

CHECK-LIST OF ADDITIONAL TAXA TO THE SUPPLEMENT FLORA OF TURKEY VI

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SUMMARY

The sixth check-list of the series entitled “Check-list of Additional taxa to the Flora of Turkey” comprises a total of 228 taxa based on the data given in 140 papers published the period between January 2011-November 2013. Additionally taxa which have not been recorded neither in the 11 volumes of the Flora of Turkey nor in the five previously published supplementary check-lists. With this paper the following are added to the Turkish flora: 186 taxa new to science and 42 taxa new record.

ÖZET

“Türkiye Florasına İlave Taksonların Listesi ” adlı seri halinde yayınlanmakta olan çalışmanın altıncısı, Ocak 2011 ile Kasım 2013 tarihleri arasında yayınlanan 140 çalışmada yer alan 228 taksondan oluşmaktadır. Bunlardan 186 adedi bitki bilim dünyasına yeni olarak, 42 adedi ise Türkiye florasına yeni kayıt olarak ilave edilmektedir. Aynı zamanda, bu çalışma, 11 ciltlik Türkiye Florasında ve bu seri çalışmanın ilk beşinde bulunmayan taksonları da içermektedir.

Key words: Additional taxa, Turkish flora, new species

INTRODUCTION

Turkey is one of the most important temperature countries on earth in terms of plant diversity. The diversity of vascular plants of the country has been documented in the Flora of Turkey and the Eastern Aegean Islands edited by Prof. Peter H. Davis and published in nine volumes between 1965 and 1985. With the publication of this flora, so interest in Turkey's rich plant diversity has been brought to the attention of Turkish and foreign botanists, and subsequent study has greatly increased our knowledge of the flora resulting in the addition of many new taxa.

The identification of these additional taxa has necessitated the publication of the supplementary volumes to the Flora of Turkey vol. 10 in 1988 [32] with the eleventh supplemental volume in 2000 [59]. Collectively the 11 volumes describe 8796 species from Turkey (excluding an additional 192 species confined to the East Aegean Islands Lying within Greece) The flora of Turkey continues to grow following publication of the 11th volume, and an additional 945 new species were added either as a new species or new records in the periods up to December 2013. These check list have been published in a series paper by N. Özhatay et al. as Check list III, IV, V and VI.

Since 2000 (vol. 11) nearly 664 papers regarding the flora of Turkey have been published and 945 additional taxa have been recorded which were either new to science (683 taxa) or new to the Turkish flora (262 taxa). The all original publication of these taxa was subsequently drawn together by the authors as a collection housed in the library of the Department of Pharmaceutical Botany, Istanbul University. The aim of this paper is to present all published taxa added to the flora of Turkey during 2011 to 2013 with the missing records in earlier check-lists. Since 1994 have been published six check-list of additional taxa to the Turkish flora respectively (Table 1).

The present list contains a total of 228 taxa, of which 186 taxa were added as new taxa to science (comprising 141 species, 29 subspecies, 8 varieties, and 8 hybrids), whilst a further 42 known taxa have previously been unrecorded from Turkey (32 species, 5 subspecies, 4 varieties and 1 hybrid).

Table 1. Statistical table of summary data of additional taxa for the checklists (N: new taxa for science, R: new record for Turkey).

	Check-list I (1994)		Check-list II (1999)		Check-list III (2006)		Check-list IV (2009)		Check-list V (2011)		Check-list VI (2013)		
	N	R	N	R	N	R	N	R	N	R	N	R	
Sp.	96	36	77	42	154	75	85	40	158	53	141	32	
Subsp	16	8	26	4	12	16	23	13	20	4	29	5	
Var.	11	2	5	4	15	13	9	1	9	3	8	4	
Hyb.	1	-	1	1	8	2	3	-	1	-	8	1	
Total	124	46	109	51	189	106	120	54	188	60	186	42	
N: 915				Vol. 11 (2,000) based on Check-list I & II						Türkiye Bitkileri Listesi (2012) based on Check-list III, IV & V			
R: 359													
TOTAL: 1274													

The list of the additional taxa is arranged in alphabetical order within families, genera, and species under three main systematic groups: **Pteridophyta**, **Dicotyledonae** and **Monocotyledonae**. The format is in accordance with that in Davis' Flora of Turkey and references to original papers appear in angled brackets at the end of the taxon name. It is hoped that this list will provide useful information for researchers currently working on the Turkish flora. We have endeavoured to trace all additional taxa to the flora published until November 2013. Although we are certain that further taxa remain unreported either in Davis Flora of Turkey or in our supplementary check-lists, then accordingly we invite all additions or comments for future issues in the series.

The list of additional taxa

Abbreviation: e = endemic species; * = new record for Turkish flora; ** = new taxon for science; □ = new section; ■ = new genus for Turkish flora; ■■ = new genus for science.

PTERIDOPHYTA

ADIANTACEAE

Cryptogramma R. Br. (1:45)

eC. bithynica** S.Jess., L. Lehm. & Bujnoch, in Fern Gaz. 19(2): 52 (2012). [Jessen et al., 2012]

Type: Turkey. Bursa: Uludağ south-eastern of Bursa: silicate scree near the roadway, NNE of the summit of Uludağtepe, alt. 1770 m, 40° 6' 10" N, 29° 14' 27" E, 9.9.2009, collectors S. Jessen & L. Lehmann SJ-3820, holotype JE, isotype ANK, Herbarium S. Jessen.

DICOTYLEDONES

APOCYNACEAE

Vinca L. (6:161)

eV. soneri** Koyuncu, in Turk J Bot 247-251 (2012). [Koyuncu, 2012]

Type: Turkey. B7 Erzincan: Kemaliye, above Sırakonaklar village, dry stony slopes. 1600-1900 m, 16.05.1992 (in flower & in fruit), M. Koyuncu 9067 & O. Soner (holotypes: AEF 16951, iso types: ANK, GAZI).

Paratypes: B6 Sivas: Between Ulaş and Zara, around Değirmenboğazı village, dry stony slopes, 1490 m, 20.07.2008 (in fruit), M.Koyuncu 15942 (AEF 25289); Zara to Divriği, around Bolucan, dry slopes, 1500 m, 24.07.2008 (in fruit), M.Koyuncu 15961 et al. (AEF 25262); Divriği to Zara, around Cürek village, slopes, 1100 m, 18.07.2009 (in fruit), M.Koyuncu 16241 & N.Arslan (AEF 25632); B7 Erzincan: Kemaliye, Yılanlı Dağ, around Umutlu village, stony slopes, 2400-2800 m, 27.9.1984 (in fruit), M.Coşkun (AEF 15165); Above Aşağı Umutlu village, 1400-1650 m,

28.9.1984 (in fruit), M.Tanker & M.Coşkun s.n. (AEF 15166); Kemaliye, above Sırakonaklar village, 1500-1700 m, 15.05.1994 (in flower), M.Koyuncu & O.Soner s.n. (AEF 16143); B7 Malatya: Between Eğin and İliç, mica schist area, 1420 m, 21.06.2005 (in fruit) M.Koyuncu 15083 & N.Arslan (AEF 24690); Kemaliye, between Sırakonaklar village and Halife Holy Tomb slopes, 1500 m, 21.05.2002 (in flower), M.Abu Asaker s.n. (AEF 22948).

ARISTOLOCHIACEAE

Aristolochia L. (7:552)

eA. x guneri** Malyer & Yosunoğlu, Türkiye Bitkileri Listesi p.889 (2012). [Güner ed., 2012]

Type: Turkey. C6 Hatay: d. Antakya (Amanus), Antakya-Yayladağ, nr Şenkoy, 1000 m, P.H. Davis, D.27164, (holo. E).

Examined material: Turkey. C6 Hatay: Samandağ-Yayladağ, Aydınbağçe köyü yolu girişi, ekin tarlası-yamaç. 36°01'13"N, 36°02'24"E, 483 m, 02.iv.2009, A. Tosunoğlu & H. Malyer, BULU-34327.

eA. x gypsicola** Tosunoğlu & Malyer, Türkiye Bitkileri Listesi p.889 (2012). [Güner ed, 2012]

Type: Turkey. B6 Sivas: Kangal-Divriği, Mursal yolu 2. km, yamaç ve tarla kenarları. 39°16'16"N, 38°1'21"E, 1357 m, 22.v.2009, A. Tosunoğlu (AB.1450) & H. Malyer (holo. BULU-33393).

BORAGINACEAE

Omphalodes Miller (6:280)

eO. luciliae** Boiss. subsp. **pisidica** R. R. Mill, in Edinburgh Journal of Botany 68 (2): 159-163 (2011). [Mill, 2011]

Type: Turkey. **C3** Isparta, distr. Sütçüler, Dedegöl Dağ at Dedegöl Tarn, shady rocks, 2300 m, 3 VIII 1949 (in flower and fruit), P.H. Davis 16027 (holo E).

Paratypes: Turkey. C3 Isparta: distr. Sütçüler, Dedegöl Dağ in the cirque Anici, N. cliffs, fl. Powder blue, 2200 m, 2 VIII 1949, P.H. Davis 15990 (E, flowers and immature fruits). C3 Antalya: Bozburun Dağ above Tozlu Çukur Yayla, in shady conglomerate rocks, fl. Powder blue, 1900-2200 m, 25 VII 1949, P.H. Davis 15609 (E, flowers and imature fruits).

Onosma L. (6:326)

eO. aksoyi** Aytaç & Türkmen in Turk J Bot 269-274 (2011).

[Aytaç & Türkmen, 2011]

Type: Turkey. C3 Konya: Derebucak, Çamlık, Kızıldağ, 1350-1400 m, serpentine rocks, clearing in *Pinus nigra* forest, 16.vi.2004, Aytaç 8715 (holotype: GAZI, isotypes: ANK, HUB).

Paratypes: C3 Konya: Derebucak, Çamlık, Kızıldağ, 1450-1600 m, serpentine rocks, clearings in *Pinus nigra* forest, 29.vi.1998, Aytaç 7833 (in flowers) (GAZI); ibid., 25.v.2007, Hamzaoğlu 4536, Aksoy & Budak (GAZI, ANK, E, HUB, YILDIRIMLI, Bozok Univ. Herbarium).

eO. atila-ocakii** O. Koyuncu & Yaylacı in Plant Syst Evol 299:1839–1847 (2013).

[Koyuncu et al., 2013]

Type: Turkey. **B3** Eskişehir: Eskişehir to Kütahya road, Nemli village, steppe on magnesite rocks, magnesite mine environment, 15.vi.2011, 39°43'051.2"N, 30°13'16.5"E, 1,014 m, holotype: OUFE 16469 (isotypes: ANK and GAZI).

Nonea Medik. (6:404)

eN. dumanii** B. Bilgili et Selvi, in Nord J Bot 546-552 (2012).

[Bilgili et al., 2012]

Type: Turkey. **C4** Antalya, Alanya, Taurus mountains, between Alacamiçökelesi and Gökbel, around Başyayla, rocky steppe, limestone, 1533 m a.s.l. 18 May 2007, B. Bilgili 2876 (holotype: FI, isotype: GAZI).

Paratypes: Turkey. C4 Antalya: Alanya, around Başyayla, 1550-1700 m a.s.l., 30 May 2007, leg. B. Bilgili 3143 (GAZI); ibid., 27 May 2008, leg. B. Bilgili 3733 (GAZI); ibid, 21 May 2010, leg. B. Bilgili 3806 (GAZI).

CAMPANULACEAE

Asyneuma Griseb. & Schenk (6:65)

eA. munzurdaghense** Yıldırımılı, in Ot, Sist. Bot. Dergisi, 19(1)1-34 (2012). [Yıldırımılı, 2012]

Type: Turkey. **B7** Tunceli: Ovacık, Munzur dağları, Karagöl vadisi, Dılap deresi başı, 1600m, 07.07.1980, Ş. Yıldırımılı 3455 (holo. Yıldırımılı Otluk'u ; iso. HUB)

Campanula L. (6:2)

eC. aktascii** Aytaç & H. Duman, in Turk J Bot 37:1055-1060 (2013).

[Aytaç & Duman, 2013]

Type: Turkey. **C2** Antalya: Kaş, Bayındır village, 250 m, 25.05.2009, calcareous rocks, Aytaç 9337 & Duman (holotype: GAZI, isotypes: ANK, HUB).

eC. hacerae** A.İlçim, in Ann Bot. Fenn 48: 507-510 (2011).

[İlçim et al., 2011]

Type: Turkey. **B6:** Kayseri: Uzunyayla, around Örenşehir village, on

slope of gypsum hills at 1640- 1670m, 10 July 2009 A. İlçim 1763 (holotype KSUH; isotype VANF).

Paratype: Turkey. **B6** Kayseri: Uzunyayla, near Örenşehir village, on slope of gypsum hills at 1640-1670 m, 25 July 2010 A. İlçim 1817 (KSUH).

eC. mugeana** Yıldırım, in Nord J Bot, 31:419-425 (2013).

[Yıldırım, 2013]

Type: Turkey. **B1** İzmir: Kemalpaşa, Mahmut Mountain, 1200 m a.s.l., on schistose rocks, 26 Jun 2009, H. Yıldırım 1633 (holotype: EGE, isotypes: EGE, HUB, Yıldırımli Herbarium).

Paratypes: Turkey. **B1** İzmir: Kemalpaşa, Mahmut Mountain, 1151 m a.s.l., on schistose rocks, 3 Sep 209, H. Yıldırım 1638; Turkey. **B1** İzmir: Kemalpaşa, Mahmut mountain, 1247 m a.s.l., on schistose rocks, 18 Jun 2011, H. Yıldırım 2011.

eC. silifkeensis** Tezcan & Öztekin, Türkiye Bitkileri Listesi p.890 (2012). [Güner (ed.), 2012]

Type: Turkey. C4/5 Mersin: Silifke, Ayaştürkmenli Köyü, kalkerli kayalık üzerinde, c. 1600 m, 4.viii.2002, F. Tezcan 1885, (holo. NGBB, iso. ANK, GAZI, ANKO).

CARYOPHYLLACEAE

Bufonia L. (2:89)

e B. yildirimhanii** İlçim & Behçet in Nord J Bot 31: 84-86 (2013).

[İlçim & Behçet, 2013]

Type: Turkey. **C7** Sanliurfa: Birecik, in valley near Geronticus eremite breeding station, 350-400 m a.s.l., 17 Jun 2010, A. İlçim 1813 (holotype: KSUH, isotype: BIN)

Dianthus L. (2:99)

eD. goekayi** Kaynak, Yılmaz & Daşkın, in Ann. Bot. Fenn 48: 74-78 (2011). [Yılmaz et al., 2011]

Holotype: Turkey. **A2** Bursa: Soğukpınar-Karaislah road, 3 km to Soğukpınar, 40°02'N, 29°07'E, 955 m 12 07 2001 Kaynak 12493 & Yılmaz (BULU).

Paratype: Turkey. **A2** Bursa: Harmancık, Orhaneli to Harmancık, 820 m, 20 VII 2008 Kaynak 30308 & Kaynak (BULU)

eD. vanensis** Behçet & İlçim in Turk J Bot 37: 219-224 (2013).

[İlçim et al., 2013]

Type: Turkey. **C9** Van: Çatak, Konalga vilage, Tanrıverdi hamlet, around Zevviçal, steppe, 2372 m, 25.vi.2010, M. Mükemre 300 (holotype: ANK; isotypes: VANF; GAZI, Bingöl Univ. Herb., Mustafa Kemal Univ. Herb.)

Gypsophila L. (2:149)

eG. erikii** Yıldırımli, in Ot Sist. Bot. Dergisi, 19(1)1-34 (2012).

[Yıldırımli, 2012]

Type: Turkey. **C5** Niğde: Ulukışla, Aktoprak, bozkır, kalker anakaya, 1200m, 10.07.1977, S. Erik 2387 (holo. HUB; iso. Yıldırımli Otluk'u).

eG. torulensis** M. Koç, in Ann. Bot. Fenn 50:149-150 (2013).

[Koç, 2013]

Type: Turkey. **A7** Gümüşhane: Torul, between Torul-Gümüşhane 7 km, 1100 m, a.s.l., on slopes with calcareous rocks, 40° 31.28' N, 39° 20.39' E, 17 July 2012, M. Koç 1373 (holotype: Bozok Univ. Biology Dept. herbarium;

isotypes GAZI, ANK, Bozok Univ. Biology Dept. Herbarium)

eG. turcica** Hamzaoğlu, in Turk J Bot 36: 135-139 (2012).

[Hamzaoğlu, 2012]

Type: Turkey. **B6** Sivas: Zara, between Çaypınar and Alişanağılı villages, 1835 m, gypsaceous hills, 14.vii.2010, Hamzaoğlu 5853 (holotype: GAZI, isotypes: GAZI, ANK, Bozok Univ. Biology Dept. Herb.).

Paratypes: Turkey. **B6** Sivas: Zara, Bağlama village, 1755 m, gypsaceous hills, 14.vii.2010, Hamzaoğlu 5841 (GAZI, ANK, Bozok Univ. Herb.).

eG. yusufeliensis** Budak, in Ann. Bot. Fenn. 49(5-6): 425-427 (2012). [Budak, 2012]

Type: Turkey. **A8** Artvin: Yusufeli, between Sarigöl-Bıçakçılar villages, 1255 m, rock crevices, 41°00.81'N, 41°25.70'E, 28 July 2010 Budak 2467 (holotype Bozok Univ. Biology Dept. Herbarium; isotypes: GAZI, ANK, Bozok Univ. Biology Dept. Herbarium).

Minuartia L. (2:38)

eM. aksoyi** Koç & Hamzaoğlu, in Nord J Bot 337-342 (2012).

[Koç et al., 2012]

Type: Turkey. **B6** Malatya: Darende, Aşağılupınar town, 1450-1500 m a.s.l., calcareous rocks, 38°25'N, 37°34'E, 16 Jul 2009, M. Koç 730, Hamzaoğlu and Budak (holotype: Herbarium of Biology, Dept of Bozok Univ., isotypes: Herbarium of Biology, Dept of Bozok Univ., Herbarium of Biology, Dept of Eriyes Univ., ANK, GAZI).

eM. buschiana** Schischk. subsp. **artvinica** M. Koç & Hamzaoğlu, in Turk J Bot 35: 337-341 (2011).

[Koç et al., 2011]

Type: Turkey. **A8** Artvin: Kozlu village, Avana Yaylası, 800-900 m a.s.l. calcareous rocks, 41°13'N, 41°39'E, 27.jul 2010, Hamzaoğlu 6015. M. Koç and Budak (holo-type: Herbarium of Biology, Dept. of Bozok Univ., isotypes: Herbarium of Biology, Dept. of Bozok Univ. Herbarium of Biology, Dept. of Erciyes Univ., ANK, GAZI).

eM. hamzaoglui** M. Koç & Aksoy, in Turk J Bot 37: 428-433 (2013).

