New floristic records in the Balkans: 6*

Compiled by Vladimir Vladimirov[1], Feruzan Dane[2], Vladimir Stevanović[3] & Kit Tan[4]

[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@yahoo.com

[3] Institute of Botany and Botanical Garden "Jevremovac", Faculty of Biology, University of Belgrade, 43, Takovska St., 11000 Belgrade, Serbia, e-mail: vstev@bfbot.bg.ac.yu

[4] Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bi.ku.dk

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

Abstract: New chorological data are presented for 140 species and subspecies from Bulgaria (records no. 45–57, 61–79, 123–131), Greece (2–36, 82–122), Montenegro (80, 81), Serbia (58–60, 136–140), and Turkey-in-Europe (1, 37–44, 132–135). The taxa belong to the following families: *Amaryllidaceae* (105), *Anacardiaceae* (80), *Apiaceae* (2, 58), *Asteraceae* (3, 4, 61, 62, 83, 117, 123–127), *Boraginaceae* (5, 63, 84–86), *Brassicaceae* (64), *Campanulaceae* (45, 46, 118), *Caprifoliaceae* (6), *Caryophyllaceae* (51, 59, 87, 119), *Chenopodiaceae* (7, 8, 136), *Cistaceae* (88, 89), *Convolvulaceae* (9, 65), *Cupressaceae* (116), *Cyperaceae* (21–23, 52–56, 137), *Ericaceae* (90), *Fabaceae* (1, 10, 11, 37, 38, 66, 67, 91–93, 139), *Gentianaceae* (12, 13), *Geraniaceae* (94, 95, 120), *Hydrophyllaceae* (96), *Hypericaceae* (121), *Iridaceae* (106–108, 130), *Juncaceae* (24, 25), *Lamiaceae* (47, 81, 97, 98), *Liliaceae* (26, 27, 72, 109, 131), *Lythraceae* (14), *Malvaceae* (15), *Orchidaceae* (110–115), *Paeoniaceae* (39), *Papaveraceae* (40, 122), *Poaceae* (28–36, 57, 73–79, 140), *Polygonaceae* (16, 17, 128), *Polypodiaceae* (82), *Ranunculaceae* (99, 100), *Resedaceae* (41), *Rhamnaceae* (101, 102), *Rosaceae* (68), *Rubiaceae* (18, 48, 103), *Sapindaceae* (69), *Scrophulariaceae* (42, 43, 49, 50, 104, 132, 133), *Solanaceae* (19, 20, 70), *Typhaceae* (138), *Valerianaceae* (60), *Verbenaceae* (134, 135), *Violaceae* (71), *Vitaceae* (129) and *Zygophyllaceae* (44).

First reports for countries are: Montenegro – *Salvia aethiopis* (81); Serbia – *Onobrychis caput-galli* (139); Turkey – *Onobrychis alba* subsp. *calcarea* (1).

The publication includes contributions by M. Aybeke & F. Dane (1), B. Biel & Kit Tan (2–36), F. Dane & G. Yılmaz (37–44), V. Goranova (45–50), M. Hájek, N. Velev, D. Sopotlieva, I. Apostolova & Z. Rozbrojová (51–57), P. Lazarević & Z. Krivošej (58–60), A.S. Petrova, T. Meshinev & I. Apostolova (61–79), V. Stevanović & D. Lakušić (80–81), Kit Tan & M. Issigoni (82–115), Kit Tan & G. Sfikas (116–122), V. Vladimirov (123–131), G. Yılmaz & F. Dane (132–135), B. Zlatković, V. Randjelović & M. Jušković (136–138), B. Zlatković & V. Stevanović (139–140).

This is the sixth 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.

Report 1

Mehmet Aybeke & Feruzan Dane*

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

Fabaceae

1. *Onobrychis alba* subsp. ***calcarea*** (Vandas) P.W. Ball

Tu(E) A1(E) Edirne: Sinanköy village, in the meadows, 181 m, 41°48'00" N, 26°43'00" E, 14.06.2007, coll. *M. Aybeke, C. Kurt* & *A. Semerci* (EDTU 9506), det. *M. Aybeke*, conf. *F. Dane*; Center: Budakdoğanca village, meadows, 41°45'37" N, 26°20'33" E, 98 m, 14.06.2007, coll. *M. Aybeke, C. Kurt* & *A. Semerci* (EDTU 9507), det. *M. Aybeke*, conf. *F. Dane*.

A new species for Turkey. It is an Euro-Siberian element, extending its distribution area in Europe to the Balkan Peninsula, S Romania, and C & S Italy (Ball 1968). Within the species, four subspecies have been recognized: *O. a.* subsp. *calcarea, O. a.* subsp. *echinata, O. a.* subsp. *alba,* and *O. a.* subsp. *laconica*, of which only the first one is represented in Turkey. It occurs in the central part of the Balkan Peninsula and is distinguished from the other subspecies by leaflets on lower leaves 4–15 × 1–4 mm, calyx-tube more or less pubescent, teeth 3–4 times as long as tube, corolla 8–10 mm, white, legume *c.* 5 mm, the margin with 2–4(5) teeth up to 2 mm.

The closest known locality of the subspecies is in SE Bulgaria. Therefore, it is not surprising that the taxon was recorded in Budakdoğanca village near the Bulgarian border. It is very likely that animals contributed to the spread of this species southwards accross border.

Acknowledgements. We would like to thank the personnel of the Trakya Agricultural Research Institute, the Head of Forage Crops Department, Cengiz Kurt, Agricultural Engineer, and Dr. Arif Semerci for his help with field work.

Reports 2–36

Burkhard Biel[1] & Kit Tan[2]

[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@bi.ku.dk (author for correspondence)

This is the fourth report of new plant-records for the island of Samothraki (N Aegean islands) based on fieldwork carried out in the years 2000–2002 and 2005–2007. The 31 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). Four new records for the islands of the Northern Sporades (Alonnisos, Skiathos and Skopelos) are also provided.

Apiaceae

2. *Chaerophyllum temulum* L.

Gr Samothraki: Therma, river bank with *Platanus orientalis*, 50 m, 40°29'39" N, 25°36'35" E, 19.06.2007, *Biel* 07.115.

A small population, mostly in fruit, was growing in shady places. New for the N Aegean islands.

Asteraceae

3. *Aster squamatus* (Spreng.) Hieron.

Gr Samothraki: Kamariotissa, gravelly beach at sea front, 2 m, 40°28'34" N, 25°28'25" E, 06.10.2006, *Biel* 06.585.

4. *Conyza bonariensis* (L.) Cronq.

Gr Samothraki: SW of Xiropotamos, gravelly river

bed with olive trees and shrubs, 30 m, 40°26'31" N, 25°31'34" E, 02.10.2006, *Biel* 06.453; Kamariotissa, gravelly beach and park at sea front, 2 m, 40°28'34" N, 25°28'25" E, 25.06.2007, *Biel* 07.233.

Boraginaceae

5. *Anchusa undulata* subsp. ***hybrida*** (Ten.) Cout.

Gr Samothraki: Pachia Ammos, sandy beach, 2 m, 40°23'37" N, 25°34'48" E, 23.06.2007, *Biel* 07.202a.

Three other localities are at Chora (Samothraki), Profitis Ilias and Xiropotamos.

Caprifoliaceae

6. *Lonicera japonica* Thunb.

Gr Skopelos: S-SE of Skopelos, road embankment, on limestone and schist, 60 m, 39°05'16" N, 23°44'48" E, 02.11.2005, *Biel* 05.225.

New for the West Aegean islands. This ornamental has established itself in several scattered coastal and ruderal habitats in Greece.

Chenopodiaceae

7. *Polycnemum arvense* L.

Gr Samothraki: E-SE of Alonia, edge of track at rocky summit with phrygana, 690 m, 40°27'29" N, 25°32'58" E, 21.06.2007, *Biel* 07.146; SW of Therma, *Juniperus* phrygana with old oak trees on mountain ridge, 1010 m, 40°28'25" N, 25°35'03" E, 26.06.2007, *Biel* 07.242.

Another locality was noted N of Pachia Ammos. New for the N Aegean islands.

Fig. 1. *Schenkia spicata* (photo B. Biel).

8. *Suaeda maritima* (L.) Dum.

Gr Samothraki: W-SW of Kamariotissa, gravelly beach at northern edge of large coastal pool N of Ag. Andreas, 3 m, 40°28'13" N, 25°27'21" E, 17.06.2007, *Biel* 07.015; W-SW of Kamariotissa, gravelly area with coastal pools at Ag. Andreas, 2 m, 40°27'58" N, 25°27'19" E, 27.06.2007, *Biel* 07.283.

Recorded from Thasos and Limnos.

Convolvulaceae

9. *Calystegia soldanella* (L.) R. Br.

Gr Samothraki: W of Kamariotissa, gravelly beach near wind power station, 2 m, 40°28'21" N, 25°27'02" E, 27.06.2007, *Biel* 07.282.

Recorded from Thasos.

Fabaceae

10. *Melilotus albus* Medik.

Gr Samothraki: NE of Kamariotissa, road ditch on way to Therma, 3 m, 40°29'07" N, 25°29'02" E, 17.06.2007, *Biel* 07.046.

Other localities are near Kamariotissa and within the village of Chora (Samothraki). Recorded from Thasos.

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

Gr Samothraki: Therma, roadside meadow, 40 m, 40°29'45" N, 25°36'32" E, 19.06.2007, *Biel* 07.113.

Also noted from Karyotes. Recorded from Thasos.

Gentianaceae

12. *Centaurium tenuiflorum* (L.) Fritsch

Gr Samothraki: SW of Kamariotissa, wheat field by dirt road, 4 m, 40°28'10" N, 25°27'50" E, 16.06.2007, *Biel* 07.004; E of Kamariotissa, *Quercus coccifera* phrygana, on flysch, 30 m, 40°28'53" N, 25°29'00" E, 17.06.2007, *Biel* 07.029; along road from Chora to Kamariotissa, *Stamatiadou* 9485 (ATH).

Other localities are near Alonia and Therma. Also recorded from Ag. Evstratios in the N Aegean.

13. *Schenkia spicata* (L.) Manison (Fig. 1).

Gr Samothraki: SW of Kamariotissa, grassy edge of seasonal coastal pool, on loam and gravel, 5 m, 40°27'43" N, 25°27'33" E, 18.06.2007, *Biel* 07.057.

Another locality is E-NE of Kamariotissa. New for the N Aegean islands.

Lythraceae

14. *Lythrum tribracteatum* Salzm.

Gr Samothraki: SW of Kamariotissa, grassy edge of seasonal coastal pool, on loam and gravel, 5 m, 40°27'43" N, 25°27'33" E, 18.06.2007, *Biel* 07.056.

New for the N Aegean islands.

Malvaceae

15. *Althaea cannabina* L.

Gr Samothraki: N of Therma, shrubby roadsides, 20 m, 40°29'50" N, 25°36'31" E, 01.10.2006, *Biel* 06.431.

Other localities are near Therma, Kato Karyotes, Makrilies and Xiropotamos. Apparently well-established in coastal areas.

Polygonaceae

16. *Fallopia aubertii* (Henry) Holub

Gr Samothraki: SW of Kamariotissa, road margins and fallow fields in port area, 3 m, 40°28'40" N, 25°28'20" E, 24.10.2002, *Biel* 02.137.

17. *Fallopia convolvulus* (L.) Á. Löve

Gr Samothraki: E-SE of Therma, sandy bank of Fonias river with *Platanus orientalis*, 20 m, 40°28'59" N, 25°39'09" E, 14.06.2000, *Biel* 00.078. Other observations are at Therma, Kato Karyotes and Kamariotissa.

Fig. 2. *Crucianella graeca* (photo B. Biel).

Rubiaceae

18. *Crucianella graeca* Boiss. & Spruner (Fig. 2)

Gr Samothraki: E-SE of Alonia, rocky slopes with phrygana, by dirt track, 690 m, 40°27'29" N, 25°32'58" E, 21.06.2007, *Biel* 07.145.

Other localites include Kamariotissa, N of Pachia Ammos and SE of Chora (Samothraki). Confirming the literature record published by Ade & Rechinger (1938: 136). Also on Thasos.

Solanaceae

19. *Datura innoxia* Mill.

Gr Samothraki: N-NE of Kamariotissa, road embankment near coast, 5 m, 40°28'48" N, 25°28'34" E, 06.10.2006, *Biel* 06.586.

20. *Datura stramonium* L.

Gr Samothraki: SW of Kamariotissa, phrygana on coastal limestone slope, 10 m, 40°28'09" N, 25°27'33" E, 25.06.2007, *Biel* 07.234.

Another locality noted within Kamariotissa.

Cyperaceae

21. *Cyperus esculentus* L.

Gr Alonnisos: NW of Patitiri, road embankment, on limestone and schist, 70 m, 39°08'55" N, 23°51'29" E, 06.11.2005, *Biel* 05.107.

New for Alonnisos. Also known from Skiathos and Evvia in West Aegean area,

22. *Cyperus badius* Desf.

Gr Skiathos: N-NE of Kolios, grazed valley beside dirt road near Platanias, on schist, 10 m, 39°09'01" N, 23°26'38" E, 10.11.2005, *Biel* 05.040.

New for Skiathos. Recorded from Skiros and Skopelos in West Aegean.

