

New floristic records in the Balkans: 31*

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Abstract: New chorological data are presented for 224 species and subspecies from Bulgaria (1, 79-109, 119-139, 145-151, 159-218) and Greece (2-78, 110-118, 140-144, 152-158, 219-224). The taxa belong to the following families: *Alliaceae* (55, 102, 118, 155, 209), *Amaranthaceae* (2, 3, 21-23, 140), *Amaryllidaceae* (187), *Apiaceae* (77, 78, 152, 159, 190, 191), *Araceae* (156), *Asclepiadaceae* (192), *Asteraceae* (1, 4, 24-31, 79, 80, 110, 119, 129, 145, 153, 160, 161, 164, 178-184, 193-195, 219), *Boraginaceae* (81, 146, 154), *Brassicaceae* (32, 82-84, 147, 196, 220), *Cactaceae* (111), *Campanulaceae* (5), *Caprifoliaceae* (6), *Caryophyllaceae* (7, 8, 33, 34, 85-89, 162, 163, 197, 198), *Chenopodiaceae* (35), *Colchicaceae* (143, 224), *Commelinaceae* (188), *Crassulaceae* (73, 74, 120, 199), *Cuscutaceae* (90), *Cyperaceae* (56-58, 144), *Dipsacaceae* (91, 200), *Euphorbiaceae* (36, 112, 214, 221), *Fabaceae* (9, 37, 38, 92-95, 121, 130, 165-169, 185, 215), *Gentianaceae* (39, 40), *Geraniaceae* (113), *Iridaceae* (59-62, 125), *Juncaceae* (103, 104, 217), *Lamiaceae* (10, 11, 96, 122, 131, 132, 170, 201, 222), *Liliaceae* s.l. (126, 138, 139, 210), *Linaceae* (75, 171, 202), *Lythraceae* (41), *Malvaceae* (12, 42), *Moraceae* (97, 123), *Nyctaginaceae* (114), *Oleaceae* (172), *Onagraceae* (43), *Ophioglossaceae* (20), *Orchidaceae* (127, 149-150, 157, 158), *Orobanchaceae* (203, 204), *Plantaginaceae* (44, 98), *Plumbaginaceae* (13, 133, 141), *Poaceae* (16-19, 63-72, 105-109, 151, 173-177, 189, 211-213, 218), *Polygonaceae* (14, 205, 216), *Ranunculaceae* (45, 124), *Rosaceae* (99, 134), *Rubiaceae* (46, 47, 76, 100, 135, 136, 142), *Ruppiaceae* (48), *Saxifragaceae* (206), *Scrophulariaceae* (101, 115, 137, 148, 207, 208), *Solanaceae* (15, 49-53, 116), *Trapaceae* (128), *Tropaeolaceae* (117), *Valerianaceae* (54), and *Verbenaceae* (223).

New species for science is: *Seseli halkensis* Cattaneo & al. (78).

New species for countries are: Bulgaria – *Sternbergia lutea* (187); Greece – *Cenchrus tribuloides* (16).

The publication includes contributions by: A. Asenov (1), B. Biel & Kit Tan (2-19), B. Biel & Kit Tan (20-72), C. Cattaneo & M. Grano (73-76), C. Cattaneo, Kit Tan & B. Biel (77-78), D. Dimitrov & V. Vutov (79-109), Ch. Galanos (110-118), A. Petrova, B. Assyov, R. Vassilev & I. Gerasimova (119-127), A. Petrova & Z. Hubenov (128), A. Petrova & R. Vassilev (129-139), K. Polymenakos & Kit Tan (140-144), S. Stoyanov & Y. Marinov (145-151), Kit Tan, D. Katsiotis & G. Vold (152-158), A. Tashev, D. Dimitrov & M. Delcheva (159-163), K. Vassilev (164-172), K. Vassilev & H. Pedashenko (173-178), V. Vladimirov, A. Tashev & M. Delcheva (178-189), V. Vutov & D. Dimitrov (190-213), D. Zahariev (214-218), G. Zarkos, V. Christodoulou, Kit Tan & G. Vold (219-224).

This is an ongoing report in the 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 and for Greece by Kit Tan.

Report 1

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Asteraceae

1. *Centaurea kerneriana* Janka (Halácsy) Dostál (Fig. 1)

Bu Pirin Mts (*Northern*): Kamenishki Cirque: mosaic population in rocky and grassy places, along the river, on eastern slopes of Kadiev Ridge, on silicate terrain, in a *Pinus mugo* habitat, 2166 m, 41°41'24"N, 23°32'10"E, coll. A. Asenov (SO 107 716).

So far this Bulgarian endemic has been known only from the Balkan Range (*Central*) and Rila Mts (Delipavlov 2011). No direct threats to the population have been observed in the reported new locality.



Fig. 1. *Centaurea kerneriana* (photo A. Asenov).

Reports 2–19

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This is the first report of new plant-records for the island of Thasos (Nomos Kavallas, Eparchia Thasou) based on a short five-day visit in October 2002 and a more recent one in November 2016. The records listed are all new to the island and ten species were found to be new to the floristic region N Aegean islands (NAe) as circumscribed in *Flora Hellenica* (Strid & Tan 1997). Occurrence on the other N Aegean islands is also provided. *Cenchrus tribuloides* is reported as new for Greece.

Amaranthaceae

2. *Amaranthus blitum* L.

Gr Thasos: Limenaria, ruderal places and park in harbour area, 5 m, 40°37'33"N, 23°34'36"E, 12.11.2016, Biel 16.026.

New for the N Aegean islands.

3. *Amaranthus bouchonii* Thell.

Gr Thasos: N outskirts of Limenas, ruderal places and park in harbour area, 3 m, 40°46'47"N, 24°42'34"E, 20.10.2002, Biel 02.16.

New for the N Aegean islands.

Asteraceae

4. *Lactuca saligna* L.

Gr Thasos: along dirt road W of Potamia, phrygana with *Pteridium* on schistose slope, 600 m, 40°42'59"N, 24°42'06"E, 22.10.2002, Biel 02.29.

Recorded from Samothraki and Limnos.

Campanulaceae

5. *Campanula delicatula* Boiss.

Gr Thasos: E-SE of Limenas, *Cistus* phrygana under *Pinus*, micaceous schist, 120 m, 40°46'38"N, 24°43'19"E, 18.10.2002, Biel 02.01.

Recorded from Samothraki.

Caprifoliaceae

6. *Lonicera japonica* Thunb.

Gr Thasos: Limenas, ruderal places and road margins in village, 8 m, 40°46'35"N, 24°42'20"E, 12.11.2016, Biel 16.025.

New for the N Aegean islands, locally established. Also noted at Skala Potamias.

Caryophyllaceae

7. *Dianthus tripunctatus* Sm.

Gr Thasos: E outskirts of Skala Sotiros, grazed olive plantations near road, 30 m, 40°43'38"N, 24°33'01"E, 20.10.2002, Biel 02.22.

Recorded from Samothraki.

8. *Minuartia setacea* (Thuill.) Hayek

Gr Thasos: W-SW of Potamia, open phrygana on rocky NE ridge of Profitis Ilias, schist and granite, 1020 m, 40°43'35"N, 24°41'53"E, 22.10.2002, Biel 02.36.

Recorded from Samothraki.

Fabaceae

9. *Amorpha fruticosa* L.

Gr Thasos: N outskirts of Limenas, ruderal places and park in harbour area, 3 m, 40°46'47"N, 24°42'34"E, 09.11.2016, Biel 16.001.

New for the N Aegean islands.

Lamiaceae**10. *Calamintha menthifolia* Host. (Fig. 2)**

Gr Thasos: W of Potamia, meadow by concrete road, on schist, 190 m, 40°43'12"N, 24°43'09"E, 22.10.2002, *Biel* 02.27.

Previously recorded as *C. officinalis* Moench (Stojanov & Kitanov 1946: 148) and *C. sylvatica* Bromf. (*Snogerup* 991, LD).

11. *Teucrium montanum* subsp. *helianthemoides* (Adamovic) Baden

Gr Thasos: W-SW of Potamia, open phrygana on rocky NE ridge of Profitis Ilias, schist and granite, 970 m, 40°43'36"N, 24°41'58"E, 22.10.2002, *Biel* 02.32.

New for N Aegean islands.

Malvaceae**12. *Malva punctata* (All.) Alef.**

Gr Thasos: W of Potamia, open phrygana with pine trees at rocky NE ridge of Profitis Ilias, on schist and granite, 500 m, 40°43'44"N, 24°42'43"E, 22.10.2002, *Biel* 02.39.

Recorded from Samothraki.

Plumbaginaceae**13. *Acantholimon aegaeum* F.K. Mey. (Figs. 3 & 4)**

Gr Thasos: SW slopes of Mt Fanos, NE of Rachoni, limestone rock and scree, 200–340 m, 40°46'15"N, 24°37'38"E, 14.11.2016, *Biel* 16.040.

New for N Aegean islands, previously recorded only from the E Aegean islands of Chios and Samos (see Fig. 4). A large population comprising 50-80 spiny cushions was found.

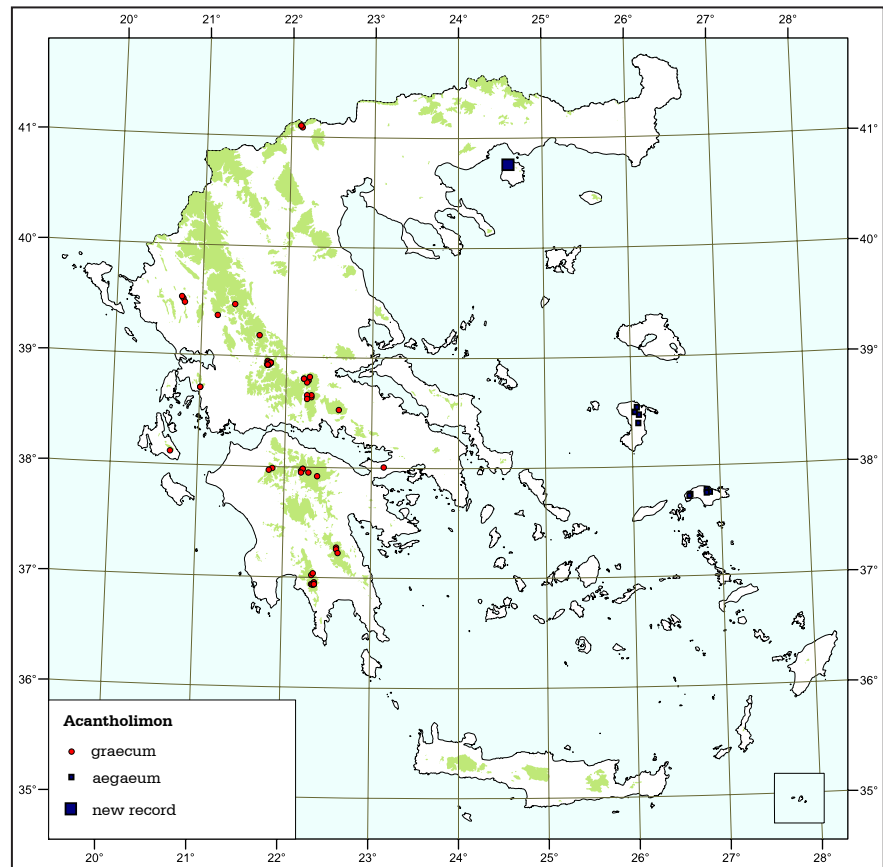


Fig. 4. Distribution of *Acantholimon aegaeum* and *A. graecum* in Greece.



Fig. 2. *Calamintha menthifolia* (photo B. Biel).



Fig. 3. *Acantholimon aegaeum* (photo B. Biel).

Polygonaceae**14. *Polygonum bellardii* All.**

Gr Thasos: E-NE of Sotiros, *Erica-Cistus*-phrygana slopes by dirt road, 250 m, 40°43'19"N, 24°35'41"E, 20.10.2002, *Biel* 02.24.

Recorded from Samothraki, Limnos and Ag. Evstratios.

Solanaceae**15. *Lycium barbarum* L.**

Gr Thasos: W of Limenaria, waste ground at beach, 2 m, 40°37'32"N, 24°33'47"E, 12.11.2016, *Biel* 16.030.

New for the N Aegean islands.

Poaceae**16. *Cenchrus tribuloides* L. (Fig. 5)**

Gr Thasos: Skala Rachoniou, at roadside, 6 m, 40°46'34"N, 24°36'15"E, 11.11.2016, *Biel* 16.022; W-NW of Rachoni, edge of dirt road, 30 m, 40°45'51"N, 24°37'07"E, 14.11.2016, *Biel* obs.

New for Greece. On dampish ground at roadsides, late-flowering, with 15–30 individuals in full fruiting state. Native to eastern and southern coast of N America, rarer in S America. The large “burs” (fascicles) are white villous-pubescent and with a single, *ca.* 6 mm



Fig. 5. *Cenchrus tribuloides* (photo B. Biel).

long, sessile spikelet within. There are several reports of *C. longispinus* (Hack.) Fernald from NE Greece. It is possible these records may also refer to *C. tribuloides*.

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

Gr Thasos: N outskirts of Limenas, ruderal places and park in harbour area, 3 m, 40°46'47"N, 24°42'34"E, 20.10.2002, *Biel* 02.15.

Recorded from Samothraki and Limnos. Probably a recent introduction, now naturalized.

18. *Paspalum dilatatum* Poir.

Gr Thasos: SE of Potamia, waste ground at road junction, 70 m, 40°42'51"N, 24°44'07"E, 09.11.2016, *Biel* 16.055.

New for the N Aegean islands.

19. *Sporobolus indicus* (L.) R. Br.

Gr Thasos: N outskirts of Limenas, ruderal places and park in harbour area, 3 m, 40°46'47"N, 24°42'34"E, 09.11.2016, *Biel* 16.003.

New for the N Aegean islands.

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

Reports 20–72**Burkhard Biel¹ & Kit Tan²**

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This is the first report of new plant-records for the islands of Serifos (Eparchia Keas) and Sifnos (Eparchia Milou) in phytogeographical region Kiklades, Nomos Kikladon. They are based on visits carried out in 2003 and 2004. The 28 records listed for Serifos and also 28 for Sifnos are new for each island. Two species were found to be new for the floristic region Kiklades (Kik) as circumscribed in *Flora Hellenica* (Strid & Tan 1997), bringing the total number of new records for this area to 44. Occurrence on the other Kikladian islands is also summarized.

Ophioglossaceae**20. *Ophioglossum lusitanicum* L. (Fig. 6)**

Gr Sifnos: S-SW of Platy Ghialos, in *Juniperus* scrub near Anglistries Skali, on granite, marble and schist, 120 m, 36°55'36"N, 24°43'29"E, 25.02.2004, *Biel* 04.053.

Also noted near Vathi.

- Serifos: S-SE of Livadi, *Sarcopoterium-phrygana* on rocky granitic slopes S of Livadaki beach, 30 m, 37°08'13"N, 24°31'14"E, 28.02.2004, *Biel* 04.116.
Also noted at Livadi. Mainly occurring in C Kiklades.

Amaranthaceae

21. *Amaranthus blitoides* S. Watson

- Gr** Sifnos: Kamares, beach with small dunes and brackish pools, 3 m, 36°59'27"N, 24°40'45"E, 11.10.2003, *Biel* 03.328.

On several islands in N and C Kiklades.

22. *Amaranthus graecizans* L.

- Gr** Sifnos: Vathi, roadside and vegetable gardens, 5 m, 36°56'01"N, 24°41'25"E, 23.10.2004, *Biel* 04.566.

N and C Kiklades.

23. *Amaranthus viridis* L.

- Gr** Sifnos: stream gorge near Kastro, on schist, 5 m, 36°58'22"N, 24°44'44"E, 08.10.2003, *Biel* 03.290; W of Apollonia, ruderal places and stone stairways in village, 210 m, 36°58'37"N, 24°43'17"E, 23.10.2004, *Biel* 04.541 & 04.571.

N and C Kiklades.



Fig. 6. *Ophioglossum lusitanicum* (photo B. Biel).

Asteraceae

24. *Erigeron sumatrensis* Retz.

- Gr** Serifos: SSE of Livadi, remnants of coastal swamp near holiday homes, 2 m, 37°08'23"N, 24°30'53"E, 13.10.2003, *Biel* 03.338.

N Kiklades.

25. *Filago contracta* (Boiss.) Chrtek & Holub

- Gr** Serifos: S-SW of Mega Livadi, *Sarcopoterium-phrygana* on rocky slope east of castle ruin, on granite and basalt, 140 m, 37°07'54"N, 24°25'37"E, 26.04.2003, *Biel* 03.173.

Most of Kiklades, not yet recorded for Kea and Kithnos.

26. *Filago eriocephala* Guss.

- Gr** Sifnos: S-SE of Apollonia-Katavati, terraced pasture and uncultivated ground by donkey path, on marble and schist, 230 m, 36°57'33"N, 24°43'32"E, 01.06.2004, *Biel* 04.267.

Most of Kiklades.

27. *Scorzonera cretica* Willd.

- Gr** Sifnos: SE of Kamares, rocky slope near Kapsalos, phrygana on marble, 470 m, 36°58'39"N, 24°41'20"E, 06.06.2004, *Biel* 04.327 (det. S. Snogerup, 2004).

- Serifos: W-SW of Hora, rocky outcrops on terraced slope above chapel Ag. Pandeileimonas, on granite, 400 m, 37°09'24"N, 24°28'53"E, 16.06.2004, *Biel* 04.457 (det. H. Runemark, 2005).

New for the Kiklades.

28. *Sonchus tenerrimus* L.

- Gr** Serifos: Livadi, estuary and ruderal places on beach, 3 m, 37°08'50"N, 24°31'03"E, 16.10.2003, *Biel* 03.355.

