

New floristic records in the Balkans: 22*

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Abstract. New chorological data are presented for 168 species and subspecies from Bulgaria (1, 34-65, 77, 78, 87-99, 109-113, 130-146), Greece (16-24, 68-76, 100-108, 114-116, 147-168), Serbia (66, 67, 79-86) and Turkey-in-Europe (2-15, 25-33, 117-129). The taxa belong to the following families: *Aceraceae* (147), *Agavaceae* (165), *Alliaceae* (166), *Amaranthaceae* (68), *Amaryllidaceae* (167), *Anacardiaceae* (100), *Apiaceae* (35, 79, 148, 149), *Asteraceae* (13, 16-23, 36-40, 69-71, 80, 81, 88, 101, 127, 130, 150), *Balsaminaceae* (89), *Berberidaceae* (90), *Biebersteiniaceae* (151), *Boraginaceae* (152), *Brassicaceae* (2-4, 102, 124, 125, 131), *Campanulaceae* (82, 128), *Caprifoliaceae* (28), *Caryophyllaceae* (41-44, 119-121, 132, 141), *Chenopodiaceae* (91), *Cistaceae* (103), *Crassulaceae* (29, 104, 142), *Cupressaceae* (87), *Cuscutaceae* (45), *Cyperaceae* (57), *Droseraceae* (78), *Equisetaceae* (34), *Euphorbiaceae* (72, 83, 84, 92, 105, 160), *Fabaceae* (5-8, 46-48, 114, 115, 133, 134, 143, 153, 161), *Fumariaceae* (122, 154), *Gentianaceae* (135), *Geraniaceae* (49), *Iridaceae* (107, 117), *Juncaceae* (15, 58, 75, 76), *Lamiaceae* (24, 93, 136, 155-156, 162, 163), *Liliaceae* s.l. (27, 85, 108), *Linaceae* (30-33, 137-139), *Lycopodiaceae* (66, 77), *Moraceae* (94), *Oleaceae* (50), *Orchidaceae* (86, 112, 113, 118, 159, 168), *Orobanchaceae* (51, 52, 109), *Oxalidaceae* (95), *Papaveraceae* (106), *Plantaginaceae* (73), *Pinaceae* (110), *Plumbaginaceae* (14), *Poaceae* (59-65, 98-99, 146), *Primulaceae* (25, 157), *Pyrolaceae* (67), *Ranunculaceae* (9-12, 53, 123, 164), *Rosaceae* (54, 126, 144), *Rubiaceae* (140), *Scrophulariaceae* (1, 55, 56, 74, 96, 158), *Solanaceae* (26, 116), *Ulmaceae* (111), *Valerianaceae* (145), *Violaceae* (129), and *Vitaceae* (97).

First report for a country is: Bulgaria – *Orobanche hederæ* (109), Greece – *Crepis paludosa* (20) and *Nepeta nuda* subsp. *lydiae* (162).

First reports for Europe are *Rorippa aurea* (4) and *Nepeta nuda* subsp. *lydiae* (162).

The publication includes contributions by: A. Asenov (1), M. Aybeke (2-4), M. Aybeke & F. Dane (5-8), M. Aybeke, C. Kurt & A. Semerci (9-12), M. Aybeke & C. Yarı (13-15), B. Biel & Kit Tan (16-24), F. Dane & S. Tütüncü Konyar (25-27), F. Dane, S. Tütüncü Konyar & G. Dalgıç (28, 29), F. Dane, S. Tütüncü Konyar & B. Köse (30-33), D. Dimitrov & E. Kachaunova (34-65), V. Djordjević, S. Vukojičić & V. Stevanović (66, 67), Th. Gregor & L. Meierott (68-76), D. Ivanova, R. Natcheva & S. Stoyanov (77, 78), P. Lazarević, Z. Krivošej, G. Tomović & V. Stevanović (79-86), A. Petrova, R. Vassilev, I. Gerasimova & D. Venkova (87-99), K. Polymenakos & Kit Tan (100-108), K. Stoyanov (109), A. Tashev, K. Koev & N. Tashev (110-113), I. Tsialtas & Kit Tan (114-116), S. Tütüncü Konyar (117, 118), S. Tütüncü Konyar, F. Dane & M. Aybeke (119-121), S. Tütüncü Konyar, F. Dane & B. Köse (122, 123), S. Tütüncü Konyar, F. Dane & S. Tütüncü (124-126), S. Tütüncü Konyar & S. Tütüncü (127), S. Tütüncü Konyar, S. Tütüncü & F. Dane (128, 129), K. Vassilev (130-140), K. Vassilev & H. Pedashenko (141-146), G. Zarkos, V. Christodoulou & Kit Tan (147-159), A. Zografidis, Kit Tan & Gert Vold (160-168).

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

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

Report 1

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Scrophulariaceae

1. *Verbascum phoenicaeum* subsp. *flavidum* (Boiss.) Bornm.

Bu Znepole Region: Mt Zemenska, close to peak Glamen, 1100 m, FM30, 06.06.2013, coll. A. Asenov (SO 107 541).

A new taxon for the Znepole Region. This subspecies is sparsely spread on the northern limestone parts of the mountain and takes part in the xerothermic herbaceous vegetation of *Saturejion mantanae*, communities of *Astragalus angustifolius* belonging to the unions *Astragalo angustifolii-Seslerio coerulantis*, and communities belonging to the unions *Amygdalion nannae* and *Pruno tenellae-Syringion*.

Reports 2–4

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Brassicaceae

2. *Arabis sagittata* (Bert.) DC.

Tu(E) A1(E) Edirne, Keşan, Kılıçköy (04-B-01), 24 m, 40°46'60"N, 26°33'00"E, 05.05.2004, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 275); Edirne, Keşan, Koruklu (04-B-04), 27 m, 40°38'60"N, 26°25'00"E, 05.05.2004, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 324).

A new species for European Turkey. So far the species has been known from A2 Bursa (Cullen 1965). According to *Flora Europaea* (Jones & Akeroyd 1993), this taxon is indicated for the Balkan Peninsula and Aegean Region, but not for European Turkey.

3. *Bunias erucago* L.

Tu(E) A1(E) Edirne, Meriç, Nasuhbey (04-D-05), 43 m, 41°14'01.5"N, 26°20'22.7"E, 26.05.2004, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 561); Edirne, Süloğlu, Geçkinli pasture (04 E 05), 183 m, 41°43'00"N, 26°51'00"E, 02.06.2004, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 1026).

New to A1(E) Edirne in European Turkey. So far the species has been known from A2(E) Istanbul (Hedge 1965).

4. *Rorippa aurea* (Boiss. & Heldr.) Hub.-Mor.

Tu(E) A1(E) Edirne, Uzunköprü, Çöpköy (04-C-03), 145 m, 26°41'60"E, 26°49'22"E, 12.05.2004, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 419); Edirne Centrum, Üyüklütatar village (04-D-01), 50 m, 41°32'44"N, 26°36'36"E, 26.05.2004, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 457); Edirne, Lalapaşa, Hacılar village pasture (03-H), 460 m, 41°55'60"N, 26°46'60"E, 08.07.2003, coll. C. Kurt, A. Semerci & M. Aybeke, det. M. Aybeke (TTAE 88).

A new species for the flora of Europe. So far the species has been known from C2 Antalya (Coode & Cullen 1965). According to *Flora Europaea* (Valentine & Jonsell 1993), this taxon has not been indicated for Europe yet.

Acknowledgements. Fieldwork was carried out in 2003–2004 under the project TAGEM/04/04/01/002.

Reports 5–8

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Fabaceae

5. *Astragalus angustifolius* Lam. var. *angustifolius*

Tu(E) A1(E) Çanakkale, Gelibolu, Ilgardere Dere Kenarı, 121 m, at stream edge, 40°18'13"N, 26°28'36"E, 10.05.1987, coll. F. Dane, det. M. Aybeke (EDTU 690).

A new species for European Turkey. So far the species has been known from A2(A) Bursa. According to Chamberlain & Matthews (1970) and Chater (1968), this taxon is indicated as E. Medit. element. The currently reported locality is not surprising bearing in mind the occurrence of the species near Bursa.

6. *Vicia cracca* L. var. *stenophylla* Velen.

Tu(E) A1(E) Edirne, Keşan, the environs of lake Mercan, 108 m, 40°51'21"N, 26°37'49"E, 11.06.1987, coll. H. Arda & G. Dalgıç, det. M. Aybeke (EDTU 1305); Edirne, Lalapaşa, Donköy,

334 m, 41°55'60"N, 26°41'60"E, 13.06.1993, coll.

N. Başak, det. *M. Aybeke* (EDTU 5722).

New to A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Kırklareli and A2(E) Istanbul (Davis & Plitmann 1970).

7. *Vicia lathyroides* L.

Tu(E) A1(E) Edirne, Lalapaşa, between Hamzabeyli–Çaldere, 2 km, grass, 391 m, 41°57'50"N, 26°38'39"E, 15.04.1999, coll. *N. Başak* & *N. Güler*, det. *M. Aybeke* (EDTU 7882).

New to A1(E) Edirne in European Turkey. Until now the species has been known from A1(E) Kırklareli and A2(E) Istanbul (Davis & Plitmann 1970).

8. *Vicia lutea* L. var. *hirta* (Balb.) Loisel.

Tu(E) A1(E) Edirne, Centrum, between Karakasım–Tayakadın, 29 m, 41°31'00"N, 26°37'60"E, 07.06.1989, coll. *F. Dane* & *N. Polat*, det. *M. Aybeke* (EDTU 3263); Edirne, Keşan Mecidiye, 61 m, 40°38'20"N, 26°32'14"E, 10.06.1998, coll. *G. Dalgıç*, det. *M. Aybeke* (EDTU 7316).

New to A1(E) Edirne in European Turkey. Until now the species has been known from A1(A) Çanakklae and A2(E) Istanbul (Davis & Plitmann 1970).

Acknowledgements. Field work was carried out in 1987–1999. Revisions and identifications of taxa were carried out under TÜBAP 2008/36 project in 2010.

Reports 9–12

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Ranunculaceae

9. *Adonis annua* L.

Tu(E) A1(E) Edirne, Keşan, Kılıçköy (04-B-01), 24 m, 40°46'60"N, 26°33'00"E, 05.05.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 270); Edirne, Keşan, Yenimuhacir village (04-B-05), 121 m, 26°51'00"E, 26°41'36"E, 05.05.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 338).

New to A1(E) Edirne in European Turkey. Until now the species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Davis 1965).

10. *Consolida phrygia* subsp. *thessalonica* (Soó) Davis

Tu(E) A1(E) Edirne, Havsa, Haskoy (04-E-03), 114 m, 41°38'28"N, 26°51'31"E, 02.06.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 686); Edirne Centrum, Menekse–Sofular village (04-F-06), 119 m, 41°46'00"N, 26°38'60"E, 09.06.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 860); Edirne Centrum, Küçükdöllük village (04-F-07), 132 m, 41°45'00"N, 26°40'00"E, 09.06.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 887); Edirne, Lalapaşa, Çömlekakpınar village (04-G-01), 152 m, 41°49'60"N, 26°38'60"E, 16.06.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 947); Edirne, Lalapaşa, Küçünlü pasture (03-02), 328 m, 41°55'60"N, 26°46'00"E, 01.07.2003, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 1287); Edirne, Centrum, Orhaniye pasture, 99 m, 41°31'00"N, 26°38'60"E, 02.06.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 1338).

New to A1(E) Edirne in European Turkey. Until now the species has been known from A1(E) Çanakklae and A2(E) Istanbul (Davis 1965).

11. *Consolida regalis* subsp. *paniculata* (Host) Soó var. *paniculata*

Tu(E) A1(E) Edirne, Lalapasa, Hacilar village pasture (03-H), 460 m, 41°55'60"N, 26°46'60"E, 08.07.2003, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 38).

New to A1(E) Edirne in European Turkey. Until now the species has been known from A2(E) Istanbul (Davis 1965).

12. *Ranunculus neapolitanus* Ten.

Tu(E) A1(E) Edirne, Uzunköprü, Çöpköy (04-C-03), 145 m, 26°41'60"E, 26°49'22"E, 12.05.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 418); Edirne Keşan, Koruklu (04-B-04), 27 m, 40°38'60"N, 26°25'00"E, 05.05.2004, coll. *C. Kurt*, *A. Semerci* & *M. Aybeke*, det. *M. Aybeke* (TTAE 336).

New to A1(E) Edirne in European Turkey. Until now the species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Davis 1965).

Acknowledgements. Field work was carried out in 2003–2004 under project TAGEM/04/04/01/002.

Reports 13–15

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Asteraceae

13. *Cichorium intybus* L.

Tu(E) A1(E) Kırklareli, Demirköy, İğneada environ Mert lake, 0 m, 41°52'28"N, 27°59'20"E, 03.09.1988, coll. & det. C. Yarcı (EDTU 2483).

New to A1(E) Kırklareli in European Turkey. Until now the species has been known from A1(E) Edirne and A2(E) Istanbul (Matthews 1975).

Plumbaginaceae

14. *Limonium bellidifolium* (Gouan) Dumort.

Tu(E) A1(E) Kırklareli, Demirköy, İğneada environ Mert lake, 0 m, 41°52'28"N, 27°59'20"E, 03.09.1988, coll. & det. C. Yarcı (EDTU 2481).

New to A1(E) Kırklareli in European Turkey. Until now the species has been known from A1(E) Edirne (Bokhari & Edmondson 1982).

Juncaceae

15. *Juncus heldreichianus* Parl. subsp. *heldreichianus*

Tu(E) A1(E) Kırklareli, Demirköy, between Demirköy–Pınarhisar, 1 km, 244 m, 41°49'17"N, 27°45'38"E, 02.07.1989, coll. & det. C. Yarcı (EDTU 4170); Kırklareli, Demirköy, İğneada environ Mert lake, 0 m, 41°52'28"N, 27°59'20"E, 03.09.1988, coll. & det. C. Yarcı, conf. M. Aybeke (EDTU 2478).

New to A1(E) Kırklareli in European Turkey. Until now the species has been known from A1(E) Çanakkale Gelibolu, A2(E) Istanbul (Snogerup 1985).

Reports 16–24

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This is the twenty-first report of new plant-records for the island of Samothraki (N Aegean islands, Nomos Evrou, Eparchia Samothrakis) based on fieldwork carried out over several years. The records, dealing mainly with *Crepis*, are listed as new to the island, or to the floristic region N Aegean (NAe) as circumscribed in

Flora Hellenica (Strid & Tan 1997). The occurrence on the other N Aegean islands is also provided.

Asteraceae

16. *Crepis foetida* L. subsp. *foetida*

Gr Samothraki: Therma, wet area with thermal headwaters at bath house, 40 m, 40°29'48"N, 25°36'14"E, 05.04.2006, *Biel* 06.138; SW of Kamariotissa, grazed uncultivated land at coastal road, 5 m, 40°28'11"N, 25°28'00"E, 17.06.2007, *Biel* 07.007; E of Alonia, open oak wood near dirt road, on schist and basalt, 360 m, 40°27'42"N, 25°31'53"E, 18.06.2007, *Biel* 07.081; SW of Kamariotissa, coastal limestone slope with *Thymus-Sarcopoterium* phrygana, 10 m, 40°27'57"N, 25°27'24"E, 14.05.2010, *Biel* 10.556.

Confirming report by Stojanov & Kitanov (1944: 454) as *C. foetida* subsp. *eu-foetida*. Recorded from Ag. Evstratios in the N Aegean area.

17. *Crepis foetida* subsp. *rhoedifolia* (M. Bieb.) Čelak.

Gr Samothraki: E-SE of Xiropotamos, steep slope with heavily grazed *Satureja* phrygana, 460 m, 40°26'51"N, 25°32'32"E, 11.05.2010, *Biel* 10.464; SW of Kamariotissa, coastal limestone slope with *Thymus-Sarcopoterium* phrygana, 10 m, 40°27'57"N, 25°27'24"E, 14.05.2010, *Biel* 10.555.

Not previously recorded in Greece under this subspecies rank.

18. *Crepis neglecta* subsp. *graeca* (Vierh.) Rech. f. (Fig. 1)



Fig. 1. *Crepis neglecta* subsp. *graeca* (photo B. Biel).

Gr Samothraki: Anomeria, macchie with *Juniperus excelsa* near Akr. Kipos at the eastern part of Samothraki, 140 m, 40°25'47"N, 25°41'03"E, 27.05.1999, *Schuler* 99/464 (B); SW of

Xiropotamos, olive grove with spring S of alluvial forest, 80 m, 40°26'38"N, 25°31'23"E, 09.02.2009, *Biel* 09.005; Kamariotissa, road margins near port, on coastal limestone, 30 m, 40°28'12"N, 25°28'34"E, 12.02.2009, *Biel* 09.095; NE outskirts of Chora, N-exposed rocky slope with phrygana, 270 m, 40°28'33"N, 25°31'35"E, 04.05.2010, *Biel* 10.106; coastal cliff E of Pachia Ammos, agglomerated granitic gravel, ca. 50 m, 40°23'44"N, 25°35'35"E, 07.05.2010, *Biel* 10.304 + 10.305; N of Kato Karyotes, coastal plain with *Pteridium*, 2 m, 40°30'36"N, 5°33'51"E, 10.05.2010, *Biel* 10.426; W-NW of Alonia, large wheat field on slope, 130 m, 40°28'15"N, 25°30'05"E, 12.05.2010, *Biel* 10.501; E of Kamariotissa, road embankments outside village, 30 m, 40°28'23"N, 25°28'44"E, 09.02.2011, *Biel* 11.038; NE of Kamariotissa, road embankment above stream, 15 m, 40°28'53"N, 25°29'01"E, 05.05.2011, *Biel* 11.092.

