

New floristic records in the Balkans: 9*

Compiled by Vladimir Vladimirov¹, Feruzan Dane² & Kit Tan³

¹ Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria, e-mail: vdvlad@bio.bas.bg

² Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: feruzandane@gmail.com

³ Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk

Abstract: New chorological data are presented for 108 species and subspecies from Bulgaria (records no. 46, 49, 55-62, 69-74, 83-108), Greece (14-43, 75-82) and Turkey-in-Europe (1-13; 44, 45, 47, 48, 50-54, 63-68). The taxa belong to the following families: *Alismataceae* (34), *Amaryllidaceae* (35), *Apiaceae* (16), *Aristolochiaceae* (17), *Asclepiaceae* (18), *Aspleniaceae* (9-12), *Asteraceae* (44, 45, 50-54, 69, 76), *Balsaminaceae* (19), *Boraginaceae* (49), *Brassicaceae* (20, 70, 77, 83), *Campanulaceae* (46, 84), *Caryophyllaceae* (21, 55, 85, 86), *Chenopodiaceae* (22, 23), *Cistaceae* (24, 87), *Convolvulaceae* (25), *Corylaceae* (26), *Cuscutaceae* (27), *Cyperaceae* (36-39; 60, 61), *Euphorbiaceae* (2-7, 28, 29, 88), *Fabaceae* (1, 8, 63-68, 71, 89-92), *Fagaceae* (93), *Gentianaceae* (78), *Geraniaceae* (79), *Globulariaceae* (94), *Hypericaceae* (95, 96), *Iridaceae* (81), *Juncaceae* (40, 41), *Lamiaceae* (97, 98), *Liliaceae* s.l. (42, 43, 82, 106-108), *Linaceae* (99, 100), *Malvaceae* (80), *Orchidaceae* (47, 48, 62), *Plantaginaceae* (101), *Poaceae* (73, 74), *Polygalaceae* (102, 103), *Polypodiaceae* (14, 15), *Ranunculaceae* (30), *Rosaceae* (104), *Rubiaceae* (31, 56, 75), *Santalaceae* (105), *Scrophulariaceae* (32, 57, 58, 72), *Sinopteridaceae* (13), *Solanaceae* (33) and *Violaceae* (59).

The publication includes contributions by M. Aybeke (1), M. Aybeke & F. Dane (2-7), M. Aybeke, C. Kurt & A. Semerci (8), N. Başak, N. Güler & F. Dane (9-13), B. Biel & Kit Tan (14-43), F. Dane, Ç. Meriç & G. Yılmaz (44-45), V. Goranova, H. Pedashenko & K. Vassilev (46), N. Güler (47), N. Güler, K. Hürkan & A. Gönüz (48), I. Kirjakov (49), Ç. Meriç, G. Yılmaz, K. Alpınar & F. Dane (50-54), A.S. Petrova & B. Assyov (55-62), G. Savaş, N. Başak, G. Yılmaz & F. Dane (63-68), S. Stoyanov (69-74), Kit Tan & U. Raabe (75), Kit Tan, G. Sfikas & G. Vold (76-82), K. Vassilev, H. Pedashenko & V. Goranova (83-108).

This is the ninth report in a series dealing with the new chorological data of vascular plants in the Balkans. For details on the presentation of information see *Phytologia Balcanica*, vol. 12(1), pp. 107-108 and vol. 12(2), p. 279.

* Reports for Bulgaria have been reviewed by V. Vladimirov, for Greece by Kit Tan and for Turkey-in-Europe by F. Dane.

Report 1

Mehmet Aybeke

Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey, e-mail:
mehmetaybeke@yahoo.com

Fabaceae

1. *Vicia sativa* subsp. *amphicarpa* (Dorthes) Asch. & Graebn. (Fig. 1)

Tu(E) A1(E) Edirne, Keşan, Yenimuhacir village, in waste places, 40°51'29"N, 26°41'36"E, 121 m, 05.05.2004, coll. M. Aybeke, C. Kurt & A. Semerci, det. M. Aybeke (ETTA 2145).

New for A1(E) Edirne in the European Turkey. The species has been known so far from A2(E) İstanbul, Yeşilköy (Plitmann 1970). According to the International Legume Database & Information Service (ILDIS, see References) the taxon was also reported from Europe (Albania, Azores, Balearic Islands, Bulgaria, Corsica, Crete, former Yugoslavia, France, Greece, Italy-F.E., Malta, Portugal, Romania, Sardinia, Sicily, Spain, as well as from the European Turkey, İstanbul Yeşilköy), as described above.

Acknowledgements. Fieldwork was carried out in 2003–2006 within the project TAGEM /04/04/01/002.

Reports 2-7

Feruzan Dane & Mehmet Aybeke

Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey, e-mail:
feruzandane@yahoo.com, mehmetaybeke@yahoo.com

This is a report of new records of six *Euphorbia* L. taxa for some regions in the European Turkey based on the fieldwork carried out in 1987–1989.

Euphorbiaceae

2. *Euphorbia cyparissias* L.

Tu(E) A1(E) Tekirdağ, Şarköy, on cemetery ground, 0 m, 40°36'58"N, 27°06'03"E, 15.07.1988, coll. F. Dane (EDTU 2570).

New for A1(E) Tekirdağ in the European Turkey. So far the species has been known from A1(E) Edirne to Pazarkule and Kırklareli (Radcliffe-Smith 1982).

3. *Euphorbia helioscopia* L.

Tu(E) A1(E) Edirne, Center, 26 m, 41°40'28"N, 26°33'39"E, 15.04.1989, coll. F. Dane (EDTU 2977).

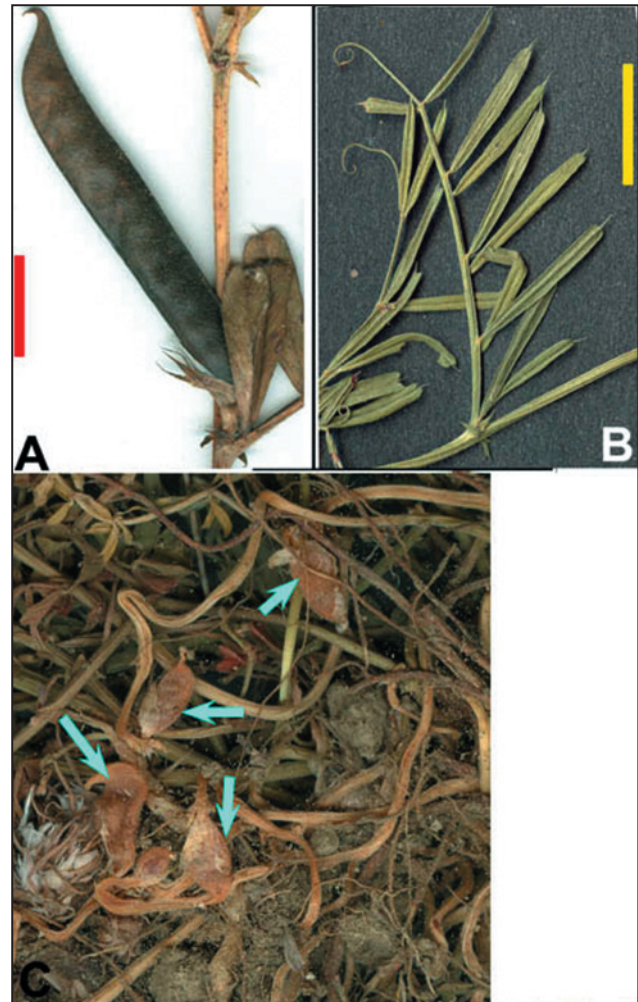


Fig. 1. *Vicia sativa* subsp. *amphicarpa*:
A – mature legume (above ground). Scale bar = 12 mm; B – leaf. Scale bar = 15 mm; C – subterranean legumes (arrows) (original).

New for A1(E) Edirne in the European Turkey. The species has been known so far from A1(E) Tekirdağ, Muratlı and A2(E) İstanbul (Radcliffe-Smith 1982).

4. *Euphorbia macroclada* Boiss.

Tu(E) A1(E) Edirne, Center, Merkez, Sarayakpınar (Sırsındığı) village, 135 m, 41°46'39"N, 26°28'51"E, 04.06.1987, coll. G. Olgun, G. Dalğıç, F. Dane & N. Başak (EDTU 136); Edirne: Süloğlu, from Süloğlu to Tatarlar village, 156 m, 41°46'02"N, 26°54'43"E, 02.05.1987, coll. G. Olgun, F. Dane, N. Başak, H. Arda & G. Dalğıç (EDTU 676); Süloğlu, between two fields, at the roadside, in rocky areas, 156 m, 41°46'02"N, 26°54'43"E, 01.06.1987, coll. H. Arda & F. Dane (EDTU 722); Edirne, Center, Sarayakpınar village entrance, 135 m, 41°46'39"N, 26°28'51"E,

02.06.1987, coll. *G. Dalgıç & N. Başak* (EDTU 815); Edirne, Center, Budakdoğanca village, 98 m, 41°45'37"N, 26°20'33"E, 08.07.1988, coll. *F. Dane & H. Arda* (EDTU 2405); Çanakkale, Gelibolu, between Kilitbahir and Behramlı, 10 km, at the roadside, 82 m, 40°07'00"N, 26°17'00"E, 09.08.1986, coll. *İ. Uysal*, det. *İ. Uysal* (EDTU 585); Gelibolu, Bolayır Ilgardere park, at the seaside, 160 m, 40°18'00"N, 26°29'00"E, 10.05.1987, coll. & det. *F. Dane* (EDTU 593); Gelibolu to Bolayır, 16 km, at the roadside, 80 m, 40°30'45"N, 26°45'20"E, 09.07.1986, coll. & det. *İ. Uysal* (EDTU 4591).

New for the Balkan and European flora. The species has been known so far from W Syria, Syrian Desert, N Iraq, NW, W & C Iran, Armenia, and Anatolia. Irano-Turanian element (Radcliffe-Smith 1982).

5. *Euphorbia peplus* L. var. *peplus*

Tu(E) A1(E) Edirne, Center, Söğütlük, Meriç riverside, 26 m, 41°40'28"N, 26°33'39"E, 05.07.1989, coll. *S. Öksüz*, det. *Ş. Şiraneci*, conf. *M. Aybeke* (EDTU 4435).

New for A1(E) Edirne in the European Turkey. The species has been known so far from A2(E) İstanbul, Rumelihisarı (Radcliffe-Smith 1982).

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

Tu(E) A1(E) Edirne, Center, Söğütlük, at Meriç riverside, in a forest, 26 m, 41°40'28"N, 26°33'39"E, 04.07.1987, coll. *F. Dane & G. Dalgıç*, conf. *M. Aybeke* (EDTU 1745).

New for A1(E) Edirne in the European Turkey. So

far the species has been known from A1(E) Tekirdağ, A2(E) İstanbul (Radcliffe-Smith 1982).