Most of Kiklades. Also noted near Apollonia and Vathi.

29. *Symphytichum squamatum* (Spreng.) G.L. Nesom

- Gr** Serifos: Livadi, ruderal places in village, 20 m, 37°08'25"N, 24°30'48"E, 13.10.2003, *Biel* 03.334a; S-SE of Livadi, remnants of coastal swamp near holiday homes, 2 m, 37°08'23"N, 24°30'53"E, 13.10.2003, *Biel* 03.335.

N and C Kiklades.

30. *Taraxacum hellenicum* Dahlst.

- Gr** Sifnos: NE of Vathi, phrygana slope with *Juniperus* at Psilo Petali, on limestone and sandstone, 380 m, 36°57'13"N, 24°42'46"E, 24.02.2004, *Biel* 04.051.

C and S Kiklades.

31. *Taraxacum minimum* (Briq.) Terracc. (Fig. 7)

Gr Sifnos: W of Apollonia, edge of path between walls, on schist, 220 m, 36°58'22"N, 24°43'17"E, 07.10.2003, *Biel* 03.275; NW of Artemonas, schistose rocky slope, 200 m, 36°59'52"N, 24°42'43"E, 22.10.2004, *Biel* 04.523; S-SW of Katavati, along stairway between walls, on schist, 250 m, 36°58'04"N, 24°43'23"E, 25.10.2004, *Biel* 04.561.

Mainly in C Kiklades. Also noted on Serifos but no material was collected.



Fig. 7. *Taraxacum minimum* (photo B. Biel).

Brassicaceae**32. *Erophila praecox*** (Steven) DC.

Gr Serifos: N of Hora, phrygana slope at Monopati, on granitic rock, 220 m, 37°09'41"N, 24°30'28"E, 27.02.2004, *Biel* 04.084.

Most of the Kiklades. Also noted in vicinity of Hora, Panagia and Sikamia.

Caryophyllaceae**33. *Dianthus tripunctatus*** Sm.

Gr Sifnos: N of Troulaki, phrygana slope with olive trees, on marble and limestone, 320 m, 37°00'40"N, 24°40'36"E, 02.06.2004, *Biel* 04.279.

N and S Kiklades, not observed on the larger islands of Naxos and Paros.

34. *Moenchia graeca* Boiss. & Heldr.

Gr Serifos: W-NW of Hora, phrygana slope W of Petrias peak, on granite and basalt, 440 m, 37°09'39"N, 24°29'10"E, 25.04.2003, *Biel* 03.147.

N and C Kiklades.

Chenopodiaceae**35. *Dysphania ambrosioides*** (L.) Mosyakin & Clemants

Gr Serifos: Livadi, estuary and ruderal places on beach, 3 m, 37°08'50"N, 24°31'03"E, 16.10.2003, *Biel* 03.358a.

N and C Kiklades. Also noted on Sifnos (from Apollonia and Cheronissos) but no material was collected.

Euphorbiaceae**36. *Chrozophora obliqua*** (Vahl) A. Juss. ex Spreng.

Gr Serifos: N of Koutalas, phrygana on narrow ridge near dirt road to Aspro Pirgos, on limestone and basalt, 260 m, 37°08'52"N, 24°27'03"E, 19.06.2004, *Biel* 04.485.

N and S Kiklades.

Fabaceae**37. *Medicago rigidula*** (L.) All.

Gr Serifos: Livadi, estuary and ruderal places on beach, 3 m, 37°08'50"N, 24°31'03"E, 26.02.2004, *Biel* 04.080.

Mainly N and C Kiklades.

38. *Ononis spinosa* subsp. *antiquorum* (L.) Arcang.

Gr Sifnos: SE of Katavati-Simbopoula, uncultivated terraces near sports field, on schist, 220 m, 36°57'20"N, 24°43'53"E, 01.06.2004, *Biel* 04.271.

Mainly N and C Kiklades.

Gentianaceae**39. *Blackstonia perfoliata*** subsp. *intermedia* (Ten.) Zeltner

Gr Serifos: SSE of Kamares, steep rocky slope above reservoir, on marble, 140 m, 36°59'09"N, 24°40'51"E, 140 m, 06.06.2004, *Biel* 04.321.

Blackstonia perfoliata occurs on most of the Kiklades; *B. p.* subsp. *intermedia* (diploid) is recorded from Naxos.

40. *Centaurium maritimum* (L.) Fritsch

Gr Serifos: S of Livadi, streambank SE of Ramos, on granite, 40 m, 37°07'53"N, 24°30'42"E, 23.04.2003, *Biel* 03.116.

Most of Kiklades except the southeast. Also noted near Hora, Kalitsos, Mega Livadi and Sikamia.

Lythraceae**41. *Lythrum borysthenicum*** (Schrank) Litv.

Gr Serifos: slopes of Oros plateau SW of Hora, pasture by small stream, on schist and basalt, 360 m, 37°08'22"N, 24°29'09"E, 15.10.2003, *Biel* 03.353.

On Mikonos and Sifnos.

Malvaceae**42. *Malva arborea*** (L.) Webb & Berthel.

Gr Serifos: rocky slopes and ruderal places W of Hora, on granite, 220 m, 37°09'21"N, 24°30'21"E, 21.06.2004, *Biel* 04.508.

Most of Kiklades.

Onagraceae**43. *Epilobium tetragonum* L.**

Gr Serifos: NW of Hora, phrygana slope at rocky stream bed, granite, 450 m, 37°09'57"N, 24°29'05"E, 19.06.2004, *Biel* 04.482.

On the larger islands of Paros and Naxos.

Plantaginaceae**44. *Plantago major* subsp. *intermedia* (Gilib.) Lange**

Gr Sifnos: NW of Kastro, chapel below Moni Panagia I Poulati, on schist, 40 m, 36°59'15"N, 24°44'19"E, 08.10.2003, *Biel* 03.300.

Reported from Naxos.

Ranunculaceae**45. *Ranunculus ficaria* subsp. *ficariiformis* (F.W. Schultz) Rouy & Fouc.**

Gr Serifos: W of Panagia, *Salvia*-phrygana on ridge, granite and schist, 420 m, 37°10'50"N, 24°28'27"E, 28.02.2004, *Biel* 04.108.

Mainly N and C Kiklades. Also noted at Panagia.

Rubiaceae**46. *Rubia peregrina* L.**

Gr Sifnos: Kastro, edge of dirt road by stream near chapel Ag. Konstantinos, 40 m, 36°59'08"N, 24°44'06"E, 08.10.2003, *Biel* 03.306.

Mainly N and C Kiklades.

47. *Rubia tinctorum* L.

Gr Sifnos: N of Apollonia, field margin and walls along road to Artemonas, on schist, 220 m, 36°58'46"N, 24°43'40"E, 04.06.2004, *Biel* 04.310.

— Serifos: S-SE of Livadi, remnants of coastal swamp near holiday homes, 2 m, 37°08'23"N, 24°30'53"E, 13.10.2003, *Biel* 03.337.

On larger islands in N and C Kiklades.

Ruppiaceae**48. *Ruppia maritima* L.**

Gr Sifnos: Kamares, beach with small dunes and brackish pools, 3 m, 36°59'27"N, 24°40'45"E, 25.10.2004, *Biel* 04.554.

Mainly C Kiklades.

Solanaceae**49. *Solanum elaeagnifolium* Cav.**

Gr Sifnos: Apollonia-Artemonas, road margins, on schist, 220 m, 36°58'46"N, 24°43'32"E, 08.10.2003, *Biel* 03.307.

Scattered; on Siros, Milos and Amorgos.

50. *Solanum luteum* Mill. subsp. *luteum*

Gr Sifnos: E of Apollonia, rocky phrygana slope between fields near Valanies, 170 m, 36°58'42"N, 24°43'48"E, 08.10.2003, *Biel* 03.280.

Solanum luteum occurs in most of the Kiklades, subsp. *luteum* is reported from Andros. Also noted near Kastro and Katavati on Sifnos.

51. *Solanum nigrum* L. subsp. *nigrum*

Gr Sifnos: N-NW of Apollonia, ruderal places and roadsides, on schist, 220 m, 36°58'46"N, 24°43'32"E, 23.02.2004, *Biel* 04.023.

N and C Kiklades. Also noted near Kamares.

52. *Solanum nigrum* subsp. *schultesii* (Opiz) Wessely

Gr Sifnos: Kastro, edge of dirt road by stream near chapel Ag. Konstantinos, 40 m, 36°59'08"N, 24°44'06"E, 40 m, 08.10.2003, *Biel* 03.305.

Reported from Andros and Amorgos.

53. *Solanum rostratum* Dunal

Gr Sifnos: S of Kamares, grazed phrygana slope, on marble and schist, 50 m, 36°59'25"N, 24°40'59"E, 25.10.2004, *Biel* 04.552.

New for Kiklades.

Valerianaceae**54. *Valerianella microcarpa* Loisel.**

Gr Serifos: SE of Koutalas, area with small sand dunes and broad, flat streambed, 3 m, 37°07'38"N, 24°27'48"E, 3 m, 26.04.2003, *Biel* 03.164.

On the larger islands in N and C Kiklades (Andros, Paros and Naxos).

Alliaceae**55. *Allium dentiferum* Webb. & Berthel.**

Gr Serifos: S of Hora, olive grove in valley near Nochta, on granite, 30 m, 37°08'50"N, 24°30'11"E, 18.06.2004, *Biel* 04.476.

On Mikonos, Paros, Naxos and Folegandros.

Cyperaceae**56. *Cyperus fuscus* L.**

Gr Sifnos: NW of Kastro, chapel below Moni Panagia I Poulati, on schist, 40 m, 36°59'15"N, 24°44'19"E, 08.10.2003, *Biel* 03.299 & 03.304.

— Serifos: W-SW of Panagia, phrygana slope by old path near a small stream, on schist, 300 m, 37°10'28"N, 24°28'33"E, 14.10.2003, *Biel* 03.349a.

Reported from Naxos and Andros.

57. *Isolepis cernua* (Vahl) Roem. & Schult.

Gr Sifnos: NW of Artemona, rocky slope near Tris

Piges, on schist, 200 m, 36°59'52"N, 24°42'43"E,
22.10.2004, *Biel* 04.524.

Mainly N and C Kiklades.

58. *Isolepis setacea* (L.) R. Br.

Gr Serifos: SW of Livadi, stream banks, on schist and granite, 120 m, 26.04.2003, *Biel* 03.156.

Reported from Andros.

Iridaceae

59. *Iris tuberosa* L.

Gr Sifnos: NW of Katavati, slope with olive trees, on limestone, 220 m, 36°58'22"N, 24°43'16"E,
22.02.2004, *Biel* 04.001.

Mainly N and C Kiklades. Also noted near Apollonia and Platy Ghialos.

60. *Freesia leichtlinii* subsp. *alba* (G.L. Mey.) J.C. Manning & Goldblatt

Gr Serifos: W-NW of Hora, phrygana slope W of Petrias peak, granite and basalt, 440 m, 37°09'39"N, 24°29'10"E, 25.04.2003, *Biel* 03.145.

Reported from Amorgos.

61. *Romulea bulbocodium* (L.) Sebast. & Mauri

Gr Sifnos: SW of Apollonia, rocky SE slopes of Profitis Ilias, phrygana on marble, 450 m, 36°58'11"N, 24°43'04"E, 26.02.2004, *Biel* 04.060.

Almost throughout Kiklades, not yet recorded from Kea. Also noted near Apollonia and Katavati on Sifnos.

62. *Romulea linaresii* Parl. (Fig. 8)

Gr Sifnos: N-NW of Apollonia, phrygana slope at old path near Metallia, limestone and basalt, 270 m, 37°00'18"N, 24°42'46"E, 23.02.2004, *Biel* 04.038.

Mainly C Kiklades.

Poaceae

63. *Avena sterilis* subsp. *ludoviciana* (Durieu) Gillet & Magne

Gr Sifnos: SSE of Kamares, steep rocky slope above reservoir, phrygana on marble, 140 m, 36°59'09"N, 24°40'51"E, 06.06.2004, *Biel* 04.322.

On Milos, Naxos and Amorgos.

64. *Digitaria sanguinalis* (L.) Scop.

Gr Sifnos: W-SW of Apollonia, edge of dirt road in small valley, on schist, 170 m, 36°58'23"N, 24°43'06"E, 06.06.2004, *Biel* 04.247.

Mainly N and C Kiklades. Also noted near Kastro.

65. *Echinaria capitata* (L.) Desf.

Gr Serifos: NNE of Koutalas, *Calicotome*-phrygana on steep grassy slope near Marties, on basalt

and granite, 410 m, 37°09'20"N, 24°27'33"E,
26.04.2003, *Biel* 03.175.

Most of Kiklades.

66. *Maillea crypsoides* (d'Urv.) Boiss.

Gr Serifos: SE of Koutalas, area with small sand dunes and broad, flat streambed, 3 m, 37°07'38"N, 24°27'48"E, 26.04.2003, *Biel* 03.162.

Mainly in C Kiklades.

67. *Piptatherum miliaceum* (L.) Coss. subsp. *miliaceum*

Gr Sifnos: N-NE of Vathi, rocky phrygana slope above valley cultivated with olives, on schist, 30 m, 36°56'28"N, 24°41'42"E, 23.10.2004, *Biel* 04.538 (det. H. Scholz).

Most of Kiklades. Also at Apollonia, Artemona, Faros, Kastro, Katavati, Platy Ghialos and Vathi.

68. *Piptatherum miliaceum* subsp. *thomasii* (Duby) Freitag

Gr Sifnos: SE of Kastro, rocky pasture slope near chapel Ag. Antonios, on schist, 40 m, 36°58'25"N, 24°44'48"E, 08.10.2003, *Biel* 03.294 (det. H. Scholz).

Mainly N and C Kiklades.

69. *Poa annua* L.

Gr Serifos: Livadi, beach with estuary and ruderal places, 3 m, 37°08'50"N, 24°31'03"E, 02.03.2004, *Biel* 04.131.

Several islands including Andros, Naxos, Sifnos, Milos, Amorgos and Anafi.

70. *Polypogon maritimus* Willd. subsp. *maritimus*

Gr Serifos: W of Hora, damp places by stream near Livadhera, on schist and basalt, 400 m, 37°09'16"N, 24°28'45"E, 16.06.2004, *Biel* 04.458.

Most of Kiklades. Also noted near Livadi.



Fig. 8. *Romulea linaresii* (photo B. Biel).

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

Gr Sifnos: W of Apollonia-Ano Petali, ruderal places and stone stairways in village, 210 m, 36°58'37"N, 24°43'17"E, 07.10.2003, *Biel* 03.271.

Mainly N and C Kiklades. Also noted near Apollonia-Exambela.

72. *Setaria viridis* (L.) P. Beauv.

Gr Serifos: Megha Livadi, road margins and phrygana slope at northern outskirts of village, on limestone and schist, 5 m, 37°08'32"N, 24°25'55"E, 19.06.2004, *Biel* 04.456.

Mainly N and C Kiklades (Andros, Sifnos, Paros, Naxos, Folgandros, Sikinos, Amorgos).

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

Reports 73–76

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A few new plant-records are provided for the islands of Tilos and Chalki (phytogeographical region E Aegean, Nomos Dodekanisou, Eparchia Rodou) based on a visit in August 2016.

Crassulaceae

73. *Sedum sediforme* (Jacq.) Pau

Gr Tilos: Prinos, NE of Megalo Horio, crevices of limestone cliffs, 356 m, 36°27'37"N, 27°21'30"E, 10.08.2016, *Cattaneo & Grano* Tilo11 (herb. Cattaneo).

Dipsacaceae

74. *Lomelosia variifolia* (Boiss.) Greuter & Burdet (Fig. 9)

Gr Tilos: near Ag. Pandeimon Monastery on the west side of Mt Profitis Ilias, 396 m, 36°26'33"N, 27°18'25"E, 13.08.2016, *Cattaneo & Grano* obs. (photos).

— Chalki: Keramos, N side of island, 243 m, 36°14'13"N, 27°34'42"E, 02.08.2016, *Cattaneo & Grano* CK33 (herb. Cattaneo).

On the island of Tilos, only three specimens were noted in crevices of vertical limestone cliffs, together with *Linum arboreum*, *Achillea cretica* and *Inula verbascifolia* subsp. *heterolepis*. On Chalki, some plants were collected from crevices of vertical limestone cliffs, together with *Ptilostemon chamaepeuce* and *Inula ver-*



Fig. 9. *Lomelosia variifolia* from Tilos (photo C. Cattaneo).

bascifolia subsp. *heterolepis*. Carlström (1987) mentions the occurrence of *L. variifolia* on Chalki (1987: 86) but omitted it in the map (1987: 205) and there is no specimen at LD. The species is restricted to Karpathos, Rodos, Chalki, Tilos and Simi in the S Aegean, and to Muğla in SW Anatolia.

Linaceae

75. *Linum arboreum* L.

Gr Tilos: Krialos, near Ag. Pandeimon Monastery, in crevices of limestone cliffs, 362 m, 36°27'08"N, 27°18'20"E, 12.08.2016, *Cattaneo & Grano* obs. (photos); near Ag. Pandeimon Monastery on the west side of Mt Profitis Ilias, 36°26'33"N, 27°18'25"E, 13.08.2016, *Cattaneo & Grano* Tilo9 (herb. Cattaneo). A SE Aegean endemic (Kriti, Karpathos, Kasos, Rodos, Chalki, Simi, Astipalea).

Rubiaceae

76. *Asperula tournefortii* Spreng. (Fig. 10)

Gr Tilos: Mesovouno, Tholos Bay, S of Livadia, N-facing limestone cliffs, 210 m, 36°23'23"N, 27°23'31"E, 08.08.2016, *Cattaneo & Grano* Tilo4 (herb. Cattaneo).

SE Aegean endemic.