[Koç & Aksoy, 2013]

Type: Turkey. **B5** Kayseri: Mount Erciyes, over ski slopes, to the summit, 2835 m, alpine, 38°31'50"N, 35°29'16"E, 04.09.2011, Hamzaoğlu 6276, M. Koç & Aksoy (holotype: ANK, isotypes: Bozok Univ. Herb., Erciyes Univ. Herb., ANK, GAZI, HUB).

Paratype: Turkey. **B6** Malatya: Hekimhan, between Kurşunlu-Ağılbaşı, 38°34'45"N, 37°49'18"E, 1630 m, 25.06.2010, Hamzaoğlu 5773, M.Koç & Budak (Bozok Univ. Herb.).

eM. turcica** M. Koç, in Turk J Bot 35: 337-341 (2011).

[Koç et al., 2011]

Type: Turkey. **A4** Karabük: Safranbolu, North of Yukarıçiftlik village, Kurttepesi vicinity, 800-900 m, in open forest, stony places, 41°17'N, 32°43'E, 27.vi.2010, M. Koç 1197 (holo-type: Bozok Univ. Herb.; isotypes: Bozok Univ. Herb., Erciyes Univ. Herb., ANK, GAZI).

Saponaria L. (2:138)

eS emineana** Y. Gemici & Kit Tan, in *Phytotaxa* 30: 45-52 (2011).

[Gemici et al., 2011]

Type: Turkey. **B3:** Afyon: Sandıklı, Sorkun, Kestel River valley, dry stream bed mbankments, on sandy, gravelly and stony ground, 38° 23 ' N, 30° 04' E, ca. 1055 m; 23 July 1983, Y.Gemici 2524 (holotype EGE, isotypus C, EGE).

Silene L. (2: 179)

e **S. gevasica Hamzaoğlu, in *Turk J Bot* 35: 67-70 (2011).

[Hamzaoğlu et al., 2011]

Type: Turkey. **B9** Van: Gevaş, North slopes of Artos mt., 2100-2200 m, calcareous rocks, 38° 16' N, 43° 07' E, 14.vii.2009, M. Koç 673, Hamzaoğlu & Budak (holotype: Bozok Univ. Biology Dept. Herb., isotypes: Bozok Univ. Biology Dept. Herb., ANK, GAZI).

e **S. hamzaoglui Budak, in *Turk J Bot* 285-289 (2011).

[Budak & Koç, 2011]

Type: Turkey. **B5:** Yozgat: Çekerek, between Kurtağlı and Fakıdağlı village, 1140-1180 m, calcareous rocky places, 40°02'83"N, 35°34'82"E, 22.v.2010, Budak & M.Koç 941 (holotype: Bozok Univ. Biology Dept. Herbarium, isotypes: Bozok Univ. Biology Dept. Herbarium, ANK, GAZI).

e **S. yıldırımlii Dinç in *Ot Sist. Bot. Dergisi*, 19(1)1-34 (2012).

[Yıldırımli, 2012]

Type: Turkey. **B7** Tunceli, Ovacık, Munzur dağları, Kepir tepesi, doruk

çevresi, 3000m, 29.07.1979, Ş. Yıldırımli 2316 (holo. Yıldırımli Otluk'u; iso. HUB).

CHENOPODIACEAE

Sarcocornia A.J. Scott

eS. obclavata** Yaprak, in *Phytotaxa* 49: 55-60 (2012).

[Yaprak, 2012]

Type: Turkey. Çanakkale: Gelibolu, Evreşe, Kavak köyü Çorağı, sea level, 20 October 2004, A. E. Yaprak 2004-95 (holotype ANK, isotypes GAZI, EGE, ISTF).

Paratypes: Turkey. İzmir: Çiğli, Çamaltı tuzlası, sea level, lagoon, 22 November 2000, A.E. Yaprak 2000-23 (ANK). Mersin: Silifke, Göksu Deltası, Paradeniz Dalyanı, sea level, lagoon, 4 September 2004, A.E. Yaprak 2004-115 (ANK), Aydın: Söke, Doğanbey, sea level, lagoon, 17 October 2004, A.E. Yaprak 2004-78 (ANK).

COMMELINACEAE

Tradescantia L. (8:555)

***T. fluminensis** Vell., *Fl. Flumin.* 140 (1829).

[Eminağaoğlu et al., 2012]

Examined specimens: **A8** Artvin: Hopa, Kemalpaşa, Sovil, damp roadsides, grassland, 90 m, 41°28'39"N, 41°31'18"E, 27.iv.2011, Ö. Emin. 8732; **A8** Artvin: Hopa, Kemalpaşa, Sovil, streamside, damp place, 120 m, 41°28'30"N, 41°31'30"E, 27.iv.2011, Ö. Emin. 8733; **A8** Artvin:Hopa, near forest, 70 m, 41°23'14"N, 41°24'50" E, 27.iv.2011, Ö.Emin. 8745; **A2(E)** İstanbul: Dolmabahçe Sarayı, A. Baytop s.n. (ISTE 49962)

COMPOSITAE

Achillea L. (5:224)

eA. aleppica** DC. subsp. **altinozlui**

Yıldırımli, in *Ot Sist. Bot. Dergisi*,

19(2)1-51 (2012).

[Yıldırımli, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırımli 38523 (holo. Yıldırımli Otluk'u; iso. HUB, Yıldırımli Otluk'u). **Anthemis** L. (5:174)

eA. pauciloba** Boiss. var. **alba** Hamzaoglu & Budak, in Turk J Bot 35: 85-88 (2011).

[Hamzaoglu et al., 2011]

Type: Turkey. **C5** Niğde: Ulukışla, around Aktoprak village, 1380 m, 21.06.2009, M. Koç 388-A, E. Hamzaoglu & Ü. Budak (holotype: Bozok Univ. Biology Dept. Herbarium, isotypes: Bozok Univ. Biology Dept. Herbarium, ANK, GAZI).

Artemisia L. (5: 311)

***A. santonicum** L. subsp. **patens** (Neilr.) K.M.Perss., in Turk J Bot 89 (2011).

[Kurşat et al. , 2011]

Specimens examined: *A. santonicum* subsp. *santonicum*: **B4** Ankara: Şereflikoçhisar-Ankara highway, after 6 km Şereflikoçhisar, fields and roadsides, 938 m, 07.vii.2007, 38°58'704"N, 33°29'579"E, M. Kurşat 1010 (FUH);-*A. santonicum* subsp. *patens*: **A1** Edirne: Enez, Meriç delta, 5 m, 09.ix.2007, 45°43'512"N, 26°04'394"E, Ş. Civelek, İ. Türkoğlu & M. Kurşat 1026 (FUH); Çanakkale: Çanakkale-Keşan highway, old İstanbul road, Kavak delta, 4 m, 25.x.2007, 40°37'555"N, 26°50'838"E, Ş. Civelek & M. Kurşat 1100(FUH).

Centaurea L. (5:465)

e C. akmanii** Yıldırımli, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırımli, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar,

Aşağıkepen köyü yakını, jipsli yerler, 950-1000 m, 27.09.2008, Ş. Yıldırımli 35312 (holo. Yıldırımli Otluk'u).

eC. baserii** Köse & Alan, in Phytotaxa 117 (1):23-29 (2013).

[Köse & Alan, 2013]

Type: Turkey. Afyon. Emirdağ, Calbalı, Tahtalı, rocky place, 38° 54' 21.1" N, 31° 12' 51.0" E, 1772 m, 4 Jul 2009, YBK 1566 (holotype ESSE).

Cirsium Mill. (5:370)

eC. balikesirense** Yıldız, Arabacı & Dirmenci, in Turk J Bot 37: 1045-1054 (2013)

[Yıldız et al., 2013]

Type: Turkey, **B1** Balıkesir: 5 km from Balya to Yenice, in open scrubs, 350-400 m, 31.07.2007, Yıldız 16493 Dirmenci (holotype: ISTE; isotypes: ANK, EGE, GAZI, HUB, INU).

Paratypes: Turkey. **A2** Bursa: Uludağ, 1200 m, *Pinus* L. forest, 20.07.1968, Sorger 68-52-3 (W); ibid., 1100 m, near forest, 08.08.1976, Sorger 76-37-1 (W); ibid., in olympo Bithyni, 07.1874, Pichler s.n. (W); Uludağ, road of Uludağ, 400 m, in open forest, 21.08.2007, Yıldız 16582 & Arabacı (Hb. Yıldız); ibid., 10.09.2009 Yıldız 17127 & 17128 (Hb. Yıldız); ibid., 28.08.2012, Yıldız & Dirmenci 3785 (Hb. Yıldız); Uludağ, road of Uludağ, 1000 m, 28.08.2012, Yıldız & Dirmenci 3786 (Hb. Yıldız); Yalova: Çınarcık, Üç Reisler, 10.07.1982, E. Tuzlacı (ISTE 49929).

eC. nerimaniae** Yıldız, Dirmenci & Arabacı, in Turk J Bot 37: 1045-1054 (2013).

[Yıldız et al., 2013]

Type: Turkey. **A1** Çanakkale: Gökçeada, east of Gökçeada, in phrygana, 100-150 m, 08.09.2008, Yıldız

16988 (holotype: ISTE; isotypes: GAZI, HUB, INU).

eC. peshmenianum** Yıldız, Dirmenci & Arabacı, in Nord J Bot 29:26-37, (2011).

[Yıldız et al., 2011]

Type: Turkey. **B9** Van: between Çatak and Bahçesaray north of Yukarınarlı vilage, between and Karapet pass, south slopes, 2200-2400 m a.s.l., conglomerate, 38°08'680" N, 42°02'000" E, 18 Aug 2008, Yıldız 16958, Dirmenci and Fırat (holotype: ISTE, isotypes: E, INU, W).

eC. sivasicum** Yıldız, Arabacı & Dirmenci, in Nord J Bot 29:26-37, 2011.

[Yıldız et al., 2011]

Type: Turkey. **B6** Sivas: Zara, 3-4 km south of Bolucan, 1400 m a.s.l., eroded slopes, 18 Jul 2007, Yıldız 16487 (holotype: ISTE, isotypes: G, GAZI, HUB, INU).

Paratypes: Turkey. **B6** Sivas: between Divriği and Zara, 28 km northwest of Divriği, 1350 m a.s.l., 13 Jul 1981, Nydegger 16965 (E, G, W); between Sincan and Divriği, 8 km east of Sincan, 1380 m a.s.l., 14 Jul 1982, Nydegger 17144 (G); between Divriği and Sincan, 1350 m a.s.l., 22 Jul 2009, 39°29'900"N, 37°56'300"E, Yıldız 17066 and Tekin; between Zara and Bolucan, Karabel pass, 1500 m a.s.l., 22 Jul 2009, Yıldız 17056 and Tekin.

eC. yildizianum** Arabacı & Dirmenci, in Ann Bot Fenn 48: 503-506 (2011). [Arabacı & Dirmenci, 2011]

Type: Turkey. **B8** Muş: 4 km from Muş to Bingöl, 1380 m, wet places near field borders, 13.viii.2007 Dirmenci

3567 & Arabacı (holotype INU; isotypes GAZI, HUB, ISTE).

Paratypes: Turkey. **B7** Elazığ: Sivrice, between Gözeli and Kamışlık, 1500 m, deep soiled area, 2008 B. Yıldız 16964 & Arabacı; 38 km from Elazığ to Bingöl, 1700 m, *Quercus* scrub openings, 2007 Dirmenci 3508 & Arabacı; Erzincan: Sipikör, Sintenis (1890: 3293) (G); **B8** Erzincan: 85 km WSW Erzurum towards Tercan, 1956 Re-chinger, 15134 (W); Palandöken Mount, 30-40 km from Çat to Erzurum, 2000-2150 m, in pasture, 1966 Davis 47412 (E, K); 32 km from Çat to Erzurum, 39°47'78"N, 41°05'00"E, 2150 m, 2007 Dirmenci 3529 & Arabacı; Bingöl: 15 km from Karlıova to Bingöl, 1950 m, stepe, 2007 Dirmenci 3516 & Arabacı; Muş: 24 km E of Muş, Davis 24779 (BM, E); **C9** Hakkari: 15 km from Yüksekova to Hakkari, 1700-1800 m, 2007 Dirmenci 3571 & Fırat; 18 km from Şemdinli to Yüksekova, ca. 1700 m, Dirmenci 3580 & Fırat.

Cota J. Gays (5:863)

eC. hamzaoglu** U.Özbek & Vural, in Turk J Bot 35: 331-336 (2011).

[Özbek et al., 2011].

Type: Turkey. **A2** Bursa: Uludağ, above hotels, between cable cars, and near an old wolfram mine, 2050-2100 m, among *Juniperus* and *Vaccinium* subalpine shrubs, 31.07.2009, U.Özbek 2812 & M.Vural (Holotype GAZI; Isotypes BULU, HUB, ANK).

Paratypes: Turkey. **A2** Bursa: Uludağ, above hotels, between cable cars, and near an old wolfram mine, 2100 m, 29.07.2006, E.Hamzaoğlu 4403 & A.Aksoy, Ü.Budak (Bozok Univ. Herb., GAZI); Bursa: Uludağ, around Kuşaklıkaya, 2100-2200 m, among *Juniperus communis* shrubs, 07.08.2003, R.Daşkın 17911 & Ö.Yılmaz (BULU, GAZI); Bursa: Uludağ, between Kuşaklıkaya and wolfram mine pathway, 1900-2000 m, among *Juniperus communis* shrubs, 29.07.2004, R.Daşkın 20562, Ö.Yılmaz & E.Erdoğan (BULU).

Crepis L. (5:814)

e C. gemicii** H.Yıldırım, Ö.Bingöl & M.Armağan, in Nord J Bot 29: 14-19, (2011).

[Yıldırım et al., 2011]

Type: Turkey. **B9** Van:Gevaş, Deveboynu peninsula, above İnköy, Mountain steppe, meadows and openings in *Quercus petraea* subsp. *pinnatiloba*, 2100 m a.s.l., 17 Jul 2002, Ö.Bingöl 2199 (holotype: EGE, isotype: VANF).

Cousinia Cass. (5:329)

eC. x kurubasgeciensis** Ilcim & Ozcelik, in BioDiCon, 6/1:71-75 (2013).

[İlçim et al., 2013]

Type: Turkey. **B9** Van: Kurubaş pass,stepe vegetation, 1700-1900 m, 10 july 1994, A. İlçim 60 (Holo in MKUH; isotypes in VANF and GUL Herbaria).

Eclipta L. (5:45)

e E. turkica** Yıldırım, in Ot Sist. Bot. Dergisi, 18 (2):1-24 (2011).

[Yıldırım, 2011]

Type: Turkey. **C6** Osmaniye: Kadirli, Andırın'a doğru 10 km, Yenigün (Mehirli) köyü, yol kıyısı, yamaç, sulak yer, 485 m, 02.09.2008, Ş. Yıldırım 35173 (holo. Yıldırım Otluk'u; iso. EGE, HUB).

Echinops L. (5:609)

***E. adenocaulos** Boiss., Diagn. Ser. 1 (10): 88 (1849).

[Vural & Şapcı, 2012]

Type: Lebanon. Saida, 10.7.1856, Gaillardot 1323 (K).

Examined specimens: Turkey. **B6** Malatya: Between Darende and Gürpınar Waterfall road, near Beybaşı, 38°33'28"N, 37°26'94"E, 1209 m, 06.7.2008, C.Vural 4379 (Erciyes Univ. Herb.). **B8** Bingöl: 40°56'35"E, 1800 m, 26.8.2007, C.Vural 4465 (Erciyes Univ. Herb.). **C6** Kahramanmaraş: Between Gök-sun and Doğankonak, 20 km, 38°11'35"N, 36°27'40"E, 1621 m, 21.7.2007, C.Vural 4356 (Erciyes Univ. Herb.). **C7** Şanlıurfa: Bilecik, Suruç, 37°03'38"N, 38°09'88"E, 757m, 06.8.2008, C.Vural 4574 (Erciyes Univ. Herb.).

eE. antalyensis** C. Vural, in Ann Bot Fenn 49: 95-98 (2012).

[Vural, 2012]

Holotype: Turkey. Antalya province, Antalya-Kemer, Konyaaltı, 36° 52.768' N, 30° 39.671' E, 15-30 m, in maquis, 20 August 2008, Servet Özcan & C. Vural 4599 (holotype Herbarium of Erciyes University; isotypes ANK, GAZI).

eE. borae** C. Vural, in Ann Bot Fenn 49: 95-98 (2012).

[Vural, 2012]

Holotype: Turkey. Mersin (İçel) province, Erdemli-Silifke, Ayaş, near Paşasuyu stream, 36° 28.643' N, 34° 10.294' E, 1-20 m, road side, in maquis, 24 july 2009, Bora Vural & C. Vural 4749 (holotype Herbarium of Erciyes University; isotypes ANK, GAZI).

***E. chardinii** Boiss. & Buhse, Nouv. Mém. Soc. Imp. Nat. Mosc. 12: 124 (1860).

[Vural & Şapcı, 2012]

Type: Muschambar, Buhse s.n. (K).

Examined specimens: Turkey. **B5** Yozgat: Sorgun, north of Çiğdemli town, between Sorgun and Çekerek, 16 km, 39°50'65"N, 35°18'00"E,

1126 m, 21.8.2007, *C.Vural* 4396 (Erciyes Univ. Herb.); Sorgun, between Gökdere and Çiğdemli, 2 km, 39°58'77"N, 35°23'73"E, 21.8.2007, *C.Vural* 4397 (Erciyes Univ. Herb.); **B7** Malatya: Between Malatya and Gölbaşı, 23 km, 38°16'73"N, 38°05'13"E, 1096 m, 05.8.2007, *C.Vural* 4371 (Erciyes Univ. Herb.); Between Darende and Gürün, Yazıköy, 38°40'62"N, 37°26'08"E, 1210 m, 05.8.2007, *C.Vural* 4380 (Erciyes Univ. Herb.); Between Malatya and Kayseri, 8 km, 38°21'27"N, 38°02'48"E, 919 m, 06.8.2006, *C.Vural* 4376 (Erciyes Üniv. Herb.); Between Gürün and Malatya, c. 10 km, E of Darende, banks of Tohmasuyu, c. 900 m, 5.8.1956, *McNeill* 432 (K); Elazığ: Between Elazığ and Malatya, 20 miles from Elazığ, 01.9.1954, *P.H.Davis* 24801 (K); **C8** Mardin: Kasmin, 20.7.1888, *Sintenis* 1375 (K).

***E. gaillardotii** Boiss., *Diagn. Ser.* 2(3): 38 (1856).

[*Vural & Şapcı*, 2012]

Type: In Syria, Littorali ad Sidonem. Gebaa et Libano ad Machmouche et inditione *Merdjaioun* s.n. (K).

Examined specimens: Turkey. **C5** Mersin: Çamlıyayla, 37°39'13"N, 34°42'25"E, 896 m, 01.7.2008, *C.Vural* 4496 (Erciyes Univ. Herb.). Syria. 10.7.1816, *Gaillardot* 1941 (K).