7. *Euphorbia seguieriana* Neck. subsp. *seguieriana*

Tu(E) A1(E) Edirne, Center, Medical Faculty campus, 41 m, 41°40'28"N, 26°33'39"E, 21.05.1986, coll. *F. Dane, G. Dalgıç & N. Başak*, conf. *M. Aybeke* (EDTU 393); Edirne, Süloğlu-Taşlımüsellim road, 156 m, 41°46'02"N, 26°54'43"E, 01.06.1987, coll. *G. Olgun, F. Dane & H. Arda*, conf. *M. Aybeke* (EDTU 705); Edirne, Lalapaşa, Bağlıkderesi, 172 m, 41°50'00"N, 26°44'00"E, 04.07.1989, coll. *S. Öksüz*, conf. *M. Aybeke* (EDTU 3807).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A1(E) Kırklareli, Dereköy and A2(E) İstanbul, Halkalı (Radcliffe-Smith 1982).

Report 8

Mehmet Aybeke¹, Cengiz Kurt² & Arif Semerci²

¹ Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: mehmetaybeke@yahoo.com, cengizkurt69@hotmail.com

² Department of Forage Crops, Trakya Agricultural Researches Institute, Edirne, Turkey, e-mail: arifsemerci@tae.gov.tr

Fabaceae

8. *Anthyllis vulneraria* subsp. *boissieri* (Sagorski)

Bornm. (Fig. 2)

Tu(E) A1(E) Edirne, Lalapaşa, Kalkansogut village, Takımyanı-Kulealtı locality, on stony ground, 126 m, 41°56'31"N, 26°52'23"E, 23.05.2006, coll.

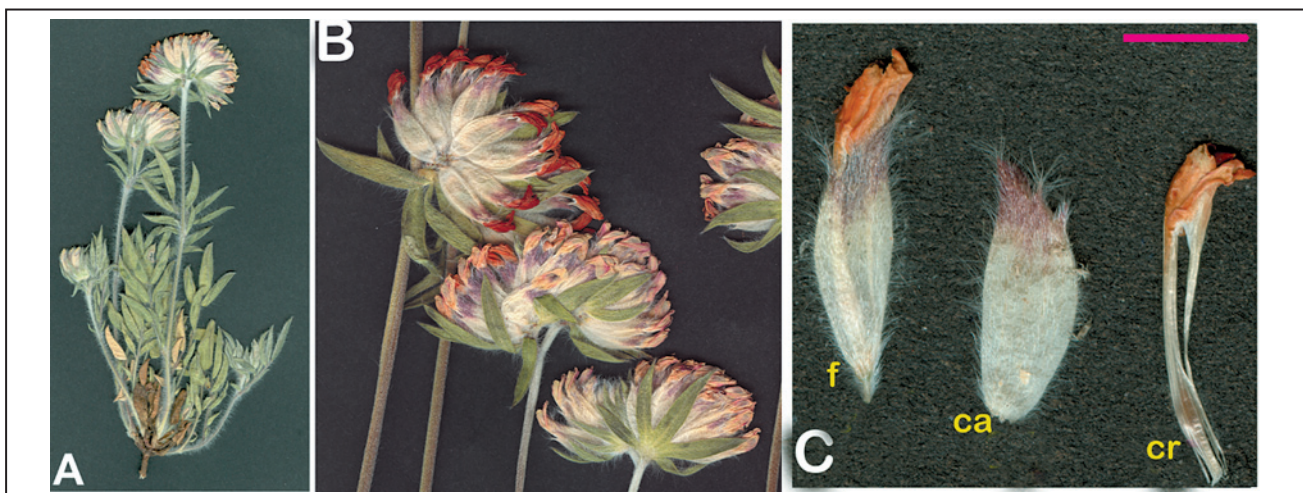


Fig. 2. *Anthyllis vulneraria* subsp. *boissieri*: A – general view of plant; B – inflorescence; C – dissected flower parts (f – flower, ca – calyx, cr – corolla = vexillum, wing and keel, as whole). Scale bar = 5 mm (original).

M. Aybeke, C. Kurt & A. Semerci, det. M. Aybeke (ETTA 1221).

Specimens of this taxon have been collected from Anatolia, A3 Bolu, A4 Ankara, A5 Amasya, A6 Tokat, A7 Gümüşhane, A8 Trabzon, A9 Kars, B2 Kütahya, B7 Erzincan, B9, B10 Ağrı (Cullen 1970). In the author's opinion, it is distributed in the Crimea and Caucassus. Furthermore, in the International Legume Database & Information Service (ILDIS, see References) the taxon was reported from Asia (Armenia, Azerbaijan, Gruzia-Abkhazia), the Asian part of Russia (Dagestan, Kabardino-Balkaria, Karachyevo-Cherkessia, Krasnodar, Severo-Osetia), Europe – Ukraine (Crimea).

During our fieldwork it was collected near to the Bulgarian frontier. New for the flora of European Turkey and the Balkans.

Acknowledgements. Fieldwork was carried out in 2006 within the framework of project TAGEM /04/04/01/002.

Reports 9-13

Nesibe Başak*, Necmettin Güler & Feruzan Dane

Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey,
e-mail: basak@trakya.edu.tr, nguler@trakya.edu.tr,
feruzandane@yahoo.com

*corresponding author

Aspleniaceae

9. *Asplenium ruta-muraria* L. subsp. *ruta-muraria*

Tu(E) A1(E) Edirne, Center: on the wall of the Old Mosque (Eski camii), 55 m, 41°40'35"N, 26°33'20"E, 29.06.1987, coll. *N. Başak* (EDTU 1577); on the wall of Beyazıt Külliyesi, 40 m, 41°41'10"N, 26°32'39"E, 18.04.1992, coll. *N. Başak* (EDTU 4823); on the wall of Selimiye Mosque, 75 m, 41°40'42"N, 26°33'32"E, 18.04.1992, coll. *N. Başak* (EDTU 4825); on the wall of Üçşerefeli Mosque, 50 m, 41°40'40"N, 26°33'11"E, 18.04.1992, coll. *N. Başak* (EDTU 4826).

New for A1(E) Edirne in the European Turkey. The species has been known so far from A2(E) Istanbul, Bahçeköy and Anatolia (Henderson 1965; Başak 1993).

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

Tu(E) A1(E) Edirne, Center: Saksığan to

Hüseyinakpınar, among rocks, 100 m, 41°53'21"N, 26°35'33"E, 19.04.1992, coll. *N. Başak* (EDTU 4836); Lalapaşa: Kalkansöğüt, 420 m, 41°58'17"N, 26°48'50"E, 08.05.1988, coll. *N. Başak* (EDTU 2016); Hanlıyenice village, among rocks, 255 m, 41°52'29"N, 26°41'04"E, 19.04.1992, coll. *N. Başak* (EDTU 4834); Lalapaşa: Lalapaşa to Süloğlu, among rocks, 179 m, 41°50'11"N, 26°45'00"E, 19.04.1992, coll. *N. Başak* (EDTU 4835); Hamzabeyli village, among rocks, 400 m, 41°58'00"N, 26°38'40"E, 19.04.1992, coll. *N. Başak* (EDTU 4837).

New for A1(E) Edirne in the European Turkey. The species has been known so far from Anatolia (Henderson 1965; Başak 1993).

11. *Asplenium trichomanes* L. subsp. *trichomanes*

Tu(E) A1(E) Kırklareli, Center: Yoğuntaş village, 348 m, 41°49'58"N, 27°04'07"E, 06.05.1988, coll. *G. Dalgıç & N. Başak* (EDTU 2002); Kayalıdere dam, 270 m, 41°47'10"N, 27°07'00"E, 06.05.1988, coll. *G. Dalgıç & N. Başak* (EDTU 2008, 2014); Kofcaz: Kırklareli to Kofcaz, 15 km, 300 m, 41°50'21"N, 27°09'44"E, 10.06.1987, coll. *N. Başak* (EDTU 1208); Kofcaz to Elmacık 3 km, 450 m, 41°55'14"N, 27°10'00"E, 10.06.1987, coll. *G. Dalgıç & C. Yarcı* (EDTU 1222).

New for A1(E) Kırklareli in the European Turkey. The species has been known so far from A2(E) Istanbul, Bahçeköy and Anatolia (Henderson 1965).

12. *Ceterach officinarum* DC.

Tu(E) A1(E) Edirne, Lalapaşa: Hacıdanişment village, 440 m, 41°54'39"N, 26°49'24"E, 18.04.1992, coll. *N. Başak* (EDTU 4828); Kalkansöğüt to the border of Bulgaria, 420 m, 41°58'17"N, 26°48'50"E, 19.04.1992, coll. *N. Başak* (EDTU 4827).

— A1(E) Kırklareli, Dereköy: Kocayazı, 645 m, 41°57'50"N, 27°12'14"E, 18.06.1986, coll. *N. Başak & G. Dalgıç* (EDTU 473).

New for A1(E) Edirne in the European Turkey. The species has been known so far from A2(E) Istanbul, Belgrade forest and Anatolia (Henderson 1965).

Sinopteridaceae

13. *Cheilanthes marantae* (L.) Domin

Tu(E) A1(E) Edirne, Lalapaşa: Hüseyinakpınar village, in a forest, on rocks, 190 m, 41°53'55"N,

26°35'43"E, 19.04.1992, coll. *N. Başak* (EDTU 4847); Hanlıyenice village, under rocks, 255 m, 41°52'29"N, 26°41'04"E, 19.04.1992, coll. *N. Başak* (EDTU 4848); Süloğlu: Süloğlu dam, at the edge of water, 210 m, 41°47'40"N, 26°55'33"E, 26.04.1992, coll. *N. Başak* (EDTU 4846).

- A1(E) Tekirdağ, Şarköy: Uçmaktdere, at the edge of water of a fountain, 104 m, 40°47'54"N, 27°21'55"E, 10.06.1999, coll. *G. Dalgıç* (EDTU 7839).

New for A1(E) Edirne in the European Turkey. The species has been known so far from Anatolia (Henderson 1965; Başak 1993).

Reports 14-43

Burkhard Biel¹ & Kit Tan²

¹ Am Judengarten 3, D-97204 Höchberg, Germany, e-mail: b.biel@arcor.de

² Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk (author for correspondence)

This is the seventh report of new plant-records for the island of Samothraki (N Aegean islands, Nomos Evrou, Eparchia Samothrakis) based on fieldwork carried out mainly in June 2008. The 30 records listed are all new to the island and when specifically stated, to the floristic region N Aegean (NAe) as circumscribed in Flora Hellenica (Strid & Tan 1997). The distribution on the other N Aegean islands is also provided.

Polypodiaceae

14. *Cystopteris fragilis* (L.) Bernh.

Gr Samothraki: N-NE of Pachia Ammos, Kousianda stream with small waterfalls on steep meadow slopes, 960 m, 40°25'55"N, 25°36'15", 19.06.2008, *Biel* 08.275.

First collected SW of Therma in 2002 (*Biel* 02.101). Confirming earlier literature records by Ade & Rechinger (1938: 114) and Stojanov & Kitanov (1944: 415) from other localities on island. In the N Aegean, also recorded from Thasos.

15. *Polystichum setiferum* (Forssk.) Woyn.

Gr Samothraki: SW of Therma, rocky field in valley with two streams, on basalt and granite, 1050 m, 40°28'25"N, 25°35'05"E, 17.06.2008, *Biel* 08.230.

Confirming literature records by Ade & Rechinger (1938: 114) and Stojanov & Kitanov (1944: 415). Recorded from Thasos.

Apiaceae

16. *Sanicula europaea* L.

