

THE FLORA OF KELTEPE AREA (KOCAELİ/TURKEY)

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S U M M A R Y

The aim of this study was to determine the flora of vascular plants of Keltepe (Kartepe) [A3 Kocaeli] and the adjacent region. An evaluation of the vascular plant flora of the area, 418 species and subspecies, from 256 genera belonging to 80 families, were identified. 40 taxa, which had not been previously recorded in the area, were added to the grid square (A3). *Adenostyles alliariae* (Gouan) A. Kerner subsp. *alliariae* (*Asteraceae*) is a new record for the Flora of Turkey.

Key words: Vascular plants, Keltepe (Kocaeli), Turkish flora.

Keltepe Alanının Florası (Kocaeli/Turkey)

Ö Z E T

Bu çalışmanın amacı, Keltepe' nin (Kartepe) [A3 Kocaeli] ve yakın çevresinin vaskular bitki florasını saptamaktır. Çalışma alanından toplanan vaskular bitkilerin değerlendirilmesi sonucunda 80 familyaya ait 256 cins, 418 tür ve alt tür teşhis edilmiştir. Daha önce alanda kayıtlı olmayan 40 takson (A3) karesine eklenmiştir. *Asteraceae* familyasından *Adenostyles alliariae* (Gouan) A. Kerner subsp. *alliariae* Türkiye florası için yeni bir kayıttır.

Anahtar sözcükler: Vaskular bitkiler, Keltepe (Kocaeli), Türkiye florası.

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I N T R O D U C T I O N

The South-East Marmara region has various types of relief, including mountains of differing altitudes, many large plateaus, hills and plains. In addition to geographical features, climatic characteristics have strongly influenced its floristic structure, increasing the diversity of plant species.

Despite being located very close to big cities such as Kocaeli and Sakarya, the study area "Keltepe" is still full of "undiscovered" places as well as "untouched" forests and has an "undetailed" list of flora.

This study is a contribution to the determination the plant profiles of Keltepe and its nearest environment.

Description of the study area

Keltepe (recently named as Kartepe) is a part of the Samanlı Mountains (the highest altitude 1602 m) that lie on the South-East of the Marmara region, however, the research is limited to the summit area and its environment (Figure 1). Davis (1965) described the area in square A3 as Euro-Siberian and defined its territory along most of the North Anatolia region. The main research is targeted on Keltepe its and large adjacent region, as shown in Figure 1. The main part of the North-East side of the research area lies on various hills along the mountain region and located above Sapanca Lake. In a general view of this region, besides a number of high mountains, larger plateaus, hills and plains occupy the rest of the mountain range. Geologically, the study area is mainly made up of high plateaus composed of andesite, metamorphic and paleozoic the summit consists of blue and pinkish the paleozoic age (Bilgin, 1967). The mountain ranges of the area are surrounded by some valleys formed by various streams such as Akçay in South-East; Sular deresi in the South; Serindere in the West and Karaçay in the East. Almost all the area is covered by brown forest soil and podsol except some places with stone and marble formations around the summit (Güngördü, 1985).

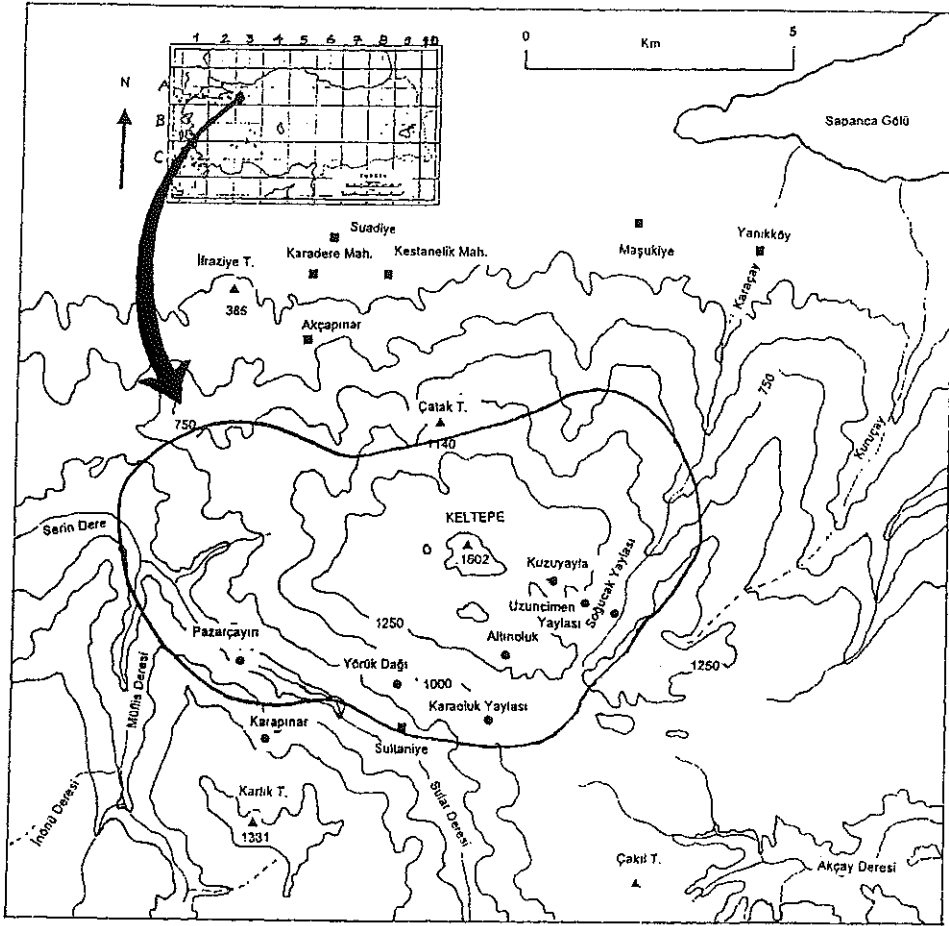


Figure 1. Map of the study area

The large area between Sular Deresi and Sakarya Valley presents the highest altitudes in the east of the Samanlı Mountains, generally 1200 - 1400 m above sea level. As it is well known, climate and precipitation are both critical factors influencing the period of growth in the plant cycle as well as the effects of differing altitudes. Bilgin (1967) stated that because of the northern slopes being subjected to heavier precipitation, they have been densely covered with mixed forests well as a rich flora on ground level, in contrast to the relatively rare forests and poor flora present on the southern sides of slopes. The research area, which is the part of Samanlı Mountains, is accepted as a transition district between the climates of West Black Sea and Mediterranean regions. According to Güngördü (1985), conditions are suitable in this

area, for plant growth for around 150 days, near summit (1602 m), but this increases to 250-300 days or more at altitudes down to 100-500 m.

According to Davis (1965), this study area is mainly Euro-Siberian, most of the western part of it being referred to the Euxin province. However, considerable amounts of Mediterranean elements were collected as well as a substantial list of specimens which have no geographical definition and probably belong to various phytogeographical regions. Among some typical, common Mediterranean elements of macchie and other woody taxa are; *Laurus nobilis* L.; *Phillyrea latifolia* L.; *Pistacia terebinthus* L. subsp. *terebinthus*; *Cistus creticus* L.

Materials and methods :

Between the years 1988-2000, twenty-three field trips were made to the area. On these trips, 1193 vascular plant specimens were collected and processed as herbarium material. To identify of the specimens, Flora of Turkey and The East Aegean Islands (Davis et al., 1965-1985; Davis et al., 1988; Güner et al., 2000), Flora Europaea (Tutin et al., 1993) and Flora Orientalis (Boissier, 1879-1884) were mainly used. Plant samples from the herbaria of ISTE and ISTO were used to check the identification of the plants of the area. For the determination of the some controversial items, specialists were asked to assist. For instance, *Poaceae*, *Gymnospermae*, *Ranunculaceae* and *Allium* species were identified by Musa Doğan, Faik Yaltrık, Ali Çırpıcı and Neriman Özhatay respectively. The other specialists who determined some certain species are mentioned in the list of plants. Since *Adenostyles alliariae* (Gouan) A. Kerner subsp. *alliariae* is a new takson for the Turkish flora, its identification has been verified at the Herbarium of the Royal Botanic Garden, Kew, U.K. by Engin Özhatay. Further specialists, who kindly assisted in identification, are listed in the acknowledgements section. The floristic list of the research is given in the appendix. The order of taxa followed is alphabetical, however, *Gymnosperms* come before *Angiosperms* and *Dicotyledons* are listed before *Monocotyledon* specimens. The plant list includes the taxa and their phytogeographical regions, an indication of whether they are new records for A3 grid square, as well as record numbers of the collector and herbarium numbers of University of Marmara, Atatürk Education Faculty Herbarium (MARA).

In the plant list the abbreviations used are as follows: Medit.= Mediterranean; Euro-Sib.=Euro - Siberian; Ir.-Tur.= Irano - Turanian; End.= Endemic, ŞA. = Şener Akıncı. An asterisk indicates a new record for the A3 grid square and two asterisks show a new species for the Turkish flora. Three asterisks state the samples are preserved in ISTE Herbarium.

Results and Discussion:

After identification of all plant samples, 418 taxa have been determined to species or lower levels. The data is presented in terms of the distribution of ferns, gymnosperms, dicotyledons, monocotyledons as well as their phytogeographical properties in Table 1.

Table 1. The floristic evaluation data of Keltepe

	Ferns	Gymno.	Dicots	Monocots	Total
Family	6	2	64	8	80
Genera	8	3	210	35	256
Takson	11	3	349	55	418
Endemic species	-	1	11	4	16
Medit:	-	1	23	6	30
E. Medit	-	-	3	4	7
Euro-Sib.	1	-	89	13	103
Euxine	-	1	23	6	30
Other (+)	3	-	8	-	11
Have no statement	10	2	198	27	237

(+) Irano-Turanian, Hyrcano-Euxine.

As shown in Table 1, there was a split of 30:103:30 among the three main phytogeographic types, Mediterranean, Euro - Siberian and Euxine respectively. The number of Euro - Siberian elements is nearly 40% higher than the combined number of Mediterranean and Euxine elements. The Euro - Siberian group contained the greatest number of both monocotyledons and dicotyledons. The five largest families are as follows: *Asteraceae*, *Lamiaceae*, *Fabaceae*, *Poaceae*, *Rosaceae*. *Caryophyllaceae*, *Brassicaceae* and *Liliaceae* were among those having high numbers of species following the top five families (Table 2).

Table 2. The largest five families.

	Number of Genera	Number of taxa (sp., subsp., var.)
<i>Asteraceae</i>	26	39
<i>Lamiaceae</i>	16	34
<i>Fabaceae</i>	15	31
<i>Poaceae</i>	17	26
<i>Rosaceae</i>	13	22

There is only one monocotyledon family (*Poaceae*) amongst the five largest families. Of the other monocotyledon families, the *Liliaceae* had 16 species in 10 genera. *Trifolium*, *Ranunculus* and *Silene* were found to be the largest genera of dicotyledons appearing commonly in nearly all areas (Table 3). The endemism rate is very low and only 16 taxa were found to be endemic to the study area. *Staphyllea pinnata* L. is the only plant collected from the area, which is monotypic for the Turkish flora.

Table 3. The largest three genera

	Number of Taxa
<i>Trifolium</i>	9
<i>Ranunculus</i>	8
<i>Silene</i>	7

The area has various phytogeographical properties apparent from determining the 1193 specimens. Despite the numerous Euro-Siberian samples, the total number of Mediterranean elements (including East and Omni-Medit.) with 37 samples is quite high range. Mediterranean elements (24) are mostly found to the north, and at lower altitudes (250-600 m), and 3 are found around the summit (1602 m). The remaining Mediterranean elements (10) are found on the south side of the summit of Keltepe. The distribution of the plants is strongly influenced by the precipitation regime and soil structures as well as various plant communities, which live together (Güngördü, 1985).

The period of collecting of samples from the summit is rather limited and numbers of varieties are not as high as at lower altitudes. Heavy snow has strongly affected the growing period here for three months at least. Among the other unfavourable conditions are: The structure of the summit which, being wide open and naked, has no deep soil and stony surface due to climatic effects of freezing effects during the rest of growing period. In contrast, the south of Keltepe has a very rich flora as a result of having different zones, with various plant communities at lower altitudes, which can favour some different species.

The wet forests surrounding each side comprise mainly *Fagus orientalis* Lipsky, *Carpinus betulus* L., *Populus tremula* L. and *Castanea sativa* Miller. *Corylus avellana* L. var. *avellana*, *Ilex colchica* Poj., *Cornus mas* L., *C. sanguinea* L. subsp. *australis* (C.A. Meyer) Jav., *Sorbus torminalis* (L.) Crantz var. *torminalis*, *Laurocerasus officinalis* Roemer and *Rhododendron ponticum* L. subsp. *ponticum* which are the

dominant species of small trees and bushes present in the research. Because of the richness of the vegetation, interesting plants such as *Adenostyles alliariae* (Gouan) A. Kerner subsp. *alliariae* for Turkey, and forty new taxa for the grid square of A3 (Akıncı and Özhatay, 2000; Güner, Özhatay, Ekim and Başer, 2000; Özhatay, Kültür and Aksoy, 1994 and 1999; Donner, 1990) were collected from the study area. In contrast to the statement of Bilgin (1967) the present observations indicate that the south side of the area, is relatively rich in deciduous or mixed scrubs, woodlands, meadows and steppes as well as grassy slopes with varied characteristics.

A C K N O W L E D G E M E N T S

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THE FLORISTIC LIST

PTERIDOPHYTA

ASPIDACEAE

****Dryopteris borreleri* Newm.

Maşukiye to Kuzuyayla, 3 rd km, 250 m,
20.05.1973 N.& E. Özhatay, ISTE 24608!

Euro-Sib. element.

**Dryopteris dilatata* (Hoffm.) Gray

Around Kuzuyayla picnic area, open *Fagus* and
Carpinus woods, 1400 m, 19.08.1989 ŞA 1147,
MARA 1782!

**D. pallida* (Bory) Fomin

Around Yörük Mountain, damp banks, 1330 m,
27.08.1990 ŞA 1811, MARA 2602!

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

Maşukiye to Kuzuyayla, 1350 m, 20.05.1973
N.& E. Özhatay, ISTE 24631!

ASPLENIACEAE

Asplenium onopteris L.

Maşukiye to Kuzuyayla, 3 rd km, gravelly bank,
250 m, 26.07.1989 ŞA 1018, MARA 1666!; Ibid.
27.04.1990 ŞA 1429, MARA 2077!

A. trichomanes L.

Kuzuyayla to summit, shady bank, 1600 m,
17.09.1989 ŞA 1264, MARA 1897!; Maşukiye to
Kuzuyayla, dampy slopes, 250 m, 29.05.1990 ŞA
1444, MARA 2096!; Above Karadere, rocky
area, 1280 m, 07.11.1992 ŞA 2163, MARA
4482!

Phyllitis scolopendrium (L.) Newm.

Kuzuyayla to summit, in the mixed woodland,
1400 m, 17.09.1989 ŞA 1239, MARA 1873!;
Maşukiye to Kuzuyayla, 6 th km, around
fountain, earthy slope, 500 m, 29.05.1990 ŞA
1611, MARA 2255!

EQUISETACEAE

Equisetum telmateia Ehrh.

Between Sultaniye Village and Kuzuyayla,
streamside, 1070 m, 27.08.1990 ŞA 1826,
MARA 2617!

LYCOPODIACEAE

Lycopodium clavatum L.

Maşukiye to Kuzuyayla, 12 th km, slopes, 1000
m, 26.07.1989 ŞA 1063, MARA 1704!

POLYPODIACEAE

Polypodium vulgare L.

Around Karadere, rocky slopes, 1280 m,
07.11.1992 ŞA 2164, MARA 4456!

PTERIDACEAE

Pteridium aquilinum (L.) Kuhn

Maşukiye to Kuzuyayla, 12 th km, slopes, 1000
m, 26.07.1989 ŞA 1053, MARA 1696!

SPERMATOPHYTA

GYMNOSPERMAE

CUPRESSACEAE

Juniperus oxycedrus L. subsp. *oxycedrus*

South slopes of Keltepe, around Altıtoluk Plateau,
field margin, 1150 m, 12.10.1991 ŞA 2094,
MARA 3031!