***E. ritrodes** Bunge in *Bull. Acad. Petersb.* 6:407 (1863).

[*Vural & Şapcı*, 2012]

Type: Meshkhed in montis ad orientem sitis, July 1858, Bunge s.n. (K).

Examined specimens: Turkey. **B6** Kahramanmaraş: Between Göksun and Doğankonak vilage, 24 km, 38°12'45"N, 36°25'84"E, 1614 m, 04.8.2007, *C.Vural* 4352 (Erciyes Univ. Herb.). **C6** Kahramanmaraş: Ahır Mountain, 37°37'91"N, 36°56'52"E, 1552 m, 04.8.2007, *C.Vural* 4359 (Erciyes Univ. Herb.); *ibid.*, near Küçük Lake, 37°37'60"N, 36°55'00"E, 1379 m, 04.8.2007, *C.Vural* 4364 (Erciyes Univ. Herb.). **C10** Hakkâri: 10 km from Bajirge to

Yüksekova, 1900 m, shaley hillside on steppe, 18.6.1966, *P.H.Davis* 45192 (K).

***E. tenuisectus** Rech.f., *Anz. Österr. Akad. Wiss., Math.-Naturwiss. Kl.* 101: 16 (1964).

[*Vural & Şapcı*, 2012]

Type: Iraq. Saharaban, Diyalah distr., 31.5.1937, *Rechinger* 9714 (K).

Examined specimens: Turkey. **B6** Kahramanmaraş: Between Göksun and Doğankonak, 20 km, 38°11'35"N, 36°27'40"E, 1621 m, 04.8.2007, *C.Vural* 4355 (Erciyes Univ. Herb.). **B7** Diyarbakır: Between Ergani and Diyarbakır, 25 km, 743 m, 07.8.2007, *C.Vural* 4589 (Erciyes Univ. Herb.); Elazığ: Between Elazığ and Bingöl, 48 km, 38°36'97"N, 39°40'89"E, 1069 m, 26.8.2007, *C.Vural* 4472 (Erciyes Univ. Herb.); Malatya: Between Malatya and Gölbaşı, 23 km, 38°16'73"N, 38°05'13"E, 1096 m, 05.8.2007, *C.Vural* 4370 (Erciyes Univ. Herb.).

Galatella Cass. (5:122)

e G. anatolica** Hamzaoğlu & Budak, in *Nord J Bot* 31:087-089 (2013). [*Hamzaoğlu et al.*, 2013]

Type: Turkey. **C6** Osmaniye: Bahçe, Gökçedağ summit, on serpentine rocky places, 1630 m a.s.l., 7 Sep. 2011, Hamzaoğlu 6296, Budak and M. Koç (holotype: GAZI, isotypes: E, GAZI, ANK, Bozok Univ. Biol. Dept Herb.)

Helichrysum Gaertner (5:80)

e H. uncapitatum** S.G. Şenol, Ö. Seçmen & B. Öztürk, in *Ann Bot Fenn* 48: 145–154, 2011.

[*Şenol et al.*, 2011]

Type: Turkey. **C2** Denizli: Above Kızılcabölük district, Babadağ (Cadmus Mt.), Evran Mountain, 37°41'53.5"N, 28°59'43.4"E, 1920 m,

on calcareous rocks, 13.vii.2004 S.G. Şenol & B. Öztürk (holotype EGE 40730; isotypes BC, IZEF, S)

e H. yuksekovaense** Yıldırımli, in Ot Sist. Bot. Dergisi, 18 (2):1-24 (2011). [Yıldırımli, 2011]

Type: Turkey. **C10** Hakkâri: Yüksekova, Kamışkı, Yeşildere yıkık mezrası aşağısı, Dağlıca yolu, yol kıyısı, yamaç, 2000 m, 18.06.2003, Ş. Yıldırımli 29013 (holo. Yıldırımli Otluk'u; iso. GAZI, HUB).

Inula L. (5:54)

e I. tuzgoluensis** M. Öztürk & O. Çetin, in Turk J Bot. 37: 825-835 (2013).

[Öztürk & Çetin, 2013]

Type: Turkey **C4** Konya: Cihanbeyli, between Gölyazı-Lake Tuz, 920 m, salty stepe, 13.07.2010, 38° 33.57' N, 033° 18.19' E, M. Öztürk 1248 & A. Duran (Holotype: KNYA, isotypes: GAZI, ANK, HUB, E).

Paratypes: Turkey. **C4** Konya: Cihanbeyli, between Gölyazı and Lake Tuz, after Dumanağıl place, 923 m, 25.09.2011, A.Duran 9313 & B.Doğan, E.Martin, Ö.Çetin (KNYA); ibid., 9. km, 922 m, 12.06.2006, A.Duran 7180 (KNYA).

Jurinea Cass. (5:439)

e J. catanoica** Boiss. & Hausskn. subsp. **mardinensis** B. Doğan & A. Duran, in Nord J Bot 29: 366-369 (2011).

[Doğan et al., 2011]

Type: Turkey. **C8** Mardin: Bakirkiri, abandoned fields, vineyard, 1150 m a.s.l. 37°19.221' N, 40° 45.658' E, 5

Aug 2009, A. Duran and B. Doğan 8640 (holotype: KNYA, isotype: GAZI).

Klasea Cass.

e K. turkica** Yıldırımli, in Ot Sist. Bot. Dergisi, 18 (2):1-24 (2011). [Yıldırımli, 2011]

Type: Turkey. **B9** Van: Erek dağı, Gevenli köyü üstü, batı yamaçlar, bozkır, 2100-2250 m, 23.06.2011, Ş. Yıldırımli 37625 (holo. Yıldırımli Otluk'u; iso. HUB).

Onopordum L. (5:356)

***O. rhodense** Boiss. ex Rech. fil. in Phytion (Horn), 1: 214 (1949).

[Aytaç & Duman, 2013]

Examined specimen: Antalya: Kaş, Bayındır village, near road, 210 m, calcareous rocks, 29.05.2010, Aytaç 9579 & Duman GAZI.

Scorzonera L. (5:632)

eS. ahmet-duranii** S. Makbul & Coskuncelebi in Nord J Bot 30: 2-11 (2012).

[Makbul et al., 2012]

Type: Turkey. **C2** Muğla: Köyceğiz, Sandras Mountain, 1655 m a.s.l. 37° 07' 756" N, 28° 47' 736" E, 23 June 2010, S. Makbul and K. Coskuncelebi 230 (holotype: KTUB, isotype: RUB).

eS. aksekiensis** A.Duran & M. Öztürk in Nord J Bot 31: 704-710 (2013). [Duran et al., 2013]

Type: Turkey. **C3** Antalya: Akseki, Güzelsu, Otluk mountain, Kuyuönü vicinity, 1600–1650 m a.s.l., 1 Jul 2009, 36°90.823'N, 031°86.699'E, A. Duran 8469 and B. Doğan (holotype: KNYA,

isotypes: GAZI, ANK, HUB, Selçuk Univ. Herbarium of the Faculty of Education).

eS. coriacea** A. Duran & Aksoy, in *Candollea* 66: 353-359 (2011).

[Duran et al., 2011]

Type: Turkey. **C3** Konya: Derebucak, Çamlık district, Kızıldağ, serpentine stony places, 1400 m, 37° 21.869' N, 31° 40.501' E, 12.vi.2009, A. Duran 8349 & B. Doğan (holo: KNYA; iso.: GAZI, ANK, HUB, Selçuk Univ. Herbarium of the Faculty of Education).

e S. kurtii** Yıldırım, in *Ot Sist. Bot. Dergisi*, 18 (2):1-24 (2011).

[Yıldırım, 2011]

Type: Turkey. **B4** Konya: Kulu, Tuzyaka (Sütkanlı), Bozan köyü, Kaldırım yolu, Tuzgölü kıyısı, tuzcul yerler, 945 m, 04.05.2007, Ş. Yıldırım 33661 (holo. Yıldırım Otluk'u; iso. HUB).

e S. pacis** Güzel, Kayıkcı & S. Yıldız, in *Ann Bot Fenn* 50: 417-422 (2013).

[Güzel et al., 2013]

Holotype: Turkey. **C6** Hatay, Antakya, around Karaali town, Maquis, 410 m a.s.l., 36° 18' 30.96" N lat, 36° 9' 9.57" E long, 14.VI. 2011. S. Yıldız 551 & S. Kayıkcı (holotype GAZI: isotypes HUB, MKU).

e S. tuzgoluensis** A. Duran, B. Doğan & S. Makbul, in *Nord J Bot* 29: 20-25 (2011).

[Doğan et al., 2011]

Type: Turkey. **B4** Konya: Cihanbeyli,

between Gölyazı-Tuzgölü, 908 m a.s.l., 38° 32.552' N, 033° 21.188' E, 11 Jun 2009, A. Duran 8368, B. Doğan and S. Makbul (holotype: KNYA, isotypes: GAZI, ANK, HUB, MR).

Paratypes: **B4** Konya: Cihanbeyli, between Gölyazı-Tuzgölü, 908 m a.s.l., 38° 32.552' N, 033° 21.188' E, 12 Jul 2006, A. Duran 7241 (KNYA, MR); **B4** Konya: Cihanbeyli, between Gölyazı-Tuzgölü, 908 m a.s.l., 38° 32.552' N, 033° 21.188' E, 29 Jun 2009, B. Doğan 2100 (KNYA, GAZI, MR)

e S. zorkunensis** Coşkunçelebi & S. Makbul, in *Türk J Bot* 36: 299-310 (2012).

[Coşkunçelebi et al., 2012]

Type: Turkey. **C6:** Osmaniye: Amanos Dağı, Zorkun Yaylasından 5 km sonra, Keldaz tepesi, Halep gören mevkii, 2075 m, 36° 58' 388" N, 36° 58' 388" E, 05.07.2010, S. Makbul 242 & K. Coşkunçelebi (holotype: Karadeniz Technical Univ. Herb., Rize Univ. Herb., ANK).

Sigesbeckia L. (5:45)

***S. pubescens** (Makino) Makino, *J. Jap. Bot.* 1(7): 24 (1917).

[Karaer & Terzioğlu, 2013]

Examined specimens: **A7** Trabzon: Maçka, 1000 m, 29.08.1974 (KATO 1548); **A8** Trabzon: Çaykara, 420 m, 18.09.1995 (KATO 12718); **A8** Trabzon: Of, 10 m, 16.08.1997 (Kato 12720); **A8** Artvin: Hatila Vadisi National Park, around Taşlıca village, edge of forest, wet places, roadsides, 594m, 22.10.2011, UTM: 0730231, 4561777 E. Karaer 22503, (KATO 18784); **A7** Trabzon: Asrin, Çardaklı village, 561 m, 01.10.2011, UTM: 0575829, 4526794 (KATO 18912).

■ **Turanecio** Hamzaoğlu, in *Türk J Bot* 35: 479-508 (2011).

[Hamzaoğlu et al., 2011]

≡ *Senecio* L., sect. *Velutini* Boiss., *Fl. Orient.* 3: 395 (1875) p.p.; sect. *Reniformes* Boiss., *Fl. Orient.* 3: 400 (1875) p.p.; sect. *Quadridentati* Boiss., *Fl. Orient.* 3:413 (1875).

Type: *Turanecio hypochionaeus* (Boiss.) Hamzaoglu.

T. bulghardaghensis (Soldano) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio farfarifolius* Boiss. & Kotschy, *Fl. Orient.* 3: 400 (1875), non Maxim. (1874) [*Senecio farfarifolius* Maxim.]; *Iranecio farfarifolius* (Boiss. & Kotschy) C.Jeff rey, *Kew Bull.* 47(1): 102 (1992); *Senecio bulghardaghensis* Soldano, *Comp. Newsl.* 20/21: 7 (1992), nom. nov. pro *S. farfarifolius* Boiss. & Kotschy; *Iranecio bulghardaghensis* (Soldano) D.Heller, *Consp. Fl. Or.* 8: 68 (1993).

T. cariensis (Boiss.) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011].

≡ *Senecio cariensis* Boiss., *Fl. Orient.* 3: 398 (1875); *Iranecio cariensis* (Boiss.) C.Jeff rey, *Kew Bull.* 47(1): 102 (1992).

T. davisii (V.A.Matthews) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio davisii* V.A.Matthews, *Notes Roy Bot Gard Edinb* 33: 256 (1974); *Iranecio davisii* (V.A.Matthews) C.Jeff rey, *Kew Bull.* 47(1): 102 (1992).

T. eriospermus (DC.) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio eriospermus* DC., *Prodr.* 6: 358 (1838); *Iranecio eriospermus* (DC.) C.Jeff rey, *Kew Bull.* 47(1): 102 (1992).

T. hypochionaeus (Boiss.) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio hypochionaeus* Boiss., *Diagn. Ser.* 1(4): 14 (1844); *Iranecio hypochionaeus* (Boiss.) C.Jeff rey, *Kew Bull.* 47(1): 102 (1992).

T. jurineifolius (Boiss. & Balansa) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio jurineifolius* Boiss. & Balansa, *Diagn. Ser.* 2(6): 99 (1859); *Iranecio jurineifolius* (Boiss. & Balansa) C.Jeff rey, *Kew Bull.* 47(1): 102 (1992).

T. lazicus (Boiss. & Balansa) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio lazicus* Boiss. & Balansa, *Fl. Orient.* 3: 400 (1875); *Iranecio lazicus* (Boiss. & Balansa) C.Jeff rey, *Kew Bull.* 47(1): 103 (1992).

T. lorentii (Hochst.) Hamzaoglu, in *Turk J Bot* 35: 479-508 (2011).

[Hamzaoglu et al., 2011]

≡ *Senecio lorentii* Hochst., *Wanderungen* 330 (1845) & in *Flora* 28: 27 (1845); *Iranecio lorentii* (Hochst.) C.Jeff rey, *Kew Bull.* 47(1): 103 (1992).

T. pandurifolius (K.Koch) Hamzaoğlu, in Turk J Bot 35: 479-508 (2011). [Hamzaoğlu et al., 2011]
 ≡ *Senecio pandurifolius* K.Koch, *Linnaea* 17: 48 (1843); *Iranecio pandurifolius* (K.Koch) C.Jeffrey, *Kew Bull.* 47(1): 103 (1992).

T. taraxacifolius (M.Bieb.) Hamzaoğlu var. **taraxacifolius**, in Turk J Bot 35: 479-508 (2011). [Hamzaoğlu et al., 2011]
 ≡ *Cineraria taraxacifolia* M.Bieb., *Fl. Taur.-Cauc.* 2: 313 (1808); *Senecio taraxacifolius* (M.Bieb.) DC., *Prodr.* (DC.) 6: 348 (1838); *Iranecio taraxacifolius* (M.Bieb.) C.Jeffrey, *Kew Bull.* 47(1): 103 (1992).

T. taraxacifolius (M.Bieb.) Hamzaoğlu var. **discoideus** (V.A.Matthews) Hamzaoğlu, in Turk J Bot 35: 479-508 (2011). [Hamzaoğlu et al., 2011]
 ≡ *Senecio taraxacifolius* (M.Bieb.) DC. var. *discoideus* V.A.Matthews, *Notes Roy Bot Gard Edinb* 33: 257 (1974); *Iranecio taraxacifolius* (M.Bieb.) C.Jeffrey var. *discoideus* (V.A.Matthews) D.Heller, *Consp. Fl. Orient.* 8: 171 (1993).

CONVOLVULACEAE

Convolvulus L. (6:198)

e C. x peshmenii** C. Aykurt & Sümbül (*Convolvulus holosericeus* Bieb. subsp. *macrocalycinus* Hausskn. & Bornm. × *Convolvulus compactus* Boiss.), in Nord J Bot 29:408-416(2011). [Aykurt & Sümbül, 2011]

Holotype: Turkey. Southern Anatolia, C5 Adana, Pozantı, 5-6 km from Pozantı to Adana, under *Pinus brutia*, 945 m a.s.l., 9 Jun 2007, C. Aykurt 1495 and N.Kemaloğlu (AKDU).

eC. x pseudocompactus** C.Aykurt & Sümbül (*Convolvulus oleifolius* Desr. V

var. *deserti* Pamp. × *Convolvulus compactus* Boiss.), in Nord J Bot 29:408-416 (2011).

[Aykurt & Sümbül, 2011]

Type: Turkey. Western Anatolia, C1 Muğla, Datça, between Marmaris and Datça, stony slopes, 80m a.s.l., 7 May 2006, C.Aykurt 1006 and N.Kemaloğlu (holotype: AKDU).

eC. x turcicus** C. Aykurt & Sümbül (*Convolvulus holosericeus* Bieb. subsp. *holosericeus* × *Convolvulus compactus* Boiss) in Ann Bot Fenn 48: 428-434 (2011).

[Aykurt & Sümbül, 2011]

Holotype: Turkey. C. Anatolia, B3 Eskişehir, Seyitgazi, 2 km from Seyitgazi to the Cevizli road, stepe, 1117 m, 7.vi.2008 C. Aykurt 2172 & N. Kemaloğlu (AKDU).

CRASSULACEAE

Sedum L. (4:224)

eS. koyuncui** Yıldırımli in Ot Sist. Bot. Dergisi, 19(1)1-34 (2012). [Yıldırımli, 2012]

Type: Turkey. B1 Balıkesir. Edremit, Zeytinli, Kazdağı, Hatip pınarı, or-

man açıklığı, 1135m, 29.05.1991, Ş. Yıldırımli 38413 (holo. Yıldırımli Otluk'u).

CRUCIFERAE (1:248)

Aethionema L. (1:314)

e A. anatolica** A. Duran & M. Öztürk, in Ann Bot Fenn 50:183-186 (2013).

[Karabacak et al., 2013]

Type: Turkey. **C5** Konya: Ereğli, Halkapınar, Kayasaray village, Dügünlük stream valley, 1660 m a.s.l., 22 June 2012, limestone cliffs, 37° 22 '056" N, 34° 16 ' 388" E, M. Özt. 1733, A. Duran & O. Karab. (holotype KNYA; isotypes GAZI, ANK).

Alyssum L. (1:362)

e A. kaynakiae** Yılmaz, in Nord J Bot 30: 190-194 (2012).

[Yılmaz, 2012]

Holotype: Turkey. **C2:** Denizli: Çameli, Üzümlü-Çameli, Kirazlıyayla çıkışı, 36°58'35"N, 29°14'20"E, 890 m a.s.l., 9 May 2010, Ö. Yılmaz 87/10-1 (BULU).

Arabis L. (1:422)

e A. kaynakiae** Daşkın, in Phytotaxa 126 (1): 43-48 (2013).

[Daşkın, 2013]

Type: Turkey. **C4** Mersin: Silifke-Gülнар, 17.km, 36° 22' 26" N, 33° 46' 21" E, 720 m, on calcareous rocks, 25 March 2011, fl. And fr., G. Kaynak, R. Daşkın 1101, Ö. Yılmaz & A. Yılmaz (holotype BULU).