Gr Samothraki: S of Therma, stream valley with *Platanus* and slopes near village, 60 m, 40°29'33"N, 25°36'31"E, 09.06.2008, *Biel* 08.084.

Two other localities noted near Therma. Confirming literature record by Ade & Rechinger (1938: 127) based on Ade's collection in July 1933.

Aristolochiaceae

17. *Aristolochia clematitis* L. (Fig. 3)

Gr Samothraki: W-SW of Palaeopolis, wet meadows by stream and ditches behind coastal wall, 3 m, 40°29'59"N, 25°31'32"E, 12.06.2008, *Biel* 08.155.

An earlier unpublished collection exists from near Isomata in the northeast (*Schuler* 99/478). Recorded from Thasos.



Fig. 3. *Aristolochia clematitis* (photo B. Biel).

Asclepiaceae

18. *Cynanchum acutum* L. (Fig. 4)

Gr Samothraki: W of Palaeopolis, winter-wet uncultivated ground and road margins, 5 m, 40°29'58"N, 25°30'56"E, 12.06.2008, *Biel* 08.158.

Recorded from Thasos, Limnos and Ag. Evstratios.



Fig. 4. *Cynanchum acutum* (photo B. Biel).

Balsaminaceae

19. *Impatiens balfourii* Hook. f.

Gr Samothraki: NW of Therma, wet ruderal area with ditch, on basalt and schist, 50 m, 40°29'44"N, 25°36'16"E, 09.06.2008, *Biel* 08.089.

Introduced and naturalised; native to tropical Asia (N India). New for the N Aegean islands.

Brassicaceae

20. *Diplotaxis viminea* (L.) DC.

Gr Samothraki: NW of Chora, open phrygana at road margins, 130 m, 40°28'44"N, 25°30'48"E, 12.06.2008, *Biel* 08.147.

New for the N Aegean islands.

Caryophyllaceae

21. *Minuartia glomerata* (M. Bieb.) Degen

Gr Samothraki: E–SE of Chora, rocky hill slopes with open phrygana, on basalt and schist, 900 m, 40°27'46"N, 25°33'33"E, 11.06.2008, *Biel* 08.129.

One collection known from the southern part of the island (*Schuler* 99/1340), otherwise new for Samothraki.

Chenopodiaceae

22. *Chenopodium botrys* L.

Gr Samothraki: SE of Kamariotissa, uncultivated fields and road margins at Kladeri, 20 m, 40°28'13"N, 25°28'42"E, 16.06.2008, *Biel* 08.209; E–SE of Therma, alluvial *Platanus* forest at lower part of Fonias river, 20 m, 40°28'59"N, 25°39'09"E, 19.06.2008, *Biel* 08.284.

Recorded from Thasos.

23. *Suaeda maritima* (L.) Dumort. (Fig. 5)

Gr Samothraki: W of Kamariotissa, gravelly beach near wind power station, 2 m, 40°28'21"N, 25°27'02"E, 07.06.2008, *Biel* 08.014.

Recorded from Thasos and Limnos. *Suaeda splendens* was reported in the same area by Biel & Tan (2008).

Cistaceae

24. *Tuberaria guttata* (L.) Fourr.

Gr Samothraki: NW of Therma, small clearings in scrub west of road to village, 20 m, 40°30'00"N, 25°36'18"E, 09.06.2008, *Biel* 08.090.

Confirming literature records by Ade & Rechinger (1938: 121) and Stojanov & Kitanov (1944: 443), material collected in 1943. Three other localities were noted near Ano Meria (in 2001), Kato Kariotes (2001) and Therma (in the years 2001, 2002 and 2007).



Fig. 5. *Suaeda maritima* (photo B. Biel).

Convolvulaceae**25. *Convolvulus betonicifolius* Mill.**

Gr Samothraki: NE of Kamariotissa, roadside ditch on way to Therma, 3 m, 40°29'07"N, 25°29'02"E, 08.06.2008, *Biel* 08.040.

One earlier collection made in June 1970 (*Stamatiadou* 9510, ATH), otherwise new for Samothraki.

Corylaceae**26. *Corylus avellana* L.**

Gr Samothraki: S of Therma, on valley slope with *Platanus* near village, on schist, 60 m, 40°29'33"N, 25°36'31"E, 09.06.2008, *Biel* 08.081.

Confirming a literature record by Stojanov & Kitanov (1944: 423), which is of a sterile specimen.

Cuscutaceae**27. *Cuscuta campestris* Yunck.**

Gr Samothraki: SE of Kamariotissa, uncultivated fields and road margins at Kladeri, 20 m, 40°28'13"N, 25°28'42"E, 16.06.2008, *Biel* 08.210.

New for the N Aegean islands.

Euphorbiaceae**28. *Euphorbia exigua* L.**

Gr Samothraki: NW of Chora, waste ground at abandoned quarry, on porphyritic substrate, 160 m, 40°28'44"N, 25°30'59"E, 12.06.2008, *Biel* 08.141.

Confirming literature record by Ade & Rechinger (1938: 119).

29. *Euphorbia falcata* L.

Gr Samothraki: NW of Chora, road embankments and winter-wet meadow, 130 m, 40°28'44"N, 25°30'48"E, 12.06.2008, *Biel* 08.146.

Other localities noted near Kariotes and Kamariotissa. New for the N Aegean islands.

Ranunculaceae**30. *Consolida ajacis* (L.) Schur**

Gr Samothraki: SE of Therma, meadow with fruit trees, 60 m, 40°29'32"N, 25°36'40"E, 09.06.2008, *Biel* 08.085.

New for the N Aegean islands.

Rubiaceae**31. *Crucianella bithynica* Boiss. (Fig. 6)**

Gr Samothraki: SE of Chora, rocky slopes with open phrygana, on schist, 740 m, 40°27'39"N, 25°33'15"E, 11.06.2008, *Biel* 08.116a; NE of



Fig. 6. *Crucianella bithynica* (photo B. Biel).

Pachia Ammos, rocky slopes with phrygana above river gorge, on granite, 850 m, 40°25'04"N, 25°36'43"E, 18.06.2008, *Biel* 08.254.

New for the N Aegean islands.

Scrophulariaceae**32. *Chaenorhinum minus* (L.) Lange**

Gr Samothraki: E–SE of Chora, rocky hill slopes with open phrygana, on basalt and schist, 900 m, 40°27'46"N, 25°33'33"E, 11.06.2008, *Biel* 08.123.

Confirming literature record by Ade & Rechinger (1938: 130) based on Rechinger's collection on 19 June 1936.

Solanaceae**33. *Atropa belladonna* L.**

Gr Samothraki: Therma, road margins and hedges in village, 50 m, 40°29'38"N, 25°36'31"E, 21.06.2008, *Biel* 08.304.

New for the N Aegean islands.

Alismataceae**34. *Alisma lanceolatum* With.**

Gr Samothraki: E–SE of Therma, alluvial forest

and temporary pools behind coastal wall, 2 m, 40°29'34"N, 25°38'48"E, 20.06.2008, *Biel* 08.292.

Also found in another wetland N of Therma. New for the N Aegean islands.

Amaryllidaceae

35. *Pancratium maritimum* L.

Gr Samothraki: W–SW of Kamariotissa, gravelly beach at northern edge of large coastal lagoon, 3 m, 40°28'16"N, 25°27'17"E, 07.06.2008, *Biel* obs. (photo).

Growing together with *Allium guttatum* subsp. *guttatum*, *Atriplex littoralis*, *Carex extensa*, *Catapodium marinum*, *Crassula tillaea*, *Cressa cretica*, *Eryngium maritimum*, *Hainardia cylindrica*, *Juncus gerardi*, *J. heldreichianus*, *J. littoralis*, *Papaver argemone* subsp. *nigroinctum*, *Parapholis filiformis*, *P. marginata*, *Polycnemum majus*, *Polygonum maritimum*, *Spergularia maritima* and *Suaeda splendens*, all of which are new for Samothraki. Recorded from Thasos, Limnos and Ag. Evstratios.

Cyperaceae

36. *Carex demissa* Hornem.

Gr Samothraki: NE of Pachia Ammos, narrow gorge with small waterfalls, 750 m, 40°25'04"N, 25°37'20"E, 18.06.2008, *Biel* 08.260; N–NE of Pachia Ammos, wet meadows near source of Kousianda stream, basalt rock, 1140 m, 40°26'20"N, 25°36'23"E, 19.06.2008, *Biel* 08.278.

Widespread in N Europe where it is known as “the common yellow sedge”. In Greece, only specified in literature, cited by Eleftheriadou (1992: 102) as occurring in the Rhodopi, NE Greece. Affinities to *C. flava* L. which has a proportionally longer beak; probably all records of *C. flava* from the Rhodopi are of *C. demissa*. The latter is treated by Stace (1991) as a synonym of *C. viridula* Michaux subsp. *oedocarpa* (Andersson) B. Schmid. New for the N Aegean islands.

37. *Carex extensa* Gooden.

Gr Samothraki: W–SW of Kamariotissa, gravelly beach at northern edge of large lagoon, 3 m, 40°28'16"N, 25°27'17"E, 07.06.2008, *Biel* 08.012.

Recorded from Thasos.

38. *Cyperus esculentus* L.

Gr Samothraki: NE of Therma, large coastal swamp and alluvial forest, 3 m, 40°29'57"N, 25°37'23"E, 19.06.2007, *Biel* 07.099; N of Therma, near pool

in scrub behind gravelly beach, 2 m, 40°30'12"N, 25°36'30"E, 21.06.2008, *Biel* 08.298.

Another locality noted near Kato Kariotes. New for the N Aegean islands.

39. *Cyperus rotundus* L.

Gr Samothraki: S–SW of Xiropotamos, gravelly beach and at margins of adjacent wet fields, 2 m, 40°25'23"N, 25°30'44"E, 16.06.2008, *Biel* 08.214.

An earlier collection exists from near Phonias-tower on the north coast (*Strid* 46972, LD).

Juncaceae

40. *Juncus heldreichianus* Parl.

Gr Samothraki: W–SW of Kamariotissa, gravelly beach at northern edge of large lagoon, 3 m, 40°28'16"N, 25°27'17"E, 07.06.2008, *Biel* 08.010.

Recorded from Thasos, Limnos and Ag. Evstratios.

41. *Juncus littoralis* C.A. Mey.

Gr Samothraki: W–SW of Kamariotissa, gravelly beach at northern edge of large lagoon, 3 m, 40°28'16"N, 25°27'17"E, 07.06.2008, *Biel* 08.011.

Recorded from Limnos.

Liliaceae s.l.

42. *Allium ampeloprasum* L.

Gr Samothraki: SW of Kamariotissa, grassy edge of temporary pool behind coastal wall, 4 m, 40°27'38"N, 25°27'35"E, 07.06.2008, *Biel* 08.018.

There is an unpublished collection made by Stamatiadou exactly 38 years earlier (07.06.1970). Recorded from Ag. Evstratios.

43. *Allium nigrum* L. (Fig. 7)

Gr Samothraki: SW of Xiropotamos-Makrilies, grazed flats by river, olive trees and scrub above bridge, 30 m, 40°25'46"N, 25°30'45"E, 02.10.2006, *Biel* 06.454 (Fig. 7, flowering, in cultivation at Höchberg); NE of Kamariotissa, edge of cereal field by dirt road, 15 m, 40°28'53"N, 25°28'45"E, 08.06.2008, *Biel* 08.021 (fruiting, in cultivation at Höchberg).