PINACEAE

Abies nordmanniana (Stev.) Spach subsp.
bornmuelleriana (Mattf.) Coode et Cullen

Kuzuyayla picnic area, in *Fagus* and *Abies* forest,
1400 m, 27.04.1990 ŞA 1384, MARA 2032!;
Around summit, in the mixed woodland, 1600 m,
27.04.1990 ŞA 1401, MARA 204!; Above
Sultaniye Village, 1320 m, 26.08.1990 ŞA 1768,
MARA 2560!

Endemic. Euxine element.

Pinus nigra Arn. subsp. *pallasiana* (Lamb.)
Holmboe

Maşukiye to Kuzuyayla, 5 th km, Hillside, 440
m, 19.08.1989 ŞA 1114, MARA 1750!

ANGIOSPERMAE

DICOTYLEDONEAE

ACERACEAE

Acer campestre L. subsp. *campestre*

South slopes of Keltepe, above Kilise (church)
place, field side, 720 m, 07.07.1991 ŞA 2035,
MARA 2907!; Maşukiye to Kuzuyayla, roadside,
450 m, 11.10.1992 ŞA 2132, MARA 4444!

A. platanoides L.

Maşukiye to Kuzuyayla, roadside, 950 m,
11.10.1992 ŞA 2128, MARA 4440!

Euro-Sib. element.

A. trautvetteri Medw.

Kuzuyayla picnic area, in the mixed woodland,
1400 m, 19.08.1989 ŞA 1153, MARA 1788!;
Around Yörük Mountain, 1350 m, 27.08.1990
ŞA 1812, MARA 2603!; Maşukiye to Kuzuyayla,

in the mixed woodland, 1300 m, 04.06.1991 ŞA 1899, MARA 2713!; Maşukiye to Kuzuyayla, roadside, 760 m, 11.10.1992 ŞA 2127, MARA 4439!

Euxine element.

AMARANTHACEAE

Amaranthus retroflexus L.

Maşukiye to Kuzuyayla, roadside, 280 m, 18.11.1989 ŞA 1298, MARA 1931!; Maşukiye to Kuzuyayla, roadside, 170 m, 11.10.1992 ŞA 2116, MARA 4428!

ANACARDIACEAE

Pistacia terebinthus L. subsp. *terebinthus*

Maşukiye to Kuzuyayla, 2 nd km, roadside, 250 m, 19.08.1989 ŞA 1107, MARA 1743!

Medit. element.

Rhus coriaria L.

Between Sultaniye Village and Kuzuyayla, slopes, 1170 m, 27.08.1990 ŞA 1790, MARA 2581!; Yöriik Mountain to summit, open area, 1100 m, 12.10.1991 ŞA 2090, MARA 3027!

APIACEAE (UMBELLIFERAE)

Daucus carota L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, field margin, 500 m, 26.07.1989 ŞA 1023, MARA 1670!; Maşukiye to Kuzuyayla, roadside, 500 m, 19.08.1989 ŞA 1123, MARA 1759!; Maşukiye to Kuzuyayla, roadside, 280 m, 18.11.1989 ŞA 1299, MARA 1932!

Heracleum platytaenium Boiss.

Maşukiye to Kuzuyayla, 15 th km, fieldside, 1300 m, 26.07.1989 ŞA 1064, MARA 1705!; Around Hanlar, 700 m, 07.07.1991 ŞA 2041, MARA 2913!

Endemic. Euxine element ?

Oenanthe pimpinelloides L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, field margin, 500 m, 29.05.1990 ŞA 1610, MARA 2254!; Maşukiye to Kuzuyayla, 2 nd km, fieldside, 250 m, 04.06.1991 ŞA 1949, MARA 2763!

Peucedanum aegopodioides (Boiss.) Vandas

Maşukiye to Kuzuyayla, fieldside, 700 m, 11.10.1992 ŞA 2113, MARA 4425!

Euro-Sib. element.

****Sanicula europaea* L.

Maşukiye to Kuzuyayla, 3 rd km, 250 m, 20.05.1973 N. & E. Özhatay, ISTE 24593!

Euro-Sib. element.

Smyrniunm perfoliatum L.

South slopes of Keltepe, between Sultaniye Village and Kuzuyayla, hillside, 1330 m, 27.08.1990 ŞA 1815, MARA 2606!

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

Maşukiye to Kuzuyayla, 6 th km, fieldside, 500 m, 21.07.1990 ŞA 1691, MARA 2483.

AQUIFOLIACEAE

Ilex colchica Poj.

Maşukiye to Kuzuyayla, in the mixed forest, 950 m, 17.09.1989 ŞA 1194, MARA 1829!; Maşukiye to Kuzuyayla, slopes, 1400 m, 17.09.1989 ŞA 1237, MARA 1871!; Sultaniye Village to Kuzuyayla, in the mixed woodland, 1070 m, 27.08.1990 ŞA 1818, MARA 2609!; Around Soğucak Plateau, 1210 m, 08.11.1992 ŞA 2170, MARA 4462!

Euxine element.

ARALIACEAE

Hedera colchica (C.Koch) C.Koch

Maşukiye to Kuzuyayla, roadside, 950 m, 11.10.1992 ŞA 2126, MARA 4438!

Euxine element.

H. helix L.

Kuzuyayla to summit, roadside, 1400 m, 17.09.1989 ŞA 1238, MARA 1872!; Sultaniye to Kuzuyayla, 1070 m, 27.08.1990 ŞA 1822, MARA 2613!

ARISTOLOCHIACEAE

Aristolochia pallida Willd.

Around summit, slopes, 1600 m, 29.05.1990 ŞA 1535, MARA 2183!; Ibid. 04.06.1991 ŞA 1883, MARA 2698!

Asarum europaeum L.

Around summit, slopes, 1600 m, 04.06.1991 ŞA 1876, MARA 2691!

Euro-Sib. element.

ASTERACEAE (COMPOSITAE)

**Achillea crithmifolia* Waldst. et Kit.

Pazar meadow, around İfrazıye, 300 m, 07.07.1992 ŞA 2070, MARA 2942!

Euro-Sib. element.

A. grandifolia Friv.

Kuzuyayla to summit, 20 th km, fieldside, 1580 m, 26.07.1989 ŞA 1085, MARA 1723!; Kuzuyayla to summit, in the mixed woodland, 1550 m, 17.09.1989 ŞA 1274, MARA 1906!; Ibid. 10.06.1990 ŞA 1654, MARA 2310!; Around summit, open area, 1600 m, 21.07.1990 ŞA 1720, MARA 2511!

Arctium minus (Hill) Bernh. subsp. *minus*

Maşukiye to Kuzuyayla, 6 th km, roadside, 500 m, 19.08.1989 ŞA 1120, MARA 1756!;

Maşukiye to Kuzuyayla, slopes, 950 m, 17.09.1989 ŞA 1195, MARA 1830!; Maşukiye to Kuzuyayla, roadside, 670 m, 11.10.1992 ŞA 2147, MARA 4466!

****Adenostyles alliariae** (Gouan) A. Kerner subsp. *alliariae*

South slopes of Keltepe, between Mühürlü Pınar and Karadere, wood margins, dampy slopes, 1150 m, 06.07.1991 ŞA 1992, Ibid. 22.07.2000, ŞA 2183, MARA 2857!

General distribution: Mountains of Europe, from N. Greece and Bulgaria to Spain. *Adenostyles* is a small genus with three species which none of them is presented in Turkey. This taxon suppose to be introduced as a new genus for the Turkish flora after completion of the related research.

Bellis sylvestris Cyr.

Maşukiye to Kuzuyayla, field, 350 m, 18.11.1989 ŞA 1285, MARA 1918!

Medit. element.

B. perennis L.

Maşukiye to Kuzuyayla, fieldside, 250 m, 18.03.1990 ŞA 1345, MARA 1978!; Ibid. 27.04.1990 ŞA 1378, MARA 2025, Around Kuzuyayla picnic area, 1400 m, 19.05.1991 ŞA 1842, MARA 2650!; Around Altoluk, 1050 m, 06.07.1991 ŞA 1981, MARA 2846!

Euro-Sib. element.

Bidens tripartita L.

Maşukiye to Kuzuyayla, 540 m, 11.10.1992 ŞA 2112, MARA 4424!

Carduus nutans L. sensu lato

Above Altoluk Plateau, slopes, 1050 m, 06.07.1991 ŞA 1984, MARA 2849!

C. pycnocephalus L. subsp. *albidus* (Bieb.) Kazmi

Maşukiye to Kuzuyayla, field, 320 m, 18.11.1989 ŞA 1328, MARA 1960!; Maşukiye to Kuzuyayla, around fountain, 29.05.1990 ŞA 1587, MARA 2234!

***Centaurea cariensis** Boiss. subsp. *longipapposa* Wagenitz

Between Kuzuyayla and Yörük Mountain, pasture, 1400 m, 27.08.1990 ŞA 1805, MARA 2596!

Endemic. E. Medit. element.

C. diffusa Lam.

Maşukiye to Kuzuyayla, slopes, 950 m, 17.09.1989 ŞA 1198, MARA 1833!

Medit. element.

C. iberica Trev. ex Sprengel

Maşukiye to Kuzuyayla, roadside, 570 m, 11.10.1992 ŞA 2111, MARA 4423!; Pazar meadow, Around Ifraziye, 300 m, 07.07.1991 ŞA 2069, MARA 2941!

***C. pichleri** Boiss. subsp. *pichleri*

Maşukiye to Kuzuyayla, 12 th km, roadside, 1000 m, 26.07.1989 ŞA 1058, MARA 1700!

***Chondrilla juncea** L. var. *juncea*

Between Sultaniye Village and Kuzuyayla, streamside, 970 m, 27.08.1990 ŞA 1835 MARA 2626!

Cichorium intybus L.

Maşukiye to Kuzuyayla, 6 th km, roadside, 500 m, 19.08.1989 ŞA 1115, MARA 1751!; Maşukiye to Kuzuyayla, roadside, 330 m, 18.11.1989 ŞA 1283, MARA 1916!; Maşukiye to Kuzuyayla, around fountain, 500 m, 21.07.1990 ŞA 1690, MARA 2482!

Cirsium arvense (L.) Scop. subsp. *vestitum* (Wimmer et Grab.) Petrak

Maşukiye to Kuzuyayla, fieldside, 12 th km, 1000 m, 26.07.1989 ŞA 1055, MARA 1698!; Maşukiye to Kuzuyayla, roadside, 1300 m, 11.10.1992 ŞA 2153, MARA 4472!

C. hypoleucum DC.

Maşukiye to Kuzuyayla, 2 nd km, roadside, 250 m, 04.06.1991 ŞA 1942, MARA 2756!

Euxine element.

C. ligulare Boiss.

Around summit, gravelly banks, 1600 m, 21.07.1990 ŞA 1716, MARA 2508!

C. vulgare (Savi) Ten.

Maşukiye to Kuzuyayla, 2 nd km, fieldside, 250 m, 19.08.1989 ŞA 1108, MARA 1744!

Conyza canadensis (L.) Cronquist

Maşukiye to Kuzuyayla, roadside, 280 m, 18.11.1989 ŞA 1301, MARA 1934!; Maşukiye to Kuzuyayla, fieldside, 250 m, 29.05.1990 ŞA 1559, MARA 2206.

Doronicum orientale Hoffm.

Maşukiye to Kuzuyayla, roadside, 250 m, 27.04.1990 ŞA 1364, MARA 2011!

Eupatorium cannabinum L.

Maşukiye to Kuzuyayla, 6 th km, fieldside, 525 m, 26.07.1989 ŞA 1048, MARA 1693!; Maşukiye to Kuzuyayla, 7 th km, stony area, 550 m, 19.08.1989 ŞA 1130, MARA 1765!; Sultaniye Village to Kuzuyayla, 1070 m, 27.08.1990 ŞA 1825, MARA 2616!

Euro-Sib. element.

Helichrysum plicatum DC. subsp. *plicatum*

Pazar meadow, around İfraziye, slopes, 200 m, 07.07.1992 ŞA 2072b, MARA 2945!

Lactuca saligna L.

Maşukiye to Kuzuyayla, slopes, 300 m, 17.09.1989 ŞA 1167, MARA 1802!; Maşukiye to Kuzuyayla, roadside, slopes, 950 m, 17.09.1989 ŞA 1196, MARA 1831.

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

Maşukiye to Kuzuyayla, 6 th km, around fountain, pasture, 500 m, 26.07.1989 ŞA 1027, MARA 1674!; Ibid. 10.06.1990 ŞA 1644, MARA 2300!; Kuzuyayla to summit, 1550 m, 21.07.1990 ŞA 1744, MARA 2534!; Around Hanlar, slopes, 850 m, 06.07.1991 ŞA 1965, MARA 2830!

Logfia arvensis (L.) Holub.

Maşukiye to Kuzuyayla, roadside, 750 m, 07.07.1991 ŞA 2057, MARA 2929!

Mycelis muralis (L.) Dum.

Maşukiye to Kuzuyayla, roadside, 950 m, 17.09.1989 ŞA 1197, MARA 1832!

Euro-Sib. element.

Petasites hybridus (L.) Gaertner

Maşukiye to Kuzuyayla, shady and dampy roadsides, 600 m, 18.03.1990 ŞA 1356, MARA 1989!; Ibid. 27.04.1990 ŞA 1421, MARA 2068!; Around picnic area, 1400 m, 19.05.1991 ŞA 1853, MARA 2661!; Kuzuyayla to summit, dampy roadside, 1410 m, 04.06.1991 ŞA 1906, MARA 2720!

Euro-Sib. element.

Pilosella hoppeana (Schultes) C.H. et F.W. Schultz subsp. *troica* (Zahn) Sell et West

Above Altıtoluk Plateau, 1350 m, 07.11.1992 ŞA 2160, MARA 4479!

Pulicaria dysenterica (L.) Bernh.

Maşukiye to Kuzuyayla, 6 th km, 500 m, 19.08.1989 ŞA 1122, MARA 1758!; Maşukiye to Kuzuyayla, dampy roadside, 600 m, 19.08.1989 ŞA 1137, MARA 1772!; Maşukiye to Kuzuyayla, in the mixed woodland, 550 m, 17.09.1989 ŞA 1176, MARA 1811!

Senecio integrifolius (L.) Clairv. subsp. *aucheri* (DC.) Matthews

Around summit, rocky places, 1600 m, 29.05.1990 ŞA 1525, MARA 2174!; Kuzuyayla to summit, slopes, 1550 m, 29.05.1990 ŞA 1512, MARA 2161!; Around summit, stony area, 1600 m, 10.06.1990 ŞA 1666, MARA 2323!; Around Kuzuyayla picnic area, 1400 m, 19.05.1991 ŞA 1879, MARA 2694!

Euro-Sib. (Euxine ?) element.

S. vernalis Waldst. et Kit.

Maşukiye to Kuzuyayla, roadside, 250 m, 18.03.1990 ŞA 1329, MARA 1962!; Ibid. 27.04.1990 ŞA 1360a, MARA 2006!; Kuzuyayla to summit, roadside, 1400 m, 04.06.1991 ŞA 1893, MARA 2707!

S. vulgaris L.

Maşukiye to Kuzuyayla, roadside, 600 m, 18.11.1989 ŞA 1320, MARA 1952!

Solidago virgaurea L. subsp. *virgaurea*

Maşukiye to Kuzuyayla, 6 th km, roadside, 525 m, 26.07.1989 ŞA 1047, MARA 1692!

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

Maşukiye to Kuzuyayla, 3 rd km, 250 m, 29.05.1990 ŞA 1564, MARA 2210!

Telekia speciosa (Schreber) Baumg.

Around summit, in the open forest, 1500 m, 17.09.1989 ŞA 1280, MARA 1913!

Euro-Sib. element.

***Tragopogon aureus** Boiss.

Maşukiye to Kuzuyayla, roadside, 250 m, 29.05.1990 ŞA 1558, MARA 2205!

Endemic.

***T. dubius** Scop.

South slopes of Keltepe, around Hanlar stream, 500 m, 07.07.1991 ŞA 2025, MARA 2897!; Around Sultaniye Village, Above Hanlar, 850 m, 06.07.1991 ŞA 1959, MARA 2824!