Fig. 10. *Asperula tournefortii* (photo C. Cattaneo).

Reports 77–78

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Investigations on the chasmophytic flora of some SE Aegean islands by the first author (CC) revealed two species of *Seseli* on the island of Chalki, one of which is an undescribed taxon endemic to the islands of Chalki and Tilos (Nomos Dodekanisou, Eparchia Rodou).

Apiaceae

77. *Seseli crithmifolium* (DC.) Boiss.

Gr Nomos Dodekanisou, Eparchia Rodou: island of Chalki, crevices of vertical N-facing limestone cliffs at Klisoura, 200–400 m, 36°13'N, 27°32'E, 02.08.2016, Cattaneo obs.

New for Chalki and second report for the E Aegean islands, the first being from Rodos. There it was recorded based on observations at Armenistis by H. Runemark and A. Carlström. Apparently no material was collected perhaps because the plants were growing far out of reach (Carlström 1987: 83).

78. *Seseli halkensis* Cattaneo, Kit Tan & Biel, **sp. nov.** (Figs. 11–13)

Gr Nomos Dodekanisou, Eparchia Rodou: island of Chalki, crevices of vertical N-facing limestone cliffs at Klisoura, 200–400 m, 36°13'N, 27°32'E, 02.08.2016, Cattaneo CK35 (holotype C; isotypes ATH, herb. Cattaneo).

— island of Tilos, crevices of limestone rock, *ca.*



Fig. 11. *Seseli halkensis* from Chalki (photo C. Cattaneo).

360 m, 36°27'N, 27°18'E, 12.08.2016, Cattaneo Tilo27 (herb. Cattaneo).

Monocarpic perennial 60–120 cm tall, with stout rootstock. Stems two to several, erect to erect-ascending, terete, solid, finely striate, green, glabrous; fibrous collar absent. Lateral branches 5–10, ± evenly spaced along upper half or two-thirds of stem, lower than or overtopping the main stem, each branch terminating in a large umbellate inflorescence 5–7 cm in diameter. Basal and lower cauline leaves 3-pinnatisect; lamina ovate in outline, up to 30 cm long, long-petiolate, glabrous, glaucous-green; lobes sessile, trifid with linear-lanceolate, 1–20 × 0.5–2 mm, thickened, rigid segments (laciniae). Upper cauline leaves similar, 2–3-pinnatisect, sessile with a sheathing base. Umbels with 20–30 puberulent, unequal rays up to 4 cm long; bracts ovate, *ca.* 1 cm long, sometimes absent from lateral umbels; bracteoles several, 3–4 mm long, connate at base. Flowers numerous. Sepals

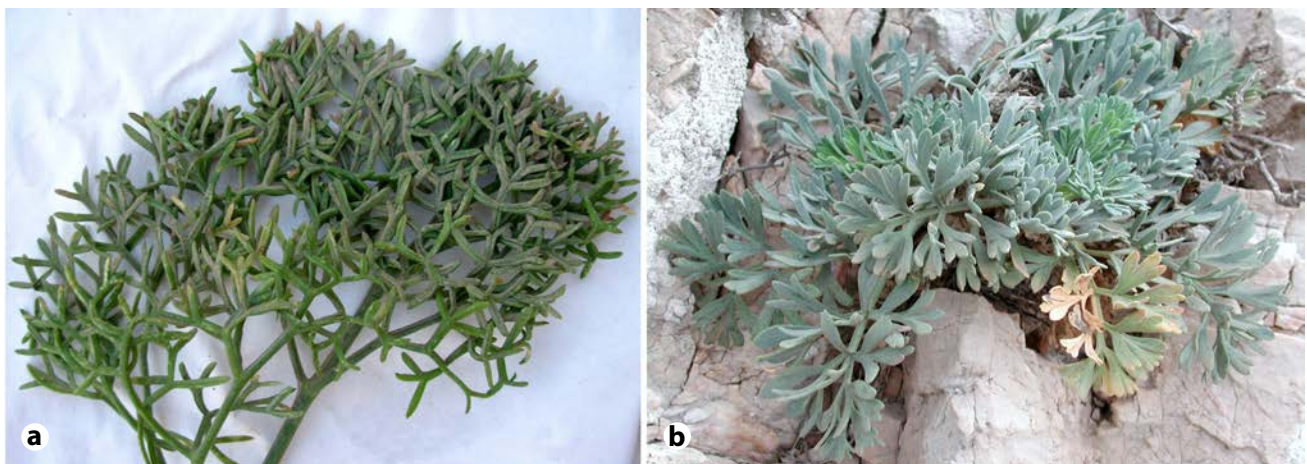


Fig. 12. a) *Seseli halkensis* from Chalki and b) *S. crithmifolium* from Folegandros: basal leaves (prepared by B. Biel).

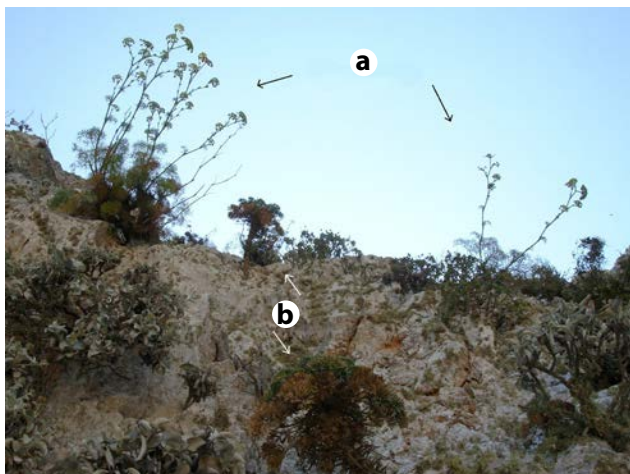


Fig. 13. a) *Seseli halkensis* and b) *S. crithmifolium* growing together on Chalki (photo C. Cattaneo).

minute, inconspicuous, less than 0.5 mm long. Petals puberulent, ca. 1.5 mm long, white tinged pinkish, apex inflexed; anthers cream. Fruit oblong, 5–7 mm long, pubescent; mericarps strongly 5-ridged; style 1–1.8 mm, longer than stylopodium, deflexed in fruit.

Habitat and ecology: In crevices of vertical hard limestone cliffs a few meters inland from the coast, in relatively cool and shady places at altitudes of 200 to 400 m. Other plants in the near vicinity are *Inula verbascifolia* subsp. *heterolepis*, *Helichrysum orientale*, *Linum arboreum* and *Ptilostemon chamaepeuce*. In two localities on Chalki *Lomelosia variifolia* and *Asperula tournefortii* were also noted. The plants flowered in August, with full fruiting in September. This is a Greek endemic apparently restricted to the islands of Chalki and Tilos to the west of Rhodos.

Taxonomic affinities: *Seseli halkensis* is closely related to *S. crithmifolium* (DC.) Boiss. for which two subspecies have been described. The latter is endemic to the C and S Aegean islands, including Kriti, Karpathos, Saria, Folegandros, Kardiotissa, Sikinos, Keros, Makares, Denousa, Amorgos, Atimo, Nikouria and Kinaros. A record from Rodos was based on field notes by Runemark and Carlström and no collections have been made (see report 77). According to Runemark (pers. comm. to A. Strid in 2006), *S. crithmifolium* subsp. *crithmifolium* and *S. c.* subsp. *aegaeum* (see Fig. 14) cannot be distinguished from each other. *Seseli crithmifolium* was formerly treated as a subspecies of *S. gummiferum* Pall. ex Sm. but the latter is now considered a separate

species restricted to N Anatolia and the Crimea. A third related species, *S. corymbosum* Boiss. & Heldr. occurs in south central Anatolia.

Seseli halkensis differs from *S. crithmifolium* in habit, the stems and lateral branches having a more slender facies. *Seseli crithmifolium* has a stout rigid rootstock bearing the persistent remains of lower leaves (see Figs. 13 & 14) and with hardly any, or a few, lateral branches in the uppermost part of the stem. *Seseli halkensis* has 3-pinnatisect, glaucous-green, glabrous leaves with rigid linear-lanceolate segments (laciniae) while in *Seseli crithmifolium* the leaves are 2-pinnatisect, greyish-green, glabrous or velutinous, with flattened, broadly lanceolate to ovate,



Fig. 14. *Seseli crithmifolium* from Kriti (Davis & Barneby 1987, type of *S. gummiferum* subsp. *aegaeum* P.H. Davis: <http://data.rbge.org.uk/herb/E00000551>).

soft, semi-fleshy segments (see Fig. 12). The umbel rays in *S. halkensis* are 20–30 and up to 4 cm long, while in *S. crithmifolium* they are more numerous and longer, often 20–50 (60) and up to 5 cm long, forming large, dense, compact umbels. The fruits of *S. halkensis* are 5–7 mm long as compared with those of *S. crithmifolium* which are 3–4 mm. Both taxa are clearly perennial.

On Chalki, *Seseli halkensis* and *S. crithmifolium* grow in close proximity to each other in crevices of vertical, NW- to NE-facing limestone cliffs and steep rocky slopes, at altitudes of 100–430 m, often out of reach (see Fig. 13). Elsewhere in the Aegean, *S. crithmifolium* occurs on limestone, sandstone and siliceous schist, from sea-level to a maximal altitude of 1100 m on Mt Kalilimni, Karpathos. *Seseli crithmifolium* would make a most attractive ornamental with its beautiful greyish-green foliage and large white-flowered umbels but the constant drying sea breeze necessary to keep it in optimal condition would be difficult to attain or imitate in cultivation. We believe that *S. halkensis* should not be regarded as a subspecies of *S. crithmifolium* as there is no geographical separation between the two taxa, nor should it be treated as a variant of it since the differences between the two species are so pronounced.

Eponymy: named for the island of Chalki in the SE Aegean area.

Reports 79–109

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Asteraceae

79. *Centaurea triumphettii* All. subsp. *novakii* (Dost.) Dost.

Bu Vitosha region: Mt. Lyulin, above the protected area Elenina Bara, FN72, 12.06.2015, coll. *D. Dimitrov* (SOM 172647).

This subspecies is known from the Rhodope Mts (Delipavlov 2011).

80. *Scorzonera purpurea* L.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, above Tuhovishta village, KF59, 31.07.2016, coll. *D. Dimitrov* (SOM 172637).

Boraginaceae

81. *Onosma thracica* Velen.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on proterozoic marble above Tuhovishta village, KF59, 31.05.2016, coll. *D. Dimitrov* (SOM 172622).

This is a new locality of this Balkan endemic so far known from the Northeast Bulgaria, Balkan Range (*Eastern*), Znepole region, Rhodopi Mts (*Eastern*), Thracian Lowland, and Tundzha Hilly Country (Assyov & Petrova 2012).

Brassicaceae

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

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, northwards of Tuhovishta village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172620).

Confirming the distribution of the species in this floristic subregion. First reported for Rhodopi Mts (*Western*) by Stanev (1983).

83. *Alyssum borzeanum* E.I. Nyarady

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, above Tuhovishta village, KF59, 30.06.2016, coll. *D. Dimitrov* (SOM 172686).

84. *Arabis collina* Ten.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on proterozoic marble northwards of Tuhovishta village, KF59, 31.05.2016, coll. *D. Dimitrov* (SOM 172638).

Caryophyllaceae

85. *Cerastium luridum* Guss.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, eastwards of Tuhovishta village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172624).

86. *Cerastium velenovskyi* Hayek

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, eastwards of Tuhovishta village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172623).

87. *Dianthus drenovskyanus* Rech.f.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, between Tuhovishta and Zhizhevo villages, KF59, 22.09.2011, coll. *D. Dimitrov* (SOM 172573).

88. *Minuartia mesogitana* (Boiss.) Hand.-Mazz.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, above Tuhovishta village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172639).

89. *Moenchia graeca* Boiss. & Heldr.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, before Zhizhevo village, above the left-side bank of river Zhizhevskva, KG50, 31.05.2016, coll. *D. Dimitrov* (SOM 172641).

Cuscutaceae**90. *Cuscuta cesatiana*** Bertol.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on limestone terrain above Tuhovishta village, KF59, 20.09.2011, coll. *D. Dimitrov* (SOM 172617).

Dipsacaceae**91. *Scabiosa lucida*** Vill.

Bu Rhodopi Mts (*Western*): Mt Dabrash, on limestone rock above Tuhovishta village on the trail to Zhizhevo village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172543).

Fabaceae**92. *Ononis pusilla*** L.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on proterozoic marble above Tuhovishta village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172642).

93. *Ornithopus compressus* L.

Bu Rhodopi Mts (*Western*): Mt Dabrash, on the left-hand bank of river Zhizhevskva, after its inflow into river Dospatska, KF59, 31.05.2016, coll. *D. Dimitrov* (SOM 172629).

94. *Trifolium bocconeii* Savi

Bu Rhodopi Mts (*Central*): above Kosovo village, LG04, 27.06.2016, coll. *D. Dimitrov* (SOM 172688).

95. *Trifolium scabrum* L. subsp. *scabrum*

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on calcareous rock along river Dospatska, KF59, 31.05.2016, coll. *D. Dimitrov* (SOM 172630).

Lamiaceae**96. *Satureja cuneifolia*** Ten.

Bu Rhodopi Mts (*Central*): in a beech forest above Plovdivtsi village, LF18, 07.08.2012, coll. *D. Dimitrov* (SOM 172542).

Moraceae**97. *Broussonettia papyrifera*** L.

Bu Rhodopi Mts (*Western*): Mt Dabrash, on a street

in Tuhovishta village, Satovch district, KF59, 31.05.2016, coll. *D. Dimitrov* (SOM 172891).

This is a new locality of this species known from the Black Sea Coast and the Valley of River Sruma (Petrova & al. 2012).

Plantaginaceae**98. *Plantago scabra*** Moench

Bu Rhodopi Mts (*Western*): above Tuhovishta village, KF59, 30.06.2016, coll. *D. Dimitrov* (SOM 172684).

Rosaceae**99. *Potentilla mollicrinis*** (Borbás) Stankov

Bu Rhodopi Mts (*Western*): Mt Dabrash, at the left-hand bank of river Zhizhevskva, before Zhizhevo village, KG50, 31.05.2016, coll. *D. Dimitrov* (SOM 172628).

Rubiaceae**100. *Galium parisiense*** L.

Bu Rhodopi Mts (*Central*): above Kosovo village, LG04, 27.06.2016, coll. *D. Dimitrov* (SOM 172689).

Scrophulariaceae**101. *Veronica multifida*** L.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, before Zhizhevo village, KG50, 31.05.2016, coll. *D. Dimitrov* (SOM 172640).

Alliaceae**102. *Allium ampeloprasum*** L.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, above Tuhovishta village, KF59, 30.06.2016, coll. *D. Dimitrov* (SOM 172685).

Juncaceae**103. *Juncus capitatus*** Weigel

Bu Rhodopi Mts (*Western*): Mt Dabrash, near a stream before Zhizhevo village, KG50, 31.05.2016, coll. *D. Dimitrov* (SOM 172619).

104. *Juncus ranarius* Song. & Perr.

Bu Rhodopi Mts (*Western*): above Bani Varvara, on the road to Ravno Bore chalet, KG67, 17.06.2016, coll. *D. Dimitrov* (SOM 172690).

Poaceae**105. *Bromus intermedius*** Guss.

Bu Rhodopi Mts (*Western*): Mt Dabrash, eastwards of Tuhovishta village, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172621).

106. *Festuca spectabilis* subsp. *affinis* (Hack.) Hack.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, northwards of Tuhovishta village, KF59, 31.05.2016, coll. *D. Dimitrov* (SOM 172632).

107. *Sesleria alba* Sibth. & Sm.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on proterozoic marble rock, KF59, 30.05.2016, coll. *D. Dimitrov* (SOM 172634).

108. *Sclerochloa dura* (L.) P. Beauv.

Bu Rhodopi Mts (*Western*): Mt Dabrash, at Tuhovishta village, KF59, 30.06.2016, coll. *D. Dimitrov* (SOM 172687).

109. *Stipa tirsia* Stev.

Bu Rhodopi Mts (*Western*): Mt Dabrash, Dospat Dere, on marble rock northwards of Tuhovishta village, KF59, 30.06.2016, coll. *D. Dimitrov* (SOM 172618).

Reports 110–118

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New floristic records from the Dodecanese Island complex in the SE Aegean, Greece, are presented. They are from the islands of Rodos, Simi and Chalki (Nomos Dodekanisou, Eparchia Rodou). The islands of Simi and Chalki were visited between 14 and 17 November 2015, as well as on 23 April and 16 October 2016 (Simi) and 5 Jun 2016 (Chalki). Voucher specimens for all taxa were collected and are deposited in the author's personal herbarium. The author gratefully acknowledges the General Directorate for the Protection and Development of Forests and the Rural Environment of the Ministry of Reconstruction, Production, Environment and Energy for permission to carry out the investigation and the plant species collection (ref. 120518/153, 133714/3689, 133578/3741, 124400/2051) in the years 2015 and 2016. Also, he thanks Prof. A. Strid, Prof. D. Tzanoudakis, M. Ristow and A. Kleinsteuber for valuable information in compiling this report. Special thanks go to the Director of the Dodecanesian Forestry Directorate K. Balatsouka and the mayor of Chalki island M. Patros for their support.

Asteraceae

110. *Galatella cretica* Gand.

Gr Simi: Emborios, steep, rocky coastal slopes near

village, 20 m, 36°37'N, 27°49'E, 14.11.2015, *Galanos* 15111 (herb. Galanos; confirmed A. Strid).

Native, hemicryptophyte, E Mediterranean. Not previously recorded from Simi. Endemic to Kriti, Karpathos, Rodos and SW Turkey.

Cactaceae

111. *Austrocylindropuntia subulata* (Möhlenpf.) Backeb.