23. *Cyperus rotundus* L.

Gr Skiathos: N-NE of Kolios, grazed valley beside dirt road near Platanias, on schist, 10 m, 39°09'01" N, 23°26'38" E, 10.11.2005, *Biel* 05.041.

New for Skiathos. Also known from Skiros in West Aegean area.

Juncaceae

24. *Juncus capitatus* Weigel

Gr Samothraki: N-NE of Pachia Ammos, near source of Kousianda river, basalt rock, 1140 m,

40°26'20" N, 25°36'23" E, 29.06.2007, *Biel* 07.316.
Another locality noted in a gorge near mid-point of Kousianda river. Also recorded from Thasos and Limnos.

25. *Juncus hybridus* Brot.

Gr Samothraki: SW of Kamariotissa, edge of seasonal coastal pool, 5 m, 40°27'43" N, 25°27'33" E, 18.06.2007, *Biel* 07.061; N-NW of Therma, edge of seasonal pool, open phrygana, 5 m, 40°30'04" N, 25°36'13" E, 19.06.2007, *Biel* 07.090.

Other localities are near Alonia and N of Pachia Ammos. Recorded from Ag. Evstratios and Limnos in the N Aegean.

Liliaceae s.l.

26. *Allium guttatum* Steven subsp. ***guttatum***

Gr Samothraki: W-SW of Kamariotissa, gravelly beach and coastal limestone slopes N of Ag. Andreas, 3 m, 40°28'13" N, 25°27'21" E, 17.06.2007, *Biel* 07.017.

Also near Kamariotissa (5 different areas), Xiropotamos and Pachia Ammos. Recorded from Thasos in the N Aegean area.

27. *Allium dentiferum* Webb & Berthel.

Gr Samothraki: N of Kato Karyotes, coastal *Platanus* alluvial forest disturbed by tourist development, 3 m, 40°30'29" N, 25°34'20" E, 25.06.2007, *Biel* 07.225.

Other localities are near Karyotes. New for the N Aegean islands.

Poaceae

28. *Anthoxanthum aristatum* Boiss. subsp. ***aristatum***

Gr Samothraki: E of Alonia, open *Quercus* forest by dirt track, 360 m, 40°27'42" N, 25°31'53" E, 18.06.2007, *Biel* 07.082; village of Kamariotissa, gravelly beach and parking area at sea front, 2 m, 40°28'34" N, 25°28'25" E, 19.06.2007, *Biel* 07.084.

Recorded for Thasos.

29. *Brachiaria eruciformis* (Sm.) Griseb.

Gr Samothraki: S-SW of Xiropotamos-Makrilies, gravelly beach and adjacent field margins, 2 m, 40°25'23" N, 25°30'44" E, 23.06.2007, *Biel* 07.193.

New for the N Aegean islands.

30. *Echinochloa colonum* (L.) Link

Gr Samothraki: S-SW of Xiropotamos-Makrilies, gravelly beach and adjacent field margins, 2 m, 40°25'23" N, 25°30'44" E, 23.06.2007, *Biel* 07.194.

Also noted at beach of Pachia Ammos. New for the N Aegean islands. First registrations for the Flora Hellenica Database.

31. *Hordeum geniculatum* All.

Gr Samothraki: SW of Kamariotissa, grassy edge of seasonal coastal pool, 4 m, 40°27'38" N, 25°27'35" E, 18.06.2007, *Biel* 07.065a; W of Xiropotamos, base of slopes above gravelly river bed, 90 m, 40°26'41" N, 25°31'37" E, 20.06.2007, *Biel* 07.126.

Also in coastal wetland near Therma. New for the N Aegean islands.

32. *Koeleria nitidula* Velen.

Gr Samothraki: W-SW of Kamariotissa, intensively cultivated field above chapel, on coastal limestone, 10 m, 40°28'09" N, 25°27'33" E, 25.06.2007, *Biel* 07.237.

New for the N Aegean islands.

33. *Paspalum paspalodes* (Michx.) Scribn.

Gr Samothraki: N-NE of Kamariotissa, coastal road, wet area with *Phragmites*, 5 m, 40°28'48" N, 25°28'34" E, 17.06.2007, *Biel* 07.050.

New for the N Aegean islands.

34. *Setaria verticillata* (L.) P. Beauv.

Gr Samothraki: S of Anomeria-Isomata, *Quercus* slope with wet areas, 130 m, 40°27'45" N, 25°40'12" E, 22.06.2007, *Biel* 07.185.

New for the N Aegean islands.

35. *Stipa capensis* Thunb.

Gr Samothraki: SW of Kamariotissa, shrubby phrygana on coastal limestone slope, 10 m, 40°27'57" N, 25°27'24" E, 17.06.2007, *Biel* 07.023.

Other localities were noted near Kamariotissa and Xiropotamos-Makrilies.

36. *Vulpia myuros* (L.) C.C. Gmel.

Gr Samothraki: N of Therma, shrubby places behind gravelly beach, 2 m, 40°30'12" N, 25°36'30" E, 02.06.2002, *Biel* 02.124; E-SE of Alonia, damp pasture with *Juniperus* on steep slope, 700 m, 40°27'35" N, 25°33'04" E, 21.06.2007, *Biel* 07.150.

Also near Chora (Samothraki) and Xiropotamos. Recorded from Thasos.

All cited vouchers are kept in the private herbarium of B. Biel at Höchberg (herb. Biel). We thank Prof. Dr Hildemar Scholz, Berlin, for determining or confirming our identifications of the *Gramineae*.

Reports 37–44

Feruzan Dane & Gülden Yılmaz

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

Fabaceae

37. *Astragalus glycyphyllos* L. subsp. ***glycyphyllos***

Tu(E) Edirne, Center: Karaagac, 26 m, 41°40'29"N, 26°33'39"E, 20.05.2002, coll. *F. Dane* (EDTU 8516).

New for A1(E) Edirne in European Turkey. The species has been known so far from A1(E) Tekirdag and A2(A) Kocaeli (Chamberlain & Matthews 1969).

38. *Astragalus hamosus* L.

Tu(E) Edirne, Center: Edirne, near the Faculty of Medicine, 26 m, 41°40'29"N, 26°33'39"E, 20.05.2002, coll. *F. Dane* (EDTU 8515).

New for A1(E). The species has been known so far from A2(E) Istanbul and A1(A) Canakkale (Chamberlain & Matthews 1969).

Paeoniaceae

39. *Paeonia peregrina* Mill.

Tu(E) Edirne, Center: Korucukoy village, 26 m, 41°40'28"N, 26°33'39"E, 25.04.1986, coll. *F. Dane* & *G. Olgun* (EDTU 1780); Lalapasa: Kalkansogut village, near the slopes, 172 m, 41°50'00"N, 26°44'00"E, 06.05.1990, coll. *F. Dane* (EDTU 3121), around *Quercus* forest, 172 m, 41°50'00"N, 26°44'00"E, 14.05.1989, coll. *G. Dalgic* & *N. Polat* (EDTU 4467); Omeroba village, near forest, 328 m, 41°55'00"N, 26°55'60"E, 15.04.1989, coll. *N. Polat* & *G. Dalgic* (EDTU 4433); Comlekakpinar village, 152 m, 41°50'00"N, 26°39'00"E, 10.05.1987, coll. *F. Dane* & *G. Olgun* (EDTU 1168); Enez: Buyukevren village, 79 m, 40°39'00"N, 26°13'00"E, 18.05.1987, coll. *F. Dane* (EDTU 1783); Cavuskoy village, 83 m, 40°41'00"N, 26°10'00"E, 18.05.1987, coll. *F. Dane* (EDTU 1784); Yazirkoy, 176 m, 40°42'00"N, 26°14'00"E, 18.05.1987, coll. *F. Dane* (EDTU 1785); Meneksesofular village, 119 m, 41°46'00"N, 26°39'00"E, 18.05.1987, coll. *F. Dane* (EDTU 1786).

— Kirklareli: Demirkoy, 244 m, 41°49'17"N, 27°45'38"E, 26.05.1986, coll. *F. Dane* (EDTU 383); Vize, near Saka lake, 186 m, 41°34'21"N, 27°45'57"E, 15.05.1989, coll. *S. Yurtsever* (EDTU 3241).

New for A1(E): Edirne and Kirklareli in European Turkey. The species has been known so far from A2(A): Bursa (Davis & Cullen 1965). However, it has been recorded from European Turkey (E) (Baytop 1984, locality not specified).

Papaveraceae

40. *Chelidonium majus* L.

Tu(E) Edirne, Center: near Sogutluk forest, 26 m, 41°40'28"N, 26°33'39"E, 20.05.1987, coll. *F. Dane* (EDTU 657); near river Tunca, 26 m, 41°40'28"N, 26°33'39"E, 25.01.1999, coll. *F. Dane* (EDTU 2702).

New for A1(E): Edirne in European Turkey. The species has been known so far from A1(E): Tekirdag and A2(E) Istanbul (Cullen 1965).

Resedaceae

41. *Reseda lutea* L. var. ***lutea***

Tu(E) Edirne, Center: Budakdoğanca village, 98 m, 41°45'37"N, 26°20'33"E, 08.07.1988, coll. *F. Dane* & *al.* (EDTU 2397); Elcili village, 53 m, 41°27'04"N, 26°37'16"E, 07.06.1989, coll. *F. Dane* & *N. Polat* (EDTU 3333); Karaagac: Sogutluk, around a forest, 23 m, 41°39'28"N, 26°31'25"E, 25.05.1988, coll. *F. Dane* (EDTU 2670); Suleoglu, 156 m, 41°46'02"N, 26°54'43"E, 14.07.1988, coll. *F. Dane* & *al.* (EDTU 2433); Uzunkopru: at the Harmanlı graveyard, 25.04.1989, coll. *F. Dane* & *al.* (EDTU 3656); Lalapasa: Domurcalı-Taslımusellim, 2 km, 193 m, 41°49'00"N, 26°47'00"E, 01.06.1987, coll. *F. Dane* & *al.* (EDTU 898); Kesan: Mecidiye, 61 m, 40°38'20"N, 26°32'14"E, 11.06.1987, coll. *F. Dane* & *al.* (EDTU 1441).

— Kirklareli: Vize, Saka lake, 186 m, 41°34'21"N, 27°45'57"E, 12.06.1991, coll. *F. Dane* (EDTU 4656); Demirkoy, around Velika bridge, 478 m, 41°50'08"N, 27°40'34"E, 12.06.1985, coll. *H. Demiriz* (EDTU 192).

New for A1(E): Edirne and Kirklareli in European Turkey. The species has been known so far from A1 (E): Tekirdag and A2 (E) Istanbul (Coode 1965).

Scrophulariaceae

42. *Parentucellia latifolia* (L.) Caruel subsp. ***latifolia***

Tu(E) Edirne: Musabeyli village, 109 m, 41°41'00"N, 26°40'00"E, 28.05.1989, coll. *F. Dane* (EDTU 3557).

New for A1(E): Edirne in European Turkey. Until now the species has been known from A1(E): Kirklareli and A2 (E) Istanbul (Hedge 1978).

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

Tu(E) Edirne: Musabeyli village, 109 m, 41°41'00" N, 26°40'00" E, 15.09.1993, coll. *F. Dane* (EDTU 5868).

New for A1(E): Edirne in European Turkey. The species has been known so far from A2 (E) Istanbul (Hedge 1978).

Zygophyllaceae

44. *Tribulus terrestris* L.

Tu(E) Edirne, Center: Musabeyli village, 109 m, 41°41'00" N, 26°40'00" E, 15.09.1989, coll. *F. Dane* & *N. Polat* (EDTU 3889); Edirne, near the Faculty of Medicine, 26 m, 41°40'28" N, 26°33'39" E, 04.09.1989, coll. *F. Dane* (EDTU 3974).

— Kirklareli: Kofcaz, 445 m, 41°55'42" N, 27°09'40" E, 18.06.1986, coll. *F. Dane* & *al.* (EDTU 435).

— Tekirdag: Sarkoy, 0 m, 40°36'58" N, 27°06'03" E, 02.08.1987, coll. *F. Dane* (EDTU 1822).

New for A1(E). The species has been known so far from A2(E) Istanbul and A1(A) Canakkale (Coode 1967).

Reports 45–50

Valentina Goranova

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

Campanulaceae

45. *Asyneuma anthericoides* (Janka) Bornm.

Bu Valley of River Mesta: on the slope above river Mesta, near Momina Koula restaurant, Boukovo village district, GM-22, 13.06.2007, coll. *V. Goranova* (SOM 163795).

This species has been known so far from Northeast Bulgaria, Balkan Range, Znepole Region, Vitosha Region, Mt Sredna Gora (*Western*), Rhodopi Mts (*Western* & *Central*), and Toundzha Hilly Country (Anchev 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006).

46. *Campanula patula* L. subsp. ***patula***

Bu Forebalkan (*Western*): Vrachanski Balkan Nature Park, on open grassy places in the forest between Vrattsata and Ledenika complex, GN-08, 18.06.2007, coll. *V. Goranova* (SOM 163792).

This species is distributed in the Balkan Range, Vitosha Region, Rila Mts, Pirin Mts, Rhodopi Mts (*Western* & *Central*), West Frontier Mts, and Mt Belasitsa (Anchev 1992; Cheshmedzhiev 2003; Assyov & Petrova 2006).

