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Flora of Taşlıyayla and Kızık (Bolu–Seben) Surrounding

*Bilge TUNÇKOL¹, Ünal AKKEMİK²

¹Bartın University, Bartın Vocational School, Department of Forestry Forestry and Forest Products Program, 74100 Bartın

²Istanbul University, Faculty of Forestry, Department of Forest Botany, 34473 Bahçeköy / İstanbul

*Corresponding Author: btunckol@bartin.edu.tr

Abstract

Studies on the flora of Turkey are still important. In the present research, we aimed to determine the flora of Taşlıyayla and Kızık surroundings. Research field is located between Bolu and Seben in Bolu province. It covers the Alms Solaklar, Nimetli, Dedeler, Ayman, Korucuk, Hacıođlan, Bozyer, Alpogut, Kozyaka, Keskinli and Demirciler together with the villages of Kızık, Dereceören, Kuzgölcük and Kabak. According to the P.H.Davis's grid system, it is in the A3 square.

As a result of 35 times excursions to research area, 1750 plant samples were collected in different vegetation periods from February 2010 to October 2011. As a consequence of identification of the plant specimens collected, 575 taxa belonging to 298 genera and 80 families have been determined. 80 of these taxa are endemic for Turkey.

The largest families recorded are as follows: Fabaceae-61 taxa (% 10.64), Asteraceae-56 taxa (% 9.77), Labiatae-42 taxa (% 7.32), Poaceae-32 taxa (% 5.58), Brassicaceae-31 taxa (% 5.41).

The phytogeographical distribution of determined taxa are as follows; Euro-Siberian 129 (% 22.5), Irano-Turanian 57 (% 9.94), Mediterranean: 52 (9.07). In the study, 58 taxa have been determined as new records for the A3 square.

Keywords: Turkey, Bolu, A3, Flora, Botany

Introduction

The flora studies revealed that Turkey had a rich flora having more than 12.000 taxa. New floristic studies still show new distribution areas of the present species and new records for the flora of Turkey. Recently Akkemik and Yılmaz (2016) added a new record (*Barbarea bracteosa*) to the flora.

In the northwestern Anatolia several flora studies were performed. Aksoy (2001) determined the flora of Karakiriş Mountain. Güner (2000) studied the flora of Dođan Dede Hill and its environment, Dođan (2000) worked on the flora of Nallıhan Kuş Cenneti, Türker (1990) determined the flora of Abant and İkinci (2000) studied the flora of Bolu-Gölcük. These studies where were located at the surroundings of the studied area revealed valuable results. However, there is a still a gap in the region. No study was done on the flora of Taşlıyayla and Kızık Plateu between Seben and Bolu.

The purpose of the present paper is to submit the flora of this region and thus to fill the gap.

Study area

Research field is located in the A3 square according to the grid system of Davis (1965) and it is phytogeographically located in an area in which it is seen the effects of Euro-Siberian, Mediterranean and Irano-Turanian Floristic Regions. The research area covers about 10.532ha (Anonim, 2004). The highest part of the research area is Kayakapı Hill with 1727m elevation which is in the southeast of the Kızık Village. It is in between the area of 40 32' 00"–40 34' 03" north latitudes and 31 27' 33"–31 41' 53" east longitudes (Figure 1).

The soil type of the research area are alluvial soil (in the Aladađ Stream Valley), colluvial soil (in the plateaus that are in the northern sides of the research area), brown forest soil (in the southern and western parts of the area), brown soil (in the eastern part of the Aladađ Stream Valley), and limeless brown forest soil (in the northern and eastern parts of the area) (Şahin, 1984).

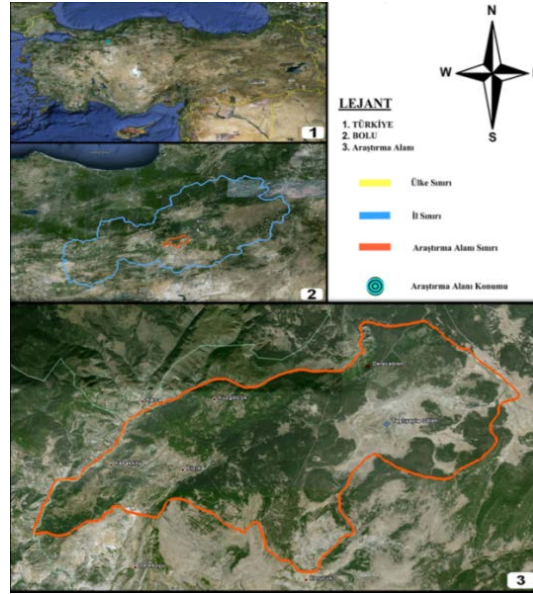


Figure 1. Geographic location of research area

In determining the climate of the research area, the data of Bolu meteorology station has been used together with the Thornthwaite methods of

estimating and a water balance table has been prepared (Çepel, 1995; Özyuvacı, 1999) (Table 1).

Table 1: Water balance showing mean temperature and precipitation

Balance sheet elements	Months												Annual
	1	2	3	4	5	6	7	8	9	10	11	12	
Temperature (°C)	1.0	1.9	5.0	9.8	14.0	17.5	19.8	19.7	16.0	11.8	6.5	2.8	10.5
Temperature index	0.09	0.23	1.00	2.77	4.75	6.66	8.03	7.97	5.82	3.67	1.42	0.42	42.81
Uncorrected PE mm	3.0	6.5	20.0	40.0	57.2	100.0	114.3	113.6	81.8	54.5	26.3	10.0	
Corrected PE mm	2.52	5.4	20.6	44.4	70.9	125.9	145.2	134.1	85.1	52.3	21.8	8.1	715.42
Precipitation mm	58.2	42.1	47.2	48.4	57.8	46.1	32.0	25.4	25.3	42.1	47.8	8.2	530.6
Monthly storechange mm	23.9	0	0	0	-13.1	-78.9	-8.0	0	0	0	26.0	50.1	
Storage mm	100	100	100	100	86.9	8.0	0	0	0	0	26.0	76.1	
Actual evapotranspiration mm	2.52	5.4	20.6	44.4	70.9	125.9	40.0	25.4	25.3	42.1	21.8	8.1	431.52
Water deficiency mm	0	0	0	0	0	0	105.2	108.7	59.8	10.2	0	0	283.9
Water surplus mm	31.78	36.7	26.6	4.0	0	0	0	0	0	0	0	0	99.08
Surface flow	15.89	26.30	26.45	15.22	7.61	3.81	1.90	0.95	0.48	0.24	0.12	0.06	99.02
Humidity rate	22.10	6.80	1.29	0.09	-0.18	-0.63	-0.78	-0.81	-0.70	-0.20	1.19	6.19	

In this evaluation, according to Thornthwaite methods of estimating, it is determined that the climate type of Bolu is

slightly humid, mesothermal, having water surplus in winter by showing similar characteristics with oceanic climate.

Material and Methods

It has been benefited from the method used by P.H. Davis in the Flora of Turkey while forming the systematic order and from Angiosperm Phylogeny Flowering Plant Systematics for the subdivision systematic of the angiospermae (APG IV) (Cole et. all, 2016; Davis 1965-1985). In this study, as a result of 35 times fieldworks to research area from February 2010 to October 2011, 1750 plant samples were collected.

Findings

Identification results showed that total 575 taxa belonging to 298 genera and 80 families were determined.

The list of the species determined was given below. The abbreviations used in the flora list are as follows: Th: Therophytes, Ch: Chamaephytes, Hy: Hydrophytes, G: Geophytes, K: Cryptophytes, H: Hemicryptophytes, Ir-Tur.: Irano-Turanian, Eu.Sib.: Euro-Siberian, Med.: Mediterranean, el.: Elementi, Ph: Phanerophytes, 1: A3 Bolu Seben.

PTERIDOPHYTA

EQUISETACEAE

Equisetum arvense L., 1, 1360 m., 23.10.2010, K 40° 33' 62" D 031° 39' 29", TUNÇKOL 2219, ISTO 35120, G.

E. telmateia Ehrh., 1, Dereceören, 1290 m., 04.06.2011, K 40° 33' 10" D 031° 39' 42" T 2329, ISTO 35121, G.

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) Kuhn, 1, Ayman Alm, 1450 m., 10.10.2010, K 40° 32' 17" D 031° 40' 58", T 2244, ISTO 35122, H.

DRYOPTERIDACEAE

Dryopteris filix-mas (L.) Schott, 1, on the road of Kızık, 1591 m., 23.10.2010, K 40° 31' 17" D 031° 33' 25", T 2243, ISTO 35123, G.

POYPODIACEAE

Polypodium vulgare L. subsp. *vulgare*, 1, Demirciler Alm, 1589 m., 18.06.2011, K 40° 31' 15" D 031° 36' 17", T 2551, ISTO 35409, G.

SPERMATOPHYTA

GYMNOSPERMAE

PINACEAE

Abies nordmanniana (Stev.) Spach subsp. *bornmuelleriana* (Mattf.) Coode & Cullen, 1,

on the road of Kızık, 1530 m., 10.10.2010, K 40° 31' 24" D 031° 35' 41", T 2242, ISTO 35410, Eu-Sib.el., Ph.

Pinus nigra Arn. subsp. *pallasiana* (Lamb.) Holmboe var. *pallasiana*, 1, Kabak Village, 1013 m., 01.09.2011, K 40° 30' 25" D 031° 29' 47", T 2738, Ph.

P. sylvestris L. var. *hamata*, 1, Solaklar Alm, 1454 m., 10.10.2010, K 40° 31' 46" D 031° 40' 57", T 2239, ISTO 35411, Eu-Sib.el., Ph.

CUPRESSACEAE

Juniperus communis L. var. *saxatilis*, 1, Kızık Village, 1473 m., 10.10.2010, K 40° 31' 48" D 031° 35' 49", T 2235, ISTO 35412, Ph.

J. oxycedrus L. subsp. *oxycedrus*, 1, Nimetli Alm, 1456 m. 25.09.2010, K 40° 35' 46" D 031° 39' 29", T 2076, ISTO 35413, Ph.

J. foetidissima Willd., 1, Kabak Village, 926 m., 07.03.2010, K 40° 30' 31" D 031° 29' 26", T 2258, ISTO 35414, Ph.

J. excelsa Bieb. subsp. *excelsa*, 1, Kabak Village, 1052 m., 26.02.2011, K 40° 30' 12" D 031° 29' 33", T 2260, ISTO 35415, Ph.

EPHEDRACEAE

Ephedra major Host. subsp. *major*, 1, Kabak Village, 1050 m., 31.03.2011, K 40° 30' 15" D 031° 29' 46", T 2297, Ph.

ANGIOSPERMAE

ARISTOLACHIACEAE

Aristolochia maurorum L., 1, Kabak-Kozyaka, 1608 m., 03.05.2011, K 40° 29' 16" D 031° 33' 36", T 2349, ISTO 35771, H.

ARACEAE

Arum euxinum R. Mill, 1, Kabak Village, 938 m., 03.05.2011, K 40° 30' 24" D 031° 39' 12", T 2316, ISTO 35774, Eu-Sib.el., G.

COLCHICACEAE

Colchicum szovitsii Fisch. & Mey., 1, Taşhyayla location, 454 m., 26.02.2011, K 40° 32' 06" D 031° 37' 29", T 2268, ISTO 35869, Ir-Tur. el., G.

C. umbrosum Steven, 1, Kuzgölcük, 966 m., 10.10.2010, K 40° 31' 49" D 031° 30' 50", T 2196, ISTO 35868, Eu-Sib.el., G.

C. bivonae Guss., 1, Kuzgölcük, 1366 m., 10.10.2010, K 40° 31' 48" D 031° 32' 31", T 2209, ISTO 35867, Med. el., G.

C. speciosum Steven, 1, Kabak Village, 955 m., 10.10.2010, K 40° 30' 03" D 031° 28' 19", T 2195, Eu-Sib. el., G.

LILIACEAE

Allium olympicum Boiss., 1, Kızık Village, 1566 m., 25.09.2010, K 40° 30' 36" D 031° 33' 26", T 1991, ISTO 35863, Eu-Sib.el., G.

A. paniculatum L. subsp. *paniculatum*, 1, Dereceören Village, 1310 m., 10.10.2010, K 40° 33' 45" D 031° 37' 15", T 2151, ISTO 35866, Med. el., G.

A. paniculatum L. subsp. *fuscum* (Waldst. & Kit.) Arc., 1, Dereceören, 1308 m., 25.09.2010, K 40° 33' 48" D 031° 37' 15", T 1990, ISTO 35862, Med. el., G.

A. huber-morathii Kollmann, N. Özhatay & Koyuncu, 1, Kabak Village, 907 m., 25.09.2010, K 40° 29' 22" D 031° 37' 57", T 1993, ISTO 35865, Ir-Tur. el., G.

A. scorodoprasum L. subsp. *rotundum* (L.) Stearn, 1, Dedeler Alm, 1442 m., 02.07.2010, K 40° 30' 58" D 031° 38' 18", T 1504, ISTO 35858, Med. el., G.

A. scorodoprasum L. subsp. *waldsteinii* (G. Don) Stearn, 1, Nimetli Alm, 1442 m., 12.09.2010, K 40° 31' 18" D 031° 39' 06", T 1941, ISTO 35861, Eu-Sib.el., G.

A. guttatum Steven subsp. *guttatum*, 1, Kızık Village, 1550 m., 25.09.2010, K 40° 30' 53" D 031° 33' 11", T 1992, ISTO 35864, Med. el., G.

A. guttatum Steven subsp. *dalmaticum* (A. Kerner ex Janchen) Stearn, 1, Taşlıyayla location, 1437 m., 07.08.2010, K 40° 31' 47" D 031° 37' 34", T 1722, ISTO 35847, Doğu Med. el., G.

Allium efeae Özhatay & İ.Genç, 1, Nimetli Alm, 1442 m., 12.09.2010, K 40° 31' 18" D 031° 39' 06", T 1439.

Fritillaria pinardii Boiss., 1, Ayman Alm, 1436 m., 21.03.2010, K 40° 32' 51" D 031° 40' 24", T 1039, ISTO 35846, Ir-Tur. el., G.

Tulipa sylvestris L., 1, Nimetli Alm, 1446 m., 04.04.2010, K 40° 32' 04" D 031° 39' 21", T 1096, ISTO 35845, G.

Gagea bithynica Pascher, 1, Demirciler Alm, 1471 m., 21.03.2010, K 40° 30' 53" D 031° 37' 14", T 1037, ISTO 35853, Med. el., G.

G. fistulosa Ker-Gawler, 1, Taşlıyayla location, 1438 m., 21.03.2010, K 40° 31' 54" D 031° 37' 54", T 1036, ISTO 35849, Eu-Sib.el., G.

G. granatellii (Parl.) Parl., 1, Korucuk Alm, 1262 m., 21.03.2010, K 40° 28' 36" D

031° 36' 09", T 1033, ISTO 35850, Med. el., G.

AMARYLLIDACEAE

Galanyhus elwesii Hooker fil. subsp. *elwesii*, 1, Dereceören, 1285 m., 31.03.2011, K 40° 33' 43" D 031° 37' 25", T 2283, ISTO 35773, Med. el., G.

Sternbergia colchiciflora Waldst. & Kit., Kuzgölcük, Köçekkaya, 1235 m., 20.03.2010, K 40° 31' 42" D 031° 31' 23", T 2530, G.

ASPARAGACEAE

Polygonatum orientale Desf., 1, Dereceören, 1329 m., 20.06.2010, K 40° 33' 20" D 031° 37' 40", T 1414, ISTO 35856, Eu-Sib.el., G.

Scilla bifolia L., 1, Çavuşlar Alm, 1479 m., 21.03.2010, K 40° 30' 49" D 031° 37' 05", T 1043, ISTO 35848, Med. el., G.

Ornithogalum narbonense L., 1, Kuzgölcük, Büvecik Hill location, 1405 m., 29.08.2010, K 40° 31' 25" D 031° 33' 12", T 1865, ISTO 35860, Med. el., G.

O. oligophyllum E. D. Clarke, 1, Nimetli Alm, 1442 m., 17.04.2010, K 40° 31' 14" D 031° 39' 10", T 1172, ISTO 35851, G.

O. platyphyllum Boiss., 1, Demirciler Alm, 1438 m., 16.05.2010, K 40° 31' 26" D 031° 37' 14", T 1336, ISTO 35855, Ir-Tur. el., G.

O. fimbriatum Willd., 1, Kabak Village, 899 m., 21.03.2010, K 40° 30' 00" D 031° 28' 10", T 1050, ISTO 35852, Med. el., G.

Muscari comosum (L.) Miller, 1, Kızık, 899 m., 15.07.2010, K 40° 28' 31" D 031° 27' 46", T 1639, ISTO 35859, Med. el., G.

M. aucheri (Boiss.) Baker, 1, Taşlıyayla location, 1437 m., 04.04.2010, K 40° 31' 47" D 031° 37' 51", T 1072, ISTO 35857, G.

M. armeniacum Leichtlin ex Baker, 1, Dereceören, 1303 m., 07.03.2010, K 40° 33' 46" D 031° 37' 15", T 1028, ISTO 35854, G.

IRIDACEAE

Iris kerneriana Ascherson & Sint. ex Baker, 1, Korucuk Alm, 1425 m., 19.06.2011, K 40° 29' 20" D 031° 30' 39" T 2627, ISTO 35844, Eu-Sib.el., G.

Crocus biflorus Miller subsp. *pulchricolor* (Herbert) Mathew, 1, Dedeler Alm, 1462 m., 10.10.2010, K 40° 30' 53" D 031° 38' 00", T 2193, ISTO 35842, Eu-Sib.el., G.

