46	%67,8	%65,5

Table 7. Comparison of our research with other surveys according to the 10 largest families.

Abbreviations of studies: 1. Result of this study; 2. Özkan *et al.* (2016); 3. Akman & Ketenoglu (1979); 4. Akman & Ketenoglu (1981); 5. Aksoy (2009); 6. Arslan *et al.* (2013); 7. Ekim & İlarıslan (1982); 8. İkinci & Güner (2007); 9. İkinci (2011); 10. Kanoğlu *et al.* (2016); 11. Sungurlu (2011); 12. Tunçkol & Akkemik (2016); 13. Turker & Güner (2003); 14. Sümer (2002).

Abbreviations of families: Api.: Apiaceae; Asp.: Asparagaceae; Ast.: Asteraceae; Bra.: Brassicaceae; Bor.: Boraginaceae; Cam.: Campanulaceae; Car.: Caryophyllaceae; Eri.: Ericaceae; Fab.: Fabaceae; Lam.: Lamiaceae; Lil.: Liliaceae; Orc.: Orchidaceae; Pla.: Plantaginaceae; Poa.: Poaceae; Ran.: Ranunculaceae; Ros.: Rosaceae; Rub.: Rubiaceae; Scr.: Scrophulariaceae; Cyp.: Cyperaceae.

Compared Studies		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Total Taxa	Numbers of	768	554	315	286	511	240	245	453	324	406	174	573	660	345	
The largest 10 families and percentages.	1	Ast. %12,63	Poa. %9,93	Fab. %8,48	Fab. %9,9	Ast. %14,1	Ast. %8,3	Fab. %11,1	Fab. %9,6	Ast. %9,9	Ast. %11,4	Ast. %9,2	Ast. %11,52	Ast. %10,4	Ast. %14,3	
	2	Fab. %8,07	Ast. %9,21	Ast. %9,21	Ast. %7,5	Fab. %11,8	Ros. %7,9	Ast. %10,7	Ast. %9,3	Lam. %9,9	Fab. %8,33	Fab. %8,0	Lam. %7,11	Poa. %8,2	Poa. %9,6	
	3	Lam. %6,64	Fab. %8,48	Poa. %5,3	Ros. %7,3	Lam. %7,5	Fab. %6,7	Ros. %5,5	Poa. %8,7	Fab. %9,3	Lam. %6,14	Poa. %8,0	Poa. %7,11	Fab. %7,1	Fab. %7,3	
	4	Ros. %5,73	Ros. %5,96	Lam. %5,0	Lam. %6,6	Poa. %6,8	Lam. %6,3	Lam. %5,5	Lam. %5,3	Lam. %5,6	Bor. %5,7	Bra. %5,7	Ros. %8,0	Bra. %6,77	Lam. %6,7	Lam. %5,8
	5	Poa. %4,82	Bra. %5,23	Car. %5,0	Poa. %6,2	Ros. %5,2	Poa. %5,4	Poa. %4,7	Ros. %5,3	Ros. %4,0	Ros. %4,84	Ros. %6,3	Lam. %6,44	Fab. %5,3	Ros. %5,3	Bra. %5
	6	Bra. %4,56	Lam. %4,87	Bra. %4,7	Bra. %5,9	Bra. %3,9	Car. %4,2	Api. %4,7	Bra. %4,0	Bra. %4,0	Bor. %4,39	Bor. %5,2	Car. %5,08	Ros. %4,7	Bra. %4,7	Ran. %4,7
	7	Car. %4,17	Car. %4,87	Bor. %4,4	Car. %4,8	Bor. %3,1	Bra. %3,8	Car. %4,3	Api. %3,8	Api. %3,7	Poa. %3,51	Pla. %3,0	Api. %3,72	Car. %3,4	Api. %4,4	
	8	Api. %3,65	Lil. %3,61	Api. %3,1	Ran. %3,6	Api. %3,0	Pla. %3,3	Bra. %2,6	Car. %3,8	Car. %2,8	Car. %3,7	Bra. %3,0	Bor. %3,38	Ran. %3,2	Ran. %3,2	Cyp. %3,5
	9	Bor. %3,52	Bor. %3,43	Ran. %2,8	Rub. %3,1	Pla. %1,76	Api. %3,3	Rub. %2,1	Bor. %3,2	Ran. %2,8	Api. %2,19	Rub. %3,0	Rub. %3,38	Car. %3,0	Api. %2,9	Ros. %2,9
	10	Orc. %3,13	Rub. %2,89	Cam. %2,5	Pla. %3,1	Cam. %1,56	Bor. %2,9	Eri. %2,1	Orc. %2,8	Asp. %2,16	Asp. %2,19	Asp. %3,0	Pla. %2,44	Bor. %2,70	Car. %2,6	
	Others	%43,08	%41,52	%49,51	%41,92	%41,28	%47,9	%46,7	%44,2	%45,84	%47,61	%43,3	%43,05	%45,3	%39,9	