Paratype: Turkey. **C4** Mersin: Gülнар-Silifke, Silifke to 40 km, 36° 20' 24" N, 33° 45' 21" E,

on calcareous rocks, 750 m, 23 May 2011, fr. R. Daşkın 1202 (BULU).

Barbarea R. Br. (1:433)

eB. duralii** Y. Bağcı & Savran, Türkiye Bitkileri Listesi p.889 (2012). [Güner (ed.), 2012]

Type: Turkey. **C2** Muğla: Köyceğiz, Ağla-Eskere yolu, Gökçeova Gölü'ne 1 km kala, 1720 m, 37°03'517"N, 28°49'212"E, 05.vi.2008, Bağcı 3773, Savran ve Başköse (holo. KNYA, iso. NGBB, ANK, GAZI).

Brassica L. (1:263)

e B. elongata** Ehrh. subsp. **duralii** Yıldırımli, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırımli, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırımli, 38532 (holo. Yıldırımli Otluk'u; iso. GAZI, HUB, KNYA, Yıldırımli Otluk'u).

Paratypes: **B3** Eskişehir: Sivrihisar, Afyon'a doğru, Aşağıkepen köyü yakını jipsli yerler, bayır, dere tepe, 990-1030 m, 31.05.2008, Ş. Yıldırımli 34748 (Yıldırımli Otluk'u); **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1005 m, 01.08.2012 Ş. Yıldırımli 38573 (Yıldırımli Otluk'u).

Camelina Crantz (1:490)

e C. alpkoyensis** Yıldırımli, in Ot Sist. Bot. Dergisi, 18 (1):1-13 (2011).

[Yıldırımli, 2011]

Type: Turkey. **B7** Erzincan: Kemah, Alpköy, Karasu kenarı, 1100 m, 26.05.1979, Ş. Yıldırımli 1502 (holo. HUB; iso. Photo. Yıldırımli)

Draba L. (1:413)

eD. cemileae** Karaer, in *Ann Bot Fenn* 49:111-116 (2012).

[Karaer, 2012]

Type: Turkey. **A7** Giresun: 6-12 km N of Şebinkarahisar, Şaplıca and Tamzara village (NE Anotolia) 1300-1500 m, 40° 20' 41" N, 38° 26' 27" E, volcanic rocky slopes, 24.VII.2003 F.Karaer 10135 & F. Celep (holotype OMUB).

Paratypes: Turkey. **A7** Giresun: Schlucht des Aslanyurdu deresi 11 km N of Şebinkarahisar, 1350 m slopes, I.VII. 1955 A.Huber-Morath 13759; **A6** Sivas: between Zara and Suşehri, 1500 m, 16.V.1933 Balls 252 (K)

Fibigia Medikus (1:356)

TM Section Purpureae A. Duran & Ö. Çetin, in *Afr. J. Biotechnol.* 11(1): 109-119 (2012).

[Çetin et al., 2012]

Fibigia suffruticosa (Vent.) Sweet

eF. clypeata** subsp. **anatolica** A.Duran & Tustas, in *Afr. J. Biotechnol.* 11(1): 109-119 (2012).

[Çetin et al., 2012]

Type: Turkey. **C6** Hatay: Iskenderun, Arsuz, above Gözcüler town, serpentine stony places, 1350 m, 07.07.2007, S.Tustas 1007 (holotype: KNYA, isotypes: ANK, GAZI, HUB, Selçuk Üniv. Eğitim Fak. Herb.).

Paratype: Turkey. **C6** Hatay: Iskenderun, Arsuz, above Gözcüler town, serpentine stony places, 1350 m, 21.07.2006. S.Tustas 1001 (KNYA, Selçuk Üniv. Eğitim Fak. Herb.); Hatay: Iskenderun, Arsuz, above Gözcüler town, serpentine stony places, 1350 m, 31.05.2008, S.Tustas 1009 (KNYA, Selçuk Üniv. Eğitim Fak. Herb.); Hatay: Iskenderun, Arsuz, above Gözcüler town, serpentine stony places, 1350

m, 36°20.380'N, 35°58.978'E, 06.08.2001, N.Adıgüzel 4069 (GAZI).

Iberis L. (1:309)

e I. halophila** Vural & H. Duman, in *Turk J Bot* 36: 427-433 (2012).

[Vural et al., 2012]

Type: Turkey. **B4** Konya: Cihanbeyli, Gölyazı to Günyüzü (Tersakan Gölü), 1000 m, salt steppes, 03.06.1999, M. Vural 8200 (holotype: GAZI, isotypes: ANK, HUB).

Paratypes: **B4** Aksaray: Eskil-Yenikent, 4 km east of Eskil, 950 m, salt steppes, 09.10.1998, M. Vural 8169 & H. Duman (GAZI, ANK, HUB); *ibid.*, 940 m, 05.07.1998, M. Aydoğdu 3856 (GAZI); *ibid.*, 24.06.1999, Z. Aytaç 7909, H. Duman & M. Ekici (GAZI); *ibid.*, 2 km east of Eskil, 980 m, 03.06.1999, M. Vural 8195 (GAZI, ANK); **B4** Konya: Cihanbeyli, Gölyazı to Günyüzü (Tersakan Gölü), 930 m, salt steppes, 29.07.1998, H. Duman 6832 & Z. Aytaç (ANK, HUB).

DIPSACACEAE

Cephalaria Schrader ex Roemer & Schultes (4:585)

eC. davisiana** Göktürk & Sümbül, in *Turk J Bot* 36:311-321 (2012).

[Göktürk et al., 2012]

Type: Turkey. **C6** Kahramanmaraş: between Göksun and Sarız, east of Doğançanak village, Binboğa mountain, mountain slopes, 1700-2000 m, 3.8.2001, R. S. Göktürk 4733 & M. Göktürk (holotype: Akdeniz Univ. Herb. İsoypes: ANK, GAZI, HUB).

Paratype: Turkey. **C6** Kahramanmaraş: between Göksun and Sarız, east of Doğançanak village, Binboğa mountain, mountain slopes, 1700-2000 m, 9.8.1995, R.S. Göktürk 3508 & M.R. Tunç (Akdeniz Univ. Herb. , ANK, GAZI, HUB).

eC. sumbuliana** Göktürk, in Turk J Bot 36:311-321 (2012).

[Göktürk et al., 2012]

Type: Turkey. **C4** Konya: Seydişehir, 21 km from Seydişehir to Akseki, rocky places, under and clearing in Abies forest, 1435 m, 8.8.2000, R.S. Göktürk 4466 & F. Göktürk (holotype: Akdeniz Univ. Herb., isotypes: ANK, GAZI, HUB).

Paratypes: Turkey. **C4** Konya: Seydişehir, Seydişehir-Akseki yolunun 21. km'si kayalık yerler, Abies altı ve açıklıkları, 1435 m, 4.7.2002, R.S. Göktürk 4865 & F. Göktürk (Akdeniz Univ. Herb.); Seydişehir, Seydişehir-Akseki yolunun 21. km.si kayalık yerler, Abies altı ve açıklıkları, 1435 m, 1.8.2002, R.S. Göktürk, 5040 & M. Göktürk (Akdeniz Univ. Herb.).

ELATINACEAE

Elatine L. (2:353)

***E. triandra** Schkuhr, Handb. 1: 345 (1791).

[Akalin Uruşak et al., 2013]

Examined specimens: **A1(E)** Kırklareli: Dereköy boundary, Taşköprü to Şükrüpaşa, 41° 57' N, 27°27' E, 513 m, 04.07.2009, seasonal ponds bank of the road, N. Güler & H. Ersoy (EDTU 12777).

EUPHORBIACEAE

Euphorbia L. (7:571)

eE. yıldırımlii** Dinç, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırımli, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırımli 38540 (holo. Yıldırımli

Otluk'u; iso. ANK, EGE, HUB, Yıldırımli Otluk'u).

Paratype: **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.08.2012, Ş. Yıldırımli 38581 (GAZI, Yıldırımli Otluk'u).

FRANKENIACEAE

Frankenia L. (2:352)

eF. salsuginea** Adıgüzel & Aytaç, in Turk J Bot 36: 427-433 (2012).

[Vural et al., 2012].

Type: Turkey. **B4** Aksaray: Cihanbeyli, Gölyazı to Günyüzü (Tersakan Gölü), 1000 m, salt steppes, 03.06.1999, M. Vural 8199 (holotype: Gazi, isotypes: ANK, HUB).

Paratypes: Turkey. **B4** Aksaray: Cihanbeyli, Gölyazı to Günyüzü (Tersakan Gölü), 930 m, salt steppes, 25.09.1996, M. Vural 7719, H. Duman & N. Adıgüzel (GAZI, ANK, HUB); ibid., A. Güner 12688, H. Duman, M. Vural & T. Ekim (GAZI).

LABIATAE

Ballota L. (7:156)

eB. antalyanse** F. Tezcan & H. Duman, Türkiye Bitkileri Listesi p.894-896 (2012).

[Güner (ed.), 2012]

Type: **C3** Antalya: Finike, Turunçova-Elmalı yolu, 5. km, maki, vadi içi, 170 m, 17.vii.1997, F. Tezcan 1701 (holo. GAZI).

Lamium L. (7:126)

eL. artvinense** Yıldırımli, in Ot Sist. Bot. Dergisi, 19(1)1-34 (2012).

[Yıldırımli, 2012]

Type: Turkey. **A9** Artvin: Borçka, Ca-

mili, Düzenli köyü, Ukviyela çevresi, Karçal dağları eteği, 1125-1175 m, 20.09.2010, Ş. Yıldırım 37325 (holo. Yıldırım Otluk'u; iso. ANK, EGE,GAZİ, HUB, Yıldırım Otluk'u).

***L. garganicum** L. in Sp. Pl. Ed. 2:808 (1763) subsp. **striatum** (Sm.) Hayek in Prodr. Fl.Balc. 2:275 (1929). [Tuzlacı & Bulut, 2012]

Examined specimen: Turkey. **B1** Çanakkale: Gökçeada, Dereli köyü, 24.iv.2004, E. Tuzlacı (MARE 9225).

Marrubium L. (7:165)

e****M. sivasense** Aytaç, Akgül & Ekiçi, in Turk J Bot 36: 443-443 (2012). [Aytaç et al., 2012]

Type: Turkey. **B6** Sivas: Between Kangal and Sivas, 2 km, 1550-1600 m, 09.07.2002, stepe, M. Ekici 3035, Aytaç & H.Akan. (holotype: GAZI; isotypes ANK, HUB).

Paratype: **B6** Sivas: Between Kangal and Gürün, east of Mancılık village, 1640 m, 10.07.2007, stepe, Aytaç 9074 (GAZI).

Phlomis L. (7:102)

***P. x praetervis**a Rech. f. (*Phlomis bruguieri* Desf. X *Phlomis kurdica* Rech. f.), Öst. Bot. Zeitschr. 89:296, 1940.

[Kaya & Ertekin, 2012]

Examined specimen: Turkey. **C7** Şanlıurfa: East side of Germuş mountain, stepe, 665 m, 25.05.2008, OFK 3038 & ASE (DUF).

Salvia L. (7:400)

e** **S. brachyantha** (Bordz.) Pobed. subsp. **tankutiana** Bagherpour, Celep, Kahraman & Doğan, in Turk J Bot 35:

343-350 (2011).

[Bagherpour et al., 2011]

Type: Turkey. **B5** Kırşehir, Kaman, Gönüldağ, above Demirli village 39°17'567"N, 33°56'860"E, 1424 m, 10.6.2008, Bagherpour 465 (holotype ANK: isotypes E,GAZI).

Paratypes: Turkey, **B5** Kırşehir: North of Kırşehir, Boztepe hills, 1504 m, 17.5.2008, Bagherpour 436 (ANK); Kırşehir: Kaman, Gönüldağ above Demirli village, 1400-1700 m, 5.6.2009, Bagherpour 537 (ANK).

e****S. cadmica** Boiss. var. **bozkirien-sis** Celep, Kahraman & Doğan, in Pl. Ecol. Evol. 144 (1): 111-114 (2011). [Celep et al., 2011]

Type: Turkey. **C4** Konya, Bozkır, Erenler hill (Sivri), near İkidelik, on calcareous rocks, 37°11' 604" N, 32° 14' 782" E, alt. 1160 m, 2 May 2006, A. Kahraman & F. Celep 1034 (holo.: GAZI; iso.; ANK).

e****S. siirtica** Kahraman, Celep & Doğan, in Nord J Bot 29: 397-401(2011).

[Kahraman et al., 2011]

Type: Turkey. Southeast Anatolia, Siirt: north of Siirt Aydınlar, Çatılı region, 38°1'23.9988"N, 42°16'0.9984"E, 1473 m a.s.l., open *Quercus* forest, 3 June 2009, Kahraman 1650 and Celep (holotype: ANK, Fig. 2; isotypes: E, GAZI).

Scutellaria L. (7: 78)

e****S. anatolica** M. Cicek & O. Ketenoğlu, in Ann. Bot. Fenn. 48: 276-279 (2011)

[Çiçek & Ketenoğlu, 2011]

Type: Turkey. **C5** Niğde: Ulukışla'nın 15 km kuzeydoğusu, Çaykavak geçidi, 37°35'56.3"N, 34°32'36.3"E, 1540-1610 m, aşınmış volkanik kayalık ve taşlık yamaçlar, 14.vi.2007, M. Çiçek 2050 (holo. ANK, iso. AEF, ANK, GAZI, PAMUH)

eS. x ketenoglui** M. Çiçek & Yaprak (*Scutellaria tortumensis* (Kit Tan & Sorger) A. P. Khokhr. X *Scutellaria sosnowskyi* Takht. subsp. *sosnowskyi*), in *Phytotaxa* 29: 51-55 (2011).

[Çiçek & Yaprak, 2011]

Type: Turkey. Erzurum: Tortum-Uzundere arası, Derekapı, 40° 26' 03.2" N, 041° 29' 42.2" E, 1260 m, aşınmış açık kayalık ve taşlık yamaçlar, 23 june 2007, Çiçek 2061 (holotype ANK).

eS. yildirimlii** M. Çiçek & Yaprak, in *Phytotaxa* 132 (1): 53-58 (2013).

[Çiçek & Yaprak, 2013]

Type: Turkey. **B4** Ankara: Ayaş'tan Ankara'ya doğru 16. km, Aysantı geçidi, 1190 m, jipsli alanlar, 31 july 2006, M. Çiçek 2002 (holotype ANK, iso-types ANK, GAZI).

Paratypes: **A4** Ankara: Ayaş'ın 16 km doğusu, 1190 m, kıraç dik yamaçlar, 23 August 1977, Sorger 77-62-10 (W); **B3** Eskişehir: Polatlı-Sivrihisar yolu, Sivrihisar'a 24 km, Oğlakçı, 870 m, killi yamaçlar, 20 june 1980, E. Tuzlacı (ISTE 45549); **B3** Eskişehir: Sivrihisar, Aşağı Kepen köyü yakını, 950-1000 m, jipsli yerler, 27 September 2008, Ş. Yıldırım 35322 (Hb. Yıldırım, HUB); **B3** Eskişehir: Sivrihisar, Aşağı Kepen köyü aşağısı, 915 m, jipsli yerler, 28 july 2009, Ş. Yıldırım 36203, G. Yıldırım & H. I. Yıldırım (Hb. Yıldırım); **B3** Eskişehir: Sivrihisar, Aşağı Kepen köyüne gelmeden, Afyon-Sivrihisar yolu-Yeşilköy

bağlantısı üzeri, 872 m, jipsli yamaçlar, 11 September 2011, A. E. Yaprak 2011-534 (ANK); ibid., 1 November 2011, A. E. Yaprak 2011-578 (ANK); **B3** Eskişehir: Sivrihisar, Aşağı Kepen köyü, 955-1025 m, jipsli yerler, 1 june 2012, Ş. Yıldırım 38585 (GAZI, Hb. Yıldırım).

Stachys L. (7:199)

***S. cretica** L. subsp. **cretica**, in *Turk J Bot* 36: 217-234 (2012).

[Akçiçek et al., 2012].

Examined specimens: Turkey. **A1** Edirne: 23 km from Keşan to Gelibolu, Korudağı ramp, 50 m, 29.05.2007, Akçiçek 4543, Dirmenci (Hb. Akçiçek); Kırklareli: Pınarhisar, Poyralı village, 260 m, 16.06.2010, Akçiçek 5498 (Hb. Akçiçek).

***S. cretica** L. subsp. **salviifolia** (Ten.) Rech.f., in *Turk J Bot* 36: 217-234 (2012).

[Akçiçek et al., 2012].

Examined specimens: Turkey. **A1** Kırklareli: Pınarhisar, Poyralı village, 200 m, 31.05.2007, Akçiçek 4600 & Dirmenci (Hb. Akçiçek).

***S. thracica** Davidov, in *Turk J Bot* 36: 217-234 (2012).

[Akçiçek et al., 2012].

Type: Turkey. Istanbul: In pascuis circa Constantinopolem ad stationem Bijuk Han. 11.V.1913, B.Davidov (SOM – 62599).

Examined specimens: Turkey: **A1(E)** Kırklareli: 24 km from Kırklareli to Demirköy, Kapaklı village, 560 m, 31.05.2007, Akçiçek 4592 & Dirmenci (Hb. Akçiçek); 22 km from Kırklareli to Dereköy, 550 m, 31.05.2007, Akçiçek 4569 & Dirmenci (Hb. Akçiçek); İğneada-Limanköy road junction, 8 m, 31.05.2007, Akçiçek 4599 & Dirmenci (Hb. Akçiçek); 2 km from Dereköy to Demirköy, 550 m, 02.08.2007, Yıldız 16522 & Dirmenci (Hb. Akçiçek); 6 km from Armutveren to Sarpdere, 380 m, 21.06.2009, Akçiçek 5291 & Dirmenci; (Hb. Akçiçek) 22 km from Kırıkköy

to Demirköy, 150 m, 21.06.2009, Akçiçek 5299 & Dirmenci (Hb. Akçiçek); Demirköy, Sarpdere village, 350 m, 21.06.2009, Akçiçek 5298 & Dirmenci (Hb. Akçiçek); Tekirdağ: 2 km from Saray to Kıyıköy, E, 165 m, 21.06.2009, Akçiçek 5294 & Dirmenci (Hb. Akçiçek). **A2 (E)** İstanbul: On the way from Karamandere to Karacaköy, 28.07.1967, A.Baytop & G.Atila (ISTE 11617); Yeniköy, 19.06.1984, K.H.Rechinger 60753 (W); Bahçeköy, 08.06.1902, Aznavour s.n. (G); Çatalca, 19.05.2002, 80 m, İ.Genç 1278 (ISTE 82136).

***S. tymphaea** Hausskn., in Turk J Bot 36: 217-234 (2012).

[Akçiçek et al., 2012].