Lamiaceae

47. *Micromeria cristata* (Hampe) Griseb.

Bu Forebalkan (*Western*), Vrachanski Balkan Nature Park, on the rocky hills near Cherepishki Monastery, GN-17, 30.05.2007, coll. *V. Goranova* (SOM 163793).

Ančev (1989) reported the species for the Forebalkan, but in later general sources on the flora of Bulgaria (Cheshmedzhiev 2003; Assyov & Petrova 2006) it was not referred to this floristic region.

Rubiaceae

48. *Galium anisophyllon* Vill.

Bu Rhodopi Mts (*Central*): Trigrad gorge, on the rocks around the road fork Trigrad – Mougla village, KG-81, 21.06.2004, coll. *V. Goranova*, det. *M. Anchev* (SOM 163791).

This species has been known so far from the Balkan Range (*Western* & *Central*), Vitosha Region, Rila Mts, Pirin Mts, and Mt Slavyanka (Anchev 1989; Cheshmedzhiev 2003; Assyov & Petrova 2006).

Scrophulariaceae

49. *Digitalis viridiflora* Lindl.

Bu Valley of River Mesta: in the shrubs along the road near Momina Koula restaurant, Boukovo village district, GM-22, 13.06.2007, coll. *V. Goranova* (SOM 163796).

According to Assenov (1995), this species is widely spread in the country. According to Cheshmedzhiev (2003) and Assyov & Petrova (2006), the species is distributed in the Balkan Range, Znepole Region, Mt Belasitsa, West Frontier Mts, Mt Slavyanka, Rila Mts, Pirin Mts, Mt Sredna Gora, Rhodopi Mts, and Mt Strandzha.

50. *Pedicularis grisebachii* Wettst.

Bu Forebalkan (*Western*): Vrachanski Balkan Nature Park, Kravya locality, GN-08, 18.05.2007, coll. *V. Goranova* (SOM 163794).

This species has been known so far from the Balkan Range (*Western* & *Eastern*), Sofia Region, Vitosha Region, West Frontier Mts, and Toundzha Hilly Country (Peev 1995; Cheshmedzhiev 2003; Assyov & Petrova 2006).

Acknowledgements. The author is grateful to Prof. Mincho Anchev for determining some of the material.

Reports 51–57

Michal Hájek[1,2], Nikolay Velev[3], Desislava Sopotlieva[3], Iva Apostolova[3*] & Zuzana Rozbrojová[2]

[1] Institute of Botany, Czech Academy of Sciences, 3b Poříčí, CZ-60300 Brno, Czech Republic
[2] Department of Botany and Zoology, Faculty of Science, Masaryk University, Kotlářská 2, CZ-61137 Brno, Czech Republic, e-mail: hajek@sci.muni.cz
[3] Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria, *e-mail: iva@bio.bas.bg

Caryophyllaceae

51. *Stellaria palustris* Retz.

Bu Sofia Region: SE from Tsruklevtsi village, 760–800 m, 42°56'48" N, 23°07'37" E 19.06.2007, coll. *M. Hájek, D. Sopotlieva, N. Velev & Z. Rozbrojová*, 42°57'10" N, 23°09'11" E, 12.06.2006, coll. *M. Hájek & I. Apostolova* (SOM 163747).

The species is new for this floristic region. So far it is known from for the Rila and Rhodopi Mts (*Western*) (Hájek & al. 2005). In the Tsruklevtsi locality, the species occurs at the edge of a calcareous fen (water conductivity 633 μS.cm^{-1}, pH 6.8) and in acidic and less calcareous peat deposits (conductivity 180 μS.cm^{-1}, pH 5.8).

Cyperaceae

52. *Carex buxbaumii* Wahlenb.

Bu Sofia Region: SE from Tsruklevtsi village, 42°56'48" N, 23°07'37" E, 760 m, 19.06.2007, coll. *M. Hájek, D. Sopotlieva, N. Velev & Z. Rozbrojová* (SOM 163636).

This boreal species, which is extremely rare across temperate Europe, appears to be very rare in Bulgaria too. So far the presence of the species has been confirmed for the Rhodopi (*Western*) and Rila Mts (in the meadows W of Samokov) (Hájek & al. 2005). The distribution of *C. buxbaumii* is related to the wet meadows developed in peat soils, mowed mostly once a year. In the Tsruklevtsi locality, the species occurs in one of the acidic and less calcareous peat deposits scattered throughout a large complex of intermittently wet meadows on mineral-rich soils. Conductivity of soil water was 180 μS.cm^{-1} (20 °C), water pH was 5.8. As a rare species at European scale, *C. buxbaumii* deserves protection at species level, as well as on the level of its habitats and should be included in the Red List of the Bulgarian vascular plants.

53. *Carex caespitosa* L.

Bu Rila Mts: E of Dospei village, Samokov region, 42°18'27.7" N, 23°31'35.3" E, 1000 m, 27.06.2007, coll. *M. Hájek, D. Sopotlieva, N. Velev & Z. Rozbrojová* (SOM 163637).

So far this species has been reported for the country by Yordanov & al. (1974) and Stoeva & al. (2005). Only localities from the Toundzha Hilly Country are known. It the current locality it has a relatively dense population. The species forms a monodominant community developed at the edge of an extremely-rich fen, characterised by a high number of interspersed herbs, grasses and bryophytes typical of the *Molinietalia* wet meadows (e.g. *Festuca rubra* agg., *Holcus lanatus* L., *Lysimachia nummularia* L., *Caltha palustris* L., *Lysimachia vulgaris* L., *Plagiomnium affine* agg., *Calliergonella cuspidata* (Hedw.) Loeske). *Eriophorum latifolium* Hoppe was another accompanying species. In Central and West Europe, such a vegetation type is classified as the *Caricetum cespitosae* Steffen 1931 association from the alliance *Calthion palustris*. This vegetation has typically a tussock structure. However, the fen meadow close to Dospei is presently now mowed and the tussock structure therefore does not occur. *Carex caespitosa* is also scattered in a community with *Carex acuta* L., *Pedicularis palustris* L., *Caltha palustris,* and *Eriophorum latifolium*, representing a transition between fen and tall-sedge vegetation. Water entering the wetland complex had conductivity of 398 μS.cm^{-1} (20 °C) and pH of 6.9.

54. *Carex punctata* Gaudin

Bu Valley of River Strouma *(Southern)*: N of Kolarovo village, Petrich district, 275 m, 41°22'38.7" N, 23°07'06.6" E, 24.06.2007, coll. *M. Hájek, I. Apostolova, N. Velev & Z. Rozbrojová* (SOM 163638).

The species has been known so far only from four localities distributed in the Balkan Range (*Central*) and Rhodopi Mts (*Central*) (Hájek & al. 2005). Although the new locality extends the species distribution area in the country, it should be considered as very rare. The locality is linked with the distribution area of *Osmunda regalis* L., *Carex punctata* populates a spring habitat dominated by *Philonotis marchica, Juncus articulatus, Eleocharis uniglumis* and *Isolepis setacea*. Conductivity of spring water was 250 μS.cm^{-1} (20 °C), and the pH 6.8.

55. *Eleocharis quinqueflora* (Hartm.) O. Schwarz

Bu Valley of River Strouma (*Southern*): N of Kolarovo village, Petrich district, 275 m, 41°22'38.7" N, 23°07'06.6" E,

24.06.2007, coll. *M. Hájek, I. Apostolova, N. Velev* & *Z. Rozbrojová* (SOM 163640).

— Rila Mts: E of Dospei village, Samokov region, 42°18'27.7" N, 23°31'35.3" E, 1000 m, 27.06.2007, coll. *M. Hájek, D. Sopotlieva, N. Velev* & *Z. Rozbrojová* (SOM).

The species is new to these two floristic regions. It is a characteristic species of the *Caricion davallianae* calcareous fens.

56. *Eriophorum gracile* Koch ex Roth

Bu Mt Sredna Gora *(Western)*: Mt Lozenska, Rousamski Livadi locality, 42°32'51.3" N, 23°33'05.5" E, 26.06.2007, 976 m, coll. *M. Hájek, I. Apostolova, D. Sopotlieva, Z. Rozbrojová* (SOM 163639).

The species is new to this floristic region. It forms a small population in a spring fen patch surrounded by *Filipendula ulmaria* tall-herb vegetation. The species is so far known from the Western Rhodopes (Hájek & al. 2005). The localities in the Balkan Range (*Western*) and Mt Vitosha need further study for confirming their recent existence. It is considered as a very rare and rapidly disappearing species of the European flora. The species should be protected by law and its habitats also deserve further conservation. It should be included in the Red List of the Bulgarian vascular plants.

Poaceae

57. *Gaudinia fragilis* (L.) P. Beauv.

Bu Sofia Region: wet meadows in the Sarantsi village, 620 m, 42°43'16" N, 23°46'26" E, 25.06.2006, coll. *M. Hájek, P. Hájková, I. Apostolova* & *Z. Otýpková* (SOM 163746).

This Mediterranean grass is new to this floristic region. It has been so far reported from Znepole Region, Rhodopi Mts (*Eastern*) and Mt Strandzha. In the newly discovered locality, the species seldom occurs in a mowed salt-rich fen meadow dominated by *Carex distans, C. otrubae, Juncus articulatus, J. compressus* and *Eleocharis uniglumis*. The high concentration of salts is reflected in the high water conductivity (800 μS.cm^{-1}), and a pH of 7.1.

Acknowledgement. The research was conducted within an exchange project of the Czech and Bulgarian Academies of Sciences (2005–2007) and within the long-term research plans of the Botanical Institute of the Czech Academy of Sciences (no. AVZ0Z6005908) and of Masaryk University, Brno (no. MSM0021622416).

Reports 58–60

Predrag Lazarević[1] & Zoran Krivošej[2]

[1]Institute for Nature Conservation of Serbia, 91 Dr Ivana Ribara St., 11070 Belgrade, Serbia, e-mail: lazarevic@natureprotection.org.yu

[2]Faculty of Sciences, University of Kosovska Mitrovica, 38220 Kosovska Mitrovica, Serbia

Apiaceae

58. *Bupleurum longifolium* L.

Sr (*East*) Mt Kučajske, the gorge between Kršijora and Kurmature hills. A small limestone gorge in the beech forest zone (*Fagetum moesiacae*), *ca.* 830 m, 44°02'58.5" N, 21°51'46.4" E, 06.07.2006, coll./det. *P. Lazarević* (BEOU 16086).

The species is recorded only in three localities in Serbia: Mt Kopaonik (Pančić 1856, 1874; Fritsch 1915; Nikolić 1973), Stara Planina (Nikolić 1973), and Suva Planina – Trem (B. Zlatković *pers. com.*). The new record is just the fourth and northernmost point in Serbia, over 60 km off the nearest locality.

Caryophyllaceae

59. *Gypsophila spergulifolia* Griseb.

Sr (*Southwest*) Pešter Plateau – Trojan hill, pioneer plant on eroded serpentine areas of the association *Poo molinieri-Plantaginetum holostei*, *c.* 1200 m, 43°06'36.7" N, 20°09'30.9" E, 20.05.2000, coll./det. *P. Lazarević* & *Z. Krivošej* (BEOU).

An endemic obligate serpentinophyte distributed in N Bosnia, W Serbia and N Albania. It is recorded at several localities in the W Serbia: Mt. Zlatibor, CP-66, CP-93: Zlatibor (Gajić 1970); Zlatibor, 1925, coll. *Bornmüller* (BEOU); Zlatibor-Ribnica, 1873, 1875, 01.06.1877, coll. *J. Pančić* (BEOU); Zlatibor-Ribnica, 16.08.1930, coll. *N. Košanin* (BEOU); Panjak, Užice, 1868, coll. *J. Pančić* (BEOU); Mt. Maljen-Tometino Polje, DP-28, DP-27: Maljen, Tometino Polje (Nikolić & al. 1986); Divčibare-Kozji rid, 01.07.1875, coll. *J. Pančić* (BEOU); Maljen-Tometino Polje, 10.09.1981, coll. *V. Stevanović* (BEOU); Tometino polje-Veliko okolište, 29.08.2001, coll. *Z. Krivošej* (BEOU); Divčibare, on the banks of an artifical lake, 29.08.2001, coll. *Z. Krivošej* (BEOU); Mt. Tara CP-93, CP-86: Tara-Zaovine, 06.1920, coll.

M. Terzić (BEOU); Tara-Kremna trail, serpentin, *c.* 1100 m, 10.09.1981, coll. *V. Stevanović* (BEOU).

The new record of the Pešter Plateau represents the southernmost point of the species distribution in Serbia.

Valerianaceae

60. ***Valeriana dioica*** subsp. ***simplicifolia*** (Rchb.) Nyman (Syn. *Valeriana simplicifolia* (Rchb.) Kabath)

Sr (*Southwest*) Pešter Plateau, Sjenica, in a peat bog near Štavalj, in communities with *Menyanthes trifoliata* (*Magnocaricion*), *c.* 1050 m, 43°15'56.4" N, 20°07'41.2" E, 18.06.2004, coll./det. *P. Lazarević* (BEOU); in a peat bog near Suvi Do, *Magnocaricion, Lathyreto-Molinietum caeruleae, Phragmitetum communis, c.* 1160 m, 43°02'45.5" N, 20°09'40.7" E, 17.05.2006, coll./det. *P. Lazarević* (BEOU).