Several collections were made on the island.

19. *Crepis neglecta* L. subsp. *neglecta*

Gr Samothraki: NE of Therma, *Platanus* valley near estuary, 3 m, 40°30'04"N, 25°36'57"E, 19.06.2007, *Biel* 07.105.

New for N Aegean area (and in fact, first report for all Aegean islands).

20. *Crepis paludosa* (L.) Moench

Gr Samothraki: S of Chora, heavily grazed *Sarcopoterium* phrygana with scattered trees of *Pinus* and *Pyrus*, on schist and porphyritic substrate, 280 m, 40°28'11"N, 25°31'29"E, 04.05.2010, *Biel* 10.128.

Apparently new for Greece.

21. *Crepis pulchra* L.

Gr Samothraki: N-NW of Therma, seasonal pool in open phrygana, beside the road junction to Therma, 5 m, 40°30'01"N, 25°36'30"E, 06.05.2010, *Biel* 10.238a.

Recorded from the island of Thasos in the N Aegean area.

22. *Crepis sancta* subsp. *obovata* (Boiss. & Noë) Babc. (Fig. 2)

Gr Samothraki: N-NW of Therma, seasonal pool in open phrygana, beside the road junction to Therma, 5 m, 40°30'01"N, 25°36'30"E, 05.05.2010, *Biel* 10.172.

Not previously recorded in Greece under this subspecies rank.

23. *Crepis vesicaria* subsp. *taraxacifolia* (Thuill.) Thell.

Gr Samothraki: SW of Kamariotissa, seasonally wet field by coast, 4 m, 40°28'10"N, 25°27'50"E, 17.06.2007, *Biel* 07.006.

Not previously recorded in Greece under this subspecies rank.



Fig. 2. *Crepis sancta* subsp. *obovata* (photo B. Biel).

Lamiaceae

24. *Stachys leucoglossa* Griseb. subsp. *samoethracica* (Degen) Biel & Kit Tan, **comb. & stat. nov.** (Fig. 3) ≡ *Stachys patula* var. *samoethracica* Degen in Österr. Bot. Z. 41: 336 (1891) ≡ *S. leucoglossa* var. *samoethracica* (Degen) Rech. f. in Repert. Spec. Nov. Regni Veg. Beih. 100: 131 (1938).

Gr Samothraki: E-SE of Chora, phrygana slope with rocks above small waterfall, 1020 m, 40°27'49"N, 25°33'52"E, 21.06.2007, *Biel* 07.170; E-SE of Chora, rocky slope with *Quercus* and phrygana, 960 m, 40°27'46"N, 25°33'33"E, 11.02.2011, *Biel* 11.054; E of Chora, *Juniperus-Berberis* scrub at flat saddle, 1110 m, 40°28'25"N, 25°32'58"E, 01.07.2011, *Biel* 11.295; E-SE of Chora, rock outcrop on steep *Quercus* slope above mountain track, 1020 m, 40°27'59"N, 25°33'60"E, 03.07.2011, *Biel* 11.317; E-SE of Chora, steep gravelly slope with open cushion phrygana below saddle of Saos ridge, 1100 m, 40°27'60"N, 25°34'28"E, 03.07.2011, *Biel* 11.320.

In shrubby places on the drier parts of Mt Fengari, probably a local endemic. It was first collected on Fengari by Ignatius Dörfler on 27 June 1890 and re-collected by Rechinger on 18 June 1936 (Mt Fengari, on siliceous substrate, *Rechinger* 9845, LD). It differs from *Stachys leucoglossa* subsp. *leucoglossa* [in Griseb., Spic. Fl. Rumel. 2 (4): 140, July 1844] from mainland

NE Greece, Bulgaria and other parts of the C Balkans, by its lower stature which is maintained in cultivation (4.5–6 cm tall, not 10–50 cm), consistently few-flowered verticillasters (usually 1–2, not 4–6), shorter calyx (3.5–6 mm long, not 6–9 mm) and corolla (8–13 mm long, not 16–18 mm).

Cited vouchers are provisionally kept in the private herbarium of B. Biel at Höchberg (herb. Biel). We thank Dr Birgit Gemeinholzer (Giessen), for kindly identifying or confirming the identity of our *Crepis* specimens.



Fig. 3. *Stachys leucoglossa* subsp. *samothracica* (photo B. Biel).

Reports 25–27

Feruzan Dane & Sevil Tütüncü Konyar

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Primulaceae

25. *Lysimachia punctata* L.

Tu(E) A1(E) Edirne: Meriç, 20 m, 41°11'22"N, 26°25'30"E, 14.06.1992, coll. & det. H. Çetin (EDTU 5201).

A new record for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Kırklareli and A2(E) Istanbul (Leblebici 1978).

Solanaceae

26. *Datura innoxia* Mill.

Tu(E) A1(E) Edirne: Center, in waste places, at roadsides, 26 m, 41°40'28"N; 26°33'39"E, 15.09.2006, coll. & det. F. Dane (EDTU 10334).

This is a new record for European Turkey, with the specimen collected from Edirne. So far the species has been known from Anatolia (B1 Izmir, C5 Adana and C6 Hatay) (Baytop 1978). Not previously recorded in European Turkey (Moore 1972). Locally naturalized in waste places. This species is native to Central America.

Liliaceae s.l.

27. *Smilax excelsa* L.

Tu(E) A1(E) Edirne: Centre, the Balkan Campus of Trakya University, around the Faculty of Medicine, 99 m, 41°31'00"N, 26°38'60"E, 07.03.1994, coll. G. Dalgıç (EDTU 2145).
— A1(E) Kırklareli: Vize Panayır catwalk-fountain kephale, 194 m, 41°43'54"N, 27°13'29"E, 30.08.1989, coll. & det. F. Dane (EDTU 3942); Demirköy–İğneada, Kocagöl, in riparian forest, 0 m, 41°52'28"N, 27°59'20"E, 17.09.1990, coll. & det. C. Yarcı (EDTU 5326).

A new record for A1(E) Edirne and A1(E) Kırklareli in European Turkey. So far the species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Davis 1984).

Reports 28–29

Feruzan Dane, Sevil Tütüncü Konyar & Güler Dalgıç

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Caprifoliaceae

28. *Sambucus ebulus* L.

Tu(E) A1(E) Edirne: Centre, Tayakadın village, 53 m, 41°27'40"N, 26°37'16"E, 07.06.1989, coll. & det. F. Dane (EDTU 3275).

New to A1(E) Edirne in European Turkey. So far the species has been known from A2(E) Istanbul and A1(E) Kırklareli (Chamberlain 1972).

Crassulaceae**29. *Sedum sartorianum* Boiss. (*Sedum urvillei* DC.)**

Tu(E) A1(E) Edirne: Centre, Bahçedere–Ismailçe village, 99 m 41°31'00"N, 26°38'60"E, 10.06.1993, coll. G. Dalgıç, det. K. Alpınar (EDTU 845); Keşan, Mecidiye Askeri kampı, 61 m, 40°38'20"N, 26°32'14"E, 08.05.1993, coll. G. Dalgıç, det. K. Alpınar (EDTU 5647).

New to A1(E) Edirne in European Turkey. So far the species has been known from A2(E) Istanbul (Chamberlain 1972).

Reports 30–33**Feruzan Dane, Sevil Tütüncü Konyar & Bediha Köse**

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Linaceae**30. *Linum hirsutum* subsp. *byzantinum* Azn.**

Tu(E) A1(E) Edirne: Keşan, Mecidiye forest, 61 m, 40°38'20"N, 26°32'14"E, 05.06.1994, coll. & det. G. Dalgıç (EDTU 2019); Keşan, Paddy village exit forest, 108 m, 40°51'21"N, 26°37'49"E, 04.06.1995, coll. G. Dalgıç (EDTU 5941).

A new record for A1(E) Edirne in European Turkey, with the specimens collected from Keşan. So far the species has been known from A2(E) Istanbul (Davis 1967).

31. *Linum nodiflorum* L.

Tu(E) A1(E) Edirne: Uzunköprü, Değirmenci Dam, 7 m, 41°16'10"N, 26°41'10"E, 11.06.1987, coll. H. Arda, det. A. Baytop (EDTU 1278); Keşan, Mecidiye Mercan lake, at roadsides, 61 m, 40°38'20"N, 26°32'14"E, 11.06.1987, coll. F. Dane & al., det. G. Dalgıç (EDTU 1302).

A new record for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Çanakkale and A2(E) Istanbul (Davis 1967).

32. *Linum trigynum* L.

Tu(E) A1(E) Edirne: Keşan, around lake Mercan, 108 m, 40°51'21"N, 26°37'49"E, 11.06.1987, coll. F. Dane, G. Dalgıç & N. Başak (EDTU 1295).
— A1(E) Kırklareli: Centre, 11 km from Değirmencik to Kavaklı meadow, 194 m, 41°43'54"N, 27°13'29"E, 06.07.1987, coll. H. Arda & N. Polat, det. A. Baytop (EDTU 1632).

A new record for A1(E) Edirne and A1(E) Kırklareli in

European Turkey. So far the species has been known A2(E) Istanbul (Davis 1967).

33. *Linum usitatissimum* L.

Tu(E) A1(E) Edirne: Keşan – Mecidiye coast, 61 m, 40°38'20"N, 26°32'14"E, 10.08.1988, coll. & det. G. Dalgıç (EDTU 2563).

A new record for A1(E) Edirne in European Turkey. So far the species has been known A2(E) Istanbul and A1(E) Çanakkale (Davis 1967).

Reports 34–65**Dimitar Dimitrov¹ & Eli Kachaunova²**

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Equisetaceae**34. *Equisetum fluviatile* L.**

Bu Danubian Plain: before Dabovan village, Gulyantsi district, in sandy places, in a farm field, LJ04, 22.05.2010, coll. D. Dimitrov (SOM 165 891).

A new locality of this species, known so far from Sofia Region, Znepole Region, Vitosha Region, Rila Mts and Rhodopi Mts (*Western, Central*) (Andreev 1992).

Apiaceae**35. *Bupleurum affine* Sadler**

Bu Balkan Range (*Eastern*), above Byala village, Sliven district, MH33, 03.08.2010, coll. D. Dimitrov (SO 106 336).

Asteraceae**36. *Centaurea epapposa* Velen.**

Bu Balkan Range (*Eastern*): above Byala village, Sliven district, MH33, 03.08.2010, coll. D. Dimitrov (SO 106 371).

According to Peev (1992), it does not occur in Bulgaria. Stojanov & al. (1967) treated the species as a form of *Centaurea splendens* subsp. *splendens* f. *epapposa* (Velen.) Stoj. & Acht.

37. *Erigeron annuus* (L.) Pers.

Bu Mt Strandzha: Kovach locality – on the right bank of river Veleka, under the new bridge, NG36, 11.07.2012, coll. D. Dimitrov (SOM 168896).

38. *Hieracium caespitosum* Dumort. subsp. *caespitosum*

Bu Balkan Range (*Eastern*): above Byala village, Sliven district, MH33, 03.08.2010, coll. *D. Dimitrov* (SOM 165 974).

— Thracian Lowland: eastwards from Stara Zagora town – at the Thracian tombs in Orta Bozalak locality, LG89, 25.05.2012, coll. *D. Dimitrov* (SOM 169270).

New for these floristic regions.

39. *Taraxacum megalorrhizon* (Forssk.) Hand-Mazz.

Bu Balkan Range (*Eastern*): above Byala village, Sliven district, MH33, 08.06.2010, coll. *D. Dimitrov* (SOM 165 986).

40. *Tragopogon crocifolius* L.

Bu Forebalkan (*Western*): above Kameno Pole village, Mezdra district, GN38, 22.05.2010, coll. *D. Dimitrov* (SOM 165 986).

A new locality of this Mediterranean element.

Caryophyllaceae

41. *Cerastium bulgaricum* Ueotr.

Bu Balkan Range (*Eastern*): southwards and above Byala village, Sliven district, on terrain of calcareous rocks, 900 m, MH33, 08.06.2010, coll. *D. Dimitrov* (SOM 165 973).

New for this floristic region (Petrova 1992).

42. *Cerastium pumilum* subsp. *pallens* (F.W. Schultz) Schinz & Thell.

Bu Forebalkan (*Western*): east of Tsakonitsa village, Mezdra district, GN29, 21.05.2010, coll. *D. Dimitrov* (SOM 165 903).

So far the subspecies has not been reported for this floristic region (Petrova 1992).

43. *Cerastium petricola* Pančić

Bu Forebalkan (*Western*): Kameno Pole village, Mezdra district, in calcareous grassy places, GN38, 22.05.2010, coll. *D. Dimitrov* (SO 106 386).

— Thracian Lowland: eastwards from Stara Zagora town – at the Thracian tombs in the Orta Bozalak locality, LG89, 25.05.2012, coll. *D. Dimitrov* (SOM 169262).

— Mt Strandzha: eastwards from Zvezdets village, on the road to Petrova Niva locality, NG36, 13.07.2012, coll. *D. Dimitrov* (SOM 16889).

New localities for this Balkan endemic.

44. *Dianthus gracilis* Sm.

Bu Mt Strandzha: westwards from Zvezdets village

in the Teketo locality, NG36, 11.07.2012, coll. *D. Dimitrov* (SOM 168884).

Cuscutaceae

45. *Cuscuta approximata* Bab.

Bu Mt Strandzha: southeastwards from Zvezdets village, NG36, 11.07.2012, coll. *D. Dimitrov* (SOM 168872).

Fabaceae

46. *Trifolium medium* subsp. *balcanicum* Velen.

Bu Forebalkan (*Western*): above Kameno Pole village, Mezdra district, in a calcareous grassy terrain, GN38, 22.05.2010, coll. *D. Dimitrov* (SOM 165 906).

New taxon for this floristic region.

47. *Trifolium scabrum* subsp. *turcicum* Velen.

Bu Balkan Range (*Western*): below Zasele village, Svoje Municipality, FN96, 05.08.2011, coll. *D. Dimitrov* (SOM 169 252).

48. *Trifolium striatum* subsp. *tenuiflorum* (Ten.) Kozuharov

Bu Balkan Range (*Eastern*): Mt Kotlemska Planina, Chernookovo village, Varbitsa Municipality, 01.06.2009, coll. *D. Dimitrov* (SOM 169265).

Geraniaceae

49. *Geranium brutium* Gasp.

Bu Balkan Range (*Eastern*): above Byala village, Sliven district, MH33, 08.06.2010, coll. *D. Dimitrov* (SOM 165 963).

Oleaceae

50. *Fraxinus oxycarpa* M. Bieb.

Bu Mt Strandzha: westwards from Zvezdets village, NG36, 12.07.2012, coll. *D. Dimitrov* (SOM 168866).

Orobanchaceae

51. *Orobanche caryophyllacea* Sm.

Bu Forebalkan (*Western*): above Kunino village, Roman district, GN48, 08.10.2010, coll. *D. Dimitrov* (SO 106 395).

52. *Orobanche reticulata* Wall.

Bu Forebalkan (*Western*): between Tsakonitsa and Kameno Pole villages, Mezdra district, GN29, 22.05.2010, coll. *D. Dimitrov* (SO 106 394).

Ranunculaceae

53. *Pulsatilla montana* (Hoppe) Rchb.

Bu Pirin Mts (*Northen*): between calcareous rocks, above Ilindenci village, Strumyani district,

1600 m, FM81, 04.10.2012, coll. *D. Dimitrov* (SOM 169 122).

Rosaceae

54. *Rosa pumila* Jacq.

Bu Balkan Range (*Eastern*): southwards and above Byala village, Sliven district, MH33, 08.06.2010, coll. *D. Dimitrov* (SOM 165 958).

Scrophulariaceae

55. *Euphrasia liburnica* Wettst.

Bu Balkan Range (*Eastern*): above Byala village, Sliven district, MH33, 03.06.2010, coll. *D. Dimitrov* (SO 106 230, SOM 165 971).

A new locality for this species so far known from the Balkan Range (*Central*), Sofia region, Belasitsa, Pirin and Rhodopi Mts (*Western*), and the Tundzha Hilly Country (Andreev 1995).

56. *Verbascum niveum* Ten.

Bu Balkan Range (*Eastern*): above Byala village, Sliven district, 1000 m, MH33, 03.08.2010, coll. *D. Dimitrov* (SO 106 309).

Cyperaceae

57. *Carex hostiana* DC.

Bu Mt Strandzha: westwards from Zvezdets village, Teketo locality, NG36, 11.07.2012, coll. *D. Dimitrov* (SOM 168 875).

Juncaceae

58. *Juncus gerardii* Loisel.

Bu Mt Strandzha: southeastwards from Zvezdets village, close to a cow farm, NG36, 11.07.2012, coll. *D. Dimitrov* (SOM 168 874).

Poaceae

59. *Bromus riparius* Rehmman

Bu Pirin Mts (*Northern*): above a limestone quarry, above Ilindentsi village, Sadanski district, 1500 m, FM81, 04.10.2012, coll. *D. Dimitrov* (SO 107 477).

60. *Festuca gigantea* (L.) Vill.

Bu Forebalkan (*Eastern*): at Zlatna Panega Karst Spring, KH67, 13.09.2010, coll. *D. Dimitrov* (SO 106 312).