C. ancyrensis (Herbert) Maw, 1, Demirciler Alm, 1438 m., 26.02.2011, K 40° 31' 33" D 031° 37' 06", T 2276, ISTO 35840, Ir-Tur. el, G.

C. olivieri Gay subsp. *olivieri*, 1, Kızık Village, 1538 m., 31.03.2011, K 40° 30' 39" D 031° 33' 22", T 2295, ISTO 35839, G.

C. speciosus Bieb subsp. *speciosus*, 1, Kuzgölcük, Fındıcak Fountain, 1268 m., 10.10.2010, K 40° 31' 58" D 031° 33' 50", T 2193, ISTO 35843, G.

Gladiolus atroviolaceus Boiss., 1, Taşlıyayla location, 1442 m., 16.05.2010, K 40° 32' 07" D 031° 38' 12", T 1339, ISTO 35841, Ir-Tur. el., G.

ORCHIDACEAE

Cephalanthera rubra (L.) L.C.M. Richard, 1, Dereceören, 1298 m., 16.07.2011, K 40° 32' 55" D 031° 37' 16", T 2726, ISTO 35898, G.

Limodorum abortivum (L.) Swartz, 1, Dedeler Alm, 1505 m., 10.10.2010, K 40° 30' 50" D 031° 38' 45", T 2201, G.

Ophrys oestriifera Bieb. subsp. *oestriifera*, 1, Kuzgölcük, 1235 m., 20.06.2010, K 40° 31' 42" D 031° 31' 23", T 2633, ISTO 35904, G.

Himantoglossum caprinum (Bieb.) Sprengel, 1, Kabak Village, 1113 m., 19.06.2011, K 40° 30' 10" D 031° 29' 47", T 2729, ISTO 35906, Eu-Sib.el., G.

Orchis coriophora L., 1, Seben-Kıbrısık turnout, 1379 m., 04.04.2010, K 40° 33' 55" D 031° 39' 02", T 1063, ISTO 35901, G.

O. tridentata Scop., 1, Kabak Village, 1010 m., 04.04.2010, K 40° 29' 17" D 031° 28' 01" T 1062 G.

O. mascula (L.) L. subsp. *pinetorum* (Boiss. & Kotschy) G. Camus, 1, Kızık Village, 1702 m., 17.04.2010, K 40° 30' 01" D 031° 33' 08", T 1189, ISTO 35900, Med. el., G.

O. pallens L., 1, Kuzgölcük, 1173 m., 17.04.2010, K 40° 31' 51" D 031° 31' 55", T 1189, ISTO 35899, Med. el., G.

O. palustris Jacq., 1, Dereceören, 1352 m., 04.04.2010, K 40° 33' 26" D 031° 37' 41", T 1066, ISTO 35902, G.

Dactylorhiza romana (Seb.) Soó subsp. *romana*, 1, Kızık road, 1558 m., 10.10.2010, K 40° 31' 14" D 031° 34' 56", T 2205, ISTO 35903, Med. el., G.

CYPERACEAE

Carex muricata L., 1, Demirciler Alm, 1470 m., 25.09.2010, K 40° 31' 33" D 031° 36' 32", T 1988, ISTO 35916, Eu-Sib.el., H.

JUNCEAE

Juncus conglomeratus L., 1, Taşlıyayla location, 1460 m., 10.10.2010, K 40° 32' 03" D 031° 37' 15", T 2230, Eu-Sib.el., Hy.

J. articulatus L., 1, Nimetli Alm, 1436 m., 25.09.2010, K 40° 32' 05" D 031° 39' 56", T 1994, ISTO 35768, Eu-Sib.el., Hy.

Luzula campestris (L.) DC., 1, Solaklar Alm, 1437 m., 14.07.2010, K 40° 31' 51" D 031° 40' 19", T 1546, ISTO 35769, Eu-Sib.el., G.

POACEAE

Elymus repens (L.) Gould subsp. *repens*, 1, Nimetli Alm, 1434 m., 07.08.2010, K 40° 32' 16" D 031° 39' 06", T 1772, H.

Aegilops triuncialis L. subsp. *triuncialis*, 1, Dedeler Alm, 1476 m., 14.08.2010, K 40° 30' 54" D 031° 37' 39", T 1818, ISTO 35886, Th.

Hordeum bulbosum L., 1, Taşlıyayla location, 1438 m., 29.08.2010, K 40° 31' 36" D 031° 37' 03", T 1840, ISTO 35881, G.

Taeniatherum caput-medusae (L.) Nevski subsp. *crinitum* (Schreber) Melderis, 1, Ayman Alm, 1438 m., 29.08.2010, K 40° 32' 24" D 031° 40' 00", T 1828, ISTO 35878, Ir-Tur. el., Th.

Bromus japonicus Thunb. subsp. *japonicus*, 1, Demirciler Alm, 1435 m., 29.08.2010, K 40° 31' 29" D 031° 37' 19", T 1851, ISTO 35875, Th.

B. tectorum L., 1, Nimetli Alm, 1430 m., 29.08.2010, K 40° 32' 14" D 031° 39' 11", T 1857, ISTO 35876, Th.

B. sterilis L., 1, Seben-Kıbrısık turnout, 1474 m., 29.08.2010, K 40° 33' 58" D 031° 39' 05", T 1853, ISTO 35877, Th.

B. ramosus Hudson, 1, Solaklar Alm, 1484 m., 29.08.2010, K 40° 31' 37" D 031° 40' 46", T 1850, Th.

Avena barbata Pott ex Link subsp. *barbata*, 1, Dereceören, 1289 m., 14.08.2010, K 40° 33' 44" D 031° 37' 24", T 1800, ISTO 35890, Med. el., Th.

Koeleria cristata (L.) Pers., 1, Taşlıyayla location, 1440 m., 07.08.2010, K 40° 31' 49" D 031° 37' 16", T 1779, ISTO 35871, H.

Deschampsia caespitosa (L.) P. Beauv., 1, Taşlıyayla location, 1464 m., 07.08.2010, K

40° 32' 03" D 031° 37' 12", T 1773, ISTO 35873, H.

Holcus lanatus L., 1, Dedeler Alm, 1444 m., 29.08.2010, K 40° 30' 57" D 031° 38' 22", T 1833, ISTO 35888, Eu-Sib.el., H.

Calamagrostis epigejos (L.) Roth, 1, Alpagut Alm, 1450 m., 06.06.2010, K 40° 31' 11" D 031° 39' 52", T 1359, Eu-Sib.el., H.

C. pseudophragmites (Haller fil.) Koeler, 1, Çavuşlar Alm, 1567 m., 02.07.2010, K 40° 30' 48" D 031° 36' 42", T 1461, ISTO 35874, Eu-Sib.el., H.

Agrostis canina L., 1, Solaklar Alm, 1435 m., 12.09.2010, K 40° 32' 09" D 031° 39' 44", T 1995, ISTO 35880, Eu-Sib.el., H.

Anthoxanthum odoratum L. subsp. *alpinum* (A. & D. Löve) B. Jones & Melderis, 1, Dereceören, 1310 m., 07.08.2010, K 40° 32' 50" D 031° 37' 15", T 1776, ISTO 35872, Eu-Sib.el., H.

Alopecurus arundinaceus Poiret, 1, Nimetli Alm, 1437 m., 02.07.2010, K 40° 32' 10" D 031° 39' 41", T 1466, ISTO 35882, Eu-Sib.el., Cr.

Phleum alpinum L., 1, Demirciler Alm 1565 m., 14.08.2010, K 40° 31' 13" D 031° 36' 05", T 1817, ISTO 35894, Eu-Sib.el., H.

P. pratense L., 1, Taşlıyayla location, 1437 m., 14.08.2010, K 40° 31' 56" D 031° 38' 00", T 1816, ISTO 35895, Eu-Sib.el., H.

P. montanum C. Koch subsp. *montanum*, 1, Demirciler Alm, 1444 m., 16.05.2010, K 40° 31' 27" D 031° 36' 57", T 1343, ISTO 35892, H.

Festuca cyllenica Boiss. & Heldr., 1, Nimetli Alm, 1434 m., 29.08.2010, K 40° 32' 14" D 031° 39' 09", T 1839, ISTO 35896, Eu-Sib.el., H.

F. rubra L. subsp. *pseudorivularis* Markgr.-Dannenb, 1, Dedeler Alm, 1442 m., 29.08.2010, K 40° 30' 57" D 031° 38' 11", T 1838, ISTO 35884, Eu-Sib.el., H.

F. callieri (Hackel ex St.-Yves) F. Markgraf apud Hayek subsp. *callieri*, 1, Taşlıyayla location, 1440 m., 14.07.2010, K 40° 31' 57" D 031° 37' 50", T 1510, H.

F. arundinacea Schreber subsp. *arundinacea*, 1, Bozyer Alm, 1476 m., 29.08.2010, K 40° 30' 47" D 031° 39' 23", T 1836, H.

Poa trivialis L., 1, Alpagut Alm, 1480 m., 12.09.2010, K 40° 30' 57" D 031° 40' 24", T 1996, ISTO 35893, H.

P. nemoralis L., 1, Ayman Alm, 1430 m., 12.09.2010, K 40° 33' 03" D 031° 40' 32", T 1997, ISTO 35883, H.

P. bulbosa L., 1, Dedeler Alm, 1443 m., 06.06.2010, K 40° 31' 01" D 031° 38' 21", T 1361, ISTO 35879, G.

Dactylis glomerata L. subsp. *hispanica* (Roth.) Nyman, 1, Demirciler Alm, 1500 m., 29.08.2010, K 40° 31' 10" D 031° 36' 51", T 1844, ISTO 35885, H.

Briza media L., 1, Dedeler Alm, 1489 m., 10.10.2010, K 40° 30' 48" D 031° 37' 46", T 2161, ISTO 35891, H.

Melica ciliata L. subsp. *ciliata*, 1, Solaklar Alm, 1435 m., 14.08.2010, K 40° 32' 04" D 031° 40' 06", T 1813, ISTO 35889, H.

Stipa holosericea Trin., 1, Kabak Village, 911 m., 14.07.2010, K 40° 29' 22" D 031° 27' 51", T 1511, ISTO 35887, Ir-Tur. el., H.

Cynodon dactylon (L.) Pers. *villosus* Regel, 1, Korucuk Alm, 1211 m., 29.08.2010, K 40° 28' 24" D 031° 35' 38", T 1854, G.

TYPHACEAE

Typha angustifolia L., 1, Taşlıyayla location, 1462 m., 10.10.2010, K 40° 32' 01" D 031° 37' 13", T 2238, ISTO 35909, Hy.

BERBERIDACEAE

Berberis crataegina DC., 1, Taşlıyayla Pond, 1517 m., 10.10.2010, K 40° 30' 51" D 031° 40' 28", T 2121, ISTO 35438, Ph.

PAPAVERACEAE

Chelidonium majus L., 1, Kuzgölcük, 1478 m., 04.06.2011, K 40° 31' 19" D 031° 32' 36" T 2468, ISTO 35439, Eu-Sib.el., H.

Glaucium corniculatum (L.) Rud. subsp. *refractum* (Nab.) Cullen, 1, Kızık, 1568 m., 12.09.2010, K 40° 30' 19" D 031° 32' 36" T 1971, ISTO 35440, Ir-Tur. el., H.

G. flavum Crantz, 1, Kabak Village, 18.06.2011, K 40° 30' 23" D 031° 29' 43", T 2506, ISTO 35441, H.

Papaver pilosum Sibth. & Sm., 1, Dereceören, 1426 m., 20.06.2010, K 40° 30' 24" D 031° 37' 57", T 2048, Th.

P. rhoeas L., 1, Kıbrısçık-Seben turnout, 1435 m., 14.07.2010, K 40° 33' 44" D 031° 39' 12", T 2545, ISTO 35442, Th.

P. lacerum Popov, 1, Kıbrısçık-Seben turnout, 1430 m., 14.07.2010, K 40° 33' 47" D 031° 39' 16", T 1538, ISTO 35443, Th.

Corydalis solida (L.) Swartz. subsp. *solida*, 1, Solaklar Alm, Akçakilise brook location, 1434 m., 07.03.2010, K 40° 32' 27" D 031° 41' 34", T 1001, G.

Fumaria officinalis L., 1, Taşlıyayla Pond, 1445 m., 16.05.2010, K 40° 31' 68" D 031° 37' 22", T 1322, ISTO 35445, Th.

RANUNCULACEAE

Nigella arvensis L. var. *glauca* Boiss., A3 Bolu: Kabak ridge, 1166 m., 05.07.2010, K 40° 29' 35" D 031° 28' 87", T 1621, ISTO 35417, Th.

Delphinium venulosum Boiss., 1, Kozyaka Alm, 1617 m., 25.09.2010, K 40° 29' 33" D 031° 32' 26", T 2060, Ir-Tur. el., Th.

D. fissum Waldst. & Kit. subsp. *anatolicum* Chowdhuri & P.H. Davis, 1, Kabak Village, 910 m., 14.08.2010, K 40° 28' 49" D 031° 27' 34", T 1812, ISTO 35419, E. H.

Consolida orientalis (Gay) Schröd., 1, Demirciler Alm, 1540 m., 12.09.2010, K 40° 31' 48" D 031° 35' 41", T 1945, ISTO 35420, Th.

Anemone blanda Schott & Kotschy, 1, Taşlıyayla Pond, 1464 m., 04.04.2010, K 40° 32' 51" D 031° 37' 12", T 1067, ISTO 35421, G.

Clematis vitalba L., 1, Kıbrısçık-Seben turnout, 1375 m., 05.07.2010, K 40° 33' 58" D 031° 37' 12", T 1624, ISTO 35422, Ph.

C. viticella L., 1, Kuzgölcük, 1269 m., 05.07.2010, K 40° 32' 14" D 031° 32' 33", T 1622, ISTO 35423, Ph.

Adonis aestivalis L. subsp. *aestivalis*, 1, Kızık Pond, 1505 m., 19.06.2011, K 40° 30' 38" D 031° 32' 56", T 2688, ISTO 35424, Th.

A. flammea Jacq., 1, Kızık Village, 1530 m., 14.07.2010, K 40° 31' 10" D 031° 31' 41", T 1619, ISTO 35425, Th.

Ranunculus brutius Ten., 1, Kızık Village, 1600 m., 19.06.2011, K 40° 30' 56" D 031° 33' 19", T 2694, ISTO 35426, Eu-Sib.el., H.

R. saniculifolius Viv., 1, Solaklar Alm, 1434 m., 17.04.2010, K 40° 32' 29" D 031° 41' 23", T 1143, ISTO 35427, Hy.

R. repens L., 1, Nimetli Alm, 1442 m., 14.07.2010, K 40° 31' 15" D 031° 39' 11", T 1523, ISTO 35428, H.

R. constantinopolitanus (DC.) d'Urv., 1, Dedeler Alm, 1472 m., 04.04.2010, K 40° 30' 45" D 031° 28' 20" T 1060, ISTO 35429, H.

R. argyreus Boiss., 1, Dedeler Alm, 1472 m., 17.04.2010, K 40° 30' 34" D 031° 28' 15", T 1144, ISTO 35430, H.

R. neapolitanus Ten., 1, Keskinli Alm, 1460 m., 17.04.2010, K 40° 30' 35" D 031° 36' 58", T 1148, ISTO 35431, H.

R. illyricus L. subsp. *illyricus*, 1, Dedeler Alm, 1472 m., 02.05.2010, K 40° 30' 34" D 031° 28' 15", T 1262, ISTO 35432, H.

R. gracilis Clarke, 1, Dedeler Alm, 1461 m., 07.03.2010, K 40° 30' 34" D 031° 28' 17", T 1019, ISTO 35433 Th.

R. arvensis L., 1, Çavuşlar Alm location, 1514 m., 03.05.2011, K 40° 30' 47" D 031° 36' 55", T 2364, ISTO 35434, Th.

R. ficaria L. subsp. *ficariiformis* Rouy & Fouc., 1, Kızık Village, 1451 m., 03.05.2011, K 40° 30' 53" D 031° 31' 32", T 2368, ISTO 35435, G.

Thalictrum minus L. var. *minus*, 1, Kızık Pond, 1508 m., 14.07.2010, K 40° 30' 37" D 031° 32' 53", T 1551, ISTO 35436, G.

CRASSULACEAE

Umbilicus luteus (Huds.) Webb & Berthel., 1, Kızık Village, 1583 m., 14.07.2010, K 40° 31' 13" D 031° 34' 35", T 1574, ISTO 35648, H.

Sedum obtusifolium C. A. Meyer, 1, Kuzgölcük, 1155 m., 25.09.2010, K 40° 32' 00" D 031° 32' 15", T 2091, ISTO 35647, Ch.

S. acre L., 1, Kızık Village, 1701 m., 12.09.2010, K 40° 30' 01" D 031° 33' 08", T 1902, ISTO 35644, Ch.

S. album L., 1, Kayakapı Hill, 1640 m., 14.07.2010, K 40° 30' 14" D 031° 33' 47", T 1597, ISTO 35645, Ch.

S. pallidum Bieb. var. *bithynicum* (Boiss.) Chamberlain, 1, Dereceören, 1345 m., 20.06.2010, K 40° 33' 39" D 031° 36' 57", T 1400, ISTO 35646, Eu-Sib.el., Ch.

Sempervivum armenum Boiss. & Huet. var. *armenum*, 1, Kızık, 1692 m., 01.09.2011, K 40° 30' 10" D 031° 33' 13", T 2714, ISTO 35649, Eu-Sib.el., Ch.