— Mt. Kamena Gora, river Strmečićka, in the wet meadows near the river, *Deschampsietum caespitosae, c.* 1200 m, 43°16'39" N, 19°33'52" E, 12.07.2006, coll./det. *P. Lazarević* (BEOU); on the slopes of Jezerina, in small peat bogs, *Magnocaricion, c.* 1250 m, 43°15'30" N, 19°33'30" E, 11.07.2006, coll./det. *P. Lazarević* (BEOU).

This species has been known so far in Serbia only in two localities: Mt. Kopaonik: "with *Silene asterias* and *Equisetum silvaticum*", 1856, 1874, coll. *J. Pančić* (BEOU); Karamanski stream, 1700 m, granite, *Caricion canescentis*, 12.07.1988, coll. *S. Stanić* (BEOU); Samokovska river gorge, 04.06.1985, coll. *V. Stevanović* & *M. Niketić* (BEOU); Pajino Preslo, 1750 m, granite, *Caricion canescentis*, 04.07.1988, coll. *D. Lakušić* (BEOU); and Uvac river gorge (SW Serbia), Caričina village, *c.* 1400 m, *Caricetо-Eryophoretum,* 05.2000, 05.2002 (Veljić & al. 2006).

The range of *V. dioica* subsp. *simplicifolia* in Serbia is not clearly defined owing to its confusion with *V. dioica* subsp. *dioica* (cauline leaves pinnatifid) which is also recorded at several localities in W & C Serbia in similar habitats: Mt Kopaonik (Pančić 1856, 1874); Tutin region (Petković 1983), Mt Tara-Crveni Potok near Mitrovac. Also, it is occasionally confused with *Valeriana simplicifolia* K. Maly, which name is illegitimate and actually is a synonym of *Valeriana bertiscea* Pančić, an endemic species of the Dinaric and Scardopindic Massif growing in quite different habitats – limestone high-mountain screes (Beck & al. 1974).

Reports 61–79

Antoaneta S. Petrova[1], Tenyo Meshinev[2] & Iva Apostolova[2]

[1] Botanical Garden, Bulgarian Academy of Sciences, P.O. Box 664, 1000 Sofia, e-mail: petrovabotgar1@abv.bg, corresponding author
[2] Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria

The data for this contribution were collected mostly during the work on the Important Plant Areas project in Bulgaria. Most significant are the data for the distribution of many rare plant species at the Taushan Tepe hill near Nevsha village, Varna district, a locality that definitely deserves further attention and investigation.

Asteraceae

61. ***Centaurea thracica*** (Janka) Hayek

Bu Danubian Plain: in the pastures at Belite Bairi and Bozhurluka localities, near Gorna Stoudena village, Pleven district, LJ-60, 13.05.2007, coll. *A.S. Petrova* (SOM 163578).

The species has been discovered earlier in the Danubian Plain (Tzonev 2002) but not published and, therefore, omitted later by Assyov & Petrova (2006). The population of this Pontic element at Bozhurluka locality was very numerous.

62. ***Serratula radiata*** (Waldst. & Kit.) M. Bieb.

Bu Danubian Plain: in the pastures at Belite Bairi locality, near Gorna Stoudena village, Pleven district, LJ-60, 13.05.2007, coll. *A.S. Petrova, T. Meshinev* & *I. Apostolova* (SOM 163625).

A new species for the region.

Boraginaceae

63. ***Echium russicum*** J.F. Gmel.

Bu Northeast Bulgaria: Taushan Tepe hill, near Nevsha villige, Varna district, NH-29, 29.05.2007, obs. *A.S. Petrova*.

This is a new locality for this locally distributed species. The observed population was a small one, of single individuals (Fig. 3) on the western slope of the hill.

Brassicaceae

64. ***Crambe tataria*** Sebeók

Bu Danubian Plain: in a pasture between Kozlovets village and Ovcha Mogila, Pleven district, 43°27'42.7" N, 25°19'23.8" E, LJ-61, 10.06.2007, coll. *T. Meshinev* (SOM 164009).

Fig. 3. *Echium russicum* (photo A. Petrova).

A rare species, included in Annex IIb of the Directive 92/43 of EC. Anchev (2007) mentions it only for the Black Sea Region (*Northern*) and Northeast Bulgaria but there are data on its distribution in the Danubian Plain (Tzonev 2004), near Vardim village (not far from the locality reported here). Only one individual was observed in the new locality, in a community dominated by *Chrysopogon gryllus* (L.) Trin., *Stipa capillata* L., *S. pennata* L. and with significant presence of *Amygdalus nana* L., *Chamaecytissus banaticus* (Griseb. & Schrenk.) Rothm. Based on our personal studies in North Bulgaria during the past few years (Meshinev & al. 2005), recent floristic publications for the region and a search in the herbaria SOM, SO and SOA, those two localities and one near Kavarna beach (two plants observed in 2003 by Assyov and in 2004 by Petrova, unpubl.) are the only contemporary records of the species in Bulgaria.

Convolvulaceae

65. *Convolvolus lineatus* L.

Bu Northeast Bulgaria: Taushan Tepe hill, near Nevsha villige, Varna district, NH-29, 29.05.2007, coll. *A.S. Petrova* (SOM 163581).

A rare plant new for the region (Vasilev 1984), known from the Black Sea Coast and Toundzha Hilly Country (Kuzmanov 1982). The population at Taushan Tepe is developed in stony chalk ravine and landslips on the southeastern slope. The number of observed plants is 130–140, but mention deserves the fact that there are more appropriate microhabitats on the hill.

Fabaceae

66. *Caragana frutex* subsp. ***mollis*** (M. Bieb.) Kuzmanov

Bu Northeast Bulgaria: Taushan Tepe hill, near Nevsha villige, Varna district, 43°17.806' N, 27°18.926' E, NH-29, 09.05.2007, with flowers and young fruits, coll. *T. Meshinev, I. Apostolova* & *A.S. Petrova* (SOM 163570) and 29.05.2007, coll. *A.S. Petrova* (SOM 163571).

Caragana frutex is a rare plant for Bulgaria (Velev 1984) known from the region of Northeast Bulgaria, from the localities in Shoumen district, near Zlatna Niva and Kabiyuk villages (Meshinev & Andreev 1994). At Taushan Tepe hill, two sub-populations were observed. One of them is found on the northeastern slope, among shrubs of *Paliurus spina-christii* Mill. and *Carpinus orientalis* Mill. The area of the subpopulation is about 0.5 ha. The population structure is a mosaic one. The second sub-population was on the southeastern slope, also among shrubs of *P. spina-christii* and *C. orientalis*. It was again a numerous one, on an area of about 0.4 ha. In contrast with the first sub-population, the flowering of that one was very bad, with singular flowers and, respectively, fruits.

We had also an opportunity to visit the population at Kabiyushka Mogila in the Shoumen district (on 10.05.2007). After a fire eight years ago, now the population covers about 0.05 ha, with a very dense cover of young shoots. The flowering was extremely poor, only few flowers were seen.

On 10.06.2007, the population at Chernata Mogila (43°29'01.8" N, 25°17'26" E) in the Pleven district was visited too. At this locality, Koceva & Dimitrov (1994) found about 50 plants. It 2007, the population on the eastern slope covered about 0.02 ha. There were three generations. The oldest group numbered about 50 plants, with a height of 50–60 cm, and uneven spatial distribution. On the ridge of the slope, there were two spots (with areas of about 150–200 sq. m and 120 sq. m) with dense regular shoots, about 30 cm high. The third group consisted of 10–12 cm offshoots, which were regularly spread in a community dominated by *Agropyron cristatum* (L.) Gaertn. The logical consideration is that there were two consistent fires at the place. Most likely, the larger plants were about 50 individuals, observed at first by Koceva and Dimitrov (1994), very soon after the first fire, at the moment when the rest of the population was difficult to be seen. After the renovation by offshoots, possibly at 2005 another fire harmed part of the population. This part is growing up again now.

Besides the localities discussed above, there were only few more reported ones. Single individuals were

found at the localities Goloto Burdo, near Novachene village and Kapitanska Mogila near Trunchovitsa village, Pleven district (Tzonev 2004), and the locality near Zlatna Niva (Meshinev & Andreev 1994).

Caragana frutex communities are included in the Annex 1 of the Directive 92/43 of the EC – a priority habitat of the type 40C0 Ponto-Sarmatic deciduous shrubs. Our data allowed us to calculate the approximate area of the habitat in Bulgaria. It is 1.2 ha, of which about 75 % are at the Taushan Tepe hill. This is one of the reasons to suggest this hill to be included in NATURA 2000 network in Bulgaria. The other reasons are: the population of *Centaurea jankae* Brandza (Petrova 2007), and the presence of the habitat type 62C0 Ponto-Sarmatic steppes, dominated by *Stipa pulcherrima* Koch, *S. lessingiana* Trin & Rupr. and *S. capillata* L.

67. *Hedysarum tauricum* Pall. ex Willd.

Bu Northeast Bulgaria: Taushan Tepe hill, near Nevsha villige, Varna district, NH-29, 29.05.2007, with flowers, coll. *A.S. Petrova* (SOM 163588).

A new locality of this rare species (Kozhuharov 1984). The observed population numbers 25 plants, in groups of 5–10 individuals, found at a stony chalk ravine and landslip at the southeast slope.

Rosaceae

68. *Rosa pumila* Jacq.

Bu Northeast Bulgaria: Kabiyushka Mogila hill, Shoumen district, MJ-90, 08.05.2007, coll. *A.S. Petrova* (SOM 163603).

A new species for the region.

Sapindaceae

69. *Koelreuteria paniculata* Laxm.

Bu Northeast Bulgaria: in an Oriental Hornbeam grove on the slopes of Madara Plateau, NH-09, 08.05.2007, coll. *A.S. Petrova* (SOM 163631).

A species, which easily naturalizes, recently reported as wild-growing in the country (Vladimirov 2006).

Solanaceae

70. *Lycium barbarum* L.

Bu Danubian Plain: along the road near Pavel village, Veliko Turnovo district, LJ-60, 13.05.2007, observed by *A.S. Petrova*.

This species introduced as an ornamental shrub is naturalized in many places but similarly to many other such species the real distribution in the country is not well known and documented.

Violaceae

71. *Viola canina* L.

Bu Sofia Region: in shrubs near Chibaovtsi village, Sofia district, FN-85, 16.04.2007, coll. *A.S. Petrova* (SOM 163610).

Liliaceae s.l.

72. *Asparagus verticillatus* L.

Bu Northeast Bulgaria: Topchala hill near Belogradetz village, Varna district, NH-29, 04.07.2007, with fruits, coll. *A.S. Petrova* (SOM 163642).

The species is not reported for this region in the main floristic sources (Petrova 1992; Assyov & Petrova 2006) but actually it is quite common and is also observed near Nevsha, Venchan, Vetrino villages, and Devnya town.

Poaceae

73. *Agrostis castellana* Boiss. & Reut.

Bu Northeast Bulgaria: Topchala hill near Belogradetz village, Varna district, NH-29, 04.07.2007, coll. *A.S. Petrova* (SOM 163641).

Kozhuharov (1992) reported it for the Rila Mts, Rhodopi Mts (*Central*, *Eastern*) and Mt Strandzha. Recently, the species was established for Sofia Region, Vitosha Mts and the Rhodopi Mts (*Western*) (Petrova 2004; Petrova & Vassilev 2006).

74. *Agrostis gigantea* Roth

Bu Danubian Plain: in local humid places at Belite Bairi locality, near Gorna Stoudena village, Pleven district, LJ-60, 13.05.2007, coll. *A.S. Petrova* (SOM 163626).

— Znepole Region: wet places at the slope of Mt Lyubash, near Lyalintsi villige, Pernik district, FN-43, 22.08.2007, coll. *A.S. Petrova* (SOM 163698).

A new species for these regions.

75. *Festuca pseudodalmatica* Krajina ex Domin

Bu Northeast Bulgaria: in pastures at the foothills of Kabiyushka Mogila hill, Shoumen district, MJ-90, 08.05.2007, coll. *A.S. Petrova, T. Meshinev* & *I. Apostolova* (SOM 163603).

A new species for the region found at much lower altitudes as compared to the known distribution, mostly in mountainous regions: Stara Planina (*Western*), Vitosha Region, Rila Mts, Pirin Mts, and Rhodopi Mts (Assyov & Petrova 2006), but also reported for the Eastern Stara Planina (Grozeva & al. 2004).

76. *Poa angustifolia* L.

Bu Danubian Plain: in pastures at Belite Bairi locality, near Gorna Stoudena village, Pleven district, LJ-60, 13.05.2007, coll. *A.S. Petrova* (SOM 163627).

— Forebalkan (*Eastern*): in a pasture near Ledenik village, Veliko Turnovo district, LH-87, 08.05.2007, coll. *A.S. Petrova* (SOM 163601).

The distribution of this species, which is very common in the lowlands, was incorrectly given by Kozhuharov (1992) as limited to few regions.

77. *Stipa lessingiana* Trin. & Rupr.