61. *Festuca spectabilis* subsp. *affinis* (Boiss. & Heldr. ex Hack.) Hack

Bu Balkan Range (*Eastern*): southwards and above Byala village, Sliven district, MH33, 08.06.2010, coll. *D. Dimitrov* (SOM 165 950, 165 951).

— Mt Strandzha: in the swamp westwards of Zvezdets village, NG36, 12.07.2012, coll. *D. Dimitrov* (SOM 168 861).

62. *Koeleria nitidula* Velen.

Bu Forebalkan (*Western*): between Tsakonitsa and Kameno Pole villages, Mezdra district, in calcareous grassy places, GN29, 22.05.2010, coll. *D. Dimitrov* (SO 106 383, SOM 165 900).

— Balkan Range (*Western*): Zasele village, Svoge district, in calcareous rocky places, FN96, 05.08.2011, coll. *D. Dimitrov* (SOM 169 259).

— Mt Strandzha: Dokuzak locality, on steep calcareous rocks, MG45, 12.07.2012, coll. *D. Dimitrov* (SO 107 478).

New for these floristic regions.

63. *Poa angustifolia* L.

Bu Thracian Lowland: eastwards from Stara Zagora town – at the Thracian tombs in the Orta Bozalak locality, LG89, 25.05.2012, coll. *D. Dimitrov* (SOM 169 260).

64. *Poa molinerii* Balb.

Bu Pirin Mts (*Northern*): in the Mura marble quarry, above Ilindentsi village, 1600 m, FM81, 04.10.2012, coll. *D. Dimitrov* (SOM 169 117).

65. *Vulpia ciliata* Dumort.

Bu Danubian Plain, southwards of Dabovan village, Gulyantsi district, in sandy places, LJ04, 24.05.2010, coll. *D. Dimitrov* (SO 106 382).

Reports 66–67

Vladan Djordjević, Snežana Vukojičić & Vladimir Stevanović

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Lycopodiaceae

66. *Lycopodium clavatum* L. (Fig. 4)

Sr Northwest Serbia: Mt Jablanik, Arsići village, in meadow surrounded by a beech forest, ca. 800 m, CP99, 01.07.1995, coll. *V. Djordjević* (BEOU 16661); Mt Medvednik, CP99, *V. Jovanović*, pers. comm.; Mt Boranja, Zmajevac, CQ61, 03.04.2010, coll. *Dj. Vasiljević* (BEOU 16665).
— West Serbia: Ivanjica, Mt Crvena Gora (near the road to Sivčina village), in a beech forest,

ca. 900 m, DP32, 22.06.2011, coll. S. Vukojičić (BEOU 32883).

- Northeast Serbia: Bor (Mt Crni Vrh), EP99, 10.12.2007, coll. D. Ristev (BEOU 16662); Majdanpek, EQ71, 01.07.1853, coll. J. Pančić (BEOU 6).
- Central Serbia: Mt Kopaonik, river Samokovska, in a spruce forest, DN89, coll. V. Mišić, M. Popović (BEOU 16670).

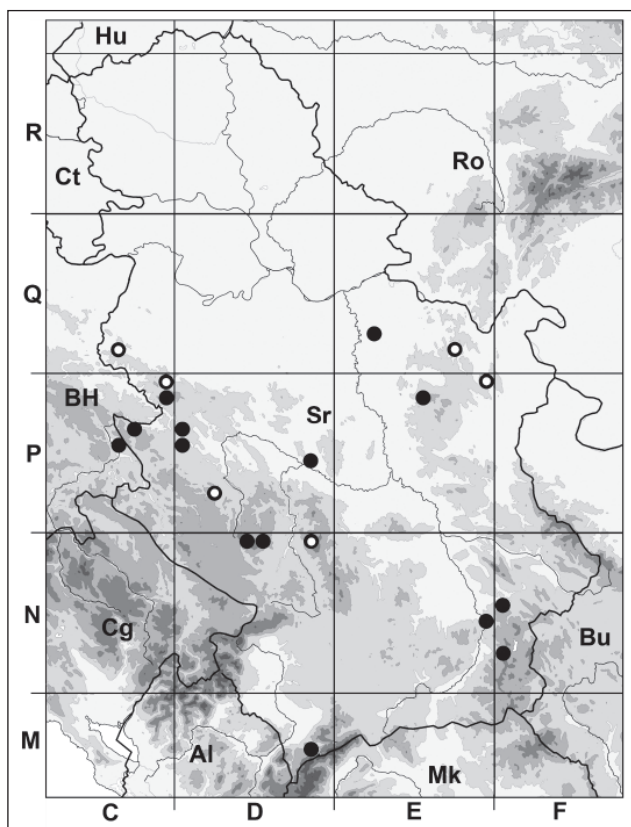


Fig. 4. Distribution of *Lycopodium clavatum* in Serbia (○ – new floristic records, ● – literature data).

The localities in NW Serbia (Mts Boranja, Jablanik and Medvednik) represent the northernmost points of the species' distribution in the Dinaric part of Serbia.

This Circumboreal species in Serbia has been known so far from NE Serbia: Požarevac – Petrovac (Vukićević 1992), Mt Beljanica (Jovanović & al. 2005); NW Serbia: Mt Povlen (Debelo Brdo) (Vukićević 1992); W Serbia: Užice (Marin Brijeg, Jelova Gora), Mt Tara (Dobro polje, Zaovine, Lazići) (Vukićević 1992); SW Serbia: Mt Golija (Vukićević 1992); SE Serbia: Vlasina (Randjelović & al. 2010), Mt Ostrožub (Gigov & Nikolić 1954), Predejanska river (Tričković 2001); Kosovo (Mt Šar planina, Kobilica: Carevo Gumno) (Duraki 2009).

Pyrolaceae

67. *Pyrola rotundifolia* L. subsp. *rotundifolia* (Fig. 5)

Sr Northwest Serbia: Mt Maljen, Divčibare (church), in a *Pinus sylvestris* forest with *Pinus sylvestris*, *Sorbus aucuparia*, *Populus tremula*, *Quercus petraea*, *Danae cornubiensis*, *Rubus hirtus*, *Fragaria vesca*, *Silene vulgaris*, *Sanguisorba officinalis*, *Deschampsia caespitosa*, *Bromus erectus*, *Platanthera bifolia* etc., serpentine, 970 m, DP18, 04.07.2004, coll. V. Djordjević (BEOU 16663).

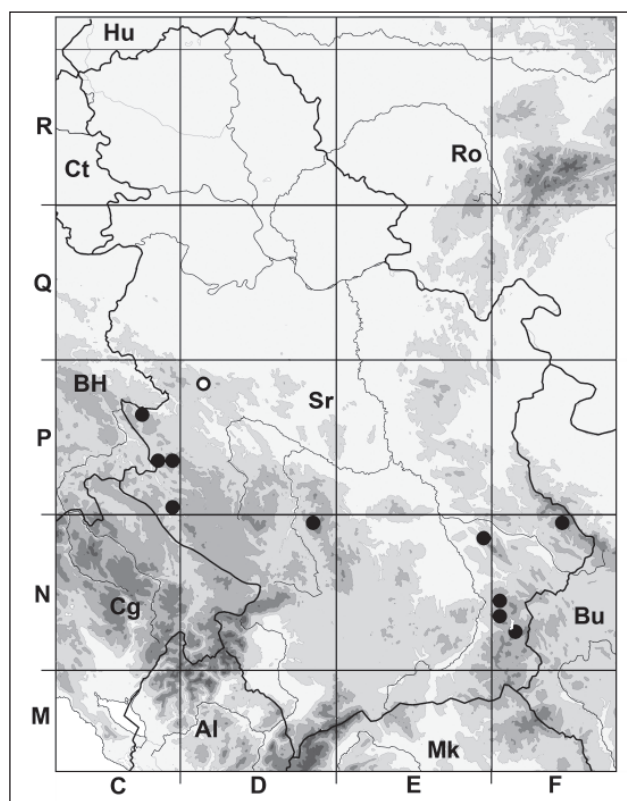


Fig. 5. Distribution of *Pyrola rotundifolia* subsp. *rotundifolia* in Serbia (○ – new floristic records, ● – literature data).

The locality on Mt Maljen represents the northernmost limit of the species' distribution in Serbia. The observed population of *P. rotundifolia* on Mt Maljen numbers ca. 10 specimens.

This species is a rare representative of the Circumboreal flora in Serbia, where it has been reported from W Serbia: Mt Zlatibor (Tornik, Liska) (Urošević 1949); SW Serbia: the canyon of river Mileševka (Ostojić & Zlatković 2010); C Serbia: Mt Kopaonik (Gajić & al. 1991); E Serbia: Mt Suva Planina (Randjelović & al. 2000); Mt Stara Planina (Vrtibog, Krvave Bare) (Adamović 1910); SE Serbia: Vlasina, Čemernik (Cvetkova Reka) (Randjelović & Zlatković 2010); Mt Ostrožub (Nikolić & al. 1986).

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Reports 68–76

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Amaranthaceae

68. *Amaranthus palmeri* S. Watson

Gr Nomos Chanion, Eparchia Kissamou: Kaloudiana 4 km SE of Kissamos, 35°29'11"N, 23°41'16"E, 17 m, ruderal site in centre of village, 04.11.2009, *Meierott* 09-420 (M).

New for Crete. Recorded as new for Greece by Raus & Raabe (2006) from Sterea Ellas and Poloponnese.

Asteraceae

69. *Hieracium alpicola* subsp. *petraeum* Nägeli & Peter

Gr Nomos Ioanninon/Kastorias, Eparchia Kastorias/Konitsis: Gramos, eastern slope of Tsouka Petsik, 40°20'49"N, 20°46'52"E, 2450 m, on stony soil, 04.08.2009, *Gregor & Meierott* GR-09-326, det. *G. Gottschlich* (M).

New for Northern Pindhos, in Strid & Tan (1991) only mentioned from North Central Greece.

70. *Hieracium sartorianum* Boiss. & Heldr.

Gr Nomos Ioanninon/Kastorias, Eparchia Kastorias/Konitsis: Gramos, on the ridge 0.5 km W-NW of Perifano, 40°20'18"N, 20°48'35"E, 2312 m, rock ledge and scree, 04.08.2009, *Gregor & Meierott* GR-09-309, det. *G. Gottschlich* (M, herb. Gottschlich 54187).

New for Gramos.

71. *Hieracium sericophyllum* Nejčeff & Zahn

Gr Nomos Ioanninon/Kastorias, Eparchia Kastorias/Konitsis: Gramos, rocky ridge 0.5 km W of Perifanos 40°20'18"N 20°48'35"E, 2312 m, rocks and crevices, 04.08.2009, *Gregor & Meierott* GR-09-297, det. *G. Gottschlich* (M).

New for Gramos.

Euphorbiaceae

72. *Euphorbia hypericifolia* L. (syn. *Chamaesyce hypericifolia* (L.) Millsp.)

Gr Crete, Nomos Lasithi, Agios Nikolaos, roadside and plant beds near the harbour, 08.11.2009, *Meierott* 09/460, conf. *H.-J. Esser* (M).

Introduced and possibly established, new for Crete. It was listed for AE(G) in the Euro+Med PlantBase (<http://www.emplantbase.org/home.html>).

Plantaginaceae

73. *Callitriche palustris* L.

Gr Nomos Ioanninon/Kastorias, Eparchia Kastorias/Konitsis: 0.5 km SE of Gramos peak, 40°20'43"N 20°47'01"E, 2338 m, temporary pool, 04.08.2009 *Gregor* 5757, conf. *T. Raus* (FR).

New for Gramos. Recorded by Sarika-Hatzinikolaou & al. (1996), as new for Northern Pindos.

Scrophulariaceae

74. *Macrosyringion glutinosum* (M. Bieb.) Rothm. [Syn.: *Odontites glutinosa* (M. Bieb.) Bentham]

Gr Nomos Ioanninon, Eparchia Dodonis: Timfi, SE flank of Astraka massif, 39°57'44"N, 20°46'55"E, 2260 m, calcareous ground, 31.07.2009, *Gregor* 5639 & *Meierott* GR-09-228 (FR, M).

New for Mt Timfi. Strid & Tan (1991) list it from Peloponnisos, Bergmeier & Matthäs (1995) from Crete and Lafranchis & Sfikas (2009) mention it from Mt Voio (Northern Pindos).

Juncaceae

75. *Juncus bufonius* L.

Gr Nomos Pellis, Eparchia Almopias: Kaimakčalan, near road to ski centre 40°54'03"N, 21°49'24"E, 1884 m, roadside ditch, 07.08.2009, *Gregor* 5857 & *Meierott* (FR).

New for Voras (Kaimakčalan). In Strid & Tan (1991) not mentioned for mountain areas. However, Hagemann & al. 1731 (cited in a list of collections made in 1983) represents the taxon from Mt Pierias, and Chochliouros & Georgiadis (1997) recorded it from Mt Vermio.

76. *Juncus capitatus* Weigel

Gr Nomos Pellis, Eparchia Almopias: Kaimakčalan, small valley 4.2 km SE of summit, 40°53'58"N, 21°48'50"E, 1884 m, between rocks, 08.08.2009, *Gregor* 5883 & *Meierott*, conf. *T. Raus* (FR).

New for North Central.

Acknowledgements. For determination of vascular plants we thank Hans-Joachim Esser, Günter Gottschlich and Thomas Raus.

Reports 77–78

Daniella Ivanova, Rayna Natcheva & Stoyan Stoyanov

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Lycopodiaceae

77. *Lycopodiella inundata* (L.) Holub (Fig. 6)

Bu Znepole Region: in a spring fen at the ridge of Mt Milevska above Velimirovtsi neighbourhood of Metohia village, Treklyano district, near the Bulgarian-Serbian border, at ca. 1620 m, 42.62646°N, 22.46108°E, 20.09.2012, coll. S. Stoyanov, det. D. Ivanova & S. Stoyanov (SOM 168960); *loc. cit.*, 16.07.2013, D. Ivanova, R. Nacheva & S. Stoyanov, obs.

A new species to the Znepole Region.



Fig. 6. *Lycopodiella inundata* (photo D. Ivanova).

Lycopodiella inundata is one of the rarest plants in Bulgaria. It is included in the Biological Diversity Act of Bulgaria, as well as in the Red List of the Bulgarian Vascular Plants and the Red Book of the Republic of Bulgaria as Critically Endangered at a national level (Ivanova 2009, 2012).

Historically, *Lycopodiella inundata* has been known from one locality in the Rila Mts and several localities in the Central Rodopi Mts. There is a tendency of reduction in the number of its populations, as well as in their numbers and area of occupancy in the last years, due to habitat deterioration. The major reasons are drainage of the suitable wetlands as a result of natural processes or human activities. At present, only two populations of the species have survived in the Central Rodopi Mts.

The new locality in the Znepole Region is far away from the other Bulgarian populations. The mire is relatively small, just ca. 0.5 dka. There are large hummocks of *Sphagnum capillifolium* and small areas of open shallow water and stony bottom (Fig. 7). The Marsh Clubmoss is a weak competitor and grows in bare or disturbed micro-habitats. It forms several groups, mainly at the periphery of *Sphagnum* hummocks where there is some competition-free space. Some individuals grew directly in the water, which perhaps will become even shallower or completely dry out in late summer.



Fig. 7. Habitat of *Lycopodiella inundata* (photo S. Stoyanov).

Lycopodiella inundata grows in habitat 7140 (Transition Mires and Quaking Bogs), together with *Sphagnum capillifolium*, *S. subsecundum*, *S. contortum*, *S. fallax*, *S. flexuosum*, *Polytrichum commune*, *Aulacomnium palustre*, *Warnstorfia exannulata*, *Deschampsia flexuosa*, *Agrostis capillaris*, *Festuca nigrescens*, *Carex nigra*, *Carex serotina*, *Bruckenthalia spiculifolia*, *Vaccinium myrtillus*, *Eriophorum latifolium*, *Drosera rotundifolia*, *Potentilla erecta*, *Nardus stricta*, *Deschampsia caespitosa*, *Succisa pratensis*, some *Molinia caerulea*, the fungus *Galerina paludosa*, as well as *Veratrum lobelianum* and *Epilobium angustifolium* at the edge of the mire.

The total area of the groups of *L. inundata* is small (<10 m²) but it is represented by numerous individuals and presently the population looks healthy. Considering the high conservation value of the species, the small size of the population, and the small size of the habitat, it is advisable to put the site under monitoring. The habitat is seriously threatened by fires. We have observed traces of last-year intensive fire that has damaged considerably the *Sphagnum* hummocks at the periphery of the mire.

The pastures along the ridge of the mountain are grazed by cattle who visit the mire for water. On the one hand, they trample some of the individuals of *L. inundata*, but on the other, they help create small bare patches needed for the species' establishment.

Lycopodiella inundata is one of the target species in an ongoing Life+ project (Life 08/NAT/BG/00279) that aims at the establishment of a national network of small protected sites for conservation of endangered species. In order to preserve the species' population, the new locality in Mt Milevska should be declared a protected site and a proposal for its establishment is forthcoming.