Three other localities were noted near Alonia, Kamariotissa and Palaeopolis.

Recorded from Thasos. *Allium cyrilli* (Fig. 8) also occurs on Samothraki. Although quite distinct it has often been confused with *A. nigrum*.

All cited vouchers are kept in the private herbarium of B. Biel at Höchberg (herb. Biel).



Fig. 7. *Allium nigrum* (photo B. Biel).



Fig. 8. *Allium cyrilli* (photo B. Biel).

Reports 44-45

Feruzan Dane, Çiler Meriç & Gülden Yılmaz

Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey, e-mail:
cilermeric@trakya.edu.tr, feruzandane@yahoo.com,
guldenyl@yahoo.com

Asteraceae

44. *Xantium spinosum* L.

Tu(E) A1(E) Edirne: Center, around the Faculty of Medicine, at the roadside, 26 m, 41°40'28"N, 26°33'39"E, 15.08.1988, coll. *F. Dane* (EDTU 2928).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A1(E) Çanakkale and A2(E) Istanbul (Kupicha 1975).

45. *Xantium strumarium* L. subsp. *strumarium*

Tu(E) A1(E) Edirne: Center, around the Faculty of Medicine, at the roadside, 26 m, 41°40'28"N, 26°33'39"E, 15.08.1988, coll. *F. Dane* (EDTU 2927).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Kupicha 1975).

Report 46

Valentina Goranova, Hristo Pedashenko & Kiril Vassilev

Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria, e-mail: goranova@bio.bas.bg

Campanulaceae

46. *Edraianthus graminifolius* (L.) A. DC. (Fig. 9)

Bu Znepole Region: on a sheer calcareous rock above the trail at the entrance into the gorge of river Erma, near the town of Tran, FN-34, 15.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164213).

Distribution of *E. graminifolius* in Bulgaria was confirmed. This species was discovered for the first time in Bulgaria by Urumoff in 1907, in the region of the town of Tran and was determined as *E. serbicus* (A. Kern.) Petrović (SOM 75541). The material was revised in 2006 by D. Lacușić as *E. graminifolius* s.l. This is the only collection of the species until present on the territory of the country.

In the *Flora of Bulgaria* (Stojanov & Stefanov 1925, 1933, 1948), distribution of *E. kitaibelii* A. DC., which is a synonym for *E. graminifolius*, was reported for the



Fig. 9. *Edraianthus graminifolius* (photo K. Dokov).

country, although there was no deposited material in the Buglarian herbaria. Data on the distribution of *E. kitalbelii* in Bulgaria are contradictory. Stojanov & Stefanov (1925) related the species to "...dry and calcareous rocks near Kyustendil, Mt Greben, and probably other westernmost parts of Bulgaria (Griseb.)". Subsequently, Stojanov & Stefanov (1933, 1948) mentioned it as "probable around Tran and Mt Greben, but it has not been found yet of this side of the border."

In the contemporary Bulgarian taxonomic literature (Anchev 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006) the species is mentioned with the epithet '*graminifolius*'.

Edraianthus graminifolius is an European endemic spread in the Balkan Peninsula (Serbia, Albania, Greece, Kosovo), Romania, Italy and Sicily (Obradović 1974; Kuzmanov 1976a). According to Stefanović & al. (2008), its wide distribution in Serbia is attributed to its considerable ecological plasticity in respect to terrains on which it develops: sheer rocks, screes, rocky fields, mainly on calcareous, but occasionally on silicate substrate too. Irrespective of this plasticity, it has been found in Bulgaria only on sheer rocks in the gorge of river Erma.

Acknowledgements. The authors are grateful to Dr Ana Petrova for the reference literature put at their disposal and for the help rendered during the preparation of the paper. They are also grateful to Prof. Mincho Anchev for helping them clarify the chronology of the species in Bulgaria.

Report 47

Necmettin Güler

Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey, e-mail:
nguler@trakya.edu.tr

Orchidaceae

47. *Epipactis microphylla* (Ehrh.) Swartz (Fig. 10)
Tu(E) A1(E) Edirne: Keşan, Mecidiye village,
in the maquis, 12 m, 40°36'78"N, 26°31'09"E,
19.05.2008, coll. N. Güler & H. Ersoy, det. N.
Güler (EDTU 9624).

This is the first report of this species for A1(E) Edirne in European Turkey based on fieldwork carried out in 2008. The closest known locality of the species is A2(A) Istanbul. Therefore, it is not surprising that the taxon was recorded in European Turkey. This species was found in sparsely represented populations in one locality in the study area. It is distributed in NW, W and S Anatolia and across the world, in most of Europe (except C & S Russia), Cyprus, Caucasus and N Iran. It is an Euro-Siberian element (Renz & Taubenheim 1984).

It is distinguished from the other species by its slender stem, 15–40 cm tall; with 3–5 leaves, much shorter than internodes; flowers ± unilateral; rachis clearly pubescent and ovary as densely pubescent as rachis; hypochile without lateral lobes and epichile attached to hypochile by a rigid fold.

Acknowledgements. The author would like to thank Hüseyin Ersoy for his help in the fieldwork. This work was supported by the Research Fund of the Trakya University (TUBAP-799).

Report 48

Necmettin Güler¹, Kaan Hürkan² & Ahmet Gönüz²

¹ Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey,
e-mail: nguler@trakya.edu.tr (corresponding author)

² Department of Biology, Faculty of Science and Arts,
Çanakkale Onsekizmart University, 17860 Edirne, Turkey,
e-mail: kaanhurkan@hotmail.com, ahmetgonuz2@yahoo.com

Orchidaceae

48. *Neotinea maculata* (Desf.) Stearn (Fig. 11)
Tu(E) A1(E) Çanakkale: Eceabat, Kabatepe, in a
Pinus brutia forest, 23 m, 40°12'13"N, 26°16'20"E,



Fig. 10. *Epipactis microphylla*: **a.** plant, **b.** spike (photo N. Güler).

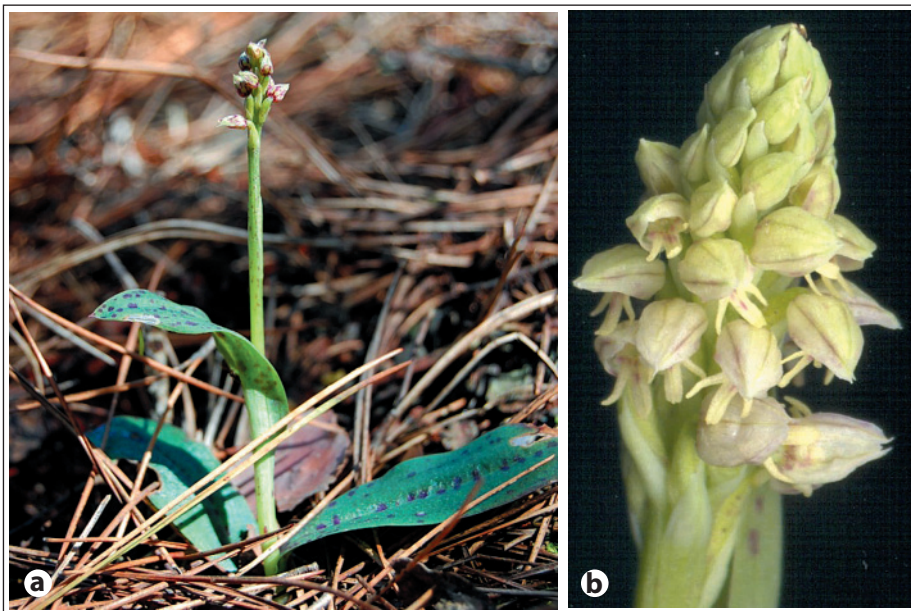


Fig. 11. *Neotinea maculata*: **a.** plant, **b.** spike (photo K. Hürkan & N. Güler).

05.04.2008, coll. K. Hürkan & A. Gönüz, det. N. Güler (EDTU 9623).

First report for A1(E) in the European Turkey based on fieldwork carried out in 2008. The closest known localities of the species are in NE Turkey-in-Europe, A2(E) Istanbul and Anatolia, A1(A) Çanakkale. This species was found in sparsely represented populations in one locality in the study area. It is distributed mainly in NW Turkey, W & S Anatolia, Islands and across the world, in Ireland, Isle of Man and the Mediterranean area (except Libya & Egypt). A Mediterranean element (Renz & Taubenheim 1984).

It is distinguished from the other genera by small perennial entire-root tubers and 2–3 green leaves at base. Spike cylindrical, very dense, often slightly twisted. Flowers small, sessile. Sepals and petals forming a closed hood. Labellum 3-lobed, spurred. Column short, with 2 large lateral stigmas joined below. Anther prominent, 2 pollinia, each with a short caudicle attached to a viscidium, both glands enclosed in a single pouch (bursicula). Ovary cylindrical-fusiform, sessile, twisted, glabrous. Monotypic (Renz & Taubenheim 1984).

Report 49

Ivan Kirjakov

Department of Botany, Faculty of Biology, University of Plovdiv
Paisiy Hilendarski, 24 Tsar Assen St., 4000 Plovdiv, Bulgaria

Boraginaceae

49. *Buglossoides glandulosa* (Velen.) R. Fern.

Bu Znepole Region: grassy places W from Zhilentsi village, Kyustendil district, 42°16'N, 22°38'E, 08.05.2004, with flowers, coll. & det. *I. Kirjakov* (SOM 164134, 164135).

The species is known from many other parts of the country (Kirjakov & Petrova 2003). It is distributed also in R Macedonia (Micevski 1973; Matevski in press), Greece (Eleftheriadou & al. 2004), Romania (Oprea 2005) and Turkey, Central Anatolia (Tarikahya & Sadik 2008).

Reports 50-54

Çiler Meriç, Gülden Yılmaz, Kerim Alpınar & Feruzan Dane

Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: cilermeric@trakya.edu.tr, feruzandane@yahoo.com, guldenyl@yahoo.com

Asteraceae

50. *Achillea clypeolata* Sm.

Tu(E) A1(E) Edirne: Lalapasa, Sinankoy village, near a pasture, 181 m, 41°48'00"N, 26°43'00"E, 20.05.2005, coll. Ç. Meriç, det. *K. Alpınar* (EDTU 8594).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A1(E) Kirklareli (Huber-Morath 1975).

51. *Achillea millefolium* L. subsp. *millefolium*

Tu(E) A1(E) Edirne: Lalapasa, Kalkansogut, 172 m, 41°50'00"N, 26°44'00"E, 08.06.1989, coll. & det. *G. Dalgıç* (EDTU 4668).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Huber-Morath 1975).

52. *Anthemis tinctoria* L.

Tu(E) A1(E) Edirne: Center, around the Faculty of Medicine, 26 m, 41°40'28"N, 26°33'39"E, 30.05.2005, coll. Ç. Meriç (EDTU 9466); Kayapa village, around a pasture, 164 m, 41°46'00"N, 26°43'00"E, 20.05.2005, coll. Ç. Meriç, det. *K. Alpınar* (EDTU 8587).