Endemic.

Tussilago farfara L.

Maşukiye to Kuzuyayla, roadside, 250 m, 18.03.1990 ŞA 1335, MARA 1968!; Above Hanlar, 850 m, 06.07.1991 ŞA 1970, MARA 2835!

Euro-Sib. element.

BERBERIDACEAE

Epimedium pubigerum (DC.) Moren et Decaisne

Maşukiye to Kuzuyayla, 11 th km, roadside, 1000 m, 27.04.1990 ŞA 1416, MARA 2063!

Euxine.

BORAGINACEAE

Alkanna tinctoria (L.) Tausch subsp. *tinctoria*

Kuzuyayla picnic area, 19 km from Maşukiye, in the mixed forest, 1400 m, 27.04.1990 ŞA 1394, MARA 2042!; Ibid. 29.05.1990 ŞA 1487, MARA 2140!; Around summit, open, stony area, 1600 m, 29.05.1990 ŞA 1543, MARA 2189!; Ibid. 10.06.1990 ŞA 1670, MARA 2327!

Medit. element.

Anchusa azurea Miller var. *azurea*

Between Sultaniye Village and Suadiye, around Karapınar, 800 m, 07.07.1991 ŞA 2047, MARA 2919.

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

Around summit, gravelly banks, 1600 m, 10.06.1990 ŞA 1665a, MARA 23211; Ibid. 04.06.1991 ŞA 1887, MARA 2700!

Cynoglossum montanum L.

Maşukiye to Kuzuyayla, 15 th km, 1300 m, 26.07.1989 ŞA 1069, MARA 1710!; Maşukiye to Kuzuyayla, slopes, 1400 m, 17.09.1989 ŞA 1243, MARA 1877!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1590, MARA 2237!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1501, MARA 2152!; Around summit, open, stony area, 1600 m, 21.07.1990 ŞA 1718, MARA 2510!; Maşukiye to Kuzuyayla, 200 m, 04.06.1991 ŞA 1927, MARA 2741!

Euro-Sib. element.

Echium italicum L.

Sultaniye Village, around Hanlar stream, 500 m, 07.07.1991 ŞA 2018, MARA 2890!

Medit. element.

E. vulgare L.

Maşukiye to Kuzuyayla, 1250 m, 17.09.1989 ŞA 1207, MARA 1842!; Around Sultaniye Village, around Altıoluk, 1050 m, 06.07.1991 ŞA 1985, MARA 2850!

Euro-Sib. element.

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

Kuzuyayla picnic area, open woodlands, 1400 m, 17.09.1989 ŞA 1229, MARA 1864!; Around summit, open area, 1600 m, 29.05.1990 ŞA 1538, MARA 2185!; Ibid. 04.06.1991 ŞA 1873, MARA 2688!; Between Mühürlü Pınar and Karadere, 1150 m, 06.07.1991 ŞA 1997, MARA 2862!

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

Maşukiye to Kuzuyayla, roadside, 250 m, 29.05.1990 ŞA 1432, MARA 2083!

Euro-Sib. element.

Lithospermum purpureocaeruleum L.

Maşukiye to Kuzuyayla, 250 m, 27.04.1990 ŞA 1369, MARA 2016!; Ibid. 29.05.1990 ŞA 1456, MARA 2110!

Euro-Sib. element.

Trachystemon orientalis (L.) G. Don

Around summit, 1550 m, 10.06.1990 ŞA 1669, MARA 2326!; Maşukiye to Kuzuyayla, slopes,

1530 m, 19.05.1991 ŞA 1866, MARA 2674!; Maşukiye to Kuzuyayla, slopes, 04.06.1991 ŞA 1932, MARA 2746!

Euxine element.

BRASSICACEAE (CRUCIFERAE)

Alyssum repens Baumg. subsp. *trichostachyum* (Rupr.) Hayek var. *stenophyllum* Hal.

Around summit, open areas, 1580 m, 26.07.1989 ŞA 1079, MARA 1717!; Ibid. 17.09.1989 ŞA 1250, MARA 1884!; Around summit, 10.06.1990 ŞA 1659, MARA 2315!; Ibid. stony area, 1600 m, 19.05.1991 ŞA 1857, MARA 2665!; Sultaniye Village to Suadiye, Ortamahalle, 750 m, 07.07.1991 ŞA 2059, MARA 2931!

Arabidopsis thaliana (L.) Heynhold

Maşukiye to Kuzuyayla, slopes, 250 m, 27.04.1990 ŞA 1424b, MARA 2072.

Arabis caucasica Willd. subsp. *caucasica*

Maşukiye to Kuzuyayla, fieldside, 250 m, 18.03.1990 ŞA 1354, MARA 1987!; Around Kuzuyayla picnic area, 1420 m, 27.04.1990 ŞA 1391, MARA 2039!; Around summit, slopes, 1600 m, 27.04.1990 ŞA 1404, MARA 2051!; Ibid. 10.06.1990 ŞA 1675a, MARA 2332!; Maşukiye to Kuzuyayla, 1300 m, 04.06.1991 ŞA 1902, MARA 2716!

A. sagittata (Bertol.) DC.

Maşukiye to Kuzuyayla, 250 m, 27.04.1990 ŞA 1365, MARA 2012!

Barbarea plantaginea DC.

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 01.07.1993 ŞA 2181, MARA 4493!

Berteroa mutabilis (Vent.) DC.

Kuzuyayla to summit, in the mixed woodland, 1550 m, 17.09.1989 ŞA 1273, MARA 1905!; Around summit, 1600 m, open areas, 17.09.1989 ŞA 1259, MARA 1892!; Around summit, stony area, 1600 m, 29.05.1990 ŞA 1546b, MARA 2193!; Sultaniye Village to summit, 1550 m, 12.10.1991 ŞA 2081, MARA 3018!

Capsella bursa-pastoris (L.) Medik.

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1370, MARA 2017!; Around Kuzuyayla picnic area, 1400 m, 19.05.1991 ŞA 1850, MARA 2658!; Ibid. 29.05.1990 ŞA 1478, MARA 2132!

Cardamine bulbifera (L.) Crantz

Maşukiye to Kuzuyayla, fieldside, 280 m, 18.03.1990 ŞA 1341, MARA 1974!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1492, MARA 2145!; Kuzuyayla to summit, slopes, 1460 m, 04.06.1991 ŞA 1929, MARA 2743!

C. hirsuta L.

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1424a, MARA 2071.

C. impatiens L. var. pectinata (Pallas) Trautv.

Maşukiye to Kuzuyayla, slopes, 1250 m, 17.09.1989 ŞA 1202, MARA 1837!; Maşukiye to Kuzuyayla, 10 th km, 1100 m, 29.05.1990 ŞA 1467, MARA 2121!; Kuzuyayla, picnic area, 1400 m, 19.05.1991 ŞA 1849, MARA 2657!; Maşukiye to Kuzuyayla, roadside, 200 m, 04.06.1991 ŞA 1926, MARA 2740!

*****C. quinquefolia (Bieb.) Schmalh.**

Kuzuyayla picnic area, 1450 m, 29.04.1974, A. Baytop, ISTE 27760!

Euro-Sib. element

***C. raphanifolia Pourr. subsp. acris (Gris.) O. E. Schultz**

Kuzuyayla picnic area, in the open mixed forest, 1400 m, 29.05.1990 ŞA 1486, MARA 2139!

Euro-Sib. element.

Erophila verna (L.) Chevall. subsp. verna

Maşukiye to Kuzuyayla, 250 m, 18.03.1990 ŞA 1330, MARA 1963!

***Iberis sempervirens L.**

Kuzuyayla to summit, 1600 m, 04.06.1991 ŞA 1874, MARA 2689!

Medit. element.

Lepidium campestre (L.) R. Br.

Maşukiye to Kuzuyayla, slopes, 950 m, 17.09.1989 ŞA 1209, MARA 1844!

Raphanus raphanistrum L.

Maşukiye to Kuzuyayla, fieldside, 250 m, 04.06.1991 ŞA 1917, MARA 2731!

Sisymbrium officinale (L.) Scop.

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 26.07.1989 ŞA 1033, MARA 1679!; Maşukiye to Kuzuyayla, roadside and slopes, 250 m, 29.05.1990 ŞA 1462, MARA 2116!

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

Maşukiye to summit, 20 th km, open area, stony places, 1580 m, 26.07.1989 ŞA 1089, MARA 1726!; Kuzuyayla to summit, slopes, 1500 m, 17.09.1989 ŞA 1278, MARA 1911!; Around summit, stony area, 1600 m, 17.09.1989 ŞA 1253, MARA 1887!; Ibid. 21.07.1990 ŞA 1721, MARA 2512!

Campanula glomerata L. subsp. hispida (Witasek) Hayek

Around summit, open area, 1600 m, 21.07.1990 ŞA 1742, MARA 2532!

Euro-Sib. element.

C. latifolia L.

Maşukiye to Kuzuyayla, woodland margin, 15 th km, 1300 m, 26.07.1989 ŞA 1060, MARA 1702!; Maşukiye to Kuzuyayla, roadside, slopes, 1100 m, 21.07.1990 ŞA 1715, MARA 2507!

Euro-Sib. element.

C. lyrata Lam. subsp. lyrata

Sultaniye Village to Suadiye, around Ortamahalle, slopes, 750 m, 07.07.1991 ŞA 2044, MARA 2916!; Maşukiye to Kuzuyayla, roadside, 1250 m, 11.10.1992 ŞA 2141, MARA 4453!

Endemic

C. persicifolia L.

Sultaniye Village to Kuzuyayla, slopes, 1100 m, 26.08.1990 ŞA 1779, MARA 2570!; Suadiye Village, around Hanlar place, 800 m, 07.07.1991 ŞA 2004, MARA 2876!

Euro-Sib. element.

C. rapunculoides L. subsp. cordifolia (C.Koch) Damboldt

Sultaniye Village to Kuzuyayla, slopes, 1100 m, 26.08.1990 ŞA 1780, MARA 2571!; Sultaniye Village to Suadiye, around Ortamahalle, slopes, 750 m, 07.07.1991 ŞA 2065, MARA 2937.

Legousia falcata (Ten.) Fritsch

Maşukiye to Kuzuyayla, fieldside, 250 m, 29.05.1990 ŞA 1570, MARA 2216!

Medit. element.

CAPRIFOLIACEAE**Sambucus ebulus L.**

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1000, MARA 1652!; Ibid. 19.08.1989 ŞA 1101, MARA 1737!; 9 th km, roadside, 750 m, 17.09.1989 ŞA 1187, MARA 1822!; 6 th km, around fountain, 500 m, 21.07.1990 ŞA 1680, MARA 2472!

Euro-Sib. element.

S. nigra L.

Maşukiye to Kuzuyayla, 9 th km, roadside, 750 m, 19.08.1989 ŞA 1142, MARA 1777!; Ibid. 17.09.1989 ŞA 1185, MARA 1820!; roadside, 950 m, 11.10.1992 ŞA 2138, MARA 4450!

Euro-Sib. element.

CARYOPHYLLACEAE**Agrostemma githago L.**

Above Sultaniye Village, around Altıoluk, 1000 m, 06.07.1991 ŞA 1969, MARA 2834!

Arenaria serpyllifolia L.

Maşukiye to Kuzuyayla, roadside, 1550 m,
10.06.1990 ŞA 1655a, MARA 2311!

Det. A. Çırpıcı

Cerastium fontanum Baumg. subsp. *triviale*
(Link) Jalas

Maşukiye to Kuzuyayla, fieldside, 250 m,
27.04.1990 ŞA 1373, MARA 2020!; around
fountain, 500 m, 29.05.1990 ŞA 1592, MARA
2239!

Det. A. Çırpıcı

***C. semidecandrum** L.

Maşukiye to Kuzuyayla, fieldside, 250 m,
29.05.1990 ŞA 1440, MARA 2092!

Dianthus carmelitarum Reut. ex Boiss.

Kuzuyayla to summit, open area, 1580 m,
26.07.1989 ŞA 1075, MARA 1713!; Ibid.
10.06.1990 ŞA 1662, MARA 2318!

Det. Ş. Kültür.

Endemic. Euxine element.

D. carthusianorum L.

Around summit, open area, stony place, 1600 m,
21.07.1990 ŞA 1729, MARA 2520!

Det. Ş. Kültür.

Minuartia anatolica (Boiss.) Woron. var.
anatolica

Around summit, open area, 1600 m, 29.05.1990
ŞA 1527, MARA 2176!

Endemic.

Det. A. Çırpıcı.

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

Maşukiye to Kuzuyayla, fieldside, 250 m,
29.05.1990 ŞA 1441, MARA 2093!

Moechringia trinervia (L.) Clairv.

Kuzuyayla picnic area, in the open mixed forest,
1400 m, 29.05.1990 ŞA 1489, MARA 2142!

Myosoton aquaticum (L.) Moench

Maşukiye to Kuzuyayla, roadside, 550 m,
17.09.1989 ŞA 1182, MARA 1817!

Euro-Sib. element.

Petrorhagia prolifera (L.) Ball et Heywood

South slopes of Keltepe, around Kilise (church)
place, meadow, 650 m, 07.07.1991 ŞA 2026,
MARA 2898!

Det. A. Çırpıcı.

Silene alba (Miller) Krause subsp. *divaricata*
(Reichb.) Walters

Maşukiye to Kuzuyayla, fieldside, 250 m,
04.06.1991 ŞA 1923, MARA 2737!

Det. K. Yıldız.

S. compacta Fischer

Above Suadiye, around İfraziye, slopes, 300 m,
07.07.1991 ŞA 2072, MARA 2944!

Det. K. Yıldız.

S. gallica L.

Maşukiye to Kuzuyayla, roadside, 250 m,
04.06.1991 ŞA 1934, MARA 2748!; around
fountain, open area, 500 m, 10.06.1990 ŞA 1633,
MARA 2291!; Ibid. 29.05.1990 ŞA 1593,
MARA 2240!; South slopes, around Kilise
(church) place, meadow, 650 m, 07.07.1991 ŞA
2029, MARA 2901!

Det. K. Yıldız.

S. italica (L.) Pers.

Kuzuyayla to summit, slopes, 1580 m,
26.07.1989 ŞA 1076, MARA 1714!; around
summit, open, stony area, 1600 m, 21.07.1990
ŞA 1724, MARA 2515!

Det. K. Yıldız.

***S. nocturna** L.

Maşukiye to Kuzuyayla, fieldside, 250 m,
04.06.1991 ŞA 1373, MARA 2683!

Medit. element.

Det. K. Yıldız.

***S. vulgaris** (Moench) Garcke

var. *macrocarpa* (Turri) Coode et Cullen

Maşukiye to Kuzuyayla, banks, 1400 m,
04.06.1991 ŞA 1936, MARA 2750!

Det. K. Yıldız.

var. *vulgaris*

Around Kuzuyayla picnic area, 1400 m,
17.09.1989 ŞA 1223, MARA 1858!; Maşukiye to
Kuzuyayla, roadside, 1400 m, 17.09.1989 ŞA
1242, MARA 1876!; Maşukiye to Kuzuyayla, in
the mixed woodland, slopes, 1500 m, 17.09.1989
ŞA 1277, MARA 1910!; around summit, 1600 m,
21.07.1990 ŞA 1723, MARA 2514!

Det. K. Yıldız.

Spergularia rubra (L.) J. et C. Presl

Maşukiye to Kuzuyayla, woodland margin, 1100
m, 29.05.1990 ŞA 1469, MARA 2123.

Det. A. Çırpıcı.

Stellaria holostea L.

Kuzuyayla picnic area, slopes, 1000 m,
27.04.1990 ŞA 1417, MARA 2064!

Det. A. Çırpıcı

Euro-Sib. element.

S. media (L.) Vill. subsp. *media*

Kuzuyayla picnic area, in the open woodland,
1400 m, 19.05.1991 ŞA 1846, MARA 2654!

CELASTRACEAE

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

Kuzuyayla to summit, in the mixed forest, 1400 m, 17.09.1989 ŞA 1240, MARA 1874!; Sultaniye Village to Kuzuyayla, in the mixed woodland, 1070 m, 27.08.1990 ŞA 1819, MARA 2610!

Euro-Sib. element.