Examined specimens: Turkey. **A1** Kırklareli: 22 km from Kırklareli to Dereköy, 550 m, 31.05.2007, Akçiçek 4591 & Dirmenci (Hb. Akçiçek); 3 km from Şükrüpaşa village to Karadere village, 600 m, 31.05.2007, Akçiçek 4597 & Dirmenci (Hb. Akçiçek); İğneada-Limanköy road junction, 8 m, 31.05.2007, Akçiçek 4598 & Dirmenci (Hb. Akçiçek); 6 km from Dereköy to Bulgaria frontier, 550 m, 28.07.2007, Yıldız 16517 & Dirmenci (Hb. Akçiçek); Saray, Güngörmez village, 150 m, 01.08.2007, Yıldız 16527 & Dirmenci (Hb. Akçiçek); Kofcaz, 500 m, 01.08.2007, Yıldız 16611 (Hb. Akçiçek); Saray, 3 km from Beyceler village to Sinekli village, 150 m, 02.08.2007; Yıldız 16533 (Hb. Akçiçek).

eS. vuralii** Yıldız, Dirmenci & Akçiçek, in Ann. Bot. Fenn 48: 401-408 (2011).

[Dirmenci et al., 2011]

Holotype: Turkey. **A4** Bartın: road from Bartın to Cide, 3 km W of Kurucasile, 41° 50' 12" N, 32° 42' 10" E, 100 m, *Pinus brutia* forest clearing, growing in calcareous gravel along roadside 41° 50' N, 32° 42' E, 100 m, 4.viii.2007 Yıldız 16553, Dirmenci &

Brüüncher (holotype GAZI; isotypes C. , EGE, G, HUB, ISTE, K, M, W, herb. Brauchler).

Paratype: **A4** Kastamonu: road from Cide to Sinop, just W of Doğanyol, 42° 00' 21" N, 33° 27' 33" E, 50 m. Cide, Doğanyol, *Pinus brutia* forest clearing, 50 m, 5.viii.2007 Yıldız 16556, Dirmenci & Brüüchler (herb. Dirmenci, M. and herb. Brauchler keep isotypes and paratypes as well).

Thymus L. (7:349)

e T. ekimi** Yıldırım, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38542 (holo. Yıldırım Otluk'u; iso. HUB, Yıldırım Otluk'u).

Paratype: Turkey. **B3** Eskişehir: Sivrihisar, Afyon'a doğru Aşağıkepen köyü yakını, jipsli yerler, dere tepe, 990-1030 m, 31.05.2008, Ş. Yıldırım 34760 & Görkem Yıldırım (GAZI, Yıldırım Otluk'u).

eT. turkmenii** Yıldırım, in Ot Sist. Bot. Dergisi, 19(1)1-34 (2012).

[Yıldırım, 2012]

Type: Turkey. **B7** Tunceli: Ovacık, Munzur dağları, Kepir tepesi, Bellihasan çukurluğu sırtları, 2700-2800 m, 29.07.1979, Ş. Yıldırım 2299 (holo. Yıldırım Otluk'u; iso. HUB, Hb.B. Yıldız).

LEGUMINOSAE

Astragalus L. (3:49)

e A. argentophyllus** Taeb & Uzunh. İn Ann. Bot. Fenn 49: 259-262 (2012).

[Taeb & Uzunhisarcıklı, 2012]

Type: Turkey. **B5** Kahramanmaraş: Çağlayancerit-Çatalağaç, 12 km E of Çağlayancerit, 1510 m, gravelly mountain slopes near the main road, 30 May 2011 F. Taeb 1022 & M.E. Uzunhisarcıklı (holotype GAZI; isotypes MSB, TUH).

Paratypes: Turkey. **B5** Kahramanmaraş: between Çatalağaç and Çağlıancerit, 19 May 2005 Baybourt MSB-147651 (MSB). Gömbe, 10 km to Uçarsu, 1257 m, 18 May 2011 F. Taeb 1015 & M. E. Uzunhisarcıklı (GAZI), ca. 35 km SW Elmalı, pinewood, 1300 m, May 1997, Victourvan Hoe 1705 (MSB).

eA. pseudopinetorum** Taeb, Özüdoğru & Erik, in Ann. Bot. Fenn 48: 84-86 (2011).

[Özüdoğru et al., 2011]

Type: Turkey. **C10:** Hakkari: Beytüşşebap-Uludere, Tanintanin Mountains, ca. 2500m, 25.VII. 1974 M. Rix 2332 (holotype HUB).

eA. sarikamishensis** Podlech, in Ann. Naturhist. Mus. Wien 105 B: 565-596 (2004).

[Podlech, 2004]

Holotype: Turkey. **A9** Kars: 4 km SW Selim towards Sarikamiş, 1850 m, *Artemisia*-steppe, 12.7.1959, A. Huber-Morath 16147 (G; iso MSB).

eA. silifkeense** Dinç, Aytaç & Doğu, in Turk J Bot 37: 841-846 (2013). [Dinç et al., 2013]

Type: Turkey. **C4** Mersin: Between Silifke and Hotamiş, 9th km, 1380 m, *Abies cilicica* forest opening, calcareous rocks, 19.05.2011, Z. Aytaç 9779 & M. Dinç & S. Doğu (holotype: GAZI, isotypes: KNYA, ANK).

Paratype: **C4** Mersin: Between Silifke and Hotamiş, 9th km, 1380 m, *Abies cilicica* forest opening, calcareous rocks, 19.05.2010, M. Dinç 3192 & S. Doğu (GAZI).

eA. geyikdaghensis** Podlech & Ekici, in Rev. Gen. Astragalus L. (Leguminosae) Old World 3:1658 (2013). [Podlech & Zarre, 2013]

Type: Turkey. Prov. Antalya, Alanya, Geyik Dağı, 2700-2800 m, Yüksek Dağ stebi, 20.7.1996, collector, H. Duman 6221, holotype GAZI, isotype MSB.

eA. pascuicola** Podlech, in Rev. Gen. Astragalus L. (Leguminosae) Old World 1:597 (2013).

[Podlech & Zarre, 2013]

Type: Turkey. Bitlis, Hanemir Dağ Nordseite, von Oboskü Köyü aus, 2280 m, 10.8.1987, collector T. Engel 16, holotype MSB.

eA. gueruenensis** Podlech, in Rev. Gen. Astragalus L. (Leguminosae) Old World 2:1290 (2013).

[Podlech & Zarre, 2013]

Type: Turkey. Sivas, distr. Gürün, 20 km W Gürün gegen Pinarbaşı, 1700 m, 22.7.1958, collector Huber-Morath 15070, holotype MSB, isotype G.

eA. pseudoyusufeliensis** Podlech, in Rev. Gen. Astragalus L. (Leguminosae) Old World 3: 2280 (2013). [Podlech & Zarre, 2013]

Type: Turkey. Çoruh (Artvin), near Yusufeli, 10.4.1996, collector Sytin & Khokhryakov, holotype MSB.

Cicer L. (3:78)

eC. floribundus** Fenzl. var. **amanicola** M. Öztürk & A. Duran, in *BioDi-Con* 4/3: 44-51 (2011).

[Öztürk et al., 2011]

Type: Turkey. Osmaniye: between Osmaniye and Yarpuz, 10 km, 835 m, 16.06.2010, 37° 04' 840" N, 36° 21' 965" E, M. Özt. 1578 & A. Duran (holotype: KNYA, isotypes: GAZI, ANK, HUB, MR).

eC.uludereensis** Dönmez, in *Turk J Bot* 35(2011) 71-76.

[Dönmez, 2011]

Type: Turkey. **C9** Şırnak: Uludere, Dağdibi village, Kurudere district, 37°23'451"N 038° 07'418"E, 1186m, among *Quercus* scrub, 29.vi.2009, A.A. Dönmez 15478 (Holotype: HUB, isotypes: HUB, GAZI, KNYA, WAG).

Paratype: **C9** Şırnak: Uludere, 2 km from Dağdibi village to Şırnak-Hakkâri road, limestone, *Quercus libani* opening, 37°22'320"N 043°07'784"E, 1124 m, 26.v.2004, A.A.Dönmez 11918 (HUB).

Genista L. (3:24)

eG. kepenensis** Yıldırım, in *Ot Sist. Bot. Dergisi*, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38543 (holo. Yıldırım Otluk'u; iso. EGE, GAZI, HUB, Yıldırım Otluk'u).

Paratype: **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.08.2012, Ş. Yıldırım 34756 (DUF, Yıldırım Otluk'u).

Hedysarum L. (3:549)

eH. duruiae** Yıldırım, in *Ot Sist. Bot. Dergisi*, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38542 (holo. Yıldırım Otluk'u; iso. HUB, Yıldırım Otluk'u).

eH. hasanyildirimii** Yıldırım, in *Ot Sist. Bot. Dergisi*, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38541 (holo. Yıldırım Otluk'u; iso. HUB, Yıldırım Otluk'u).

Paratype: **B3** Eskişehir: Alpu, Bozan, ağaçlandırma alanı girişi, dere, tepe, jipsli yerler, 850-900 m, 30.06.2007, Ş. Yıldırım 34284 & A. Ocak (GAZI, Yıldırım Otluk'u).

Lathyrus L. (3:328)

***L. atropatanus** (Grossh.) Sirj. in *Bull. Soc. Bot. Bulgar.* VI, 62 (1934).

[Güneş & Çırpıcı, 2012]

Specimens examined: **B9** Van: Mount Pirreşit, above Gündüzlü village, steppe, 2350 m, 26.06.1997, *F. Özgökçe* (VANF 3363); Mount Pirreşit, North slopes, steppe, 2000 m, 30.06.1998, *M. Ünal* (VANF 2265); Between Güzelsu and Başkale, Güldere pass, 2600 m, 10.06.2001, *M. Armağan* (VANF 1297); Gürpınar, above Sapakonak village, rocky slopes, steppe, 2400 m, 03.07.2011, *M. Ünal* (VANF 5161); Mount Pirreşit slopes, above Gündüzlü village, 2704 m, 38°09'941"N; 43°09'527"E, 12.06.2008, *F. Güneş* 1836; Van-Hakkari road, Güzeldere pass, behind the military care building, 2370 m, 14.06.2008, 38°11'334"N; 43°054'387"E, *F. Güneş* 1848 & *M. Armağan*; Gürpınar- Kırkgeçit road, Sapa-

konak village, slopes above village, 2653 m, 38°20'715"N; 43°60'980"E, 14.06.2008, *F. Güneş* 1849 & *M. Armağan*.

e L. tefennicus** H.Genç & A. Şahin in *Plant Syst Evol* 49(5):505-508(2011).

[Genç & Şahin, 2011]

Type: Turkey. **C2** Burdur Tefenni Province: 37°17'33.71"N, 29°35'40.07"E, alt.1250-1370 m, grassy places around *Pinus* forests in the Burdur Tefenni Province, 2009-06-20, *H.Genç* 1200 (holotype, FUH; isotype, GUL).

Trifolium L. (3:384)

e T. fergan-karaeri** Keskin, Türkiye Bitkileri Listesi p.891 (2012).

[Güner (ed.), 2012]

Type: Turkey. **A1(A)** Çanakkale: Çanakkale-Çan, Balaban road, 25.v.1956, Tören & Atilla, ISTF 14918 (holo. ISTF).

***T. fragiferum** L. var. **majus** Boiss. [Keskin, 2011]

Examined specimens: **A6** Tokat: Reşadiye, Çamballı village, Çaylılar area, 25.8.1974, S. Şahin ISTF 30905; **A4** Ankara: Ravli-Kalecik, 1000 m, 4.06.1954, P.H. Davis 21415; **B8** Bitlis: Tatvan, 1750 m, 04.06.1954, P.H. Davis & O. Polunin (D. 23605); Armenia: c.a. 1867, Calvert & Zohrab; **C6** Adana: Ceyhan-Osmaniye arası, 500 m, 17.05.1957, P.H. Davis & I.C. Hedge (D. 26710).

e T. nerimaniae** Keskin, Türkiye Bitkileri Listesi p.892 (2012).

[Güner (ed.), 2012]

Type: Turkey. **C4** Karaman: Dumlugöze köyü, 10.vi.2000, S. Koçak, ISTE 79056 (holo. ISTE).

e T. uniflorum** L. subsp. **kerimii** Keskin, Türkiye Bitkileri Listesi p.892 (2012).

[Güner (ed.), 2012]

Type: Turkey. **B1** Balıkesir: Ayvalık, Sarımsa Yarımadası güneybatısı, Eğribucak burnu, 25.x.1995, deniz kıyısı, K. Alpınar, ISTE 68638 (holo. ISTE).

LENTIBULARIACEAE

Pinguicula L. (6:108)

e P. habiliü** Yıldırım, Şenol & Pirhan in *Phytotaxa* 1179-3155 (2012).

[Yıldırım et al., 2012]

Type: Turkey. **C2** Muğla: along the stream near Marmaris, on serpentine rocks, 100-200 m, 21 May 2011, *H. Yıldırım, A.F. Pirhan & S. G. Şenol* 3498 (holotype EGE; isotypes EGE, HUB, ISTF, Yıldırımli Herbarium).

Paratypes: Turkey. Muğla: Along the stream near Marmaris. On serpentine rocks, 100-200 m., 02 October 2010, *A.F. Pirhan, S.G. Şenol & H. Yıldırım* 1790 (EGE); same locality, 03 December 2011, *A.F. Pirhan, S.G. Şenol & H. Yıldırım* 2245 (EGE).

LINACEAE

Linum L. (2:425)

e L. hirsutum** L. subsp. **bozdaghense** Yılmaz & Kaynak, in *Novon* 20: 507-511 (2010).

[Yılmaz & Kaynak, 2010]

Type: Turkey. **C2** Denizli: Tavas, Büyükkonak (Nikfer), N of Bozdağ Mtn., 1946 m, 37°19'N, 29°10'E, 13

June 2007, Ö. Yılmaz s.n. (holotype BULU 29039).

Paratype: Turkey. C2 Denizli: Tavas, Büyük-konak (Nikfer), W of Bozdağ Mtn., 2100 m, 20 June 2008, Ö. Yılmaz s.n. (BULU 32550).

***L. decumbens** Desf., in Willdenowia 42:291 (2012).

[Greuter & Raus (ed), 2012]

Turkey. West Anatolia: C2 Muğla: Bozburun, Taşlıca-Loryma (Bozukkale), 0 – 150 m, 8.4.1995, Byfeld & Pearman (ISTE 69398); *ibid.*, Taşlıca, Serçe inlet, on the eastern slopes facing the inlet, 0 – 130 m, 15.4.2006, Özhatay 10542 & Keskin (MUFE!).

OROBANCHACEAE

Orobanche L. (7:3)

***O. owerini** (Beck) Beck, Feddes Repert. 18 (1): 39 (1922).

[Zare & Dönmez, 2013]

Basionym: *Orobanche crenata* Forsk var. *owerini* Beck, Monogr. Orob. 227 (1890).

Type: LE, Georgia Republic.

Examined specimens: **A9** Ardahan: Posof, from Al village, 41° 29. 614' N, 42° 45 962' E, 1523 m, G.Zare 477 & A.A. Dönmez (HUB). Ardahan: Çıldır Lake, Kars to Arpaçay, 8 km before Arpaçay, around cultivated area, 40° 53. 952' N, 43° 16. 247' E, 1976 m, 01.07.2009, G. Zare 466 & A.A. Dönmez (HUB). Artvin: between Artvin-Şavşat, around Küplüce village, 41° 29. 666' N, 42° 25. 462' E, 25.06.2010, H. Altınözlü 5921 (HUB).

***O. longibracteata** Schiman-Czeika, Fl. Iranica 5: 17 (1964).

[Zare & Yıldırım, 2012]

Examined specimen: Turkey. **A9** Kars: Susuz,

between Erdağı South steppe and cultivated area, 1800 m, 14.07.1998, H. Ocakverdi & B. Kaya 1328 (Hb. Yıldırım); **B9** Van: between Van and Bitlis, Kuzgunkıran pass, steppe, 2235 m, 20.06.1986, Ö. Seçmen 3481/6 (EGE); **B10** Iğdır: Suveren village, Pamuk dağı, 1050-1700 m, 30.05.1998, Ş. Yıldırım 21759 & A. Polat (Hb. Yıldırım).

***O. reticulata** Wallr., Orob. Gen. 42 (1825).

[Zare & Dönmez, 2013]

Type: Described from Toulouse, southern France, 1807, Flugge (LE), lectotype designed by Foley (2001).

Examined specimens: **B5** Kayseri: Mountain Erciyes, from Hisarcık to Develi 15 km, 38° 30' 42" N, 35° 29' 58" E, 2100-2200 m, steppe, 14.07.2009, G. Zare 490, G. Ekincioglu & F. Bozcuk (HUB). Kayseri: Mountain Erciyes, 2 km southwards of Tekir Lake, steppe, 38° 29' 52" N, 35° 30' 59" E, 27.06.2010, G. Zare 600, N. Bayrak (HUB). Mountain Erciyes, Develi to Kayseri, 8 km before (southward) Tekir Lake, 27.06.2010, G. Zare 606 & N. Bayrak (HUB).

PAPAVERACEAE

Glaucium Adanson. (1:214)

e ** **G. secmenii** Yıldırım, in Ot Sist. Bot. Dergisi, 19(2):1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38550 (holo. Yıldırım Otluk'u; iso. EGE, HUB, Yıldırım Otluk'u).

PLUMBAGINACEAE

Limonium Mill. (7: 465)

e ****L. smithii** Akaydin, in World Appl. Sci. J. 406-411 (2007).

[Akaydın, 2007]

Type: Turkey. **B5** Kırşehir: Kırşehir, Badıllı, around Seyfe Gölü, saline places, 1085 m, 27 vi 2004, Akaydın 9236 (holo. ANK).

POLYGALACEAE

Polygala L. (1:533)

eP. guneri** Yıldırım, in *Ot Sist. Bot. Dergisi*, 19(2):1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38551 (holo. Yıldırım Otluk'u; iso. HUB, Yıldırım Otluk'u).

Paratype: **B3** Eskişehir: Sivrihisar, Afyon'a doğru, Aşağıkepen köyü yakını, jipsli yerler, dere, tepe, bayır, 990-1030 m, 31.05.2008, Ş. Yıldırım 34762 & Görkem Yıldırım (Yıldırım Otluk'u).

POLYGONACEAE

Polygonum L. (2:269)

eP. leblebici** Yıldırım, in *Ot Sist. Bot. Dergisi*, 18 (1):1-13 (2011).

[Yıldırım, 2011]

Type: Turkey. **A9** Artvin: Borçka, Camili, Düzenli köyü, Ukviyela çevresi, 1125-1175 m, 20.09.2010, Ş. Yıldırım 37328 (holo. Yıldırım Otluk'u; iso. EGE, HUB).

Paratype: *ibid.* Yıldırım 37330 (GAZI), 37331 (Yıldırım Otluk'u).

PRIMULACEAE

Primula L. (6:112)

eP. x uzungolensis** Terzioğlu & Coşkunçelebi (*P. acaulis* (L.) Hill sub-

sp. *rubra* (Sm.) Greuter & Burdet ≡ *P. vulgaris* Huds. subsp. *sibthorpii* (Hoffmanns.) W.W.Sm. Forrest) x *Primula veris* L. subsp. *columnae* (Ten.) Maire & Petitmengin), in *Turk J Bot.* 36: 9-19 (2012).