PAEONIACEAE

Paeonia peregrina Miller, 1, Kızık-Kozyaka Alm, 1417 m., 03.05.2011, K 40° 29' 26" D 031° 30' 38", T 2476, ISTO 35437, G.

SAXIFRAGACEAE

Saxifraga rotundifolia L., 1, Dereceören, Kuyupınar Hill, 1305 m., 14.07.2010, K 40° 33' 20" D 031° 39' 15", T 1540, ISTO 35650, Eu-Sib.el., H.

S. cymbalaria L. var. *cymbalaria*, 1, Kıbrısık-Seben turnout, 1367 m., 10.10.2010, K 40° 33' 52" D 031° 39' 03", T 2221, ISTO 35651, Th.

CELASTRACEAE

Euonymus latifolius (L.) Miller. subsp. *latifolius*, 1, Kabak Village, 1100 m., 10.10.2010, K 40° 28' 02" D 031° 37' 59", T 2120, ISTO 35550, Eu-Sib.el., Ph.

EUPHORBIACEAE

Euphorbia cardiophylla Boiss. & Heldr., 1, Seben road, 1499 m., 03.05.2011, K 40° 32' 57" D 031° 38' 19", T 2327, ISTO 35920, G.

E. stricta L., 1, Dereceören Village, 1396 m., 10.10.2010, K 40° 33' 26" D 031° 37' 45", T 2116, ISTO 35918, Eu-Sib.el., Th.

E. peplus L. var. *minima* DC., 1, Kabak Village, 903 m., 10.10.2010, K 40° 29' 22" D 031° 27' 48", T 2245, ISTO 35917, Eu-Sib.el., Th.

E. myrsinites L., 1, Dedeler Alm, 1442 m., 07.03.2010, K 40° 30' 57" D 031° 38' 19", T 1010, ISTO 35922, H.

E. seguieriana Necker subsp. *niciciana* (Barbas ex Novak) Rech., 1, Dereceören turnout, 1291 m., 10.10.2010, K 40° 32' 46" D 031° 37' 07", T 2246, ISTO 35921, H.

E. amygdaloides L. var. *amygdaloides*, 1, Seben road, 1510 m., 10.10.2010, K 40° 33' 18" D 031° 39' 15", T 2114, ISTO 35919, Eu-Sib.el., H.

E. lathyris L., 1, Dereceören, 1290 m., 23.10.2010, K 40° 32' 49" D 031° 37' 11", T 2247, ISTO 35923, H.

HYPERICACEAE

Hypericum heterophyllum Vent., 1, Dereceören, 1234 m., 10.10.2010, K 40° 33' 10" D 031° 37' 18", T 2127, ISTO 35520, Ch.

H. hyssopifolium Chaix subsp. *elongatum* (Ledeb.) Woron var. *elongatum*, 1, Kızık Village, 1589 m., 01.09.2011, K 40° 30' 19" D 031° 33' 46", T 2732, ISTO 35521, Ir-Tur. el, H.

H. linarioides Bosse., 1, Dedeler Alm, 1543 m., 16.05.2010, K 40° 30' 38" D 031° 38' 43", T 1318, ISTO 35522, H.

H. montbretii Spach, 1, Kızık, Kayakapı Hill, 1599 m., 16.07.2011, K 40° 30' 14" D 031° 34' 03", T 2727, ISTO 35523, H.

H. adenotrichum Spach, 1, Kayakapı Hill, 1721 m., 05.07.2010, K 40° 30' 05" D 031° 32' 04", T 1655, ISTO 35524, H.

H. orientale L., 1, Dedeler Alm on the road, 1536 m., 02.07.2010, K 40° 30' 15" D 031° 37' 46", T 1501, ISTO 35525, H.

H. origanifolium Willd., 1, Kızık, 1450 m., 19.06.2011, K 40° 29' 36" D 031° 31' 18", T 2673, ISTO 35526, H.

H. perforatum L., 1, Taşlıyayla, 1460 m., 14.07.2010, K 40° 32' 01" D 031° 37' 27", T 1533, ISTO 35527, H.

LINACEAE

Linum flavum L. subsp. *scabrinerve* (Davis) P. H. Davis, 1, Kızık Village, 1505 m., 01.09.2011, K 40° 30' 05" D 031° 31' 52", T 2737, ISTO 35532, Ir-Tur. el., Th.

L. nodiflorum L., 1, Kozyaka Alm, 1368 m., 19.06.2011, K 40° 29' 10" D 031° 30' 38", T 2655, ISTO 35533, Med. el., Th.

L. hirsutum L. subsp. *anatolicum* (Boiss.) Hayek var. *anatolicum*, 1, Dereceören, 1255 m., 12.09.2010, K 40° 33' 07" D 031° 37' 19", T 1967, ISTO 35534, Ir-Tur. el., H

SALICACEAE

Salix alba L., 1, Taşlıyayla location, 1467 m., 18.06.2011, K 40° 32' 02" D 031° 37' 10", T 2609, ISTO 35914, Eu-Sib.el., Ph.

S. caprea L., 1, Taşlıyayla location, 1468 m., 10.10.2010, K 40° 32' 05" D 031° 37' 15", T 2229, ISTO 35913, Eu-Sib.el., Ph.

S. amplexicaulis Bory & Chaub., 1, Taşlıyayla location, 1463 m., 10.10.2010, K 40° 32' 00" D 031° 37' 13", T 2225, ISTO 35915, Med. el., Ph.

Populus tremula L., 1, Dereceören, 1268 m., 14.07.2010, K 40° 32' 59" D 031° 37' 13", T 1557, ISTO 35912, Eu-Sib.el., Ph.

P. nigra L. subsp. *nigra*, 1, Kabak Village, 901 m., 18.06.2011, K 40° 29' 38" D 031° 28' 01", T 2519, Eu-Sib.el., Ph.

VIOLACEAE

Viola odorata L., 1, Taşlıyayla forest storehouse, 1438 m., 07.03.2010, K 40° 32' 03" D 031° 38' 23", T 1022, ISTO 35480, H.

V. suavis Bieb., 1, Demirciler Alm, 1474 m., 17.04.2010, K 40° 31' 24" D 031° 36' 42", T 1176, ISTO 35481, H.

V. reichenbachiana Jord. ex Bor., 1, Nimetli Alm, 1439 m., 17.04.2010, K 40° 31' 21" D 031° 39' 22", T 1116, ISTO 35482, H.

V. sieheana Becker, 1, Alpagut Alm, 1472 m., 03.05.2011, K 40° 30' 58" D 031° 41' 51", T 2374, ISTO 35483, H.

V. occulta Lehm, 1, Taşlıyayla location, 1444 m., 31.03.2011, K 40° 31' 40" D 031° 36' 52", T 2292, ISTO 35484, Th.

V. parvula Tieno, 1, Taşlıyayla, forest storehouse, 1439 m., 20.06.2010, K 40° 31' 56" D 031° 38' 07", T 1435, ISTO 35485, Th.

V. kitaibeliana Roem. & Schult., 1, Taşlıyayla, location, 1437 m., 03.05.2011, K 40° 32' 03" D 031° 38' 02", T 2366, ISTO 35486, Th.

FABACEAE

Cytisus hirsutus L., 1, Solaklar Alm, 1460 m., 04.06.2011, K 40° 31' 40" D 031° 41' 22", T 2427, ISTO 35570, Ch.

Genista albida Willd., 1, Gökçepinar location, 1473 m., 16.05.2010, K 40° 32' 48" D 031° 37' 57", T 1346, ISTO 35567, Ch.

G. aucheri Boiss., 1, Kozyaka Alm, 1423 m., 19.06.2011, K 40° 33' 52" D 031° 39' 03", T 2708, ISTO 35568, Ir-Tur. el., Ch.

Argyrobium biebersteinii P.W.Ball, 1, Demirciler Alm, 1476 m., 10.10.2010, K 40° 30' 56" D 031° 36' 03", T 2175, ISTO 35596, H.

Colutea cilicica Boiss & Bal., 1, Dedeler Alm, 1512 m., 12.09.2010, K 40° 30' 40" D 031° 38' 32", T 1953, ISTO 35593, Ph.

Astragalus nanus DC., 1, Korucuk Alm, 1200 m., 04.06.2011, K 40° 29' 03" D 031° 36' 22", T 2454, ISTO 35572, Ch.

A. glycyphyllos L. subsp. *glycyphylloides* (DC.) Matthews, 1, Dedeler Alm, 1512 m., 14.07.2010, K 40° 30' 46" D 031° 38' 39", T 1568, ISTO 35553, Eu-Sib.el., H.

A. trichostigma Bunge, 1, Dedeler Alm, 1512 m., 07.08.2010, K 40° 30' 46" D 031° 38' 39", T 1713, ISTO 35562, H.

A. plumosus Willd. var. *plumosus*, 1, Nimetli Alm, 1439 m., 10.10.2010, K 40° 31' 50" D 031° 39' 51", T 2176, ISTO 35571, Ch.

A. prusianus Boiss., 1, Dedeler Alm, 1512 m., 18.06.2011, K 40° 30' 46" D 031° 38' 39", T 2559, ISTO 35582, Med. el., Ch.

A. brachypterus Fischer, 1, Demirciler Alm, 1501 m., 06.06.2010, K 40° 31' 07" D 031° 36' 57", T 1391, ISTO 35576, Ir-Tur. el., Ch.

A. wiedemannianus Fischer, 1, Dedeler Alm, 1512 m., 14.07.2010, K 40° 30' 46" D 031° 38' 39", T 1568, ISTO 35573, Ir-Tur. el., Ch.

A. ponticus Pall., 1, Kızık Village, 1512 m., 01.09.2011, K 40° 29' 12" D 031° 30' 39", T 2740, ISTO 35579, Ch.

A. macrocephalus Willd. subsp. *macrocephalus*, 1, Kızık Village, 1414 m., 19.06.2011, K 40° 29' 01" D 031° 30' 53", T 2723, ISTO 35577, Ch.

A. lydius Boiss., 1, Kabak Village, Toprak Hill location, 970 m., 17.04.2010, K 40° 30' 06" D 031° 28' 43", T 1185, ISTO 35575, Ir-Tur. el., H.

A. karamasicus Boiss. & Bal., 1, Kızık, 1461 m., 04.06.2011, K 40° 30' 05" D 031° 31' 46", T 2457, ISTO 35578, Ir-Tur. el., H.

A. xylobasis Freyn & Bornm. var. *angustus* (Freyn & Sint.) Freyn & Bornm., 1, Dedeler Alm, 1508 m., 07.08.2010, K 40° 30' 59" D 031° 39' 00", T 1715, ISTO 35574, Ir-Tur. el., H.

A. squalidus Boiss. & Noe, 1, Dedeler Alm, 1508 m., 16.05.2010, K 40° 30' 59" D 031° 39' 00", T 1358, ISTO 35580, H.

A. spruneri Boiss., 1, Kabak Village, 908 m., 04.06.2011, K 40° 29' 19" D 031° 27' 47", T 2419, ISTO 35581, H.

Vicia cracca L. subsp. *cracca*, 1, Dereceören, 1245 m., 16.05.2010, K 40° 32' 50" D 031° 37' 05", T 1347, ISTO 35556, Eu-Sib.el., H.

V. pannonica Crantz. var. *pannonica*, 1, Ayman Alm, 1448 m., 06.06.2010, K 40° 32' 52" D 031° 40' 28", T 1384, ISTO 35555, Th.

V. sativa L. subsp. *sativa*, 1, Kızık Village road, 535 m., 04.06.2011, K 40° 31' 19" D 031° 35' 03", T 2474, ISTO 35563, Th.

V. sativa L. subsp. *incisa* (Bieb.) Arc. var. *cordata* (Wulfen ex Hoppe) Arc., 1, Kuzgölcük, 1092 m., 04.06.2011, K 40° 32' 11" D 031° 32' 17", T 2453, ISTO 35564, Th.

V. narbonensis L. var. *narbonensis*, 1, Kızık Village, 1640 m., 04.06.2011, K 40° 30' 11" D 031° 33' 35", T 2472, ISTO 35565, Th.

Lathyrus aureus (Stev.) Brandza, 1, Bozyer Alm, 1496 m., 02.07.2010, K 40° 30' 43" D 031° 40' 06", T 1473, ISTO 35606, Eu-Sib.el., H.

L. brachypterus Cel. var. *brachypterus*, 1, Demirciler Alm, 1549 m., 02.05.2010, K 40°

31' 07" D 031° 35' 43", T 1273, ISTO 35560, Ir-Tur. el, H.

L. digitatus (Bieb.) Fiori, 1, Taşlıyayla location, 1435 m., 17.04.2010, K 40° 31' 52" D 031° 37' 46", T 1192, ISTO 35557, Med. el., H.

L. tukhtensis Czecz., 1, Kabak Village, 1300 m., 17.04.2010, K 40° 29' 59" D 031° 30' 33", T 1193, ISTO 35559, H.

L. laxiflorus (Desf.) O. Kuntze subsp. *laxiflorus*, 1, Demirciler Alm, 1474 m., 02.05.2010, K 40° 31' 12" D 031° 37' 03", T 1236, ISTO 35558, H.

L. cicera L., 1, Dereceören, Soğucak Pınarı location, 1266 m., 04.06.2011, K 40° 32' 49" D 031° 36' 27", T 2410, ISTO 35588, Th.

L. nissolia L., 1, Solaklar Alm, 1440 m., 16.05.2010, K 40° 31' 52" D 031° 40' 23", T 1356, ISTO 35561, Th.

Pisum sativum L. var. *brevipedunculatum* P. H. Davis & Meikle, 1, Kabak Village, 1258 m., 04.06.2011, K 40° 30' 11" D 031° 30' 18", T 2442, ISTO 35566, Th.

Ononis spinosa L. subsp. *leiosperma* (Boiss.) Sirj., 1 Kabak Village, 1329 m., 29.08.2010, K 40° 29' 55" D 031° 30' 23", T 1862, ISTO 35597, H.

Trifolium hybridum L. var. *hybridum*, 1, Demirciler Alm, 1440 m., 02.07.2010, K 40° 31' 43" D 031° 37' 10", T 1453, ISTO 35604, H.

T. speciosum Willd., 1, Ayman Alm, 1445 m., 05.07.2010, K 40° 32' 13" D 031° 41' 47", T 1671, ISTO 35590, Th.

T. spadiceum L., 1, Kızık Village road, 1519 m., 02.07.2010, K 40° 31' 17" D 031° 35' 04", T 1488, ISTO 35603, Eu-Sib.el., Th.

T. aureum Poll., 1, Demirciler Alm, 1440 m., 07.08.2010, K 40° 31' 11" D 031° 38' 48", T 1710, ISTO 35608, Eu-Sib.el., Th.

T. patens Schreb., 1, Dereceören, 1265 m., 20.06.2010, K 40° 33' 29" D 031° 37' 24", T 1446, ISTO 35600, Th.

T. pratense L. var. *pratense*, 1, Taşlıyayla location, 1466 m., 02.07.2010, K 40° 32' 03" D 031° 37' 15", T 1489, ISTO 35611, H.

T. medium L. var. *medium*, 1, Taşlıyayla location, 1436 m., 02.07.2010, K 40° 31' 59" D 031° 38' 13", T 1453, ISTO 35599, H.

T. medium L. var. *ericalycinum* Hausskn., 1, Demirciler Alm, 1550 m.,

02.07.2010, K 40° 31' 12" D 031° 36' 26", T 1452, ISTO 35607, H.

T. pannonicum Jacq. subsp. *elongatum* (Willd.) Zoh., 1, Dedeler Alm, 1448 m., 20.06.2010, K 40° 30' 57" D 031° 30' 58", T 1422, ISTO 35569, H.

T. lappaceum L., 1, Ayman Alm, 1428 m., 05.07.2010, K 40° 32' 24" D 031° 39' 09", T 1670, ISTO 35589, Med. el., Th.

T. arvense L. var. *arvense*, 1, Kızık Village road, 1580 m., 12.09.2010, K 40° 31' 20" D 031° 33' 35", T 1947, ISTO 35594, Th.

T. echinatum Bieb., 1, Kızık Village road, 1590 m., 20.06.2010, K 40° 30' 52" D 031° 34' 33", T 1445, ISTO 35598, Med. el., Th.

Melilotus officinalis (L.) Desr., 1, Kozyaka Alm, Ömürce Boğazı location, 1617 m., 12.09.2010, K 40° 29' 37" D 031° 33' 13", T 1952, ISTO 35592, Th.

M. bicolor Boiss. & Bal., 1, Kabak Village, 899 m., 12.09.2010, K 40° 28' 33" D 031° 27' 45", T 2558, ISTO 35585, Ir-Tur. el, Th.

Trigonella astroites Fisch. & Mey., 1, Kıbrısçık turnout, 1379 m., 12.09.2010, K 40° 33' 59" D 031° 39' 05", T 1950, ISTO 35595, Ir-Tur. el, Th.

T. spicata Sibth. & Sm., 1, Kuzgölcük, 1470 m., 05.07.2010, K 40° 31' 12" D 031° 32' 23", T 1675, ISTO 35609, Doğu Med. el., Th.

Medicago lupulina L., 1, Taşlıyayla forest storehouse, 1439 m., 02.07.2010, K 40° 32' 17" D 031° 38' 53", T 1476, ISTO 35605, H.