Gr Simi: Gialos, steep, rocky coastal slopes, 15 m, 36°36'59"N, 27°50'10"E, 14.11.2015, *Galanos* obs.; Harani, dry rocky places at grassy roadside, 5 m, 36°37'13"N, 27°50'16"E, 14.11.2015, *Galanos* 15112 (herb. Galanos; confirmed A. Strid).

Naturalized neophyte, phanerophyte, native to S America. Not previously recorded from Simi. Locally well established. Recorded from Rodos as new for the alien flora of Greece (*Galanos* 2015). According to the DAISIE Database, *A. subulata* is established in Italy, Sardinia, Sicily and Spain.

Euphorbiaceae

112. *Euphorbia hypericifolia* L.

Gr Simi: Harani, stony roadside on way to Evangelismos church, ca. 20 m, 36°37'N, 27°50'E, 23.4.2016, *Galanos* 16041 (herb. Galanos).

Naturalized neophyte, native to America. Not previously recorded from Simi. So far has been reported from Spain (incl. Canary islands), Italy, Belgium and Israel. In Greece, it has been recorded from the Peloponnese, Kriti, Karpathos, Rodos and Chalki (Chilton 1993; *Galanos* 2015; Kleinsteuber & al. 2016; Sciandrello & al. 2016; Strid 2016; Thornberg & Tan 2016).

Geraniaceae

113. *Geranium purpureum* Villars

Gr Simi: Harani, in limestone crevices, ca. 20 m a.s.l., 36°37'N, 27°50'E, 23.04.2016, *Galanos* 16043 (herb. Galanos; confirmed A. Strid).

Native, therophyte, Mediterranean European. According to the literature (Carlström 1987; Chilton 1999; Strid 2016), *G. purpureum* is widespread in the Aegean, as well as in the Dodecanese Island complex, except of the islands of Simi, Leros and Patmos, where it has not previously recorded. Consequently, the particular genus of *Geranium* in Simi island is represented by the following four species: *G. lucidum*, *G. molle*, *G. rotundifolium* and *G. purpureum*.

Nyctaginaceae**114. *Mirabilis jalapa* L.**

Gr Simi: Harani, along roadside, sea level, 36°37'N, 27°50'E, 16.10.2016, *Galanos* 16101 (herb. Galanos).

Naturalized neophyte, hemicryptophyte, native to S. America. Observed also around the settlements of Harani and Horio. Not previously recorded from Simi. Widespread and well established in Greece.

Scrophulariaceae**115. *Ajuga chamaepitys* subsp. *chia* (Schreb.) Arcang.**

Gr Chalki: Pondamos to Horio, open stony ground, ca. 50 m, 36°13'N, 27°35'E, 05.6.2016, *Galanos* 16061 (herb. Galanos).

Native, hemicryptophyte, European-SW Asian. Not previously recorded from Simi. Widespread on E Aegean islands (see map in Strid 2016).

Solanaceae**116. *Solanum elaeagnifolium* Cav.**

Gr Rodos: Ialisos, roadside clearings near sea level, 36°24'55"N, 28°10'26"E, 26.7.2016, *Galanos* 16071 (herb. Galanos).

Naturalized neophyte, native to America. Not previously recorded from Rodos. New for the Dodecanese Island complex. Fairly common on mainland Greece. From the E Aegean islands it has been reported from Lesbos, Chios and Samos. On Rodos, established populations have become invasive in anthropogenic habitats of Ialisos and Kremasti areas.

Tropaeolaceae**117. *Tropaeolum majus* L.**

Gr Simi: Harani, stony calcareous slopes near harbour, ca. 25 m, 36°37'11"N, 27°50'12"E, 23.4.2016, *Galanos* 16042 (herb. Galanos).

Naturalized neophyte, native to S America. Not previously recorded from Simi. Reported from the floristic regions of Kriti and Karpathos (KK) and E Aegean (EAe) (Dimopoulos & al. 2013; Galanos 2015; Zervou & al. 2009). A single population was found at Harani.

Alliaceae**118. *Allium archeotrichon* Brullo, Pavone & Salmeri (Fig. 15)**

Gr Simi: on the way from Harani to Emborios, ca. 20 m, 36°37'19"N, 27°50'16"E, 14.11.2015, *Galanos* 15113 (herb. Galanos); Emborios area, ca. 25 m, 36°37'N, 27°49'E, 14.11.2015, *Galanos*

obs.; on the way to Panormitis, 480 m, 36°35'N, 27°50'E, 14.11.2015, *Galanos* obs.

Native, geophyte, endemic to Rodos, Tilos and Simi. *Allium archeotrichon* is an autumn-flowering species which was described as a single-island endemic of Rodos (Brullo & al. 1999). It was found also on Tilos island by Tzanoudakis (pers. comm., Strid 2016). Plants were found in various sites on the way from Harani to Emborios, on rocky slopes with phrygana along the coastline of Gialos, as well as on stony ground in cypress forest in the central part of the island on the way to Panormitis. Living material was collected from Rodos and Simi for cultivation in the experimental Botanical Garden of the University of Patras. *Allium archeotrichon* is considered as common on Rodos while it is somewhat restricted in distribution on Simi. Some significant characteristics in the description of *A. archeotrichon* are provided, supplementing the cited features in Brullo & al. (1999) in parentheses: bulb size up to 2.2 × 2.8 cm (1.4 × 1.8 cm), leaves up to 62 cm long (32 cm), scape up to 60–62 cm high (25 cm), inflorescence 2–43 (4–20), the larger valve of the spathe up to 9.6 cm long (4 cm) and the smaller



Fig. 15. *Allium archeotrichon*, Simi, 14.11.2015 (photo Ch. Galanos).

one 6–56 mm (10–25 mm). Additionally, it should be noted that during November some individuals in the same population were observed with hairy sheaths or leaves, while some others were observed as without, which, however, emerged just late of February.

Reports 119–127

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Asteraceae

119. *Senecio nemorensis* L.

Bu Forebalkan (*Western*): Vrachanski Balkan Nature Park, on the edges of a beech forest along the trail to Gorski Dom locality, ca. 1200 m, GN08, app. 43.16334°N, 23.47914°E, 04.08.2016, coll. A. Petrova (SOM 172829).

According to Vladimirov (2012), the species has been found in the following floristic regions: Balkan Range (*Central*), Vitosha region, West Frontier Mts, and Rila Mts. Our voucher confirms its distribution in Vrachanski Balkan Divide, respectively, the Forebalkan (*Western*) floristic subregion, as it is given in Borisova & Donchev (2003).

Crassulaceae

120. *Sedum sexangulare* L.

Bu Balkan Range (*Eastern*): along the road between Vedrovo and Bosilkovo villages, ca. 235 m, MH94, 42.829861°N, 26.990556°E, 12.08.2016, coll. A. Petrova & B. Assyov (SOM 173144).

Stefanoff (1965) described *Sedum tschernokolevii* from Sherba locality in the Balkan Range (*Eastern*) as a Bulgarian endemic, as it is given also in Valev (1970). Stefanoff noticed its close similarity to *S. sexangulare*. According to him, the differences are in the color of flowers and the shape of leaves. There have been no more specific studies about this species in Bulgaria. No other localities have been reported. It is consid-

ered Rare in the first edition of the *Red Data Book of Bulgaria* (Cheshmedzhiev 1984) and as Data Deficient in the Red List (Ivanova 2009).

Hart (1983) described a new species of *Sedum acre* group from Greece, which is similar to *S. sexangulare*. He discussed also two species of this group, described from Bulgaria (*S. tschernokolevii* Stef.; *S. zollikoferi* P. Herm. & Stef.), which had a very limited distribution. On the basis of morphological characters of the leaves and chromosome number, he considered *S. tschernokolevii* identical with *S. sexangulare*. This opinion was accepted by Webb & al. (1993); Jalas & al. (1999: 90); Assyov & Petrova (2012), etc.

The observed population covers an area of about 0.1 ha, on a sandy and stony terrain in the form of a very shallow bed for temporal running water – a specific microhabitat, similar to that described by Stefanoff (1965) for the *locus classicus* of *S. tschernokolevii*. The population had uneven spatial structure. The somewhat lax caespitose growing habit with some particulation makes it difficult to consider the number of individuals; an approximate estimation was for a population between 500–600 individuals.

Fabaceae

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

Bu Forebalkan (*Western*): in dry, stony pastures near the Chelyustnitsa stone pit, northwards of village Chelyustnitsa, Montana district, FP61, 43.445748°N, 23.002341°E, 12.04.2016, coll. A. Petrova & R. Vassilev (SOM 172726).

This is a new record for the Forebalkan region (Assyov & Petrova 2012).

Lamiaceae

122. *Stachys leucoglossa* Griseb.

Bu Black Sea Coast (*Northern*): Pobiti Kamani – central group, Varna district, NH58, 43.227393°N, 27.705930°E, 12.07.2014, coll. A. Petrova (SOM 172966) & 12.08.2016, A. Petrova & B. Assyov obs.

— Northeast Bulgaria: along the road Provadia town – Dobrina village, NH38, 43.173473°N, 27.453680°E, 12.08.2016, A. Petrova & B. Assyov obs.

Until 1989, this Balkan endemic was determined in the Bulgarian Flora sources as intraspecific taxon in *Stachys recta* L. s.l., while now it is recognized as a species. Most probably, this is the reason for this species incomplete distribution summary (Koeva 1989).

It is evaluated as Endangered in the Red List (Genova 2009, 2015). The populations reported here are numerous (especially that in the Pobiti Kamani locality) and well-conditioned. Considering also the wide distribution of the species in the country (in nine floristic regions), with a lot of localities, and our other observations of different populations of the species: at the Black Sea Coast (the dunes around Nesebar town), Northeast Bulgaria (on limestone slopes near Sindel village), Balkan Range (*Eastern* – Sinite Kamani Nature Park; above Aithos; above Topolitsa village), Rhodopi Mts (*Eastern* – around Ivailovgrad; near Belopolyane village; in the Likana protected area; around Madzharovo town; in Oreshari protected area; Potochnitsa, Potocharka villages, Valchi Dol Nature Reserve; Stari Chal village, etc.), Rhodopi Mts (*Central* – above Asenovgrad town), Tundzha Hilly Country (in limestone areas near Mramor and Ustrem vilages), in our opinion the the threat category is overestimated and needs reevaluation.

Moraceae

123. *Broussonetia papyrifera* L.

Bu Balkan Range (*Eastern*): near Zavet Railway Station, NH04, ca. 42.8420°N, 27.0380°E, 12.08.2016, coll. A. Petrova & B. Assyov (SOM 172912).

This is a new species for this floristic region. Scores of plants of different height were observed together, along with another woody alien species – *Catalpa* sp.

Ranunculaceae

124. *Adonis annua* L.

Bu Tundzha Hilly Country: along the road between Zlatinitsa and Mamarchevo villages, Yambol district, MG76, 02.05.2015, coll. A. Petrova & I. Gerasimova (SOM 172911).

Confirming the distribution of the species in this floristic region. First reported for Tundzha Hilly Country by Panov (1972) but omitted in the later floristic sources.

Iridaceae

125. *Crocus olivieri* J. Gay

Bu West Frontier Mts: Mt Vlahina, in open grassy places along the road to Luchishte stone-pit, above Logodazh village, Blagoevgrad district, FM64, 42.012130°N, 22.928777°E, 21.02.2016, coll. A. Petrova, B. Assyov & R. Vassilev (SOM 172797).

This is a new floristic region for this protected species. The observed population is numerous.

Liliaceae s.l.

126. *Colchicum doerfleri* Halácsy

Bu West Frontier Mts: Mt Vlahina, in open grassy places along the road to Luchishte stone-pit, above Logodazh village, Blagoevgrad district, 42.003397°N, 22.936200°E, FM64, 21.02.2016, coll. A. Petrova, B. Assyov & R. Vassilev (SOM 172792).

This is a Balkan endemic species, with a center of distribution in the Republic of Macedonia, with more than 20 locations (V. Matevski, pers. commun.) found also in the neighboring areas of Albania (Malo & Shuka 2013), Greece (Alexiou 2013) and Bulgaria. The distribution in Bulgaria is limited. The species is evaluated as Endangered in the Red List of Bulgaria (Bancheva 2009, 2015). The observed population is a numerous one and forms patches of different size along the road to the Luchishte stone pit.

Orchidaceae

127. *Ophrys mammosa* Desf.

Bu Valley of River Struma (*Southern*): on dry grassy hills along the road from Chuchuligovo to Dolno Spanchevo villages, Blagoevgrad district, FL98, 41.40427°N, 23.36305°E & 41.417565°N, 23.376197°E, etc., 17.04.2015, coll. A. Petrova, I. Gerasimova & R. Vassilev (SOM 172745).

Already reported for this floristic region (Petrova & al. 2007). A very spacious and numerous population, thousands of individuals were observed of this Vulnerable (Petrova 2009) for the country species. We decided to report this locality because data about the distribution of this species in the region of Struma Valley is very limited.

Acknowledgements. This report is part of the continuous work on the project „Conspectus of the Bulgarian Vascular Flora”.

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Trapaceae

128. *Trapa natans* L. (Fig. 16).

Bu Tundzha Hilly Country: in old fishery ponds E of Nikolaevo village, Stara Zagora district, right

next to Zhrebchevo Dam, MH02, 42°37'53.20"N 25°49'17.47"E, 29.08. 2014, Z. Hubenov obs.; 17.07. 2016, coll. A. Petrova (SOM 172773).

This is a remarkable aquatic plant, a tertiary relict. Its fruits are edible, historically used as food (in Europe also). This annual species is known with significant fluctuations in its population's numbers (Tihomirov 1988). It is considered Near Threatened at European level (Lansdown 2011) and is included in Appendix I of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), as well as in many national Red Lists and/or Lists of Protected Species of European countries.

Džigurski & al. (2013) pointed out that although it is considered Endangered with its declining populations in many areas of Europe, it has marked an increase in population numbers up to becoming a problematic, even invasive species in some areas, especially outside of its natural range, but also in Europe (they have found out that it is in expansion in Serbia). The distribution and population status of such species deserve to be studied and monitored.

In Bulgaria, it is protected by the Biological Diversity Act and evaluated as Endangered (Peev & Tsoneva 2009, 2015). Its known distribution includes the floristic regions of the Black Sea Coast, Northeast Bulgaria, Danubian Plain, Forebalkan, Balkan Range (*Eastern*), Rhodopi Mts (*Eastern*), and Thracian Lowland. Tosheva & Traikov (2010) reported it as new for the Tundzha

Hilly Country from the area of Yasna Polyana Dam and thus the species was given for the region in Assyov and Petrova (2012). However, this locality actually lies in the Mt Strandzha floristic region, as it was considered by Peev & Tsoneva (2015). Thus the locality reported here confirmed the presence of the species in the Tundzha Hilly Country floristic region. The observed population was large and numerous, especially abundant at the time of observation in 2014, as it is seen from Fig. 16.

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Asteraceae

129. *Cyanus pseudoaxillaris* (Stef. & T. Georgiev) Holub

Bu Tundzha Hilly Country: in grassy places in a secondary oak forest near Ustrem, Topolovgrad Municipality, Haskovo district, close to the road to Ustrem mine, MG55, 41.99542°N, 26.48160°E, 08.05.2016, with flowers, coll. A. Petrova (SOM 172721).

Centaurea pseudoaxillaris (Fig. 17) is a rare Bulgarian endemic, included in the national Red List as Critically Endangered (Bancheva 2009). Although there are historical data for more than 13 localities in the Thracian Lowland and Tundzha Hilly Country floristic regions (Bancheva & Raimondo 2003), reliable recent data exist for only three localities in Thracian Lowland (Bancheva 2015).

The observed population numbered about 60 individuals, the flowering ones prevailed, and it has a sparse spatial structure. The species was already collected in the vicinities of Ustrem village in 1926 (N. Stoyanov, SOA 12099).



Fig. 16. *Trapa natans*, fishery ponds next to Zhrebchevo dam, 08.2014 (photo Z. Hubenov).

Fabaceae**130. *Vicia incisa* M. Bieb.**

Bu Tundzha Hilly Country: in grassy places and forest glades near Ustrem village, Topolovgrad Municipality, Haskovo district, along the road fork to Ustrem mine, MG55, 41.99778°N, 26.48228°E, 08.05. 2016, with flowers, coll. A. Petrova (SOM 172779).

This is a new species for the Tundzha Hilly Country floristic region (Kuzmanov 1976; Terziiski 2011; Dimitrov 2015). It is included in the national Red List as Endangered (Dimitrov 2009). On the basis of repeated personal observations of the species occurrence, the population's occupancies and densities in Mt Strandzha and Black Sea Coast (*Southern*) floristic regions (SOM 159198; 160255; 160256; 160257; 160258; 160259 and other observations), the opinion of the first author is that the threat category is overestimated and needs reevaluation.

Lamiaceae**131. *Scutellaria velenovskyi* Rech. f.**

Bu Tundzha Hilly Country: in grassy places near the limestone quarry in the vicinity of Mramor village, Topolovgrad Municipality, Haskovo district, MG55, near 42.03375°N, 26.42487°E, 08.05.2016, with flowers, coll. R. Vassilev & A. Petrova (SOM 172758).



Fig. 17. *Cyanus pseudoaxillaris* (photo A. Petrova).

A SE Balkan-Anatolian element, new for the floristic region, according to Peev (1989).

132. *Thymus atticus* Čelak.

Bu Tundzha Hilly Country: in rocky places near the limestone quarry in the vicinity of Mramor village, Topolovgrad Municipality, Haskovo district, MG55, ca. 42.03375°N, 26.42487°E, 08.05.2016, with flowers, coll. A. Petrova (SOM 172772).

The species was confirmed for this floristic region. Urumov (1906, cited in Markova 1989) reported it for the area between Yambol and Aitos.