[Terzioğlu et al., 2012]

Type: Turkey. NE Anatolia: **A8** Trabzon, Uzungöl, 1139 m, meadows, 18. iv. 2010 (Holotype: KATO 18794, isotype: KTUB (P83)).

PORTULACACEAE

Portulaca L. (2:13)

***P. granulatostellulata** (Poelln.) Ricceri & Arrigoni, in *Willdenowia* 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimens: Turkey. **B3** Eskişehir, Eskişehir, Anadolu University campus, 29.6.2007, A. Danin (HUJ); **A2(A)** İstanbul, İstanbul, Bostancı, 1.7.2007, A. Danin (HUJ); C2 Muğla, c. 10 km SE of Köyceğiz, Beyobası, 19.5.1990, P. Uotila 37854 (H). Turkey-in-Europe: **A1(E)** Kırklareli, Babaeski, 1.7.2007, A. Danin (HUJ); **A1(E)** Çanakkale, Gelibolu, 3.7.2007, A. Danin (HUJ).

***P. nitida** (Danin & H. G. Baker) Ricceri & Arrigoni, in *Willdenowia* 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimens: Turkey. **A2(A)** İstanbul, İstanbul, Bostancı, 1.7.2007, A. Danin (HUJ). **A1(E)** Kırklareli, Babaeski, 1.7.2007, A. Danin (HUJ); **A1(E)** Çanakkale, Gelibolu, 3.7.2007, A. Danin (HUJ).

***P. papillatostellulata** (Danin & H. G. Baker) Danin, in *Willdenowia* 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimens: Turkey. **A2(A)** Istanbul, Istanbul, Bostancı, 1.7.2007, A. Danin (HJ). **A1(E)** Kırklareli, Babaeski, 1.7.2007, A. Danin (HJ).

***P. rausii** Danin, in Willdenowia 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimens: Turkey. **B1** Aydın, Ephesos, 18.8.2004, J. Walter (herb. J. Walter): **A1(E)** Kırklareli, Lüleburgaz, 1.7.2007, A. Danin (HJ).

***P. sativa** Haw., in Willdenowia 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimens: Turkey. Erzurum, seed bought from bazar in 1972, cult. in Finland, Helsinki, 4.9.1972, P. Uotila 21090 (H).

***P. trituberculata** Danin, Domina & Raimondo, in Willdenowia 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimens: Turkey. **B3** Eskişehir, Eskişehir, Anadolu University campus, 29.6.2007, A. Danin (HJ); **A2(A)** Istanbul, Istanbul, Bostancı, 1.7.2007, A. Danin (HJ); **A1(A)** Çanakkale, Denizkent, shore of the Sea of Marmara, 22.7.1981, P. Uotila 30390 (H); **A2(A)** Bursa, Iznik Gölü, 10 km E of Iznik, 21.7.1981, K. Hormia 453 (H). **A1(E)** Kırklareli, Babaeski, 1.7.2007, A. Danin (HJ); **A1(E)** Çanakkale, Gelibolu, 3.7.2007, A. Danin (HJ).

***P. zaffranii** Danin, in Willdenowia 41: 129-138 (2011).

[Greuter & Raab-Straube, 2011]

Examined specimen: Turkey-in-Europe. **A1(E)** Edirne: Keşan, 3.7.2007, A. Danin (HJ).

RANUNCULACEAE

Clematis L. (1:138)

e****C. austroanatolica** Ziel. & Kit Tan, in Phytotaxa 24: 28-32 (2011). [Zielinski & Tan, 2011]

Type: Turkey. Province Antalya: Dim valley, NE of Alanya, road margin, ca. 100 m, 2 October 1998, flowers pinkish, K. Browicz & J. Zielinski 63/98 (holotype KOR 40206).

■ ■ **Pseudodelphinium** H. Duman, Vural, Aytaç & Adıgüzel in Turk J Bot 36: 427-433 (2012).

[Vural et al., 2012]

e** **P. turcicum** H. Duman, Vural, Aytaç & Adıgüzel, in Turk J Bot 36: 427-433 (2012).

[Vural et al., 2012]

Type: Turkey. **C4** Konya: Karapınar to Konya road, 30 km, Merdivenli village, 1020 m, dry plain steppes, growing with Peganum harmala communities, 28.7.1998, H.Duman 6824 & Z. Aytaç (holotype: GAZI, isotypes: ANK, HUB).

Paratypes: **C4** Konya: Karapınar to Konya road, 30 km, Merdivenli village, 1020 m, dry plain steppes, with Peganum harmala communities, 24.06.1997, M. Vural 7793, H. Duman & Z. Aytaç (GAZI, KNYA). İbid., 24.06.1999, Z. Aytaç 7900, H. Duman & M. Ekici (GAZI).

ROSACEAE

Rosa L. (4:106)

e** **R. vanheurckiana** Crep. var. **barbata** Kit Tan, Yıldırım & Zielinski, in Phytotaxa 54:26-36 (2012).

[Kit Tan et al., 2012]

Type: Turkey. **B6** Malatya: Darende, Ağılbaşı (Engüzek) Belediyesi, Ağılbaşı plateau, Beşdelik area, calcar-

eous rock crevices, 38° 34' N, 37° 46' E, 1660 m, 27 June 2011, Yıldırım 2173 (holotype EGE, isotypes C, KOR, LD).

Paratypes: Turkey. **B6** Malatya: Darende, Ağılbaşı (Engüzek) Belediyesi, Ağılbaşı plateau, Beşdelik area, calcareous rock crevices, 38° 34' N, 37° 46' E, 1660 m, 13 September 2011, Yıldırım 2225 (paratype EGE, isoparatypes C, KOR, LD); loc. ibid., 27 June 2011, Yıldırım 2181 (EGE); loc. ibid., 13 September 2011, Yıldırım 2228 (EGE).

Sanguisorba L. (4:77)

eS. minor** Scop. subsp. **ertugrulii** Yıldırım, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38556 (holo. Yıldırım Otluk'u; iso. ANK, EGE, GAZI, HUB, KNYA, Yıldırım Otluk'u).

Sorbus L. (4:147)

***S. caucasica** Zinserl. var. **caucasica**, in Not. Syst. Her. Hort. Petrop.4:142 (1923).

[Eminağaoğlu et al., 2012]

Type: Described from Caucasus.

Specimens examined: *Sorbus caucasica* var. *caucasica*: **A8** Artvin: Yusufeli. Çevreli village, Çuvar, 40°47'03.5"E, 1990 m, 09.vii.2010, ÖE 8731; *Sorbus caucasica* var. *yaltirikli*: **A8** Artvin: Yusufeli, Altıparmak Kelenzhev, 1700 m, 25.viii. 1972, Gökşin (ISTO 13155).

RUBIACEAE

Asperula L (7:734)

eA. anatolica** M.Oztürk, in Turk J Bot 37: 46-54 (2013).

[Öztürk, 2013]

Type: Turkey. **C9** Şırnak: Uludere, between Yemişli and Dağdibi village, Kurudere district, 1093 m, limestone rocks, 21.vi.2009, 37°22'924"N, 43°07'446"E, A.Duran 8382 & M.Öztürk (holotype: KNYA, isotypes: GAZI, ANK).

Galium L. (7:767)

eG. dincii** Yıldırım, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38557 (holo. Yıldırım Otluk'u; iso. HUB, KNYA, Yıldırım Otluk'u).

Paratypes: **B3** Eskişehir: Sivrihisar, Afyon'a doğru, Aşağıkepen köyü yakını, jipsli yerler, dere, tepe, bayır, 990-1030 m, 31.05.2008, Ş. Yıldırım 34767 & Görkem Yıldırım (KNYA, Yıldırım Otluk'u): **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü yakını, jipsli yerler, 950-1000m, 27.09.2008, Ş. Yıldırım 35326 (Yıldırım Otluk'u); **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1005 m, 01.08.2012, Ş. Yıldırım 38595 (GAZİ, Yıldırım Otluk'u).

SALICACEAE

Salix L. (7:694)

eS. euxina** I.V. Belyaeva, in Taxon 58 (4):1344-1348 (2009).

[Belyaeva, 2009]

Type: Turkey. Kastamonu, Ecevit, between Seydiler and Kure, 43 km from Kastamonu, 1200 m, near stream, July 30. 1962, P.H. Davis 38464 (holotype:K000335241 K)

SCROPHULARIACEAE**Linaria** Mill. (6:654)**e**L. turcica** S. Makbul & Hamzaoglu, in Ann. Bot. Fenn 48: 177–181, 2011.

[Makbul et al., 2011]

Type: Turkey. **A8** Artvin: Yusufeli, between Çeltikdüzü and Dokumacılar, 750 m, 1.v.2009. Makbul 123 (holotype RUB; isotypes RUB, GAZI, ANK)**Verbascum** L.(6:461)**e**V. ergin-hamzaoglui** Karavel. in Turk J Bot. 35: 275-283 (2011).

[Karavelioğulları et al., 2011]

Type: Turkey. **C5** Niğde: Ulukışla-Maden village, 25. km, Sakapınarderesi, 1500-1700 m, 02.07.2006, calcareous stony slopes, F. A. Karavelioğulları 3567, M.U. Özbek & B. Bani (holotype: GAZI, isotypes: ANK, HUB, ISTE).**e**V. hasbenlii** Aytaç & H.Duman, in Turk J Bot 36: 322-327 (2012).

[Aytaç & Duman, 2012]

Type: B1: Çanakkale: Çan, Kirazlıtepe, 700 m, 08.vii.2010, *Z.Aytaç* 9625 & *H.Duman*, (Holotype: GAZI, isotype: ANK).**UMBELLIFERAE****Angelica** L. (4:431)***A. archangelica** L. Sp. Pl. 250 (1753). [Daşkın & Kaynak, 2012]**Typus:** “Hab. In Alpinus Lapponiae, ad rivulus” Linn. Herb.354.1 (LINN). Lectotype: sel. By Reduron, Nord J Bot 22:83 (2002).Examined specimens: (Europe) unspecified, (B, digital image). Turkey. **A2 (A)** Bursa: Uludağ Mt; Keles, above Pınarcık village, on damp rocks, 1450-1500 m, 2003.07.09, G. Kaynak, R. Daşkın & Ö. Yılmaz, BULU 1733; İnegöl, Kıranköy village to Kırın Plateau, at watersides, 1700 m, 2004.07.20, G. Kaynak, R. Daşkın & Ö. Yılmaz, BULU 20389; above Pınarcık village to Dutçalık Locality, 7. km, on damp rocks, 1450-1500 m, 2006.07.17, G. Kaynak, R. Daşkın & K. Daşkın, BULU 28222.**Bunium** L. (4:342)**e**B. allioides** B. Bani, Pimenov & Adıgüzel in Ann. Bot. Fenn 49:412-416 (2012).

[Bani et al., 2012]

Holotype: Turkey. **B6** Adana: Tufanbeyli, Güzelim village, around Kumlupınar district, sandy soil under Black Pine forest, 1450 m, 26 June 2008 B. Bani 6580 (GAZI).**Paratype:** Turkey. **B6** Adana: Tufanbeyli, Güzelim village, around Kumlupınar district, sandy soil under and clearing black pine forest, 1450 m, 10 July 2009 B. Bani 6722 (GAZI).**Bilacunaria** Pimenov & V.N.Tikhom.**e**B. anatolica** A. Duran, in Nord J Bot 29: 652-659, 2011.

[Duran et al., 2011]

Type: Turkey. **C2** Muğla: between Kınık-Fethiye, ca 13th km, 1070 m a.s.l., 5 Jul 2007, 36°46.261"N, 29°27.848"E, A. Duran 7499 and M. Öztürk (holotype: KNYA, isotypes: ANK, GAZI, HUB, MR).**e**B. aksekiensis** A. Duran & B. Doğan, in Ann. Bot. Fenn 48: 361-367, 2011.

[Duran et al., 2011]

Type: Turkey. Antalya, Akseki, Çukurköy, Alçaktepe, Kocaöz vicinity,

920 m, 7.viii.2005 A. Duran 7087 (holotype KNYA; isotypes GAZI, Ank, HUB and Selçuk University, Herbarium of Education Faculty).

Paratypes: Turkey. **C3** Antalya: Akseki, Çukurköy, Alçaktepe, Fireklidünek vicinity, 1000 m, 2005 A. Duran 7074 (KNYA, GAZI); *ibid.*, 2005 A. Duran 7087 (KNYA); *ibid.*, 2007 A. Duran and M. Öztürk 7498 (MR); Antalya: Akseki, Çukurköy, North of Kavzan Dağı, Saytaş vicinity, ca. 1150 m, 2008 A. Duran 8134 (MR).

Daucus L. (4:531)

***D. conchitae** W. Greuter.

[Tuzlacı & Bulut, 2012; Aytaç & Duman, 2013]

Examined specimen: Turkey. **C1** Muğla: Datça, Eski Datça arası, 90 m, 15.vi.2003, E. Tuzlacı (MARE 8731) Antalya: Kaş, Kekova village, Gülçukur, 355 m, macquis, 23.vi.2009, Aytaç 9456 & Duman (GAZI).

Dichoropetalum Fenzl (4:635)

eD. anatolicum** Pimenov & Kljuykov, in *Ann. Bot. Fenn* 48: 337–342, 2011.

[Pimenov & Kljuykov, 2011]

Type: Turkey. **C2** Antalya, near Elmali, SW slope of Elmali Dağı, 36°44'N, 29°54'E, 1760–1800 m, 11.vii.2007 M.G. Pimenov & E.V. Kljuykov 108 (holotype MW).

eD. bupleuroides** Pimenov & Kljuykov, in *Ann. Bot. Fenn* 48: 337–342, 2011.

[Pimenov & Kljuykov, 2011]

Type: Turkey. **C10** Hakkari, Cilo Dağı above Diz Deresi, 7500 ft, 7.viii.1954 P.H. Davis & O. Polunin 23945 (holotype ANK)

Diplotaenia Boiss. (4:440)

eD. hayri-dumanii** Pimenov & Kljuykov, in *Willdenowia* 41: 67–74 (2011).

[Pimenov et al., 2011]

Holotype: Turkey. **C4** Konya, Hadim, Beyreli, N 36°51'93.8", E 82°21'56.4", 1545 m, 15.7.1998, Duman & Aytaç 6715 (GAZI; Fig. 4B; isotype ["Turkey: C4, Konya: Hadim, Beyreli, 1545 m", 15.7.1998, Baßer & al. 12660] ESKI).

eD. turcica** Pimenov & Kljuykov, in *Willdenowia* 41: 67–74 (2011).

[Pimenov et al., 2011]

Holotype: Turkey. **B9** Bitlis: Tatvan, Karz Dağ, 1800–2600 m, 20.8.1972, Peşmen 3277 (HUB).

Eryngium L. (4:292)

e E. babadaghensis** G.Ecevit-Genç, E.Akalın & A.Wörz, in *Turk J Bot* 36: 1–8 (2012).

[Ecevit-Genç et al., 2012]

Type: Turkey. **C2** Muğla: Fethiye, Babadağ, Eşekbayıltan, 1610 m, stony slopes, serpentine, clearing in *Juniperus excelsa* communities, 08.vii.2008, G.Ecevit-Genç & İ.Genç (ISTE 86121) (holotype ISTE, isotype STU).

Paratypes: **C2** Muğla: Fethiye, Babadağ, Eşekbayıltan site, 1463 m, stony slope, serpentine, clearing in *Juniperus excelsa* communities. 08.09.2008 (ISTE 86122); Fethiye, Eren Mountain, Girdev (Eren) plateau, 1700 m, 29.10.2009 (ISTE 87041).

Ferula L. (4:440)

eF. divaricata** Pimenov & Kljuykov, in *Phytotaxa* 99 (1): 35–39 (2013).

[Pimenov & Kljuykov, 2013]

Type: Turkey. **B3** Eskişehir, Sivrihisar

dağları, Kaymaz, road turn to Beylikova, elevation 920-930 m, 39 31 N, 31 04 E 08 August 2008, M.G. Pimenov & E. V. Kljuykov 36 (holotype MW).

Paratype: Turkey. **B3** Eskişehir: Kaymaz areal, 10 km S of Kaymaz, 12 June 1983, N. Niski & E. Pütün 50863 (ISTE)

Ferulago W. Koch (4:453)

***F. angulata** Boiss. subsp. **carduchorum** (Boiss. & Hausskn.) D.F.Champ., Fl. Iramıca (Rechinger) 162:432(1987).

[Behçet et al., 2012]

Syn.: *Ferulago abbreviata* C.C. Towns., Kew Bull. 20:79(1966); *F.carduchorum* Boiss. & Hausskn. Ex Boiss., Fl. Orient 2: 1005 (1872); *F.trifida* Boiss., Ann. Sci. Nat., Bot., ser. 3, 1:318 (1844)

Type (syntype): Persia: M.Shahu, C.Haussknecht, BM, K; M. Dalekhani, C. Haussknecht, BM; Supra Kermanshah, C. Haussknecht, BM; Kuh Kilo-yeh, C. Haussknecht, BM.

Examined specimens: Turkey. **C9** Hakkari: around Işıklar village, rocky slopes, 2300 m, 22.07.2010, İdris Kaval 198; Şırnak: Beytüşşebap, Mezraa town, Kelle rocks, 1797 m, 18.04.2010, M.Rüstemoğlu 1356; Nator plateau, 2030 m, 16.07.2010, M.Rüstemoğlu 1650 (in fruit). **C9** Van: Çatak, Dakbastı köyü-Belbuka yaylası, step, 2500 m, 28.08.2003; B. Bani 2407 (GAZİ); **C9** Şırnak: Şırnak-Eruh, 1280 m, 18.09.2002, M.Vural 8749 (GAZİ); Hakkari: Cilo Dağ, Diz Deresi, 5800 ft. On shady limestone rocks, in shade, 10.8.1954, Davis, O.Plunin 24282b (ANK); Siirt: Kurtalan, aşınmış yamaçlar, 24.06.2012, P.H.Davis 22174 (ANK); **C9** Hakkari: Geçitli köyü mezrası yol üstü, kaya çatlağı 2183 m, 14.07.2009, İ.Kaval 235 (VANF); **B9** Van: Muradiye, Adaklı köyünün üstü, dere kenarı, 2500 m, 20.06.1998,

M.Ünal 3039 (VANF); **B9** Van: Özalp, Çatak köyü, Radar istasyonu altı, Step, 2000 m, 15.06.1998, F.Özgökçe 6389 (VANF)

Grammosciadium DC. (4:318)

***G. scabridum** Boiss. Ann. Scienc. Nat. Ser. 3,2:66 (1844).

[Behçet et al., 2012]

Syn.: *Falcaria longiloba* (Boiss. & Hausskn.) Kosopol. Bull. Soc. Imp. Naturalistes Moscou 1915, n. s. xxix. 140 (1916); *Falcaria scabrida* (Boiss.) Kosopol. Bull. Soc. Imp. Naturalistes Moscou n.s. , 29: 140. 1915(1916); *G.longilobum* Boiss. & Hausskn, in Boiss., Fl. Orient. 2: 900(1872); *Gdaucoides* auct. non DC.: C.C Townsend, Kew Bull, 20:84(1966)

Type: Armenia, Aucher-Eloy 3606, K, P.