Droseraceae

78. *Drosera rotundifolia* L. (Fig. 8)

Bu Znepole Region: in a spring fen at the ridge of Mt Milevska above Velimirovtsi neighbourhood of Metohia village, Treklyano district, near the Bulgarian-Serbian border, ca. 1620 m, 42.62646°N, 22.46108°E, 20.09.2012, coll. S. Stoyanov (SOM 168961); *loc. cit.*, together with *Lycopodiella inundata*, 16.07.2013, D. Ivanova, R. Nacheva & S. Stoyanov, obs.; *ibid.*, ca. 1620 m, 42.62772°N, 22.46035°E, very few individuals; *ibid.*, ca. 1620 m, 42.62804°N, 22.46121°E; *ibid.*, ca. 1620 m, 42.62988°N, 22.46155°E; *ibid.*, ca. 1600 m, 42.62374°N, 22.46279°E; near the ridge of Mt Milevska SW of Pobit Kamak village, 1470 m, 42.58305°N, 22.44327°E.

A new species to the Znepole Region.



Fig. 8. *Drosera rotundifolia* (photo D. Ivanova).

Drosera rotundifolia is known from the Balkan Range (*Western, Central*), Vitosha Region, Rila Mts, Mt Sredna Gora (*Western*), and Rhodopi Mts (*Western,*

Central). The first records for its distribution are given respectively by Pančić (1883) for the Balkan Range (*Western*) and Mt Vitosha, by Gussev & al. (2000) and Evstatieva & Vitkova (2000) for the Balkan Range (*Central*), by Georgiev (1906) and Urumov (1917) for the Rila Mts, by Urumov (1904) and Stojanov & Achtarov (1951) for Mt Sredna Gora (*Western*), by Širjaev (1928) for the Rhodopi Mts (*Western*), and by Jordanoff (1939-1940) for the Rhodopi Mts (*Central*).

The species has been evaluated as Vulnerable at a national level (Vitkova 2009). In most localities in Mt Milevska, *D. rotundifolia* is represented by numerous individuals and looked in a good state.

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Apiaceae

79. *Eryngium amethystinum* L. (Fig. 9)

Sr Southwest Serbia: Pester Plateau – Crvsko village, in limestone pastures (*Festucion vallesiaceae*) on the Pavlica hill, ca. 1050 m, DN17, 31.7.2008, coll./det. P. Lazarević & Z. Krivošej (BEOU 16292)

So far this species has been known in Serbia only from the surroundings of Ljubovija in Western Serbia (Nikolić 1973; Wörz 2006). Nikolić (1973) also reported it from Kikinda (Vojvodina Province) but that record is incorrect and probably refers to *E. planum*. Nowadays the existence of both *E. amethystinum* or *E. planum* is not confirmed in this locality (Anačkov, G. pers. comm.).

Eryngium amethystinum is a C and E Mediterranean species. The newly discovered locality is its second record from Serbia. The estimated population size is ca. 300 specimens, growing on a relatively restricted area of ca. 3 ha. The main threat for this population is its

overgrowing by forest and shrub vegetation, since traditional usage of this pastures has been declining. For this reason, *E. amethystinum* in the future should be considered a threatened and strictly protected species of the Serbian flora.

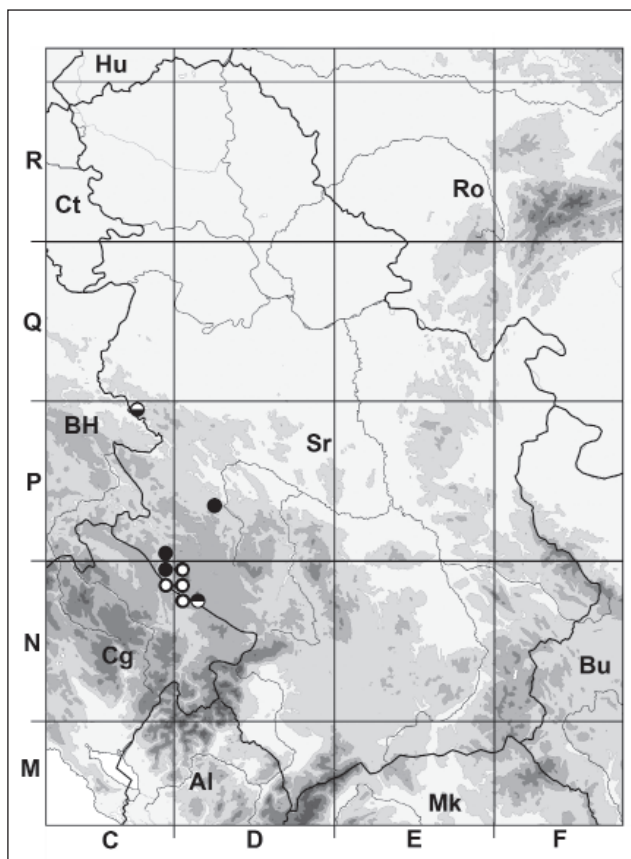


Fig. 9. Distribution of *Eryngium amethystinum* (○ – new floristic record, ● – literature data) and *Campanula secundiflora* (○ – new floristic record, ● – literature and herbarium data) in Serbia.

Asteraceae

80. *Achillea ageratifolia* subsp. *serbica* (Nyman)
Heimerl (Fig. 10)

Sr Southwest Serbia: on limestone cliffs in the gorge of river Lim, near the border of Montenegro, ca. 520 m, DN08, 16.10.2008, coll./det. P. Lazarević (BEOU 16320); Sopoćani Monastery: on limestone cliffs near Pazarište, ca. 600 m, DN57, 29.10.2008, coll./det. P. Lazarević (BEOU 16322); Tutin: on limestone cliffs in the gorge of river Godulja, DN45, 03.05.2008, coll./det. P. Lazarević & M. Lazarević (Herb. Inst. Natur. Conserv. Serb.); Mt Mokra Gora near Ribariće, on limestone cliffs of river Mojstirska Suhovara, ca. 950 m, DN55, 29.09.2010. coll./det. P. Lazarević (Herb. Inst. Natur. Cons. Serb.)

This Balkan endemic is considered as threatened and protected in Serbia. It is widespread on limestone cliffs and rocks in East and Southeast Serbia (Mt Beljanica, Mt Rtanj, Mt Suva Planina, Basara, Mt Tupižnica, Mt Svrlijske Planine, Mt Rudina, Jerma Gorge etc.), near Gnjilane on Kosmet and in several localities of the western part of Serbia: Mt Medvednik, Mt Tara, Mt Zlatibor, Sutjeska Gorge near Priboj, etc. (Tomovic 2007). Besides the mentioned new records, *A. serbica* was observed and photographed on the limestone cliffs and rocks in the Ibar Gorge, at the roadsides from village Ribariće to Mehov Krš (border with Montenegro). The new records complete its area in SW Serbia.

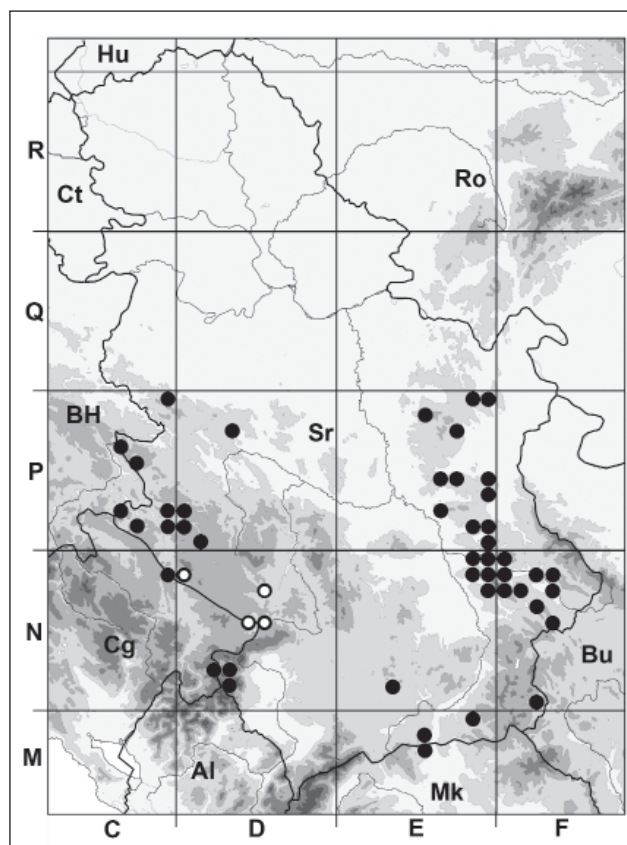


Fig. 10. Distribution of *Achillea ageratifolia* subsp. *serbica* in Serbia (○ – new floristic records, ● – literature and herbarium data).

81. *Reichardia macrophylla* Vis. & Pančić (Fig. 11).

Sr Southwest Serbia: Mt Jadovnik, on limestone scree in Žute Stene locality, 790 m, CN98, 19.07.2007, coll./det. P. Lazarević (BEOU 16221).
A Balkan endemic, spread sporadically in central and eastern part of the Dinaric Alps, from Herzegovina and Montenegro eastward to W Serbia. It is an endangered and protected species in Serbia. *Reichardia macrophylla* was recorded from Mt Mokra Gora (Ograđenica, the

gorge of river Beli Rzav, Pančić 1874, Lakušić 1999) and Mt Prokletije (around Peć and Rugovo Gorge) (Amidžić & Panjković 2003, Tomović 2007). The new record was taken between Mt Mokra Gora and Mt Prokletije and naturally connects the distribution of *R. macrophylla* to the Dinaric part of Serbia.

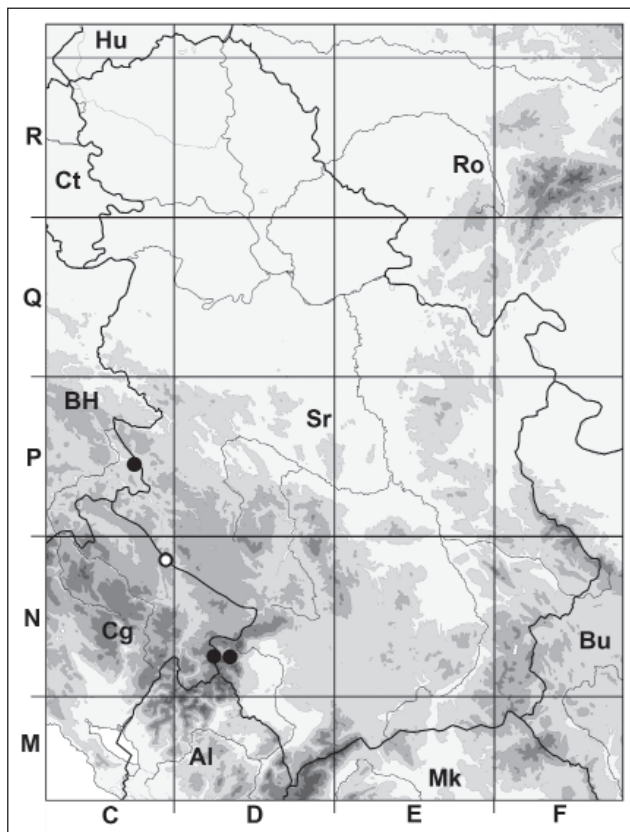


Fig. 11. Distribution of *Reichardia macrophylla* in Serbia (○ – new floristic records, ● – literature and herbarium data).

Campanulaceae

82. *Campanula secundiflora* Vis. & Pančić (Fig. 9)

Sr Southwest Serbia: Gostun, western side of the gorge of river Lim, on limestone cliffs, 520 m, CN98, 23.09.2003, coll./det. *P. Lazarević* (BEOU 16193); Mt Jadovnik: on the limestone cliffs of an unnamed gorge above Davidovica Monastery, 560 m, CN98, 17.07.2007, coll./det. *P. Lazarević* (BEOU 16190); Davidovica Monastery near Brodarevo: on the old tufa stone slabs of the monastery building, 540 m, CN98, 17.07.2007, coll./det. *P. Lazarević* (BEOU 16189); on limestone cliffs in Žute Stijene locality, 790 m, CN98, 19.07.2007, coll./det. *P. Lazarević* (BEOU 16191); Stene – on top of Mt Jadovnik, 1570 m, DN09, 19.07.2007, coll./det. *P. Lazarević* (BEOU 16192); Gostun: on cliffs in the Lim Gorge near the border with Montenegro, DN08, 16.10.2008,

coll. *P. Lazarević* & *B. Petrović*, det. *P. Lazarević* (BEOU 16317); on limestone cliffs above Kumanica Monastery, DN07, 16.10.2008, coll. *P. Lazarević* & *B. Petrović*, det. *P. Lazarević* (BEOU 16318); Mt Ozren: on shaded limestone cliffs of Dubočica Gorge, 550 m, DN08, 18.07.2007, coll./det. *P. Lazarević* (BEOU 16193); Mt Kamena Gora: on limestone rocks of Mačkovića, ca. 1000 m, CN99, 22.05.2008, coll./det. *P. Lazarević* (Herb. Inst. Natur. Cons. Serb.).

Campanula secundiflora is a local E Illyrian endemic. It was recorded with certainty only from three localities: gorge of river Panjica near Ivanjica (*locus classicus*), gorge of river Lim (near Brodarevo) and gorge of river Mileševka (Stevanović 1982). The set of new records confirms that *C. secundiflora* is well represented in the Lim Gorge and the surrounding area with numerous small populations, at altitude from 500 m to 1570 m. Besides the new records, the species was observed without collecting in many micro localities from Prijepolje to the border with Montenegro. It is a threatened and strictly protected species in Serbia.

Euphorbiaceae

83. *Euphorbia montenegrina* (Bald.) Rohlena (Fig. 12)

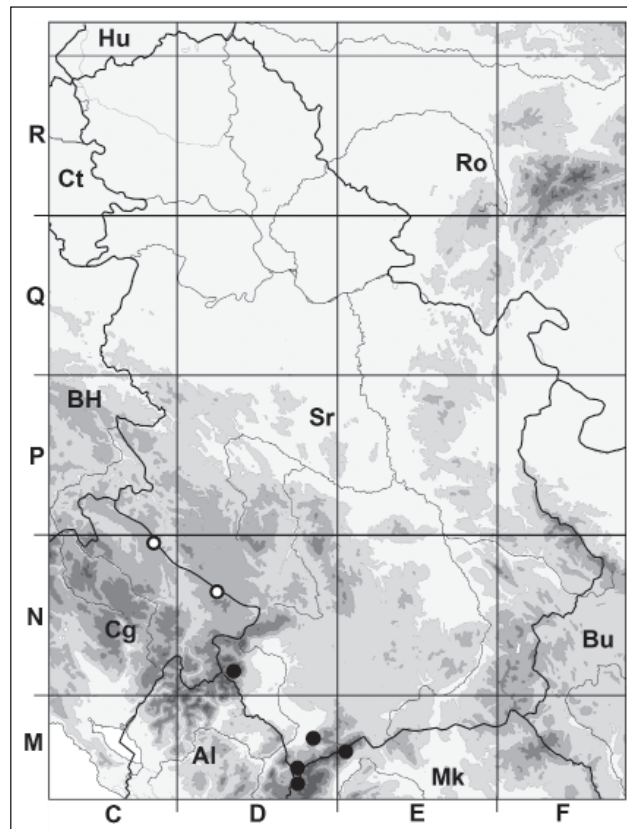


Fig. 12. Distribution of *Euphorbia montenegrina* in Serbia (○ – new floristic records, ● – literature and herbarium data).

Sr Southwest Serbia: Pester Plateau – southwestern border of the Plateau, in limestone pastures, ca. 1250 m, DN26, 20.06.2006, coll./det. *P. Lazarević* (BEOU 16216); Mt Kamena Gora: along forest trail near Guvnište village (*Piceetum excelsae*), ca. 1300 m, CN89, 15.08.2008, coll./det. *P. Lazarević* (BEOU 16329).

A Balkan endemic species from the SE Dinaric Alp and N Scardo-Pindic Mountain Chain in Serbia, Montenegro and Macedonia. In Serbia, *E. montenegrina* has status of Endangered and strictly protected species. So far it has been recorded from several localities on the territory of Kosmet Province: Mt Šar Planina (Durlav Potok, Ošljak, Šutman, Paštrik) and Mt Prokletije (Kurvala) (Tomović 2007). The new records represent the northernmost point of the species distribution in Serbia. In both newly discovered localities in Serbia, only few individuals of *E. montenegrina* were found.

84. *Euphorbia subhastata* Vis. & Pančić (Fig. 13)

Sr Southwest Serbia: Pester, Bistrice Gorge near Crvsko, on limestone rocks, ca. 950 m, DN17, 20.06.2005, coll./det. *P. Lazarević* (BEOU 16211); Tutin: in the gorge of rivulet Godulja, on limestone cliffs and screes, ca. 800 m, DN45, 25.05.2000, coll./det. *P. Lazarević* (BEOU 16218); Mt Jadovnik: on limestone rocks and screes of Žute Stijene, ca. 800 m, CN98, 26.09.2007, coll./det. *P. Lazarević* (BEOU 16219); Sopoćani Monastery: on limestone cliffs and screes from Pazarište to Tutin, ca. 600 m, DN57, 29.10.2008, coll./det. *P. Lazarević* (BEOU 16323); Kolovrat: in the gorge of rivulet Gračanica, on limestone rocks and screes, ca. 700 m, CN99, 17.08.2008, coll./det. *P. Lazarević* (Herb. Inst. Natur. Cons. Serb.); in river Lim Gorge: on limestone rocks of Mačkovica, ca. 1000 m, CN99, 22.05.2008, coll./det. *P. Lazarević* (Herb. Inst. Natur. Cons. Serb.).