Plumbaginaceae**133. *Armeria rumelica* Boiss. f. *adamovicii* (Hal.) Stoj., Stef. & Kitan.**

Bu Thracian Lowland: NE of Izvorovo village, along the road to Balgarska Polyana village, in stony places, MG34, 06.05.2016, coll. A. Petrova (SOM 172711).

— Tundzha Hilly Country: Hlyabovo village, near the historical Dolmen Rock in Nuchevo Livadi locality, MG35, 08.05.2016, coll. A. Petrova (SOM 171712).

The data about the distribution of this beautiful colour form (Fig. 18) in Bulgaria are very scarce. Ančev (1982) cited Mt Sakar, but erroneously put it in the Thracian Lowland floristic region. Our data show that the taxon



Fig. 18. *Armeria rumelica* f. *adamovicii* (photo A. Petrova).

is found in both regions. The observed populations were small, each with about 60–90 individuals.

Rosaceae

134. *Cydonia oblonga* Mill.

Bu Tundzha Hilly Country: Oreshnik village, in shrubby places near pastures and former fields in Dyalkova Cheshma locality, in the vicinity of the village, MG45, 15.10.2016, with fruits, coll. R. Vassilev & K. Bakardzhiev (SOM 173112).

The population was numerous, on 300 m², with shrubs of max. 3 m height, with rounded fruits, about 3–5 (6) cm in diameter – var. *maliformis* (Mill) Thell (Fig. 19). The species is traditionally cultivated in Bulgaria – usually cultivars with larger fruits. In some of the general sources on the Bulgarian flora (Stojanov & al. 1966; Valev 1973), the species was given as cultivated but occasionally becoming wild. In more recent sources Popova (2011) gives it as only cultivated; Assyov & Petrova (2012) did not notice it. Kurtto (2009) gave it as an alien in Bulgaria too. Our data documented at least one locality of the species as naturalized in the country. It has been observed also on 4.04.2016, with individual specimens in blossom near



Fig. 19. *Cydonia oblonga* (photo R. Vassilev).

a dirt road from Mramor village to Kazankite locality (42.03436° N 26.39987° E).

We have checked the vouchers of the species in the Herbaria SO and SOM. The labels' information was insufficient to consider whether some of the specimens were from naturalized populations, or all were from cultivated trees (as it is indicated on the labels of most of them). Possibly, the collection of Tsvetkov – Rhodopi Mts, along the road from Bachkovo Monastery to Slivov Dol locality, 14.06.1961 (SO 67481) – was from such population.

Rubiaceae

135. *Galium lovcense* Urum.

Bu Tundzha Hilly Country: in rocky places near the limestone quarry in the vicinity of Mramor village, Topolovgrad Municipality, Haskovo district, MG55, ca. 42.03375°N, 26.42487°E, 08.05.2016, with flowers, coll. A. Petrova (SOM 172802).

A new species for the Tundzha Hilly Country (Ančev 1999; Assyov & Petrova 2012).

136. *Galium spurium* L.

Bu Thracian Lowland: Bakarlia Protected Area near Yerusalimovo village, Lyubimetz Municipality, in shrubby places, MG24, 06.05.2016, coll. A. Petrova (SOM 172730).

— Tundzha Hilly Country: Mt Sakar, on forest edges near Kazankite locality, MG45, app. 42.05053°N, 26.35542°E, 07.05.2016, coll. A. Petrova (SOM 172732); Hlyabovo village, near the historical rock phenomenon „Dolmen“ in Nuchevi Livadi locality, MG35, 08.05.2016, coll. A. Petrova (SOM 171731).

A species quite often neglected in the floristic studies and so far unreported for those regions (Ančev 1989, 1999; Assyov & Petrova 2012).

Scrophulariaceae

137. *Verbascum adrianopolitanum* Podp. (Fig. 20)

Bu Tundzha Hilly Country: Mt Sakar, in glades and stony places along the forest road to Kazankite locality, MG45, 42.02199°N, 26.34014°E, 07.05.2016, coll. A. Petrova (SOM 172776).

Verbascum adrianopolitanum is a Balkan endemic species distributed in SE Bulgaria, NE Greece and Turkey-in-Europe (Stefanova-Gateva 1995). It is rare and local in Bulgaria, evaluated as Endangered (Gussev 2009). Stefanova (1984) reported the distribution of the species in Mt Sakar, but recent sources (Stefanova-Gateva 1995, 2006; Assyov & Petrova 2012; Gussev 2015) did not list it for this region. Thus, our data confirmed the



Fig. 20. *Verbascum adrianopolitanum* (photo A. Petrova).

distribution of this rare species in the Tundzha Hilly Country floristic region. The observed population has developed along the forest edges, in clearings, stony glades, with uneven spatial structure and numbers of above 400 flowering individuals.

Liliaceae s.l.

138. *Asparagus verticillatus* L.

Bu Tundzha Hilly Country: Mt Sakar, along the road from Topolovgrad to peak Vishegrad, also near the Chernite Skali locality, MG45, 07.05.2016, A. Petrova & R. Vassilev obs.

A new species for the floristic region (Assyov & Petrova 2012).

139. *Asphodeline lutea* (L.) Rchb.

Bu Tundzha Hilly Country: Mt Sakar, along the road from Topolovgrad to peak Vishegrad, MG45, app. 42.011794°N, 26.305823°E, 07.05.2016, R. Vassilev & K. Bakardzhiev obs. (Fig. 21).

A new species for this floristic region (Assyov & Petrova 2012).

Acknowledgements. This report is part of the continuous work on the project „Conspectus of the Bulgarian Vascular Flo-



Fig. 21. *Asphodeline lutea* (photo R. Vassilev).

ra”. We are grateful to Bakardzhievs family for their kind hospitality and to Ljubomir Domozevski and Viktor Bratkov for assistance in the field work.

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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).

Amaranthaceae

140. *Amaranthus muricatus* Gillies ex Moq. (Fig. 22)

Gr Nomos Kikladon, Eparchia Sirou: Mikonos, common in village of Ano Mera along roads and in abandoned fields, 80 m, 37°26'N, 25°24'E, 26.08.2016, Polymenakos 123 (ATHU; photos, confirmed Kit Tan, November 2016).



Fig. 22. *Amaranthus muricatus* (photo K. Polymenakos).

— Nomos & Eparchia Attikis: Vravra, edge of Erasinos river, disturbed ground *ca.* 100 m to the west of archaeological site, 5 m, 37°55'N, 23°59'E, 17.09.2016, *Polymenakos* 126 (ATHU).

Naturalized weed in Thessaloniki area (North East) and Kalimnos (E Aegean islands). Its presence on Mikonos is not unusual as it also occurs on nearby Tinos and Siros (Kiklades). Distinct by its narrow leaves and strongly tuberculate fruit, visible in the photos.

Plumbaginaceae

141. *Limonium ammophilon* (Papatsou & Phitos) Domina (Fig. 23)

Gr Nomos Kikladon, Eparchia Sirou: Mikonos, sandy beach at Fokos on north side of island, sea level, 37°28'N, 25°24'E, 20.08.2016, *Polymenakos* 116 (ATHU).

Scattered in Cretan area (Kriti and Karpathos), Kiklades and E Aegean islands. Occurring in a small population of a few individuals. Previously treated as a subspecies of *L. graecum* (Poir.) Rech. f.

Rubiaceae

142. *Asperula arcadiensis* Sims

Gr Nomos Arkadias, Eparchia Mandinias: vertical cliffs SW of village Vlacherna, below monastery of Agia Eleousa, 1030 m, 37°42'N, 22°15'E, 31.07.2016, *Polymenakos* obs. (photo, confirmed Kit Tan, November 2016).

New for eparchia. A Greek endemic reported from NC Peloponnese (Chelmos, Killini and Oligirtos) and



Fig. 23. *Limonium ammophilon* (photo K. Polymenakos).

S Peloponnese (Parnonas). A few fruiting plants were found in the foothills of Mt Menalo, recognizable by their slender stems and soft grey foliage.

Colchicaceae

143. *Colchicum variegatum* L. (Fig. 24)

Gr Nomos Kikladon, Eparchia Sirou: Mikonos, at the northwest side of island 1.8 km west of summit Profitis Ilias, 230 m, 37°29'N, 25°19'E, 21.08.2016, *Polymenakos* obs. (photo; confirmed Kit Tan, November 2016).



Fig. 24. *Colchicum variegatum* (photo K. Polymenakos).

Widespread in the Kiklades and E Aegean islands. A fine, fully-flowering population was located in *Thymus capitatus* – *Sarcopoterium spinosum* phrygana.

Cyperaceae

144. *Cyperus eragrostis* Lam.

Gr Nomos & Eparchia Attikis: Voula, a few plants along path next to the beach, sea level, 37°49'N, 23°46'E, 14.08.2016, *Polymenakos* 114 (ATHU).

Apparently the first record for mainland Greece. This is a fairly recent introduction reported in 1982 from the Ionian island of Kerkira (*Hansen* KER148, C). It also occurs on Samothraki (N Aegean islands) and Skiros (W Aegean islands), locally naturalized in wet places, roadside ditches, etc.

Reports 145–151

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Asteraceae

145. *Erigeron atticus* Vill.

Bu Balkan Range (*Central*): Sokolna Reserve, near the springs of river Sokolna, on calcareous dry stony slopes, 1900 m, 42.71856°N, 25.10463°E, with flowers, 23.07.2016, coll. S. *Stoyanov* & Y. *Marinov* (SOM 172901, 172902).

According to Vladimirov & Kuzmanov (2012), this species occurs in Mt Slavyanka, Pirin Mts, and Rila Mts floristic regions.

Boraginaceae

146. *Cerinth glabra* Mill. (Fig. 25)

Bu Balkan Range (*Central*): Central Balkan National Park, Triglav Divide, Sedemte Dereta locality, on rocky and wet terrains, close to the timber-line, in grass communities near watercourses, 1482 m, 42.75870°N, 25.10528°E, with flowers, 21.05.2013, coll. Y. *Marinov* (SOM 172903, 172904).

According to Andreev & Peev (1989), the species is known from Vitosha, Pirin and Rila Mts floristic regions.

Brassicaceae

147. *Rapistrum rugosum* (L.) All.

Bu Thracian Lowland: 1 km SE of Mihalich village, Svilengrad district, in calcareous dry grassy places near the rock church, 330 m, 41.85028°N, 26.42446°E, with fruits, 23.05.2016, coll. S. *Stoyanov* & Y. *Marinov* (SOM 172905, 172906).

According to Ančev (2007), the species occurs in the Black Sea Coast, Rhodopi Mts (*Eastern*) and Tundzha Hilly Country floristic regions. Confirming the distribution of the species in this floristic region since it has been reported for Thracian Lowland by Gančev & Denčev (1963) but apparently omitted in the later floristic sources.

Scrophulariaceae

148. *Verbascum adrianopolitanum* Podp. (Fig. 26)

Bu Tundzha Hilly Country: Sveti Iliyski Hills, between Savino and Meden Kladenets villages, Yambol district, in dry stony siliceous places in sparse *Quercus pubescens* forests, 300 m, 42.33480°N, 26.30166°E, with flowers, 22.05.2016, coll. S. *Stoyanov* & Y. *Marinov* (SOM 172907, 172908).

This rare Balkan endemic species has been known from a few localities in the Balkan Range (*Eastern*), Rhodopi Mts (*Eastern*), Thracian Lowland, and Mt Strandzha floristic regions (Gussev 2015).



Fig. 25. *Cerinth glabra* (photo Y. Marinov).



Fig. 26. *Verbascum adrianopolitanum* (photo S. Stoyanov).

Orchidaceae

149. *Limodorum abortivum* (L.) Sw. subsp. *mezekii*
Delip. & Cheshm. (Fig. 27)

Bu Tundzha Hilly Country: Mt Sakar, NW of Planinovo village, Topolovgrad district, near the dirt road between Planinovo village and peak Vishegrad, in a dry *Quercus pubescens* forest, 756 m, 41.97730°N, 26.34304°E, with flowers, 23.05.2016, S. Stoyanov & Y. Marinov obs. (photo).

This subspecies has been known only from the Rhodopi Mts (Eastern) floristic region (Cheshmedzhiev 2003; Petrova & al. 2008).

150. *Ophrys apifera* Huds. (Fig. 28)

Bu Balkan Range (Central): Balgarka Nature Park, in calcareous dry grassy places, 850 m, 42.79787°N, 25.48315°E, with flowers, 03.06.2016, Y. Marinov obs. (photo).

— Tundzha Hilly Country: Mt Sakar, 2 km W of Ustrem village, Topolovgrad district, in calcareous grassy places in an open *Carpinus orientalis* forest, 180 m,



Fig. 27. *Limodorum abortivum* subsp. *mezekii* (photo Y. Marinov).



Fig. 28. *Ophrys apifera*:
a) in Balgarka Natural
 Park; **b)** – in Sakar Moun-
 tain (photo Y. Marinov).

42.02089°N, 26.43259°E, with flowers, 23.05.2016,
 S. Stoyanov & Y. Marinov obs. (photo).

According to Cheshmedzhiev (2003), *O. apifera* is known from the Black Sea Coast (*Southern*), Northeast Bulgaria, Sofia region, Rhodopi Mts (*Eastern*), and Mt Strandzha floristic regions. Subsequently, the species has been reported from the Forebalkan (*Western*) (Vladimirov 2006), Balkan Range (*Western*) (Tashev & al. 2006), Thracian Lowland (Grozeva 2006), Znepole region (Apostolova-Stoyanova & Stoyanov 2007; Asenov 2010), Mt Sredna Gora (*Western*) (Pedashenko 2010), Valley of River Struma (*Northern*) (Stoyanov & Goranova 2014), and Valley of River Struma (*Southern*) (Vladimirov 2014) floristic regions.

Poaceae

151. *Bromus moesiacus* Velen.

Bu Balkan Range (*Central*): Sokolna Reserve, near the trail between Sokolna chalet and Sahrnka peak, 1480 m, 42.70628°N, 25.13619°E, with fruits, 23.07.2016, coll. S. Stoyanov & Y. Marinov (SOM 172909).

According to Assyov & Petrova (2012), this Bulgarian endemic species occurs in the Forebalkan (*Western*), Balkan Range (*Western* and *Eastern*), Sofia, Znepole and Vitosha regions, Mt Slavyanka, and Thracian Lowland floristic regions.

Reports 152–158

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Continuing a series of new plant records based on further floristic investigations in the Mani Peninsula. The records listed are new for Eparchia Itilou or Githiou in Nomos Lakonias. The dry and barren-looking Sangias range (1218 m) in southern or Deep Mani is a continuation of the southern 50 km or so of the Taigetos range which forms the backbone of northern or Outer Mani. There are current plans to establish wind turbines on the Sangias ridge.

Apiaceae

152. *Carum graecum* Boiss. & Heldr.

Gr Nomos Lakonias, Eparchia Itilou: Sangias

range, walk from Kalonioi – Pori – Nikolakos – Abeles to Ag. Asomati, 730 m, 36°30'N, 22°26'E, 14.04.2015, Kit Tan, G. Vold & Katsiotis 31830.

New for eparchia; the locality is the furthest south in Greece.

Asteraceae**153. *Helichrysum taenari* Rothm.**

Gr Nomos Lakonias, Eparchia Githiou: narrow gorge at Achillio, shaded damp vertical limestone rock face, 200 m, 36°26'N, 22°28'E, 13.04.2015, *Kit Tan, G. Vold & Katsiotis* obs.

Tan, G. Vold & Katsiotis obs.

A third locality in the Mani Peninsula for this rare endemic; it is further south than the presumed *locus classicus* in a ravine S-SE of the village of Korogonianika. The second known locality is between Vathia and Kenouria Chora (Eparchia Githiou/Itilou). Achillio has a natural spring, a rare source of water in the dry southern Mani. Waters flow through the gorge, percolating crushed and porous limestone to emerge on hard quartz-haematite subsoil at the Bay of Achillio. So rich was the iron ore that mining was even considered in 1900. It is possible Rothmaler (1944: 443) found the helichrysum in this gorge; we even conjecture that his mule stumbled on the rocky boulders (like we did) and brought him face to face with the new species. Only two plants, not in flower, were noted on the rock face. Probably threatened in this particular site by its own rarity.

Boraginaceae**154. *Buglossoides incrassata* (Guss.) I.M. Johnst.**

Gr Nomos Lakonias, Eparchia Itilou: Sangias range, walk from Kalonioi - Pori - Nikolakos - Abeles to Ag. Asomati, 730 m, 36°30'N, 22°26'E, 14.04.2015, *Kit Tan, G. Vold & Katsiotis* 31826.

New for eparchia; the locality is the furthest south in the Mani Peninsula.

Alliaceae**155. *Allium circinnatum* subsp. *peloponnesiacum* Tzanoud.**

Gr Nomos Lakonias, Eparchia Itilou: Koukouri bay, SW of village Kafionas, in-between limestone rock boulders, 7 m, 36°34'N, 22°23'E, 13.04.2015, *Kit Tan, G. Vold & Katsiotis* 31820 (herb. Katsiotis).

New for eparchia. Occurring in pale pink and white forms in their thousands, forming thick carpets in open patches between the rocks, a most beautiful sight and certainly the largest populations of this Greek endemic that we have ever seen. Strangely enough, only a few plants were observed in the same locality the previous year. Monitoring of the populations continue.