Bu Danubian Plain: in pastures at Belite Bairi locality, near Gorna Stoudena village, Pleven district, LJ-60, 13.05.2007, coll. *A.S. Petrova, T. Meshinev* & *I. Apostolova* (SOM 163607).

A rare species (Stoeva 1984), known from the Black Sea Coast (*Northern*) and Northeast Bulgaria (Kozhuharov 1992). There are old data from the area of Gorna Stoudena village, at Bozhourluka locality (Gančev & Kočev 1963) but as the species is not included in the list of the plants of the area (Tzonev 2002), its presence in the Danubian Plain floristic region was under question (Assyov & Petrova 2006). The new data confirm the species for the area. Only a small population (about 20 m^2) was observed.

78. *Stipa pennata* L.

Bu Northeast Bulgaria: Madara Plateau, above the monument, NH-09, 08.05.2007, coll. *A.S. Petrova, I. Apostolova* & *T. Meshinev* (SOM 163632).

A new species for the region. It forms small communities.

79. *Stipa pulcherrima* Koch

Bu Northeast Bulgaria: Tepichkite locality, NE of Nevsha villige, Varna district, NH-29, 09.05.2007, coll. *A. Petrova, I. Apostolova* & *T. Meshinev* (SOM 163629) and Taushan Tepe locality N of Nevsha village, 29.05.2007, coll. *A. Petrova* (SOM 164010).

A new species for the region, forming communities in both localities.

Acknowledgements. The financial support of the Plantlife International and the Dutch Ministry of Agriculture, Nature and Food Quality (Important Plant Areas project) for the field studies in North Bulgaria is gratefully acknowledged. The authors also thank the Bulgarian Biodiversity Foundation for support of the studies in Kostinbrod Municipality, Sofia district.

Reports 80–81

Vladimir Stevanović & Dmitar Lakušić

Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade, Serbia, e-mail: vstev@bfbot.bg.ac.yu

Anacardiaceae

80. *Rhus coriaria* L.

Cg Village Krašići, Luštica Peninsula, Boka Kotorska bay, CM-09, 28.07.1997, coll. *D. Lakušić* & *B. Lakušić* (BEOU 7175); Luštica Peninsula, Boka Kotorska bay, between Oblatna and Mirište bays, pseudomaquie, in an open limestone place surrounded by a maquis community with *Pistacia terebinthus, P. lentiscus, Arbutus unedo, Myrtus communis, Spartium junceum, Carpinus orinetalis, Coronilla emeroides, Erica arborea, Fraxinus ornus, Smilax aspera, Quercus ilex, Quercus pubescens,* etc., *c.* 200 m, 42°22.75' N, 18°38.848' E, CM-09, coll *V. Stevanović* (BEOU 20167).

— Poseljane village between Virpazar and Rijeka Crnojevića, pseudomaquis, on limestone, in a community with *Pistacia terebinthus*, *Carpinus orientalis*, *Fraxinus ornus*, *Quercus pubescens, Phyllirea latifolia, Acer monspessulanum, Coronilla emeroides, Punica granatum, Smilax aspera,* etc., *c.* 100 m, CM-47, 25.08.2006, coll. *V. Stevanović* (BEOU 21977).

— Valdanos near Ulcinj, maquis, on limestone, *c.* 200 m, 41°57.027' N, 19°10.741' E, CM-44, 02.06.2007, coll. *V. Stevanović* & *D. Lakušić* (BEOU, 24419).

— Bušat between Ulcinj and Bar, maquis, *c.* 60 m, 42°0.185' N, 19°9.014' E, CM-45, 02.06.2007, *D. Lakušić* (obs.).

— Kruče between Ulcinj and Bar, maquis, 110 m, 41°58.732' N, 19°9.773' E, CM-55, 02.06.2007, *D. Lakušić* (obs.).

It is a rare representative of C-E Mediterranean dendroflora along the Adriatic coast, where only few records have been reported: in the surroundings of Šibenik (Milović 2002) and between Dubrovnik and Herceg Novi in Dalmatia (Jovančević 1964, 1966); Dubrovnik, Srđ hill, coll. *V. Stevanović, L. Rajevski* & *S. Jovanović* (BEOU 486/90), very common along the road between Konavli and Gornji Brgat in the surroundings of Dubrovnik, *V. Stevanović* (obs.), around Trebinje in Herzegovina (Šilić 1972/73), Ulcinj in S Montenegro (Rohlena 1942) and Sutorman, Lonac, on limesone rocky slopes, 890 m, 28.07.2002, coll. *Petrović* (Petrović 2004: 54). In

Macedonia, it is a very common species along the valleys of river Vardar and the gorges of its tributaries, as well as in the southeastern part of the territory (Micevski & Matevski 2005). New records in Montenegro and those from Herzegovina and C & S Dalmatia represent the western and northern limits of the species distribution in the Balkans. It seems to be more frequent on inaccessible and unpopulated limestone slopes along S Adriatic in Herzegovina and Montenegro, covered by various types of evergreen and semievergreen shrublands.

Lamiaceae

81. *Salvia aethiopis* L.

Cg Bogišići above village Radovici, Luštica Peninsula, Boka Kotorska bay, in local cemetery, on shallow limestone soil between old tombs, *c.* 300 m, CM-09, 20.08.2005, coll. *V. Stevanović* (BEOU 20191).

The small population was first observed in the late summer 2003. During few years of monitoring, the population has slightly increased but was still restricted to the cemetery. Most probably, it was accidentally introduced. In SE Europe the species is mainly distributed in E and C part of the Balkans and the Pannonian Plain. The locality in the Mediterranean part of Montenegro represents the westernmost point of distribution in the Balkans. New for Montenegro.

Reports 82–115

Kit Tan[1] & Margarita Issigoni[2]

[1] Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bi.ku.dk (author for correspondence)
[2] P.O. Box 7911, Agioi, Aegina, Gr 180 10, Greece

Additions to the vascular flora of the island of Aegina are presented below. The island occupies an area of 83 sq km in the Argosaronic Gulf and lies 17 nautical miles from Piraeus, Greece. Towards the north and the northeast extends a series of small valleys and low hills. *Pinus halepensis* forest formerly covered the slopes and the trees were tapped as a source of resin and cut for fuel. The famed temple of Aphaia stands on one of these pine-clad hills with a panoramic view over the sea. There is a rich annual flora to be found in the regenerated phrygana of the surrounding area and also along the way from the Aphaia temple to the Monastery of St Minas. The central and southern part of the island is less fertile, being stony and volcanic in origin. It nevertheless also has a rich flora. Some interesting places are the plateau at the Monastery of Chrysoleontissa, the Skotini valley, the slopes east of Anitseon and the base of the northern slopes of Mt Oros, an extinct volcano. Although an alpine zone is absent on the island (the highest point being only 535 m at the summit of Oros) some montane elements exist including *Anthemis montana*, *Colchicum bivonae*, *Crocus olivieri*, *Lonicera etrusca*, *Myosotis cadmea*, *Scilla bifolia* and *Sideritis montana*. Apart from pistachio plantations (*Pistacia vera* cv.) near the main town of Aegina and at Kipseli, there is no additional crop cultivation.

The island is a popular holiday resort due to its proximity to Athens and tourists come over from the mainland in large groups. The anthropogenic disturbance especially during the summer months is pronounced and irreversible. *Pancratium maritimum* has practically disappeared from all coasts although there are still very small populations remaining on Nisida, an islet to the northeast. The recent development in hotel complexes, additional summer villas for the well-to-do Athenian population together with the rise in associated construction work plus heavy coastal pollution all damage the sites and contribute to the environmental problems of the island. A major setback is the pollution and gradual disappearance of the only drinkable natural water supply at the spring of Kourenti.

This is the first report of new floristic records for the island based on fieldwork carried out intermittently during the years 2000 to 2007. Being resident on the island, one of the authors (MI) is in an admirable position to carry out detailed observations, including phenological studies, on a scale not achievable for the temporarily visiting botanist. The recent warm weather with marked increases in temperature have caused the flora to advance its flowering by at least a month and for many spring species, a second flowering in the autumn was also documented.

The first floristic list of the island was published by Heldreich in 1898. It contained no less than 576 species. The most relevant recent publication is that of Vallianatou & Yannitsaros (1993) which added sever-

al new records. It is estimated that the total flora comprises more than 850 species which number is rather high for such a small island of only 83 sq. km. The best times to visit the island are the months of March and April when several orchids come into bloom.

The following are new records for the Nomos of Attikis, Eparchia of Eginis, island of Egina in the phytogeographical region Peloponnese (Pe) as circumscribed in Flora Hellenica (Strid & Tan 1997). *Ranunculus peltatus* subsp. *peltatus* is also a new record for the Peloponnese.

Polypodiaceae

82. *Polypodium cambricum* L.

Gr Slope SE of Kontos, under *Quercus ilex* in *Pinus* forest, 240 m, 37°44'40" N, 23°29'35" E, 30.04.2007, coll. *M. Issigoni*. Also S of Vathi, at the foot of Dragonera cliff.

Asteraceae

83. *Senecio squalidus* L.

Gr S of Agioi, in open *Pinus halepensis* forest, 45–50 m, 37°46'02" N, 23°31'13" E, end of April 2007, coll. *M. Issigoni*.

Boraginaceae

84. *Cerinthe retorta* Sm.

Gr Near ruin at Anitseo, 250 m, 37°42'24" N, 23°30'17" E, 07.04.2006, coll. *M. Issigoni*.

85. *Cynoglossum officinale* L.

Gr SW of Agioi, in open *Pinus halepensis* forest, 45 m, 37°46'05" N, 23°30'15" E, 17.04.2005, coll. *M. Issigoni*.

86. *Heliotropium curassavicum* L.

Gr N of Vaia, sandy coast, sea level, 37°46'20" N, 23°32'13" E, 28.05.2007, coll. *M. Issigoni*.

Naturalised. Surprisingly few records have been documented for the Peloponnese (only one from Kithira) and Sterea Ellas (only three from the vicinity of Athens). Known from NE, Ionian islands and East Aegean islands (Chios, Lesvos).

Caryophyllaceae

87. *Silene apetala* Willd.

Gr Souvala, occurring as a weed between cement pavement and wall near sea, 5 m, 37°46'24" N, 23°29'23" E, 30.04.2007, coll. *M. Issigoni*.

Reported as rare in Greece; known only from Crete, Karpathos and Rodos (Greuter 1997: 314). It has apparently not been collected in the vicinity of Athens (StE) for more than a century. Vallianatou & al. (1994), however, records it from the small island of Psittalia in the Saronic Gulf.

Cistaceae

88. *Fumana laevipes* (L.) Spach

Gr S of Agioi, phrygana in open *Pinus* forest on rocky limestone slope. With *Cistus parviflorus, C salvifolius, Coridothymus capitatus* and *Phlomis fruticosa*, 135 m, 37°45'54" N, 23°30'06" E, 25.04.2006, coll. *M. Issigoni*.

89. *Helianthemum* aff. ***canum*** (L.) Baumg.

Gr W of Vaia, phrygana with *Cistus creticus, Coridothymus capitatus* and *Fumana thymifolia,* 15 m, 37°46'17" N, 23°31'22" E, 25.03.2007, coll. *M. Issigoni*.

We have named this aff. *H. canum* for the moment as it does not match material determined as *H. oelandicum* (L.) DC. subsp. *canum* (L.) Bonnier. *H. salicifolium* and *H. nummularium* are the only two other species of *Helianthemum* so far recorded for the island.

Ericaceae

90. *Arbutus andrachne* L.

Gr S of Agioi, in open *Pinus halepensis* forest, 90 m, 37°45'57" N, 23°30'32" E, 01.04.2007, coll. *M. Issigoni*.

Fabaceae

91. *Anthyllis vulneraria* subsp. ***praepropera*** (A. Kern.) Bornm.

Gr S of Agioi, open *Pinus-Juniperus* forest with phrygana dominated by *Cistus salvifolius*, *Fumana arabica* and *Teucrium divaricatum*, 125 m, 37°45'58" N, 23°30'16" E, 30.04.2007, coll. *M. Issigoni*.

92. *Anthyllis vulneraria* subsp. ***rubriflora*** (DC.) Arc.

Gr In the same locality as *A. v.* subsp. *praepropera*.

These are the first records of *A. vulneraria* from the island.

93. *Ononis pubescens* L.

Gr SW of Agioi, roadsides, *c.* 40 m, 37°45'07" N, 23°31'01" E, 24.05.2007, coll. *M. Issigoni*.

Geraniaceae

94. *Geranium tuberosum* L.

Gr E of Kontos, meadow near stream, 40 m, 37°44'57" N, 23°29'18" E, 28.03.2007, coll. *M. Issigoni*.

95. *Geranium columbinum* L.

Gr N slope of Mt. Oros, stony area volcanic in origin, 270 m, 37°42'25" N, 23°29'43" E, 6.04.2006, coll. *M. Issigoni*. Also N of Aeginitissa to the west of Mt. Oros.

Hydrophyllaceae

96. *Phacelia tanacetifolia* Benth.

Gr W of Agioi, roadsides, 35–40 m, 37°46'05" N, 23°31'07" E, end of April 2007, coll. *M. Issigoni*.

Lamiaceae

97. *Ajuga chamaepitys* (L.) Schreb.