M. sativa L. subsp. *sativa*, 1, Kabak Village, 910 m., 29.08.2010, K 40° 28' 45" D 031° 27' 30", T 1881, ISTO 35591, H.

Dorycnium graecum (L.) Ser., 1, Dedeler Alm, 1560 m., 16.05.2010, K 40° 30' 33" D 031° 38' 30", T 1350, ISTO 35552, Eu-Sib.el., Ch.

Lotus ornithopodioides L., 1, Nimetli Alm, 1455 m., 10.10.2010, K 40° 31' 25" D 031° 38' 55", T 2173, ISTO 35601, Med. el., Th.

L. corniculatus L. var. *tenuifolius*, 1, Çavuşlu Alm, 1555 m., 02.05.2010, K 40° 30' 42" D 031° 36' 30", T 1237, ISTO 35583, H.

L. aegaeus (Gris.) Boiss., 1, Kozyaka Alm, Çoplum brook location, 1560 m., 19.06.2011, K 40° 29' 14" D 031° 33' 53", T 2617, ISTO 35586, H.

Anthyllis vulneraria L. subsp. *boisseri* (Sag.) Bornm., 1, Kızık Village turnout, 1501 m., 02.07.2010, K 40° 31' 28" D 031° 36' 03", T 1497, ISTO 35554, H.

Coronilla scorpioides (L.) Koch, 1, Kabak Village, 899 m., 03.05.2011, K 40° 28' 34" D 031° 27' 42", T 2389, ISTO 35587, Th.

C. varia L. subsp. *varia*, 1, Taşlıyayla, 1450 m., 06.06.2010, K 40° 32' 02" D 031° 37' 01", T 1377, ISTO 35551, H.

Hedysarum varium Willd., 1, Kuzgölcük, 1510 m., 05.07.2010, K 40° 30' 44" D 031° 39' 19", T 1634, ISTO 35602, Ir-Tur. el., H.

Onobrychis armena Boiss. & Huet., 1, Dereceören, 1260 m., 04.06.2011, K 40° 32' 42" D 031° 37' 03", T 2420, ISTO 35584, E.

O. tournefortii (Willd.) Desv., 1, Kozyaka Alm, 1610 m., 07.08.2010, K 40° 29' 35" D 031° 33' 29", T 1704, ISTO 35610, H.

POLYGALACEAE

Polygala supina Schreb., 1, Dereceören, Gökçepinar Kayası, 1363 m., 14.07.2010, K 40° 32' 53" D 031° 37' 23", T 1536, ISTO 35487, H.

P. anatolica Boiss. & Heldr., 1, Kıbrıscık-Seben turnout, 1380 m., 04.06.2011, K 40° 33' 52" D 031° 39' 03", T 2433, ISTO 35488, H.

ELAEAGNACEAE

Elaeagnus angustifolia L. var. *orientalis*, 1, Kozyaka Alm, 1566 m., 18.06.2011, K 40° 29' 14" D 031° 33' 55", T 2546, ISTO 35870, Ph.

RHAMNACEAE

Paliurus spina-christi Miller, 1, Kabak Village, 1150 m., 10.10.2010, K 40° 29' 57" D 031° 30' 04", T 2110, ISTO 35545, Ph.

Frangula alnus Miller subsp. *alnus*, 1, Kızık road, 1373 m., 10.10.2010, K 40° 33' 52" D 031° 39' 03", T 2208, ISTO 35546, Eu-Sib.el., Ph.

Rhamnus thymifolius Bornm., 1, Korucuk Alm, 1223 m., 01.09.2011, K 40° 28' 27" D 031° 36' 01", T 2749, ISTO 35547, Ph

ROSACEAE

Prunus x domestica L., 1, Kızık Village, 920 m., 04.06.2011, K 40° 29' 05" D 031° 27' 46", T 2393, Ph.

Cerasus mahaleb (L.) Miller var. *mahaleb*, 1, Kabak Village, 1489 m., 18.06.2011, K 40° 28' 52" D 031° 28' 34", T 2477, ISTO 35632, Ph.

Filipendula vulgaris Moench., 1, Kuzgölcük, m., 16.05.2010, K 40° 31' 54" D 031° 37' 03", T 1319, ISTO 35612, Eu-Sib.el., G.

Rubus sanctus Schreber, 1, Taşlıyayla location, 1476 m., 10.10.2010, K 40° 31' 57" D 031° 36' 50", T 2186, ISTO 35626, Ch.

R. canescens DC. var. *canescens*, 1, Kızık Village, 1565 m., 16.07.2011, K 40° 30' 20" D 031° 33' 12", T 2728, ISTO 35615, Eu-Sib.el., Ch.

Potentilla rupestris L., 1, Kuzgölcük, 1430 m., 18.06.2011, K 40° 31' 22" D 031° 33' 05", T 2614, ISTO 35628, Eu-Sib.el, H.

P. calabra Ten., 1, Ayman Alm, 1435 m., 05.07.2010, K 40° 32' 44" D 031° 40' 39", T 1626, ISTO 35622, Med. el., H.

P. recta L., 1, Kuzgölcük, 1540 m., 29.08.2010, K 40° 31' 15" D 031° 30' 43", T 1890, ISTO 35619, H.

P. reptans L., 1, Alpagut Alm, 1470 m., 10.10.2010, K 40° 30' 32" D 031° 41' 28", T 2211, ISTO 35620, H.

Fragaria vesca L., 1, Kıbrıscık-Seben turnout, 1428 m., 20.06.2010, K 40° 33' 30" D 031° 38' 30", T 1555, ISTO 35613, H.

Geum urbanum L., 1, Kızık Village, Harman Taşı location, 1571 m., 14.07.2010, K 40° 30' 22" D 031° 32' 33", T 1618, ISTO 35623, Eu-Sib.el., H.

Agrimonia eupatoria L., 1, Kızık Village, 1507 m., 29.08.2010, K 40° 30' 33" D 031° 32' 55", T 1889, ISTO 35618, H.

Rosa pulverulenta Bieb., 1, Kızık Village, Killik Hill location, 1493 m., 02.07.2010, K 40° 31' 17" D 031° 32' 17", T 2184, ISTO 35625, Ch.

R. canina L., 1, Taşlıyayla location, 1479 m., 02.07.2010, K 40° 31' 50" D 031° 37' 07", T 1468, ISTO 35614, Ph.

Cotoneaster nummularia Fisch. & Mey., 1, Taşlıyayla location, 1440 m., 18.06.2011, K 40° 31' 12" D 031° 37' 13", T 2485, ISTO 35616, Ph.

Crataegus tanacetifolia (Lam.) Pers., 1, Kabak Village, 1160 m., 10.10.2010, K 40° 30' 14" D 031° 30' 12", T 2180, ISTO 35630, Ph.

C. monogyna Jacq. subsp. *monogyna*, 1, Kabak Village, 1050 m., 10.10.2010, K 40° 30' 21" D 031° 29' 40", T 2182, ISTO 35631, Ph.

C. monogyna Jacq. subsp. *azarella* (Gris.) Franco., 1, Kızık Village road, 1569 m., 10.10.2010, K 40° 31' 01" D 031° 32' 56", T 2210, ISTO 35627, Ph.

Pyracantha coccinea Roemer, 1, Kabak Village, 940 m., 26.02.2011, K 40° 30' 58" D 031° 29' 58", T 2265, ISTO 35621, Ph.

Sorbus aucuparia L., 1, Dereceören, 1297 m., 25.09.2010, K 40° 33' 16" D 031° 37' 11", T 2074, ISTO 35624, Eu-Sib.el., Ph.

S. umbellata (Desf.) Fritsch var. *umbellata*, 1, Kızık Village, 1461 m., 19.06.2011, K 40° 29' 47", D 031° 31' 26", T 2692, ISTO 35629, Ph.

S. torminalis (L.) Crantz var. *torminalis*, 1, Kızık Village, 1530 m., 18.06.2011, K 40° 30' 32" D 031° 32' 58", T 2489, ISTO 35617, Eu-Sib.el., Ph.

Malus sylvestris Miller subsp. *orientalis* var. *orientalis*, 1, Kuzgölcük, Küçükkaya Ridge, 1310 m., 01.09.2011, K 40° 31' 43" D 031° 32' 52", T 2744, ISTO 35633, Ph.

Pyrus communis L. subsp. *communis*, 1, Kızık Village road, Emin Hoca Fountain location, 1534 m., 01.09.2011, K 40° 30' 41" D 031° 33' 20", T 2742, ISTO 35634, Ph.

P. amygdaliformis Vill. var. *lanceolata*, 1, Kabak Village, 1132 m., 01.09.2011, K 40° 30' 08" D 031° 29' 48", T 2743, ISTO 35635, Med. el., Ph.

P. elaeagnifolia Pallas subsp. *elaeagnifolia*, 1, Kızık Village road, 1532 m., 01.09.2011, K 40° 30' 54" D 031° 33' 04", T 2731, Ph.

ULMACEAE

Celtis tournefortii Lam., 1, Kabak Village, Aşılıkbaşı Ridge 938 m., 18.06.2011, K 40° 30' 26" D 031° 29' 08", T 2481, ISTO 35907, Ph.

C. glabrata Steven ex Planchon, 1, Korucuk Alm, 1185 m., 18.06.2011, K 40° 28' 12" D 031° 35' 47", T 2547, ISTO 35908, Eu-Sib.el., Ph.

CUCURBIATACEAE

Bryonia alba L., 1, Kabak Village, 1091 m., 19.06.2011, K 40° 30' 06" D 031° 29' 37", T 2646, ISTO 35642, Eu-Sib.el., H.

DATISCACEAE

Datisca cannabina L., 1, Kabak Village, 935 m., 12.09.2010, K 40° 30' 40" D 031° 29' 37", T 1964, ISTO 35643, Ch.

BETULACEAE

Carpinus betulus L., 1, Kuzgölcük, 1004 m., 10.10.2010, K 40° 31' 57" D 031° 31' 26", T 2214, ISTO 35945, Eu-Sib.el., Ph.

Corylus colurna L., 1, Korucuk Alm, 1256 m., 18.06.2011, K 40° 28' 32" D 031° 35' 58", T 2482, ISTO 35944, Eu-Sib.el., Ph.

C. avellana L. var. *avellana*, 1, Kızık Village, 1536 m., 18.06.2011, K 40° 30' 44" D 031° 33' 18", T 2480, Eu-Sib.el., Ph.

Alnus glutinosa (L.) Gaertner subsp. *glutinosa*, 1, Kuzgölcük, 1036 m., 16.07.2011, K 40° 32' 25" D 031° 32' 43", T 2724, ISTO 35797, Eu-Sib.el., Ph.

FAGACEAE

Quercus robur L. subsp. *robur*, 1, Kabak Village, 958 m., 18.06.2011, K 40° 31' 45" D 031° 30' 45", T 2515, ISTO 35927, Eu-Sib.el., Ph.

Q. macranthera Fisch. & Mey. ex Hohen. subsp. *sypirensis* (C. Koch) Menitsky, 1, Kızık Village, 1566 m., 19.06.2011, K 40° 30' 51" D 031° 32' 46", T 2690, ISTO 35928, Ph.

Q. petraea (Mattuschka) Liebl. subsp. *petraea*, 1, Kızık Pond, 1549 m., 19.06.2011, K 40° 30' 31" D 031° 33' 36", T 2677, Eu-Sib.el., Ph.

Q. petraea (Mattuschka) Liebl. subsp. *iberica* (Steven ex Bieb.) Krassiln., 1, Kızık Village, 1495 m., 10.10.2010, K 40° 30' 09" D 031° 31' 55", T 2224, ISTO 35926, Ph.

Q. infectoria Oliver subsp. *boissieri* (Reuter) O. Schwarz, 1, Kabak Village, 925 m., 10.10.2010, K 40° 30' 20" D 031° 29' 34", T 2198, ISTO 35930, Ph.

Q. pubescens Willd., 1, Kızık Village, 1587 m., 18.06.2011, K 40° 30' 27" D 031° 33' 08", T 2611, ISTO 35925, Ph.

Q. cerris L. var. *cerris*, 1, Kızık Village, 1533 m., 19.06.2011, K 40° 30' 42" D 031° 33' 19", T 2684, ISTO 35929, Ph.

JUGLANDACEAE

Juglans regia L., 1, Kızık Village, 1380 m., 18.06.2011, K 40° 30' 05" D 031° 31' 47", T 2484, Ph.

GERANIACEAE

Geranium robertianum L., 1, Kızık Village, Harman Taşı location, 1541 m., 20.06.2010, K 40° 30' 18" D 031° 32' 21", T 2411, ISTO 35535, Th.

G. columbinum L., 1, Kabak Village, 888 m., 04.06.2011, K 40° 29' 00" D 031° 27' 43", T 2411, ISTO 35536, Th.

G. macrostylum Boiss., 1, Dereceören, 1350 m., 17.04.2010, K 40° 33' 17" D 031° 37' 13", T 1156, ISTO 35537, Med. el., Th.

G. asphodeloides Burnm subsp. *sintenisii* (Freyn) P. H. Davis, 1, Kıbrısık turnout, 1404 m., 10.10.2010, K 40° 33' 44" D 031° 38' 48", T 2216, ISTO 35538, Eu-Sib.el., Th.

G. pyrenaicum Burm., 1, Dereceören, 1216 m., 25.09.2010, K 40° 33' 05" D 031° 37' 16", T 2054, ISTO 35539, H.

Erodium cicutarium (L.) L'Hérit. subsp. *cutarium*, 1, Taşlıyayla, 1444 m., 26.02.2011, K 40° 31' 54" D 031° 37' 49", T 2255, ISTO 35540, Th.

LYTHRACEAE

Lythrum salicaria L., 1, Kabak Village, 914 m., 25.09.2010, K 40° 28' 49" D 031° 27' 34", T 2078, ISTO 35636, Eu-Sib.el., H.

ONAGRACEAE

Epilobium angustifolium L., 1, Kabak Village, 899 m., 14.07.2010, K 40° 29' 40" D 031° 28' 00", T 1524, Eu-Sib.el., H.

E. hirsutum L., 1, Kabak Village, 910 m., 05.07.2010, K 40° 28' 48" D 031° 27' 24", T 1668, ISTO 35640, H.

E. montanum L., 1, Kabak Village, 1190 m., 25.09.2010, K 40° 29' 07" D 031° 38' 06", T 1944, ISTO 35637, Eu-Sib.el., H.

E. lanceolatum Seb. & Mauri, 1, Kabak Village, 888 m., 14.07.2010, K 40° 28' 44" D 031° 27' 43", T 1617, ISTO 35638, Eu-Sib.el., H.

E. tetragonum L. subsp. *tetragonum*, 1, Kabak Village, 909 m., 02.07.2010, K 40° 29' 16" D 031° 27' 46", T 1471, ISTO 35639, H.

ANACARDIACEAE

Rhus coriaria L., 1, Kabak Village, 1047 m., 04.06.2011, K 40° 30' 04" D 031° 28' 15", T 2397, ISTO 35549, Ph.

SAPINDACEAE

Acer tataricum L., 1, Kabak Village, 1306 m., 01.09.2011, K 40° 29' 44" D 031° 30' 05", T 2735, ISTO 35541, Ph.

A. platanoides L., 1, Kabak Village, 1283 m., 18.06.2011, K 40° 28' 12" D 031° 35' 43", T 2510, ISTO 35542, Eu-Sib.el., Ph.

A. campestre L. subsp. *campestre*, 1, Kızık Village, 1526 m., 19.06.2011, K 40° 30' 27" D 031° 37' 42", T 2620, ISTO 35543, Eu-Sib.el., Ph.

A. hyrcanum Fisch. & Mey. subsp. *hyrcanum*, 1, Kabak Village, 1155 m.,

01.09.2011, K 40° 30' 09" D 031° 29' 57", T 2734, ISTO 35544, Eu-Sib.el., Ph.

CISTACEAE

Cistus creticus L., 1, Kabak Village, 1100 m., 19.06.2011, K 40° 30' 10" D 031° 29' 46", T 2634, ISTO 35477, Med. el., Ch.

C. laurifolius L., 1, Kabak Village, 970 m., 01.09.2011, K 40° 30' 32" D 031° 29' 34", T 2739, ISTO 35478, Med. el., Ch.

Helianthemum nummularium (L.) Miller subsp. *nummularium*, 1, Taşlıyayla location, 1435 m., 16.05.2010, K 40° 31' 50" D 031° 37' 49", T 1315, ISTO 35479, Ch.

MALVACEAE

Malva neglecta Wallr., 1, Taşlıyayla forest storehouse, 1442 m., 25.09.2010, K 40° 31' 56" D 031° 37' 46", T 2046, ISTO 35528, Th.

Alcea apterocarpa (Fenzl) Boiss., 1, Kızık Village, 1593 m., 05.07.2010, K 40° 30' 56" D 031° 33' 35", T 1644, ISTO 35529, Ir-Tur. el., H.

A. pallida Waldst. & Kit., 1, Kızık Village, 1525 m., 05.07.2010, K 40° 30' 34" D 031° 32' 56", T 1643, ISTO 35530, H.

Tilia rubra DC. subsp. *caucasica* (Rupr.) V. Engler, 1, Kabak Village, 940 m., 19.06.2011, K 40° 30' 35" D 031° 29' 45", T 2669, ISTO 35531, Eu-Sib.el., Ph.

THYMELIACEAE

Daphne pontica L., 1, Kızık Village road, 1623 m., 10.10.2010, K 40° 31' 03" D 031° 33' 26", T 2130, Eu-Sib.el., Ch.

BRASSICACEAE

Conringia orientalis (L.) Anrdz., 1, Kızık Alm, 1568 m., 03.05.2011, K 40° 30' 19" D 031° 32' 36", T 2348, ISTO 35446, Th.