Araceae**156. *Arum concinnatum* Schott (Fig. 29)**

Gr Nomos Lakonias, Eparchia Itilou: rocky lime-

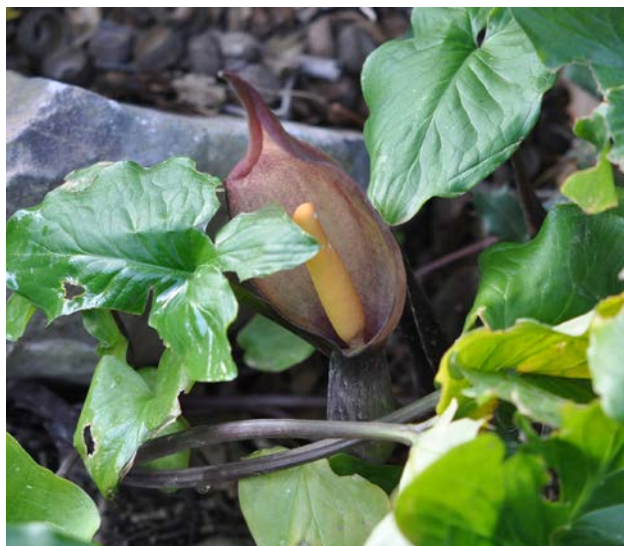


Fig. 29. *Arum concinnatum* (photo D. Katsiotis).

stone at summit of Sangias ridge, 1000–1100 m, 36°36'N, 22°25'E, 16.05.2009, *Katsiotis* obs.; *loc. ibid.*, 05.05.2014, *Katsiotis* obs. (photos; conf. Kit Tan, March 2015); olive grove in Pyrgos Dirou, in shade of stone walls, 175 m, 36°37'N, 22°22'E, 14.04.2015, *Kit Tan, G. Vold & Katsiotis* 31838 (herb. Katsiotis).

New for eparchia, second record for mainland Peloponnese, extending known distribution of the species westwards. This species occurs scattered in the Mani, usually with a few individuals at each locality. The largest populations were found at Pyrgos Dirou in the shade of planted *Opuntia ficus-indica* and in the grounds of old buildings and Byzantine churches. On the Sangias ridge, it was found in sheltered and shaded rocky limestone gorges protected from strong wind, the altitude of 1100 m is the highest recorded for the species. The spathe is suffused brownish-purple or entirely dark brown and the spadix yellowish or yellowish-brown. Elsewhere in Greece (Cretan area, Kiklades, W & E Aegean islands) the spathe is often pale green edged purple.

Orchidaceae**157. *Ophrys fuciflora* subsp. *candica* E. Nelson ex Soó (Fig. 30)**

Gr Nomos Lakonias, Eparchia Itilou: Sangias range, slopes above Kalonioi, 860 m, 36°30'N, 22°26'E, 14.04.2015, *Kit Tan, G. Vold & Katsiotis* obs.

New for eparchia. On calcareous ground in phrygana and under *Quercus*, at altitudes from 10 to 1218 m (summit of Sangias). As regarding the planned

site of the wind turbines, the antenna (wind-vane) is already pitched above Kalonioi (Fig. 31). *Ophrys f.* subsp. *candica* occurs in the Peloponnese (south of Taigetos, Kithira), Crete, Karpathos and Rodos. It has also been described as *Ophrys lacaena* P. Delforge, endemic to Laconia.

158. *Orchis boryi* Rchb. f. [= *Anacamptis boryi* (Rchb. f.) R.M. Bateman & al.]

Gr Nomos Lakonias, Eparchia Itilou: Sangias range, walk from Kalonioi - Pori - Nikolakos - Abeles to Ag. Asomati, 730 m, 36°30'N, 22°26'E, 14.04.2015, *Kit Tan, G. Vold & Katsiotis* 31828. New for eparchia; locality is the furthest south in the Mani Peninsula.



Fig. 30. *Ophrys fuciflora* subsp. *candica* (photo D. Katsiotis).



Fig. 31. Wind antenna above Kalonioi (photo D. Katsiotis).

Reports 159–163

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Apiaceae

159. *Seseli tortuosum* L.

Bu Valley of River Mesta: along the motorway between Mesta and Gospodintsi villages, on the right-hand bank of river Mesta, close to Momina Kula locality, under sheer rocks, on an east-facing slope with inclination of 15°, 568 m, 41°40'40.6"N, 23°43'35.0"E, 18.07.2013, coll. A. Tashev & D. Dimitrov (SOM 171770).

The species was found in a rock community, along with *Ostrya carpinifolia*, *Fraxinus ornus*, *Cornus sanguinea*, *Chamaecytisus hirsutus*, *Quercus pubescens*, *Clematis vitalba*, *Prunus cerasifera*. От тревистите видове са установени *Achillea millefolium*, *Agrimonia eupatoria*, *Alyssum tortuosum*, *Artemisia campestris*, *A. vulgaris*, *Bromus squarrosus*, *Coronilla varia*, *Cruciata laevipes*, *Dactylis glomerata*, *Euphorbia cyparissias*, *Galium* sp., *Hordeum murinum*, *Linaria genistifolia*, *Melica ciliata*, *Melilotus albus*, *Origanum vulgare*, *Plantago scabra*, *Sedum hispanicum*, *Solidago virgaurea*, *Trifolium arvense*, *Verbascum longifolium*, *Vicia cracca*, *Vulpia ciliata*, etc.

This is a new locality in Bulgaria for this sub-Mediterranean species, so far reported for the Black Sea Coast, Northeast Bulgaria, Danubian Plain, and Valley of River Struma (Southern) floristic regions (Delipavlov & Cheshmedzhiev 2011: 270; Assyov & Petrova 2012: 381).

Asteraceae**160. *Centaurea rutifolia* Sm.**

Bu Valley of River Mesta: in Momina Kula locality, Momina Klisura Pass, on rhyolite rocks, above the motorway between Mesta and Gospodintsi villages, on the right-hand bank of river Mesta, on a steep south-facing slope, with inclination of 40°, 704 m, 41°42'58.8"N, 23°41'43.4"E, 18.07.2013, coll. D.

Dimitrov & A. Tashev (SOM 171766; SO 107674).

The species was found in a rock community, along with *Acer hyrcanum*, *Cornus mas*, *Euonymus verrucosus*, *Genista rumelica*, *Rhamnus saxatilis*, *Rosa micrantha*, *Spiraea media*. От тревистите видове са установени *Achillea clypeolata*, *A. depressa*, *Acinos suaveolens*, *Alliaria petiolata*, *Allium flavum*, *A. sphaerocephalon*, *Alyssum tortuosum*, *Asperula cynanchica*, *Asplenium trichomanes*, *Astragalus glycyphyllos*, *Asyneuma limonifolium*, *Ballota nigra*, *Briza media*, *Bromus squarrosus*, *Campanula trachelium*, *Carduus nutans*, *Dactylis glomerata*, *Dianthus piniifolius*, *Echium vulgare*, *Eryngium campestre*, *Festuca valesiaca*, *Galium lucidum*, *Hypericum perforatum*, *H. umbellatum*, *Jurinea consanguinea*, *Koeleria simonkai*, *Lychnis coronaria*, *Malva sylvestris*, *Melica ciliata*, *Mercurialis annua*, *Micromeria dalmatica*, *Minuartia hybrida*, *Muscari comosum*, *Phleum phleoides*, *Poa nemoralis*, *P. timoleontis*, *Potentilla argentea*, *P. pedata*, *Primula veris*, *Salvia argentea*, *Scabiosa triniifolia*, *Scleranthus annuus*, *Sedum album*, *S. sartorianum*, *Sempervivum erythraeum*, *Stipa capillata*, *Trifolium arvense*, *T. aureum*, *Verbascum nigrum*, *Veronica orchidea*, *Vincetoxicum hirundinaria*, etc.

This is a new locality in Bulgaria for this Balkan endemic, so far reported for the Black Sea Coast, Northeast Bulgaria, Balkan Range (*Eastern*), Sofia region, Pirin Mts, Valley of River Struma (*Northern*), Rhodopi Mts (*Eastern*) and Mt Strandzha (Delipavlov 2011: 417; Assyov & Petrova 2012: 129).

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

Bu Valley of River Mesta: on the right-hand bank of river Mesta, close to Baroto Hotel, 41°42'N, 23°41'E, 04.09.2013, coll. D. *Dimitrov* (SOM 169681).

This is a new locality in Bulgaria for this North American adventive species so far reported for the Black Sea Coast (*Northern*), Valley of River Struma (*Southern*) and Thracian Lowland (Vladimirov 2011: 379; Assyov & Petrova 2012: 134).

Caryophyllaceae**162. *Cerastium luridum* Guss.**

Bu Valley of River Mesta: in Momina Kula locality, Momina Klisura Pass, on rhyolite rocks, above the motorway between Mesta and Gospodintsi villages, on the right-hand bank of river Mesta, on a steep south-facing slope, with inclination of 40°, 704 m, 41°42'58.8"N, 23°41'43.4"E, 18.07.2013, coll. D. *Dimitrov & A. Tashev* (SOM 170645).

The species was found in a rock community, along with *Acer hyrcanum*, *Cornus mas*, *Euonymus verrucosus*, *Genista rumelica*, *Rhamnus saxatilis*, *Rosa micrantha*, *Spiraea media*. От тревистите видове са установени *Achillea clypeolata*, *A. depressa*, *Acinos suaveolens*, *Alliaria petiolata*, *Allium flavum*, *A. sphaerocephalon*, *Alyssum tortuosum*, *Asperula cynanchica*, *Asplenium trichomanes*, *Astragalus glycyphyllos*, *Asyneuma limonifolium*, *Ballota nigra*, *Briza media*, *Bromus squarrosus*, *Campanula trachelium*, *Carduus nutans*, *Dactylis glomerata*, *Dianthus carthusianorum*, *D. piniifolius*, *Echium vulgare*, *Eryngium campestre*, *Festuca valesiaca*, *Galium lucidum*, *Hypericum perforatum*, *H. umbellatum*, *Jurinea consanguinea*, *Koeleria simonkai*, *Lychnis coronaria*, *Malva sylvestris*, *Melica ciliata*, *Mercurialis annua*, *Micromeria dalmatica*, *Minuartia hybrida*, *Muscari comosum*, *Phleum phleoides*, *Poa nemoralis*, *P. timoleontis*, *Potentilla argentea*, *P. pedata*, *Primula veris*, *Salvia argentea*, *Scabiosa triniifolia*, *Scleranthus annuus*, *Sedum album*, *S. sartorianum*, *Sempervivum erythraeum*, *Stipa capillata*, *Trifolium arvense*, *T. aureum*, *Verbascum nigrum*, *Veronica orchidea*, *Vincetoxicum hirundinaria*, etc.

This is a new locality in Bulgaria for this Euro-Mediterranean species so far reported from the Black Sea Coast, Balkan Range (*Eastern*) and Znepole region (Assyov & Petrova 2012: 134).

163. *Dianthus carthusianorum* L.

Bu Valley of River Mesta: in Momina Kula locality, Momina Klisura Pass, on rhyolite rocks, above the motorway between Mesta and Gospodintsi villages, on the right-hand bank of river Mesta, on a steep south-facing slope, with inclination of 40°, 704 m, 41°42'58.8"N, 23°41'43.4"E, 18.07.2013, coll. D. *Dimitrov & A. Tashev* (SOM 171897).

The species was found in a rock community, along with *Acer hyrcanum*, *Cornus mas*, *Euonymus verrucosus*, *Genista rumelica*, *Rhamnus saxatilis*, *Rosa micrantha*, *Spiraea media*. От тревистите видове са установени

Achillea clypeolata, *A. depressa*, *Acinos suaveolens*, *Alliaria petiolata*, *Allium flavum*, *A. sphaerocephalon*, *Alyssum tortuosum*, *Asperula cynanchica*, *Asplenium trichomanes*, *Astragalus glycyphyllos*, *Asyneuma limonifolium*, *Ballota nigra*, *Briza media*, *Bromus squarrosus*, *Campanula trachelium*, *Carduus nutans*, *Cerastium luridum*, *Dactylis glomerata*, *Dianthus pinifolius*, *Echium vulgare*, *Eryngium campestre*, *Festuca valesiaca*, *Galium lucidum*, *Hypericum perforatum*, *H. umbellatum*, *Jurinea consanguinea*, *Koeleria simonkai*, *Lychnis coronaria*, *Malva sylvestris*, *Melica ciliata*, *Mercurialis annua*, *Micromeria dalmatica*, *Minuartia hybrida*, *Muscari comosum*, *Phleum phleoides*, *Poa nemoralis*, *P. timoleonis*, *Potentilla argentea*, *P. pedata*, *Primula veris*, *Salvia argentea*, *Scabiosa triniifolia*, *Scleranthus annuus*, *Sedum album*, *S. sartorianum*, *Sempervivum erythraeum*, *Stipa capillata*, *Trifolium arvense*, *T. aureum*, *Verbascum nigrum*, *Veronica orchidea*, *Vincetoxicum hirundinaria*, etc.

This is a new locality in Bulgaria for this rare and protected by the Bulgarian Biological Diversity Act (2007) European species, so far reported for the Danubian Plain, Vitosha and Znepole regions, and Mt Sredna Gora (*Western*) (Delipavlov 2011: 81; Assyov & Petrova 2012: 165).

Reports 164–172

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Asteraceae

164. *Centaurea orientalis* L.

- Bu** Valley of River Struma (*Northern*): near Elenovo neighborhood of Blagoevgrad town, FM75, 18.07.2013, coll. *D. Dimitrov* (SOM 169613).
— Mt Sredna Gora (*Eastern*): in dry grasslands near Borilovo village, LH80, 42.47993°N, 25.55717°E, 15.06.2016, coll. *K. Vassilev* (SOM 173080).
— Rhodopi Mts (*Western*): Dubrash Ridge, under Slasten village, above the left-hand bank of river Mesta, KF59, 20.09.2011, coll. *M. Genovska* (SOM 167975).

This species is widely distributed in dry grassland communities in these floristic regions. It has not been reported for these regions so far.

Fabaceae

165. *Asrtagalus hamosus* L.

- Bu** Vitosha region: Mt Vitosha, on a stony limestone slope above a spring northwards of Bosnek village, Pernik district, FN70, 26.06.2006, coll. *D. Dimitrov* (SOM 162798).
— Mt Sredna Gora (*Eastern*): in dry grasslands near Kolena village, LH90, 42.47378°N, 25.720547°E, 15.06.2016, coll. *K. Vassilev* (SOM 173082).
This is a new species for these floristic regions.

166. *Colutea arborescens* L.

- Bu** Mt Sredna Gora (*Eastern*): in dry grasslands near Kolena village, 42.47378°N, 25.720547°E, LH90, 15.06.2016, coll. *K. Vassilev* (SOM 173084).
This is a subdominant shrubby species in shrubland communities dominated by *Fraxinus ornus*, *Quercus pubescens* and *Syringa vulgaris*. It is distributed in most of the territory of the country but has not been known from this floristic region before.

167. *Lupinus graecus* Boiss. & Spruner

- Bu** West Frontier Mts: in grasslands near Churichane village, FL79, 41.46096°N, 23.11527°E, 15.05.2016, coll. *K. Vassilev* (SOM 173089).
This species is a new for this floristic region and is distributed locally in dry grasslands of *Helianthemetea guttati* class.

168. *Onobrychis alba* (Waldst. & Kit.) Desv.

- Bu** Danubian Plain: Chernata Mogila place near Dragomirovo village, LJ51, 19.06.1990, coll. *D. Stoyanov* (SOM 49818).
— Rila Mts: NW part of the mountain, in grassy places above Rila town, at 1000 m, FM76, 03.09.2005, coll. *D. Dimitrov* (SOM 163522);
— Mt Sredna Gora (*Eastern*): in dry grasslands near Kolena village, LH90, 42.47378°N, 25.720547°E, 15.06.2016, coll. *K. Vassilev* (SOM 173081).

It is a widespread species in most of the country, known from 21 floristic regions and subregions (Assyov & Petrova 2012). It is a new species for these floristic regions.

169. *Trifolium leucanthum* M. Bieb.

- Bu** Forebalkan: in dry grasslands near Tsarevets village, GN28, 43.16100°N, 23.80950°E, 27.07.2016, coll. *K. Vassilev* (SOM 173087).
It is a new species for this floristic region.

Lamiaceae

170. *Thymus callieri* Velen.

- Bu** Mt Sredna Gora (*Eastern*): in dry grasslands near

Borilovo village, LF79, 41.47993°N, 25.55717°E, 15.06.2016, coll. K. Vassilev (SOM 173079).

This is a subdominant species in xerothermic communities of the alliance *Festucion valesiaca*. It has not been reported so far for this floristic region.

Linaceae

171. *Linum bienne* Mill.

Bu West Frontier Mts: in grasslands near Churichane village, LF79, 41.46096°N, 23.11527°E, 15.05.2016, coll. K. Vassilev (SOM 173088).

— Mt Slavyanka: in the northern part of Hambar Dere locality, GL28, 28.07.2008, coll. D. Dimitrov (SOM 169526); in meadows at 1700 m, GL28, 30.07.2008, coll. D. Dimitrov (SOM 169483).

This species has not been reported so far for these floristic regions. It is widespread in xerothermic grassland communities.

Oleaceae

172. *Jasminum fruticans* L.

Bu Znepole region: on calcareous terrain above *Pinus nigra* woodland eastwards of Dragoman town, FN55, 28.05.1989, coll. D. Peev (SOM 147410).

— Mt Sredna Gora (*Eastern*): in dry grasslands near Kolena village, LH90, 42.47378°N, 25.72054°E, 15.06.2016, coll. K. Vassilev (SOM 173083).

This is a companion species in xerothermic grasslands of the classes *Festuco-Brometea* (alliances *Saturejion montanae*, *Festucion valesiaca*). It has not been reported so far for these floristic regions.

Reports 173–177

Kiril Vassilev & Hristo Pedashenko

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Poaceae

173. *Aegilops triuncialis* L.

Bu Mt Sredna Gora (*Eastern*): in dry grasslands near Borilovo village, LH80, 42.47943°N, 25.55717°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171656); in dry grasslands around Kolena village, 42.47378°N, 25.72054°E, LH90, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171660).