Gr SE of Kontos, edge of path in *Pinus* forest, 240 m, 37°44'40" N, 23°29'37" E, 20.04.2007, coll. *M. Issigoni*. Also NE of Sfentouri.

Probably representing *A. ch.* subsp. *chia* (Schreb.) Arcang.

98. *Salvia viridis* L.

Gr SW of Agioi, field margins, 35–40 m, 37°46'06" N, 23°31'05" E, 14.04.2006, coll. *M. Issigoni*. Also S of Vathi, foot of Dragonera cliff.

Ranunculaceae

99. *Delphinium hellenicum* Pawł.

Gr S of Souvala beach, coastal area with phrygana, 3 m, 37°46'22" N, 23°29'35" E, 05.06.2006, coll. *M. Issigoni*. Also at Vathypotamos, roadside phrygana, open *Pinus* forest.

Endemic to Greece.

100. *Ranunculus peltatus* Schrank subsp. ***peltatus*** (Fig. 4).

Gr SE of Pagoni, in natural pool (souvala), 122 m, 37°44'02" N, 23°27'44" E, 10.03.2006, coll. *A. Mouratidou*.

New for Pe, previously known from Kik, NC and StE.

Fig. 4. *Ranunculus peltatus* subsp. *peltatus* (photo A. Mouratidou).

Rhamnaceae

101. *Rhamnus alaternus* L.

Gr S of Pagoni, by Asopos river in Skotini valley, 30 m, 37°44'06" N, 23°26'52" E, 20.04.2007, coll. *A. Mouratidou*.

102. *Paliurus spina-christi* Mill.

Gr SE of Pagoni, abandoned field with phrygana, 120 m, 37°44'00" N, 23°27'43" E, 20.05.2007, coll. *A. Mouratidou*.

Rubiaceae

103. *Asperula rigidula* Halácsy

Gr SW of Agioi, steep slopes by road in former *Pinus halepensis* forest, with *Didesmus aegyptius*, *Fumana arabica*, *Teucrium divaricatum*, 30 m, 37°46'05" N, 23°29'55" E, 30.05.2006, coll. *M. Issigoni*.

Only two plants noted in the disturbed habitat. Endemic to Greece.

Scrophulariaceae

104. *Scrophularia heterophylla* Willd. var. ***heterophylla***

Gr Slopes of Plativouni hill, S of Monastery of Chrysoleontissa, in *Quercus coccifera-Juniperus phoenicea-Olea europaea* macchie, volcanic rock (andesite) crevices, 400 m, 37°43'30" N, 23°29'21" E, 10.06.2005, coll. *M. Issigoni*. Endemic to Greece.

Amaryllidaceae

105. *Narcissus tazetta* L.

Gr SW of Agioi, 40 m, 37°46'07" N, 23°31'06" E, 06.02.2006, coll. *M. Issigoni*.

Confirming a 1968 record without indication of locality on island.

Iridaceae

106. *Crocus olivieri* Gay

Gr NW of Anitseon on the northern slopes of Mt. Oros, mixed macchie and phrygana (*Quercus coccifera, Genista acanthoclada, Juniperus phoenicea, Cistus* spp.), on volcanic substrate (andesite), 230 m, 37°42'38" N, 23°29'54" E, 25.01.2007, coll. *M. Issigoni*. Another large population was found SW of Lazarides not so far distant, at 380 m, together with *Colchicum bivonae*, *Ornithogalum* sp. and *Romulea ramiflora*.

107. *Gynandriris monophylla* Klatt

Gr SW of Agioi, open *Pinus-Juniperus* forest, stony limestone slopes, 150 m, 37°45'55" N, 23°30'16" E, 15.04.2006, coll. *M. Issigoni*.

Also found SE of Agioi, in meadows at the 100 m summit of Vrouva.

108. *Romulea ramiflora* Ten.

Gr S of Souvala, phrygana in open *Pinus* forest, on limestone, 40 m, 37°46'03" N, 23°29'37" E, 19.02. 2007, coll. *M. Issigoni*. Also NW of Anitseon, at the northern foot of Mt. Oros, and north of the Monastery of Chrysoleontissa.

Liliaceae

109. *Gagea reticulata* (Pall.) Schult. & Schult. f.

Gr S of Souvala, phrygana in open *Pinus* forest, on limestone, 45 m, 37°45'58" N, 23°29'37" E, 01.03.2002, coll. *M. Issigoni*.

Orchidaceae

110. *Ophrys fusca* Link.

Gr SW of Agioi, open *Pinus-Juniperus* forest, 100 m, 37°45'55" N, 23°30'05" E, 04.03.2007, coll. *M. Issigoni*.

111. *Ophrys lutea* subsp. **sicula** (Tineo) Soldano

Gr SW of Agioi, open *Pinus-Juniperus* forest, 100 m, 37°45'55" N, 23°30'05" E, 04.03.2007, coll. *M. Issigoni* (Recorded by Heldreich as *O. lutea* f. *minor* Parl.).

Both the above orchids were listed from approximately the same locality by Heldreich (1898: 51) but apparently have not been noted for the last hundred years.

112. *Ophrys ciliata* Biv.

Gr E of Leonti, phrygana, 5 m, 37°46'18" N, 23°28'16" E, 21.03.2007, coll. *M. Issigoni*. Also near Kavouropetra, in phrygana covered slopes above the main road.

113. *Ophrys spruneri* Nyman

Gr S of Agioi, open *Pinus* forest with phrygana, 40 m, 37°46'06" N, 23°30'18" E, 09.04.2007, coll. *M. Issigoni*. Endemic to Greece.

114. *Orchis quadripunctata* Ten.

Gr SW of Agioi, open *Pinus-Juniperus* forest with phrygana, 120 m, 37°45'50" N, 23°30'05" E, 30.03.2007, coll. *M. Issigoni*. Also on the nearby hill of Paliomili and on the northern slopes of Mt. Oros.

115. *Orchis papilionacea* L.

Gr SW of Agioi, open *Pinus-Juniperus* forest with phrygana, 110 m, 37°45'58" N, 23°30'10" E, 15.04.2007, coll. *M. Issigoni*. Also at Monastery of St. Minas, and SE of Agioi on the summit of Vrouva.

Acknowledgements. We thank Afroditi Mouratidou for contributing the entries of *Rhamnaceae* and *Ranunculus peltatus* including Fig. 4. All cited vouchers are unnumbered and kept in the private herbarium of M. Issigoni at Aigina.

Reports 116–122

Kit Tan[1] & George Sfikas[2]

[1] Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark (author for correspondence)
[2] 2 Vyzantiou St., Argyroupolis, Athens 16452, Greece

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).

Cupressaceae

116. *Juniperus foetidissima* Willd.

Gr Nomos Fokidos, Eparchia Doridos: Lidorikiou Ori, limestone ridge between the villages of Vounichora and Malandrino, 900–1500 m, 38°24' N, 22°14' E, 22.05.2007, *Sfikas* obs.

New for mountain range in Sterea Ellas, the other localities being the more botanically well-known mountains of Giona, Parnassos, Vardousia, etc.

Asteraceae

117. *Centaurea chrysocephala* Phitos & T. Georgiadis

Gr Nomos Ioanninon, Eparchia Metsovou: between Metsovo and Malakassi, gravelly or sandy soil, 1030–1080 m, 39°47' N, 21°14' E, 16.09.2005, *Sfikas* 13694 (herb. Kit, herb. Sfikas).

New for eparchia, nomos and N Pindos. This biennial *Centaurea* produces a rosette of winged leaves with linear lobes in its first year and a large inflorescence with several capitula the following year. It was considered rare in Greece, endemic to the Meteora monastery (in eparchia Kalambaka), the Pertouli area (eparchia Trikalon) and the Koroni monastery (eparchia Karditsis), all in S Pindos. During an Environmental Impact Survey on the Egnatia Highway between Metsovo and Trigona, more than a hundred plants were found in two different localities by the roadside. The plants were growing in disturbed habitats on gravelly or sandy soil turned up by digging, e.g., at the entrance of the large tunnel running eastwards from Anilio and at the entrance of the next tunnel. It is obvious that distribution and spread has been greatly facilitated by construction works.

Campanulaceae

118. *Halacsyella parnassica* (Boiss. & Spruner) Janch.

Gr Nomos Achais, Eparchia Patron: meadows near summit of Mt Panachaiko, 1523 m, 38°11' N, 21°52' E, 05.06.2007, *Sfikas* 13790 (herb. Sfikas; det. Kit Tan 2007).

New for Mt Panachaiko in N Peloponnese. Bornmüller (1928: 295) was the first to collect this species from Mt Erimanthos and he named his plant *Ha-*

lacsyella parnassica, recognising its distinct character from the genera *Campanula* and *Edraianthus*. Mt Kallifoni is the only other locality in the Peloponnese.

Caryophyllaceae

119. *Silene integripetala* subsp. ***lidenii*** Oxelman (Fig. 5).

Gr Nomos Lakonias, Eparchia Githiou: Mani Peninsula, hills above Porto Kagio, 36°26'N, 22°29'E, 6.03.2007, *Sfikas* s.n. (herb. Kit, herb. Sfikas; det. Kit Tan, 2007).

Voucher specimens were prepared from material brought from the locality cited, cultivated in Athens and pressed in April 2007. The flowers are unusually pale pink instead of the bright magenta described by Greuter (1997). However, in all other characters including the clearly emarginate, oblong-cuneate petal limb, length, colour and attachment of the coronal scales (white with reddish margin), our southern Mani plants match the description of *S. i.* subsp. *lidenii* very well. At Xifariankia there was a population with emarginate, bright magenta-pink petals, thus intermediate in character with *S. i.* subsp. *integripetala*.

New for the Peloponnese and mainland Greece. Previously considered restricted to the Korikos Peninsula in NW Crete. It should be looked for on the islands of Kithira and Andikithira which lie out in the stormy waters south of Cape Malea and have been described as "stepping stones in the South Aegean island arc".

Geraniaceae

120. *Erodium guicciardii* Boiss.

Gr Nomos Fokidos, Eparchia Doridos: Lidorikiou Ori, limestone ridge between the villages of Vounichora and Malandrino, in openings of *Juniperus foetidissima* forest, 1300–1350 m, 38°24'N, 22°14'E, 22.05.2007, *Sfikas* 13777 (herb. Sfikas).

New for both eparchia, nomos and mountain range; in southern Greece previously known only from Mt Timfristos (Nomos and Eparchia Evritanias). This silvery-leaved species resembles *E. chrysanthum* but has pink instead of lemon-yellow petals. It has an interesting distribution in Greece being known from Mt Timfristos in Sterea Ellas and disjunct in the mountains of Nomos Florinis in NW Greece (in the vicinity of lakes Megali and Mikri Prespa and near the Albanian border). There is also a record from Mt Vourinos in NC.

Fig. 5. *Silene integripetala* subsp. *lidenii* (photo G. Sfikas).

Hypericaceae

121. *Hypericum barbatum* Jacq.

Gr Nomos Achaias, Eparchia Patron: meadows near summit of Mt Panachaiko, 1562 m, 38°11'N, 21°52'E, 05.06.2007, *Sfikas* 13789 (herb. Sfikas; det. Kit Tan 2007).

— Nomos Arkadias, Eparchia Gortinias/Mandinias: Mt Menalon, along forest road from Vitina to Ostrakina. Meadow with rocky limestone outcrops in opening of *Abies cephalonica* forest, 1350 m, 37°40'N, 22°14'E, 19.07.1998, *Strid* & *Kit Tan* 47197 (G).

New for Mts Panachaiko and Menalon, otherwise only known from Mt Chelmos in the Peloponnese.

Papaveraceae

122. *Papaver argemone* subsp. ***nigrotinctum*** (Fedde) Kadereit

Gr Nomos Lakonias, Eparchia Epidavrou-Limiras: Mt Gidovouni, limestone slopes, 30.04.2007, *Sfikas* 13782 (herb. Sfikas).

New for mountain and extending the western limits of the taxon's range in the Peloponnese.

Reports 123–131

Vladimir Vladimirov

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

Asteraceae

123. *Ambrosia artemisiifolia* L.

Bu Valley of Strouma River: along the road from Simitli to Bansko near Gradevo village, FM-84, 09.08.2007, coll. *V. Vladimirov* (SOM).

A single, 1 m tall plant was found in the locality and

collected to prevent establishment. However, other individuals may have been brought to the area with gravel and soil for the road construction works taking place there. This aggressive North American species is rapidly spreading troughout the country during the past decade (cf. Vladimirov 2006). New occurrences have been established in the Forebalkan (*Eastern*): along the road Sofia–Varna, east of Mikre village, KH-96, 27.08.2007, *V. Vladimirov* (obs., thousands of individuals) and in several places along the road Sofia–Varna near Malinovo village, LH-26, 27.08.2007, *V. Vladimirov* (obs., thousands of individuals).

124. *Chamomilla suaveolens* (Pursh) Rydb.

Bu Pirin Mts (*Northern*): on sandy disturbed soil at the middle cable-car station above Bansko, *c.* 1600 m, GM-02, 09.08.2007, coll. *V. Vladimirov* (SOM).

The taxon has been reported so far from the Forebalkan, Balkan Range (*Eastern*), Sofia Region, Vitosha Region, Rila Mts and Rhodopi Mts (Assyov & Petrova 2006). It is very likely that this alien species has been recently brought to the locality with soil from elsewhere during the construction of the cable-car station.