This Illyrian endemic species is closely related to *E. agraria*, while some authors erroneously treat it as a synonym of *E. agraria* (*Fl. Europaea* 2). It is widespread in N Montenegro, E Bosnia and W Serbia, in more or less open limestone habitats. *Euphorbia subhastata* was recorded in Serbia from the following localities: Mt Giljeva Planina (Gorge of rivulet Trijebinska), Novi Pazar (Gradina), Prijepolje (Gorge of river Mileševka), Tutin area (Ribarići), Uvac Gorge, Mt Prokletije, Mt Jelica, Mt Tara (Vranjak, several localities), Mt Mokra

Gora (the gorge of river Beli Rzav, Ograđenica, Šargan), Ovčarsko-Kablarska gorge, and gorge of river Đetina (Tomović 2007). Besides the above-mentioned new records, *E. subhastata* was sporadically observed (without collecting any herbarium specimens) in several micro localities in the Lim Gorge from Prijepolje town to the border with Montenegro, and in the Ibar Gorge from Ribarići to Mehov Krš (border with Montenegro). The new records contributed to the knowledge of the distribution of *E. subhastata* in Serbia, showing at the same time that *E. subhastata* is widespread on limestone rocks, cliffs and screes across the whole Serbian part of the Dinaric Chain, from Mt Tara to Mt Prokletije.

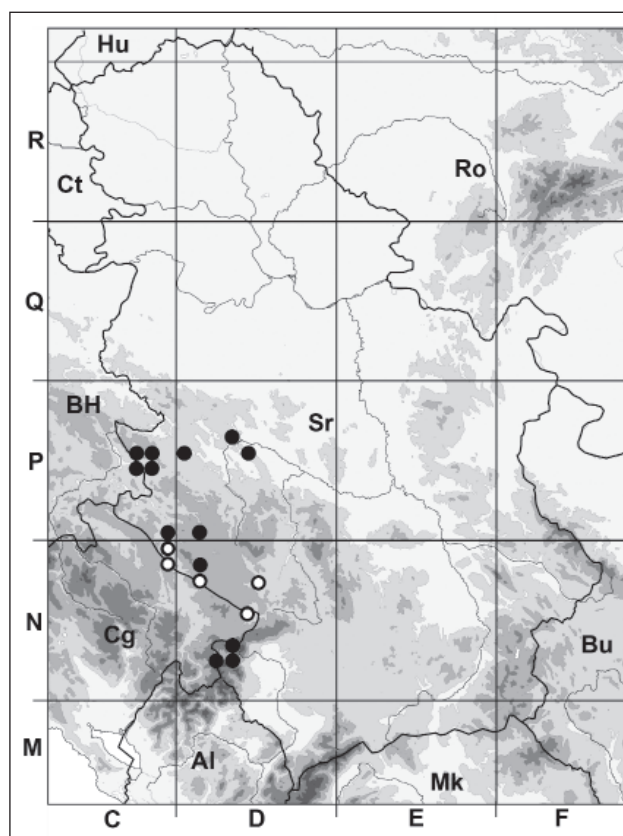


Fig. 13. Distribution of *Euphorbia subhastata* in Serbia (○ – new floristic records, ● – literature and herbarium data).

Liliaceae

85. *Lilium carniolicum* subsp. *albanicum* (Griseb.)

Hayek (Fig. 14)

Sr Southwest Serbia: Mt Jadovnik, in pastures of the Bakuša Plateau, 1380 m, DN09, 17.07.2007, coll./det. *P. Lazarević* (BEOU 16222); Mt Giljeva: in calcareous pastures of peak Jelenak, ca. 1600 m, DN18, 01.07.2008, coll./det. *P. Lazarević* & *Z. Krivošej* (BEOU 16313).

It is a Balkan endemic subspecies from the *L. carniolicum* complex. In Serbia, *L. c.* subsp. *albanicum* is a rare and protected species, distributed mainly in the mountains of Kosovo and Metohia (Mt Prokletije, Mt Šar Planina, Mt Paštrik) and sporadically in the mountains of W and SW Serbia (Mt Tara, Mt Mokra Gora, Mt Ozren, Mt Golija) (Tomović 2007). New records in the Pešter region expand the knowledge of its distribution in Serbia.

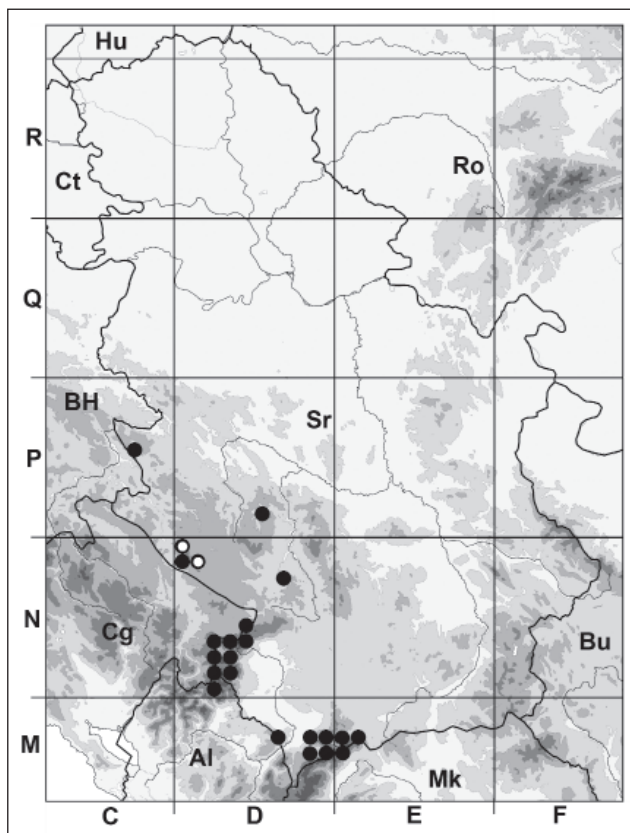


Fig. 14. Distribution of *Lilium carniolicum* subsp. *albanicum* in Serbia (○ – new floristic records, ● – literature and herbarium data)

86. *Goodyera repens* (L.) R. Br. (Fig. 15)

Sr Southwest Serbia: Dubočica Gorge near Gostun, on the mosses of a shaded limestone scree, ca. 550 m, DN08, 18.07.2007, coll./det. *P. Lazarević* (BEOU 16223).

Goodyera repens is a boreal relict and strictly protected species in Serbia. It was recorded from Mt Tara (Aluška Planina, Crvene Stene, Rastište), Mt Kopaonik (Metode), Mt Stara Planina, Mt Suva Planina (Rakoš) (Diklić 1976), and Mt Prokletije (Amidžić & Panjković 2003; Vukojičić, *S. pers. comm.*). The new record in Dubočica Gorge is represented by a very small population (3 plants seen), but it is expected to occur also in some other micro localities, in the limestone part of that mainly serpentine gorge.

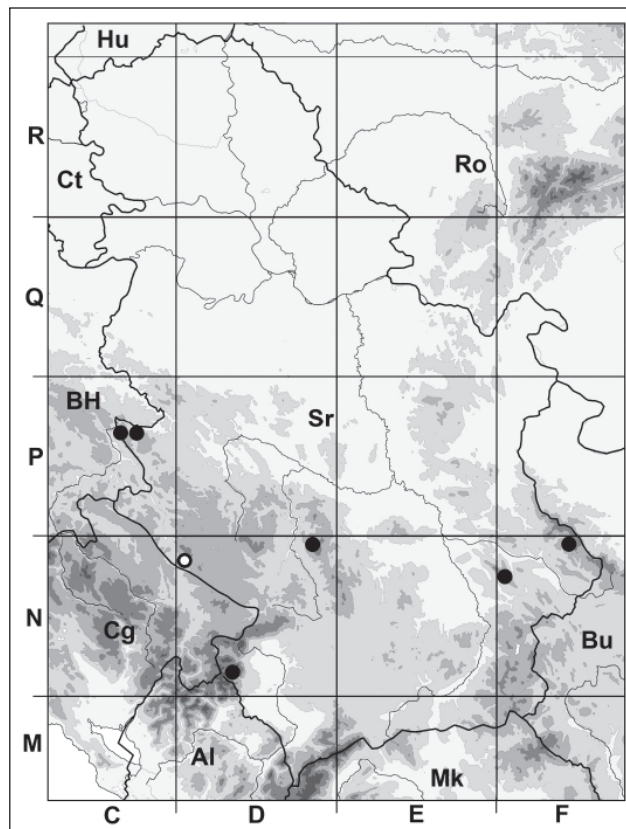


Fig. 15. Distribution of *Goodyera repens* in Serbia (○ – new floristic records, ● – literature and herbarium data).

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The issues of the alien species and biological invasion are presently very important (Lambdon & al. 2008, etc.). A review was completed recently for Bulgaria (Petrova & al. 2012a, b). Here are presented data on aliens found in different floristic regions in Bulgaria. If not otherwise stated, the taxon is a new one for the floristic region.

Cupressaceae

87. *Platycladus orientalis* (L.) Franco [syn. *Thuja orientalis* L.]

Bu Forebalkan (*Western*): on limestone rocks above Cherepishski Monastery, 43.09346°N;

23.61495°E, GN17, 05.08.2012, coll. A. Petrova, R. Vassilev & I. Gerasimova (SOM 169078).

This species is widely used as ornamental in Bulgaria, but the recent report by Vladimirov (2012, sub *Thuja orientalis* L.) is rather the first report of a naturalized population. According the DAISIE European Invasive Alien Species Gateway (<http://www.europe-aliens.org>), the species has been recorded as alien in some European countries, of which in France and Italy it is considered established. The population on the rocks above Cherepishki Monastery is a numerous one, with a large generative individual easily recognized as the eldest and many others of different sizes.

Asteraceae

88. *Helianthus tuberosus* L.

Bu Forebalkan (*Western*): in tall grass vegetation along river Chelyustinska, close to Chelyustnitsa village, FP61, 04.10.2012, coll. A. Petrova & D. Venkova (SOM 169054); observed also in a meadow south of Zheljazna village, FP50, near Chiprovtsi town, 02.10.2012.

Balsaminaceae

89. *Impatiens balfourii* Hook.f.

Bu Forebalkan (*Western*): Belimel village, on a street along the river, FP61, 03.10.2012, coll. I. Gerasimova & D. Venkova (SOM 169050), groups;

— Forebalkan (*Eastern*): Gabrovo, along river Yantra bed in the central town area, LH64, 09.2012, obs. D. Venkova, in small groups.

— Vitosha Region: on the east slopes of Mt Plana, near the inflow of river Palakaria into river Iskar, above Mechkata Villa Zone, 42.42199128°N, 23.5240752°E, GM19, 02.08.2012, coll. A. Petrova, R. Vasilev & D. Venkova (SOM 169049), a numerous population (Fig. 16).

This species is known as alien in many European countries, but for Bulgaria it was reported only recently (Adamowski 2009, Vladimirov 2012). Self-supporting populations have been observed since 2009 also in the capital city of Sofia – in garden containers in front of the Holy Trinity Romanian Orthodox Church, Knjaz Boris I-st St., and in Varna city – in flower beds in the Chaika district, near apartment blocks 62, 68.

Berberidaceae

90. *Mahonia aquifolium* (Pursh) Nutt.

Bu Forebalkan (*Western*): on limestone slopes

with dry grasslands, southwest of Borovtsi village, 43.32346°N, 23.13281°E, FN79, 20.07.2012, coll. A. Petrova (SOM 169067). Observed also along river Ogosta, westwards of Mitrovtsi village, Montana district, FP51, 04.10.2012, obs. A. Petrova.

The above mentioned localities confirm the ability of the species to naturalize in different regions of the country, as well as in different habitats and substrates. In the first locality, the population consists of some dispersed individuals and is quite far from places where the species was cultivated by man.



Fig. 16. *Impatiens balfourii* (photo A. Petrova).

91. *Chenopodium ambrosioides* L.

Bu Forebalkan (*Western*): along river Iskar, north-eastwards of Zverino village, 43.09347°N, 23.58098°E, GN07, 05.08.2012, coll. A. Petrova & R. Vassilev (SOM 169026).

Euphorbiaceae

92. *Euphorbia maculata* L.

Bu Balkan Range (*Western*): along the road between Gabrovnitsa and Medov Dol villages, 43.04853°N, 23.47430°E, GN07, 04.08.2012, coll. A. Petrova (SOM 169039).

- Tundzha Hilly Country: Gabarevo village, on the pavement in the parking yard of Valera Hotel, LH41, 16.09.2012, coll. A. Petrova & D. Venkova (SOM 169040); observed also around Sevtopolis Hotel in Pavel Banya town, 30.10.2012.

Lamiaceae

93. *Lavandula angustifolia* Mill.

- Bu** Forebalkan (*Western*): on limestone slopes near Varbovo village (northwards of the village; on the slopes of Vedernik ridge, ect.), 43.54984°N, 22.65869°E, 43.54981°N, 22.66243°E, and 43.54241°N, 22.66086°E, FP32, 19.07. & 28.08.2012, coll. A. Petrova (SOM 169063, 169064, 169061); in a pasture at Mala Glama Hill near Salash village, 43.62533796°N, 22.50360883°E, FP23, 26.08.2012, coll. A. Petrova, I. Gerasimova & R. Vassilev (SOM 169060); SW of Gara Oreshesh, 43.64385°N, 22.72068°E, FP33, 01.09.2012, coll. A. Petrova & I. Gerasimova (SOM 169062). It was also observed near Belotintsi village, FP52, A. Petrova, I. Gerasimova & R. Vassilev, obs.

The number of localities shows that the species have found the dry limestone slopes in the area quite appropriate for establishment. Some localities contain single individuals (near the limestone pit north of Varbovo village, slope of Vedernik ridge), others contain groups of shrubs. The largest locality with a complex population structure is the one near Gara Oreshesh settlement. There, around an abandoned Lavender field with an area of 0.5 ha, there are numerous groups and patches of shrubs on the surrounding slopes.

Moraceae

94. *Broussonetia papyrifera* L.

- Bu** Pirin Mts (*Southern*): near the road between Rozhen and Lyubovishte villages, 41.53022°N, 23.44141°E, GM00, 19.07.2012, coll. A. Petrova, D. Venkova & R. Vassilev (SOM 168737).

Groups and dense patches of plants of different height were found below the typical for the area sandstone hills and around the village buildings.

Oxalidaceae

95. *Oxalis dillenii* Jacq.

- Bu** Znepole Region: Radomir town, on the pavement along the road to Kyustendil town, FN61, 27.07.2012, coll. A. Petrova (SOM 169072).

This is a new region for this alien species, known in Bulgaria from the floristic regions of the Western Frontier Mts and the Valley of River Struma (*Southern*).

Scrophulariaceae

96. *Cymbalaria muralis* Gaertn., B. Mayer & Schreb.

- Bu** Forebalkan (*Eastern*): on stone walls in the historical part of Veliko Tarnovo town, LH96, A. Petrova & R. Vassilev, obs.

Confirming the occurrence of this alien species in this floristic region (see Cheshmedzhiev 2011). The species is quite common in the historical part of Veliko Tarnovo.

Vitaceae

97. *Parthenocissus inserta* (A. Kern.) Fritsch.

- Bu** Forebalkan (*Western*): on trees along Ogosta river, W of Mitrovtsi village, 43.44275°N, 33.93299°E, FP52, 04.10.2012, coll. A. Petrova, R. Vassilev & I. Gerasimova (SOM 169074).

- Vitoshka Region: on the eastern slopes of Mt Plana, near the inflow of river Palakaria into river Iskar, above the Mechkata Villa Zone, 42.42199128°N 23.5240752°E, GM19, 02.08.2012, coll. A. Petrova, R. Vassilev & D. Venkova (SOM 169073).

The species was reported recently as an alien for the country (Zieliński & al. 2012).

Poaceae

98. *Eleusine indica* (L.) Gaertn.

- Bu** Forebalkan (*Eastern*) among the stones on Gurko street in the historical part of Veliko Tarnovo town, 23.09.2012, LH96, coll. A. Petrova & R. Vassilev (SOM 169031).

This is a new region for this alien species and second report north of the Balkan Range, after the one from Varna town (Vladimirov & Petrova 2010).

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

- Bu** Forebalkan (*Western*): along Iskar river, north-east of Zverino village, 43.09347°N, 23.58098°E, GN07, 04.08.2012, coll. A. Petrova & R. Vassilev (SOM 169075).

This is a new region for this alien species.

Acknowledgements. Some of the data were obtained during the fieldwork for the projects Mapping and Identification of Conservation Status of Natural Habitats and Species – Phase I and Natural Network for Plants and People. The financial support of the Ministry of Environment and Waters of Bulgaria and Plantlife International is gratefully acknowledged.

Reports 100–108

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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).

Anacardiaceae

100. *Rhus coriaria* L.

Gr Nomos Attikis, Eparchia Megaridos: Mt Kitheronas, main road from Vilia to the summit, 1290 m, 38°11'N, 23°15'E, 25.06.2013, Polymenakos obs. (photo, conf. Kit Tan, July 2013). Not listed from Kitheronas by Constantinidis (1997).

Asteraceae

101. *Cirsium eriophorum* (L.) Scop. (Fig. 17)

Gr Nomos & Eparchia Kastorias: Mt Gramos, 1830 m, 40°22'N, 20°51'E, 15.08.2009, Polymenakos & G. Fakas obs. (photo, conf. Kit Tan, July 2013).

New for Mt Gramos. A widespread and variable species in W and C Europe, reaching C Greece.