Table 8. Comparison of our research with other surveys according to the 10 largest genera.

Abbreviations of studies: 1. Results of this study; 2. Özkan *et al.* (2016); 3. Akman & Ketenoğlu (1979); 4. Akman & Ketenoğlu (1981); 5. Aksoy (2009); 6. Arslan *et al.* (2013); 7. Ekim & İlarıslan (1982); 8. İkinci & Güner (2007); 9. İkinci (2011); 10. Kanoğlu *et al.* (2016); 11. Sungurlu (2011); 12. Tunçkol & Akkemik (2016); 13. Turker & Güner (2003); 14. Sümer (2002); O.= Others genera.

Studies	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total Numbers of Taxa	768	554	315	286	511	240	245	453	324	406	174	573	660	345
The largest 10 genera, their species and taxa number and percentages.	1 <i>Geranium</i> 12 (%1,56)	<i>Veronica</i> 10 (%1,81)	<i>Veronica</i> 12 (%3,81)	<i>Veronica</i> 7 (%2,45)	<i>Salvia</i> 12 (%2,35)	<i>Veronica</i> 6 (%2,50)	<i>Trifolium</i> 9 (%3,67)	<i>Vicia</i> 9 (%1,98)	<i>Vicia</i> 7 (%2,16)	<i>Centaurea</i> 7 (%1,72)	<i>Trifolium</i> 4 (%2,30)	<i>Astragalus</i> 14 (%2,44)	<i>Veronica</i> 15 (%2,27)	<i>Ranunculus</i> 9 (%2,6)
	2 <i>Silene</i> 12 (%1,56)	<i>Allium</i> 9 (%1,62)	<i>Trifolium</i> 9 (%2,86)	<i>Galium</i> 6 (%2,10)	<i>Astragalus</i> 10 (%1,96)	<i>Silene</i> 6 (%2,50)	<i>Campanula</i> 5 (%2,04)	<i>Trifolium</i> 8 (%1,76)	<i>Astragalus</i> 7 (%2,16)	<i>Geranium</i> 7 (%1,72)	<i>Allium</i> 4 (%2,30)	<i>Trifolium</i> 12 (%2,09)	<i>Ranunculus</i> 12 (%1,82)	<i>Veronica</i> 7 (%2,00)
	3 <i>Salvia</i> 11 (%1,43)	<i>Trifolium</i> 9 (%1,62)	<i>Lathyrus</i> 7 (%2,22)	<i>Ranunculus</i> 6 (%2,10)	<i>Centaurea</i> 8 (%1,57)	<i>Trifolium</i> 5 (%2,08)	<i>Silene</i> 4 (%1,63)	<i>Veronica</i> 7 (%1,54)	<i>Salvia</i> 6 (%1,85)	<i>Hypericum</i> 7 (%1,72)	<i>Hypericum</i> 3 (%1,72)	<i>Ranunculus</i> 10 (%1,75)	<i>Trifolium</i> 10 (%1,52)	<i>Carex</i> 7 (%2,00)
	4 <i>Trifolium</i> 10 (%1,30)	<i>Galium</i> 9 (%1,62)	<i>Sedum</i> 7 (%2,22)	<i>Poa</i> 6 (%2,10)	<i>Geranium</i> 8 (%1,57)	<i>Galium</i> 4 (%1,67)	<i>Lathyrus</i> 4 (%1,63)	<i>Poa</i> 6 (%1,32)	<i>Centaurea</i> 5 (%1,54)	<i>Ornithogalum</i> 6 (%1,48)	<i>Geranium</i> 3 (%1,72)	<i>Centaurea</i> 9 (%1,57)	<i>Carex</i> 10 (%1,52)	<i>Juncus</i> 6 (%1,80)
	5 <i>Veronica</i> 10 (%1,30)	<i>Ranunculus</i> 8 (%1,44)	<i>Myosotis</i> 6 (%1,90)	<i>Silene</i> 5 (%1,75)	<i>Euphorbia</i> 7 (%1,37)	<i>Allium</i> 4 (%1,67)	<i>Sedum</i> 3 (%1,22)	<i>Bromus</i> 6 (%1,32)	<i>Viola</i> 5 (%1,54)	<i>Salvia</i> 6 (%1,48)	<i>Epilobium</i> 3 (%1,72)	<i>Silene</i> 9 (%1,57)	<i>Galium</i> 8 (%1,21)	<i>Medicago</i> 5 (%1,50)