125. *Helianthus tuberosus* L.

Bu Rhodopi Mts (*Central*): along river Shirokolushka, just below Shiroka Luka village, KG-91, 06.10.2007, *V. Vladimirov* (obs.).

New species for this floristic region. Hundreds of flowering stems were observed in the locality in several dense groups. It has been reported so far only from Sofia Region (Vladimirov 2003). It is an alien species to the Bulgarian flora, probably more widely naturalized in the country.

126. *Lactuca aurea* (Sch.Bip. ex Vis. & Pančić) Stebbins

Bu Pirin Mts (*Northern*): in a Norway Spruce forest by river Damyanishka, 1600–1700 m, GM-02, 41°47'37" N, 23°28'02" E, 26.07.2007, coll. *V. Vladimirov* (SOM).

Less than 10 specimens were observed in the area. The species has been reported so far from the Balkan Range (*Western*, *Central*), Znepole Region, Vitosha Region, West Frontier Mts, Mt Sredna Gora (*Western*), Rhodopi Mts (*Eastern*), and Mt Strandzha (Assyov & Petrova 2006).

127. *Solidago gigantea* Aiton

Bu Balkan Range (*Western*): along the asphalt road *c.* 0.5 km from Burziya village to Klisurski Monastery, Montana district, FN-78, 09.2006, *V. Vladimirov* (obs.).

— Pirin Mts (*Northern*): along the road from Dobrinishte village to the lower lift-station, GM-13, 02.08.2001, *V. Vladimirov* (obs.).

— Rhodopi Mts (*Central*): along river Trigradska, 2–3 km above Trigrad village, KG-80, 41°34'30" N, 24°24'21" E, 06.10.2007, coll. *V. Vladimirov* (SOM); along river Chepelarska, about 2 km above Hvoina village, LG-03, *V. Vladimirov* (obs.).

New records for these floristic regions. In all above-mentioned localities a few well established groups were observed. This North American species has been reported so far for Northeast Bulgaria, Balkan Range (*Central*), Sofia Region, Pirin Mts (*Southern*), Rhodopi Mts (*Western*), and Thracian Lowland (Assyov & Petrova 2006).

Polygonaceae

128. *Fallopia bohemica* (Chrtek & Chrtková) J.P. Bailey

Bu Forebalkan (*Western*): by river Leva in Vratsa town, 0.5–1 km from Vratsata locality, GN-08, 26.06.2006, *V. Vladimirov* (obs.).

— Vitosha Region: Mt Vitosha, near Hyunday hotel, situated *c.* 4.5 km below Aleko chalet by the asphalt road to Sofia, 1500–1600 m, FN-81, 17.10.2006, *V. Vladimirov* (obs.).

New locality for this alien species to the Bulgarian flora. It has been reported so far from the Balkan Range (*Western*), Sofia Region, Znepole Region, Rhodopi Mts (*Central*) (Assyov & Petrova 2006; Vladimirov 2006).

Vitaceae

129. *Parthenocissus quinquefolia* (L.) Planch.

Bu Rhodopi Mts (*Central*): along the road from Bachkovo Monastery to Assenovgrad town, 250–300 m, LG-24, LG-25, 06.10.2007, *V. Vladimirov* (obs.).

New record for this species. The taxon stands out in this season with the red-coloured leaves and was noted in several places on the rocky slopes above the road. This North American species has been recently reported as naturalized in Northeast Bulgaria, Forebalkan (*Eastern*) and the Balkan Range (*Eastern*) (Assyov & Petrova 2006).

Iridaceae

130. *Crocus reticulatus* Steven ex Adam

Bu Forebalkan (*Western*): Pustrina hill above Nikolovo village, Montana district, FP-80, 07.02.2007, coll. *V. Vladimirov* (SOM).

First record of the species in this floristic region.

Liliaceae s.l.

131. *Allium fuscum* Waldst. & Kit.

Bu Forebalkan (*Western*): in an oak forest near Belogradchik town, along the tourist trail to the Natural History Museum, 43°37′N, 22°40′E, FP-33, 22.08.2007, coll. *V. Vladimirov* (SOM).

First record for the species in this floristic subregion. The taxon has been reported so far from Northeast Bulgaria, Danubian Plain, Forebalkan (*Eastern*), Balkan Range (*Western*), Valey of Strouma River, Rhodopi Mts (*Central*, *Eastern*) (Cheshmedzhiev 2003; Assyov & Petrova 2006).

Reports 132–135

Gülden Yılmar & Feruzan Dane

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

Scrophulariaceae

132. *Bellardia trixago* (L.) All.

Tu(E) Edirne: Kesan: Mecidiye, 61 m, 40°38′20″N, 26°32′14″E, 19.05.2001, coll. *G. Dalgic* (EDTU 8051).

New for A1(E): Edirne in European Turkey. The species has been known so far from A1(E): Canakkale, A1(A): Canakkale and A2(E): Istanbul (Hedge 1978).

133. *Verbascum macrurum* Ten.

Tu(E) Edirne, Center: Edirne, around the Faculty of Medicine, 26 m, 41°40′28″N, 26°33′39″E, 11.07.2007, coll. *F. Dane* & *G. Yilmaz* (EDTU 9608).

New for A1(E): Edirne in European Turkey. The species has been known so far from A1(E): Kirklareli (Huber-Morath 1978).

Verbenaceae

134. *Verbena officinalis* L.

Tu(E) Edirne: Center: around river Tunca, 26 m, 41°40′28″N, 26°33′39″E, 21.08.1989, coll. *F. Dane* (EDTU 4103).

New for A1(E): Edirne in European Turkey. The species has been known so far from A1(E): Kirklareli and A2(E): Istanbul (Townsend 1982).

135. *Vitex agnus-castus* L.

Tu(E) Edirne: Kesan: 108 m, 40°51′21″N, 26°37′49″E, 02.10.2001, coll. *A. Dalgic* & *G. Dalgic* (EDTU 8276).

New for A1(E): Edirne in European Turkey. The species has been known so far from A1(E): Canakkale and A1(A) Canakkale (Townsend 1982).

Reports 136–138

Bojan Zlatković, Vladimir Randjelović & Marina Jušković

Institute of Biology and Ecology, Faculty of Natural Sciences, University of Niš, 33 Višegradska St., 18000 Niš, Serbia,
e-mail: bojanzlat@yahoo.com, vladar@pmf.ni.ac.yu, marinaju@pmf.ni.ac.yu

Chenopodiaceae

136. *Chenopodium ambrosioides* L.

Sr Niš, Supovac village, on sandy river banks, EP-06, 06.09.2006, coll. *B. Zlatković, V. Randjelović* & *A. Savić* (BEOU 16112).

— Trgovište, Novo Selo village, in ruderal vegetation on sandy places, EM-79, 17.09.2006, coll. *B. Zlatković* & *K. Zlatković* (BEOU 16113).

It was primarily cultivated and afterwards widely naturalized throughout C & S Europe. The species is native in C & S America. As an adventive plant, it was reported for many localities in N Serbia (Slavnić 1972; Jovanović 1994), obviously it is not common in the southern part of the territory.

Cyperaceae

137. *Fimbristylis bisumbellata* (Forssk.) Bubani

Sr Trgovište, Vražji Kamen locality, in bare habitats on aluvium, river gravel and sand banks, EM-89, 17.09.2006, coll. *B. Zlatković* & *K. Zlatković* (BEOU 16110).

— Klenike, in the surrounding of St. Prohor Pčinjski Monastery, in sandy places close to the river, *Cypreus flavescens-Fymbristilis dichotoma* Ass. Slavnić, 1951, EM-78, 27.09.2006, coll. *B. Zlatković, V. Randjelović* & *A. Savić* (BEOU 16109).

The species is included in the *Red Data Book of the Flora of Serbia*, as Regionally Critically Endangered (Cr-Srb). It has been considered as extinct from all localities in

Serbia, except one (Bela Crkva) in the northern part of country (Lakušić 1999). It has been recorded and later extinct in few localities in the South, Central (Adamović 1904; Slavnić 1940) and North Serbia (Slavnić 1951). The population in the newly discovered localities is comparatively rich, especially near Trgovište. The population was estimated at few hundred mature individuals. The species in this region forms some interesting riverbank dwarf-sedge communities that belong to the *Nanocyperion flavescentis* vegetation alliance.

Typhaceae

138. *Typha laxmannii* Lepech.

Sr Klenike, Šaprance village, EM-79, 28.06.2004, coll. *B. Zlatković* & *M. Jušković* (BEOU 16107).

— In the surroundings of Dimitrovgrad town, FN-46, 06.09.2006, coll. *B. Zlatković, V. Randjelović* & *A. Savić* (BEOU 16111).

— Trgovište town, Vražji Kamen locality, EM-79, 06.09.2006, coll. *B. Zlatković* & *K. Zlatković* (BEOU 16108).

— In the surroundings of Vranjska Banja town, banks of Crna reka above dam Prvanek, EN-81, 12.05.2002, *N. Randjelović* (pers. comm.).

The species has been found in many sites in Vojvodina region (Budak 1975, 1986). According to the literature data (Kaligarić & Jogan 1996), this expansive and probably adventive species has spread its range from SE toward C Europe. Occurrence of this species in the S Balkan Peninsula, including the new records in Serbia, could be considered as a part of its native range. In S Serbia, *Typha laxmannii* forms small beds on the banks along rivers and streams. Its habitats in S Serbia are usually without free-standing water during dry period.

Reports 139–140

Bojan Zlatković[1] & Vladimir Stevanović[2]

[1] Institute of Biology and Ecology, Faculty of Natural Sciences, University of Niš, 33 Višegradska St., 18000 Niš, Serbia, e-mail: bojanzlat@yahoo.com

[2] Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, 43 Takovska St., 11000 Belgrade, Serbia, e-mail: vstev@bfbot.bg.ac.yu

Fabaceae

139. *Onobrychis caput-galli* (L.) Lam.

Sr Klenike, Rusce village, valley of river Pčinja, on limestone marly ground, in SE exposed dry grasslands of the alliance *Koelerio-Festucion dalmaticae* Randđ. et Ružić 1982, 500 m, EM-79, 28.06.2003, coll. *B. Zlatković* (BEOU 16114).

Excluding few islands, the species is widespread throughout the Mediterranean region. This plant has not been known in Serbia so far. The closest localities of the species are situated in Macedonia (Micevski 2001) and Bulgaria (Kožuharov 1976). It has been found mainly in the gorges, lowlands and hilly regions in the south of these countries. The new location represents one of the northernmost occurrences of this plant on the Balkan Peninsula. It was found on sandy soils and limestone marly ground along the valley of river Pčinja. A new species for Serbia.

Poaceae

140. *Rostraria cristata* (L.) Tzvelev
(Syn. *Lophochloa cristata*)

Sr Klenike, Brnjare village, valley of Pčinja, in sandy places along roadsides, SE exposed marly slopes, 500 m, EM-79, 20.06.2003, coll. *B. Zlatković* (BEOU 16106).

— Trgovište, Vražji Kamen locality, in waste places and sandy ruderal habitats, on silicate, EM-89, 20.06.2003, coll. *B. Zlatković* (BEOU 16105).

This annual grass is common in the Mediterranean and occasionally in the Submediterranean part of Europe. Along river valleys, it spreads northwards from the Aegean region to the C Balkans. This species has been known in Serbia only from a single locality: the slopes of Mt Seličevica (Kurvin Grad fortress), close to the town of Niš (Randjelović 1977, 1982).

References

Adamović, L. 1904. Revisio Glumacearum serbicarum. – Magyar Bot. Lapok, **3**(3/5): 133-162.

Ade, A. & Rechinger, K.H. 1938. Samothrake. – Repert. Spec. Nov. Regni Veg. Beih., **100**: 106-146.

Anchev, M. 1992. *Campanulaceae*. – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 280-285. Naouka & Izkoustvo, Sofia (in Bulgarian).

Ančev, M. 1989. *Galium* L. (pp. 42-96), *Micromeria* Benth. (356-362). – In: **Velčev, V.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **9**. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

Ančev, M. 2007. Catalogue of the family *Brassicaceae (Cruciferae)* in the flora of Bulgaria. – Phytol. Balcan., **13**(2): 153-178.

Assenov, I. 1995. *Digitalis* L. – In: **Kožuharov, S.** (ed.), Fl. Reipubl. Bulgaricae. Vol. **10**, pp. 134-142. In Aeditio Acad. "Prof. Marin Drinov", Serdicae (in Bulgarian).

Assyov, B. & Petrova, A. (eds). 2006. Conspectus of the Bulgarian vascular flora. Distribution maps and floristic elements. Ed. 3. BBF, Sofia.

Ball, P.W. 1968. *Onobrychis* Miller. – In: **Turin, T.G. & al.** (eds), Flora Europaea. Vol. **2**, pp. 187-191. Cambridge Univ. Press, Cambridge.

Baytop, A. 1984. Turkish materials presented in the Herbarium of the Faculty of Pharmacy of Istanbul University I. *Pteridophyta*, *Gymnospermae*, *Dicotyledones*. Istanbul (in Turkish).