This species has not been reported for this floristic region so far. It was found in xerothermic communities of the alliance *Festucion valesiaca*, dominated by *Dichantium ischaemum*, *Festuca rupicola*, *Thymus callieri*, and *Astragalus onobrychis*. The total vegetation cover of *Aegilops triuncialis* in phytocoenosis is up to 3%.

174. *Agrostis canina* L.

Bu Mt Sredna Gora (*Eastern*): in xerothermic grasslands between Zmeyovo village and Maglizh town, LH80, 42.52898°N, 25.57435°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171665).

It is a new species for this floristic region. According to Assyov & Petrova (2012), it is known from 17 floristic regions. This is a subdominant species in xero-mesophytic grasslands of the alliance *Chrysopogono-Danthonion*.

175. *Festuca pseudodalmatica* Domin

Bu Danubian Plain: in grasslands between Brashlyanitsa and Koylovtsi villages, LJ12, 23.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171664).

This species has not been reported for this floristic region before. In the Danubian Plain floristic region, this is an accompanying species in communities of the alliance *Festucion valesiaca*. They represent a loess dry grassland vegetation dominated by xerothermic species like *Dichantium ischaemum*, *Thymus* spp., *Dorycnium herbaceum*.

176. *Festuca rupicola* Heuff.

Bu Mt Sredna Gora (*Eastern*): in dry grasslands in near Kolena village, LH90, 42.47378°N, 25.72054°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171661); in dry grasslands between Lulyak and Shanovo villages, LH90, 42.51711°N, 25.66751°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171658); in xerothermic grasslands near Zmeyovo village, LH80, 42.50249°N, 25.61671°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171413).

This species is a new species for this floristic region.

177. *Vulpia bromoides* (L.) Gray

Bu Mt Sredna Gora (*Eastern*): in dry grasslands between Lulyak and Shanovo villages, LH80, 42.53173°N, 25.64602°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171657); in xerothermic grasslands near Zmeyovo village, LH80, 42.50249°N, 25.61671°E, 15.06.2016, coll. K. Vassilev & H. Pedashenko (SOM 171412).

This is a new species for this floristic region.

Reports 178–189

Vladimir Vladimirov¹, Alexandar Tashev² & Malina Delcheva¹

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Asteraceae

178. *Bidens bipinnatus* L.

Bu Northeast Bulgaria: Dalgopol town, on the railway near the town's cemetery, ca. 30 m, 43.051097°N, 27.364554°E, 10.10.2016, coll. V. Vladimirov & M. Delcheva (SOM).

New for this floristic region. So far known only from the Black Sea Coast (*Northern*) floristic region (Petrova & al. 2013b).

179. *Bidens frondosus* L.

Bu Black Sea Coast (*Southern*): W of Rosenets beach near Burgas city, ca. 10 m, 02.08.2016, 42.44584°N, 27.54680°E, coll. V. Vladimirov & A. Tashev (SOM); near Ribarsko Selishte – Burgas, ca. 12 m, 42.43653°N, 27.53273°E, 02.08.2016, V. Vladimirov & A. Tashev obs.; by the asphalted road between Chernomorets and Sozopol towns, ca. 8 m, 42.41145°N, 27.65445°E, 03.08.2016, coll. V. Vladimirov & A. Tashev (SOM) & 11.10.2016, V. Vladimirov, M. Delcheva & A. Tashev obs.; Lozenets village, several dozens of specimens by a small river, ca. 10 m, 42.211438°N, 27.801557°E, 05.08.2016, V. Vladimirov obs.

A new species for this floristic region. So far known from the Black Sea Coast (*Northern*), Northeast Bulgaria, Danubian Plain, Forebalkan, Balkan Range (*Western*), Sofia region, Valley of River Struma, Valley of River Mesta, Rhodopi Mts (*Western, Eastern*), Thracian Lowland, Tundzha Hilly Country and Mt Strandzha (Petrova 2013; Petrova & al. 2013b).

180. *Dittrichia graveolens* (L.) Greuter

Bu Znepole region: near Pernik town, by the shoulders of the highway to Blagoevgrad town, ca. 760 m, 42.58879°N, 23.11969°E, coll. V. Vladimirov (SOM).

A new record for this floristic region. So far reported from the Balkan Range (*Western*), Sofia region, Mt Sredna Gora (*Western*), Rhodopi Mts (*Eastern*), Thracian Lowland and Tundzha Hilly Country

(Assyov & Petrova 2012). The distribution of the species is facilitated by vehicles the along the highways and main roads in Bulgaria.

181. *Erigeron bonariensis* L.

Bu Black Sea Coast (*Southern*): Rezovo village, several dozens of specimens along the main street, ca. 40 m, 41.98427°N, 28.03046°E, 04.08.2016, V. Vladimirov & A. Tashev obs.

Second report of the species for this floristic subregion; already reported from the railway station of Burgas city (Vladimirov 2011), ca. 75 km N of the present locality.

182. *Erigeron sumatrensis* Retz.

Bu Mt Strandzha: near the centre of Kosti village along a street, ca. 25–30 m, 42.05879°N, 27.78072°E, V. Vladimirov & A. Tashev (SOM).

New record for this floristic region. A relatively widely distributed in the country species, so far reported from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, Forebalkan (*Western*), Sofia region, West Frontier Mts, Valley of River Struma, Mt Belasitsa, Valley of River Mesta, Pirin Mts (*Northern*), Rila Mts, Thracian Lowland and Tundzha Hilly Country (Vladimirov 2009; Petrova & al. 2013b).

183. *Helianthus tuberosus* L.

Bu Valley of River Struma (*Southern*): by the road from Petrich town to Kulata village near Drangovo village, ca. 160 m, 41.415697°N, 23.296395°E, 14.10.2016, coll. V. Vladimirov, M. Delcheva & A. Tashev (SOM).

New record for this floristic subregion. So far reported from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, Forebalkan (*Eastern*), Sofia region, Valley of River Mesta, Rhodopi Mts (*Central, Eastern*), Thracian Lowland, Tundzha Hilly Country (Petrova 2013; Petrova & al. 2013b).

184. *Senecio inaequidens* DC.

Bu Vitoshka region: by the road from Sofia to Pernik near Vladaya village, ca. 830 m, 42.630153°N, 23.189529°E, 23.11.2016, coll. V. Vladimirov (SOM); on the grass median strip between the travel lanes of the road Sofia – Pernik near Dragichevo village, ca. 760 m, 42.60237°N, 23.14871°E, V. Vladimirov obs.

A new record for this floristic region. The species has been recently reported for Bulgaria (Vladimirov & Petrova 2009), so far known only from Sofia region and Thracian Lowland (Petrova & al. 2015).

Fabaceae**185. *Laburnum anagyroides* Medik.**

Bu Black Sea Coast (*Southern*): SW of Rezovo village, several dozens of specimens along the bank of River Rezovska, *ca.* 10 m, 41.98284°N, 28.02661°E, 04.08.2016, coll. V. Vladimirov & A. Tashev (SOM).
A new record for this floristic region. So far the species has been reported from the Northeast Bulgaria, Balkan Range (*Western*), Sofia region, Znepole region, Tundzha Hilly Country (Petrova & al. 2013b).

Amaryllidaceae**187. *Sternbergia lutea* (L.) Ker Gawl. ex Spreng. (Fig. 32)**

Bu Valley of River Struma (*Southern*): General Todorov village, by the asphalted road to Novo Konomladi village, *ca.* 96 m, 41.456348°N, 23.290955°E, 14.10.2016, coll. V. Vladimirov, M. Delcheva & A. Tashev (SOM).

First report of this species for the Bulgarian flora. It is a garden escape. Although the species forms persistent populations, it is often collected from the naturalised populations and returned again for planting in gardens. Therefore, currently it should be regarded as a casual taxon in the Bulgarian flora.

Commelinaceae**188. *Commelina communis* L.**

Bu Black Sea Coast (*Southern*): Ribarsko Selishte – Burgas, *ca.* 6 m, 42.43586°N, 27.53273°E, 02.08.2016, coll. V. Vladimirov & A. Tashev (SOM).

A new record for this floristic region. A casual species so far reported from several floristic regions of the country: Forebalkan (*Eastern*), Sofia region, Valley of River Struma and Thracian Lowland (Assyov & Petrova 2012).



Fig. 32. *Sternbergia lutea* (photo V. Vladimirov).

Poaceae**189. *Panicum capillare* L.**

Bu Black Sea Coast (*Southern*): near Ribarsko Selishte – Burgas, *ca.* 12 m, 42.43653°N, 27.53273°E, 02.08.2016, coll. V. Vladimirov & A. Tashev (SOM); Chernomorets town, by a street, *ca.* 18 m, 42.442790°N, 27.648145°E, 03.08.2016, V. Vladimirov obs.; W of Sozopol town by the asphalted road to Chernomorets town, *ca.* 5 m, 42.40565°N, 27.66579°E, V. Vladimirov & A. Tashev obs.

First report of the species for this floristic region. So far reported from the Northeast Bulgaria, Danubian Plain and Sofia region (Petrova & al. 2013b).

Acknowledgements. Financial support of the Financial Mechanism of the European Economic Area and of the Bulgarian state budgeted within Programme BG03 'Biodiversity and Ecosystems' under the project ESENIAS-TOOLS (Contract Д-33-51/30.06.2015) is gratefully acknowledged.

Reports 190–213**Vassil Vutov & Dimitar Dimitrov**

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Apiaceae**190. *Bupleurum gerardi* All.**

Bu Valley of River Mesta: under Momina Kula Fortress, GM23, 02.07.2016, coll. D. Dimitrov (SOM 172679).

191. *Oenanthe lachenalii* C.C. Gmel.

Bu Mt Sredna Gora: Mt Lozenska, in damp places northwards of Kostadinkino village, GN21, 12.06.2012, coll. D. Dimitrov (SOM 172526).

Asclepiadaceae**192. *Asclepias syriaca* L.**

Bu Forebalkan (*Western*): St. Ivan Pusti Monastery (Bistretski Monastery), GN08, 11.06.2014, coll. M. Langurov, det. D. Dimitrov (SOM 172875).

So far the species have been reported from the Northeast Bulgaria, Danubian Plain, Forebalkan (*Eastern*), Sofia region, Mt. Belasitsa, Valley of River Mesta, Mt Sredna Gora, Thracian Lowland and Tundzha Hilly Country (Petrova & al. 2013b).

Asteraceae

193. *Achillea distans* Willd. subsp. *distans*

Bu Mt Sredna Gora (*Western*): Mt Lozenska, eastwards of peak Polovrak, 1000 m, GN01, 30.07.2016, coll. *D. Dimitrov* (SOM 172883).

194. *Centaurea degeniana* Wagn.

Bu Valley of River Struma (*Northern*): along the right-hand bank of river Rilska, eastwards of Rila town, FM76, 01.10.2016, coll. *D. Dimitrov* (SOM).

195. *Scolymus hispanicus* L.

Bu Mt Sredna Gora (*Western*): Mt Lozenska, eastwards of peak Polovrak, 1000 m, GN01, 30.07.2016, coll. *D. Dimitrov* (SOM 172889).

Brassicaceae

196. *Cardamine matthioli* Moretti

Bu Black Sea Coast (*Southern*): along a stream in Arapyra camping site, NG76, 09.04.2016, coll. *D. Dimitrov* (SOM 172488).

Caryophyllaceae

197. *Cerastium pumilum* Curt. subsp. *pallescens* (Schultz) Schinz. & Thell.

Bu Black Sea Coast (*Southern*): on a sand beach northwards of Tsarevo town, NG76, 09.04.2016, coll. *D. Dimitrov* (SOM 172489).

198. *Minuartia bosniaca* (G. Beck) K. Maly

Bu Mt Sredna Gora (*Western*): Mt Lozenska, eastwards of peak Polovrak, 1000 m, GN01, 30.07.2016, coll. *D. Dimitrov* (SOM 172884).

Crassulaceae

199. *Sedum alpestre* Vill.

Bu Valley of River Mesta: under Momina Kula Fortress, GM23, 02.07.2016, coll. *D. Dimitrov* (SOM 172972).

Dipsacaceae

200. *Knautia orientalis* L.

Bu Pirin Mts (*Southern*): after Paril village, on the road to Slavyanka chalet, GL29, 01.07.2016, coll. *D. Dimitrov* (SOM 172693).

— Rila Mts: NW Rila, under Pastra village, FM86, 04.07.2016, coll. *D. Dimitrov* (SOM 172694).

Lamiaceae

201. *Thymus callieri* Velen.

Bu Pirin Mts (*Southern*): above Paril village, along the road to Slavyanka chalet, GL29, 01.07.2016, coll. *D. Dimitrov* (SOM 172876).

Linaceae

202. *Linum thracicum* (Griseb.) Deg. subsp. *thracicum*

Bu Valley of River Mesta: between Yablanitsa and Bogolin villages, GN40, 30.05.2016, coll. *D. Dimitrov* (SOM 172821).

Orobanchaceae

203. *Orobanche crenata* Forssk.

Bu Pirin Mts (*Northern*): in the lower part of the mill-race trail under Vihren chalet, GM03, 03.07.2016, coll. *D. Dimitrov* (SOM 172691).

— Rila Mts: above Kirilova Polyana, along the road to Tiha Rila, FM96, 04.07.2016, coll. *D. Dimitrov* (SOM 172692).

204. *Phelipanche arenaria* (Borkh.) Powel var. *euxina* (Velen.) K. Stoyanov

Bu Black Sea Coast (*Southern*): in Vasiliko residential quarter of Tsarevo, NG76, 09.04.2016, coll. *D. Dimitrov* (SOM 172484); E of Varvara village, Tsarevo district, NG76, 08.04.2016, coll. *D. Dimitrov* (SOM 172483).

Polygonaceae

205. *Fallopia bohemica* (Chrtk & Chrtkova) J.P. Bailey

Bu Valley of River Struma (*Northern*): near the road from Rila town to Smochevo village, FM76, 01.10.2016, coll. *D. Dimitrov* (SOM 172974).

Saxifragaceae

206. *Ribes uva-crispa* L. var. *glanduloso-setosum* Koch

Bu West Frontiers Mts: Mt Maleshevska, above Palat village, FM80, 06.2009, coll. *D. Dimitrov* (SOM 172873).

Scrophulariaceae

207. *Verbascum eriophorum* Godr.

Bu West Frontier Mts: Mt Maleshevska, above Igralishte village, FM70, 06.2009, coll. *D. Dimitrov* (SOM 172874).

208. *Verbascum niveum* Ten. subsp. *pannosiforme* (Stoj.) Murb.

Bu Pirin Mts (*Southern*): above Paril village, near the trail to Slavyanka chalet, GL29, 01.07.2016, coll. *D. Dimitrov* (SOM 172681).

Alliaceae

209. *Allium vineale* L.

Bu Valley of River Mesta: under Momina Kula Fortress, GM23, 02.07.2016, coll. *D. Dimitrov* (SOM 172680).

Liliaceae**210. *Muscari pulchellum*** Heldr. & Sm.

Bu Black Sea Coast (*Southern*): in a sand beach on Arapya camping site, NG67, 09.04.2016, coll. *D. Dimitrov* (SOM 172486).

Poaceae**211. *Eleusine indica*** (L.) Gaertn.

Bu Northeast Bulgaria: Ruse town, on Raiko Daskalov street, MJ15, 02.09.2007, coll. *D. Dimitrov* (SOM 163715).

A new record for this floristic region. So far the species has been reported from the Black Sea Coast, Danubian Plain, Forebalkan, Sofia region, Znepole region, West Frontier Mts., Valley of River Struma, Thracian Lowland and Tundzha Hilly Country (Vladimirov 2011, 2013; Assyov & Petrova 2012; Petrova & al. 2013a; Tzonev & Gushev 2016).

212. *Festuca diffusa* Dum.

Bu West Frontier Mts: Mt Maleshevska, Sokolata Reserve, FM70, 19.06.2009, coll. *D. Dimitrov* (SOM 172339).

213. *Stipa pennata* L.

Bu Znepole region: Mt Golo Bardo, peak Ostritsa, FN61, 16.05.2010, coll. *D. Dimitrov* (SOM 172334).

Reports 214–218**Dimcho Zahariev**

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Euphorbiaceae**214. *Euphorbia davidii*** Subils

Bu Forebalkan (*Eastern*): in ruderal areas eastwards of Malki Chiflik village, Veliko Tarnovo district, Tarnovski Heights, LH96, 16.08.2015, coll. *D. Zahariev* (SO 107705).

A new record for the floristic region. This alien species has been recently reported for Bulgaria, so far known only from the Black Sea Coast (*Northern*) (Vladimirov & Petrova 2009; Petrova & al. 2013b)

Fabaceae**215. *Lathyrus hallersteinii*** Baumg.

Bu Forebalkan (*Eastern*): in meadows in Barkovets locality, near Vrabevo village, Troyan district, LH26, 13.05.2011, coll. *D. Zahariev* (SO 107712).

A new record for this floristic region. So far the species has been reported for the Balkan Range (*Central*) and Rhodopi Mts (*Western, Central*) (Kožuharov 1976; Assyov & Petrova 2012).

Polygonaceae**216. *Rumex maritimus*** L.

Bu Forebalkan (*Eastern*): on the southern bank of the dam, southwestwards of Belyakovets village, Veliko Tarnovo district, Tarnovski Heights, LH87, 25.08.2015, coll. *D. Zahariev* (SO 107704).

A new record for this floristic region. So far the species has been reported from the Northeast Bulgaria and Danubian Plain (Assyov & Petrova 2012).

Juncaceae**217. *Juncus acutiflorus*** Hoffm.

Bu Northeast Bulgaria: on the left-hand bank of river Golyama Kamchia, between Veselinovo village and Smyadovo town, Smyadovo district, Mt Dragoevska, NH05, NH06, 07.07.2015, coll. *D. Zahariev* (SO 107711).