Fig. 17. *Cirsium eriophorum* (photo K. Polymenakos).

Brassicaceae

102. *Cardamine hirsuta* L.

Gr Nomos Attikis, Eparchia Megaridos: Mt Kitheronas, 770 m, 38°10'N, 23°18'E, 30.01.2013,

Polymenakos obs. (photo, conf. Kit Tan, May 2013).

Not listed from Kitheronas by Constantinidis (1997).

Cistaceae

103. *Fumana procumbens* (Dunal) Gren. & Godr.

Gr Nomos Attikis, Eparchia Megaridos: Mt Pateras, stony plateau on east slope of Mikri Kolosoura, 980 m, 38°06'N, 23°17'E, 16.05.2013, Polymenakos & Nikitidis obs. (photo, conf. Kit Tan, June 2013). New for Mt Pateras, not listed by Constantinidis (1997). In Nomos Attikis, recorded only from Mt Pendeli. Occurring all the way from Mikri Kolosoura to Megali Kolosoura. Other interesting taxa in the same habitat are *Asperula pulvinaris*, *Centaurea subsericans*, *Convolvulus boissieri* subsp. *parnassicus*, *Ebenus sibthorpii* and *Onosma kaheirei*.

Crassulaceae

104. *Umbilicus luteus* (Huds.) Webb & Berthel.

Gr Nomos & Eparchia Attikis: Mt Pendeli, N of the peak Pyrgari, 1060 m, 38°04'N, 23°52'E, 15.06.2013, Polymenakos obs. (photo, conf. Kit Tan, June 2013).

New for Mt Pendeli. In Nomos Attikis, recorded only from Mts Parnitha and Pateras. There were more than 40 plants at the base of rocks on a steep slope, growing with *Cerastium candidissimum*, under *Quercus coccifera* and *Juniperus oxycedrus*.

Euphorbiaceae

105. *Euphorbia aleppica* L. (Fig. 18)

Gr Nomos Attikis, Eparchia Megaridos: plain of Oenoe, between Mt Pateras and Pastra, 300 m, 38°09'N, 23°25'E, 24.02.2013 (sterile) & 25.06.2013 (flowering), Polymenakos obs. (photo, conf. Kit Tan, July 2013).

Not listed from Pateras or Pastra by Constantinidis (1997). In eparchia Megaridos the species was collected only from Mt Kitheronas by Tuntas more than a hundred years ago (Halácsy 1912: 186).

Papaveraceae

106. *Papaver apulum* Ten. (Fig. 19)

Gr Nomos & Eparchia Attikis: Mt Parnitha, Ippocratis Politia, 550 m, 38°11'N, 23°47'E, 18.04.2013, Polymenakos obs. (photo, conf. Kit Tan, July 2013); Mt Pendeli, cultivated field east of Stamata, 370 m, 38°07'N, 23°54'E, 09.04.2013, Polymenakos obs. (photo, conf. Kit Tan, July 2013). — Nomos Attikis, Eparchia Megaridos: Mt

Kitheronas, stony slope NW of Vilia, 630 m, 38°10'N, 23°18'E, 20.04.2013, *Polymenakos & Nikitidis* obs. (photo, conf. Kit Tan, July 2013). New for Mt Pendeli and Mt Kitheronas, not listed for the latter by Constantinidis (1997). Confirming an



Fig. 18. *Euphorbia aleppica* (photo K. Polymenakos).



Fig. 19. *Papaver apulum* (photo K. Polymenakos).

earlier report for Mt Parnitha (Diapoulis 1958), where it grew together with *Tulipa hageri*. On Kitheronas, there were numerous plants together with thousands of plants of *Euphorbia rigida*; on Pendeli, only two plants were found.

Iridaceae

107. *Iris pseudacorus* L. (Fig. 20)

Gr Nomos & Eparchia Attikis: Mt Pendeli, in small stream N of Ag. Stefanos, 320 m, 38°09'N, 23°52'E, 27.04.2013, *Polymenakos & Nikitidis* obs. (photo, conf. Kit Tan, June 2013).

Not reported in Nomos Attikis except for an old record at Faliro (Halácsy 1904: 189). A single plant observed in slow-flowing water together with *Carex pendula*, *Epilobium* and *Equisetum* spp.



Fig. 20. *Iris pseudacorus* (photo K. Polymenakos).

Liliaceae s.l.

108. *Tulipa sylvestris* subsp. *australis* (Link) Pamp. (Fig. 21)

Gr Nomos & Eparchia Attikis: Mt Pendeli, NW of the peak Pyrgari, 1010 m, 38°04'N, 23°52'E, 22.04.2013, *Polymenakos* obs. (photo, conf. Kit Tan, June 2013).

New for Mt Pendeli, recorded from Parnitha. More than a hundred plants were growing in a 100 m² area of a stony plateau but not all were in full flower. Most of the plants had very short scapes, adapted to withstand the continuously strong winds.

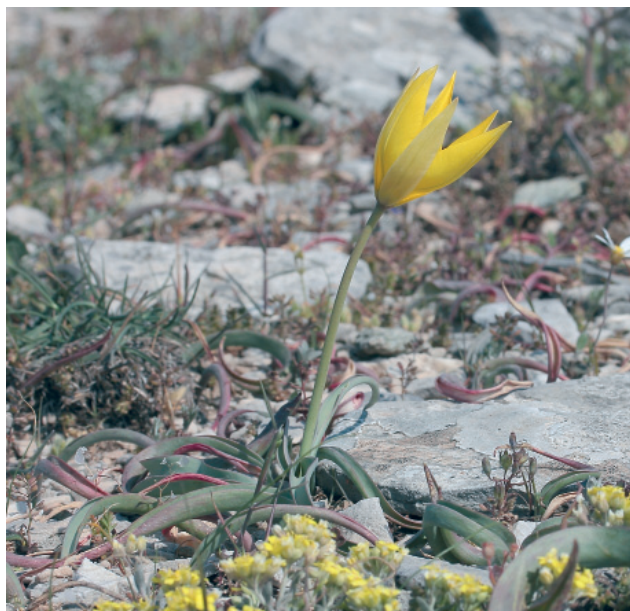


Fig. 21. *Tulipa sylvestris* subsp. *australis* (photo K. Polymenakos).

Report 109

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Orobanchaceae

109. *Orobanche hederæ* Duby

Bu Rhodopi Mts. (*Central*): along river Slivodolska, Chervenata Stena Reserve, 435 m, 41°55'17"N, 24°50'06"E, LG24, parasiting on the roots of *Hedera helix*, 04.07.2013, coll. K. Stoyanov & Ts. Raycheva (SOA 059771).

A new species to Bulgaria. Reported from Greece (Chater & Webb 1972; Polymenakos & Tan 2011; Giannopopoulos & al. 2012), Former Yugoslavia (Chater & Webb 1972; Parabuczky 1974) and Turkey (Chater & Webb 1972).

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Reports 110–113

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Pinaceae

110. *Pseudotsuga menziesii* (Mirb.) Franco subsp. *menziesii*

Bu Rhodopi Mts. (*Eastern*): on the territory of the Kirkovo State Forestry Farm, in the lands of Kremen village, around the Kremen Border Point, in Raven Kamak locality, in a forest of *Fagus sylvatica* ssp. *moesiaca*. In the upper part of a west-facing slope, with inclination of 18°, 892 m, 41°15'30.5"N, 25°20'42.2"E, 07.08.2012, coll. A. Tashev & N. Tashev (SOM 168936; SOA 059750); on the territory of the Kirkovo State Forestry Farm, in the lands of Tihomir village, around the Tihomir Border Point, in a forest glade close to a forest road in the Proletnika locality. In the upper part of a west-facing slope, with inclination of 6°, 582 m, 41°17'02.8"N, 25°31'32.5"E, 08.08.2012, coll. A. Tashev & N. Tashev (SOM 168935; SOA 059751); on the territory of the Kirkovo State Forestry Farm, in the lands of Tsarino village, Starata Niva locality, close to a forest road lying between a 70-year-old forest of *Fagus sylvatica* ssp. *moesiaca* (Habitat 91W0 – Moesian Beech Forests) and a 35-year-old culture of *Pseudotsuga menziesii* ssp. *menziesii*. In the central part of a north-facing slope, with inclination of 3°, 632 m, 41°18'52.8"N, 25°26'10.8"E, 12.08.2012, coll. N. Tashev (SOM 168934; SOA 059752).

The population of *P. menziesii* subsp. *menziesii* in the Raven Kamak locality was represented by single specimens of different age and different height, situated in Habitat 91W0 – Moesian Beech Forests. The habitat is a forest community dominated by 40-year-old individuals of *Fagus sylvatica* ssp. *moesiaca* on the first floor, with considerable participation of *Acer platanoides*, as well as of *Carpinus betulus*, *Ostrya carpinifolia* and *Prunus avium*, and with a joint projection cover of about 90%. *Corylus avellana*, *Rubus hirtus* and *Sambucus nigra* occur on the second floor. The herbaceous species had a very small projection cover in the shadow of the tall trees and were represented by *Ajuga reptans*, *Cardamine bulbifera*, *Euphorbia amygdaloides*, *Luzula luzuloides*, *Poa nemoralis*, *Pteridium aquilinum*, *Viola odorata*, etc.

The population of *P. menziesii* subsp. *menziesii* around the Tihomir Border Point was represented by single specimens of different age and height, situated in forest glades between a man-made 50-year-old plantation of *Pinus sylvestris* and a natural forest of *Fagus sylvatica* ssp. *moesiaca* (Habitat 91W0 – Moesian Beech Forests). The individuals of *P. menziesii* were surrounded by undergrowth of *Pinus sylvestris*, *Fagus sylvatica* ssp. *moesiaca* and *Quercus frainetto*. The shrubs were represented by *Rubus caesius*, *Chamaecytisus absinthioides* and *Juniperus communis*. *Pteridium aquilinum* dominated the grasses, with over 30 % of the projection cover.

The population of *P. menziesii* subsp. *menziesii* in the lands of Tsarino village was represented by single specimens or small groups of individuals of various age and height, situated in the undergrowth of various age of *Pinus nigra*, *P. sylvestris*, *Betula pendula*, *Quercus dalechampii*, *Prunus avium*, *Fagus sylvatica* subsp. *moesiaca*, *Juglans regia*, and *Robinia pseudoacacia*. The shrubs were represented by *Cotynus coggygria*, *Rubus caesius*, *Chamaecytisus absinthioides*, and *Juniperus communis*. The herbaceous species were represented by *Brachypodium sylvaticum*, *Eupatorium cannabinum*, *Euphorbia amygdaloides*, *Fragaria vesca*, *Hypericum cerastioides*, *Origanum vulgare* subsp. *hirtum*, *Pteridium aquilinum*, *Sambucus ebulus*, *Thymus* sp., *Viola riviniana*, etc.

These are new locations of that adventive species for the Bulgarian flora that have emerged naturally as a result of natural reproduction of the individuals of *Pseudotsuga menziesii* subsp. *menziesii* from man-made plantations in the neighbouring territories.

Ulmaceae

111. *Ulmus laevis* Pall.

Bu Sofia Region: on the territory of Sofia City, Studentski Grad Res. Distr., in the unbuilt green patches small groups of the plant occurred between the apartment blocks 55, 56 and 58, with individuals of various age, on a level place, 630 m, 42°38'38.9"N, 23°20'22.5"E, FN92, 09.04.2009, coll. A. Tashev (SOM 164917; SO 105788), 13.04.2009, coll. A. Tashev (SOM 164916; SO 105789), 04.05.2009, coll. A. Tashev (SOM 164916, 164918; SO 105790, 105791).

This is a new location of that Euro-Mediterranean species in Bulgaria, so far known from the Black Sea Coast, Northeast Bulgaria, Balkan Range, Thracian

Lowland, Tundzha Hilly Country, and Mt Strandzha (Terzijski 2011: 57; Assyov & Petrova 2012: 428).

Orchidaceae

112. *Goodyera repens* (L.) R. Br.

Bu Rhodopi Mts (*Central*): in the lands of Petkovo village – above the village and under Studenets chalet, in a forest of *Pinus sylvestris* and *Fagus sylvatica*. Along a forest trail in the upper part of a north-facing slope, with inclination of 5°, with flowers, 1239 m, 41°36'50.1"N, 24°53'47.2"E, LG21, 19.07.2009, coll. A. Tashev (SOM 167957); with fruits, 1239 m, 41°36'50.1"N, 24°53'47.2"E, LG21, 03.10.2010, coll. A. Tashev (SOM 167958).

About 30 rosettes of *G. repens* were found in a thinned-out part of an about 50-year-old natural forest of *Pinus sylvestris* and *Fagus sylvatica*, with single participation of *Quercus dalechampii* and *Picea abies*. There was ample undergrowth of all tree species. *Juniperus communis* prevailed among the shrubs, with occurrence also of *Corylus avellana*, *Chamaecytisus absinthioides* and *Genista carinalis*. The herbaceous floor was dominated by *Lerchenfeldia flexuosa* and *Agrostis capillaris*, with some occurrence of *Aremonia agrimonoides*, *Campanula sparsa*, *Dactylis glomerata*, *Euphorbia amygdaloides*, *Festuca rubra*, *Fragaria vesca*, *Hieracium pilosella*, *Hypericum perforatum*, *Luzula forsteri*, *Pteridium aquilinum*, *Ranunculus acris*, *Thymus* sp., *Trifolium montanum*, *Viola* spp., etc. The base rock was gneiss. The soil was brown forest, fresh, medium deep.

This is a new location in the Central Rhodopes of that relic boreal species, threatened by extinction and legislatively protected in Bulgaria and by the CITES Convention (Petrova 2011a).

113. *Serapias vomeraceae* (Burm.) Briq.

Bu Rhodopi Mts (*Eastern*): between the villages Dolni Yurutsi and Gorni Yurutsi, in a lowland hay meadow (Habitat 6510, PAL.CLASS: 38.2), along with *Orchis laxiflora*, on a south-southeast facing slope, with inclination of 6°, with flowers, 423 m, 41°21'20.8"N, 25°55'16.4"E, MF27, 14.05.2012, coll. A. Tashev (SOM 168565).

This is a new location for the Rhodopi Mts (*Eastern*) of that Mediterranean species, threatened and legislatively protected in Bulgaria and by the CITES Convention. Its population in the area was most numerous: in the meadow, on an area of 5 decares, some 800 flowering individuals were found, among even more numerous individuals of *Orchis laxiflora* (Petrova 2011b).

Reports 114–116

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Continuing a series of new plant records based on further floristic investigations in northern Greece with a focus on the genus *Lathyrus*. The floristic regions adopted follow those circumscribed in *Flora Hellenica* (Strid & Tan 1997).

Fabaceae

114. *Lathyrus annuus* L.

Gr Nomos & Eparchia Grevenon: Kentro Grevenon, edge of lentil-field (*Lens culinaris* subsp. *culinaris*), 650 m, 40°01'N, 21°37'E, 19.06.2013, Tsialtas obs. (photo, conf. Kit Tan, June 2013).

New for eparchia and nomos. Numerous plants growing together with *Vicia pannonica*.

115. *Lathyrus tuberosus* L. (Fig. 22)

Gr Nomos & Eparchia Kozanis: Lake Sari Giol (near Drepano), in fields and at field margins on organic soil, also the raised banks of drainage channels,



Fig. 22. *Lathyrus tuberosus* (photo I. Tsialtas).

660 m, 40°22'N, 21°50'E, 04.06.2013, Tsialtas obs. (photo, det. Kit Tan, June 2013).

New for eparchia and nomos. *Lathyrus tuberosus* occurs in NC and NE Greece. It was already collected from Mt Chortiatis in Thessalonikis by Orphanides in July 1857 (ATHU), his collections (only the Fabaceae) were catalogued by Heldreich (1877: 52). Our record from Kozanis seems to be the furthest south in Greece. There were numerous plants in the former lake reclaimed in the 1930's.

Solanaceae

116. *Datura stramonium* f. *tatula* (L.) Geerinck & Walravens

Gr Nomos & Eparchia Kozanis: Chromio Kozanis, road margins and adjacent slopes, 785 m, 40°08'N, 21°45'E, 26.07.2013, Tsialtas obs. (photo, det. Kit Tan, August 2013).

New for eparchia and nomos. *Datura stramonium* f. *tatula* had recently been reported from the Peloponnese, the eastern part of the Thessalian Plain and from north-eastern Greece (Tsialtas & al. 2013). This is the first report of the variant from northcentral Greece. The large population was close to manure heaps left in the yard of an abandoned farm formerly keeping cattle and sheep. The site also has a natural running stream. Although we have noted that the two forms, *D. stramonium* f. *tatula* and *D. stramonium* f. *stramonium*, often co-exist in disturbed sites or together with *D. ferox* and *D. innoxia*, only *D. stramonium* f. *tatula* was found in this locality together with other naturalized aliens such as species of *Amaranthus* and *Setaria*, *Solanum nigrum* and *Xanthium strumarium*.

Reports 117–118

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Iridaceae

117. *Iris suaveolens* Boiss. & Reuter

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 13.04.2013, coll. & det. S. Tütüncü Konyar (EDTU 13278).

New for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Çanakkale and A2(E) Istanbul (Mathew 1984).