CHENOPODIACEAE

Chenopodium album L. subsp. **album** var. **album**

South slopes of Keltepe, around Altıoluk alti, open, stony places, 960 m, 12.10.1991 ŞA 2098, MARA 3035!

CISTACEAE

Cistus creticus L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, hills, 500 m, 21.07.1990 ŞA 1683, MARA 2475!; South slopes of Keltepe, Kilise (church) place, roadside and slopes, 650 m, 07.07.1991 ŞA 2027, MARA 2899!

Omni-Medit. element.

Helianthemum nummularium (L.) Miller subsp. **nummularium**

Kuzuyayla to summit, 20 th km, open, stony place, 1580 m, 26.07.1989 ŞA 1094, MARA 1730!

CONVOLVULACEAE

Calystegia silvatica (Kit.) Griseb.

Maşukiye to Kuzuyayla, 9 th km, 750 m, 19.08.1989 ŞA 1141, MARA 1776!; Ibid. 17.09.1989 ŞA 1193, MARA 1828!; Maşukiye to Kuzuyayla, 3 rd km, roadside, 29.05.1990 ŞA 1459, MARA 2113!; Ibid. 04.06.1991 ŞA 1943, MARA 2757!

Convolvulus arvensis L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 26.07.1989 ŞA 1034, MARA 1680!; Sultaniye Village, Around Hanlar, slopes, 850 m, 06.07.1991 ŞA 1964, MARA 2829!

C. cantabrica L.

Sultaniye Village to Suadiye, around Ortamahalle, slopes, 750 m, 07.07.1991 ŞA 2054, MARA 2926!

CORNACEAE

Cornus mas L.

Sultaniye Village to Suadiye, around Ortamahalle, roadside, 750 m, 07.07.1991 ŞA 2064, MARA 2936!

Euro-Sib. element?

C. sanguinea L. subsp. **australis** (C.A. Meyer) Jav.

Maşukiye to Kuzuyayla, 3 rd km, fiedside, 250 m, 26.07.1989 ŞA 1008, MARA 1656!; Ibid. 29.05.1990 ŞA 1561, MARA 2208!; Maşukiye to

Kuzuyayla, 6 th km, roadside, 525 m, 26.07.1989 ŞA 1040, MARA 1685!; Sultaniye Village to Kuzuyayla, in the mixed woodland, 1030 m, 27.08.1990 ŞA 1820, MARA 2611!

Euro-Sib. element.

CORYLACEAE

Corylus avellana L. var. **avellana**

Maşukiye to Kuzuyayla, 6 th km, roadside, 550 m, 19.08.1989 ŞA 1134, MARA 1769!; Maşukiye to Kuzuyayla, roadside, 500 m, 18.11.1989 ŞA 1295, MARA 1928!; Sultaniye Village to Kuzuyayla, in the mixed woodland, 1270 m, 27.08.1990 ŞA 1793, MARA 2584!

Euro-Sib. element.

Carpinus betulus L.

Kuzuyayla to summit, in the mixed forest, 1400 m, 17.09.1989 ŞA 1235, MARA 1869!; Maşukiye to Kuzuyayla, 10 th km, in the mixed woodland, 1100 m, 29.05.1990 ŞA 1472, MARA 2126!; Sultaniye Village to Kuzuyayla, in the mixed woodland, 900 m, 26.08.1990 ŞA 1782, MARA 2573!; Around Yörük Mountain, 1330 m, 27.08.1990 ŞA 1800, MARA 2591!; Maşukiye to Kuzuyayla, roadside, 680 m, 11.10.1992 ŞA 2144, MARA 4463!

Euro-Sib. element.

CRASSULACEAE

Sedum album L.

Around summit, open area, on the rocks, 1600 m, 17.09.1989 ŞA 1260, MARA 1893!; Ibid. 10.06.1990 ŞA 1664, MARA 2320!

Det. K. Alpınar.

S. pallidum Bieb. var. **pallidum**

Maşukiye to Kuzuyayla, slopes, 250 m, 29.05.1990 ŞA 1436, MARA 2087!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 21.07.1990 ŞA 1688, MARA 2480!; Around summit, open, stony area, 21.07.1990 ŞA 1746b, MARA 2537!; Sultaniye Village, around Hanlar, 06.07.1991 ŞA 1957, MARA 2822!

Det. K. Alpınar.

***S. rubens** L.

Maşukiye to Kuzuyayla, slopes, 280 m, 18.11.1989 ŞA 1302, MARA 1935!

Medit. element.

Det. K. Alpınar

S. urvillei DC.

Sultaniye Village to Suadiye, around Ortamahalle, slopes, 750 m, 07.07.1991 ŞA 2063, MARA 2935!

Det. K. Alpınar.

DIOSCOREACEAE

Tamus communis L. subsp. **communis**

Maşukiye to Kuzuyayla, slopes, 250 m, 29.05.1990 ŞA 1446, MARA 2098!

DIPSACACEAE

Dipsacus fullonum L.

South slopes of Keltepe, around Hanlar stream, 500 m, 07.07.1991 ŞA 2019, MARA 2891!

Scabiosa atropurpurea L. subsp. **maritima** (L.) Arc.

Maşukiye to Kuzuyayla, open area, on the rocks, 500 m, 21.07.1990 ŞA 1692, MARA 2484!

S. columbaria L. subsp. **ochroleuca** (L.) Celak. var. **webbiana** (Don) Matthews

Kuzuyayla to summit, 20 th km, open, stony place, 1580 m, 26.07.1989 ŞA 1096, MARA 1732!

ERICACEAE

Erica arborea L.

South slopes of Keltepe, above Hanlar, slopes, 720 m, 07.07.1991 ŞA 2011, MARA 2883!

Pyrola minor L.

South slopes of Keltepe, between Mühürülpınar and Karadere, 1150 m, 06.07.1991 ŞA 1991, MARA 2856!

Euro-Sib. element.

Rhododendron ponticum L. subsp. **ponticum**

Maşukiye to Kuzuyayla, 12 th km, in the mixed forest, 1000 m, 26.07.1989 ŞA 1052, MARA 1695!; Maşukiye to Kuzuyayla, slopes, 400 m, 18.11.1989 ŞA 1319, MARA 1951!; Maşukiye to Kuzuyayla, 3 rd km, 27.04.1990 ŞA 1371, MARA 2018!; Maşukiye to Kuzuyayla, in the *Fagus* woodland, 1100 m, 29.05.1990 ŞA 1463, MARA 2117!; Sultaniye Village to Kuzuyayla, in the *Fagus* woodland, 1100 m, 26.08.1990 ŞA 1774, MARA 2566!

Euxine element.

Vaccinium arctostaphylos L.

Maşukiye to Kuzuyayla, slopes, 1100 m, 29.05.1990 ŞA 1475, MARA 2129!; Ibid. 10.06.1990 ŞA 1679, MARA 2337!

Euxine element.

EUPHORBIACEAE

Euphorbia amygdaloides L. var. **amygdaloides**

Maşukiye to Kuzuyayla, fieldside, 250 m, 18.03.1990 ŞA 1348, MARA 1981!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1504, MARA 2155!; Around summit, open area, 1600 m, 21.07.1990 ŞA 1743, MARA 2533!; Around Kuzuyayla picnic area, 1400 m, 19.05.1991 ŞA 1843, MARA 2651!; Around summit, open area,

slopes, 1600 m, 04.06.1991 ŞA 1877, MARA 2692!

Euro-Sib. element.

E. helioscopia L.

Maşukiye to Kuzuyayla, fieldside, 280 m, 18.03.1990 ŞA 1333, MARA 1966!; Maşukiye to Kuzuyayla, 3 rd km, roadside, slopes, 29.05.1990 ŞA 1581, MARA 2228!

E. seguieriana Necker subsp. **niciciana** (Borbas ex Novak) Rech. fil.

Between south slopes of Keltepe and Kuzuyayla, in the mixed forest, 1310 m, 26.08.1990 ŞA 1771, MARA 2563!

subsp. **seguieriana**

Kuzuyayla to summit, 20 th km, open area, 1580 m, 26.07.1989 ŞA 1080, MARA 1718!; Kuzuyayla to summit, in the mixed woodland, 1550 m, 17.09.1989 ŞA 1275, MARA 1907!; Around Altoluk, 1050 m, 06.07.1991 ŞA 1987, MARA 2852!

Euro-Sib. element.

E. stricta L.

Maşukiye to Kuzuyayla, roadside, 510 m, 18.11.1989 ŞA 1315, MARA 1947!; Maşukiye to Kuzuyayla, 3 rd km, field, 250 m, 27.04.1990 ŞA 1374, MARA 2021!; Maşukiye to Kuzuyayla, around fountain, hills, 500 m, 29.05.1990 ŞA 1584, MARA 2231!; Ibid. 21.07.1990 ŞA 1685, MARA 2477!

Euro-Sib. element.

Mercurialis perennis L.

Kuzuyayla picnic area, 19 th km from Maşukiye, in the open woodland, 1400 m, 27.04.1990 ŞA 1386, MARA 2034!; Around summit, open, stony area, 1600 m, 27.04.1990 ŞA 1403, MARA 2050!

Euro-Sib. element.

FABACEAE (LEGUMINOSAE)

Anthyllis vulneraria L. subsp. **boissieri** (Sag.) Bornm.

Around summit, 1610 m, open area, 10.06.1990 ŞA 1660, MARA 2316!

Astragalus glycyphyllos L. subsp.**glycyphylloides** (DC.) Matthews

Kuzuyayla picnic area, 1400 m, in the open woodland, 10.06.1990 ŞA 1652, MARA 2308!

Euro-Sib. element.

Chamaecytisus hirsutus (L.) Link

Around summit, 1600 m, open area, 29.05.1990 ŞA 1547, MARA 2194!; Kuzuyayla to summit, 19.05.1991 ŞA 1880, MARA 2695!

Coronilla varia L. subsp. **varia**

South slopes of Keltepe, above Hanlar, 850 m, slopes, 06.07.1991 ŞA 1955, MARA 2820!

Dorycnium graecum (L.) Ser.

Maşukiye to Kuzuyayla picnic area road, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1619, MARA 2263!; Above Hanlar, slopes, 850 m, 06.07.1991 ŞA 1954, MARA 2819!

Euxine element.

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

South slopes of Keltepe, around Kilise (church) place, 700 m, 07.07.1991 ŞA 2022, MARA 2894!

Galega officinalis L.

Maşukiye to Kuzuyayla, 7 th km, 600 m, 19.08.1989 ŞA 1138, MARA 1773!; Maşukiye to Kuzuyayla, slopes, 1250 m, 17.09.1989 ŞA 1214, MARA 1849!; Between Sultaniye Village and Kuzuyayla, fieldside, 900 m, 26.08.1990 ŞA 1787, MARA 2578!

Euro-Sib. element.

Genista tinctoria L.

Above Suadiye, around İfrazıye, 300 m, 07.07.1991 ŞA 2068, MARA 2940!

Euro-Sib. element.

Lathyrus czechottianus Bässler

Around summit, 1600 m, rocky place, 29.05.1990 ŞA 1542, MARA 2188!

Endemic.

L. laxiflorus (Desf.) O. Kuntze subsp. **laxiflorus**

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1375, MARA 2022!; Maşukiye to Kuzuyayla, around fountain, 500 m, 29.05.1990 ŞA 1595, MARA 2242!; Around summit, open, stony area, 1600 m, 29.05.1990 ŞA 1518, MARA 2167!; Maşukiye to Kuzuyayla, roadside, 1300 m, 27.08.1990 ŞA 1832, MARA 2623!; Around Altıoluk, meadow, 1000 m, 06.07.1991 ŞA 1972, MARA 2837!

L. undulatus Boiss.

South slopes of Keltepe, above Hanlar, 800 m, 07.07.1991 ŞA 2003, MARA 2875!

Endemic. Euxine element ?

L. venetus (Miller) Wöhlfl.

Kuzuyayla to summit, roadside, 1000 m, 27.04.1990 ŞA 1418, MARA 2065!

Euro-Sib. element.

Lotus corniculatus L. var. **alpinus** Ser.

Maşukiye to summit, 20 th km, 1580 m, 26.07.1989 ŞA 1082, MARA 1720!

var. **corniculatus**

Around summit, 1600 m, 21.07.1990 ŞA 1737, MARA 2528!; Around Hanlar, slopes, 900 m, 06.07.1991 ŞA 1963, MARA 2828!

var. **tenuifolius** L.

Maşukiye to Kuzuyayla, fieldside, 300 m, 17.09.1989 ŞA 1165, MARA 1800!

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

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1588, MARA 2235!

M. lupulina L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 26.07.1989 ŞA 1021, MARA 1668!; Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 29.05.1990 ŞA 1572a, MARA 2218!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 10.06.1990 ŞA 1639, MARA 2295!

M. polymorpha L. var. **vulgaris** (Benth.)

Shinners

Between south slopes of Keltepe and Kuzuyayla, dampy field margin 650 m, 07.07.1991 ŞA 2031, MARA 2903!

Mellilotus alba Desr.

Maşukiye to Kuzuyayla, 7 th km, dampy fields, 600 m, 19.08.1989 ŞA 1135, MARA 1770!; Maşukiye to Kuzuyayla, roadside, 1250 m, 17.09.1989 ŞA 1205, MARA 1840!; Above Suadiye Village, around İfrazıye, meadow, 200 m, 07.07.1991 ŞA 2073, MARA 2946!

Psoralea bituminosa L.

Sultaniye Village to Suadiye, around Ortamahalle and Karapınar, 800 m, 07.07.1991 ŞA 2043, MARA 2915!

Medit. element.

Robinia pseudoacacia L.

Maşukiye to Kuzuyayla, 6 th km, gravelly roadside 550 m, 19.08.1989 ŞA 1133, MARA 1768!; Maşukiye to Kuzuyayla, roadside, 250 m, 04.06.1991 ŞA 1922, MARA 2736!

Trifolium arvense L. var. **arvense**

South slopes of Keltepe, above Hanlar, 850 m, 06.07.1991 ŞA 1961, MARA 2826!

T. campestre Scrb.

Maşukiye to Kuzuyayla, fieldside, 250 m, 29.05.1990 ŞA 1572b, MARA 2219!; Ibid. 04.06.1991 ŞA 1941, MARA 2755!

T. constantinopolitanum Ser.

Maşukiye to Kuzuyayla, roadside, 250 m, 04.06.1991 ŞA 1951, MARA 2765!

T. hybridum L. var. **hybridum**

Kuzuyayla picnic area, in the open woodland, 1400 m, 17.09.1989 ŞA 1230, MARA 1865!

T. pratense L. var. *pratense*

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 26.07.1989 ŞA 1037, MARA 1682!; Around summit, open, stony area, 1600 m, 17.09.1989 ŞA 1265, MARA 1898!; Ibid. 21.07.1990 ŞA 1753, MARA 2545!

var. *sativum* Schreb.

Maşukiye to Kuzuyayla, fieldside, 580 m, 18.11.1989 ŞA 1325, MARA 1957!; Maşukiye to Kuzuyayla, around fountain, 500 m, 10.06.1990 ŞA 1646, MARA 2302!

T. repens L. var. *repens*

Maşukiye to Kuzuyayla, 6 th km, 500 m, 19.08.1989 ŞA 1121, MARA 1757!; Ibid. 10.06.1990 ŞA 1643, MARA 2299!; Sultaniye Village to Kuzuyayla, field, 1310 m, 26.08.1990 ŞA 1761, MARA 2553!; Maşukiye to Kuzuyayla, roadside, 740 m, 11.10.1992 ŞA 2149, MARA 4468!

T. resupinatum L. var. *resupinatum*

Maşukiye to Kuzuyayla, fieldside, 250 m, 04.06.1991 ŞA 1915, MARA 2729!

***T. scabrum** L.

Maşukiye to Kuzuyayla, 6 th km, 500 m, 10.06.1990 ŞA 1638, MARA 2294!

Vicia villosa Roth subsp. *eriocarpa* (Hauskn.) P.W. Ball

Maşukiye to Kuzuyayla, fieldside, 250 m, 29.05.1990 ŞA 1560, MARA 2207!; Ibid. 04.06.1991 ŞA 1918, MARA 2732!