C. perfoliata (C. A. Mey.) Busch, 1, Kızık-Kozyaka Alm, 1417 m., 03.05.2011, K 40° 29' 26" D 031° 30' 38", T 2390, ISTO 35447, Th.

Cardaria draba (L.) Desv subsp. *draba*, 1, Demirciler Alm, Aşılı Çayın location, 1527 m., 04.06.2011, K 40° 30' 58" D 031° 36' 79", T 2435, ISTO 35448, H.

Isatis floribunda Boiss. ex Bornm., 1, Kabak Village, 1208 m., 19.06.2011, K 40° 29' 11" D 031° 28' 57", T 2713, ISTO 35449, Ir-Tur. el., H.

Iberis taurica DC., 1, Kuzgölcük Village, 1519 m., 04.06.2011, K 40° 31' 14" D 031° 32' 22", T 2438, ISTO 35450, H.

Thlaspi perfoliatum L., 1, Taşlıyayla location, 1449 m., 02.05.2010, K 40° 32' 03" D 031° 37' 55", T 1211, ISTO 35451, Th.

T. ochroleucum Boiss. & Heldr., 1, Nimetli Alm, 1450 m., 02.05.2010, K 40° 32' 40" D 031° 37' 14", T 1212, ISTO 35452, Th.

T. lilacinum Boiss. & Huet, 1, Demirciler Alm, 1479 m., 03.05.2011, K 40° 31' 19" D 031° 37' 13", T 2372, ISTO 35453, Th.

Capsella bursa-pastoris (L.) Medik., 1, Solaklar Alm, 1460 m., 03.05.2011, K 40° 31' 30" D 031° 43' 59", T 2339, ISTO 35454, Th.

Fibigia clypeata (L.) Medik., 1, Kuzgölcük, 1250 m., 10.10.2010, K 40° 33' 13" D 031° 37' 22", T 2190, ISTO 35455, H.

Alyssum linifolium Steph. ex Willd. var. *linifolium*, 1, Kızık, 1360 m., 04.04.2010, K 40° 30' 27" D 031° 31' 50", T 1089, ISTO 35456, Th.

A. minutum Schelecht. ex DC., 1, Kızık Village road, 1570 m., 18.06.2011, K 40° 31' 08" D 031° 34' 44", T 2485, Th.

A. strigosum Banks. & Sol. subsp. *strigosum*, 1, Taşlıyayla location, 1440 m., 05.07.2010, K 40° 31' 52" D 031° 37' 52", T 1672, ISTO 35457, Th.

A. armenum Boiss., 1, Çavuşlar Alm location, 1542 m., 20.06.2010, K 40° 30' 40" D 031° 37' 46", T 1429, ISTO 35458, Th.

A. murale Waldst. & Kit. var. *murale*, 1, Korucuk Alm, 1387 m., 02.07.2010, K 40° 29' 13" D 031° 35' 23", T 1472, ISTO 35459, H.

Draba muralis L., 1, Dedeler Alm location, 1441 m., 03.05.2011, K 40° 30' 49" D 031° 38' 19", T 2371, ISTO 35460, H.

Arabis sagittata (Bertol.) DC., 1, Keskinli Alm, 1540 m., 02.05.2010, K 40° 30' 26" D 031° 36' 48", T 1213, ISTO 35461, H.

A. nova Vill., 1, Solaklar Alm, 1439 m., 04.06.2011, K 40° 32' 24" D 031° 41' 17", T 2450, ISTO 35462, Th.

A. verna (L.) DC., 1, Dedeler Alm, 1495 m., 03.05.2011, K 40° 30' 43" D 031° 38' 28", T 2365, ISTO 35463, Med. el., Th.

Turritis laxa (Sibth. & Sm.) Hayek, 1, Dedeler Alm, 1459 m., 10.10.2010, K 40° 30' 51" D 031° 38' 17", T 2156, ISTO 35464, H.

Rorippa sylvestre (L.) Bess., 1, Kızık Village road, 1527 m., 25.09.2010, K 40° 31' 26" D 031° 35' 39", T 2012, ISTO 35465, H.

Barbarea vulgaris R. Br., 1, Seben-Kızık turnout, 1473 m., 04.04.2010, K 40° 30' 43" D 031° 36' 56", T 1092, ISTO 35466, H.

B. trichopoda Hausskn. ex Bornm., 1, Kuzgölcük, 1147 m., 04.04.2010, K 40° 32' 18" D 031° 32' 56", T 1091, ISTO 35467, H.

B. plantaginea DC., 1, Kuzgölcük, 998 m., 02.05.2010, K 40° 32' 08" D 031° 31' 34", T 1201, ISTO 35468, H.

Aubrieta canescens (Boiss.) Bornm. subsp. *canescens*, 1, Korucuk Alm, 1396 m., 03.05.2011, K 40° 28' 43" D 031° 35' 04", T 2332, ISTO 35469, H.

Matthiola longipetala (Vent.) DC. subsp. *bicornis* (Sibth. & Smith) P. W. Ball, 1, Kabak Village, 1394 m., 04.06.2011, K 40° 29' 17" D 031° 30' 36", T 2445, ISTO 35470, Th.

Erysimum cuspidatum (Bieb.) DC., 1, Nimetli Alm, 1439 m., 02.05.2010, K 40° 31' 23" D 031° 39' 42", T 1207, ISTO 35471, H.

Alliaria petiolata (Bieb.) Cavara & Grande, 1, Dereceören, 1326 m., 03.05.2011, K 40° 33' 26" D 031° 37' 36", T 2335, ISTO 35472, H.

Sisymbrium loeselii L., 1, Kuzgölcük, 1301 m., 10.10.2010, K 40° 33' 44" D 031° 37' 39", T 2206, ISTO 35473, Th.

Descurainia sophia (L.) Webb ex Prantl, 1, Kabak Village, 888 m., 31.03.2011, K 40° 28' 44" D 031° 27' 43", T 2303, ISTO 35474, Th.

Camelina rumelica Vel., 1, Kızık Village, 1528 m., 04.06.2011, K 40° 30' 20" D 031° 32' 32", T 2412, ISTO 35475, Th.

RESEDACEAE

Reseda lutea L. var. *lutea*, 1, Kuzgölcük, 1360 m., 04.06.2011, K 40° 32' 14" D 031° 34' 29", T 2436, ISTO 35476, H.

SANTALACEAE

Viscum album L. subsp. *album*, 1, Kuzgölcük, 989 m., 26.02.2011, K 40° 32' 07" D 031° 31' 53", T 2248, Ph.

Chenopodium botrys L., 1, Taşlıyayla forest storehouse, 1432 m., 05.07.2010, K 40° 31' 27" D 031° 37' 43", T 1663, ISTO 35517, Th.

C. foliosum (Moench) Aschers., 1, Nimetli Alm, 1437 m., 10.10.2010, K 40° 31' 32" D 031° 39' 13", T 2222, ISTO 35518, H.

CARYOPHYLLACEAE

Minuartia anatolica (Boiss.) Woron var. *anatolica*, 1, Dedeler Alm, 1489 m.,

05.07.2010, K 40° 30' 47" D 031° 37' 57", T 1656, ISTO 35489, E. H.

Stellaria media (L.) Vill. subsp. *media*, 1, Kızık Village, 1505 m., 03.05.2011, K 40° 31' 29" D 031° 35' 59", T 2379, ISTO 35490, Th.

S. holostea L., 1, Kızık Village road, 1549 m., 07.03.2010, K 40° 31' 22" D 031° 35' 52", T 1021, ISTO 35491, Eu-Sib.el, H.

Cerastium fragillimum Boiss., 1, Dereceören, 1234 m., 17.04.2010, K 40° 33' 10" D 031° 37' 18", T 1117, ISTO 35492, Th.

Moenchia mantica (L.) Bartl subsp. *mantica*, 1, Demirciler Alm, 1421 m., 03.05.2011, K 40° 31' 22" D 031° 37' 21", T 2378, ISTO 35493, Th.

Dianthus micranthus Boiss.& Heldr., 1, Nimetli Alm, 1451 m., 10.10.2010, K 40° 31'39" D 031° 39'09", T 2101, ISTO 35494, H.

D. ancycensis Hausskn. & Bornm., 1, Demirciler Alm, 1440 m., 14.07.2010, K 40°31'11"D 031°37'15", T 1590, ISTO 35495, Ir-Tur. el., H.

D. crinitus Sm. var. *crinitus*, 1, Kozyaka-Kabak Village, 1377 m., 10.10.2010, K 40° 29' 25" D 031° 30' 58", T 2133, ISTO 35496, H.

D. corymbosus Sibth. & Sm., 1, Kuzgölcük, 1331 m., 10.10.2010, K 40° 31' 32" D 031° 33' 50", T 2145, ISTO 35497, H.

D. calocephalus Boiss., 1, Dereceören, 1320 m., 25.09.2010, K 40° 34' 23" D 031° 35' 56", T 2070, ISTO 35498, H.

Petrorhagia alpina (Halb.) Ball & Heywood subsp. *alpina*, 1, Dedeler Alm, 1420 m., 14.07.2010, K 40° 30' 59" D 031° 38' 20", T 1571, ISTO 35499, Th.

Saponaria glutinosa Bieb., 1, Kabak Village, 934 m., 10.07.2011, K 40° 30' 25" D 031° 29' 08", T 2725, ISTO 35500, H.

S. prostrata Willd. subsp. *prostrata*, 1, Dereceören, 1445 m., 12.09.2010, K 40° 33' 57" D 031° 39' 32", T 1903, ISTO 35501, Ir-Tur. el., Th.

Gypsophila brachypetala Trautv.,1, Dereceören, 1222 m., 10.10.2010, K 40° 33' 12" D 031° 37' 22", T 2149, ISTO 35502, Th.

Silene italica (L.) Pers., 1, Taşlıyayla Pond, 1480 m., 25.09.2010, K 40° 30' 47" D 031° 37' 38", T 2065, ISTO 35503, H.

S. laxa Boiss. & Kotschy., 1, Kozyaka Alm, 1222 m., 14.08.2010, K 40° 28' 32" D

031° 35' 46", T 1575, ISTO 35504, Ir-Tur. el., H.

S. chlorifolia Sm., 1, Kabak Village, 1070 m., 01.09.2011, K 40° 29' 16" D 031° 28' 11", T 2741, ISTO 35505, Ir-Tur. el., H.

S. vulgaris (Moench) Garcke var. *vulgaris*, 1, Keskinli Alm, 1440 m., 12.09.2010, K 40° 30' 26" D 031° 33' 26", T 1975, ISTO 35506, H.

S. compacta Fischer, 1, Kayakapı Hill, 1660 m., 18.06.2011, K 40° 30' 32" D 031° 34' 13", T 2602, ISTO 35507, H.

S. dichotoma Ehrh. subsp. *dichotoma*, 1, Kayakapı Hill, 1548 m., 12.09.2010, K 40° 29' 12" D 031° 32' 29", T 1940, ISTO 35508, Th.

S. dichotoma Ehrh. subsp. *sibthorpiana* (Reichb.) Rech., 1, Kızık, 1439 m., 04.06.2011, K 40° 30' 22" D 031° 31' 41", T 2430, ISTO 35509, Th.

S. conica L., 1, Korucuk Alm, 1255 m., 18.06.2011, K 40° 28' 24" D 031° 35' 51", T 2604, ISTO 35510, Th.

S. subconica Friv., 1, Kozyaka Alm, 1595 m., 18.06.2011, K 40° 29' 18" D 031° 33' 47", T 2599, ISTO 35511, Th.

Agrostemma githago L., 1, Kozyaka-Kabak turnout, 1379 m., 19.06.2011, K 40° 29' 08" D 031° 30' 38", T 2697, ISTO 35512, Th.

Paronychia beauverdi Czecz., 1, Kızık Village, 1450 m., 19.06.2011, K 40° 29' 38" D 031° 31' 27", T 2641, ISTO 35513, Ir-Tur. el, H.

Scleranthus annus L. subsp. *annus*, 1, Kuzgölcük, 1525 m., 18.06.2011, K 40° 31' 22" D 031° 32' 03", T 2522, ISTO 35514, H.

PLUMBAGINACEAE

Acantholimon acerosum (Willd.) Boiss var. *acerosum*, 1, Dedeler Alm, 1460 m., 12.09.2010, K 40° 30' 57" D 031° 37' 50", T 1965, ISTO 35897, Ir-Tur. el., Ch.

POLYGONACEAE

Rumex acetosella L., 1, Kabak Village, 1119 m., 16.05.2010, K 40° 29' 32" D 031° 27' 49", T 1328, ISTO 35515, H.

R. crispus L., 1, Kızık road, 1457 m., 16.05.2010, K 40° 31' 22" D 031° 33' 43", T 1326, ISTO 35516, H.

TAMARICACEAE

Tamarix parviflora DC., 1, Korucuk Alm, 1190 m., 18.06.2011, K 40° 28' 15" D 031° 35' 47", T 2520, ISTO 35519, Ph.

CORNACEAE

Cornus sanguinea L. subsp. *australis* (C.A. Meyer) Jav., 1, Kabak Village, 933 m., 18.06.2011, K 40° 30' 48" D 031° 29' 51", T 2511, Ph.

C. mas L., 1, Kızık Village, 1532 m., 18.06.2011, K 40° 30' 33" D 031° 33' 01", T 2705, Eu-Sib.el., Ph.

ERICACEAE

Orthilia secunda (L.) House, 1, Kuzgölcük, 1338 m., 25.09.2010, K 40° 31' 37" D 031° 33' 20", T 2075, ISTO 35947, Th.

Monotropa hypopithys L., 1, Kızık Village, 1563 m., 06.06.2010, K 40° 30' 52" D 031° 32' 50", T 1399, ISTO 35946, Th.

PRIMULACEAE

Primula vulgaris Huds. subsp. *vulgaris*, 1, Dedeler Alm, 1555 m., 07.03.2010, K 40° 30' 56" D 031° 39' 01", T 1007, ISTO 35955, Eu-Sib.el., H.

Androsace maxima L., 1, Kabak Village, 925 m., 03.05.2011, K 40° 28' 51" D 031° 27' 36", T 2392, ISTO 35957, Th.

Anagallis arvensis L. var. *arvensis*, 1, Taşlıyayla forest storehouse, 1436 m., 20.10.2010, K 40° 31' 51" D 031° 37' 43", T 2117, ISTO 35953, Th.

Lysimachia vulgaris L., 1, Dereceören, 1297 m., 25.09.2010, K 40° 33' 36" D 031° 37' 25", T 2024, ISTO 35955, H.

L. verticillaris Sprengel, 1, Kuzgölcük, ISTO 35954, Eu-Sib.el., H.

L. atropurpurea L., 1, Seben road, 1301 m., 17.07.2010, K 40° 28' 47" D 031° 35' 27", T 1650, ISTO 35952, Med. el., H.

CONVOLVULACEAE

Convolvulus arvensis L., 1, Kızık Village road, 1515 m., 15.07.2010, K 40° 31' 26" D 031° 35' 07", T 1652, ISTO 35949, H.

C. galaticus Rostan ex Choisy, 1, Korucuk Alm, 1314 m., 19.06.2011, K 40° 28' 48" D 031° 35' 34", T 2653, ISTO 35948, E, Ir-Tur. el., H.

SOLANACEAE

Solanum dulcamara L., 1, Kabak Village, 939 m., 10.10.2010, K 40° 30' 16" D 031° 28' 59", T 2223, ISTO 35910, Eu-Sib.el., Ph.

APOCYNACEAE

Vinca herbaceae Waldst. & Kit., 1, Kabak Village, 1167 m., 03.05.2011, K 40° 29' 59" D 031° 39' 42", T 2369, ISTO 35772, Ch.

Vincetoxicum canescens (Willd.) Decne subsp. *canescens*, 1, Demirciler Alm, 1442

m., 15.07.2010, K 40° 31' 31" D 031° 36' 58", T 1662, ISTO 35777, H.

V. fuscatum (Hornem.) Reichb. subsp. *boissieri* (Kusn.) Browicz, 1, Kuzgölcük, 1161 m., 15.07.2010, K 40° 32' 19" D 031° 33' 16", T 1543, ISTO 35778, Ir-Tur. el., H.

GENTIANACEAE

Centaurium erythraea Rafn. subsp. *erythraea*, 1, Kabak Village, Eldoğan brook, 929 m., 10.10.2010, K 40° 30' 20" D 031° 29' 00", T 2141, ISTO 35924, Eu-Sib.el., H.

RUBIACEAE

Asperula involucrata Wahlenb., 1, Çavuşlar Alm, 1499 m., 02.05.2010, K 40° 30' 48" D 031° 36' 56", T 1250, ISTO 35672, Eu-Sib.el., H.

A. arvensis L., 1, Kabak Village, 899 m., 03.05.2011, K 40° 28' 41" D 031° 27' 30", T 2391, ISTO 35668, Med. el., Th.

Galium rotundifolium L., 1, Kızık Pond, 1543 m., 10.10.2010, K 40° 30' 39" D 031° 33' 22", T 2125, ISTO 35670, Eu-Sib.el. H.

G. odoratum (L.) Scop., 1, Kızık Village road, 1582 m., 19.06.2011, K 40° 30' 58" D 031° 33' 52", T 2665, ISTO 35667, Eu-Sib.el., H.

G. verum L. subsp. *verum*, 1, Dedeler Alm, 1474 m., 14.07.2010, K 40° 30' 53" D 031° 39' 28", T 1611, ISTO 35669, Eu-Sib.el., H.