	6 <i>Campanula</i> 10 (%1,30)	<i>Lathyrus</i> 7 (%1,26)	<i>Campanula</i> 6 (%1,90)	<i>Cardamine</i> 5 (%1,75)	<i>Trifolium</i> 6 (%1,17)	<i>Lamium</i> 4 (%1,67)	<i>Geranium</i> 3 (%1,22)	<i>Carex</i> 5 (%1,10)	<i>Myosotis</i> 4 (%1,23)	<i>Trifolium</i> 6 (%1,48)	<i>Sedum</i> 3 (%1,72)	<i>Allium</i> 8 (%1,40)	<i>Allium</i> 8 (%1,21)	<i>Trifolium</i> 5 (%1,50)
	7 <i>Ranunculus</i> 8 (%1,04)	<i>Astragalus</i> 6 (%1,08)	<i>Ranunculus</i> 6 (%1,90)	<i>Carex</i> 5 (%1,75)	<i>Ornithogalum</i> 6 (%1,17)	<i>Campanula</i> 4 (%1,67)	<i>Epilobium</i> 3 (%1,22)	<i>Dianthus</i> 5 (%1,10)	<i>Carex</i> 4 (%1,23)	<i>Astragalus</i> 5 (%1,23)	<i>Galium</i> 3 (%1,72)	<i>Hypericum</i> 8 (%1,40)	<i>Poa</i> 7 (%1,06)	<i>Euphorbia</i> 5 (%1,50)
	8 <i>Euphorbia</i> 8 (%1,04)	<i>Sedum</i> 6 (%1,08)	<i>Astragalus</i> 6 (%1,90)	<i>Euphorbia</i> 5 (%1,75)	<i>Lathyrus</i> 5 (%0,98)	<i>Geranium</i> 4 (%1,67)	<i>Festuca</i> 3 (%1,22)	<i>Geranium</i> 5 (%1,10)	<i>Valerianella</i> 4 (%1,23)	<i>Campanula</i> 5 (%1,23)	<i>Myosotis</i> 3 (%1,72)	<i>Salvia</i> 8 (%1,40)	<i>Astragalus</i> 7 (%1,06)	<i>Vicia</i> 4 (%1,20)
	9 <i>Vicia</i> 8 (%1,04)	<i>Gagea</i> 6 (%1,08)	<i>Silene</i> 5 (%1,59)	<i>Crocus</i> 5 (%1,75)	<i>Galium</i> 5 (%0,98)	<i>Ranunculus</i> 4 (%1,67)	<i>Rubus</i> 3 (%1,22)	<i>Galium</i> 5 (%1,10)	<i>Dianthus</i> 3 (%0,93)	<i>Crateagus</i> 5 (%1,23)	<i>Euphorbia</i> 3 (%1,72)	<i>Quercus</i> 7 (%1,22)	<i>Salvia</i> 7 (%1,06)	<i>Lathyrus</i> 4 (%1,20)
	10 <i>Poa</i> 7 (0,91)	<i>Alyssum</i> 6 (%1,08)	<i>Galium</i> 5 (%1,59)	<i>Trifolium</i> 5 (%1,75)	<i>Carduus</i> 5 (%0,98)	<i>Cirsium</i> 3 (%1,25)	<i>Asperula</i> 3 (%1,22)	<i>Viola</i> 5 (%1,10)	<i>Silene</i> 3 (%0,93)	<i>Lathyrus</i> 5 (%1,23)	<i>Quercus</i> 3 (%1,72)	<i>Lathyrus</i> 7 (%1,22)	<i>Centaurea</i> 7 (%1,06)	<i>Centaurea</i> 4 (%1,20)
O.	87,52	86,282	78,095	80,769	85,910	81,667	83,673	86,534	85,185	85,468	81,609	83,944	86,21	83,50

5. CONCLUSION AND RECOMMENDATIONS

In the light of the information and comparisons given above, it would be fair to suggest that the research area is an important plant biodiversity center in Bolu. In more detail, the area reaching the summit of Çaltepe from the upper parts of Merkeşler Village, and the Gurbettaşı locality on the way of Sarımustan and Yedigöller has the highest variety of plants and these regions hosts many endemic and rare plants. Precautions should be taken to protect the in-situ (in place) of these two regions. It will be crucial to consult with experts in order to prevent the destruction of nature in the case of activities such as construction and road building in the region.