FAGACEAE

Castanea sativa Miller

Maşukiye to Kuzuyayla, 6 th km, in the mixed woodland, 500 m, 19.08.1989 ŞA 1125, MARA 1761!; Sultaniye to Kuzuyayla, in the mixed woodland, 1070 m, 27.08.1990 ŞA 1823, MARA 2614!; Around Hanlar, 800 m, 07.07.1991 ŞA 2008, MARA 2880!; Maşukiye to Kuzuyayla, in the mixed woodland, 1060 m, 11.10.1992 ŞA 2139, MARA 4451!

Euro-Sib. element.

Fagus orientalis Lipsky

Maşukiye to Kuzuyayla, 2 nd km, woodlands, 250 m, 19.08.1989 ŞA 1099, MARA 1735!; Around Kuzuyayla picnic area, 1400 m, 19.08.1989 ŞA 1151, MARA 1786!; Maşukiye to Kuzuyayla, in the mixed woodland, 1100 m, 29.05.1990 ŞA 1471, MARA 2125!; Between Sultaniye Village and Kuzuyayla, 1310 m, 26.08.1990 ŞA 1770, MARA 2562!; Sultaniye Village to Suadiye, Ortamahalle, Karapınar,

roadside, slopes, 200 m, 07.07.1991 ŞA 2074, MARA 2947!

Euro-Sib. element.

Quercus cerris L. var. *austriaca* (Willd.) Loudon

Sultaniye Village to Kuzuyayla, slopes, 900 m, 26.08.1990 ŞA 1784, MARA 2575!

Euro-Sib. element.

var. *cerris*

South slopes of Keltepe, open woodland, 1050 m, 12.10.1991 ŞA 2085, MARA 3022!

Medit. element.

***Q. frainetto** Ten. X **Q. petraea** (Mattuschka) Liebl. subsp. *iberica* (Steven ex Bieb.) Krassiln.

Sultaniye Village to Kuzuyayla, open mixed forest, 1250 m, 27.08.1990 ŞA 1789, MARA 2580!

Det. F. Yalçırık.

Q. petraea (Mattuschka) Liebl. subsp. *iberica* (Steven ex Bieb.) Krassiln.

Sultaniye Village, around Hanlar, 880 m, 12.10.1991 ŞA 2103, MARA 3040!; Around Altıoluk, 990 m, 12.10.1991 ŞA 2096, MARA 3033!

GENTIANACEAE

Centaureum erythraea Rafn subsp. *erythraea*

Maşukiye to Kuzuyayla, in the mixed woodland, 550 m, 17.09.1989 ŞA 1177, MARA 1812!; Kuzuyayla picnic area, 1400 m, 17.09.1989 ŞA 1234, MARA 1868!; Maşukiye to Kuzuyayla, around fountain, dampy area, 500 m, 21.07.1990 ŞA 1758, MARA 2550!

Euro-Sib. element.

Gentiana asclepiadea L.

Kuzuyayla picnic area, in the mixed woodland, 1400 m, 17.09.1989 ŞA 1217, MARA 1852!; Maşukiye to Kuzuyayla, roadside, slopes, 1400 m, 17.09.1989 ŞA 1241, MARA 1875!; Above Sultaniye Village, in the *Fagus* and *Carpinus* woodland, 1100 m, 26.08.1990 ŞA 1773, MARA 2565!

Euro-Sib. element.

GERANIACEAE

***Erodium acaule** (L.) Becherer et Thell.

South slopes of Keltepe, around Yörük Mountain, meadow, 1380 m, 27.08.1990 ŞA 1806, MARA 2597!

Medit. element.

E. cicutarium (L.) L' Hérit. subsp. *cicutarium*

Maşukiye to Kuzuyayla, around fountain, open area, 500 m, 29.05.1990 ŞA 1583, MARA 2230!; Around summit, open area, 1600 m, 04.06.1991

ŞA 1881, MARA 2696!; Around Sultaniye, Church (Kilise) place, dampy field, 650 m, 07.07.1991 ŞA 2032, MARA 2904!; Around Yörük Mountain, 1450 m, 12.10.1991 ŞA 2087, MARA 3024!

Geranium asphodeloides Burm. fil. subsp. **asphodeloides**

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1376, MARA 2023!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1524, MARA 2173!

Det. İ. Deniz.

Euro-Sib. element.

G. columbinum L.

Maşukiye to Kuzuyayla, 3 rd km, fieldside, 250 m, 29.05.1990 ŞA 1574a, MARA 2222!

G. purpureum Vill.

Maşukiye to Kuzuyayla, 3 rd km, fieldside, 250 m, 29.05.1990 ŞA 1573a, MARA 1661!

Det. İ. Deniz.

G. pyrenaicum Burm. fil.

Maşukiye to summit, 20 th km, slopes, 1580 m, 26.07.1989 ŞA 1084, MARA 2221!; Around summit, open area, 1600 m, 21.07.1990 ŞA 1740, MARA 2530!; Maşukiye to Kuzuyayla, in the mixed woodland, 1300 m, 04.06.1991 ŞA 1900, MARA 2714!; Kuzuyayla to summit, slopes, 1460 m, 04.06.1991 ŞA 1930, MARA 2744!; Around Altıoluk Plateau, 1000 m, 06.07.1991 ŞA 1974, MARA 2839!; Around Sultaniye Village, 650 m, 07.07.1991 ŞA 2036, MARA 2908!

Det. İ. Deniz.

G. robertianum L.

Maşukiye to Kuzuyayla, 3 rd km, fieldside, 250 m, 26.07.1989 ŞA 1013, MARA 1661!; Maşukiye to Kuzuyayla, roadside, 950 m, 17.09.1989 ŞA 1201, MARA 1836!; Around Yörük Mountain, 1390 m, 27.08.1990 ŞA 1809, MARA 2600!; Kuzuyayla to summit, slopes, 1550 m, 10.06.1990 ŞA 1671, MARA 2328!; Kuzuyayla to summit, 1460 m, 04.06.1991 ŞA 1931, MARA 2745!

Det. İ. Deniz.

HYPERICACEAE (GUTTIFERAE)

Hypericum androsaemum L.

Sultaniye Village, around Hanlar, 800 m, 06.07.1991 ŞA 2005, MARA 2877!

H. bithynicum Boiss.

Maşukiye to summit, 20 th km, open, stony place, 1580 m, 26.07.1989 ŞA 1095, MARA 1731!; Around Kuzuyayla picnic area, 1400 m, 17.09.1989 ŞA 1228, MARA 1863!; Maşukiye to Kuzuyayla, 3 rd km, slopes, 250 m, 29.05.1990

ŞA 1461, MARA 2115!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1609, MARA 2253!; Around İşaret place, slopes, 1000 m, 06.07.1991 ŞA 2002, MARA 2867!

Euxine element.

II. calycinum L.

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1010, MARA 1658!; Maşukiye to Kuzuyayla, 6 th km, around fountain, dampy field, 500 m, 26.07.1989 ŞA 1035, MARA 1681!; Ibid. 10.06.1990 ŞA 1640, MARA 2296!; Sultaniye Village, around Hanlar, roadside, 850 m, 06.07.1991 ŞA 1958, MARA 2823!

Euxine element.

II. perforatum L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 26.07.1989 ŞA 1032, MARA 1678!; Maşukiye to Kuzuyayla, 7 th km, hills, 600 m, 19.08.1989 ŞA 1140, MARA 1775!; Around picnic area, 1400 m, 17.09.1989 ŞA 1224, MARA 1859!; Maşukiye to Kuzuyayla, around fountain, 500 m, 10.06.1990 ŞA 1641, MARA 2297!

ILLECEBRACEAE

Scleranthus annuus L. subsp. **annuus**

Around Kuzuyayla picnic area, open woodland, 1400 m, 29.05.1990 ŞA 1507, MARA 2157!

JUGLANDACEAE

Juglans regia L.

Maşukiye to Kuzuyayla, 6 th km, in the mixed woodland, 500 m, 19.08.1989 ŞA 1119, MARA 1755!; Maşukiye to Kuzuyayla, Around fountain, 500 m, 21.07.1990 ŞA 1757, MARA 2549!

LAMIACEAE (LABIATAE)

Ajuga chamaepitys (L.) Schreber subsp. **chia** (Schreber) Arcangeli var. **chia**

Sultaniye Village to Suadiye, Ortamahalle, around Karapınar, 750 m, 07.07.1991 ŞA 2042, MARA 2925!

A. orientalis L.

Kuzuyayla picnic area, 19 km from Maşukiye, in the mixed woodland, 1400 m, 27.04.1990 ŞA 1393, MARA 2041!; Around summit, open, stony area, 1600 m, 19.05.1991 ŞA 1862, MARA 2670!; Ibid. 04.06.1991 ŞA 1888, MARA 2701!

A. reptans L.

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1379, MARA 2026!

Euro-Sib. element.

Calamintha grandiflora (L.) Moench

Maşukiye to Kuzuyayla, 15 th km, 1300 m, 26.07.1989 ŞA 1062, MARA 1703!; Maşukiye to Kuzuyayla, slopes, 1400 m, 17.09.1989 ŞA 1244, MARA 1878!; South of Keltepe, around İşaret place, 1000 m, 06.07.1991 ŞA 1999, MARA 2864!; Around Yörük Mountain, fieldside, 1390 m, 27.08.1990 ŞA 1803, MARA 2594!

Euro-Sib. element.

C. nepeta (L.) Savi subsp. *glandulosa* (Req.)

P.W. Ball

Maşukiye to Kuzuyayla, 3 rd km, 250 m, 26.07.1989 ŞA 1016, MARA 1664!; Maşukiye to Kuzuyayla, roadside slopes, 1250 m, 17.09.1989 ŞA 1206, MARA 1841!; Maşukiye to Kuzuyayla, around fountain, 500 m, 21.07.1990 ŞA 1700, MARA 2492!

***C. sylvatica** Bromf. subsp. *ascenden* (Jordan)

P.W. Ball

Kuzuyayla picnic area, in the mixed woodland, 1400 m, 17.09.1989 ŞA 1233, MARA 1867!

Clinopodium vulgare L. subsp. *vulgare*

Maşukiye to Kuzuyayla, 3 rd km, 250 m, 26.07.1989 ŞA 1019, MARA 1667!; Maşukiye to Kuzuyayla, 6 th km, roadside, field, 525 m, 26.07.1989 ŞA 1038, MARA 1683!; Maşukiye to Kuzuyayla, slopes, 750 m, 17.09.1989 ŞA 1192, MARA 1827!; Kuzuyayla to summit, open, stony area, 1580 m, 26.07.1989 ŞA 1086, MARA 1724!; Around summit, open area, 1600 m, 21.07.1990 ŞA 1725, MARA 2516!

Galeobdolon luteum Hudson subsp. *montanum* (Pers.) R. Mill

Kuzuyayla picnic area, in the mixed woodland, 1400 m, 10.06.1990 ŞA 1651, MARA 2307!

Glechoma hederacea L.

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1381, MARA 2028!

Euro-Sib. element.

Lamium garganicum L. subsp. *laevigatum* Arcangeli

Kuzuyayla picnic area, in the mixed woodland, 1400 m, 17.09.1989 ŞA 1246, MARA 1880!; Maşukiye to Kuzuyayla, roadside, 1500 m, 04.06.1991 ŞA 1912, MARA 2726!

Euxine element.

*subsp. *reniforme* (Montbret et Aucher ex Benth) R. Mill

Maşukiye to Kuzuyayla, roadside, 1300 m, 04.06.1991 ŞA 1903, MARA 2717!

L. maculatum L. var. *maculatum*

Around summit, rocky places, 1600 m, 04.06.1991 ŞA 1872, MARA 2687!; Kuzuyayla

picnic area, 1400 m, 19.05.1991 ŞA 1839, MARA 2647!

Euro-Sib. element.

L. purpureum L. var. *purpureum*

Maşukiye to Kuzuyayla, fieldside, 280 m, 18.03.1990 ŞA 1337, MARA 1970!

Euro-Sib. element.

Mentha aquatica L.

Maşukiye to Kuzuyayla, dampy roadside, 800 m, 11.10.1992 ŞA 2137, MARA 4449!

***M. longifolia** (L.) Hudson subsp. *longifolia*

Maşukiye to Kuzuyayla, around fountain, 550 m, 17.09.1989 ŞA 1181, MARA 1816!

Euxine element.

subsp. *typhoides* (Briq.) Harley var. *typhoides*

Maşukiye to Kuzuyayla, 3 rd km, dampy roadside, 250 m, 26.07.1989 ŞA 1009, MARA 1657!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 26.07.1989 ŞA 1039, MARA 1684!; Ibid. 21.07.1990, ŞA 1687, MARA 2479!

Mentha pulegium L.

Sultaniye Village, around Hanlar, fieldside, 850 m, 12.10.1991 ŞA 2105, MARA 3042!; Sultaniye Village to Kuzuyayla, Church (Kilise) place, dampy field, 1000 m, 27.08.1990 ŞA 1883, MARA 2624!

Origanum vulgare L. subsp. *hirtum* (Link)

Ietswaart

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1012, MARA 1660!; Ibid. 19.08.1989 ŞA 1098, MARA 1734!; Maşukiye to Kuzuyayla, around fountain, 500 m, 19.08.1989 ŞA 1127, MARA 1763!

E. medit. element.

subsp. *vulgare*

Around Yörük Mountain, 1390 m, 27.08.1990 ŞA 1801, MARA 2592!; Sultaniye Village to Suadiye, Ortamahalle, around Karapınar, 700 m, 07.07.1991 ŞA 2067, MARA 2939!; Above Sultaniye Village, 1260 m, 27.08.1991 ŞA 1792, MARA 2583!

Euro-Sib. element.

Phlomis russeliana (Sims) Benth

Maşukiye to Kuzuyayla, 6 th km. around fountain, 500 m, 29.05.1990 ŞA 1600, MARA 2245!; Around summit, gravelly banks, 1600 m, 21.07.1990 ŞA 1736, MARA 2527!

Endemic. Euxine (mt.) element.

Prunella vulgaris L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 26.07.1989 ŞA 1026, MARA 1673!; Maşukiye to Kuzuyayla, 9 th km,

roadside, 750 m, 19.08.1989 ŞA 1144, MARA 1779!; Kuzuyayla picnic area, 1400 m, 19.08.1989 ŞA 1150, MARA 1785!; Maşukiye to Kuzuyayla, roadside, 350 m, 18.11.1989 ŞA 1313, MARA 1945!; Around summit, open area, 1600 m, 21.07.1990 ŞA 1751, MARA 2542!

Euro-Sib. Element.

Salvia forskahlei L.

Maşukiye to Kuzuyayla, 6 th km, roadside, 525 m, 26.07.1989 ŞA 1043, MARA 1688!; Maşukiye to Kuzuyayla, 2nd km, roadside, 250 m, 19.08.1989 ŞA 1102, MARA 1738!; Above Sultaniye Village, around Altıtoluk, field, 1050 m, 06.07.1991 ŞA 1983, MARA 2848!; Around Hanlar, slopes, 720 m, 06.07.1991 ŞA 2010, MARA 2882!

Euxine element.

S. glutinosa L.

Maşukiye to Kuzuyayla, 6 th km, roadside, 525 m, 26.07.1989 ŞA 1044, MARA 1689!; Maşukiye to Kuzuyayla, 15 th km, in the mixed woodland, 1300 m, 26.07.1989 ŞA 1073, MARA 1712!; Sultaniye Village to Kuzuyayla, around Yörük Mountain, 1400 m, 12.10.1991 ŞA 2089, MARA 3026!

Hyrcano-Euxine element.

S. sclarea L.

Sultaniye Village to Suadiye, Ortamahalle, around Karapınar, slopes, 800 m, 07.07.1991 ŞA 2048, MARA 2920!

S. tomentosa Miller

Sultaniye Village to Suadiye, Ortamahalle, around Karapınar, slopes, 800 m, 07.07.1991 ŞA 2042, MARA 2914!

Medit. element.

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

Around summit, rocky place, 1600 m, 17.09.1989 ŞA 1252, MARA 1886! v.

Ir.-Tur. element ?

Scutellaria albida L. subsp. **albida**

Maşukiye to Kuzuyayla, 6th km, 525 m, 26.07.1989 ŞA 1046, MARA 1691!; Around summit, open, stony area, 1600 m, 21.07.1990 ŞA 1738, MARA 2529!; Above Hanlar, 720 m, 07.07.1991 ŞA 2012, MARA 2884!