G. aparine L., 1, Kayakayı Hill, 1616 m., 12.09.2010, K 40° 30' 09" D 031° 33' 45", T 1962, ISTO 35671, Th.

Cruciata taurica (Pallas ex Willd.) Ehrend., 1, Kızık Village, 1616 m., 07.03.2010, K 40° 30' 08" D 031° 32' 14", T 1016, ISTO 35673, Ir-Tur. el., H.

ACANTHACEAE

Acanthus dioscoridis L. var. *dioscoridis*, 1, Kızık Village, 1542 m., 01.09.2011, K 40° 30' 48" D 031° 32' 56", T 2736, ISTO 35776.

A. hirsutus Boiss., 1, Kızık Village, 1448 m., 19.06.2011, K 40° 30' 05" D 031° 31' 50", T 2630, ISTO 35775, H.

LAMIACEAE

Ajuga orientalis L., 1, Kızık Village, 1572 m., 04.04.2010, K 40° 31' 06" D 031° 35' 36", T 1054, ISTO 35833, H.

A. reptans L., 1, Dedeler Alm, 1497 m., 04.04.2010, K 40° 30' 42" D 031° 38' 26", T 1103, Eu-Sib.el., H.

A. chamaepitys (L.) Schreber subsp. *chia* (Schreber) Arcangeli var. *chia*, 1, Kabak

Village, 1320 m., 03.05.2011, K 40° 33' 52" D 031° 39' 03", T 2356, ISTO 35837, H.

Teucrium chamaedrys L. subsp. *chamaedrys*, 1, Dereceören, 1304 m., 25.09.2010, K 40° 32' 49" D 031° 37' 14", T 1998, ISTO 35799, Eu-Sib.el., H, Ch.

T. polium L., 1, Kozyaka Alm, 1566 m., 07.08.2010, K 40° 29' 14" D 031° 33' 55", T 1723, ISTO 35807, Ch.

Scutellaria orientalis L. subsp. *pinnatifida* Edmondson, 1, Kızık Village, 1589 m., 04.06.2011, K 40° 31' 21" D 031° 34' 34", T 2446, ISTO 35814, Ch.

Phlomis pungens Willd. var. *pungens*, 1, Kabak Village, 956 m., 07.08.2010, K 40° 30' 03" D 031° 28' 21", T 1739, ISTO 35819, H.

P. armeniaca Willd., 1, Bozyer Alm, 1531 m., 16.05.2010, K 40° 30' 12" D 031° 39' 55", T 1345, ISTO 35825, H.

Lamium purpureum L. var. *purpureum*, 1, Taşlyayla location, 1436 m., 17.04.2010, K 40° 31' 51" D 031° 37' 43", T 1199, ISTO 35835, Eu-Sib.el., Th.

L. crinitum Montbret & Aucher ex Benth, 1, Bozyer Alm, 1477 m., 17.04.2010, K 40° 30' 43" D 031° 39' 23", T 1194, ISTO 35834, Eu-Sib.el., H.

Ballota larendana Boiss. & Heldr., 1, Korucuk Alm, 1231 m., 02.05.2010, K 40° 28' 35" D 031° 36' 01", T 1701, ISTO 35823, Ir-Tur. el., H.

Marrubium astracanicum Jacq. subsp. *astracanicum*, 1, Kızık Village road, 1609 m., 02.07.2010, K 40° 30' 57" D 031° 33' 45", T 1456, ISTO 35828, H.

Sideritis montana L. subsp. *montana*, 1, Kabak Village, 1266 m., 12.09.2010, K 40° 30' 10" D 031° 20' 21", T 1928, ISTO 35809, Med. el., Th.

S. montana L. subsp. *remota* (d'Urv.) P.W. Ball ex Heywood, 1, Kızık Village, 1666 m., 12.09.2010, K 40° 29' 36" D 031° 31' 41", T 1942, ISTO 35806, Med. el., Th.

Stachys germanica L. subsp. *bithynica* (Boiss.) Bhattacharjee, 1, Kızık Village road, 1596 m., 19.06.2011, K 40° 30' 56" D 031° 33' 54", T 2651, ISTO 35838, H.

S. thirkei C. Koch, 1, Dereceören, Asardere location, 1396 m., 10.10.2010, K 40° 33' 18" D 031° 37' 47", T 2162, ISTO 35810, H.

S. iberica Bieb. subsp. *iberica* var. *densipilosa* Bhattacharjee, 1, Korucuk Alm,

1445 m., 20.06.2010, K 40° 29' 59" D 031° 37' 46", T 1432, ISTO 35811, Ir-Tur. el., H.

Nepeta italica L., 1, Kuzgölcük, Fındıcak Fountain, 1094 m., 19.06.2011, K 40° 32' 24" D 031° 33' 57", T 2701, ISTO 35817, H.

N. nuda L. subsp. *nuda*, 1, Kızık Village, 1563 m., 20.06.2010, K 40° 30' 52" D 031° 32' 48", T 1418, ISTO 35826, H.

Prunella vulgaris L., 1, Kuzgölcük, 1020 m., 25.09.2010, K 40° 32' 18" D 031° 32' 18", T 2036, ISTO 35798, Eu-Sib.el., H.

P. laciniata (L.) L., 1, Kızık Village, 1530 m., 07.08.2010, K 40° 33' 52" D 031° 39' 03", T 1725, ISTO 35824, Eu-Sib.el., H.

Origanum vulgare L. subsp. *hirtum* (Link) Ietswaart, 1, Kabak Village, 908 m., 25.09.2010, K 40° 29' 18" D 031° 27' 47", T 2035, ISTO 35804, Med. el., H.

O. vulgare L. subsp. *vulgare*, 1, Dereceören, Su çatı location, 1304 m., 12.09.2010, K 40° 33' 46" D 031° 37' 15", T 1911, ISTO 35803, Eu-Sib.el., H.

Calamintha grandiflora (L.) Moench, 1, Kızık Village road, 1611 m., 12.09.2010, K 40° 31' 04" D 031° 33' 24", T 1924, ISTO 35813, Eu-Sib.el., H.

Clinopodium vulgare L. subsp. *vulgare*, 1, Çavuşlar Alm, 1476 m., 07.08.2010, K 40° 30' 46" D 031° 37' 23", T 1735, ISTO 35818, H.

Acinos rotundifolius Pers., 1, Nimetli Alm arkası, 1437 m., 12.09.2010, K 40° 32' 06" D 031° 39' 34", T 1920, ISTO 35802, Th.

Thymus sipyleus Boiss. subsp. *sipyleus* var. *sipyleus*, 1, Kızık Village, 1581 m., 07.08.2010, K 40° 30' 21" D 031° 33' 41", T 1732, ISTO 35822, Ch.

T. praecox Opiz. subsp. *skorpilii* (Velen.) Jalas var. *skorpilii*, 1, Bozyer Alm, 1545 m., 02.05.2010, K 40° 30' 45" D 031° 39' 36", T 1240, ISTO 35827, Ch.

T. longicaulis C. Presl subsp. *longicaulis* var. *longicaulis*, 1, Dedeler Alm, 1466 m., 20.06.2010, K 40° 30' 51" D 031° 38' 36", T 1440, ISTO 35830, Ch.

T. longicaulis C. Presl subsp. *longicaulis* var. *subisophyllus* (Borbas) Jalas, 1, Taşlyayla location, 1451 m., 02.07.2010, K 40° 32' 05" D 031° 37' 53", T 1502, ISTO 35829, Ch.

Mentha pulegium L., 1, Dereceören, 1280 m., 12.09.2010, K 40° 33' 39" D 031° 37' 26", T 1921, ISTO 35801, H.

M. spicata L. subsp. *spicata*, 1, Kabak Village, 945 m., 07.08.2010, K 40° 30' 36" D 031° 29' 33", T 1743, ISTO 35820, H.

Lycopus europaeus L., 1, Kuzgölcük, 1140 m., 25.09.2010, K 40° 31' 53" D 031° 31' 36", T 2001, ISTO 35800, Eu-Sib.el., H.

Ziziphora capitata L., 1, Kozyaka Alm, 1671 m., 19.06.2011, K 40° 29' 25" D 031° 33' 07", T 2654, ISTO 35821, Ir-Tur. el., Th.

Salvia tomentosa Miller, 1, Kabak Village, 927 m., 12.09.2010, K 40° 30' 24" D 031° 39' 10", T 1932, ISTO 35805, Med. el., H.

S. cadmica Boiss., 1, Kabak Village, 1014 m., 04.06.2011, K 40° 29' 19" D 031° 27' 49", T 2447, ISTO 35815, H.

S. cryptantha Montbret & Aucher ex Benth., 1, Kabak Village, 1478 m., 19.06.2011, K 40° 29' 01" D 031° 28' 41", T 2700, ISTO 35816, Ir-Tur. el., H.

S. viridis L., 1, Kabak Village, 896 m., 19.06.2011, K 40° 28' 32" D 031° 27' 46", T 2676, ISTO 35836, Med. el., Th.

S. sclarea L., 1, Kozyaka Alm, 1568 m., 07.08.2010, K 40° 29' 26" D 031° 34' 02", T 1748, ISTO 35831, H.

S. candidissima Vahl. subsp. *occidentalis* Hedge, 1, Kızık Village, 1493 m., 07.08.2010, K 40° 30' 00" D 031° 31' 48", T 1751, ISTO 35832, Ir-Tur. el., H.

S. virgata Jacq., 1, Kızık Village, 1335 m., 12.09.2010, K 40° 29' 52" D 031° 30' 11", T 1939, ISTO 35808, Ir-Tur. el., H.

S. verticillata L. subsp. *verticillata*, 1, Kabak Village, 1129 m., 12.09.2010, K 40° 30' 07" D 031° 29' 47", T 1929, ISTO 35812, Eu-Sib.el., H.

OLEACEAE

Jasminum fruticans L., 1, Kabak Village, 889 m., 04.06.2011, K 40° 28' 31" D 031° 27' 46", T 2401, ISTO 35951, Med. el., Ph.

Fraxinus angustifolia Vahl subsp. *angustifolia*, 1, Kabak Village, 945 m., 31.03.2011, K 40° 29' 39" D 031° 29' 07", T 2309, ISTO 35950, Ph.

OROBANCHACEAE

Orobanche arenaria Borkh., 1, Kozyaka Alm, Avdanboğazı location, 1584 m., 19.06.2011, K 40° 29' 32" D 031° 33' 48", T 2666, ISTO 35960, G.

O. crenata Forsskal, 1, Kabak Village, 948 m., 12.09.2010, K 40° 30' 40" D 031° 29' 37", T 1961, ISTO 35959, G.

O. alba Stephan, 1, Kızık Pond, Kayakapı Hill on the road, 1588 m., 25.09.2010, K 40° 30' 28" D 031° 33' 22", T 1981, ISTO 35961, G.

Melampyrum arvense L. var. *arvense*, 1, Kızık Village, 1512 m., 14.07.2010, K 40° 30' 37" D 031° 32' 57", T 1578, ISTO 35753, Eu-Sib.el., Th.

Euphrasia pectinata Ten., 1, Kabak Village, 951 m., 25.09.2010, K 40° 30' 20" D 031° 29' 11", T 2082, ISTO 35751, Eu-Sib.el., Th.

Pedicularis comosa L. var. *sibthorpii* (Boiss.) Boiss., 1, Kızık Village road, 1578 m., 18.06.2011, K 40° 30' 57" D 031° 33' 56", T 2505, ISTO 35767, H.

Rhinanthus angustifolius C. C. Gmelin subsp. *grandiflorus* (Wall.) D. A. Webb, 1, Taşlıyayla location, 1437 m., 16.05.2010, K 40° 31' 48" D 031° 37' 36", T 1300, ISTO 35754, H.

PLANTAGINACEAE

Plantago major L. subsp. *major*, 1, Dereceören, Su çatı location, 1319 m., 25.09.2010, K 40° 33' 43" D 031° 37' 16", T 2077, ISTO 35958, H.

Globularia trichosantha Fisch. & Mey., 1, Kızık Village, 1526 m., 04.06.2011, K 40° 30' 47" D 031° 33' 10", T 2421, ISTO 35770, H.

Linaria genistifolia (L.) Miller subsp. *genistifolia*, 1, Dereceören, 1270 m., 12.09.2010, K 40° 33' 03" D 031° 37' 13", T 1904, ISTO 35748, Eu-Sib.el., H.

L. corifolia Desf., 1, Kızık Village, 1388 m., 04.06.2011, K 40° 30' 27" D 031° 31' 42", T 2405, ISTO 35762, Ir-Tur. el., H.

Gratiola officinalis L., 1, Dereceören, 1331 m., 14.07.2010, K 40° 33' 57" D 031° 37' 07", T 1514, ISTO 35750, Eu-Sib.el., H.

Digitalis ferruginea L. subsp. *ferruginea*, 1, Kuzgölcük, 1270 m., 29.08.2010, K 40° 31' 59" D 031° 33' 57", T 1873, ISTO 35765, Eu-Sib.el., H.

D. lamarckii Ivan., 1, Kabak Village, 1072 m., 25.09.2010, K 40° 29' 46" D 031° 28' 19", T 2098, ISTO 35764, Ir-Tur. el., H.

Veronica gentionoides Vahl, 1, Kızık Village, 1532 m., 17.04.2010, K 40° 30' 56" D 031° 33' 05", T 1124, ISTO 35758, Eu-Sib.el., H.

V. hederifolia L., 1, Solaklar Alm, 1543 m., 03.05.2011, K 40° 31' 28" D 031° 40' 44", T 2385, ISTO 35755, Th.

V. lysimachioides Boiss., 1, Dereceören, 905 m., 29.08.2010, K 40° 33' 43" D 031° 37' 31", T 1870, ISTO 35759, H.

V. chamaedrys L., 1, Demirciler Alm, 1497 m., 17.04.2010, K 40° 31' 08" D 031° 36' 57", T 1119, ISTO 35761, Eu-Sib.el., H.

V. pectinata L. var. *pectinata*, 1, Kuzgölcük, rocky field, 1159 m., 17.04.2010, K 40° 32' 13" D 031° 33' 16", T 1142, ISTO 35757, H.

V. multifida L., 1, Demirciler Alm, Akçakilise location, 1440 m., 17.04.2010, K 40° 31' 32" D 031° 37' 20", T 1137, ISTO 35756, Ir-Tur. el., H.

V. officinalis L., 1, Kızık Village road, 1505 m., 10.10.2010, K 40° 32' 17" D 031° 36' 05", T 2213, ISTO 35760, Eu-Sib.el., H.

SCROPHULARIACEAE

Verbascum flavidum (Boiss.) Freyn & Bornm., 1, Seben road, 1475 m., 14.07.2010, K 40° 33' 05" D 031° 38' 44", T 1576, ISTO 35749, Eu-Sib.el., H.

V. blattaria L., 1, Kızık road, 1529 m., 19.06.2011, K 40° 30' 50" D 031° 33' 04", T 2663, ISTO 35763, H.

Scrophularia scopolii (Hoppe ex) Pers. var. *scopolii*, 1, Dereceören, 1303 m., 17.04.2010, K 40° 33' 49" D 031° 37' 17", T 1130, ISTO 35752, H.

S. xanthoglossa Boiss. var. *decipiens* (Boiss. & Kotschy) Boiss., 1, Kabak Village, 976 m., 04.06.2011, K 40° 30' 30" D 031° 29' 37", T 2455, ISTO 35766, Ir-Tur. el., H.

BORAGINACEAE

Myosotis ramossima Rochel ex Schultes subsp. *ramossima*, 1, Kabak Village, 1382 m., 16.05.2010, K 40° 33' 52" D 031° 39' 03", T 1330, ISTO 35783, H.

M. stricta Link ex Roemer & Schultes, 1, Demirciler Alm, 1500 m., 02.05.2010, K 40° 31' 05" D 031° 37' 04", T 1272, ISTO 35782, Eu-Sib.el., Th.

M. sylvatica Ehrh. ex Hoffm subsp. *cyanea* Vestergren, 1, Taşlıyayla location, 1443 m., 02.05.2010, K 40° 31' 40" D 031° 36' 53", T 1245, ISTO 35784, H.

M. sylvatica Ehrh. ex Hoffm. subsp. *rivularis* Vestergren, 1, Dereceören, Su Çatı location, 1299 m., 14.07.2010, K 40° 33' 39"

D 031° 37' 22", T 1545, ISTO 35796, Eu-Sib.el., H.

M. lithospermifolia (Willd.) Hornem, 1, Kızık Village, 1580 m., 04.04.2010, K 40° 30' 26" D 031° 33' 43", T 1083, ISTO 35780, Eu-Sib.el., H.

Lithospermum purpureocaeruleum L., 1, Kabak Village, 943 m., 04.06.2011, K 40° 30' 50" D 031° 29' 51", T 2452, ISTO 35792, Eu-Sib.el., H.

Buglossoides arvensis (L.) Johnston, 1, Solaklar Alm, 1532 m., 04.04.2010, K 40° 31' 30" D 031° 40' 40", T 1081, ISTO 35779, Th.

Echium orientale L., 1, Kızık Village, 1612 m., 19.06.2011, K 40° 30' 56" D 031° 33' 43", T 2695, ISTO 35786, Eu-Sib.el., H.

E. italicum L., 1, Kuzgölcük, 1296 m., 15.07.2010, K 40° 31' 56" D 031° 33' 56", T 1665, ISTO 35785, Med. el., H.

E. vulgare L., 1, Kabak Village-Kozyaka Alm, 1417 m., 06.06.2010, K 40° 29' 25" D 031° 30' 50", T 1396, ISTO 35781, Eu-Sib.el., H.