Regional flora studies are very important for the determination of biological diversity of our country, the discovery of new species, and detection and protection of endangered species. In recent years, studies related to the conservation and rational use of plant genetic resources have been increasing in the world. First of all, the way of protection depends on the identification of the existing one. This study is hoped to contribute not only to the identification and preservation of our biological richness, but also to the establishment of information resources for the relevant institutions and organizations. The scientific data obtained in the present study will be beneficial for other disciplines, such as agriculture, biotechnology, biochemistry, pharmacy, medicine, food engineering, landscape sciences and pharmaceutical botany. Furthermore, it will provide a data for the development of economically important interdisciplinary projects. The data obtained from the floristic studies is of great importance in terms of pharmacy, particularly in terms of determining the potential of medicinal plants in the field of pharmaceutical botany, determination of plant gene resources related to agriculture and pasture breeding, recognition of important plants for beekeeping, and detection of natural forest areas.

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APPENDIX

7. APPENDIX: Photos of some plants from the research area



a) *Cyclamen coum* Mill. var. *coum*; b) *Helleborus orientalis* Lam.; c) *Primula acaulis* (L.) L. subsp. *acaulis*; d) *Potentilla micrantha* Ramond ex DC.; e) *Pinus sylvestris* L.; f) *Abies nordmanniana* (Steven) Spach subsp. *equi-trojani* (Asch. & Sint. ex Boiss.) Coode & Cullen



a) *Pinus nigra* J.F.Arnold subsp. *pallasiana* (Lamb.) Holmboe; b) *Crocus ancyrensis* (Herb.) Maw; c) *Scilla bifolia* L.; d) *Petasites hybridus* (L.) "G.Gaertn., B.Mey. & Scherb."; e) *Atropa belladonna* L.; f) *Trachystemon orientalis* (L.) G. Don



a) *Doronicum orientale* Hoffm.; b) *Orchis pallens* L.; c) *Muscari armeniacum* Leichtlin ex Baker; d) *Cruciata taurica* (Pallas ex Willd.) Ehrend.; e) *Corydalis wendelboi* Lidén subsp. *congeste* Liden & Zetterlung; f) *Corydalis caucasica* DC. subsp. *abantensis* Lidén



a) *Crocus speciosus* M.Bieb. subsp. *speciosus*; b) *Microthlaspi perfoliatum* (L.) F.K.Mey.; c) *Orchis mascula* (L.) L. subsp. *pinetorum* (Boiss. & Kotschy) G.Camus; d) *Capsella bursa-pastoris* (L.) Medik.; e) *Bellis perennis* L.; f) *Ranunculus constantinopolitanus* (DC.) d'Urv.



a) *Platanthera chlorantha* (Cruster) Rchb.; b) *Galanthus plicatus* M.Bieb. subsp. *plicatus*; c) *Campanula lyrata* Lam. subsp. *lyrata* “alba form”; d) *Pteridium aquilinum* (L.) Kuhn; e) *Trifolium pratense* L.; f) *Trifolium elongatum* Willd.



a) *Daphne pontica* L.; b) *Lilium martagon* L.; c) *Ajuga reptans* L.; d) *Iris pumila* L. subsp. *attica* (Boiss. & Heldr.) K.Richt.; e) *Iris sintenisii* Janka; f) *Potentilla recta* L.



a) *Orchis simia* Lam. subsp. *simia*; b) *Cephalanthera damasonium* (Mill.) Druce; c) *Dioscorea communis* L.; d) *Echium vulgare* L. subsp. *vulgare*; e) *Lathyrus undulatus* Boiss.; f) *Urtica dioica* L. subsp. *dioica*