E. Medit. element.

Sideritis montana L. subsp. **montana**

Sultaniye Village to Suadiye, Ortamahalle, around Karapınar, slopes, 750 m, 07.07.1991 ŞA 2058, MARA 2930!; Around Yörük Mountain, field, 1390, 27.08.1990 ŞA 1802, MARA 2593!

Medit. element.

Stachys byzantina C. Koch

Maşukiye to summit, 20 th km, open, stony place, 1580 m, 26.07.1989 ŞA 1097, MARA 1733!; Around summit, open area, 1600 m, 17.09.1989 ŞA 1248, MARA, 1882!; Ibid. 21.07.1990 ŞA 1741, MARA 2531!

Euro-Sib. element.

S. sylvatica L.

Kuzuyayla picnic area, in the mixed woodland 1400 m, 17.09.1989 ŞA 1225, MARA 1860!; Ibid. 04.06.1991 ŞA 1939, MARA 2753!

Euro-Sib. element.

S. thirkei C. Koch

Sultaniye Village, around Hanlar, 600 m, 07.07.1991 ŞA 2024, MARA 2896!

Teucrium chamaedrys L. subsp. **chamaedrys**

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1015, MARA 1663!; Around summit, open, stony area, 1600 m, 17.09.1989 ŞA 1249, MARA 1883!; Maşukiye to Kuzuyayla, around fountain, slopes, 500 m, 21.07.1990 ŞA 1697, MARA 2489!; Around Yörük Mountain, 1390 m, 27.08.1990 ŞA 1798, MARA 2589!

Euro-Sib. element.

Thymus longicaulis C. Presl subsp. **longicaulis** var. **subisophyllus** (Borbás) J alas

Sultaniye Village, above Uzun Çimen, 1400 m, 12.10.1991 ŞA 2108, MARA 3045!

***T. praecox** Opiz subsp. **skorpilii** (Velen.) J alas var. **skorpilii**

Maşukiye to summit, 20 th km, 1580 m, 26.07.1989 ŞA 1081, MARA 1719!; Around summit, open area, 1600 m, 17.09.1989 ŞA 1254, MARA 1888!; Ibid. 10.06.1990 ŞA 1661, MARA 2317!

Lauraceae

Laurus nobilis L.

Maşukiye to Kuzuyayla, 250 m, 18.11.1989 ŞA 1290, MARA 1923!; Ibid. 19.08.1989 ŞA 1105, MARA 1741!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 21.07.1990 ŞA 1705, MARA 2497!; Maşukiye to Kuzuyayla, roadside, 450 m, 11.10.1992 ŞA 2120, MARA 4432!

Medit. element.

LINACEAE

***Linum austriacum** L. subsp. **austriacum**

Sultaniye Village, around Kilise (church) place, 650 m, 07.07.1991 ŞA 2028, MARA 2900!

Det.E. Özhatay.

L. bienne Miller

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1582, MARA

22291; Ibid. 21.07.1990 ŞA 1693, MARA 24851; Maşukiye to Kuzuyayla, field margin, 550 m, 01.07.1993 ŞA 2182, MARA 4494!

Det.E. Özhatay.

Medit. element.

LORANTHACEAE

Viscum album L. subsp. *album*

Sultaniye Village, around Hanlar, 900 m, 07.11.1992 ŞA 2166, MARA 4458!

LYTHRACEAE

Lythrum salicaria L.

Maşukiye to Kuzuyayla, 6 th km, 500 m, 19.08.1989 ŞA 1132, MARA 1767!; Sultaniye Village to Kuzuyayla, 900 m, 26.08.1990 ŞA 1786, MARA 2577!; above Kilise (church) place, 650 m, 07.07.1991 ŞA 2034, MARA 2906!; Maşukiye to Kuzuyayla, roadside, 550 m, 11.10.1992 ŞA 2109, MARA 4421!

Euro-Sib. element.

MALVACEAE

Alcea pallida Waldst. et Kit.

Maşukiye to Kuzuyayla, 15 th km, woodland margin, 1300 m, 26.07.1989 ŞA 1065, MARA 1706!; Around summit, open area, 1600 m, 21.07.1990 ŞA 1730, MARA 2521!

**Althaea hirsuta* L.

Sultaniye Village to Suadiye, around Ortamahalle, 800 m, 07.07.1991 ŞA 2045, MARA 2917!

Malva neglecta Wallr.

Maşukiye to Kuzuyayla, roadside, 500 m, 29.05.1990 ŞA 1599, MARA 2244!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 10.06.1990 ŞA 1636, MARA 2293!

M. sylvestris L.

Maşukiye to Kuzuyayla, fieldside, 580 m, 18.11.1989 ŞA 1305, MARA 1938!; Around summit, 1600 m, 10.06.1990 ŞA 1657, MARA 2313!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 21.07.1990 ŞA 1706, MARA 2498!; Maşukiye to Kuzuyayla, roadside, 200 m, 04.06.1991 ŞA 1924, MARA 2738!

MORACEAE

Ficus carica L. subsp. *carica*

Maşukiye to Kuzuyayla, fieldside, 380 m, 11.10.1992 ŞA 2125, MARA 4437!; Maşukiye to Kuzuyayla, roadside, 450 m, 11.10.1992 ŞA 2119, MARA 4431!

OLEACEAE

Ligustrum vulgare L.

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1017, MARA 1665!;

Maşukiye to Kuzuyayla, roadside, 300 m, 17.09.1989 ŞA 1160, MARA 1795!

Euro-Sib. element.

Phillyrea latifolia L.

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1109, MARA 1745!

Medit. element.

ONAGRACEAE

Epilobium angustifolium L.

Maşukiye to Kuzuyayla, dampy roadside, 12 th km, 1000 m, 26.07.1989 ŞA 1049, MARA 1694!; Maşukiye to Kuzuyayla, 9 th km, roadside, slopes, 750 m, 19.08.1989 ŞA 1146, MARA 1781!; Maşukiye to Kuzuyayla, 10 th km, roadside, 1100 m, 21.07.1990 ŞA 1713, MARA 2505!; Sultaniye Village to Kuzuyayla, slopes, 1300 m, 27.08.1990 ŞA 1830, MARA 2621!

E. hirsutum L.

Maşukiye to Kuzuyayla, stony area, 550 m, 19.08.1989 ŞA 1128, MARA 1764!; Ibid. 17.09.1989 ŞA 1171, MARA 1806!

E. montanum L.

Maşukiye to Kuzuyayla, 12 th km, woodland margin, 1000 m, 26.07.1989 ŞA 1059, MARA 1701!; Kuzuyayla to summit, roadside, 1580 m, 26.07.1989 ŞA 1078, MARA 1716!; Around picnic area, 1400 m, 19.08.1989 ŞA 1152, MARA 1787!; Maşukiye to Kuzuyayla, roadside, 1250 m, 17.09.1989 ŞA 1210, MARA 1845!

Euro-Sib. element

E. parviflorum Schreber

Maşukiye to Kuzuyayla, 6 th km, roadside, 500 m, 21.07.1990 ŞA 1684, MARA 2476!

OROBANCHACEAE

**Orobanche cilicica* G. Beck

Around summit, open, gravelly place, 1600 m, 21.07.1990 ŞA 1726, MARA 2517!

O. minor Sm.

Kuzuyayla picnic area, in the open woodland, 1400 m, 04.06.1991 ŞA 1940, MARA 2754!

OXALIDACEAE

Oxalis corniculata L.

Maşukiye to Kuzuyayla, 6 th km, 500 m, 21.07.1990 ŞA 1704, MARA 2496!

PAEONIACEAE

**Paeonia mascula* (L.) Miller subsp. *arietina* (Anders.) Cullen et Heywood

Around summit, in the open woodland, 1600 m, 27.04.1990 ŞA 1406, MARA 2053!

PAPAVERACEAE

Chelidonium majus L.

Kuzuyayla picnic area, 19 th km from Maşukiye, 1400 m, 29.05.1990 ŞA 1511, MARA 2160!; Around Kurudere, stony field, 1330 m, 12.10.1991 ŞA 2078, MARA 3015!

Euro-Sib. element.

Corydalis bulbosa (L.) DC. subsp. **marschalliana** (Pall.) Chater

Kuzuyayla picnic area, 19 th km from Maşukiye, 1400 m, 27.04.1990 ŞA 1385, MARA 2033!; Kuzuyayla to summit!; 1550 m, 10.06.1990 ŞA 1672, MARA 2329, Around Kuzuyayla picnic area, 1410 m, 04.06.1991 ŞA 1907, MARA 2721!

Euro-Sib. element.

C. solida (L.) Swartz subsp. **solida**

Around summit, open area, 1600 m, 27.04.1990 ŞA 1410, MARA 2057!

Fumaria officinalis L.

Sultaniye to Suadiye, around Ortamahalle, 750 m, 07.07.1991 ŞA 2061, MARA 2933!

Papaver rhoeas L.

Sultaniye to Suadiye, around Ortamahalle, 750 m, 07.07.1991 ŞA 2062, MARA 2934!

PHYTOLACCACEAE

Phytolacca americana L.

Maşukiye to Kuzuyayla, 6 th km, roadside, 525 m, 26.07.1989 ŞA 1041, MARA 1686!;

Maşukiye to Kuzuyayla, in the mixed woodland, 300 m, 11.10.1992 ŞA 2122, MARA 4434!

PLANTAGINACEAE

***Plantago argentea** Chaix

Maşukiye to Kuzuyayla, waste place, 550 m, 17.09.1989 ŞA 1189, MARA 1824!; Around summit, open, stony area, 1600 m, 04.06.1991 ŞA 1889, MARA 2702!

Det. B.Tutel.

Euro-Sib. element.

P. lanceolata L.

Maşukiye to Kuzuyayla, roadside, 550 m, 26.07.1989 ŞA 1022, MARA 1669!; Maşukiye to Kuzuyayla, slopes, 950 m, 17.09.1989 ŞA 1191, MARA 1826!; Maşukiye to Kuzuyayla, roadside, 550 m 10.06.1990 ŞA 1635, MARA 2292!; Kuzuyayla to summit, roadside, 1460 m, 04.06.1991 ŞA 1925, MARA 2739!

Det. B.Tutel.

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

Maşukiye to Kuzuyayla, roadside, 550 m, 17.09.1989 ŞA 1188, MARA 1823!; Around summit, open, stony area, 1600 m, 21.07.1990 ŞA 1752b, MARA 2544!

Det. B.Tutel.

subsp. **major**

Around summit, rocky area, 1600 m, 21.07.1990 ŞA 1752a, MARA 2543!

Det. B.Tutel.

PLATANACEAE

Platanus orientalis L.

Maşukiye to Kuzuyayla, fieldside, 150 m, 11.10.1992 ŞA 2131, MARA 4443!

POLYGONACEAE

Polygonum persicaria L.

Maşukiye to Kuzuyayla, fieldside, 300 m, 17.09.1989 ŞA 1161, MARA 1796!; Maşukiye to Kuzuyayla, roadside, 530 m, 18.11.1989 ŞA 1293, MARA 1926!; Maşukiye to Kuzuyayla, 1300 m, 27.08.1990 ŞA 1831, MARA 2622!

Rumex acetosella L.

Sultaniye Village, around Hanlar, 900 m, 06.07.1991 ŞA 1968, MARA 2833!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1479, MARA 2133!

R. alpinus L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1613, MARA 2257!; Kuzuyayla picnic area, in the open woodland, 1370 m, 11.10.1992 ŞA 2134, MARA 4446!

R. crispus L.

Sultaniye Village, around Altoluk Plateau, 1050 m, 06.07.1991 ŞA 1988, MARA 2853!

***R. pulcher** L.

Maşukiye to Kuzuyayla, Around fountain, 500 m, 29.05.1990 ŞA 1617, MARA 2260!; Kuzuyayla to summit, roadside, 1460 m, 04.06.1991 ŞA 1937, MARA 2751!

PRIMULACEAE

Anagallis arvensis L. var. **arvensis**

Sultaniye Village, above Kilise (church) place, 650 m, 07.07.1991 ŞA 2037, MARA 2909!

Lysimachia verticillaris Sprengel

Maşukiye to Kuzuyayla, field, 7 th km, 600 m, 19.08.1989 ŞA 1136, MARA 1771!; Maşukiye to Kuzuyayla, roadside, 1100 m, 21.07.1990 ŞA 1714, MARA 2506!; Above Sultaniye Village, around Altoluk, 06.07.1991 ŞA 1971, MARA 2836!

Hyracano-Euxine element.

Cyclamen coum Miller var. **coum**

Maşukiye to Kuzuyayla, field, 280 m, 18.03.1990 ŞA 1342, MARA 1975!; Maşukiye to Kuzuyayla, field, 250 m, 27.04.1990 ŞA 1362, MARA 2009!

Primula vulgaris Huds. subsp. **sibthorpii** (Hoffmanns.) W.W. Sm. & Forrest

Maşukiye to Kuzuyayla, field, 250 m, 18.03.1990
ŞA 1355, MARA 1988!

Euxine element.

RANUNCULACEAE

Anemone blanda Schott et Kotschy

Around summit, gravelly slopes, 1600 m,
27.04.1990 ŞA 1411, MARA 2058!

Clematis vitalba L.

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250
m, 26.07.1989 ŞA 1004, MARA 1654!;
Maşukiye to Kuzuyayla, 6 th km, around
fountain, 500 m, 29.05.1990 ŞA 1618a, MARA
2261!

Delphinium fissum Waldst. et Kit. subsp.
anatolicum Chowdhuri et Davis

Maşukiye to Kuzuyayla, 10 th km, woodland
margin, 1100 m, 21.07.1990 ŞA 1712b, MARA
2504!

Endemic.

Helleborus orientalis Lam.

Maşukiye to Kuzuyayla, field, 250 m, 18.03.1990
ŞA 1352, MARA 1985 *ibid.* 19.05.1991 ŞA
1836, MARA 2644!

Euxine element.

Ranunculus brutius Ten.

Euro-Sib. element.

Maşukiye to Kuzuyayla, 18 th km, in the mixed
woodland, 27.04.1990 ŞA 1392, MARA 2040!;
Kuzuyayla to summit, 20 th km, 1550 m,
27.04.1990 ŞA 1383, MARA 2031!; Around
summit, open area, 1600 m, 29.05.1990 ŞA 1514,
MARA 2163!; Kuzuyayla to summit, in the
mixed woodland, 1550 m, 10.06.1990 ŞA 1677,
MARA 2335!; Around Kuzuyayla picnic area,
1400 m, 19.05.1991 ŞA 1838, MARA 2646!

*****Ranunculus chius** DC.

Maşukiye to Kuzuyayla, 330 m, 29.04.1974, A.
Baytop & E. Tuzlaci, *ISTE* 27782!

R. ficaria L. subsp. **ficariiformis** Rouy et Fouc.

Maşukiye to Kuzuyayla, fieldside, 500 m,
18.03.1990 ŞA 1350, MARA 1983!

R. marginatus d'Urv. var. **marginatus**

Maşukiye to Kuzuyayla, fieldside, 250 m,
27.04.1990 ŞA 1382b, MARA 2030!

var. **trachycarpus** (Fisch. Et Mey.) Azn.

Maşukiye to Kuzuyayla, fieldside, 250 m,
04.06.1991 ŞA 1920, MARA 2734!

R. muricatus L.

Maşukiye to Kuzuyayla, fieldside, 250 m,
27.04.1990 ŞA 1382a, MARA 2029!

R. neapolitanus Ten.

Maşukiye to Kuzuyayla, roadside, 250 m,
29.05.1990 ŞA 1442, MARA 2094!

R. repens L.

Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA
1497, MARA 2148!; Above Sultaniye Village,
1310 m, 26.08.1990 ŞA 1764, MARA 2556!;
Maşukiye to Kuzuyayla, slopes, 1300 m,
04.06.1991 ŞA 1898, MARA 2712!; Between
Mühürlüpinar and Karadere, meadow, 1150 m,
06.07.1991 ŞA 1995, MARA 2860!

***R. velutinus** Ten.

Maşukiye to Kuzuyayla, roadside, 250 m,
27.04.1990 ŞA 1372, MARA 2019!