Beck, G., Maly, K. & Bjelčić, Ž. 1974. *Valeriana bertiscea* Panč. – In: Flora Bosnae et Hercegovinae, Sympetalae. Vol. **4**(3), p. 73. Zemaljski Muzej BiH, Sarajevo (in Serbo-Croatian).

Bornmüller, J. 1928. Ergebnis einer botanischen Reise nach Griehenland im Jahre 1926 (Zante, Cephalonia, Achaia, Phokis, Aetolien). – Repert. Spec. Nov. Regni Veg., **25**: 161-203, 270-350.

Budak, V. 1975. *Typha laxmannii* Lepech. – In: **Sarić, M. & Diklić, N.** (eds), Flore de la Republique Socialiste de Serbie. Vol. **10**, pp. 255-266. Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

Budak, V. 1986. *Typha laxmannii* Lepech., a new species of flora of S Vojvodina. – Zbornik za prirodne nauke Matice Srpske, **49**: 203-206 (in Serbo-Croatian).

Chamberlain, D.F. & Matthews, V.A. 1969. *Astragalus* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **3**, pp. 49-253. Edinburgh Univ. Press, Edinburgh.

Cheshmedzhiev, I. 2003. *Alliaceae* (pp. 447-452), *Campanulaceae* (370-376), *Lamiaceae* (320-339), *Scrophulariaceae* (343-363). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).

Coode, M.J.E. 1965. *Reseda* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **1**, pp. 499-506. Edinburgh Univ. Press, Edinburgh.

Coode, M.J.E. 1967. *Tribulus* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **2**, p. 493. Edinburgh Univ. Press, Edinburgh.

Cullen, J. 1965. *Chelidonium* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **1**, pp. 213-214. Edinburgh Univ. Press, Edinburgh.

Davis, P.H. & Cullen, J. 1965. *Paeonia* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **1**, pp. 204-206. Edinburgh Univ. Press, Edinburgh.

Fritsch, C. 1915. Neue Beiträge zur Flora der Balkan-halbinsel, insbesondere Serbiens, Bosniens und der Herzegowina. V. – Mitt. Naturwiss. Vereines Steiermark, **51**: 173-215.

Gajić, M. 1970. *Gypsophilla* L. – In: **Josifović, M.** (ed.), Flore de la Republique Socialiste de Serbie. Vol. **2**, pp. 241-246. Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

Gančev, S. & Kočev, H. 1963. New data and some remarks on the flora of Bulgaria. – Izv. Bot. Inst. (Sofia), **11**: 149-152 (in Bulgarian).

Greuter, W. 1997. *Silene* L. – In: **Strid, A. & Tan, Kit** (eds), Flora Hellenica. Vol. **1**, pp. 239-323. Koeltz Scientific Books, Königstein.

Grozeva, N., Georgieva, M. & Vulkova, M. 2004. Flowering plants and ferns. – In: **Stoeva, M.** (ed.), Biological diversity of Sinite Kamuni Nature Park. Stara Zagora. Pp. 9-112.

Hájek, M., Hájková, P. & Apostolova, I. 2005. Notes on the Bulgarian wetland flora, including new national and regional records. – Phytol. Balcan., **11**(2): 173-184.

Hedge, I.C. 1978. *Bellardia* All. (p. 768), *Odontites* Ludwig (763-766), *Parantucellia* Viv. (766-767). – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **6**. Edinburgh Univ. Press, Edinburgh.

Heldreich, Th.V. 1898. I chloris tis Eginis. Athine (in Greek).

Huber-Morath, A. 1978. *Verbascum* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **6**, pp. 461-603. Edinburgh Univ. Press, Edinburgh.

Jovančević, M. 1964. Trees and shrubs of Mediterranean evergreen region of Herzegovina. – Rad. Šumarsk. Fak. Inst. Šumarstvo Sarajevu (in Serbo-Croatian).

Jovančević, N. 1966. Natural range, plantation and selection of Sumak tree (*Rhus coriaria* L.) in Dalamtia and Hercegovina. – Nar. Šumar, **1-2**: 9-15 (in Serbo-Croatian).

Jovanović, S. 1994. Ecological study of ruderal flora and vegetation in the city of Belgrade. Faculty of Biology, Univ. Belgrade, Belgrade (in Serbo-Croatin).

Kaligarić, M. & Jogan, N. 1996. *Typha laxmannii* Lepech., a new species in flora of Slovenia. – Hladnikia, **7**: 21-28 (in Slovenian).

Koceva, S. & Dimitrov, D. 1994. New chorological data on the flora of Bulgaria from the territory of Svisthov district. – God. Sofiisk. Univ. "Kliment Okhridski" Biol. Fak. 2, Bot., **86**: 35-36.

Kozhuharov, S. 1984. *Hedysarum tauricum* Pall. ex Willd. – In: **Velchev, V.** (ed.), Red Data Book of the PR Bulgaria. Vol. **1**. Plants, p. 196. Publ. House Bulg. Acad. Sci., Sofia (in Bulgarian).

Kozhuharov, S. 1992. *Poaceae*. – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 564-626. Naouka & Izkoustvo, Sofia (in Bulgarian).

Kožuharov, S. 1976. *Onobrychis* Adans. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **6**, pp. 236-258. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

Kuzmanov, B. 1982. *Convolvulaceae*. – In: Velčev, V. (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **8**, pp. 443-463. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

Lakušić, D. 1999. *Fimbristylis bisumbellata* (Forskål) Bubani. – In: **Stevanović, V.** (ed.), Red Data Book of Flora of Serbia **1**. Extinct and Critically Endangered taxa. Pp. 290-292. Ministry of Environment of R Serbia, Faculty of Biology, Univ. Belgrade, Inst. for Prot. Nature of the R Serbia.

Meshinev, T. & Andreev, N. 1994. Plants. – In: **Beshkov, V. & al.** Red book of the Shoumen region. Pp. 25-65. Printing house "Slavcho Nikolov & co.", Shoumen.

Meshinev, T., Apostolova, I., Georgiev, V., Dimitrov, V., Petrova, A. & Veen, P. 2005. Grasslands in Bulgaria. Dragon 2003 Publ., Sofia.

Micevski, K. 2001. Flora of Repbilic of Macedonia. Vol. **1**(5). Macedonian Academy of Science and Arts, Skopje (in Macedonian).

Micevski, K. & Matevski, V. 2005. *Rhus* L. – In: **Micevski, K.**, Flora of Repbilic of Macedonia. Vol. **1**(6), pp. 1439-1440. Macedonian Academy of Science and Arts, Skopje (in Macedonian).

Milović, M. 2002. The flora of Šibenik and its surroundings. – Nat. Croat., **11**(2): 171-223 (in Serbo-Croatian).

Nikolić, V. 1973. *Bupleurum* L. – In: **Josifović, M.** (ed.), Flore de la Republique Socialiste de Serbie. Vol. **5**, pp. 199-215. Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

Nikolić, V., Sigunov, A. & Diklić, N. 1986. Addition to the flora of SR Serbia – a new data on distribution of plant species. – In: **Sarić, M.R. & Diklić, N.** (eds.), Flore de la Republique Socialiste de Serbie. Vol. **10**, Suplement 2, pp. 257-336. Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

Pančić, J. 1856. Verzeichniss der in Serbien wildwachsenden Phanerogamen, nebst den Diagnosen einiger neuer Arten. – Verh. K. K. Zool.-Bot. Ges. Wien, **6**: 475-598.

Pančić, J. 1874. Flora Principatus Serbiae. Državna štamparnija, Belgrade.

Peev, D. 1995. *Pedicularis* L. – In: **Kožuharov, S.** (ed.), Fl. Reipubl. Bulgaricae. Vol. **10**, pp. 202-216. Editio Acad. "Prof. Marin Drinov", Serdicae (in Bulgarian).

Petković, B. 1983. Marsh vegetation of Tutin region. – Bull. Inst. Jard. Bot. Univ. Belgrade, **17**: 62-102 (in Serbo-Croatian).

Petrova, A. 1992. *Liliaceae.* – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 497-519. Naouka & Izkoustvo, Sofia (in Bulgarian).

Petrova, A. 2004. New data on the flora of West Bulgaria. – Phytol. Balcan., **10**(2-3): 211-215.

Petrova, A.S. 2007. *Centaurea jankae* and *C. trinervia (Asteraceae)*: new taxa for the Bulgarian flora. – Ptytol. Balcan., **13**(3): 225-230.

Petrova, A. & Vassilev, R. 2006. Reports 109-116. – In: **Vladimirov, V., Tan, Kit & Stevanović, V.** (eds). New floristic records in the Balkans: 3. – Phytol. Balcan., **12**(3): 414-440.

Petrović, D. 2004. Flora of Mt Sutorman. Master Thesis, Faculty of Biology, University of Belgrade. 153 pp. (in Serbo-Croatian).

Randjelović, N. 1977. Distribution of plant species in southeast Serbia II. – Bull. Nat. Hist. Mus., B, **32**: 81-86 (in Serbo-Croatian).

Randjelović, N. 1982. New records of plants in southeast Serbia. – Bull. Leskovac, **22**: 381-383 (in Serbo-Croatian).

Rohlena, J. 1942. Conspectus Florae Montenegrinae. – Preslia, **20-21**: 1-506.

Slavnić, Ž. 1940. Contribution to halophytic flora and vegetation of southeast Serbia. – Glasn. Skopsk. Naučn. Društva, **22,** Sect. Sci Nat.**, 8**: 65-77 (in Serbo-Croatian).

Slavnić, Ž. 1951. Review of nitrophilous vegetation in Vojvodina. – Matica Srpska, Dept. of Nat. Sci, Proc. Nat. Sci., **1**: 84-169 (in Serbo-Croatian).

Slavnić, Ž. 1972. *Chenopodium* L. – In: **Josifović, M.** (ed.), Flora of SR Serbia. Vol. **3**, pp. 17-18. Serbian Academy of Sciences and Arts, Belgrade (in Serbo-Croatian).

Stoeva, M. 1984. *Stipa lessingiana* Trin. & Rupr. – In: **Velchev, V.** (ed.), Red Data Book of PR Bulgaria. Vol. **1**. Plants, p. 36. Publ. House of the Bulg. Acad. of Sci., Sofia (in Bulgarian).

Stoeva, M., Uzunova, K., Popova, E. & Stoyanova, K. 2005. Patterns and levels of variation within section *Phacocystis* of genus *Carex* (*Cyperaceae*) in Bulgaria. – Phytol. Balcan., **11**(1): 45–62.

Strid, A. & Tan, Kit (eds). 1997. Flora Hellenica. Vol. **1**. Koeltz Scientific Books, Königstein.

Šilić, Č. 1972/73. New records of some rare and less known plant species in Flora of Bosnia and Herzegovina. – Glasnik Zemaljsk. Muz. Sarajevu, **9-12**: 59-79 (in Serbo-Croatian).

Townsend, C.C. 1982. *Verbena* L. (pp. 33-34), *Vitex* L. (34-35). – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **7**. Edinburgh Univ. Press, Edinburgh.

Tzonev, R. 2002. Flora and vegetation of Middle Danube Plain between the valleys of Vit and Studena rivers. *PhD thesis*, Dept. Bot., Sofia Univ., Sofia (in Bulgarian).

Tzonev, R. 2004. New data and summarised information on the chorology of some rare, threatened and endemic plants in the Middle Danube Plain and Balkan Foothill region. – God. Sofiisk. Univ. "Kliment Okhridski" Biol. Fak. 2, Bot., **97**(2): 62-72.

Valliantou, I. & Yannitsaros, A. 1993. A contribution to the flora of the island of Aiyina (Saronic Gulf, Greece). – In: Proc. 15th Conf. Hellenic Soc. Biol. Sci., Florina-Kastoria, 21-24.04.1993. Pp. 406-409. Florina, Kastoria (in Greek).

Valliantou, I., Koumpli-Sovantzi, L. & Yannitsaros, A. 1994. Flora and vegetation of the island of Psittalia (Saronic Gulf, Greece). – Candollea, **49**(1): 209-224.

Vasilev, P. 1984. *Convolvolus lineatus* L. – In: **Velchev, V.** (ed.), Red Data Book of PR Bulgaria. Vol. **1**. Plants, p. 296. Publ. House of the Bulg. Acad. of Sci., Sofia (in Bulgarian).

Velev, V. 1984. *Caragana frutex* (L.) C. Koch. – In: **Velchev, V.** (ed.), Red Data Book of PR Bulgaria. Vol. **1**. Plants, p. 188. Publ. House of the Bulg. Acad. of Sci., Sofia (in Bulgarian).

Veljić, M., Marin, P.D., Krivošej, Z. & Petković, B. 2006. New record of *Valeriana simplicifolia* (Reichenb.) Kabath in Serbia. – Arch. Biol. Sci., **58**(1): 9-10.

Vladimirov, V. 2003. On the distributionof four alien *Compositae* species in Bulgaria. – Phytol. Balcan., **9**(3): 513-516.

Vladimirov, V. 2006. Reports 242-243. – In: **Vladimirov, V., Dihoru, G. & Tan, Kit.** (eds), New floristic records in the Balkans: 3. – Phytol. Balcan., **12**(3): 438-439.

Yordanov, D., Denčev, S. & Nikolov, N. 1974. New chorological data for some vascular plants. – Izv. Bot. Inst. (Sofia), **25**: 211-215 (in Bulgarian).