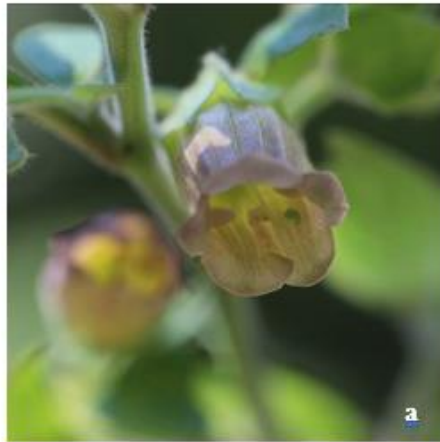
a) *Cystopteris fragilis* (L.) Bernh.; b) *Dianthus balansae* Boiss.; c) *Jurinea consanguinea* DC.; d) *Astrantia maxima* Pall. subsp. *haradjianii* (Grintz) Rech.f.; e) *Phlomis russeliana* (Sims) Lag. ex Benth.; f) *Orobanche gracilis* Sm.



a) *Eryngium bithynicum* Boiss.; b) *Hyoscyamus niger* L.; c) *Melampyrum arvense* L. var. *arvense*; d) *Taraxacum butleri* Soest; e) *Digitalis lamarckii* Ivan.; f) *Securigera varia* (L.) Lassen



a) *Dactylorhiza nieschalkiorum* H.Baumann & Künkele; b) *Colchicum umbrosum* Steven; c) *Allium olympicum* Boiss.; d) *Vincetoxicum fuscatum* (Hornem.) Endl. subsp. *fuscatum*; e) *Sempervivum gillianiae* Muirhead; f) *Lathyrus nissolia* L.



a) *Atropa belladonna* L.; b) *Viola gracilis* Sibth. et Sm.; c) *Delphinium fissum* Waldst. & Kit. subsp. *anatolicum* Chowdhuri & P.H.Davis; d) *Dianthus calocephalus* Boiss.; e) *Daucus carota* L.; f) *Smyrnum perfoliatum* L.



a) *Sedum urvillei* DC.; b) *Viscum album* L. subsp. *album*; c) *Pyracantha coccinea* M.Roem.; d) *Thymus longicaulis* C.Presl subsp. *longicaulis*; e) *Hedera helix* L.; f) *Scandix iberica* M.Bieb.



a) *Dipsacus laciniatus* L.; b) *Tussilago farfara* L.; c) *Cystopteris fragilis* (L.) Bernh.;
d) *Anthriscus nemorosa* (M.Bieb.) Spreng.; e) *Colutea cilicica* Boiss. & Balansa; f)
Sanicula europaea L.



a) *Agrimonia eupatoria* L.; b) *Alcea pallida* (Willd.) Waldst. & Kit.; c) *Aristolochia pallida* Willd.; d) *Campanula olympica* Boiss.; e) *Astragalus condensatus* Ledeb.; f) *Epilobium angustifolium* L.



a) *Erodium cicutarium* (L.) L'Hér.; b) *Globularia trichosantha* Fisch. & C.A.Mey.;
c) *Lysimachia verticillaris* Spreng.; d) *Malva sylvestris* L.-alba form; e) *Morina persica* L.; f) *Myosotis arvensis* (L.) Hill



a) *Polygala anatolica* Boiss. & Heldr.; b) *Rhinanthus serotinus* (Schönh.) Oborny;
c) *Saxifraga cymbalaria* L.; d) *Valeriana alliariifolia* Vahl; e) *Ziziphora capitata*
L.; f) *Verbascum phlomoides* L.



a) *Echinops spinosissimus* Turra subsp. *bithynicus* (Boiss.) Greuter; b) *Allium huber-morathii* Kollmann, Özhatay & Koyuncu; c) *Prospero autumnale* (L.) Speta

8. CURRICULUM VITAE

Name SURNAME : Aydın ÇELİK

Place and Date of Birth : Bolu /08.02.1988

Universities Bachelor's Degree : Bolu Abant İzzet Baysal University

e-mail : aydin_clk@hotmail.com

Telephone : 05437105152

Address : İhsaniye Mahallesi Kır Sokak Çelik
Apt. No:11 D:4 BOLU/Merkez

List of Publications

1. Çelik A, Eker İ, Kaya A (2018) “Flora of Çaltepe and Çeletepe (Bolu)”, 1st International Congress on Plant Biology, (10-12 May 2018), Konya/TURKEY. p. 199.
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