Medit. element ?

ROSACEAE

Agrimonia eupatoria L.

Above Sultaniye Village, slopes, 1310 m,
26.08.1990 ŞA 1763, MARA 2555!; Sultaniye
Village to Kuzuyayla, fieldside, 1000 m,
27.08.1990 ŞA 1821, MARA 2612!; Pazar
meadow, İfrazıye, 300 m, 07.07.1991 ŞA 2071,
MARA 2943!; Around Altıoluk, 1350 m,
12.10.1991 ŞA 2106, MARA 3043!

Crataegus microphylla C. Koch

Maşukiye to Kuzuyayla, 150 m, 11.10.1992 ŞA
2117, MARA 4429!; Above Soğuksu, 1280 m,
07.11.1992 ŞA 2155, MARA 4474!

Hyrcano-Euxine element.

C. monogyna Jacq. subsp. **monogyna**

Sultaniye to-Suadiye, around Ortamahalle, 750
m, 07.07.1991 ŞA 2056, MARA 2928!

C. orientalis Pallas ex Bieb. var. **orientalis**

South slopes of Keltepe, Sultaniye Village to
Kuzuyayla, 1260 m, 27.08.1990 ŞA 1791,
MARA 2582!

C. pentagyna Waldst. et Kit. ex Willd.

Maşukiye to Kuzuyayla, 2 nd km, roadside, 250
m, 19.08.1989 ŞA 1106, MARA 1742!;
Maşukiye to Kuzuyayla, 6 th km, around
fountain, hills, 500 m, 29.05.1990 ŞA 1603,
MARA 2248!

Euro-Sib. element.2

Fragaria vesca L.

Maşukiye to Kuzuyayla, fieldside, 250 m,
27.04.1990 ŞA 1377, MARA 2024!; Around
summit, open area, 1600 m, 29.05.1990 ŞA 1557,
MARA 2204!; *ibid.* 21.07.1990 ŞA 1728,
MARA 2519!

Geum urbanum L.

Maşukiye to Kuzuyayla, 6 th km, roadside, 500
m, 29.05.1990 ŞA 1585, MARA 2232!;
Kuzuyayla picnic area, 1400 m, 17.09.1989 ŞA

1226, MARA 1861!; Maşukiye to Kuzuyayla, 3 rd km, slopes, 250 m, 29.05.1990 ŞA 1458, MARA 2111!; Kuzuyayla to summit, slopes, 1600 m, 21.07.1990 ŞA 1717, MARA 2509!

Euro-Sib. element.

Laurocerasus officinalis Roemer

Maşukiye to Kuzuyayla, in the mixed woodland, 1400 m, 17.09.1989 ŞA 1245, MARA 1879!; Maşukiye to Kuzuyayla, roadside, 1100 m, 29.05.1990 ŞA 1473, MARA 2127!; Above Sultaniye Village, 1310 m, 26.08.1990 ŞA 1767, MARA 2559!; Sultaniye Village to summit, in the mixed woodland, 1490 m, ŞA 2093, MARA 3030!

Mespilus germanica L.

Maşukiye to Kuzuyayla, roadside, 320 m, 18.11.1989 ŞA 1321, MARA 1953!

Hyrano-Euxine element.

Potentilla argentea L.

Kuzuyayla picnic area, 1400 m, 17.09.1989 ŞA 1221, MARA 1856!

P. astracantha Jacq.

Around summit, open area, 1600 m, 17.09.1989 ŞA 1251, MARA 1885!

P. inclinata Vill.

Above Sultaniye Village, slopes, 1310 m, 26.08.1990 ŞA 1759, MARA 2551!; Between Sultaniye Village and Kuzuyayla, slopes, 1310 m, 26.08.1990 ŞA 1765, MARA 2557!; Around Altıoluk, 1000 m, 06.07.1991 ŞA 1973, MARA 2838!; Around Kilise (church) place, dampy field, 650 m, 07.07.1991 ŞA 2030, MARA 2902!

P. reptans L.

Kuzuyayla picnic area, in the open woodland, 1400 m, 17.09.1989 ŞA 1219, MARA 1854!; Above Kilise (church) place, dampy field, 550 m, 07.07.1991 ŞA 2038, MARA 2910!

Prunus divaricata Ledeb. subsp. *divaricata*

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 29.05.1990 ŞA 1449, MARA 2101!

Pyracantha coccinea Roemer

Maşukiye to Kuzuyayla, roadside, 300 m, 17.09.1989 ŞA 1163, MARA 1798!; Maşukiye to Kuzuyayla, roadside, 150 m, 11.10.1992 ŞA 2130, MARA 4442!

Rosa canina L.

Maşukiye to Kuzuyayla, 4 th km, roadside, 300 m, 19.08.1989 ŞA 1110, MARA 1746!; Sultaniye Village to Kuzuyayla, slopes, 1000 m, 26.08.1990 ŞA 1777, MARA 2568!; Around Altıoluk, open, stony area, 990 m, 12.10.1991 ŞA 2095, MARA 3032!

Rubus caesius L.

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 29.05.1990 ŞA 1451, MARA 2103!; Ibid. 29.05.1990 ŞA 1578, MARA 2225!

R. discolor Weihe et Nees

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1003, MARA 1653!; Ibid. 19.08.1989 ŞA 1103, MARA 1739!

R. hirtus Waldst. et Kit.

Maşukiye to Kuzuyayla, 12 th km, roadside, 100 m, 26.07.1989 ŞA 1057, MARA 1699!; Between Yörük Mountain and summit, in the mixed forest, 1400 m, 12.10.1991 ŞA 2091, MARA 3028!; around summit, 1600 m, 21.07.1990 ŞA 1750, MARA 2541!; around Kuzuyayla picnic area, 1370 m, 11.10.1992 ŞA 2135, MARA 4447!

Euro-Sib. element.

Sorbus aucuparia L.

Maşukiye to Kuzuyayla, 12 th km, in the mixed woodland, 1000 m, 26.07.1989 ŞA 1054, MARA 1697!

Euro-Sib. element.

S. torminalis (L.) Crantz var. *torminalis*

Sultaniye Village to Kuzuyayla, in the mixed woodland, 1200 m, 26.08.1990 ŞA 1775, MARA 2567!

Euro-Sib. element ?

RUBIACEAE

Asperula involucreta Wahlenb.

Above Sultaniye Village, around Altıoluk Plateau, slopes, 1050 m, 06.07.1991 ŞA 1986, MARA 2851!; Around Yörük Mountain, 1400 m, 27.08.1990 ŞA 1808, MARA 2599!

Euxine element.

A. taurina L. subsp. *taurina*

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 27.04.1990 ŞA 1422, MARA 2069!; Maşukiye to Kuzuyayla, 500 m, 29.05.1990 ŞA 1608, MARA 2252!; Around Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1485, MARA 2138!; Kuzuyayla to summit, roadside, 1530 m, 19.05.1991 ŞA 1865, MARA 2673!

Galium odoratum (L.) Scop.

Around summit, open area, 1600 m, 29.05.1990 ŞA 1533, MARA 2182!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1499, MARA 2150!; Around summit, open area, 1600 m, 04.06.1991 ŞA 1891, MARA 2704!

Euro-Sib. element.

G. paschale Forsskal

Sultaniye Village, above Hanlar stream, 850 m, 06.07.1991 ŞA 1967, MARA 2832!

E. Medit. element.

G. rotundifolium L.

Kuzuyayla picnic area, 1400 m, 19.08.1989 ŞA 1149, MARA 1784!; Between Mühürlü Pınar and Karadere, 1150 m, 06.07.1991 ŞA 1993, MARA 2858!

Euro-Sib. element.

***G. spurium** L. subsp. *spurium*

Maşukiye to Kuzuyayla, 6 th km, 500 m, 29.05.1990 ŞA 1616, MARA 2259!

Euro-Sib. element.

G. verum L. subsp. *verum*

Sultaniye Village, above Hanlar stream, 600 m, 07.07.1991 ŞA 2016, MARA 2888!

Euro-Sib. element.

Rubia peregrina L.

Maşukiye to Kuzuyayla, 3 rd km, 250 m, 26.07.1989 ŞA 1014, MARA 1662!

Medit. element.

Sherardia arvensis L.

Maşukiye to Kuzuyayla, roadside, 500 m, 29.05.1990 ŞA 1594, MARA 2241!; Maşukiye to Kuzuyayla, slopes, 250 m, 29.05.1990 ŞA 1433, MARA 2084!; above Kilise (church) place, dampy field, 650 m, 07.07.1991 ŞA 2033, MARA 2905!

Medit. element ?

SALICACEAE

Populus tremula L.

Sultaniye Village, above Hanlar, 920 m, 12.10.1991 ŞA 2101, MARA 3038!; Sultaniye Village to Kuzuyayla, slopes, 1070 m, 27.08.1990 ŞA 1824, MARA 2615!

Euro-Sib. element.

Salix alba L.

Maşukiye to Kuzuyayla, roadside, 320 m, 18.11.1989 ŞA 1326, MARA 1958!; Sultaniye Village, streamside, 970 m, 27.08.1990 ŞA 1834, MARA 2625!; Maşukiye to Kuzuyayla, roadside, 550 m, 11.10.1992 ŞA 2129, MARA 4441!

Euro-Sib. element.

S. caprea L.

Maşukiye to Kuzuyayla, 15 th km, in the mixed woodland, 1350 m, 27.04.1990 ŞA 1412, MARA 2059!; Sultaniye Village, above Hanlar, 920 m, 12.10.1991 ŞA 2102, MARA 3039!; Around Aşağı Yayla, 920 m, 12.10.1991 ŞA 2099, MARA 3036!

Euro-Sib. element.

S. cineria L.

Maşukiye to Kuzuyayla, 10 th km, roadside, 1100 m, 29.05.1990 ŞA 1470, MARA 2124!; Maşukiye to Kuzuyayla, 1380 m, in the mixed woodland, 04.06.1991 ŞA 1909, MARA 2723!

Euro-Sib. element.

SAXIFRAGACEAE

Saxifraga cymbalaria L. var. *cymbalaria*

South slopes of Keltepe, between Mühürlü Pınar and Karadere, 1150 m, 06.07.1991 ŞA 1994, MARA 2859!

S. rotundifolia L.

Around summit, open area, 1600 m, 29.05.1990 ŞA 1537, MARA 2184!

Euro-Sib. element.

SCROPHULARIACEAE

Digitalis ferruginea L. subsp. *ferruginea*

Maşukiye to Kuzuyayla, 6 th km, fieldside, 525 m, 26.07.1989 ŞA 1045, MARA 1690!; Kuzuyayla picnic area, 1400 m, 17.09.1989 ŞA 1222, MARA 1857!; Sultaniye Village to Kuzuyayla, in the mixed woodland, 1100 m, 26.08.1990 ŞA 1772, MARA 2564!; Around Hanlar, 800 m, 07.07.1991 ŞA 2007, MARA 2879!

Euro-Sib. element.

Euphrasia pectinata Ten.

Around summit, open area, 1600 m, 17.09.1989 ŞA 1262, MARA 1895!

Euro-Sib. element.

Lathraea squamaria L.

Kuzuyayla picnic area, 19 th km from Maşukiye, 1400 m, 27.04.1990 ŞA 1387, MARA 2035!; Ibid. 19.05.1991 ŞA 1852, MARA 2660!; Kuzuyayla to summit, 1410 m, 04.06.1991 ŞA 1905, MARA 2719!

Euro-Sib. element.

Linaria genistifolia (L.) Miller subsp. *genistifolia*

Sultaniye Village to Suadiye, Ortamahalle, around Karapınar 800 m, 07.07.1991 ŞA 2046, MARA 2918!; Around Yörük Mountain, 1390 m, 27.08.1990 ŞA 1804, MARA 2595!

Euro-Sib. element.

*****Linaria pelisseriana** (L.) Miller

Maşukiye to Kuzuyayla, 3 rd km, 20.05.1973 N.& E. Özhatay, ISTE 24603!

Medit. element.

Melampyrum arvense L. var. *arvense*

South slopes of Keltepe, above Hanlar, 720 m, 07.07.1991 ŞA 2015, MARA 2887!; Sultaniye Village to Kuzuyayla, 900 m, 26.08.1990 ŞA 1785, MARA 2576!

Euro-Sib. element.

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

Maşukiye to Kuzuyayla, 300 m, 17.09.1989 ŞA 1157, MARA 1792!

Euro-Sib. element.

Rhynchosorys elaphas (L.) Griseb. subsp. *elaphas*

Kuzuyayla to summit, 1500 m, 17.09.1989 ŞA 1279, MARA 1912!; Between Mühürü Pınar and Karadere, 1150 m, 06.07.1991 ŞA 1996, MARA 2861!

Euro-Sib. element ?

Scrophularia scopilii (Hoppe ex) Pers. var. *scopilii*

Kuzuyayla picnic area, in the mixed woodland, 1400 m, 17.09.1989 ŞA 1231, MARA 1866!; Maşukiye to Kuzuyayla, 3 rd km, fieldside, 250 m, 27.04.1990 ŞA 1427, MARA 2075!; Maşukiye to Kuzuyayla, around fountain, 500 m, 29.05.1990 ŞA 1602, MARA 2247!; Around Hanlar, 840 m, 07.07.1991 ŞA 2040, MARA 2912!

Verbascum abieticolum Bornm.

Maşukiye to Kuzuyayla, 15 th km, roadside, 1300 m, 26.07.1989 ŞA 1066, MARA 1707!; Maşukiye to summit, roadside, 1550 m, 10.06.1990 ŞA 1667, MARA 2324!

Endemic. Euxine element.

Verbascum sinuatum L. var. *sinuatum*

Maşukiye to Kuzuyayla, 3 rd km, roadside, 250 m, 26.07.1989 ŞA 1007, MARA 1655!

Medit. element.

Veronica chamaedrys L.

Maşukiye to Kuzuyayla, fieldside, 250 m, 27.04.1990 ŞA 1380, MARA 2027!; Maşukiye to Kuzuyayla, around fountain, roadside, 500 m, 29.05.1990 ŞA 1591, MARA 2238!; Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1498, MARA 2149!

Euro-Sib. element.

V. officinalis L.

South slopes of Keltepe, around İşaret place, 1000 m, 06.07.1991 ŞA 2001, MARA 2866!

Euro-Sib. element.

V. persica Poiret

Maşukiye to Kuzuyayla, fieldside, 250 m, 18.03.1990 ŞA 1334, MARA 1967!; Maşukiye to Kuzuyayla, around fountain, 500 m, 29.05.1990 ŞA 1601, MARA 2246!; Around Yörük Mountain, 1400 m, 12.10.1991 ŞA 2084, MARA 3021!

V. serpyllifolia L.

Maşukiye to Kuzuyayla, roadside, 1300 m, 04.06.1991 ŞA 1901, MARA 2715!; Around Kuzuyayla picnic area, 1400 m, 29.05.1990 ŞA 1505, MARA 2156!

SOLANACEAE

Atropa belladonna L.

Maşukiye to Kuzuyayla, 525 m, 26.07.1989 ŞA 1042, MARA 1687!; Maşukiye to Kuzuyayla, roadside, 1250 m, 17.09.1989 ŞA 1208, MARA 1843!; Maşukiye to Kuzuyayla, slopes, 1150 m, 11.10.1992 ŞA 2151, MARA 4470!

Euro-Sib. element.

Datura stramonium L.

Maşukiye to Kuzuyayla, roadside, 150 m, 11.10.1992 ŞA 2114, MARA 4426!

Ir.-Tur. element.

Physalis alkekengi L.

Maşukiye to Kuzuyayla, 4 th km, slope, 330 m, 19.08.1989 ŞA 1112, MARA 1748!; Maşukiye to Kuzuyayla, roadside, 300 m, 17.09.1989 ŞA 1154, MARA 1789!; Around Hanlar, 800 m, 07.07.1991 ŞA 2006, MARA 2878!

Solanum luteum Miller

Maşukiye to Kuzuyayla, roadside, 350 m, 18.11.1989 ŞA 1286, MARA 1919!

S. nigrum L. subsp. *schultesii* (Opiz) Wessely

Maşukiye to Kuzuyayla, fieldside, 510 m, 18.11.1989 ŞA 1309, MARA 1941!; Sultaniye Village, around Altoluk, open, stony area, 960 m, 12.10.1991 ŞA 2097, MARA 3034!