Orchidaceae

118. *Orchis papilionacea* L. var. *rubra* (Jacq.) Lindl.
[Syn. *Anacamptis papilionacea* (L.) R.M. Bateman,
Pridgeon & M.W. Chase.; *Orchis papilionacea* subsp.
heroica (E.D. Clarke) H. Bauma]

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m,
41°49'60"N, 26°43'60"E, 09.05.2013, coll. & det. S.
Tütüncü Konyar (EDTU 13286).

New for A1(E) Edirne in European Turkey. So far *O. papilionacea* has been reported from A2(E) Istanbul (Renz & Taubenheim 1984).

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Caryophyllaceae

119. *Agrostemma githago* L.

Tu(E) A1(E) Edirne: Centre, 26 m, the Balkan Campus of Trakya University, 41°40'28"N, 26°33'39"E, 23.05.1985, coll. G. *Dalgıç* & F. *Dane*, det. G. *Dalgıç* (EDTU 112); Centre – Avarız village, 23 m, 41°43'60"N, 26°33'00"E, 04.06.1985, coll. F. *Dane*, det. N. *Başak* (EDTU 138); Centre, around Budakdoğanca, 98 m, 41°45'37"N, 26°20'33"E, 02.06.1987, coll. F. *Dane* & al., det. N. *Başak* (EDTU 793); Centre, between Budakdoğanca – Ahiköy (1 km), 98 m, 41°45'37"N, 26°20'33"E, 08.06.1987, coll. H. *Arda* & al. (EDTU 830); Centre, 2 km from Domurcalı to Taslımüsellim village, 196 m, 41°49'00"N, 26°49'00"E, 01.06.1987, coll. F. *Dane* & al. (EDTU 913); Centre, between Tayakadın and Karakasım villages, 29 m, 41°31'00"N, 26°37'60"E, 09.06.1987, coll. F. *Dane* & al., det. C. *Yargıcı* (EDTU 1008); Centre, between Karaağaç and Pazarkule (2 km), 23 m, 41°39'28"N, 26°31'25"E, 24.05.1998, coll. N.Ç. *Demirkan* (EDTU 7567); Centre, Acıçeşme Cemetery, at roadsides, 26 m, 41°40'28"N, 26°33'39"E, along the road, 19.05.2001, coll. & det. C. *Karaman* & G. *Dalgıç* (EDTU 8011); between Edirne and Kırklareli (20 km off Edirne), 26 m, 41°40'28"N, 26°33'39"E, 16.06.1987, coll. H. *Arda* & al., det. C. *Yargıcı* (EDTU 1326); Edirne, Enez Sultaniçe village, 30 m, 40°37'35"N, 26°09'12"E, 03.04.1995, coll. & det. M. *Kireç* (EDTU 7212).

— A1(E) Kırklareli: Kırklareli – Yeniceköy, around Taşocağı, 451 m, 41°43'58"N, 27°38'07"E, 12.06.1985, coll. H. *Arda* & N. *Başak*, det. N. *Başak* (EDTU 170); Kırklareli – Koruköy ridges, 448 m, 41°51'N, 27°18'E, 25.05.1986, coll. N. *Başak* & F. *Dane*, det. N. *Başak* (EDTU 408); between Kırklareli and Babaeski (10 km to Babaeski), 55 m, 41°25'57"N, 27°05'35"E, 03.06.1988, coll. F. *Dane* & G. *Dalgıç*, det. G. *Dalgıç* (EDTU 2786); Kırklareli, around Kazankaya Dam, 194 m, 41°43'54"N, 27°13'29"E, 01.06.199, coll. & det. N. *Karakaya* & N. *Güler* (EDTU 4626); Demirköy, Demirköy – İğneada, 3 km, 244 m, 41°49'17"N, 27°45'38"E, 27.05.1990, coll. & det. C. *Yarcı* (EDTU 5500).

— A1(E) Tekirdağ: Centre, Tekirdağ – Istanbul road, 4 km, 0 m, 40°58'50"N, 27°30'54"E, 28.05.1988, coll. E. *Düzalan* & F. *Dane* (EDTU 2604).

New for A1(E) Edirne, A1(E) Kırklareli and A1(E) Tekirdağ in European Turkey. So far the species has been known from A2(E) Istanbul and A1(E) Çanakkale (Cullen 1967).

120. *Cerastium glomeratum* Thuill.

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 07.04.2013, coll. & det. S. *Tütüncü Konyar* (EDTU 13281).

New for A1(E) Edirne in European Turkey. So far the species has been known from A2(E) Istanbul (Cullen 1967).

121. *Vaccaria pyramidata* Medik. var. *pyramidata*

Tu(E) A1(E) Edirne: Centre, the Balkan Campus of Trakya University, 26 m, 41°40'28"N, 26°33'00", 23.05.1985, coll. G. *Dalgıç* (EDTU 131); Ahiköy, 76 m, 41°46'00"N, 26°23'60"E, 02.06.1987, coll. H. *Arda* (EDTU 720); Edirne – Süleoğlu, Süleoğlu Dam, 156 m, 41°46'02"N, 26°54'43"E, 28.05.1988, coll. N. *Polat* (EDTU 2545).

New for A1(E) Edirne in European Turkey. So far the species has been known from A2(E) Istanbul, A1(E) Çanakkale and A1(E) Kırklareli (Cullen 1967).

Reports 122–123**Sevil Tütüncü Konyar, Feruzan Dane & Bediha Köse**

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Fumariaceae**122. *Fumaria officinalis* L.**

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 10.04.2013, coll. & det. S. Tütüncü Konyar (EDTU 13283).

New for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Cullen 1965).

Ranunculaceae**123. *Adonis flammea* Jacq.**

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 10.04.2013, coll. & det. S. Tütüncü Konyar (EDTU 13280).

New for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Tekirdağ (Çorlu) and A2(E) Istanbul (Davis 1965).

Reports 124–126**Sevil Tütüncü Konyar, Feruzan Dane & Serpil Tütüncü**

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Brassicaceae**124. *Aurinia saxatilis* subsp. *orientalis* (Ard.) Dudley**

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 07.04.2013, coll. S. Tütüncü Konyar & S. Tütüncü, det. S. Tütüncü Konyar (EDTU 13280).

New for A1(E) Edirne in European Turkey. So far the species has been known from A2(E) Istanbul (Dudley 1965).

125. *Malcolmia flexuosa* (Sm.) Sm.

Tu(E) A1(E) Edirne: Keşan – Mecidiye, 61 m, 40°38'20"N, 26°32'14"E, 19.05.1995, coll. & det. G. Dalgıç (EDTU 3362).

New for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Istanbul (Cullen 1965).

Rosaceae**126. *Potentilla recta* L.**

Tu(E) A1(E) Edirne: Lalapaşa, pasture, 172 m, 41°49'60"N, 26°43'60"E, 10.05.2013, coll. & det. S. Tütüncü Konyar (EDTU 13288).

New for A1(E) Edirne in European Turkey. Peşmen (1972) has reported three informal groups of *Potentilla*

recta (Groups A, B, C) in Turkey. Our specimen fits the group A which so far has been known from A1(E) Tekirdağ.

Report 127**Sevil Tütüncü Konyar & Serpil Tütüncü**

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Asteraceae**127. *Tragopogon dubius* Scop.**

Tu(E) A1(E) Edirne: Centre, Trafik plantation, 26 m, 41°40'28"N, 26°33'39"E, 11.05.2013, coll. S. Tütüncü Konyar & S. Tütüncü, det. S. Tütüncü Konyar.

Reports 128–129**Sevil Tütüncü Konyar, Serpil Tütüncü & Feruzan Dane**

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Campanulaceae**128. *Legousia speculum-veneris* (L.) Vill.**

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 14.05.2013, coll. S. Tütüncü Konyar & S. Tütüncü, det. S. Tütüncü Konyar (EDTU 13285).

New for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Domboldt 1978).

Violaceae**129. *Viola hymettia* Boiss. & Heldr.**

Tu(E) A1(E) Edirne: Lalapaşa, in pasture, 172 m, 41°49'60"N, 26°43'60"E, 13.04.2013, coll. S. Tütüncü Konyar & S. Tütüncü, det. S. Tütüncü Konyar (EDTU 13279).

New for A1(E) Edirne in European Turkey. So far the species has been known from A1(E) Tekirdağ (Davis & al. 1988).

Reports 130–140**Kiril Vassilev**

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Asteraceae**130. *Cnicus benedictus* L.**

Bu West Frontier Mts: Mt Vlahina, in dry grasslands between the town of Blagoevgrad and Stanke Lisichkovo village, 42.00476N, 23.01922E, FM65, 18.05.2012, coll. K. Vassilev (SOM 168771).

This species has not been reported for this floristic region so far.

Brassicaceae**131. *Alyssum obtusifolium* DC.**

Bu Valley of River Mesta: in dry grasslands near Novo Leski village, 41.52923N, 23.77485E, GM30, 23.06.2012, coll. K. Vassilev (SOM 168761).

This is a new species for this floristic region. It takes part as a companion species in grasslands dominated by *Festuca valesiaca*, *F. dalmatica*, *Chrysopogon gryllus*, *Dichanthium ischaemum* on stony, eroded terrains.

Caryophyllaceae**132. *Minuartia bulgarica* (Velen.) Graebn.**

Bu Pirin Mts (*Southern*): in xerophytic grasslands around Kremen village, GM12, 25.06.2012, coll. K. Vasilev (SOM 168776).

This is a new species for that floristic region. *Minuartia bulgarica* is a Balkan endemic which so far has been known from seven floristic regions (Petrova & Vladimirov 2010). It is found locally on eroded, stony slopes, and near cliffs where soils are shallow.

Fabaceae**133. *Onobrychis degenii* Dörf.**

Bu Balkan Range (*Western*): in xeromesophytic grasslands above Negushevo village, 42.70999N, 23.71322E, GN23, 07.08.2012, coll. K. Vassilev (SOM 168339).

A new species for this floristic region.

134. *Trifolium retusum* L.

Bu Rhodopi Mts (*Western*): in dry grasslands around Gostun village, 41.79629N, 23.68807E, GM23, 22.06.2012, coll. K. Vassilev (SOM 168830).

So far the species has not been known for this floristic region.

Gentianaceae**135. *Gentiana asclepiadea* L.**

Bu Znepole Region: Mt Ruy, in mesophytic grasslands under Ruy peak, FN24, 12.07.2009, coll. K. Vassilev (SOM 168491).

This is a new floristic region for this species. It takes part in meso-xerophytic grasslands dominated by *Festuca rubra*, *Danthonia alpina* and *Agrostis capillaris*. The stands have closed horizontal structure, belong to classes *Molinio-Arrhenatheretea* and *Festuco-Brometea* or form transitional communities between them.

Lamiaceae**136. *Thymus atticus* Čelak.**

Bu West Frontier Mts: Mt Vlahina, in dry grasslands around Vartov Kamak village, 42.12533N, 22.99431E, FM66, 03.07.2012, coll. K. Vassilev (SOM 169161).

This species was not known for this floristic region so far. It has Balkan-Anatolian distribution and occurs in the southern part of the country (Petrova & Vladimirov 2010). It takes part in xerothermic grassland communities which fall into classes *Festuco-Brometea* and *Thero-Brachypodietea*, where it is a subdominant or companion species.

Linaceae**137. *Linum austriacum* L.**

Bu Valley of River Struma (*Northern*): in dry grasslands along Zemen Gorge, 42.44279N, 22.70839E, FN40, 15.06.2010, coll. K. Vassilev (SOM 168485).

This is a new species for this floristic region and takes part in dry grassland communities as a companion species.

138. *Linum bienne* Mill.

Bu Valley of River Mesta: in xerothermic grasslands near the Ilinden Border Point, GL39, 23.06.2012, coll. K. Vassilev (SOM 168783).

A new species for this floristic region.

139. *Linum elegans* Boiss.

Bu Valley of River Struma (*Southern*): in grasslands near Katuntsi village, 41.42194N, 23.42919E, GL09, 23.06.2012, coll. K. Vassilev (SOM 168222).

So far unknown for this floristic region.

Rubiaceae**140. *Asperulla tenella* Degen**

Bu Valley of River Mesta: in grasslands near Ilinden village, GL39, 23.06.2012, coll. K. Vassilev (SOM 168763).

This is a new species for this floristic region. The species is seldom found as companion species in xerothermic grasslands dominated by *Dichanthium ischaemum*, *Festuca valesiaca*, *F. callieri*, *Dichanthium ischaemum*, and *Thymus atticus*.

Reports 141–146

Kiril Vassilev & Hristo Pedashenko

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Caryophyllaceae

141. *Minuartia hybrida* (Vill.) Schischk.

Bu Vitosha Region: Mt Verila, in dry grasslands above Dolna Dikanya village, 42.462324N, 23.16252E, FN70, 21.06.2010, coll. K. Vassilev & H. Pedashenko (SOM 168486).

— West Frontier Mts: Mt Vlahina, in mesoxerophytic grasslands, 41.80479N, 22.98747E, FM63, 17.06.2010, coll. K. Vasilev (SOM 168487).

This is a new species for these floristic regions.

Crassulaceae

142. *Sedum urvillei* DC.

Bu Vitosha Region: Mt Verila, in dry grasslands above Dolna Dikanya village, 42.45234N, 23.15248E, FN70, 21.06.2010, coll. K. Vassilev & H. Pedashenko (SOM 168477).

This is a widely distributed species in the country, but so far has not been reported for this floristic region.

Fabaceae

143. *Trifolium dalmaticum* Vis.

Bu Vitosha Region: Mt Verila, in dry grasslands above Dolna Dikanya village, 42.45234N, 23.15248E, FN70, 21.06.2010, coll. K. Vassilev & H. Pedashenko (SOM 168477).

This species takes part in xerothermic grasslands of the alliances *Saturejion montanae* and *Festucion valesiacae* as a companion species.

Rosaceae

144. *Potentilla detommassii* Ten.

Bu Valley of River Struma (*Southern*): in dry grasslands between Parvomay and Strumeshnitsa villages, 41.39872N, 23.06269E, FL78, 20.05.2011, coll. K. Vassilev & H. Pedashenko (SOM 167839).

This is a new species for the region.

Valerianaceae

145. *Valerianella lasiocarpa* (Steven) Betcke

Bu Northeast Bulgaria: in grasslands near Beltsov village, 43.58837N, 25.62909E, LJ82, 28.05.2011, coll. K. Vassilev & H. Pedashenko (SOM 168184).

This is a new species for this floristic region.

Poaceae

146. *Festuca rupicola* Heuff.

Bu Danubian Plain: in grasslands near the town of Nikopol, 43.70893N, 24.91102E, LJ33, 24.05.2011, coll. K. Vassilev & H. Pedashenko (SOM 168332, 168325).

This is a new species for this floristic region, occurring on loess and calcareous terrains as dominant or subdominant species in grassland communities. *Festuca rupicola* is a good diagnostic species for the class *Festuco-Brometea* and order *Festucetalia valesiacae*. Syntaxonomical position of its communities is still not studied well in the country.

Reports 147–159

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Continuing a series of new plant records based on floristic investigations in the prefecture of Korinthias in north central Peloponnese, including Mt Killini which is *locus classicus* for several Greek mountain species and considered botanically well-explored. New and surprising discoveries of Greek endemics however, still emerge; in this case, an unexpected species of *Veronica* from Mt Killini and the disjunct distribution on Mt Gerania of a *Centaurea* previously considered restricted to Evvia.

Aceraceae

147. *Acer platanoides* L. (Fig. 23)

Gr Nomos & Eparchia Korinthias: Mt Killini, Kefalari, footpath from Ano Trikala to Lake Dhasios, 1408 m, 37°59'N, 22°26'E, 19.05.2013 & 26.05.2013, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, July 2013).

Confirming Heldreich's collection on Mt Killini, "in montes Kyllenes Achaiae regione silvatica" (June 1887, WU-Hal). A dot map in Boratyński et al. (1992: 10) shows approximately the same locality. The trees were scattered amongst *Prunus coccomilia* and *Crataegus pycnoloba* in a valley traversed by several springs and small streams, surrounded by slopes forested with *Pinus nigra* and *Abies cephalonica*.



Fig. 23. *Acer platanoides* (photo V. Christodoulou).

Apiaceae

148. *Bifora radians* M. Bieb. (Fig. 24)

Gr Nomos & Eparchia Korinthias: in openings of *Pinus nigra* woodland near Velina, 1000 m, 37°58'N, 22°33'E, 06.06.2012, Zarkos & Christodoulou obs. (photo, conf. Kit Tan, June 2013); in fields near Kesari village, 740 m, 37°55'N, 22°33'E, 07.06.2011 & 28.05.2013, Zarkos & Christodoulou obs. (photo, conf. Kit Tan, June 2013).



Fig. 24. *Bifora radians* (photo V. Christodoulou).

New for the Peloponnese. The species is conspicuously absent from southern Greece, apparently restricted to north of latitude 39°N and on the island of Chios. However, it is possible that some records in the south may have been erroneously reported as the more widely distributed *B. testiculata* which can be distinguished in fruit by its much shorter and erect styles.

149. *Bupleurum flavicans* Boiss. & Heldr.

Gr Nomos & Eparchia Korinthias: Mt Killini, dry meadow overlying limestone, 1500 m, 37°57'N, 22°25'E, 20.06.2013 & 07.07.2013, Zarkos &

Christodoulou s.n. (det. Kit Tan, July 2013); *loc. ibid.*, 27.07.2013 (fruiting), Kit Tan, G. Vold & Zarkos 31647.