Moltkia coerulea (Willd.) Lehm., 1, Kızık road, 1539 m., 03.05.2011, K 40° 31' 20" D 031° 34' 51", T 2386, ISTO 35790, Ir-Tur. el., H.

Onosma tauricum Pallas ex Willd. subsp. *tauricum*, 1, Kızık Village, 1430 m., 04.06.2011, K 40° 29' 57" D 031° 31' 30", T 2465, ISTO 35793, H.

Cerintho minor L. subsp. *auriculata* (Ten.) Domac, 1, Kızık Village, 1508 m., 12.09.2010, K 40° 30' 40" D 031° 31' 03", T 1978, ISTO 35787, H.

Anchusa leptophylla Roemer & Schultes subsp. *incana* (Ledeb.) Chamb., 1, Korucuk Alm, 1476 m., 04.06.2011, K 40° 29' 19" D 031° 36' 27", T 2400, ISTO 35788, Ir-Tur. el., H.

A. azurea Miller var. *azurea*, 1, Demirciler Alm, 1440 m., 03.05.2011, K 40° 31' 20" D 031° 37' 13", T 2322, ISTO 35791, H.

Nonea pulla (L.) DC. subsp. *monticola* Rech. Fil., 1, Nimetli Alm, 1440 m., 17.04.2010, K 40° 31' 22" D 031° 38' 56", T 1167, ISTO 35795, H.

Alkanna orientalis (L.) Boiss. var. *orientalis*, 1, Kozyaka Alm, 1636 m., 31.03.2011, K 40° 29' 26" D 031° 31' 53", T 2307, ISTO 35789, Ir-Tur. el., H.

AQUIFOLIACEAE

Ilex colchica Poj., 1 Kabak Village, 890 m., 10.10.2010, K 40° 31' 07" D 031° 30' 12", T 2120, ISTO 35548, Eu-Sib.el., Ph.

ASTERACEAE

Inula oculus-christi L., 1, Kızık Village, 1413 m., 14.07.2010, K 40° 29' 08" D 031° 30' 52", T 1560, ISTO 35742, Eu-Sib.el., H.

Helichrysum graveolens (Bieb.) Sweet, 1, Kızık Village, Kayakapı Hill, 1601 m., 14.08.2010, K 40° 29' 49" D 031° 33' 47", T 1801, ISTO 35688, H.

H. plicatum DC. subsp. *plicatum*, 1, Korucuk Alm, 1306 m., 10.10.2010, K 40° 28' 29" D 031° 35' 43", T 2167, ISTO 35685, H.

H. arenarium (L.) Moench subsp. *aucheri* (Boiss.) P. H. Davis & Kupicha, 1, Demirciler Alm, 1602 m., 07.08.2010, K 40° 31' 01" D 031° 35' 20", T 1721, ISTO 35732, Eu-Sib.el., H.

Filago vulgaris Lam., 1, Dereceören, Kuyupınar Hill location, 1280 m., 10.10.2010, K 40° 33' 43" D 031° 37' 19", T 2166, ISTO 35686, Th.

Conyza canadensis (L.) Cronquist, 1, Kuzgölcük, 1037 m., 21.03.2010, K 40° 32' 11" D 031° 32' 10", T 2041, ISTO 35718, Th.

Bellis perennis L., 1, Demirciler Alm, 1447 m., 26.02.2011, K 40° 31' 28" D 031° 36' 57", T 2251, ISTO 35719, Eu-Sib.el., H.

Doronicum orientale Hoffm., 1, Demirciler Alm, 1446 m., 17.04.2010, K 40° 31' 41" D 031° 36' 52", T 1113, STO 35729, H.

Senecio integrifolius (L.) Clairv. subsp. *aucheri* (DC.) Matthews, 1, Kızık Village road, 1603 m., 19.06.2011, K 40° 30' 23" D 031° 33' 31", T 2629, ISTO 35747, Eu-Sib.el., H.

S. vernalis Waldst. & Kit., 1, Korucuk Alm, 1414 m., 17.04.2010, K 40° 29' 23" D 031° 36' 36", T 1178, ISTO 35713, Th.

Tussilago farfara L., 1, Kıbrısık Seben turnout, 1512 m., 31.03.2011, K 40° 33' 09" D 031° 39' 13", T 2287, ISTO 35706, Eu-Sib.el., H.

Cota tinctoria L. var. *tinctoria*, 1, Dedeler Alm, 1443 m., 05.07.2010, K 40° 30' 58" D 031° 38' 29", T 1677, ISTO 35738, H.

Cota tinctoria var. *discoidea* (All.) Özbek & Vural, 1, Kızık turnout, Taşlyayla

location, 1443 m., 05.07.2010, K 40° 31' 40" D 031° 36' 33", T 1678, H.

Achillea nobilis L. subsp. *neilreichii* (Kerner) Formanek., 1, Bozyer Alm, 1515 m., 07.08.2010, K 40° 30' 24" D 031° 39' 43", T 1767, ISTO 35698, Eu-Sib.el., H.

Tanacetum poteriifolium (Ledeb.) Grierson, 1, Dereceören, 1396 m., 07.08.2010, K 40° 33' 17" D 031° 37' 51", T 1757, ISTO 35691, Eu-Sib.el., H.

T. parthenium (L.) Schultz Bip., 1, Dereceören, 1310 m., 07.08.2010, K 40° 34' 03" D 031° 36' 59", T 1755, ISTO 35690, H.

T. armenum (DC.) Schultz Bip., 1, Demirciler Alm, 1506 m., 04.04.2010, K 40° 31' 12" D 031° 36' 55", T 1070, ISTO 35730, H.

Tripleurospermum tenuifolium (Kit.) Freyn, 1, Kızık Village, 1565 m., 02.07.2010, K 40° 30' 53" D 031° 32' 49", T 1478, ISTO 35743, Eu-Sib.el., H.

Cirsium hypoleucum DC., 1, Kızık Village turnout, 1593 m., 07.08.2010, K 40° 31' 07" D 031° 34' 27", T 1703, ISTO 35744, Eu-Sib.el., H.

C. arvense (L.) Scop. subsp. *vestitum* (Wimmer & Grab.) Petrak, 1, Kabak Village, 1538 m., 10.10.2010, K 40° 28' 56" D 031° 38' 58", T 2197, ISTO 35716, H.

Carduus nutans L. subsp. *nutans*, 1, Taşlyayla location, 1436 m., 14.07.2010, K 40° 31' 58" D 031° 38' 20", T 1566, ISTO 35741, H.

Jurinea consanguinea DC., 1, Kızık Village, 1620 m., 14.08.2010, K 40° 30' 06" D 031° 31' 52", T 1877, ISTO 35702, H.

Acroptilon repens (L.) DC., 1, Kabak Village, 985 m., 25.09.2010, K 40° 30' 27" D 031° 29' 22", T 2039, ISTO 35700, Ir-Tur. el., H.

Centaurea amasiensis Bornm., 1, Kızık Village, 1435 m., 12.09.2010, K 40° 30' 35" D 031° 32' 43", T 1901, ISTO 35697, H.

C. olympica C. Koch, 1, Dereceören, Su Çatı location, 1303 m., 29.08.2010, K 40° 33' 48" D 031° 37' 16", T 1880, H.

C. consanguinea DC., 1, Kızık Village, 1466 m., 07.08.2010, K 40° 29' 50" D 031° 31' 36", T 1717, ISTO 35735, Ir-Tur. el., H.

C. inexpectata Wagenitz, 1, Kuzgölcük, 1316 m., 29.08.2010, K 40° 31' 39" D 031° 33' 04", T 1879, ISTO 35699, Eu-Sib.el., H.

- C. thracica* (Janka) Hayek, 1, Kızık Village, 1539 m., 29.08.2010, K 40° 30' 39" D 031° 32' 45", T 1878, ISTO 35687, H.
- C. solstitialis* L. subsp. *solstitialis*, 1, Kabak Village, 954 m., 07.08.2010, K 40° 29' 49" D 031° 28' 08", T 1721, ISTO 35734, Th.
- C. urvillei* DC. subsp. *stepposa* Wagenitz, 1, Kabak Village, 904 m., 07.08.2010, K 40° 28' 46" D 031° 27' 36", T 1754, ISTO 35745, Ir-Tur. el., H.
- C. pichleri* Boiss. subsp. *pichleri*, 1, Dedeler Alm, 1441 m., 17.04.2010, K 40° 30' 59" D 031° 38' 19", T 1186, ISTO 35714, Th.
- C. triumfettii* All., 1, Demirciler Alm, 1447 m., 07.08.2010, K 40° 31' 42" D 031° 36' 52", T 1752, ISTO 35689, H.
- Crupina crupinastrum* (Moris) Vis., 1, Kabak Village, 1060 m., 19.06.2010, K 40° 30' 08" D 031° 29' 20", T 2637, ISTO 35696, Th.
- Cnicus benedictus* L. var. *benedictus*, 1, Kabak Village, 904 m., 18.06.2011, K 40° 29' 09" D 031° 27' 43", T 2478, ISTO 35720, Th.
- Carlina corymbosa* L., 1, Dereceören, 1315 m., 10.10.2010, K 40° 33' 58" D 031° 37' 18", T 2105, ISTO 35704, Med. el., H.
- C. vulgaris* L., 1, Dereceören, Gökçepınar Kayası, 1256 m., 10.10.2010, K 40° 33' 05" D 031° 37' 14", T 2106, ISTO 35705, H.
- Xeranthemum annuum* L., 1, Kabak Village, 998 m., 07.08.2010, K 40° 28' 30" D 031° 27' 58", T 1765, ISTO 35692, Th.
- Echinops microcephalus* Sm., 1, Kabak Village, 894 m., 10.10.2010, K 40° 28' 45" D 031° 27' 40", T 2107, ISTO 35703, Med. el., H.
- E.sphaerocephalus* L. subsp. *sphaerocephalus*, 1, Korucuk Alm, 1302 m., 10.10.2010, K 40° 28' 40" D 031° 35' 20", T 2113, ISTO 35717, Eu-Sib.el., H.
- Scolymus hispanicus* L., 1, Dereceören, Su Çatı location, 1300 m., 25.09.2010, K 40° 33' 47" D 031° 37' 21", T 2021, Med. el., H.
- Cichorium inthybus* L., 1, Kuzgölcük, 215 m., 25.09.2010, K 40° 32' 08" D 031° 39' 03", T 2019, H.
- Scorzonera mollis* Bieb. subsp. *szowitzii* (DC.) Chamberlain, 1, Kabak Village, 1251 m., 04.06.2011, K 40° 29' 38" D 031° 29' 23", T 2425, ISTO 35715, Ir-Tur. el, H.
- Tragopogon longirostris* Bisch. ex Schultz Bip. var. *longirostris*, 1, Kıbrısçık-Seben turnout, 1496 m., 04.06.2011, K 40° 33' 15" D 031° 39' 03", T 2423, ISTO 35733, H.
- T. coloratus* C.A. Meyer, 1, Kabak Village, 995 m., 20.06.2010, K 40° 30' 27" D 031° 29' 35", T 2612, Ir-Tur. el., H.
- T. aureus* Boiss., 1, Kızık Village, 1513 m., 14.07.2010, K 40° 30' 34" D 031° 32' 56", T 2023, ISTO 35746, H.
- Leontodon asperrimus* (Willd.) J. Ball, 1, Kozyaka Alm, 1612 m., 05.07.2010, K 40° 29' 29" D 031° 33' 30", T 1692, ISTO 35737, Ir-Tur. el., H.
- L. crispus* Vill. subsp. *asper* (Waldst. & Kit.) Rohl. var. *asper*, 1, Kuzgölcük, 1345 m., 05.07.2010, K 40° 31' 36" D 031° 33' 01", T 1696, ISTO 35736, H.
- Hieracium medianiforme* (Litw. & Zahn) Juxip, 1, Taşlıyayla location, 1441 m., 06.06.2010, K 40° 31' 51" D 031° 37' 16", T 1370, ISTO 35739, H.
- H. pannosum* Boiss., 1, Kabak Village, 1094 m., 29.08.2010, K 40° 30' 14" D 031° 29' 50", T 1869, ISTO 35701, Med. el., H.
- Pilosella hoppeana* (Schultes) C. H. & F. W. Schultz subsp. *testimonialis* (Naegli ex Peter) Sell & West, 1, Nimetli Alm, 1448 m., 25.09.2010, K 40° 31' 21" D 031° 39' 03", T 2016, ISTO 35694, Eu-Sib.el., H.
- P. piloselloides* (Vill.) Sojak subsp. *piloselloides*, 1, Dereceören turnout, 1417 m., 07.08.2010, K 40° 33' 33" D 031° 38' 10", T 1766, ISTO 35693, H.
- Lactuca saligna* L., 1, Demirciler Alm, 1438 m., 25.09.2010, K 40° 31' 33" D 031° 37' 08", T 2020, ISTO 35695, H.
- Lapsana communis* subsp. *alpina* (Boiss. & Bal.) Sell, 1, Kızık Village turnout, 1480 m., 06.06.2010, K 40° 31' 50" D 031° 35' 54", T 1376, ISTO 35731, Eu-Sib.el., H.
- L. communis* subsp. *intermedia* (Bieb.) Hayek, 1, Dereceören, 1361 m., 06.06.2010, K 40° 33' 35" D 031° 37' 27", T 1372, ISTO 35740, H.
- Taraxacum macrolepium* Schischkin, 1, Kuzgölcük, 1316 m., 07.03.2010, K 40° 31' 48" D 031° 32' 43", T 1026, ISTO 35728, H.
- Chondrilla juncea* L. var. *juncea*, 1, Taşlıyayla location, 1439 m., 10.10.2010, K 40° 31' 50" D 031° 37' 49", T 2171, ISTO 35684, H.

CAMPANULACEAE

Campanula lyrata Lam. subsp. *lyrata*, 1, Dereceören, 1299 m., 10.10.2010, K 40° 33' 12" D 031° 37' 32", T 2129, ISTO 35943, H.

C. rapunculoides L. subsp. *rapunculoides*, 1, Kızık Village, 1084 m., 14.08.2010, K 40° 30' 12" D 031° 29' 38", T 1802, ISTO 35938, Eu-Sib.el., H.

C. rapunculoides L. subsp. *cardifolia* (C. Koch) Damboldt, 1, Dereceören, Asardere location, 1266 m., 25.09.2010, K 40° 33' 23" D 031° 37' 26", T 2086, ISTO 35941, H.

C. glomerata L. subsp. *hispida* (Witasek) Hayek, 1, Kızık Village turnout, 1590 m., 10.10.2010, K 40° 30' 58" D 031° 33' 51", T 2136, ISTO 35942, Eu-Sib.el., H.

C. cymbalaria Sm., 1, Taşlıyayla location, 1447 m., 14.07.2010, K 40° 32' 03" D 031° 37' 54", T 1513, ISTO 35940, Med. el., H.

C. persicifolia L., 1, Kuzgölcük, Erenler Hill location, 1350 m., 14.07.2010, K 40° 31' 34" D 031° 33' 19", T 1581, ISTO 35939, Eu-Sib. el., H.

Asyneuma amplexicaule (Willd.) Hand.-Mazz. subsp. *amplexicaule* var. *amplexicaule*, 1, Kızık Village, 1545 m., 14.07.2010, K 40° 31' 20" D 031° 34' 50", T 1604, ISTO 35931, H.

A. limonifolium (L.) Janchen subsp. *limonifolium*, 1, Kızık Village, 1487 m., 14.07.2010, K 40° 29' 50" D 031° 31' 39", T 1586, ISTO 35933, H.

A. limonifolium (L.) Janchen subsp. *pestalozzae* (Boiss.), 1, Kızık Pond, 1554 m., 14.07.2010, K 40° 30' 45" D 031° 32' 52", T 1553, ISTO 35937, H.

A. rigidum (Willd.) Grossh. subsp. *rigidum*, 1, Korucuk Alm, 1454 m., 02.07.2010, K 40° 29' 38" D 031° 35' 56", T 2089, ISTO 35934, Ir-Tur. el., H.

A. rigidum (Willd.) Grossh. subsp. *sibthorpiatum*, 1, Kızık Village, 1619 m., 14.07.2010, K 40° 30' 07" D 031° 33' 57", T 1602, ISTO 35932, Med. el., H.

Legousia speculum-veneris (L.) Chaix, 1, Kozyaka Alm, 1572 m., 15.07.2010, K 40° 29' 37" D 031° 34' 02", T 1683, ISTO 35935, Med. el., Th.

L. pentagonia (L.) Thellung, 1, Korucuk Alm, 1483 m., 20.06.2010, K 40° 29' 11" D 031° 35' 39", T 1405, ISTO 35936, Med. el., Th.

APIACEAE

Astrantia maxima Pallas subsp. *haradjianii* (Grintz) Rech., 1, Dereceören, 1259 m., 12.09.2010, K 40° 33' 19" D 031° 37' 26", T 1968, ISTO 35657, H.

Eryngium giganteum Bieb., 1, Kızık Village, 1459 m., 01.09.2011, K 40° 30' 45" D 031° 32' 34", T 2745, Eu-Sib.el., H.

E. bithynicum Boiss., 1, Kabak Village, Toprak Hill location, 949 m., 01.09.2011, K 40° 30' 20" D 031° 29' 09", T 2746, H.

Scandix iberica Bieb., 1, Kızık Village, 1359 m., 18.06.2011, K 40° 29' 17" D 031° 30' 37", T 2555, ISTO 35659, H.