Examined specimens: Turkey. **C9** Hakkari: between Eski Ceylanlı and Yeni Ceylanlı vilages, roadside, steppe, 1513 m, 29.05.2011, İdris Kaval 61.

Malabaila Hoffm. (4:484)

e****M. kazdaghense** Yıldırım, in Ot Sist. Bot. Dergisi, 19(1)1-34 (2012).

[Yıldırım, 2012]

Type: Turkey **B1** Balıkesir: Edremit, Güre, Kazdağı, Manastır çayı kıyısı, Veli'nin harlası, 65m, 02.06.1991, Ş. Yıldırım 38494 (Yıldırım Otluk'u, GAZİ)

Paratype: **B1** Balıkesir: Edremit, Zeytinli, Kazdağı, Pınarbaşı köyü üstü, ağaçlık, nemli yerler, 250 m, 02.06.1991, Ş. Yıldırım 38494 (Yıldırım Otluk'u, GAZİ).

Oenanthe L. (4:372)

***Oe. incrassans** Bory & Chaub., in Candollea 62(2): 125-130 (2007).

[Foley & Southam, 2007].

Examined specimen: Turkey. Edirne, Keşan, 6.vii.1982, Nydegger 17003 (E), as *Oe. thracica*.

Prangos Lindl. (4:382)

eP. hulusii** S. G. Şenol, H. Yıldırım & Ö. Seçmen, in Nord J Bot 29:403-407(2011).

[Şenol et al., 2011]

Type: Turkey. **B2** Izmir: Ödemiş, west slopes of Bozdağ, across side of Kırkoluk fountain, the opening of *Pinus nigra*, on schistose soils, 38°23'N, 028°04'E, 1100 m a.s.l., 28 May 2008, S. G. Şenol 3290 (holotype: EGE).

Rhabdosciadium Boiss (4:311)

eR. urusakii** E. Akalın, in Nord J Bot 560-564 (2012).

[Akalın & Akpulat, 2012]

Type: Turkey. **B7** Erzincan, from İliç to Kemaliye, open, flowing slopes, roadsides, 10 Aug 2007, 1492 m a.s.l., 39o21'N, 38o27'E, E. Akalın, U. Uruşak (holotype: ISTE 93226, isotype: CUHF); **B7** Erzincan, Kemaliye-Erzincan, 5 km from Salihli village, 14 Aug 2011, 1600 m a.s.l., 39o21'N, 38o27'E, E. Akalın, U. Uruşak (paratype: ISTE 95608).

MONOCOTYLEDONES

CYPERACEAE

Carex L. (9:73)

***C. buekii** Wimm., in Willdenowia 41:311-328 (2011).

[Greuter & Raus (ed.), 2011]

Examined specimens: Turkey. **B6** Kayseri: Pınarbaşı, river marsh, with *Salix*, 1500 m, 18.6.1954, Davis 21923 (BM, K); id. **C6** Adana district of Saimbeyli, Antitaurus, Himmetli, river sides, 600 m, 12.4.1957, Davis & Hedge 26647 (BM, K).

Ventenata Koeler (9:316)

eV. subenervis** subsp. **major** H. Scholz, T. Gregor & Meierott, in Willdenowia 41:311-328 (2011). [Greuter & Raus (ed.), 2011]

Holotypus: Turkey. **B8** Bingöl, pass 16.3 km SW Solhan on road Bingöl-Muş (D 300), open *Quercus* scrub and dry rocky grassland, 1443-1460 m, 17.6.2010, Gregor 67709 & Meierott (B).

GRAMINEAE

Anthoxanthum L. (9: 371)

***A. aristatum** Boiss., Voy. Bot. Espagne 2:638 (1842).

[Akalın Uruşak et al., 2013]

Examined specimens: **A1(E)** Kırklareli: Demirköy, Mahya mountains, on the northern slopes, 993 m, 17.05.2009, E. Akalın, Y. Yeşil & S. Demirci (ISTE 91764).

Bromus L. (9:272)

eB. musadoghani** Yıldırım, in Ot Sist. Bot. Dergisi, 19(2)1-51 (2012).

[Yıldırım, 2012]

Type: Turkey. **B3** Eskişehir: Sivrihisar, Aşağıkepen köyü, jipsli yerler, dere, tepe, bayır, 955-1025 m, 01.06.2012, Ş. Yıldırım 38558 (holo. Yıldırım Otluk'u; iso. HUB, Yıldırım Otluk'u).

Paratype: **B3** Eskişehir: Sivrihisar, Afyon'a doğru, Aşağıkepen köyü yakını, jipsli yerler, dere, tepe, bayır, 990-1030 m, 31.05.2008, Ş. Yıldırım 34771 & Görkem Yıldırım (Yıldırım Otluk'u).

eB. psammophilus** P.M.Sm. var. **robustus** Çakan & H.Scholz, in Turk J Bot 35: 713-716 (2011).

[Çakan & Scholz, 2011]

Type: Turkey. **C5:** Adana: Tuzla district, around Tuzla stake net, sand dunes and dune slack, 1-2 m, 25.06.2000 Çakan 521 (holotype: Çukurova Univ. Herb., isotype: B, GAZI, ANK).

Hordeum L. (9:262)

eH. spontaneum** var. **anatolicum** Cabi & Doğan, in *Ot Sist. Bot. Dergisi*, 19(2):53-66 (2012).

[Cabi & Doğan, 2012]

Type: Turkey. **C7** Şanlıurfa: Hilvan to Siverek, 587 m, 37° 36.432' N 39° 03' 657" E, 15 May 2008, E Cabi 2982 (holo. NGBB; iso. GAZI, Hb. Yıldırım).

***H. spontaneum** var. **proskowetzii** Nabelek, *Publ. Fac. Sci. Univ. Masaryk Brno*, 111:32 (1929).

[Cabi & Doğan, 2012]

Examined specimen: S.E. Anatolia. **C7** Şanlıurfa: Viranşehir to Şanlıurfa, 62 km to Şanlıurfa, 658 m, 37° 13.515' N 39° 23.325' E, 14 May 2008, E. Cabi 2928; Şanlıurfa to Gaziantep, 4-5 km from Şanlıurfa, 37° 03.113' N 38° 14.411' E, 23 Apr. 2006, E. Cabi 104.

IRIDACEAE

Crocus L. (8:413)

eC. antalyensis** B. Mathew subsp. **gemicii** L. Sik & O. Erol, in *Plant Syst Evol* 294:281-287 (2011).

[Erol et al., 2011]

Type: Turkey. **C2** Muğla, Fethiye to Antalya, open areas in *Pinus nigra* forest, ca. 1,300 m a.s.l., 18.02.2009, O. Erol & L. Şık, ISTF 40143 (holotype: ISTF).

eC. babadagensis** Kerndorff & Pasche in *Stapfia* 97: 3-16 (2012).

[Kerndorff et al., 2012]

Holotypus: Turkey. Lycia, Muğla Province, N-Babadağ, 1200 m, 21.3.1997, HKEP 9708 (Gatersleben, GAT 7185)

eC. beydaglarensis** Kerndorff & Pasche in *Stapfia* 95:99-105 (2011).

[Kerndorff et al., 2011]

Holotypus: Turkey. Lycia, Antalya Province, SW Bey Dağları, 1000-1200 m, 20.03.1997, HKEP 9719 (Gatersleben, GAT 7388)

eC. chrysanthus** (Herbert) Herbert subsp. **chrysanthus** var. **atroviolaceus**

F. Candan & N. Özhatay, in *Ann Bot Fenn* 50: 423-430 (2013)

[Candan & Özhatay, 2013]

Type: Turkey. **B2** Kütahya: 10 km from Kütahya towards Afyon, 1112 m a.s.l., 18 March 2005 F. Candan 86035 (holotype ISTE)

Paratypes: Turkey. **B3** Isparta: Şarkikaraağaç, Kızıldağ National Park, 1500 m (HUB 8145); **C4** Karaman: Hadim, Bolay village, 1500-1800 m a.s.l. (HUB 35998) with var. *chrysanthus* and var. *bicoloraceus*.

eC. chrysanthus** (Herbert) Herbert subsp. **chrysanthus** var. **bicoloraceus**

F. Candan & N. Özhatay, in *Ann Bot Fenn* 50: 423-430 (2013)

[Candan & Özhatay, 2013]

Type: Turkey. **B1** Manisa: Spil Mountain, right and left of the road to the horse place, 1240 m, 2 April 2006 F. Candan 86037 (holotype ISTE).

Paratypes: Turkey. **B6** Kahramanmaraş, Göksun, Kaman Mountain, 1400-1600 m (HUB 35991)

with var. *chrysanthus*; **C3** Antalya: Akseki, 1400-1500 m (AEF 19650); **C4** Karaman: Hadim, Bolay village, 1500-1800 m (HUB 35998) with var. *chrysanthus* and var. *atroviolacens*.

eC. chrysanthus** (Herbert) Herbert subsp. **kesercioglu** F. Candan & N. Özhatay, in *Ann Bot Fenn* 50: 423-430 (2013)

[Candan & Özhatay, 2013]

Type: Turkey. **C3** Muğla: from Muğla to Göktepe, North part of the Günlüce village, 1300 m a.s.l., 10 March 2007 F. Candan 86023 (holotype ISTE).

eC. chrysanthus** (Herbert) Herbert subsp. **punctatus** F. Candan & N. Özhatay, in *Ann Bot Fenn* 50: 423-430 (2013) [Candan & Özhatay, 2013]

Type: Turkey. **B2** Kütahya: Uşak-Aslanapa road, near Gediz, left of the road, 1185 m a.s.l., 18 March 2005 F. Candan 86041 (holotype ISTE)

Paratype: Turkey. **B2** Kütahya: 10 km from Afyon to Kütahya, 950 m a.s.l. (AEF 17106).

eC. chrysanthus** (Herbert) Herbert subsp. **syipyleus** F. Candan & N. Özhatay, in *Ann Bot Fenn* 50: 423-430 (2013)

[Candan & Özhatay, 2013]

Type: Turkey. **B1** Manisa: Spil Mountain, horse place, 1250 m a.s.l., 6 March 2005 F. Candan 86020 (holotype ISTE)

eC. demirizianus** O. Erol & L. Can, in *Nord J Bot* 30: 665-667 (2012). [Erol et al., 2012]

Type: Turkey: Çanakkale-Can, 361 m a.s.l., 11 Mar. 2012, O. Erol and L. Can, ISTF 40840 (holotype: ISTF).

eC. fauseri** Kerndorff & Pasche, in *Stapfia* 95: 99-105 (2011).

[Kerndorff et al., 2011]

Holotypus: Turkey. Caria, Province Muğla, Kavak Dağları, 1000-1100 m, 11.3.2003, HKEP 0305 (Gatersleben, GAT 7455).

eC. flavus** subsp. **sarichinarensis** Ruksans, in *Timber Pres, inc.* 2010. [Ruksans, 2010]

Type: Turkey. Sarichinar-Dag, N. slopes 50 km W from Antalya, 1140 m. R2CV-035, deep clay at edge of meadow with deep leafy shrubs, rarely on small clearings between shrubs, leg. J. Ruksans, 16-03-2008 (GB, holo). *Ic.: Crocuses: A complete guide to the genus* (Portland, OR, 2010), plates 214 and 215.

eC. lydius** Kerndorff & Pache, in *Stapfia* 95: 99-105 (2011).

[Kerndorff et al., 2011]

Holotypus: Turkey, Lydia, Manisa Province, Göldağ, 900-1100 m, 20.03.2006, HKEP 0606 (Gatersleben, GAT 7384).

eC. mersinensis** Kerndorff & Pasche in *Stapfia* 97: 3-16 (2012).

[Kerndorff et al., 2012]

Holotypus: Turkey, Cilician Taurus, İçel Province, Pusatlı Dağı, 1300-1400 m, 5.3.2001, HKEP 0104 (Gatersleben, GAT 7462)

eC. minutus** Kerndorff & Pasche in *Stapfia* 95: 2-5 (2011).

[Kerndorff & Pasche, 2011]

Holotypus: Turkey. Lycia, Antalya Province, northern Bey Dağları, 1600-1700 m, 20.02.2011, HKEP 1101 (Gatersleben).

eC. mysius** Kerndorff & Pasche in Stapfia 97: 3-16 (2012).
[Kerndorff et al., 2012]

Holotypus: Turkey. Mysia, Balıkesir Province, SE of Balıkesir, 600-800 m, 18.3.2007, HKEP 0711 (Gatersleben, GAT 7386)

eC. roseoviolaceus** Kerndorff & Pasche in Stapfia 95: 2-5 (2011).
[Kerndorff & Pasche, 2011]

Holotypus: Turkey. Pamphylia, Province Antalya, Toros Dağları, Taşeli Yaylası, 1600-1700 m, 11.3.2005, HKEP 0513 (LI, Gatersleben)

eC. simavensis** Kerndorff & Pasche in Stapfia 97: 3-16 (2012).
[Kerndorff et al., 2012]

Holotypus: Turkey. Mysia, Balıkesir Province, North of Simav, 1000-1400 m, 15.3.2009, HKEP 0911 (Gatersleben, GAT 7243)

eC. speciosus** subsp. **bolensis** Ruksans, in The Alpine Garden Society, 2-28 (2013).
[Ruksans, 2013]

Type: Turkey. Bolu, heights above Lake Abant. Holo: Gatersleben, GAT 19558.

eC. speciosus** subsp. **elegans** Ruksans, in The Alpine Garden Society, 2-28 (2013).
[Ruksans, 2013]

Type: Turkey. Konya province, Esereyrek Da. Holo: GB

eC. speciosus** subsp. **ibrahimii** Ruksans, in The Alpine Gardener 80: 210 (2012)

Type: Turkey. Yıldız Dağları, near Çanakça, 2008.10.12, alt. 100 m, I. Sözen (GB, holo ex culturare in Horto Ibrahim Sözen, 2011.12.10).

eC. speciosus** subsp. **sakariensis** Ruksans, in The Alpine Garden Society, 2-28 (2013).
[Ruksans, 2013]

Type: Turkey. S.E. of Sakarya, foothills of Elmacık Dağ, 2012-10-31, alt. 85 m. Holo: Gatersleben, GAT 19548; iso: GB.

eC. taseliensis** Kerndorff & Pasche in Stapfia 97: 3-16 (2012).
[Kerndorff et al., 2012]

Holotypus: Turkey, Isauria, İçel Province, Taşeli Yaylası 900-1100 m, 20.3.2006, HKEP 0512b (Gatersleben, GAT 7742)

eC. yakarianus** Yıldırım & O. Erol in Nord J Bot 31:426-429 (2013).
[Yıldırım & Erol, 2013]

Type: Turkey: **B6/7** Malatya: Doğanşehir, mountain slopes, 1900 m a.s.l., 12 Apr. 2012, H. Yıldırım 2265 (holotype: EGE 40802, isotype: ISTF 40841).

Gladiolus L. (8:441)

e G. osmaniensis** Sağiroğlu, in Turk J Bot 37: (2013).
[Sağiroğlu & Akgül, 2013]

Type: Turkey. **C6** Osmaniye: between Yarpuz and Yağlıpınar, 1250-1300 m, under mixed forest, shady slopes, 11.06.2005, M. Sağiroğlu 2556 & G. Akgül (holotype: GAZI, isotype: HUB).

Paratypes: **C6** Hatay: between Hatay and Yayladağ, 650 m, 31 km from Hatay, 650 m, 01.06.2002, M. Sağiroğlu 1929 (GAZI); **C6** Osmaniye: between Yarpuz and Yağlıpınar, 1300 m, under mixed forest, 10.06.2008, M. Sağiroğlu, 2718 (KNYA).

Hermodactylus Miller (8:411)

***H. tuberosus** (L.) Miller, Gard. Dict. Ed. 8 (1768). var. **longifolius** (Sweet) Baker in J. Linn. Soc. (Bot.) 16: 148 (1877).

[Tuzlacı & Bulut, 2012]

Examined specimen: **B1** Manisa: Turgutlu, Ören köyü, N° 38° 20.643' E° 27° 48.317', 800 m, 24.iii.2011, G. Bulut (MARE 13647), Ören köyü, N 38 20.643 E 27 48.317, 800 m, 03.iv.2012, Hüseyin Ortaç (MARE 14540).

Iris L. (8:382)

eI. farashae** Güner, Türkiye Bitkileri Listesi p.892-893 (2012).

[Güner (ed.), 2012]

Type: Turkey. **B5** Kayseri: Yahyalı, Çamlıca (Faraşa) köyü, Hafızın Kaynak çevresi, seyrek çalılıklar ve tarla araları, kalkerli arazi, 1200 m, 37°55'12,3"N, 35°28'14,2"E, 30.iii.2012, A. Güner (15972), M. Johnson, Y. Kahveci (holo. NGBB, iso. ANK, E, GAZI, K)

Other examined specimens: **B5** Kayseri: Yahyalı, Çamlıca (Faraşa) köyü, Kılıçkaya mevkii, 1211 m, 37°55'23,2"N, 035°28'10,6"E, 21.iii.2009, A. Güner (15365), A. Aksoy, M. Öztekin. Same place, Kapız tarlaları çevresi, 1135 m, 37°55'12,6"N, 35°28'28,7"E,

30.iii.2012, A. Güner (15970), M. Johnson, Y. Kahveci. Same place, Hafızın Kaynak çevresi, 1230 m, 37°55'12"N, 35°28'9,8"E, 30.iii.2012, A. Güner (15974), M. Johnson, Y. Kahveci.

eI. masia** Dykes subsp. **dumaniana** Güner, Türkiye Bitkileri Listesi p.893-894 (2012).

[Güner (ed.), 2012]

Type: Turkey. **C3** Antalya: Serik, 35. km, Yukarı Kocayatak Kasabası mezarlığı, woody areas on limestone, 20 m, 35°55'59,6"N, 30°58'12,7"E, 29.iii.2012, A. Güner (15967), M. Johnson (holo. NGBB, iso. ANK).

Other examined specimens: **C3** Antalya: Antalya-Serik arası, 20 m, 13.iv.2001, A. Güner (12926), M. Johnson (fruiting material).

eI. peshmeniana** Güner & T.Hall, Türkiye Bitkileri Listesi p.894-896 (2012).

[Güner (ed.), 2012]

Type: Turkey. **B7** Malatya: Malatya-Pötürge arası, 35. km, Kubbe Geçidi, Şakşak Dağları, bozkır, metamorfik kayalık ve taşlık arazi, 1975 m, 38°15'02,2"N, 38°35'05,9"E, 28.iv.2009, A. Güner (15388), M. Johnson, F. Gülenç (holo. NGBB, iso. ANK, E).