STAPHYLEACEAE

Staphylea pinnata L.

Maşukiye to Kuzuyayla, in the mixed woodland, 950 m, 27.04.1990 ŞA 1414, MARA 2061!

Monotypic for Turkey.

TAXACEAE

Taxus baccata L.

South slopes of Keltepe, above Kurudere, in the mixed woodland, 1460 m, 12.10.1991 ŞA 2080, MARA 3017!; Maşukiye to Kuzuyayla, in the mixed woodland, slopes, 1300 m, 04.06.1991 ŞA 1895, MARA 2709!

TILIACEAE

Tilia argentea Desf. ex DC.

Maşukiye to Kuzuyayla, 6 th km, in the mixed woodland, 500 m, 19.08.1989 ŞA 1124, MARA 1760!; Sultaniye Village to Suadiye, Pazar meadow, around İfrazıye, field margin, 200 m, 07.07.1991 ŞA 2077, MARA 2950!

Euro-Sib. element.

T. rubra DC. subsp. *caucasica* (Rupr.) V. Engler

Sultaniye Village, above Hanlar, 900 m,
08.11.1992 ŞA 2165, MARA 4457!

Euxine element.

TYMELAEACEAE

Daphne pontica L.

Maşukiye to Kuzuyayla, 10 th km, in the mixed woodland, 950 m, 27.04.1990 ŞA 1415, MARA 2062!; Around summit, in the mixed woodland, 1600 m, 29.05.1990 ŞA 1519, MARA 2168!

Euxine.

URTICACEAE

Urtica dioica L.

Maşukiye to Kuzuyayla, roadside, 1250 m,
17.09.1989 ŞA 1215, MARA 1850!

Euro-Sib. element.

VERBENACEAE

Verbena officinalis L.

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 26.07.1989 ŞA 1025, MARA 1672!

VIOLACEAE

Viola gracilis Sibth. et Sm.

Kuzuyayla to summit, 20 km, open, rocky places, 1580 m, 26.07.1989 ŞA 1087, MARA 1725!; Around Kuzuyayla picnic area, 1400 m, 17.09.1989 ŞA 1218, MARA 1853!; Around summit, open, stony area, 1600 m, 27.04.1990 ŞA 1405, MARA 2052!; Ibid. 04.06.1991 ŞA 1878, MARA 2693!

V. kitaibeliana Roem. et Schultes

Around summit, gravelly slopes, 1600 m,
17.09.1989 ŞA 1267, MARA 1900!

V. odorata L.

Kuzuyayla picnic area, in the mixed woodland, 1400 m, 17.09.1989 ŞA 1227, MARA 1862!; Maşukiye to Kuzuyayla, stony slopes, 510 m, 18.11.1989 ŞA 1317, MARA 1949!; Maşukiye to Kuzuyayla, field side, 250 m, 18.03.1990 ŞA 1338, MARA 1971!; Around Kuzuyayla picnic area, 1400 m, 19.05.1991 ŞA 1847, MARA 2655!

MONOCOTYLEDONAE

AMARYLLIDACEAE

Galanthus plicatus Bieb. subsp. *byzantinus* (Baker) D.A. Webb

Maşukiye to Kuzuyayla, 250 m, 18.03.1990 ŞA 1332, MARA 1965!; Maşukiye to Kuzuyayla, slopes, 400 m, 18.03.1990 ŞA, 1349, MARA 1982!

Endemic. Euxine element.

ARACEAE

Arum maculatum L.

Maşukiye to Kuzuyayla, field, 250 m, 27.04.1990 ŞA 1366, MARA 2013!

CYPERACEAE

Carex flacca Schreber subsp. *serrulata* (Biv.) Greuter

Maşukiye to Kuzuyayla, dampy roadside, 250 m, 27.04.1990 ŞA 1425, MARA 2073!; Maşukiye to Kuzuyayla, around fountain, 500 m, 10.06.1990 ŞA 1620, MARA 2280!; Maşukiye to Kuzuyayla, field, 250 m, 29.05.1992 ŞA 1568, MARA 2215!

Medit. element.

C. pendula Hudson

Maşukiye to Kuzuyayla, dampy roadside, 740 m, 18.11.1989 ŞA 1304, MARA 1937!; Maşukiye to Kuzuyayla, open area, 1300 m, 04.06.1991 ŞA 1897, MARA 2711!

Euro-Sib. element.

IRIDACEAE

Crocus biflorus Miller subsp. *pulchricolor* (Herbert) Mathew

Around summit, rocky place, 1600 m,
27.04.1990 ŞA 1408, MARA 2055!

Endemic. Euro-Sib. element.

JUNCACEAE

Juncus conglomeratus L.

Sultaniye Village, around Hanlar, 720 m,
07.07.1991 ŞA 2014, MARA 2886!

Euro-Sib. element.

J. effusus L.

Maşukiye to Kuzuyayla, dampy roadside, 550 m, 17.09.1989 ŞA 1173, MARA 1808!; Around Uzun Çimen, wet field, 1200 m, 06.07.1991 ŞA 1990, MARA 2855!

J. inflexus L.

Sultaniye Village, above Kilise (church) place,
650 m, 07.07.1991 ŞA 2039, MARA 2911!

****Luzula forsteri* (Sm.) DC.

Maşukiye to Kuzuyayla, 3 rd km, 250 m,
20.05.1973 N.& E. Özhatay, ISTE 24602!

L. multiflora (Ehrh. ex Retz.) Lej.

Maşukiye to Kuzuyayla, woodland margin, 1400 m, 10.06.1990 ŞA 1678, MARA 2336!; Kuzuyayla picnic area, 1400 m, 19.05.1991 19.05.1991 ŞA 1855, MARA 2663!

LILIACEAE

Allium guttatum Steven subsp. *guttatum*

Around summit, 1600 m, 21.07.1990 ŞA 1731,
MARA 2522!

A. olympicum Boiss.

Around Yörük Mountain, 1390 m, 27.08.1990
ŞA 1810, MARA 2601!

Endemic. Euxine element.

***A. paniculatum** L. subsp. **fuscum** (Waldst. et Kit.) Arc.

Around Yörük Mountain, 1390 m, 27.08.1990
ŞA 1797, MARA 2588!

E. Medit. element.

subsp. **paniculatum**

Around summit, open area, 1600 m, 17.09.1989
ŞA 1263, MARA 1896!; Around Yörük
Mountain, 1390 m, 27.08.1990 ŞA 1807, MARA
2598!

Medit. element.

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

Sultaniye Village, around Hanlar, 600 m,
07.07.1991 ŞA 2023, MARA 2895!

Medit. element.

Colchicum bivonae Guss.

South slopes of Keltepe, around Gülgenlik, 1100
m, 12.10.1991 ŞA 2104, MARA 3041!

E. Medit. element.

Fritillaria pontica Wahlenb.

Maşukiye to Kuzuyayla, fieldside, 300 m,
17.09.1989 ŞA 1156, MARA 1791!; Sultaniye to
Kuzuyayla, 1100 m, 27.08.1990 ŞA 1795,
MARA 2586!; Kuzuyayla to summit, field
margin, 1530 m, 19.05.1991 ŞA 1867, MARA
2675!

Euro-Sib. element.

Gagea fistulosa Ker-Gawler

Kuzuyayla picnic area, 1400 m, 27.04.1990 ŞA
1398, MARA 2045!; Above Altoluk, open area,
17.04.1993 ŞA 2178, MARA 4490!

Muscari armeniacum Leichtlin ex Baker

Maşukiye to Kuzuyayla, 280 m, 18.03.1990 ŞA
1344, MARA 1977!

Ornithogalum oligophyllum E.D. Clarke

Kuzuyayla picnic area, 1400 m, 27.04.1990 ŞA
1397, MARA 2044!; Around summit, open,
stony area, 1600 m, 29.05.1990 ŞA 1517, MARA
2166!; Ibid. 19.05.1991 ŞA 1861, MARA 2669!

O. sigmoideum Freyn et Sint.

Maşukiye to Kuzuyayla, 280 m, 18.03.1990 ŞA
1336, MARA 1969!

Polygonatum orientale Desf.

Maşukiye to Kuzuyayla, fieldside, 250 m,
27.04.1990 ŞA 1368, MARA 2015!; Maşukiye to
Kuzuyayla, 3 rd km, roadside, 29.05.1990 ŞA
1448, MARA 2100!; Around summit, open,
stony area, 1600 m, 29.05.1990 ŞA 1513, MARA

2162!; Kuzuyayla to summit, 1550 m,
10.06.1990 ŞA 1668, MARA 2325!

Euxine element ?

Ruscus hypoglossum L.

Maşukiye to Kuzuyayla, 3 rd km, 250 m,
26.07.1989 ŞA 1011, MARA 1659!; Maşukiye to
Kuzuyayla, around fountain, 500 m, 18.11.1989
ŞA 1296, MARA 1929!; Maşukiye to Kuzuyayla,
roadside, 250 m, 18.03.1990 ŞA 1353, MARA
1986!

Euro-Sib. element.

Scilla bifolia L.

Maşukiye to Kuzuyayla, fieldside, 280 m,
18.03.1990 ŞA 1339, MARA 1971!; Kuzuyayla
picnic area, 1400 m, 27.04.1990 ŞA 1389,
MARA 2037!; Around Altoluk, in the *Fagus*
woodland, 1180 m, 17.04.1993 ŞA 2171, MARA
4483!

Medit. element ?

S. bithynica Boiss.

Maşukiye to Kuzuyayla, 280 m, 27.04.1990 ŞA
1361, MARA 2007!

Euxine element.

Smilax excelsa L.

Maşukiye to Kuzuyayla, 330 m, 18.11.1989 ŞA
1289, MARA 1922!; Maşukiye to Kuzuyayla,
roadside, 250 m, 29.05.1990 ŞA 1580, MARA
2227!; Maşukiye to Kuzuyayla, around fountain,
500m, 21.07.1990 ŞA 1682, MARA 2474!

Euxine element.

ORCHIDACEAE

*****Limodorum abortivum** (L.) Swartz

Maşukiye to Kuzuyayla, 3 rd km, 250 m,
20.05.1973 N.& E. Özhatay, ISTE 24597!

Orchis mascula (L.) L. subsp. **pinetorum**
(Boiss. et Kotschy) G. Camus

Around summit, open area, 1600 m, 04.06.1991
ŞA 1871, MARA 2686!

E. Medit. element.

O. pallens L.

Around summit, 1600 m, 29.05.1990 ŞA 1532,
MARA 2181!

Euro-Sib. element?

POACEAE (GRAMINEAE)

Agrostis stolonifera L.

Maşukiye to Kuzuyayla, 6 th km, around
fountain, 500 m, 26.07.1989 ŞA 1024, MARA
1671!; Ibid. 21.07.1990 ŞA 1756, MARA 2548!

Aira elegantissima Schur

Maşukiye to Kuzuyayla, 250 m, 04.06.1991 ŞA
1952, MARA 2766!

Euro-Sib. element.

***Avena fatua** L. var. *fatua*

Maşukiye to Kuzuyayla, fieldside, 250 m, 29.05.1990 ŞA 1455a, MARA 2108!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 10.06.1990 ŞA 1630, MARA 2290!

Brachypodium pinnatum (L.) P. Beauv.

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 21.07.1990 ŞA 1710, MARA 2501!

Euro-Sib. element.

***Bromus fasciculatus** C. Presl

Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 29.05.1990 ŞA 1618b, MARA 2262!; Maşukiye to Kuzuyayla, fieldside, 250 m, 04.06.1991 ŞA 1950, MARA 2764!

E. Medit. element.

B. japonicus Thunb.

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 21.07.1990 ŞA 1711, MARA 2502!

B. sterilis L.

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 10.06.1990 ŞA 1623, MARA 2283!

Catopodium rigidum (L.) C. E. Hubbard ex Dony

Maşukiye to Kuzuyayla, 250 m, 29.05.1990 ŞA 1439c, MARA 2091!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 10.06.1990 ŞA 1627, MARA 2287!

Cynosurus echinatus L.

Maşukiye to Kuzuyayla, 250 m, 04.06.1991 ŞA 1946, MARA 2760!; Maşukiye to Kuzuyayla, 6 th km, around fountain, 500 m, 10.06.1990 ŞA 1621, MARA 2281!; Around Altıoluk, 1050 m, 06.07.1991 ŞA 1982, MARA 2847!

Medit. element.

Dactylis glomerata L.

Maşukiye to Kuzuyayla, 250 m, 04.06.1991 ŞA 1914, MARA 2728!

***Festuca arundinacea** Schreber subsp. *arundinacea*

Maşukiye to Kuzuyayla, 6 th km, 500 m, around fountain, 21.07.1990 ŞA 1755, MARA 2547!

***F. decolorata** Markgr.-Dannenb.

Around summit, roadside, 1600 m, 29.05.1990 ŞA 1552b, MARA 2200!

Endemic. Euxine element.

F. drymeja Mertens et Koch

Maşukiye to Kuzuyayla, fieldside, 250 m, 29.05.1990 ŞA 1454b, MARA 2107!; Maşukiye

to Kuzuyayla, roadside, 1460 m, 04.06.1991 ŞA 1928, MARA 2742!; Around Altıoluk, 1000 m, 06.07.1991 ŞA 1978, MARA 2843!

Euro-Sib. element.

***Hainardia cylindrica** (Willd.) Greuter

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 10.06.1990 ŞA 1629, MARA 2289!

Holcus lanatus L.

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 26.07.1989 ŞA 1030, MARA 1676!; Maşukiye to Kuzuyayla, dampy field, 550 m, 17.09.1989 ŞA 1174, MARA 1809!; Sultaniye Village, around Hanlar stream, 850 m, 06.07.1991 ŞA 1953, MARA 2818!

Euro-Sib. element.

Hordeum bulbosum L.

Maşukiye to Kuzuyayla, 6 th km, 500 m, 29.05.1990 ŞA 1607, MARA 2251!; Sultaniye Village, around Hanlar, 800 m, 07.07.1991 ŞA 2009, MARA 2881!

***H. geniculatum** All.

Maşukiye to Kuzuyayla, around fountain, 500 m, 10.06.1990 ŞA 1622, MARA 2282!

Euro-Sib. element.

Melica uniflora Retz

Maşukiye to Kuzuyayla, 250 m, 27.04.1990 ŞA 1426, MARA 2074!

Euro-Sib. element.

Poa annua L.

Maşukiye to Kuzuyayla, in the open woodland, 1400 m, 04.06.1991 ŞA 1894, MARA 2708!; Maşukiye to Kuzuyayla, field, 1100 m, 29.05.1990 ŞA 1468, MARA 2122!

P. bulbosa L.

Around summit, 1600 m, 04.06.1991 ŞA 1886, MARA 2699!; Around Sultaniye Village, Hanlar stream, 900 m, 06.07.1991 ŞA 1966, MARA 2831!

***P. infirma** Kunth

Around summit, 1600 m, 10.06.1990 ŞA 1663, MARA 2319!

P. pratensis L.

Maşukiye to Kuzuyayla 3 rd km, 250 m, 29.05.1990 ŞA 1455b, MARA 2109!; Maşukiye to Kuzuyayla, around fountain, 500 m, 10.06.1990 ŞA 1626, MARA 2286!; Around summit, open area, 1600 m, 10.06.1990 ŞA 1656, MARA 2312!; Maşukiye to Kuzuyayla, fieldside, 250 m, 04.06.1991 ŞA 1945, MARA 2759!

Rostraria cristata (L.) Tzvelev

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 10.06.1990 ŞA 1624, MARA 2284!

Setaria viridis (L.) P. Beauv.

Maşukiye to Kuzuyayla, 300 m, 17.09.1989 ŞA 1166, MARA 1802!; Ibid. 18.11.1989 ŞA 1327, MARA 1959!

Vulpia fasciculata (Forsskal) Fritsch

Maşukiye to Kuzuyayla, 250 m, 29.05.1990 ŞA 1439b, MARA 2090!

Medit. element.

***V. unilateralis** (L.) Stace

Maşukiye to Kuzuyayla, 6 th km, around fountain 500 m, 10.06.1990 ŞA 1625, MARA 2285!