New for A1(E) Edirne in the European Turkey. So far *A. t.* var. *pallida* DC. has been known from A2(E) Istanbul and *A. t.* var. *tinctoria* also from A1(E) Tekirdag (Grierson & Yavin 1975).

Colour often varies in pure populations with white (*A. t.* var. *pallida* DC.) or yellow flowers (*A. t.* var. *tinctoria*). The populations with white flowers were seen around Kayapa village. The populations with yellow flowers were seen at the center of Edirne.

53. *Matricaria chamomilla* L.

Tu(E) A1(E) Edirne: Center, around the Faculty of Medicine, 26 m, 41°40'28"N, 26°33'39"E, 09.05.2005, coll. Ç. Meriç, det. *K. Alpınar* (EDTU 8586).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Grierson 1975)

54. *Tripleurospermum baytopianum* E. Hossain

Tu(E) A1(E) Edirne: Ipsala, Yakupbey pasture, 21 m, 41°15'00"N, 26°34'00"E, 30.04.2004, coll. Ç. Meriç, det. *K. Alpınar* (EDTU 8553).

New for A1(E) Edirne in the European Turkey. So far the species has been known from A1(E) Çanakkale (Enayet Hossain 1975). Endemic to Turkey.

Reports 55-62

Antoaneta S. Petrova¹ & Boris Assyov²

¹ Botanical Garden, Bulgarian Academy of Sciences, P.O. Box 664, 1000 Sofia, Bulgaria, e-mail: petrovabotgar1@abv.bg

² Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria

Caryophyllaceae

55. *Silene skorpilii* Velen.

Bu Thracian Lowland: in grassy places at the Telfirskata koria locality, NE of Manole village, Plovdiv district, 42°12'22.0"N, 24°54'01.1"E, LG-27, 07.08.2008, coll. *A. Petrova* & *B. Assyov* (SOM 164306).

A Balkan endemic species, with local distribution in South Bulgaria, for which no recent data exist. The latest collection from this floristic region dates back to 1915 and it has not been collected elsewhere in the country since 1961. Apparently, *S. skorpilii* merits evaluation of its conservation status. Here it forms groups (of 3–10 individuals) at the edges of a low-growing forest.

Rubiaceae**56. *Galium spurium* L.**

- Bu** Rhodopi Mts (*Central*): Dobrostan massif, in a wet place near a fountain on the trail from Martsiganitsa chalet to Bezovo chalet, LG-24, 17.08.2006, coll. A. Petrova (SOM 163199);
- Mt Strandzha: along the Tsarevo – Malko Tarnovo road, near a local fountain, NG-66, 09.05.2004, coll. A. Petrova & B. Assyov (SOM 160210).

A new species for the Rhodopi Mts (*Central*) and Mt Strandzha. An Euro-Asiatic geoelement, which is possibly widely distributed in Bulgaria, but still reported for less than a half of the floristic regions of the country (Anchev 1989; Assyov & Petrova 2006).

Scrophulariaceae**57. *Pedicularis leucodon* Griseb.**

- Bu** Rhodopi Mts (*Central*): Dobrostan massif, in a meadow near Martsiganitsa chalet, LG-24, 06.07.1991, coll. A. Petrova (SOM 156073).
- The species has been observed regularly in meadows in the plateau area of Dobrostan; the populations usually number 5–15 individuals.

58. *Verbascum decorum* Velen.

- Bu** Rhodopi Mts (*Western*): in rock crevices in the northern part of Elidere locality (the valley of river Chepinska), with flowers, KG-66, 09.06.2007, observed by A. Petrova; also coll. I. Urumoff in 1907 (SOM 65908) and V. Stribrnyi in 1899 (SO 64426).

Verbascum decorum is a Bulgarian endemic, reported only from the Central Rhodopi Mts floristic region (Stefanova-Gateva 1995). The observed populations were of about 40 plants on eastward facing rocks.

Violaceae**59. *Viola elatior* Fr.**

- Bu** Mt Strandzha: Sredoka Nature Reserve, Gradev Sredok locality, June 2000, coll. D. Stoyanov & B. Georgiev (SO 101672).

A species with local distribution in Bulgaria, reported by Delipavlov (1979) and Anchev (1992) to occur only in few regions, which possibly has wider distribution.

Cyperaceae**60. *Carex humilis* Leyss.**

- Bu** Black Sea Coast (*Northern*): in dry hills N of Varna town, NH-78, 13.05.1900, coll. B. Davidov (SOM 9541).
- Forebalkan (*Western*): on dry limestone terrains

- at Vrashka Chuka locality, FN-98, 15.04.1965, coll. S. Ganchev & V. Velchev (SOM 154404).
- Forebalkan (*Eastern*): on dry limestone terrains at Vitata Stena locality, above Zdravkovets village, Gabrovo district, LH-55, 22.06.2008, coll. A. Petrova (SOM 164417).
- Sofia Region: in pastures NE of Ponor village, FN-75, 16.04.2007, coll. A. Petrova (SOM 163572). Observed also at the Belidie Han locality. In both places forms extensive populations.
- Vitosha Region: on dry limestone terrains above Duhlata cave, near Bosnek village, FN-70, 17.04.1989, coll. D. Stoyanov (SOM 147888).
- Pirin Mts (*Northern*): in open sunny places above Krushe locality, on marble stones, GM-03, 01.10.1984, coll. V. Velchev & P. Vassilev (SOM 154643); at Peshterite locality, above Bansko town, 03 & 11.07.2001, observed by A. Petrova.
- Mt Slavyanka: in Hambar Dere above Paril village, on marble rocks, at about 1500 m, GL-29, 06.04.1991, coll. I. Pashaliev (SOM 154318).
- Rhodopi Mts (*Western*): in a stony pasture at the Beglica locality, along an old limestone quarry, KG-63, 28.06.2006, coll. A. Petrova & B. Assyov (SOM 164416); Elidere locality, KG-66, 14.04.1914, coll. I. Mrkvichka (SOM 9545).
- Rhodopi Mts (*Central*): Dobrostan massif, in stony pastures around the Svety Duh Chapel near Dobrostan village, Chervenata Stena and Ankini Skali peaks, LG-24, 17.08.2006, coll. A. Petrova (SOM 163194, 163195 & 163196); in a stony pasture on the Trigrad Plateau, above the Dyavolsko Garlo cave, KG-80, 27.06.2006, coll. A. Petrova & B. Assyov (SOM 163200); Bachkovo, LG-24, 04.1914, coll. V. Stribrnyi (SOM 9544).
- Rhodopi Mts (*Eastern*): in Malkata Kovan Kaya locality, north of the iron bridge on river Arda, LG-90, 16.04.1996, coll. R. Vassilev, det. D. Dimitrov (SOM 161779).
- Thracian Lowland: Plovdiv, LG-16, 05 & 06.1984, coll. V. Stribrnyi (SOM 9546; SO 09858).
- Mt Strandzha: in dry stony places N of Malko Tarnovo town, NG-44, 19.04.1933, coll. D. Yordanov.
- Carex humilis* is a species with a local distribution, typical for dry limestone terrains. Although in Acharov (1957), Vălev & Kitanov (1964) and other older Floras and Guidebooks on the Bulgarian flora it is reported from many geographical regions of

Bulgaria, Markova (1992) specified its distribution in few floristic regions, followed by Dimitrov (2002) and Delipavlov (2003). A check in the herbaria of the Institute of Botany (SOM) and of the Sofia University (SO) and in the personal collections has shown that this species is found in almost all floristic regions (so far there are no samples from the Black Sea Coast (*Southern*), Mt Sredna Gora (*Eastern*), the Valley of River Struma, Mt Belasitsa, Pirin Mts (*Southern*), the Valley of River Mesta and the Tundzha Hilly Country floristic regions).

61. *Carex rostrata* Stokes

Bu Znepole Region: between river Erma gorge and Glavanovtsi village, FN-24, 19.06.1960, coll. D. Yordanov & A. Yanev (SOM 148809).

Orchidaceae

62. *Orchis spitzelii* Saut. ex W.D.J. Koch (Fig. 12)

Bu Rhodopi Mts (*Central*): Trigrad gorge, near the turn of the road to lake Chairite, KG-80, 04.06.2008, observed by B. Assyov.

Orchis spitzelii is an extremely rare species in Bulgaria, with single reports from three floristic regions. The only existing data for the Central Rhodopi Mts is its collection by Stribrnyi in 1895, above Javorovo village (SO 14147). Only a single plant was observed in the Trigrad gorge.

Reports 63-68

Gülsemin Savaş, Nesibe Başak, Gülden Yılmaz & Feruzan Dane

Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: feruzandane@yahoo.com, guldenyl@yahoo.com

These are new records of some *Trifolium* L. species belonging to *T.* sect. *Mistyllus*, *T.* sect. *Fragifera*, *T.* sect. *Paramesus* and *T.* sect. *Trichocephalum*.

Fabaceae

63. *Trifolium clusii* Godr. & Gren.

Tu(E) A1(E) Edirne: Center, 26 m, 41°40'28"N, 26°33'39"E, 01.06.1987, coll. F. Dane (EDTU 2673); Musabeyli village, 109 m, 41°41'00"N, 26°40'00"E, 23.06.1989, coll. F. Dane & N. Aktac (EDTU 3564); Tayakadin village, 26 m, 41°40'28"N, 26°33'39"E, 02.05.1998, coll. G. Savaş (EDTU 7328); Kesan: Kizkapan village, 157 m, 40°44'00"N, 26°29'00"E, 22.05.1999, coll. G. Savaş (EDTU 7377).



Fig. 12. *Orchis spitzelii* (photo B. Assyov).

New for European Turkey. So far the species has been known from A2(A) Bursa (Zohary 1970).

64. *Trifolium fragiferum* L. var. *fragiferum*

Tu(E) A1(E) Edirne: Center, Musabeyli village, 109 m, 41°41'00"N, 26°40'00"E, 15.05.1989, coll. F. Dane & N. Polat (EDTU 4002); Havsa, Kuzucu village, 95 m, 41°30'00"N, 26°49'00"E, 25.07.1998, coll. G. Savaş (EDTU 7353); Suloglu-Edirne 3 km, 156 m, 41°46'02"N, 26°54'43"E, 16.07.1999, coll. G. Savaş (EDTU 7432).

New for A1(E), with specimens collected from Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Zohary 1970).

65. *Trifolium globosum* L.

Tu(E) A1(E) Edirne: Center, Kutlutas, 26 m, 41°40'28"N, 26°33'39"E, 30.04.1988, coll. F. Dane (EDTU 5006); Suloglu, near Suloglu dam, 156 m, 41°46'02"N, 26°54'43"E, 01.06.1999, coll. N. Başak & N. Güler (EDTU 7442).

New for A1(E), with specimens collected from Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Zohary 1970).

66. *Trifolium strictum* L.

Tu(E) A1(E) Edirne: Suloglu, near Suloglu dam, 156 m, 41°46'02"N, 26°54'43"E, 16.07.1999, coll. G. Savaş (EDTU 7428).

New for A1(E), with specimens collected from Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Zohary 1970).

67. *Trifolium tomentosum* L.