Confirming an early collection made more than a century ago by Bretzl (13.07.1905, W). *Bupleurum flavicans* (B. sect. *Aristata*) is a Balkan endemic occurring from S Albania to the Peloponnese. In the Peloponnese, it is recorded only from Mts Chelmos and Taigetos. Our collection from Mt Killini is somewhat atypical, the annual plants being less than 5 cm in height and with very compact inflorescences.

Found together with *Allium achaium*, *Astragalus thracicus* subsp. *cylleneus*, *Carduus tmoleus*, *Cirsium hypopsilum*, *Crataegus pycnoloba*, *Dianthus androsaceus*, *Eryngium amethystinum* and *Verbascum speciosum* subsp. *megaphlomos*.

Asteraceae

150. *Centaurea ebenoides* S. Moore (Fig. 25)

Gr Nomos & Eparchia Korinthias: Mt Gerania, Sousaki, 130 m, 37°56'N, 23°05'E, 11.04.2009 & 21.05.2009, 06.04.2013 & 12.04.2013, Zarkos & Christodoulou s.n. (det. Kit Tan, June 2013); *loc. ibid.*, 27.07.2013 (fruiting), Kit Tan, G. Vold & Zarkos 31654.



Fig. 25. *Centaurea ebenoides* (photo V. Christodoulou).

New for Mt Gerania, eparchia and nomos Korinthias, phytogeographical region Sterea Ellas and also mainland Greece. An interesting and notable discovery as *C. ebenoides* was previously considered endemic to the island of Evvia. Sousaki lies in the area of Ag. Theodori (part of the municipality of Loutraki) at the southern side of Mt Gerania and is an extinct volcano which has been dormant for the last two million years. It is the northernmost edge of the active volcanic S Aegean arc, which includes the volcanoes of Methana,

Poros, Milos, Santorini and Nisyros. There is no crater or caldera as such but dozens of holes pitted around a gorge, and these openings (vents) still release carbon dioxide and sulphur. Approximately 40-50 plants were found on the eroded marl-like substrate in two localities at the gorge, in sparse *Pinus halepensis* woodland together with *Bufonia stricta*, *Centaurea achaia* subsp. *corinthiaca*, *Hedysarum grandiflorum* subsp. *bulgaricum*, *Helichrysum luteoalbum* and *Silene fabaria* subsp. *domokina*. The *Hedysarum* was recently described as a new record for Greece by Constantinidis (2012). We noted the *Hedysarum* at its peak flowering time on 11 April 2009, one day earlier than the collection of Constantinidis 12347 & Iliadis, 12.04.2009 (ATHU); however, there was no mention of *Centaurea ebanoidea* in his publication. An *Alyssum* resembling *A. baldaccii* Nyár. was also noted and fruiting material collected on 27 July 2013, together with an interesting species of *Aethionema* with succulent grey-glaucous to dark green leaves. If the identification of the former is correct, this would link the distribution of *A. baldaccii* on mainland Greece (S Pindos, East Central, Sterea Ellas) to its disjunct locality on central Crete.

Biebersteiniaceae

151. *Biebersteinia orphanidis* Boiss.

Gr Nomos & Eparchia Korinthias: Mt Killini, N of Mikri Ziria, 1730 m, 37°56'N, 22°27'E, 09.06.2013, Zarkos & Apostolopoulos obs. (photos, conf. Kit Tan, June 2013).

A recent confirmation of more than 160 year old records from Mt Killini which is the *locus classicus*. There were more than a hundred flowering plants, growing together with *Adonis cyllenea*, *Marrubium cylleneum* and the inevitable *Pteridium aquilinum*. The healthy and flourishing population in the shallow doline had individual plants well-spaced from each other, and we like to think that a similar sight had brightened the eyes and gladdened the heart of Orphanides when he arrived at the plateau in June 1851. The species was discovered in the same area by Vassiliades (see Vassiliades & Yannitsaros 2000) and it occurs also on Mts Saitas, Oligirtos and Dourndouvána in north-central Peloponnese.

Boraginaceae

152. *Onosma spruneri* Boiss.

Gr Nomos & Eparchia Korinthias: Penteskoufi near Akrokorinthos, edge of cultivated fields, 237 m, 37°52'N, 22°50'E, 26.04.2013, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, June 2013).

A relatively rare Greek endemic without close allies. First report from the well-botanized area of Akrokorinthos, in *Genista acanthoclada-Quercus coccifera* scrub.

Fabaceae

153. *Dorycnium rectum* (L.) Ser.

Gr Nomos & Eparchia Korinthias: Mt Killini, Kefalari, road from Riza to Trikala, 302 m, 38°00'N, 22°31'E, 19.05.2013 & 26.05.2013, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, June 2013).

New for Mt Killini, eparchia and nomos Korinthias in NE Peloponnese. On the banks of the river Sithas, with *Lycopus europaeus*, *Lythrum junceum*, *Platanus orientalis*, *Salix elaeagnos*, *Smilax aspera*, *Tamus communis*, etc. (see entry under *Lycopus europaeus*).

Fumariaceae

154. *Corydalis blanda* subsp. *oxelmannii* Lidén (Fig. 26)



Fig. 26. *Corydalis blanda* subsp. *oxelmannii* (photo V. Christodoulou).

Gr Nomos & Eparchia Korinthias: Mt Killini, 1500 m, 37°58'N, 22°26'E, 20.04.2009, 09.04.2010 & 21.04.2013, Zarkos & Christodoulou obs. (photos, det. Kit Tan, June 2013).

New for Mt Killini, eparchia and nomos Korinthias. A Greek endemic, certainly the most distinct of the four subspecies of *C. blanda*, reported previously from Mt Chelmos. It was noted by Kit Tan and G. Vold on the NNW side of Mt Saitas, flowering abundantly in May after snow melt, on the stony calcareous slopes and screes surrounding the dolines full of *Adonis cyllenea* and *Biebersteinia orphanidis*. On Mt Killini, the plants were in open *Pinus nigra* woodland together with *Adonis cyllenea*, *Anemone apennina* subsp. *blanda*, *Ranunculus* spp. and *Scilla bifolia*. *Adonis cyllenea* was also documented by photographs in its *locus classicus* on Mt Killini, where it was first collected by Heldreich in July 1848 and by Orphanides in May and June 1854.

Lamiaceae

155. *Lycopus europaeus* L.

Gr Nomos & Eparchia Korinthias: Mt Killini, Kefalari, road from Riza to Trikala, 302 m, 38°00'N, 22°31'E, 19.05.2013 & 26.05.2013, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, June 2013).

New for Mt Killini, eparchia and nomos Korinthias. On the banks of the river Sithas, with *Dorycnium rectum*, *Lythrum junceum*, *Platanus orientalis*, *Salix elaeagnos*, *Smilax aspera*, *Tamux communis*, etc. (see entry under *Dorycnium rectum*).

156. *Nepeta nuda* L. subsp. *nuda*

Gr Nomos & Eparchia Korinthias: Mt Killini, Kefalari, footpath from Ano Trikala to Lake Dhasios, 1408 m, 37°59'N, 22°26'E, 19.05.2013 & 26.05.2013, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, July 2013).

Confirming a literature record from Mt Killini (Baden 1991). The habitat is the same as for *Acer platanoides* (see entry under the latter species).

Primulaceae

157. *Coris monspeliensis* L. (Fig. 27)

Gr Nomos & Eparchia Korinthias: Mt Fokas, near Kalentzi village, 565 m, 37°51'N, 22°44'E, 06.05.2009, 21.05.2009 & 03.06.2011, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, October 2011).

Known only from a few localities in Greece, scattered in the Peloponnese and Sterea Ellas. In Nomos Korinthias, it has been recorded from Loutraki and Mt Gerania. The ancient names of Fokas are Selinountio, Ofeltio or Apesa. At the summit of Apesa are the re-

mains of the great altar dedicated to Zeus Apesantiou and references to this can be found in the classical works of ancient writers such as Hesiodos, Pindaros and Pausanias. *Coris monspeliensis* was discovered in burnt *Pinus halepensis* forest together with *Cistus* spp., *Genista acanthoclada* and *Chaenorhinum minus*.



Fig. 27. *Coris monspeliensis* (photo G. Zarkos).

Scrophulariaceae

158. *Veronica contandriopouli* Quézel (Fig. 28)

Gr Nomos & Eparchia Korinthias: Mt Killini, crevices of steep limestone rock at summit, 2100–2300 m, 37°55'N, 22°23'E, 23.06.2013 (flowering), Zarkos s.n. (photos & specimens; det. Kit Tan, June 2013); *loc. ibid.*, 29.06.2013 (flowering and fruiting), Zarkos s.n. (WU, herb. Kit; det. Kit Tan, July 2013).



Fig. 28. *Veronica contandriopouli* (photo G. Zarkos).

Veronica contandriopouli was first described in *Comptes Rendus hebdomadaires des séances de l'Académie des sciences* 259 (2): 425–427 (15 July 1964) based on two specimens collected from 2100 m on Mt Killini. It was published without indication of a type but the name was later validated in *Taxon* 16:

240 (1967) by the citation of the type locality, without dates, collectors or collection numbers. We can consider the name as validly published. It was stated that specimens were deposited in the authors' personal herbarium. However, the specimens have never been located and are probably lost or never preserved (see Fischer 1991: 216 where it was considered to be a teratological form of *V. erinoides* Boiss. & Spruner as it was described as having 5 corolla lobes). In the original publication there is a good illustration on p. 426 and we now designate this as a lectotype despite the pentamerous corolla.

Veronica contandriopouli Quézel in Compt. Rend. hebdom. Séances Acad. Sci. Paris 259 (2): 425 (15 July 1964), non rite publ., designat. typi omis. [IPNI gives the place of publication as *Naturalia Monspel.*, sér. Bot. 16: 130 (1965)].

Veronica contandriopouli Quézel in Taxon 16: 240 (1967), cum typo.

Lectotype (designated here by Kit Tan, Zarkos & Christodoulou): the illustration in Compt. Rend. hebdom. Séances Acad. Sci. Paris 259 (2): 426 (15 July 1964), based on material collected from Mt Killini, north central Peloponnese.

Veronica contandriopouli is a rare and locally restricted palaeoendemic ($2n = 32$, Contandriopoulos & Quézel 1964). It has not been re-collected or reported since first discovery. More than a hundred plants in flower and fruit were counted, covering an area of ca 0.5 m². The affinities of this species are uncertain but there are some similarities with *V. thessalica* (from Olimbos, N Albania, etc), *V. saturejoides* (from Mt Pirin, Bulgaria) and *V. kotschyana* (from the Cilician Taurus in S Anatolia). Species at the summit area of Killini include *Achillea umbellata*, *Asperula boissieri*, *Minuartia stellata*, *Silene auriculata*, *Valeriana ole-naea*, *Verbascum cylleneum* and *Viola graeca*. Seed has been collected and it is hoped the species can be kept in cultivation at the Copenhagen Botanic Garden.

Orchidaceae

159. *Listera ovata* (L.) R. Br. (Fig. 29)

Gr Nomos & Eparchia Korinthias: Mt Killini, Kefalari, footpath from Ano Trikala to Lake Dhasios, 1408 m, 37°59'N, 22°26'E, 19.05.2013 & 26.05.2013, Zarkos & Christodoulou obs. (photos, conf. Kit Tan, June 2013).

New for Mt Killini, eparchia and nomos Korinthias. The area was traversed by several springs and small

streams, and the surrounding slopes forested with *Pinus nigra* and *Abies cephalonica*. *Salix elaeagnos* and *Platanus orientalis* grew in the valley and large populations of *Dactylorhiza iberica* and *D. saccifera* abound together with *Equisetum*. The plants were at full-flowering by late May.



Fig. 29. *Listera ovata* (photo G. Zarkos).

Reports 160–168

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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).

Euphorbiaceae**160. *Euphorbia rigida* M. Bieb.**

Gr Nomos & Eparchia Chiou: island of Psara, rocky calcareous/schistose slope above the Monastery of Dormition, 400–500 m, 38°35'N, 25°35'E, 15.08.2013, *Zografidis* s.n. (photo, conf. Kit Tan, August 2013).

New for Psara. Apparently absent from all Aegean islands except those of the East Aegean.

Fabaceae**161. *Galega officinalis* L. (Fig. 30)**

Gr Nomos Evvias, Eparchia Chalkidos: Mt Xirovouni, on limestone slope above a small stream, ca. 800 m, 38°36'N, 23°54'E, 01.07.2013, *Zografidis* obs. (photo, conf. Kit Tan, July 2013).

— Nomos Achaias, Eparchia Egialias: near Egio, fenced plot on side road leading to the coast, 3 m, 38°15'N, 22°05'E, 05.06.2012, *Kit Tan & G. Vold* obs.



Fig. 30. *Galega officinalis* (photo A. Zografidis).

New for eparchia Chalkidos; on Evvia reported only from eparchia Istieas in the north, between Neos Pirgos and Orei. On Xirovouni, the slope in open *Abies cephalonica* forest, was covered by more than a hundred plants in full flower, together with *Digitalis ferruginea*, *Cirsium creticum*, *Phlomis samia*, *Campanula trachelium* subsp. *athoa* and *Dactylorhiza saccifera*. The record from Nomos Achaias is new for the Peloponnese and the plants in the field may be the remnants of former cultivation as a fodder crop or for green manure as the species is nitrogen-fixing.

Lamiaceae**162. *Nepeta nuda* subsp. *lydiae* Davis**

Gr Nomos Lesvou, Eparchia Mithimnis: Mt Routfas,

ca. 5 km N of Agra, under *Platanus*, 500–700 m, 39°10'N, 26°05'E, 11.06.1988, *Hansen & Nielsen* 5404 (C !). (det. Kit Tan, August 2013).

New for Greece (and Europe). The plant had previously been identified as *N. nuda* subsp. *albiflora* (Boiss.) Gams, which in Greece, is restricted to the moderate altitudes of 300–1600 m in the phytogeographical regions North Central (Mt Paiko) and North East (Mts Chortiatis, Falakro, Pangeon, Rhodopi). The flowers in both subspecies have white corollas (hence the taxonomic confusion) but a completely different stem and leaf indumentum. *Nepeta nuda* subsp. *lydiae* was not reported by Hedge & Lamond (1982) from any of the East Aegean Islands. This subspecies is restricted to West and Southwest Anatolia, occurring in the provinces of Aydin, Izmir and Denizli.

163. *Stachys spinulosa* Sm.

Gr Nomos Messinias, Eparchia Pilias: Methoni fortress, 36°49'N, 21°42'E, 01.04.1969, *Stamatiadou* 5073 (ATH, C ! conf. Kit Tan, August 2013).

New for eparchia and nomos. Prior to this record, within the Peloponnese, conspicuously absent from Messinias although recorded from all other nomi (prefectures).

Ranunculaceae**164. *Ranunculus paludosus* Poir.**

Gr Nomos Attikis, Eparchia Idras: island of Hydra, along road and adjacent rocky limestone slopes from Chora to Monastery of Prof. Elias, in open *Pinus halepensis* woodland, ca. 300 m, 37°20'N, 23°27'E, 22.03.2013, *Zografidis* obs. (photo, conf. Kit Tan, April 2013).

Although widespread in Greece, the species had not previously been recorded from the much-visited island of Hydra. Several plants were noted, together with *Bellevalia dubia*, *Malcolmia graeca* subsp. *hydraea* and *Lamyropsis cynaroides*.

Agavaceae**165. *Agave americana* L.**

Gr Nomos & Eparchia Chiou: island of Psara, grazed *Sarcopoterium-Coridothymus* phrygana, 70 m, 38°33'N, 25°34'E, flowering, 15.08.2013, *Zografidis* obs. (photo, conf. Kit Tan, August 2013).

New for Psara. Native to Mexico; naturalized in Greece on islands and mainland coast.

Alliaceae**166. *Allium cupani* Raf.**

Gr Nomos & Eparchia Chiou: island of Psara, rocky calcareous/schistose slope above the Monastery of Dormition, 400–500 m, 38°35'N, 25°35'E, 15.08.2013, *Zografidis* s.n. (several photos, conf. Kit Tan, August 2013).

New for Psara and the floristic region East Aegean. The plants were late-flowering (August and September) and the bulb fibres were not splitting at the base to form a basal ring, thus differing from characters noted for *A. hirtovaginatatum* Kunth. The latter is present in the South Aegean and the East Aegean Islands, including Chios, the largest neighbouring island. *A. cupani* is mainly restricted to mainland Greece and absent from all the Greek islands with the exception of Thasos (N Aegean) and Megalonisos (W Aegean).

Amaryllidaceae**167. *Pancratium maritimum* L.**

Gr Nomos & Eparchia Chiou: island of Psara, Ftelio beach, sea level, 38°34'N, 25°33'E, 15.08.2013, *Zografidis* obs. (photo, conf. Kit Tan, August 2013); Limnos beach, sea level, 38°32'N, 25°34'E, 15.08.2013, *Zografidis* obs.

More than a hundred plants on Ftelio beach were noted in full flower, a most beautiful sight; nothing was on the beach a week later except goat droppings. Only two plants were observed at Limnos.

Orchidaceae**168. *Neotinea maculata* (Desf.) Stearn**

Gr Nomos Attikis, Eparchia Idras: island of Hydra, road to Monastery of Prof. Elias, near summit of hill, ca. 450 m, 37°20'N, 23°27'E, 22.03.2013, *Zografidis* obs. (photo, conf. Kit Tan, July 2013).

Apparently not recorded from Hydra. Found together with *Fritillaria rhodokanakis*.

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