Bunium microcarpum (Boiss) Freyn. subsp. *bourgaei* (Boiss.) Hedge & Lamond, 1, Kabak Village, 1445 m., 02.05.2010, K 40° 29' 12" D 031° 30' 53", T 1261, ISTO 35656, Ir-Tur. el., G.

Bupleurum rotundifolium L., 1, Kızık Village, 995 m., 01.09.2011, K 40° 30' 27" D 031° 29' 35", T 2730, ISTO 35658, Th.

B. falcatum L. subsp. *cernuum* (Ten.) Arc., 1, Kızık Village, 1280 m., 14.07.2010, K 40° 30' 11" D 031° 30' 10", T 1573, ISTO 35652, Th.

Malabaila secacul Banks & Sol., 1, Kızık Village, 1595 m., 01.09.2011, K 40° 30' 21" D 031° 33' 45", T 2747, H.

Heracleum platytaenium Boiss., 1, Kabak Village, 955 m., 20.06.2010, K 40° 29' 37" D 031° 27' 08", T 2542, ISTO 35660, Eu-Sib.el., H.

Caucalis platycarpus L., 1, Yukarı Kabak District, 1200 m., 19.06.2011, K 40° 29' 46" D 031° 29' 24", T 2715, ISTO 35654, Th.

Turgenia latifolia (L.) Hoffm., 1, Kabak Village, Sivrice Kaya Hill location, 954 m., 19.06.2011, K 40° 29' 42" D 031° 29' 23", T 2671, ISTO 35653, Th.

Artemisia squamata L., 1, Dereceören, Gökçepinar Kayası location, 1447 m., 05.07.2010, K 40° 32' 40" D 031° 37' 20", T 1648, ISTO 35655, Th.

ARALIACEAE

Hedera helix L., 1, Kabak Village, 910 m., 10.10.2010, K 40° 28' 47" D 031° 27' 30", T 2217, ISTO 35661, Ph.

CAPRIFOLIACEAE

Sambucus ebulus L., 1, Taşlıyayla location, 1443 m., 25.09.2010, K 40° 31' 36" D 031° 36' 39", T 2051, ISTO 35666, Eu-Sib.el., H.

S. nigra L., 1, Kızık Village on the road, 1603 m., 16.05.2010, K 40° 31' 01" D 031° 33' 42", T 1309, ISTO 35662, Eu-Sib.el., Ph.

Viburnum lantana L., 1, Kızık Village, 1567 m., 18.06.2011, K 40° 30' 31" D 031° 33' 23", T 2494, ISTO 35663, Eu-Sib.el., Ph.

Lonicera caucasica Pallas subsp. *orientalis* (Lam.) Chamb. & Long., 1, Kuzgölcük Village, 1111 m., 10.10.2010, K 40° 30' 10" D 031° 29' 51", T 2126, ISTO 35664, Ph.

L. etrusca Santi var. *etrusca*, 1, Kabak Village, 951 m., 04.06.2011, K 40° 30' 46" D 031° 29' 50", T 2396, ISTO 35665, Med. el., Ph.

DIPSACACEAE

Cephalaria gigantea (Ledeb.) Bobrov, 1, Kızık Village, 1554 m., 14.08.2010, K 40° 30' 30" D 031° 33' 14", T 1810, ISTO 35679, Eu-Sib.el., H.

Knautia degenii Barbas ex Formanek, 1, Kabak Village, 913 m., 14.07.2010, K 40° 30' 10" D 031° 28' 24", T 1591, ISTO 35682, Med. el., Th.

K. involucrata Som. & Lev., 1, Kızık Village, 1554 m., 14.07.2010, K 40° 30' 30" D 031° 33' 14", T 1592, ISTO 35680, Eu-Sib.el., H.

Scabiosa columbaria L. subsp. *ochroleuca* (L.) Celak. var. *ochroleuca* (L.) Coluter, 1, Kızık Village, 1510 m., 01.09.2011, K 40° 30' 35" D 031° 32' 57", T 2748, ISTO 35683, H.

S. argentea L., 1, Korucuk Alm location, 1360 m., 14.07.2010, K 40° 29' 00" D 031° 35' 29", T 1599, ISTO 35681, H.

S. micrantha Desf., 1, Kızık, Gölcük District location, 1353 m., 12.09.2010, K 40° 30' 18" D 031° 31' 26", T 1900, ISTO 35678, Th.

MORINACEAE

Morina persica L. var. *persica*, 1, Kozyaka Alm, 1393 m., 19.06.2011, K 40° 29' 15" D 031° 30' 37", T 2709, ISTO 35677, Ir-Tur. el., H.

VALERIANACEAE

Valeriana alliarifolia Adams, 1, Keskinli Alm, 1555 m., 05.07.2010, K 40° 30' 02" D 031° 36' 59", T 1679, ISTO 35676, H.

V. dioscoridis Sm., 1, Kabak Village, 938 m., 03.05.2011, K 40° 29' 40" D 031° 27' 38", T 2350, ISTO 35674, Med. el., H.

Centranthus longiflorus Stev. subsp. *longiflorus*, 1, Kozyaka Alm, 1486 m., 18.06.2011, K 40° 28' 43" D 031° 33' 14", T 2608, ISTO 35675, Ir-Tur. el., H.

Discussion and conclusion

With this study, 1750 plant specimens were identified as 575 taxa belonging to 298 genera and 80 families have been determined. 5 of these taxa are Pteridophyta and 570 of it are Spermatophyta. 8 of these 570 Spermatophyta are Gymnospermae, and 562 of it are Angiospermae.

The distribution of identified taxa within the phytogeographical regions is showed in the Table 2. It is determined that there is Euro-Siberian elements mostly (Table 2).

Table 2: The distribution of taxa in the research area within the phytogeographical regions

Phytogeographical region	Taxa Number	Proportional distribution (%)
Euro-Siberian	129	22,5
Irano-Turanian	57	9,94
Mediterranean	52	9,07
Widely distributed plants and unknowns	337	58,46
Total	575	100

The first 5 families which include the most plant genera and the proportions of the number of taxa in these families to the total number of flora are given in the Table 3. In the research area, the family of Compositae includes the highest number of genera with 34 specimens. Its ratio is 11.5 (Table 3 and Table 4).

In the research area, the families which include the most taxa are: Leguminosae 61 taxa (%10,64) and Compositae 56 taxa (%9,77). In the flora of Turkey, Compositae family is in the first place and Leguminosae family is in the second (Table 4).

Table 3. The 5 families which include the most plant genera and the proportions of them

Family	The number of genera	The proportion of these genera in the total number of genera%
Asteraceae	34	11,5
Labiatae	21	7,11
Poaceae	21	7,11
Brassicaceae	20	6,77
Fabaceae	19	6,44
Others	183	61,43

Table 4: The 5 families which include the most taxa in the research area

Familya	Takson Sayısı	Toplam Tür Sayısına Oran %
Fabaceae	61	10,64
Asteraceae	56	9,77
Labiatae	42	7,32
Poaceae	32	5,58
Brassicaceae	31	5,41
Diğerleri	353	61,39

Table 5: The distribution of life forms of the plants according to Raunkier plant life-form

Life form	Taxa number	Proportional distribution %
Phanerophyte	70	12,21
Chamaephyte	34	5,93
Hemicryptophyte	288	50,26
Cryptophyte	69	11,69
Geophyte	65	10,99
Hydrophyte	(65 + 4)	+ 0,69)
Therophyte	114	19,89
Total	575	100

Life forms of plants revealed that hemicryptophyte plants are in the first place with 288 taxa while therophyte plants are the second with 114 taxa. The density of the phanerophyte plants with 70 taxa and geophyte plants with 65 taxa also shows that the research area has a rich floristic structure with phanerophyte and geophyte plants (Table 5).

The comparison of the research area with the phytogeographical regions of other flora studies is given in the Table 6. The proportion of Euro-Siberian taxa in the

identified total taxa is %22,5. In this sense, the most similar studies to this study are the Flora of Abant (% 29,3) and the Flora of Gölcük (Bolu) (% 31,8). Both of these studies take place in the Sub-Euxine belts of Euro-Siberian floristic area. Therefore, when it is compared to this study Euro-Siberian taxa is higher in these two studies.

The research area can be evaluated as a bridge between the Euro-Siberian and Irano-Turanian floristic regions. So, the rates of Euro-Siberian taxa are relatively lower when compared to these two studies. When the other three studies Flora of Karakiriş Mountain are (% 13,4) Flora of Doğan Dede Hill and Its Environment (%2,98) and Flora of Nallıhan Kuş Cenneti (% 4,53) are examined it is seen that the rates of Euro-Siberian taxa are lower than this study because these three studies take place in the Irano-Turanian floristic region. The proportion of Irano-Turanian taxa in the identified total taxa is % 9, 94. This rate is quite high when compared to Flora of Abant (% 4,7) and the Flora of Gölcük (Bolu) (% 1,6) which is in the north of the research area and carried out in the Sub-Euxine belts of Euro-Siberian floristic area. The reason of it is that the research area has slopes looking Central Anatolian Region (Irano-Turanian floristic region).

One of the remarkable results is the density of the Mediterranean floristic region plants with the rate of % 9,07. This rate is the second highest rate when compared to other five flora studies. The reason of this high rate of the Mediterranean floristic region plants is the Aladağ Stream Valley that constitutes the north and the west borders of the research area. This valley includes Mediterranean floristic region plants because of the warm air coming from Sakarya Valley which penetrates into this valley (Table 6).

In the research area among the identified 80 families, the 5 families which have the most taxa are compared with other five flora studies (Table 7). All studies in the region show that the family of Leguminosae and Compositae families had the highest rates of taxa.

Table 6. Comparison of the flora studies of near environment with the elements of phytogeographical regions (%)

	Research Areas					
	1	2	3	4	5	6
Euro-Siberian	22,5	13,4	2,98	4,53	29,3	31,8
Irano-Turanian	9,94	26,1	30,79	25,21	4,7	1,6
Mediterranean	9,07	7,78	8,27	9,63	5,6	5,5
Widely distributed plants and unknowns	58,49	52,7	57,95	60,63	60,6	61,1

- 1- TUNÇKOL, Flora Of Taşlıyayla And Kızık (Bolu – Seben) Surrounding
2- AKSOY, Flora of Karakiriş Mountain
3- GÜNER, Flora of Doğan Dede Hill and Its Environment
4- DOĞAN, Flora of Nallıhan Kuş Cenneti
5- TÜRKER, Flora of Abant
6- İKİNCİ, Flora of Gölcük (Bolu)

Table 7. The comparison of the families which include the most taxa in the neighbourhood of the research area (%)

Families	Research Areas					
	1	2	3	4	5	6
Fabaceae	10.6	11.8	13.2	10.8	6.9	8.6
Asteraceae	9.8	14.1	8.4	13.9	10.3	9.8
Labiatae	7.3	7.5	11.6	7.4	7.0	5.0
Poaceae	5.6	6.8	5.3	6.8	8.3	9.8
Brassicaceae	5.4	3.9	6.0	6.2	4.7	4.1

- 1- TUNÇKOL, Flora of Taşlıyayla And Kızık (Bolu – Seben) Surrounding
2- AKSOY, Flora of Karakiriş Mountain
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6- İKİNCİ, Flora of Gölcük (Bolu)

With this study, the flora of an area in which there is not a floristic study before, has been identified. It has also been determined that the research area is rich in woody plants and geophytes and it is an important transition center in the sense of endemic plants with identified 80 endemic taxa (Tunçkol and Akkemik, 2013). Also, 58 of the identified taxa, are new records for the A3 square (Tunçkol and Akkemik, 2013). So, it shows that floristic studies has not been completed in our country yet.

During the fieldworks to reserach area from the February 2010 to the October 2011, it is determined that there is a rapid increase in the touristic and uncontrolled constructions and second-house construction in the alms and pastures around Taşlıyayla Lake. These new buildings cause the decrease in the pasture areas and they threats

the floristic structure of Taşlıyayla part of the research area.

In fact, it must be determined the threats and oppression on the wetlands, coastlines, alms and pastures in such areas in which it is ignored the Environmental laws and in which there is rapid increase in uncontrolled constructions. In addition to that it must carefully be enforced the Environmental laws and it must be taken into consideration that the necessity to prepare the environmental impact assessment (EPA) reports in such areas which is under heavy human impact.

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Resources

Akkemik, Ü., Yılmaz, H., 2016. A new species record for the flora of Turkey: *Barbarea bracteosa* Guss. Journal of the Faculty of Forestry Istanbul University 66(2): 636-640. DOI: 10.17099/jffiu.28935

Aksoy, N., 2001. Karakiriş Dağı (Seben-Nallıhan) Florası, Yüksek Lisans Tezi, İ.Ü. Fen Bilimleri Enstitüsü, İstanbul.

Anonim, 2004. Seben Orman İşletme Müdürlüğü, Taşlıyayla Orman İşletme Şefliği Amenajman Planı, Orman Genel Müdürlüğü, Bolu Orman Bölge Müdürlüğü, Çevre Ve Orman Bakanlığı.

Avcı, M., 1993. Türkiye'nin Flora Bölgeleri ve Anadolu Diyagonalı ne Coğrafi Bir Yaklaşım, Türk Coğrafya Dergisi, 28, 225-248

Boisser, E., (1867- 1888). Flora Orientalis Volume: 1-5, Supplement by Buser, R. Geneve, Switzerland.

Cole TCH, Hilger HH, Doğru-Koca A., 2016. Kapalı Tohumluların Filogenisi-Çiçekli Bitkiler Sistematiği, DOI:10.13140/RG.2.1.4533.7203

Çepel, N., 1995. Orman Ekolojisi, (3. Baskı), İ.Ü. Basımevi, Yayın No:3886, Sosyal B.M.Y.O Yayın No:433, İstanbul, 975-404-398-1.

Davis, P. H., 1971. Plant Life of South-west Asia, The Botanical Society of Edinburgh, Edinburgh.

Davis, P. H., 1965-1985. Flora of Turkey and East Aegean Islands vol. 1-9, Edinburg University Press, Edinburg.

Davis, P. H., Mill, R.R. and Tan, K., 1988. Flora of Turkey and East Aegean Islands vol. 10 (suppl. 1), Edinburg University Press, Edinburg.

Doğan, E., 2000. Nallıhan Kuş Cenneti Florası (Ankara), Yüksek Lisans Tezi, G.Ü. Fen Bilimleri Enstitüsü-Ankara

Ekim, T.; İlarıslan, R., 1982. Yedigöller Milli Parkı'nın (Bolu) Florası. Orm. Araşt. Enst. Derg. 28 (56), 53-67.

Güner, A., Özhatay, N., Ekim, T., Başer, K.H.C., 2000. Flora of Turkey and East Aegean Islands vol. 11 (suppl. 2), Edinburg University Press, Edinburg.

Güner, M.B., 2000, Doğandede Tepe ve Çevresi (Beypazarı-Ankara) Florası, Yüksek Lisans Tezi, G.Ü. Fen Bilimleri Enstitüsü, Ankara.

İkinci, N., 2000, The Flora of Gölcük Area (Bolu), MSc Thesis, A.İ.B.U. Department of Biology, Bolu.

Kaptanoğlu, D., 1995. Yaylacık Araştırma Ormanı (Bolu-Mengen) Florası, Yüksek Lisans Tezi, G.Ü. Fen Bilimleri Enstitüsü, Ankara.

Özhatay, N., Kültür, Ş., Aksoy, Ş., 1994. Chek-List of Additional Taxa to the Supplement

Flora of Turkey, Turkish Journal of Botany, Vol. 18,6:497-514, Ankara

Özhatay, N., Kültür, Ş., Aksoy, Ş., 1999. Chek-List of Additional Taxa to the Supplement Flora of Turkey, Turkish Journal of Botany, Vol. 23,3:151-169, Ankara.

Özhatay, N., Byfield, A., Atay, S., 2003. Türkiye'nin Önemli Bitki Alanları, WWF Türkiye (Doğal Hayatı Koruma Vakfı), İstanbul, 975-92433-0-X.

Özyuvacı, N., 1999. Meteoroloji ve Klimatoloji, İ.Ü. Orman Fakültesi Yayınları, Rektörlük No:4196, Fakülte No:460, İstanbul, 975-404-544-5

Şahin, C., 1984. Aladağ Çayı Havzasında Abiyotik Çevre Koşulları ve Bunlarla İlgili Bizulmuş Doğal Dengenin Yeniden Kurulmasına İlişkin Sorunlar ve Çözüm Yolları, TUBITAK Çevre Araştırmaları Grubu, ÇAĞ-55 No'lu Proje.

Tutin, T.G., Heywood, V.H., Burges, N.A., Valentine, D.H., Walters, S.M. ve Webb, D.A., 1964-1993. Flora Europaea vol. 1-5, Chambridge University Press, Chambridge.

Türker, H., 1990. Ayaş, Güdül, Beypazarı ve Polatlı Arasında Kalan Bölgenin Florası, Yüksek Lisans Tezi, G.Ü. Fen Bilimleri Enstitüsü, Ankara.

Uluğ, M., 1999. Gökçeler Dağının (Gerede, Eskipazar) Florası, Yüksek Lisans Tezi, A.Ü. Fen Bilimleri Enstitüsü, Ankara.

Uçar, A., 1996. Flora of Abant, A.İ.B.U. Department of Biology, Bolu.

Vural, M., 2009. Biyoçeşitlilik Sözleşmesi ve Türkiye'nin Florsitik Yapısı. Bağbahçe Dergisi, 24. Sayı, sayfa 8-9.