Tu(E) A1(E) Edirne: Center, between the villages Kosan and Demirhanli, 123 m, 41°41'51"N, 26°44'24"E, 27.08.1998, coll. G. Savaş (EDTU 7359); Havsa, near E-5 road, 65 m, 41°33'01"N, 26°49'13"E, 25.07.1998, coll. G. Savaş (EDTU 7355); Uzunkopru, Kurttepe village, 95 m, 41°22'00"N, 26°43'00"E, 04.08.1998, coll. G. Savaş (EDTU 7349); Lalapasa, Sinankoy, near a stream, 181 m, 41°48'00"N, 26°43'00"E, 16.07.1999, coll. G. Savaş (EDTU 7426).

New for A1(E), with specimens collected from Edirne in the European Turkey. So far the species has been known from A2(E) Istanbul (Zohary 1970).

68. *Trifolium vesiculosum* Savi var. *rumelicum* Griseb.

Tu(E) A1(E) Edirne: Center, Musabeyli village, 109 m, 41°41'00"N, 26°40'00"E, 15.09.1989, coll. F. Dane & A. Baytop (EDTU 3903); between the villages Tayakadin and Abalar, 89 m, 41°33'00"N, 26°45'00"E, 20.06.1998, coll. G. Savaş (EDTU 7342); between the villages Sazlidere, and Iskender,

80 m, 41°36'00"N, 26°41'00"E, 21.06.1998, coll. G. Savaş (EDTU 7343); between the villages Kosan ana Demirhanli, 123 m, 41°41'51"N, 26°44'24"E, 27.08.1998, coll. G. Savaş (EDTU 7358); Hacıumur village, 123 m, 41°43'00"N, 26°48'00"E, 16.07.1999, coll. G. Savaş (EDTU 7415); Uzunkopru, Kurttepe village, 95 m, 41°22'00"N, 26°43'00"E, 04.08.1998, coll. G. Savaş (EDTU 7348); Kesan, Mecidiye, at the seaside, 0 m, 40°38'20"N, 26°32'14"E, 30.07.1999, coll. G. Dalgıç (EDTU 7453); Yerlisu village, around Mt Koru, 162 m, 40°44'00"N, 26°43'00"E, 06.05.1999, coll. N. Başak & N. Güler (EDTU 7482).

New for A1(E), with specimens collected from Edirne in the European Turkey. So far the species has been known from A1(E) Kırklareli (Zohary 1970).

Reports 69-74**Stoyan Stoyanov**

Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria, e-mail: stoyanov@bio.bas.bg

Asteraceae**69. *Artemisia eriantha* Ten. (Fig. 13)**

Bu Balkan Range (*Central*): Central Balkan National Park, Triglav massif, on the northern slopes of peak Mazalat, in the crevices of calcareous rocks,



Fig. 13. *Artemisia eriantha* (photo V. Koychev).

1884 m, 42°43.472'N, 25°05.947'E, 22.08.2008, coll. V. Koychev, det. S. Stoyanov (SOM 164300).

Artemisia eriantha is a rare species (Bozilova & Tonkov 1984) included in Annex 3 of the Bulgarian Biodiversity Law. It was found for the first time in the Balkan Range. The population identified in the area of peak Mazalat numbers about 30 individuals. The species is a typical representative of the high-mountain chasmophyte vegetation, attached mainly to calcareous habitats. So far it has been known from the floristic regions of Pirin Mts and Rila Mts, where it occurs in limited numbers in the altitude zone between 1800 m and 2500 m (Assyov & Petrova 2006).

Brassicaceae

70. *Erysimum cheiranthoides* L.

Bu Danubian Plain: Pleven region, Belene district, Golyama Barzina island, N of Belene town, in thinned-out poplar stands, 8 m, 43°41.390'N, 25°09.053'E, with flowers and fruits, 28.05.2008, coll. S. Stoyanov (SOM 164301).

The species is included in the *Red Data Book of Bulgaria*, in the category Rare (Anchev 1984). According to Assyov & Petrova (2006), *E. cheiranthoides* is known only from two floristic regions: Northeast Bulgaria (Malak Kosuy island, Tutrakan district, SOM 145660) and the Balkan Range (Western: above Berkovitsa town, SOM 33207).

Fabaceae

71. *Lathyrus pancicii* (Jurišić) Adamović (Fig. 14)

Bu Znepole Region: Pernik region, Mt Paramunska, 1 km SE of Paramun village, Tran district, along a dirt road leading to an abandoned quarry, 944 m, 42°47.001'N, 22°44.506'E, with flowers, 09.07.2008, coll. S. Stoyanov (SOM 164302).

A Balkan endemic, *L. pancicii* was regarded as extinct in the world over almost till the end of the 20th century. In 1998 the species was rediscovered, with location on the northern and eastern slopes of Mt Lyubash (42°46'N, 22°45'E), above Lyalintsi village, Pernik district (Petrova & al. 2003). A new location of *L. pancicii* was found in July 2008, in the lower parts of Mt Paramunska, near to Paramun village. Only three individuals were found, two with flowers. The location near Paramun village is 2 km NW of that at Lyalintsi village.

Scrophulariaceae

72. *Lindernia dubia* (L.) Pennell

Bu Northeast Bulgaria: Ruse district, N of Marten town, on the muddy banks of the Danube, at kilometer 481, MJ-26, with fruits, 25.09.2008, coll. S. Stoyanov (SOM 164303).

According to Markova (1995), *L. dubia* is distributed



Fig. 14. *Lathyrus pancicii* (photo S. Stoyanov).

in the Thracian Lowland, in wet and sandy places in the rice pads. Subsequently, Tzonev & Šumberová (2004) have recorded this adventitious species also in the Danubian Plain, with several locations along the Bulgarian banks of the Danube.

Poaceae

73. *Milium effusum* L.

Bu Northeast Bulgaria: Ruse region, valley of Beli Lom river, in the southeastern part of the Batakliyata Forest Complex, westwards of the road between Pisanets and Svalenik villages, in mixed deciduous forests, MJ-33, with flowers, 03.05.2008, coll. S. Stoyanov (SOM 164304); Ruse region, valley of Beli Lom river, Beli Lom Reserve, in forests of *Tilia tomentosa*, MJ-43, with flowers, 03.05.2008, coll. S. Stoyanov (SOM 164305).

This species has been so far known from the Danubian Plain, Forebalkan, Balkan Range, Znepole Region, Vitosha Region, West Frontier Mts, Mt Belasitsa, Mt Slavyanka, Pirin Mts, Rila Mts, Mt Sredna Gora, Rhodopi Mts, and Mt Strandzha (Assyov & Petrova 2006).

74. *Panicum capillare* L.

Bu Northeast Bulgaria: Silistra region, Tutrakan district, along the southern sandy bank of the Danubian island Malak Kosuy, northwards from Pozharevo village, MJ-77, 23.06.2007, coll. S. Stoyanov (SOM 163925).

This adventitious species was reported for the first time for the flora of Bulgaria by Deneva & Ljubenova (1996) from the vicinities of Kostinbrod town, Sofia Region. Subsequently, Tzonev & Šumberová (2004) recorded the species also for the Danubian Plain, with several locations along the Bulgarian banks of the Danube. Using the Danube as a natural settling route, *P. capillare* expands its distribution eastwards, although not yet as an aggressive invasive species.

Report 75

Kit Tan¹ & Uwe Raabe²

¹ Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk (author for correspondence)

² Borgsneider Weg 11, D-45770 Marl, Germany, e-mail: uwe.raabe@lanuv.nrw.de

Rubiaceae

75. *Cruciata taurica* subsp. *euboea* (Ehrend.)

Ehrend.

Gr Nomos Korinthias, Eparchia Korinthias: above Skotini, on way to Kandila shortly before the pass, roadside and open screes above the road, 37°29'N, 22°40'E, 10.05.2006, U. Raabe s.n. (B, herb. Iatrou, herb. Kit, MSTR, herb. Raabe).

New for the Peloponnese. Abundant and in full flower. It was recollected by Raabe in May 2007 and also noted in May 2008. *Cruciata taurica* subsp. *euboea* was previously known only from Mt Dhirfi on the West Aegean island of Evvia, where it grows between 600–1500 m in rocky and stony places and open deciduous forest overlying limestone. It flowers from mid-April to May. Early collections on Mt Dhirfi include those by Heldreich in 1858 and by Pichler in 1876.

In Greece, *C. t.* subsp. *occidentalis* (Ehrend.) Ehrend. & Schönb.-Tem. occurs only on the East Aegean island of Samos.

Reports 76-82

Kit Tan¹, George Sfikas² & Gert Vold³

¹ Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk (author for correspondence)

² 2 Vyzantiou St., Argypolis, Athens 16452, Greece

³ Botanical Garden, University of Copenhagen, Øster Farimagsgade 2C, DK-1353 Copenhagen K, Denmark

Continuing a series of new plant-records based on further floristic investigations in Greece. The floristic regions adopted follow those circumscribed in *Flora Hellenica* (Strid & Tan 1997). The travel to Limnos was in connection with a feasibility study for the establishment of windmills on the island.

Asteraceae

76. *Centaurea lactiflora* Halácsy

Gr Nomos Pierias, Eparchia Pierias: c. 100 m inland from coastal beach at Neoi Poroi, N of Tembi valley, sea level, 02.08.2008, Sfikas 13884 (herb. Kit, herb. Sfikas).

New for nomos and eparchia Pierias in phytogeographical region North Central. *Centaurea grisebachii* subsp. *grisebachii* (florets pink) and *Centaurea diffusa* Lam. (florets white, Sfikas 13885, herb. Kit, herb. Sfikas) grew in the same area.

Centaurea lactiflora, white-flowered as the name suggests, is a rather rare species in Greece and protected under the 2002 Bern Convention on the Conservation of European Wildlife and Natural Habitats. It has been collected from coastal meadows and roadsides in the northeast (Nomi Xanthis and Thessalonikis). The type locality, however, is quite far inland in central Greece, in Nomos Trikalon, Eparchia Kalambakas: Koniskos village, NE of Kalambaka.

Brassicaceae

77. *Matthiola sinuata* (L.) R. Br.

Gr Nomos Magnisias, Eparchia Skopelou: Alonnisos, eastern part of island near the bay of Steni Vala, 39°11'N, 23°55'E, 10.05.2008, *Sfikas* 13846 (herb. Kit, herb. Sfikas).

New for the Sporades group of islands in W Aegean. Widespread in the Aegean and Ionian areas. The herbarium voucher was prepared from material cultivated in Athens and grown from seed originally collected on Alonnisos. All the plants were white-flowered and the existence of this variant on Alonnisos was first communicated to us by Aliko Panou.

Gentianaceae

78. *Centaureum maritimum* (L.) Fritsch

Gr Nomos Lesvou, Eparchia Limnou: Limnos, southeastern part of island, on Paradissi hill, 250 m, 10.05.2008, *Sfikas* (photo).

New for Limnos, not mentioned in a previous study on the island by Panitsa & al. (2003). Also reported from Samothraki in the N Aegean area.

Geraniaceae

79. *Geranium subcaulescens* L'Hérit. ex DC.

Gr Nomos Grevenon, Eparchia Grevenon: peak of Megali Petra between Rodiani and Chromion, calcareous substrate, 40°07'N, 21°39'E, 26.05.2008, *Sfikas* 13864 (herb. Sfikas).