Other examined specimen: **B7** Malatya: Pötürge yolu, Kubbe Dağı Geçidi, bozkır, 1855 m, 38°14'41,4"N, 38°34'52,5"E, 29.iv.2009, A. Güner (15404), M. Johnson, F. Gülenç. Same place, 1828 m, 38°14'24,1"N, 38°34'37"E, 29.iv.209, A. Güner (15397), M. Johnson, F. Gülenç. Same place, 1827 m, 38°14'39"N, 38°34'50,1"E, 26.vi.209, A. Güner (15423), B. Mutlu (fruiting material).

eI. stenophylla** Hausskn. ex Baker subsp. **margaretiae** Güner, Türkiye Bitkileri Listesi p.894-896 (2012). [Güner (ed.), 2012]

Type: Turkey. **C6** Osmaniye: Kadirli, tahta köyü, Cıncıklı mevki, 37°36'29,1"N, 36°14'53,4"E, 25.iii.2011, A. Güner (15713), M. Johnson, M. Öztekin (holo. NGBB, iso. ANK, E, GAZI, K).

Paratypes: **C6** Osmaniye: Kadirli, Değirmendere köyü, Kale'nin yukarısı, Navruzluk mevki, 37°39'19,2"N, 36°14'28,8"E, 26.iii.2011, A. güner (15748), M. Johnson, M. Öztekin.

LILIACEAE

Allium L. (8:98)

eA. arszense** Eker & Koyuncu, in Nord J Bot 29:391-396 (2011).

[Eker & Koyuncu, 2011]

Type: Turkey. **C6** Hatay: Amanus, Arsuz, above Aydınlı village, rocky and stony plains at higher altitudes in maquis, 1450 m a.s.l., 5 Jun 2008, Eker 2189 (holotype: AIBU, isotype: AEF).

eA. bilgeiae** Yıldırım, in Ot Sist. Bot. Dergisi, 19(1)1-34 (2012).

[Yıldırım, 2012]

Type: Turkey. **B1** Balıkesir: Edremit, Zeytinli, Kazdağı, Pınarbaşı köyü üstü, ağaçlık, nemli yerler, 250 m, 02.06.1991, Ş. Yıldırım 38504 (holo. Yıldırım Otluk'u).

eA. cyrilli** Ten. subsp. **asumaniae** N. Özhatay & İ. Genç, in Turk J Bot 37: 39-45 (2013).

[Özhatay & Genç, 2013]

Type: Turkey. **A3** Bolu: The hillsides

near Lake Abant, 1360 m, 04.vi.1977, A. Baytop s.n. (Holotype: ISTE 37401).

eA. cyrilli** Ten. subsp. **fritschii** N. Özhatay & İ. Genç, in Turk J Bot 37: 39-45 (2013).

[Özhatay & Genç, 2013]

Type: Turkey. **A4** Kastamonu: Daday-Azdavay highway, 6 km to Azdavay, 850 m, 07.vi.1984, N. & E. Özhatay s.n. (Holotype: ISTE 54173).

***A. giganteum** Regel, Gartenflora 97 (1883).

[Behçet et al. , 2012]

Sect. *Melanocrommyum* Webb & Berth.

Syn.: *Allium procerum* Trautv. Ex Regel, Trudy Imp. S.- Peterburgsk. Sada 8:663 (1884)

Type: Planta quaedam culta, probabiler e bulbis in Persia inter Mashhad et Chacha, O' Donovan, LE.

Examined specimens: Turkey. **C9** Hakari: around Olgunlar village; rocky slopes, 1439 m, 26.05.2010, İdris Kaval 127; Şırnak :Beytüşşebap, Mezraa town, Sersülav District, 2030 m, 18.05.2010, M.Rüstemoğlu 1370b; ibid., Kelle rocks, 07.06.2010, M.Rüstemoğlu 1256b; ibid., 03.07.2010, 1793 m, M. Rüstemoğlu 1394 (in fruit)

eA. kandemirii** İ. Genç & N. Özhatay, in Ann Bot. Fenn 50: 50-54 (2013).

[Genç & Özhatay, 2013]

Type: Turkey. **A8** Bayburt, Aşkale-Bayburt, Pınarakapanı village, Kop Mountain, slopes, 2060-2100 m, 13 June 1981 T. Baytop, R. Çetik & M. Koyuncu 4436 (holotype ISTE 54414; isotype AEF 10037).

Paratypes: **A7** Gümüşhane: Köse-Gümüşhane, Köse pass, 2000 m, 9 July 1982 N. & E. Özhatay (ISTE 49361); Köse-Gümüşhane, Köse pass, 2000 m, 8 August 1983 N. & E. Özhatay, G. Sarıyar (ISTE 52115); Köse-Gümüşhane, 7 km from Köse pass, 1480 m, 28 May 1985 N. Özhatay (ISTE 55387); 5 km from Köse pass, 1577 m, 25 June 2008 İ. Genç 1296 & A. Kandemir (ISTE 91520). **A8** Artvin: Yusufeli, Körahmed road, rocky slopes, 2150 m, 21 June 2011, S. Aslan 4444 (DUOF 3085). Bayburt: Aşkale-Bayburt, Pırnakapanı village, Kop mountain, slopes, 2060-2100 m, 13 June 1981 T. Baytop, R. Çetik & M. Koyuncu 4436 (AEF 100037, ISTE 54414); Bayburt-Aşkale, Kop pass, 2400 m, 4 July 1984 N. & E. Özhatay (ISTE 54658); Araklı-Bayburt road, 65 km, 1850 m, 9 July 1987 M. Çoşkun, S. Kurucu, B. Konuklugil & C. Kezikoglu (AEF 19251). Aşkale-Bayburt, Kop pass, 2410 m, 25 June 2008 A. Kandemir & İ. Genç 133 (ISTE 91525). **B7** Gümüşhane: Erzincan Kelkit road, between Balkaya and Karacaören, 1750 m, 28 May 2005 N. & E. Özhatay, A. Kandemir (ISTE 88018); Sipikor Mountain, Erzincan Kelkit road, Güzyurdu village, 1739 m, 28 May 2005 N. & E. Özhatay, A. Kandemir (ISTE 88025); Erzincan: Akdağ, 2226 m, 17 June 2004 A. Kandemir 6107 (ISTE 91641); Pöske Mountain, Erzincan-Kelkit road, 2100 m, 28 May 2005 N. & E. Özhatay, A. Kandemir (ISTE 88011); Sipikor Mountain, Spikor-Akdağ, rocky slopes, 2220 m, 24 June 2008 İ. Genç 1294 & A. Kandemir (ISTE 91519).

eA. maraschicum** M. Koçyiğit & N. Özhatay, in Nord J Bot 553-559 (2012).

[Koçyiğit & Özhatay, 2012]

Type: Turkey. **C6** Kahramanmaraş: Ahırdağı, 1800 m a.s.l., 15 Jul 2009, M. Koçyiğit, ISTE 86 113 (holotype: ISTE, isotype: AEF).

***A. oliveri** Boiss, Acta Soc Bot Pol 80(4):275-277 (2011).

[Eker & Koyuncu, 2011]

Specimen examined: Turkey. S.E. Anatolia, **C7** Şanlıurfa: Tektek mountains, between Karakuş-Başaklı village, in fields, 670 m, 2007.04.06, Eker 1776; north of Karakuş village, in fields, 631 m, N 370° 01.106', E 0390° 14.475', 2009.04.23, Eker 2272.

eA. purpureoviride** M. Koyuncu & İ. Genç, in Nord J Bot 333-336 (2012). [Genç et al., 2012]

Type: Turkey. **B7:** Erzincan: Kemaliye, near Bağıştaş-Kemaliye road, 1270 m a.s.l., 7 Jun 2009, İ. Genç 1403 and Kandemir (holotype: ISTE 86120, isotype: AEF).

Paratypes: **B6** Malatya: collected from Hekimhan in fruit and cultivated in İstanbul, 30 May 1987, A. Baytop (ISTE 57756), ibid. ISTE 57756 15 May 1988, A. Attila (ISTE 58495a, 58497), Sivas: Sincan-Zara, Tecel Mountains, near road, 6 Jun 1983, KHC Başer, H. Malyer, M. Öğütveren, (ESSE 3407), **B7** Elazığ: Kharput (Harput), in montosis supra Miadun (Miyadin), 8 May 1889, Sintenis 709 (K), Sivas: Divriği, 31 May 1968, T. Baytop (ISTE 12957a), Tunceli: Pertek-Tunveli, 27 miles from Elazığ, step calcareous South slope, 'tepals green, anthers violet, ovary black' 1400 m a.s.l., 6 Jun 1957, Davis 29146 and Hedge (K), Pertek-Tunceli, 7 km from Pertek, dry rocky slopes, 1300 m a.s.l., 8 Jun 1990, N. and E. Özhatay (ISTE 61640).

eA. roseum** L. subsp. **gulekense** Koyuncu & Eker, in Nord J Bot 29:391-396 (2011).

[Eker & Koyuncu, 2011]

Type: Turkey. **C5** Mersin: Gülek, Taurus mountains, rocky moist place and shades of forest, 1500 m a.s.l., 15 May 1992, Koyuncu (AEF 18568) (holotype: AEF, isotype: AIBU).

Paratypes: **C5** Adana: Tekir plateau, under forest, rocky places, 1500 m a.s.l., Koyuncu (AEF 5394) İçel: Arslanköy, Ballık Dağı, rocky

places, 2200 m a.s.l., Koyuncu (AEF 6100) Arslanköy, 2200 m a.s.l., T. Baytop (ISTE 39166).

***A. saxatile** M.Bieb. Tabl. Prov. Casp. 114 (1798).

[Özhatay et. al. , 2012]

Examined specimens: Turkey: **A1(E)**: Kırklareli: Demirköy, Mahya Mount., Sarpdere village, 358 m, 3.10.2009, E. Akalın, Y.Yeşil s.n (ISTE 92497); Dupnisa Cave, 458 m, 26.10.2009, E.Akalın. Y.Yeşil, M.Koçyiğit s.n (ISTE 93421); 20.07.2010, N. & E.Özhatay, E.Akalın, M.Koçyiğit s.n. (ISTE 93422).

e****A. serpentanicum** İ. Genç & N. Özhatay, in Ann. Bot. Fenn 50:50-54 (2013).

[Genç & Özhatay, 2013]

Type: Turkey. Gümüşhane, Vauk Mountain pass, rocky slopes, 1900 m, 3 July 1984, N. & E. Özhatay (holotype ISTE 54638).

Paratypes: **A7** Gümüşhane: Vauk Mountain pass, rocky slopes, 1880m, 25 June 2008 A. Kandemir & İ. Genç 1300 (ISTE 91522), **A8** Erzurum: İspir, 1.5 km South of Moryayla village, 2532m, 19 June 2011 S. Aslan 4320 (DUOF 3084). **B7** Gümüşhane: Sipikor Mountain, serpentine rocks, 2220 m, 24 June 2008 A. Kandemir & İ. Genç 1288 (ISTE 91516); Kelkit, between Belenli and Karacaören villages, 1763 m, 24 June 2008 A. Kandemir & İ. Genç 1292 (ISTE 91518); Kelkit, between Beleni and Karacaören villages, 1768 m, 8 June 2009 A. Kandemir & İ. Genç 1407 (ISTE 91620) Erzincan: Erzincan-Çayırılı, 2190 m, 24 June 2008 A. Kandemir & İ. Genç 1290 (ISTE 91517).

e****A. shirnakiense** L. Behçet & Rüstemoğlu, in Turk J Bot 36: 450-454 (2012).

[Behçet & Rüstemoğlu, 2012]

Type: Turkey. **C9** Şırnak: Beytüşşebap town, Mezra district, rocky slopes, 2000-2100 m, 19.05.2010, M. Rüstemoğlu 1341 (in flower) (holotype: VANF, isotypes: AEF & ANK).

Paratypes: Turkey. **C9** Şırnak: Beytüşşebap, Mezra District, limestone rocky slopes, 2100 m, 05.06.2010, M. Rüstemoğlu 1467 (in fruit) (VANF, Bingöl Univ. Herb.)

Bellevalia Lapeyr. (8:264)

e****B. malatyaensis** Uzunh. & H. Duman in Turk J Bot 37: 651-655 (2013). [Uzunhisarcıklı et al., 2013]

Type: Turkey. **C6** Malatya: From Erkenek to Gölbaşı, 15 km, 800-1000 m, under the fairly open canopy of a *Pinus brutia* forest, 17.04.2005, 37° 54' 006" N, 37° 48' 406" E, M. E. Uzunh. 2019 (holotype: GAZI; isotypes: ANK, HUB).

Loncomelos Raf.

e****L. amplificatum** Speta, in Verh. Zool.-Bot. Ges. Österreich 147:142 (2010). [Speta, 2010]

Type: Turkey. Türki Gülübeli Gecidi (NW Elmali), 1450 m, 1988.6.7, holotype W, isotype Herb. Speta.

Muscari Miller (8:245)

e****M. erdalii** N. Özhataya & S. Demirci, in Phytotaxa, 154(1): 38-46 (2013).

[Demirci et al., 2013]

Type: Turkey. **C4** Mersin: Mut-Kırobası, 18 km of Mut, open lime soil, 1280 m, 15 June 1990, N. & E. Özhatay, Iter Anaticum 61829 (holotype ISTE).

Paratype: Turkey. **C4** İçel: 19 km E. from Mut on road & Kirobasi, open lime Stone rocky place, white friable soil, 1350 m, 15 June 1990, Cowley, Doherty et al. 72/90-334 (K!, as *Muscarimia massayanum*); between Mut and Kirobai, around Kıca village, 1189 m, 12 March 2011, cult. fl. 12 May 2012, E. Kaya 1640 (ISTE 96672); Between Mut and Kirobasi, around Kıca village, 1189 m, 12 March 2011, cult. fl. 19 May 2013, E. Kaya 1640 (ISTE 96673).

eM. tuzgoluensis** Yıldırım, in *Ot Sist. Bot. Dergisi*, 18 (1):1-13 (2011). [Yıldırım, 2011]

Type: Turkey. **B4** Konya: Kulu, Tuzyaka (Sütkanlı), Bozan köyü, Kaldırım yolu, Tuzgölü kıyısı, tuzcul yerler, 945 m, 04.05.2007, Ş. Yıldırım 33707 (holo. Yıldırım Otluk'u; iso. HUB).

Nectaroscordum Lindl. (8:211)

eN. cigdemiae** Yıld. in *Ot Sist. Bot. Dergisi*, 19(1)1-34 (2012). [Yıldırım, 2012]

Type: Turkey. **B1** Balıkesir: Edremit, Zeytinli, Kazdağı, Ayı deresi çevresi, kuz. koyu gölgeli ve aşırı nemli orman, 600 m, 27.05.1991, Ş. Yıldırım 38369 (holo. Yıldırım Otluk'u; iso. HUB, EGE, GAZI, Yıldırım Otluk'u).

Paratype: Turkey. **B1** Balıkesir: Edremit, Zeytinli, Kazdağı, Ayı deresi çevresi, kuz. koyu gölgeli ve aşırı nemli orman, 600 m, 01.06.1991, Ş. Yıldırım 38492 (Yıldırım Otluk'u).

Ornithogalum L. (8:227)

eO. beyazoglui** Y. Bağcı, in *Bangladesh J. Plant Taxon* 18(1): 51-55 (2011).

[Bağcı et al., 2011]

Type: Turkey. **B1** İzmir: Ödemiş, Bozdağ, High mountain stepe,

38°19'877" N, 28°06'956" E, 1750-1900 m, 9.6.2009, Bağcı 3936, Savran & Tutar (Holotype: KNYA, Isotypes: GAZI, PAMUH, Hb. Yıldırım).

Paratype: Turkey. **B1** İzmir: Ödemiş, Bozdağ, High mountain stepe, damp pastureland, 1760 m, 13.5.2007, Bağcı 3604 and Savran(KNYA).

eO. malatyanum** B. Mutlu, in *Turk J Bot* 125-133(2012).

[Mutlu & Karakuş, 2012]

Type: Turkey. **B7** Malatya: Venk village, Tavşan Hill, calcareous area, 1500-1600 m, 08.6.1996, B. Yıldız 13368 (holotype: INU; isotype: HUB). *ibid.*, 1400-1600 m. 07.07.1996, B. Yıldız 13665 (INU); Venk village, north side of Tavşanlı Hill, 38° 19'710"N, 38° 23'165"E, 1518 m, mixed forest of *Quercus libani* Olivier and *Quercus infectoria* Oliver subsp. *boissieri* (Reuter) O. Schwarz, calcareous area, 10.07.2010, B. Mutlu 11176 & Ş. Karakuş (paratypes: INU, HUB, GAZI, ANK, KNYA).

Scilla L. (8:214)

e S. vardaria** Yıldırım & Gemici, in *Phytotaxa* 91(2): 50-60 (2013).

[Yıldırım et al., 2013]

Type: Turkey. A8 Rize: Çamlıhemşin, Kaçkar mountain, 1520 m, openings in *Picea orientalis* forests, 28 April 2010, H. Yıldırım 1675 (holotype EGE, isotypes K, EGE, HUB, and Herb. Yıldırım)

ORCHIDACEAE (8:450)

Ophrys L. (8:476)

eO. herae** M.Hirth & H.Spaeth subsp. **osmaniaca** Kreutz, in *Ber. Arbe-*

itskrs. Heim. Orchid. 28 (2): 263–299 (2011).

[Kreutz, 2011].

Type: Turkey. Am Abzweig nach Gundoğmuş, von der Strasse Manavgat-Akseki. 22.03.2011, collector C.A.J. Kreutz, holotype L.

eO. holoserica** (Burm.f.) Greuter subsp. **toroslaria** Kreutz, Gügel & Zais, in Ber. Arbeitskrs.

Heim. Orchid. 28 (2): 263–299 (2011). [Kreutz, 2011].

Type: Turkey. Bei der Rast und Freizeitanlage am Aladağ bei Yeniköy, 21.05.1995, collector C.A.J. Kreutz, holotype L.

eO. lapethica** Gözl & H.R. Rinhard subsp. **pamphylica** Kreutz, in Ber. Arbeitskrs. Heim. Orchid. 28 (2): 263–299 (2011).

[Kreutz, 2011].

Type: Turkey. Zwischen Oymarpinar und Yaylaalan, 20.03.2011, collector C.A.J. Kreutz, holotype L.

e O. fuciflora** (F. W. Schmidt) Moench subsp. **pallidiconi** Faurh., in J. Eur. Orch. 43(3):560–566 (2011).

[Faurholdt, 2011]

Type: Turkey. Antalya: Tekkeköy (Tekke) North of Abdurrahmanlar North of road 400 between Antalya and Serik (WGS84: 37° 0.681' N / 30° 58.208' E, 52 m), 22 March 2011, n. Faurholdt s.n. (holotypus C).

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