Distinctive by its dark reddish-purple petals with black basal blotch, new for Mt Vourinos in North Central. Vourinos comprises four main mountain peaks and ridges running in a NW to SE direction. Most botanical forays have been to the main ridge which is serpentine (ophiolithic substrate), and Drissinikos peak and its surrounding area is well explored. The flora on the other three ridges where the substrate is calcareous is, however, less known. Some of the more interesting plants noted on these

calcareous peaks are *Achillea ageratifolia*, *Anthyllis aurea*, *A. vulneraria* subsp. *pindicola* (a white-flowered form), *Pulsatilla halleri* subsp. *rhodopaea*, *Satureja montana* subsp. *macedonica* and *Viola vourinensis*. These taxa and several others have previously only been recorded from the serpentine areas of Vourinos but not from the calcareous parts. The flora of the latter is under investigation.

Malvaceae

80. *Lavatera bryoniifolia* Mill.

Gr Nomos Lesvou, Eparchia Limnou: Limnos, northern part of island, Gomati Bay, 39°59'N, 25°09'E, 11.05.2008, *Sfikas* 13836 (herb. Sfikas). New for the N Aegean area.

Iridaceae

81. *Gladiolus italicus* Mill.

Gr Nomos Lesvou, Eparchia Limnou: Limnos, northern part of island, NE of the village Katalakko, 39°58'N, 25°09'E, 10.05.2008, *Sfikas* 13834 (herb. Sfikas).

New for Limnos. Also reported from Thasos and Samothraki in the N Aegean area.

Liliaceae

82. *Ornithogalum arabicum* L. (Fig. 15)

Gr Nomos Lesvou, Eparchia Limnou: Limnos, eastern part of island, Limni Aliko, 39°56'N, 25°21'E, 11.05.2008, *Sfikas* (photo).

A small naturalized population of c. ten plants. New for Limnos. Also recorded from Ag. Evstratios in the N Aegean area.

Reports 83-108

Kiril Vassilev, Hristo Pedashenko & Valentina Goranova

Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria, e-mail: vassilev@bio.bas.bg

Brassicaceae

83. *Aethionema saxatile* (L.) R. Br.

Bu The Valley of Mesta River: on open grassy places on the slope above the road between Ablanitsa village and Blatska village, Hadzhdimovo district, GM-30, 22.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164405).

First record for the species from this floristic region (for the distribution in Bulgaria see Ančev 2007).

Campanulaceae**84. *Campanula scutellata* Griseb.**

Bu The Valley of Mesta River: on slopes above the public mineral bath by Marchevo village, Gotse Delchev district, GM-31, 20.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164388); rocky places along the road around Gospodintsi village, Gotse Delchev district, 29.06.2006, coll. & det. *D. Stoyanov* (SOM 162800); meadows right of the road between Mesta village and Gotse Delchev town, 30.06.2005, coll. & det. *D. Stoyanov* (SOM 161986).

This is the first floristic record for this Balkan endemic species from the region.

Caryophyllaceae**85. *Dianthus pinifolius* Sm.**

Bu The Valley of Mesta River: on open stony slopes above the road by Gospodintsi village, Gotse Delchev district, GM-21, 22.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164384); on stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164394); on rocky places around Gospodintsi village, Gotse Delchev district, 29.06.2006, coll. & det. *D. Stoyanov* (SOM 162790); on dry meadows right of the road between Mesta village and Gotse Delchev town, 29.06.2005, coll. & det. *D. Stoyanov* (SOM 162789).

This is the first floristic record for this species from the Valley of Mesta River.

86. *Silene flavescens* Waldst. & Kit.

Bu The Valley of Mesta River: on stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164380).

This species is comparatively widespread in Bulgaria (Petrova 1992; Delipavlov 2003; Assyov & Petrova 2006), but it has not been reported for the Valley of Mesta River so far.

Cistaceae**87. *Xolanthes guttatus* (L.) Rafin.**

Bu The Valley of Mesta River: on dry stony places around Petrelik village, Hadzhidimovo district, GL-39, 22.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164385).

New species for this floristic region.

Euphorbiaceae**88. *Euphorbia myrsinites* L.**

Bu The Valley of Mesta River: on stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164398).

This species is comparatively widespread in Bulgaria (Kuzmanov 1979; Andreev 1992; Delipavlov 2003; Assyov & Petrova 2006), but it has not been reported for the Valley of Mesta River so far.



Fig. 15. *Ornithogalum arabicum* (photo G. Sfikas).

Fabaceae**89. *Astragalus monspessulanus* L.**

Bu The Valley of Mesta River: on stony shrubby meadows between Beslen and Teplen villages, Hadzhidimovo district, GL-49, 22.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164386); on stony meadows N of Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164402); around Hadzhidimovo village by the river of Mesta, 16.06.1995, coll. *I. Nikolov*, det. *A. Mihailov* (SOM 152708).

This is the first floristic record for this species from the Valley of Mesta River.

90. *Coronilla scorpioides* (L.) C. Koch

Bu The Valley of Mesta River: on stony meadows north of Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164399).

This is the first record for this species for this floristic region.

91. *Genista carinalis* Griseb.

Bu The Valley of Mesta River: on stony meadows north of Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164400); on rocky meadows above the road between Gotse Delchev town and Mesta village, 30.06.2005, coll. & det. *D. Stoyanov* (SOM 163480).

This species is comparatively widespread in Bulgaria (Kuzmanov 1976b; Kozhuharov 1992; Terziiski 2003; Assyov & Petrova 2006), but it has not been reported for the Valley of Mesta River so far.

92. *Lotus aegaeus* (Griseb.) Boiss.

Bu The Valley of Mesta River: on open stony meadows with lax shrub layer around Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164403).

Lotus aegaeus has limited occurrence in Bulgaria (Kuzmanov 1976b; Kozhuharov 1992; Terziiski 2003; Assyov & Petrova 2006) and this is the first record for the species from this floristic region.

Fagaceae**93. *Castanea sativa* Mill.**

Bu The Valley of Mesta River: a single tree on the boundary of an oak forest above the road between

Beslen and Teplen villages, Hadzhidimovo district, GL-49, 22.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164387).

New species for this floristic region which has natural populations in Balkan Range (*Western*), Mt Belasitsa, Mt Slavyanka, Pirin Mts and Rhodopi Mts (*Western*) (Anchev 1992; Terziiski 2003; Assyov & Petrova 2006).

Globulariaceae**94. *Globularia aphyllantes* Crantz**

Bu The Valley of Mesta River: on stony meadows around Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164401).

New species for this floristic region which is widespread in Bulgaria (Anchev 1992; Markova 1995; Cheshmedzhiev 2003; Assyov & Petrova 2006).

Hypericaceae**95. *Hypericum montbretii* Spach.**

Bu The Valley of Mesta River: on slopes above the public mineral bath by Marchevo village, Gotse Delchev district, GM-31, 20.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164377).

New species for this floristic region which is widespread in Bulgaria (Jordanov & Kozhuharov 1970; Petrova 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006).

96. *Hypericum rumeliacum* Boiss.

Bu The Valley of Mesta River: on stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164397); around Hadzhidimovo village, 05.1995, coll. *I. Georgiev* (SOM 97846).

New species for this floristic region.

Lamiaceae**97. *Thymus callieri* Borbás ex Velen.**

Bu The Valley of Mesta River: on sandstone area around Petrelik village, Hadzhidimovo district, GL-39, 22.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164391); on open stony grasslands between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. *K. Vassilev, H. Pedashenko & V. Goranova* (SOM 164375).

New species for this floristic region.

98. *Thymus glabrescens* Willd.

Bu The Valley of Mesta River: on slopes above the public mineral bath by Marchevo village, Gotse Delchev district, GM-31, 20.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164379).

The species has not been reported for the Valley of Mesta River so far (Markova 1989, 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006).

Linaceae**99. *Linum corymbulosum* Rchb.**

Bu The Valley of Mesta River: south of the road between Ablanitsa and Blatska villages, Hadzhidimovo district, GM-30, 22.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164390); south of Ablanitsa village, Gotse Delchev district, 22.07.1959, coll. I. Bondev (SOM 110928).

This species has not been reported for this floristic region so far (Petrova 1979, 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006).

100. *Linum tauricum* Willd.

Bu The Valley of Mesta River: on open stony grasslands around Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164404).

New species for this floristic region.

Plantaginaceae**101. *Plantago subulata* L.**

Bu The Valley of Mesta River: on open stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164393); around Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164376).

This species is comparatively widespread in Bulgaria (Petrova 1992, 1995; Cheshmedzhiev 2003; Assyov & Petrova 2006), but it has not been reported for the Valley of Mesta River so far.

Polygalaceae**102. *Polygala hospita* Heuff.**

Bu The Valley of Mesta River: on open stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59,

21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164396).

The species is not very common in Bulgaria (Kozhuharov & Petrova 1979; Petrova 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006) and it is new for this floristic region.

103. *Polygala rhodopea* (Velen.) Janch.

Bu The Valley of Mesta River: on open stony meadows between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164395).

Confirmation of incidence of this Balkan endemic species for the floristic region. Kozhuharov & Petrova (1979) and Cheshmedzhiev (2003) give this species for the Valley of Mesta River, but Petrova (1992) and Assyov & Petrova (2006) do not indicate its occurrence in the region. There is one specimen in SOM from the Valley of Mesta River – around Hadzhidimovo village by the riverbank of Mesta, 11.06.1995, coll. I. Nikolov, det. A. Mihailov (SOM 152709).

Rosaceae**104. *Potentilla laciniosa* Waldst. & Kit. ex Nestl.**

Bu The Valley of Mesta River: on slopes above the public mineral bath by Marchevo village, Gotse Delchev district, GM-31, 20.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164378).

New species for this floristic region.

Santalaceae**105. *Thesium dollineri* Murb.**

Bu The Valley of Mesta River: on open stony meadows around Godeshevo village, Hadzhidimovo district, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164381).

In the main floristic sources (Petrova 1992; Delipavlov 2003; Assyov & Petrova 2006) this species has not been reported for the Valley of Mesta River.

Liliaceae s.l.**106. *Allium flavum* L.**

Bu The Valley of Mesta River: on open stony places around the Mesta river, N of Gospodintsi village, Gotse Delchev district, GM-21, 22.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164383).

This species is comparatively widespread in Bulgaria (Petrova 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006), but it has not been reported for this floristic region so far.

107. *Allium sphaerocephalon* L.

Bu The Valley of Mesta River: at the area of Godeshevo village, Hadzhidimovo district, on open stony places, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 164382).

This species is comparatively widespread in Bulgaria (Petrova 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006), but it has not been reported for the Valley of Mesta River.

108. *Anthericum liliago* L.

Bu The Valley of Mesta River: on open stony grasslands between Godeshevo and Tuhovishta villages, Hadzhidimovo district, KF-59, 21.06.2008, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM164392).

This is the first record for the species from this floristic region.

Acknowledgements. We are grateful to National Science Fund of the Ministry of Education and Science for their financial support for our field work which has been partly funded by Project 1503/05.

References

- Achtarov, B. 1957. The Genus *Carex* L. in Bulgaria. Acad. Publishing House, Sofia (in Bulgarian).
- Ade, A. & Rechinger, K.H. 1938. Samothrake. – Repert. Spec. Nov. Regni Veg. Beih., **100**: 106-146.
- Ančev, M. 2007. Catalogue of the family *Brassicaceae* (*Cruciferae*) in the flora of Bulgaria. – Phytol. Balcan., **13**(2): 153-178.
- Anchev, M. 1984. *Erysimum cheiranthoides* L. – In: Velchev, V. (ed.), Red Data Book of the People's Republic of Bulgaria. Vol. 1. Plants. P. 133. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).
- Anchev, M. 1989. *Rubiaceae* Juss. – In: Jordanov, D. (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 9, pp. 19-100. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Anchev, M. 1992. *Campanulaceae* (pp. 280-285); *Violaceae* (769-774); *Castanea* Mill. (441); *Globularia* L. (455). – In: Kozhuharov, S. (ed.), Field Guide to the Vascular Plants in Bulgaria. Nauka & Izkustvo, Sofia (in Bulgarian).
- Andreev, N. 1992. *Euphorbia* L. – In: Kozhuharov, S. (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 376-382. Nauka & Izkustvo, Sofia (in Bulgarian).
- Assyov, B. & Petrova, A. (eds). 2006. Conspectus of the Bulgarian vascular flora. Distribution maps and floristic elements. Ed. 3. BBF, Sofia.
- Başak, N. 1993. Contribution to the Fern flora of European Turkey. – Istanbul Üniv. Eczac. Fak. Mecm., **29**(1): 49-52.
- Biel, B. & Tan, Kit. 2008. Reports 2-17. – In: Vladimirov, V. & al. (eds), New floristic records in the Balkans: 8. – Phytol. Balcan., **14**(2): 292-294.
- Bozilova, E. & Tonkov, S. 1984. *Artemisia eriantha* Ten. – In: Velchev, V. (ed.), Red Data Book of the People's Republic of Bulgaria. Vol. 1. P. 392. Plants. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).
- Cheshmedzhiev, I. 2003. *Alliaceae* (pp. 447-452); *Campanulaceae* (370-376); *Globulariaceae* (368); *Hypericaceae* (105-108); *Lamiaceae* (320-339); *Linaceae* (246-248); *Plantaginaceae* (369-370); *Polygalaceae* (254-255). – In: Delipavlov, D. & Cheshmedzhiev, I. (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Cullen, J. 1970. *Anthyllis* L. – In: Davis, P.H. (ed.), Flora of Turkey and the East Aegean Islands. Vol. 3, pp. 534-535. Edinburgh Univ. Press, Edinburgh.
- Delipavlov, D. 1979. *Violaceae* Batsch. – In: Jordanov, D. (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 7, pp. 338-395. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Delipavlov, D. 2003. *Caryophyllaceae* (pp. 65-88); *Cyperaceae* (470-482); *Euphorbiaceae* (155-160); *Santalaceae* (283-284) – In: Delipavlov, D. & Cheshmedzhiev, I. (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Deneva, S. & Ljubenova, T. 1996. Witchgrass (*Panicum capillare* L.) – a new species for the adventive flora of Bulgaria. – Phytol. Balcan., **2**(1): 54-59.
- Dimitrov, D. (ed.). 2002. Conspectus of the Bulgarian vascular flora. Distribution maps and floristic elements. Ed. 2. BSBCP, Sofia.
- Eleftheriadou, E.N. 1992. Die Flora der kalkliebenden Laub- und Koniferenwälder und der hohen Extrawaldland von Elatia Dramas. Univ. of Thessaloniki, Thessaloniki.
- Eleftheriadou, E., Theodoropoulos, K. & Raus, Th. 2004. *Lithospermum glandulosum* Velen. – In: Greuter, W. & Raus, Th. (eds), Med-Checklist Notulae, 22. – Willdenowia, **34**: 71-80.
- Enayet Hossain, A.B.M. 1975. *Tripleurospermum* Schultz. – In: Davis, P.H. (ed.), Flora of Turkey and the East Aegean Islands. Vol. 5, pp. 295-311, Edinburgh Univ. Press, Edinburgh.
- Grierson, A.J.C. 1975. *Matricaria* L. – In: Davis, P.H. (ed.), Flora of Turkey and the East Aegean Islands. Vol. 5, pp. 293-295. Edinburgh Univ. Press, Edinburgh.
- Grierson, A.J.C. & Yavin, Z. 1975. *Anthemis* L. – In: Davis, P.H. (ed.), Flora of Turkey and the East Aegean Islands. Vol. 5, pp. 174-221. Edinburgh Univ. Press, Edinburgh.
- Henderson, D.M. 1965. Filicales. – In: Davis, P.H. (ed.), Flora of Turkey and the East Aegean Islands. Vol. 1, pp. 38-63. Edinburgh Univ. Press, Edinburgh.
- Huber-Morath, A. 1975. *Achillea* L. – In: Davis, P.H. (ed.), Flora of Turkey and the East Aegean Islands. Vol. 5, pp. 224-252. Edinburgh Univ. Press, Edinburgh.
- ILDIS. <http://www.ildis.org> (accessed October 2008).
- Jordanov, D. & Kozhuharov, S. 1970. *Hypericum* L. – In: Jordanov, D. (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 4, pp. 224-263. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

- Kirjakov, I. & Petrova, A.** 2003. *Buglossoides glandulosa* (*Boraginaceae*): morphology and distribution in Bulgaria. – Phytol. Balcan., 9(3): 517-527.
- Kozhuharov, S. & Petrova, A.** 1979. *Polygala* L. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 7, pp. 190-215. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Kozhuharov, S.** 1992. *Genista* (pp. 404-406); *Lotus* (413). – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Nauka & Izkustvo, Sofia (in Bulgarian).
- Kupicha, F.K.** 1975. *Xanthium* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. 5, pp. 47-49. Edinburgh Univ. Press, Edinburgh.
- Kuzmanov, B.** 1976a. *Edraianthus* A. DC. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. 4, pp. 99-100. Cambridge Univ. Press, Cambridge.
- Kuzmanov, B.** 1976b. *Genista* L. (pp. 36-61), *Lotus* L. (203-214). – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 6. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Kuzmanov, B.** 1979. *Euphorbia* L. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 7, pp. 118-177. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Markova, M.** 1989. *Thymus* L. – In: **Velchev, V.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 9, pp. 282-331. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Markova, M.** 1992. *Carex* L. (pp. 351-361), *Thymus* L. (492-496). – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Nauka i Izkustvo, Sofia (in Bulgarian).
- Markova, M.** 1995. *Globularia* L. (pp. 277-280), *Lindernia* All. (21-24). – In: **Kozhuharov, S.** (ed.), Fl. Reipubl. Bulgaricae. Vol. 10. Editio Acad. "Prof. Marin Drinov", Serdicae (In Bulgarian).
- Matevski, V.** In press. *Buglossoides* Moench. – In: Flora of the Republic of Macedonia. MANU, Skopje (in Macedonian).
- Micevski, K.** 1973. Some new species for the flora of Macedonia and Yugoslavia. – Godišen Zborn. Prir.-Mat. Fak. Univ. Skopje, Biol., 26: 131-135 (in Macedonian).
- Obradović, M.** 1974. *Campanulaceae*. – In: **Josifović, M.** (ed.), Flore de la République Socialiste de Serbie. Vol. 6, pp. 528-573. Srpska Acad. Sci. Press, Belgrad.
- Oprea, A.** 2005. List of the Romanian Vascular Plants. Univ. Alexander Ioan Cuza Press, Iași (in Romanian).
- Panitsa, M., Snogerup, B., Snogerup, S. & Tzanoudakis, D.** 2003. Floristic investigation of Lemnos island (NE Aegean, Greece). – Willdenowia, 33(1): 79-105.
- Petrova, A.** 1979. *Linum* L. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 7, pp. 79-109. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Petrova, A.** 1992. *Allium* L. (pp. 500-506); *Hypericum* L. (457-460); *Linum* L. (519-522); *Plantago* L. (560-562); *Polygala* L. (626-629); *Silene* L. (315-323); *Thesium* L. (723-724). – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Nauka & Izkustvo, Sofia (in Bulgarian).
- Petrova, A.** 1995. *Plantago* L. – In: **Kozhuharov, S.** (ed.), Fl. Reipubl. Bulgaricae. Vol. 10, pp. 332-352. Editio Acad. "Prof. Marin Drinov", Serdicae (in Bulgarian).
- Petrova, A., Apostolova, I. & Georgiev, V.** 2003. Data on the current status of the rare species *Lathyrus pancicii*. – Phytol. Balcan., 9(1): 3-8.
- Plitmann, U.** 1970. *Vicia* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. 3, pp. 318-321. Edinburgh Univ. Press, Edinburgh.
- Radcliffe-Smith, A.** 1982. *Euphorbia* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. 7, pp. 571-630. Edinburgh Univ. Press, Edinburgh.
- Renz, J. & Taubenheim, G.** 1984. *Epipactis* Zinn. (pp. 462-468), *Neotinea* Reichb. fil. (512-513). – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. 8, pp. 462-468. Edinburgh Univ. Press, Edinburgh.
- Stace, C.A.** 1991. New Flora of the British Isles. Cambridge Univ. Press, Cambridge.
- Stefanova-Gateva, B.** 1995. *Verbascum* L. – In: **Kozhuharov, S.** (ed.), Fl. Reipubl. Bulgaricae. Vol. 10, pp. 26-100. Editio Acad. "Prof. Marin Drinov", Serdicae (in Bulgarian).
- Stefanović, S., Lacušić, D., Kuzmina, M., Mededović, S., Tan, Kit & Stevanović, V.** 2008. Molecular phylogeny of *Edraianthus* (*Grassy Bells; Campanulaceae*) based on non-coding plastid DNA sequences. – Taxon, 57(2): 452-475.
- Stojanov, N. & Kitanov, B.** 1944. Beitrage zur Kenntnis der Flora und der Vegetationsverhältnisse der Insel Samothrake. – God. Sofiisk Univ. Fiz.-Mat. Fak., 40: 401-464 (in Bulgarian).
- Stojanov, N. & Stefanov, B.** 1925. Flora of Bulgaria. Ed. 1, Vol. 2. State Printing House, Sofia (in Bulgarian).
- Stojanov, N. & Stefanov, B.** 1933. Flora of Bulgaria. Ed. 2. Guttenberg Press, Sofia (in Bulgarian).
- Stojanov, N. & Stefanov, B.** 1948. Flora of Bulgaria. Ed. 3. Univ. Press, Sofia (in Bulgarian).
- Strid, A. & Tan, Kit** (eds). 1997. Flora Hellenica. Vol. 1. Koeltz Scientific Books, Königstein.
- Tarikahya, B. & Sadik, E.** 2005. Flora of Kirmir Valley (Güdül, Ankara). – Turk. J. Bot., 29: 435-461.
- Terziiski, D.** 2003. *Fabaceae* (pp. 199-237); *Fagaceae* (59-62). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Tzonev, R. & Šumberová, K.** 2004. New data on chorology of some little known adventive species on the banks of the Danube River in Bulgaria. – Phytol. Balcan., 10(2-3): 207-209.
- Välev, S. & Kitanov, B.** 1964. *Carex* L. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. 2, pp. 63-133. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Zohary, M.** 1970. *Trifolium* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. 3, pp. 384-448. Edinburgh Univ. Press, Edinburgh.