A new record for this floristic region (cf. Assyov & Petrova 2012).

Poaceae**218. *Aegilops biuncialis*** Vis.

Bu Northeast Bulgaria: in grassy areas westwards of Podgoritsa village, Targovishte district, Lilyak Plateau, MH59, 07.06.2013, coll. *D. Zahariev* (SO 107709).

A new record for this floristic region (cf. Assyov & Petrova 2012).

Reports 219–224**George Zarkos¹, Vasilis Christodoulou², Kit Tan³ & Gert Vold⁴**

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The following are new plant records based on floristic investigations in the prefecture of Korinthias in north central Peloponnese together with a brief visit to the island of Mikonos in north central Kiklades. *Galatella linosyris* is a new record for mainland Peloponnese, and *Euphorbia hyssopifolia* is new for the floristic region Kiklades.

Asteraceae

219. *Galatella linosyris* (L.) Rchb. f. [≡ *Aster linosyris* (L.) Bernh.] (Figs. 33 & 34)

Gr Nomos & Eparchia Korinthias: plateau on Mt Killini, 1505 m, 37°57'N, 22°25'E, 17.08.2016, Christodoulou, Polymenakos & Zarkos obs.; *loc. ibid.*, 21.10.2016, Kit Tan, G. Vold & Zarkos 32250. New for the Peloponnese. There are relatively few re-



Fig. 33. *Galatella linosyris* (photo G. Zarkos).



Fig. 34. Distribution of *Galatella linosyris* in Greece.

ords from Greece as the plant is late-flowering and so seldom collected. However, the flowering period is long, lasting from June to late October. Recorded from Sterea Ellas, N Evvia, N Pindos and North East (see Fig. 34). *Galatella cretica* Gand. (≡ *Aster creticus* (Gand.) Rech. f.) occurs in the Cretan area (E Kriti, Karpathos and Saria), the Dodecanese and SW Anatolia.

Brassicaceae

220. *Diplotaxis eruroides* (L.) DC. (Fig. 35)

Gr Nomos & Eparchia Korinthias: between villages of Xylokeriza and Kechries, 60 m, 37°53'N, 22°57'E, 27.03.2016, Zarkos obs.; *loc. ibid.*, 30.10.2016 & 07.11.2016, Zarkos obs.; village Xylokeriza, old stone quarry, 90 m, 37°54'N, 22°56'E, road margins and olive fields, 21.11.2016, Zarkos obs.; 2 km from Examilia to Korinthos, roadsides, 60 m, 37°53'N, 22°57'E, 12.11.2016, Kit Tan & G. Vold 32260; 1 km from Xilokeriza to Examilia, edge of olive plantations and arable land, 37°54'N, 22°56'E, 12.11.2016, Kit Tan & G. Vold 32262.

New for nomos and eparchia Korinthias. Native to SW Europe (Spain to Italy and Sicily). Second record from the Peloponnese, the first being from Nomos Argolidos, Eparchia Navplias where it was reported as a weed in an orange grove (Chitos & Raus 1998: 167). Its first introduction to Greece is apparently at the harbour of Phalerus (present-day Falirio, Nomos Attikis, Eparchia Pireos) where it was collected by Friedrichsthal on 1 March 1835. Since then, it has spread in Greece although the extent of its naturalization is as yet undocumented. In Korinthias, it occurs as an annual weed in olive plantations



Fig. 35. *Diplotaxis eruroides* (photo G. Zarkos).

and at roadsides, in large quantities with even whole fields in flower and fruit. The flowers are sweetly fragrant, reminiscent of *Matthiola incana* and *Hesperis*. The leaves resemble those of *Eruca vesicaria* (rucola, roka) which is widely used as a salad plant but they have not the sharp, pungent flavor so one wonders why whole fields were covered by it, almost like an abandoned crop.

Euphorbiaceae

221. *Euphorbia hyssopifolia* L. (Fig. 36)

Gr Nomos Kikladon, *Eparchia Sirou: Mikonos*,
Psarou beach, 14 m, 37°24'N, 25°20'E, 07.08.2016,
Zarkos obs.

New for the Kiklades. This is the second report from Greece, the first being from Xylokastro in N Peloponnese (Zarkos & al. 2015: 391-392).



Fig. 36. *Euphorbia hyssopifolia* (photo G. Zarkos).

Lamiaceae

222. *Stachys annua* (L.) L. (Fig. 37)

Gr Nomos & Eparchia Korinthias: weed in tomato fields to the southeast of Kesari village, 37°56'N, 22°34'E, 742 m, 02.10.2009, Christodoulou obs.; *loc. ibid.*, 01.07.2012 & 05.11.2012, Christodoulou obs.; 25.10.2016, Christodoulou & Zarkos obs.; *loc. ibid.*, 06.11.2016, Kit Tan, G. Vold & Christodoulou 32257.

Known from mainland Greece, this is the second report for the Peloponnese, the first being from Nomos Achaïas. It has been noted by V. Christodoulou on several occasions since 2009, but always in the cultivated fields around Kesari. The species normally flowers in late May to July but an unusually warm autumn and copious irrigation have encouraged a second luxuriant flowering in October and November.

Verbenaceae

223. *Phyla nodiflora* (L.) Greene

Gr Nomos Kikladon, *Eparchia Sirou: Mikonos*,
Psarou beach, 14 m, 37°24'N, 25°20'E, 07.08.2016,
Zarkos obs.

New for the island of Mikonos, second report from the Kiklades, the first being from Amorgos (Biel & Tan 2016: 264).

Colchicaceae

224. *Colchicum peloponnesiacum* Rech. f. & P.H. Davis

Gr Nomos & Eparchia Korinthias: Rozena to Evrostina, stony and grassy slopes at edge of olive fields, 700–900 m, 38°04'N, 22°23'E, 01.11.2016,
Kit Tan & G. Vold 32255.

New for nomos and eparchia. Abundant, growing together with *Crocus cancellatus* subsp. *mazziaricus* on land marked for sale. Endemic to the Peloponnese.



Fig. 37. *Stachys annua* (photo V. Christodoulou).

References

- Alexiou, S.** 2013. The genus *Colchicum* L. (*Colchicaceae*) in Greece. – *Parnassiana Archives* 1 (2013): 59-73. Available from www.wildgreeceditions.com/parnassiana_archives/, accessed Oct, 14-en, 2016.
- Ančev, M.** 1982. *Armeria* Willd. – In: **Velčev, V.** (ed.) *Fl. Reipubl. Popularis Bulgariae*. Vol. 8, pp. 345-348. In *Aedibus Acad. Sci. Bulgariae, Serdicae* (in Bulgarian).
- Ančev, M.** 1989. *Gallium* L. – In: **Velčev, V.** (ed.) *Fl. Reipubl. Popularis Bulgariae*. Vol. 9, pp. 467-474. In *Aedibus Acad. Sci. Bulgariae, Serdicae* (in Bulgarian).
- Ančev, M.** 1999. *Galium* L. – In: **Petrova, A., Anchev, M. & Palamarev, E.** (eds). *How to Identify the Plants in Our Nature. Excursion Field Guide*, pp. 413-418. Prosveta Printing House, Sofia. (in Bulgarian).
- Ančev, M.** 2007. Catalogue of the family *Brassicaceae* (*Cruciferae*) in the flora of Bulgaria. – *Phytol. Balcan.*, 13(2): 153-178.
- Andreev, N. & Peev, D.** 1989. *Cerintho* L. – In: **Velčev, V.** (ed.), *Fl. Reipubl. Popularis Bulgariae*. Vol. 9, pp. 134-136. In *Aedibus Acad. Sci. Bulgariae, Serdicae* (in Bulgarian).
- Apostolova-Stoyanova, N. & Stoyanov, S.** 2007. Reports 1–4. – In: **Vladimirov, V. & al.** (comps), *New floristic records in the Balkans: 5.* – *Phytol. Balcan.*, 13(2): 262.
- Asenov, A.** 2010. Reports 2–26. – In: **Vladimirov, V. & al.** (comps), *New floristic records in the Balkans: 14.* – *Phytol. Balcan.*, 16(3): 416-418.
- Assyov, B. & Petrova, A.** (eds). 2012. *Conspectus of the Bulgarian Vascular Flora. Distribution Maps and Floristic Elements. Fourth revised and enlarged edition.* Bulgarian Biodiversity Foundation, Sofia.
- Bancheva, S.** 2009. *Colchicum doerfleri* (75), *Cyanus pseudoaxillaris* (68). – In: **Petrova, A. & Vladimirov, V.** (eds), *Red List of Bulgarian vascular plants.* – *Phytol. Balcan.*, 15(1).
- Bancheva, S.** 2015. *Centaurea pseudaxillaris* (209), *Colchicum doerfleri* (p. 455). – In: **Peev, D. & al.** (eds), *Red Data Book of the Republic of Bulgaria. Vol. 1, Plants and Fungi.* P. 439. BAS & MoEW, Sofia.
- Bancheva, S. & Raimondo, F.** 2003. Biosystematic studies of seven Balkan species from genus *Cyanus* (*Compositae*). – *Bocconea*, 16(2): 507–527.
- Biel, B. & Tan, Kit** 2016. Reports 8–51. – In: **Vladimirov, V. & al.** (comp.), *New floristic records in the Balkans: 30.* – *Phytol. Balcan.*, 22(2): 261-265.
- Borisova, D. & Donchev, K.** 2003. *Studies in Natural Park Vrachanski Balkan. 1. Flora studies.* Nat. Park Vrachanski Balkan, Vratsa.
- Brullo S., Pavone P. & Salmeri C.** 1999. *Allium archeotrichon* (*Alliaceae*), a new species from Rhodos (Dodekannisos, Greece). – *Nord. J. Bot.*, 19: 41-46.
- Carlström, A.** 1987. A survey of the flora and phytogeography of Rodhos, Simi, Tilos and the Marmaris Peninsula (SE Greece, SW Turkey). *Ph.D. thesis.* Univ. Lund, Lund.
- Cheshmedzhiev, I.** 1984. *Sedum tschernokolevii* Stef. – In: **Velčev, V.** (ed.), *Red Data Book of the People's Republic of Bulgaria. Vol. 1. Plants*, p. 155. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).
- Cheshmedzhiev, I.** 2003. *Ophrys*. – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), *Key to the Plants of Bulgaria.* Pp. 465-466. Agrarian Univ. Acad. Press, Plovdiv (in Bulgarian).
- Chilton, L.** 1993. *Plant list for Rhodes (Greece: East Aegean Islands).* Ed. 2 (slightly revised 1994–2011). Retford, Marengo.
- Chilton, L.** 1999. *Plant list for Symi (Greece: East Aegean Islands).* Ed. 1 (slightly revised 2000–2010). Retford, Marengo.
- Chitos, Th. & Raus, Th.** 1998. *Diploaxis erucooides*. – In: **Greuter, W. & Raus, Th.** (eds), *Med-Checklist notulae*, 17. – *Willdenowia*, 28(1-2): 163-174.
- DAISIE.** *Delivering Alien Invasive Species Inventories for Europe.* – Published at <http://www.europe-aliens.org> [accessed 8 Jan 2016].
- Delipavlov, D.** 2011. *Asteraceae* (pp. 376-432), *Caryophyllaceae* (65-88). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), *Key to the Plants of Bulgaria.* Agrarian Univ. Acad. Press, Plovdiv (in Bulgarian).
- Delipavlov, D. & Cheshmedzhiev, I.** (eds). 2011. *Key to the Plants of Bulgaria.* Agrarian Univ. Acad. Press, Plovdiv (in Bulgarian).
- Dimitrov, D.** 2009. *Vicia incisa* M. Bieb. – In: **Petrova, A. & Vladimirov, V.** (eds), *Red List of Bulgarian vascular plants.* – *Phytol. Balcan.*, 15(1): 81.
- Dimitrov, D.** 2015. *Vicia incisa* M. Bieb. – In: **Peev, D. & al.** (eds), *Red Data Book of the Republic of Bulgaria. Vol. 1, Plants and Fungi*, p. 648. BAS & MoEW, Sofia.
- Dimopoulos, P., Raus, Th., Bergmeier, E., Constantinidis, Th., Iatrou, G., Kokkini, S., Strid, A. & Tzanoudakis, D.** 2013. *Vascular Plants of Greece: An Annotated Checklist.* Botanic Garden and Botanical Museum Berlin-Dahlem, Berlin & Hellenic Botanical Society, Athens. – *Englera*, 31.
- Džigurski, D., Ljevnaić-Mašić, B. & Nikolić, L.** 2013. *Trisetum natantis* Müller et Görs 1960 in hydromeliorative facilities in Serbia. – *Acta Soc. Bot. Pol.*, 82(2): 125-133.
- Galanos, C.J.** 2015. The alien flora of terrestrial and marine ecosystems of Rodos island (SE Aegean), Greece. – *Willdenowia*, 45: 261-278.
- Gančev, I. & Denčev, S.** 1963. Floristische Materialien aus der Stara-Zagora-Ebene und der Särnena Gora. – *Izv. Bot. Inst. (Sofia)*, 11: 159-160 (in Bulgarian).
- Genova, E.** 2009. *Stachys leucoglossa* Griseb. – In: **Petrova, A. & Vladimirov, V.** (eds), *Red List of Bulgarian vascular plants.* – *Phytol. Balcan.*, 15(1): 80.
- Genova, E.** 2015. *Stachys leucoglossa* Griseb. – In: **Peev, D. & al.** (eds), *Red Data Book of the Republic of Bulgaria. Vol. 1, Plants and Fungi*, p. 615. BAS & MoEW, Sofia.
- Grozeva, N.** 2006. Report 53. – In: **Vladimirov, V. & al.** (eds), *New floristic records in the Balkans: 2.* – *Phytol. Balcan.*, 12(2): 287.
- Gushev, Ch.** 2009. *Verbascum adriopolitanum* Podp. – In: **Petrova, A. & Vladimirov, V.** (eds), *Red List of Bulgarian vascular plants.* – *Phytol. Balcan.*, 15(1): 80.
- Gushev, Ch.** 2015. *Verbascum adriopolitanum* Podp. – In: **Peev, D. & al.** (eds), *Red Data Book of the Republic of Bulgaria. Vol. 1. Plants and Fungi*, p. 637. BAS & MoEW, Sofia.

- Hart, H. t.** 1983. *Sedum apoleipon*, a new species of the *Sedum acre* group (*Crassulaceae*) from Central Greece. – *Willdenowia*, **13**(2): 309-319.
- Ivanova, D.** 2009. *Sedum tschernokolevii* Stef. – In: **Petrova, A. & Vladimirov, V.** (eds), Red List of Bulgarian vascular plants. – *Phytol. Balcan.*, **15**(1): 91.
- Jalas, J., Suominen, J., Lampinen, R. & Kurtto, A.** (eds). 1999. Atlas Florae Europaeae. Distribution of vascular plants in Europe, vol. **12**, *Resedaceae* to *Platanaceae*. The Committee for Mapping the Flora of Europe & Societas Biologica Fennica Vanamo, Helsinki.
- Kleinstuber, A., Ristow, M. & Hassler, M.** 2016. Flora von Rhodos & Chalki. Band **1**. Naturwissenschaftlicher Verlag A. Kleinstuber, Karlsruhe.
- Koeva, J.** 1989. *Stachys*. – In: **Velčev, V.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **9**, pp. 388-411. In *Aedibus Acad. Sci. Bulgaricae, Serdicae* (in Bulgarian).
- Kožuharov, S.** 1976. *Lathyrus*. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **6**, pp. 503-548. In *Aedibus Acad. Sci. Bulgaricae, Serdicae* (in Bulgarian).
- Kurtto, A.** 2009. *Rosaceae* (pro parte majore). – In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. – <http://www2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameId=30948&PTRefFk=7300000> (accessed 19.10.2016).
- Kuzmanov, B.** 1976. *Vicia*. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **6**, pp. 442-498. In *Aedibus Acad. Sci. Bulgaricae, Serdicae*.
- Lansdown, R.** 2011. *Trapa natans* L. – In: The IUCN Red List of Threatened Species 2011: e.T164153A5751867. – <http://www.iucnredlist.org/details/164153/1> (downloaded on 11.10.2016).
- Malo, S. & Shuka, L.** 2013. Distribution of *Colchicum doerfleri* Halácsy, *Colchicum triphyllum* Kunze and *Colchicum bivonae* Guss., in Albania. – *Int. J. Ecosyst. & Ecol. Sci.*: **3**(2): 273-278.
- Markova, M.** 1989. *Thymus* L. – In: **Velčev, V.** (ed.) Fl. Reipubl. Popularis Bulgaricae. Vol. **9**, pp. 288-331. In *Aedibus Acad. Sci. Bulgaricae, Serdicae* (in Bulgarian).
- Panov, P.** 1972. Floristic materials and some critical notes. – *Izv. Bot. Inst. (Sofia)*, **22**: 159-168 (in Bulgarian).
- Pedashenko, H.** 2010. Reports 49–51. – In: **Vladimirov, V. & al.** (comps), New floristic records in the Balkans: 13. – *Phytol. Balcan.*, **16**(1): 153-154.
- Peev, D.** 1989. *Scutellaria* L. – In: **Velčev, V.** (ed.) Fl. Reipubl. Popularis Bulgaricae. Vol. **9**, pp. 467-474. In *Aedibus Acad. Sci. Bulgaricae, Serdicae* (in Bulgarian).
- Peev, D. & Tsoneva, S.** 2009. *Trapa natans*. – In: **Petrova, A. & Vladimirov, V.** (eds), Red List of Bulgarian vascular plants. – *Phytol. Balcan.*, **15**(1): 80.
- Peev, D. & Tsoneva, S.** 2015. *Trapa natans*. – In: **Peev, D. & al.** (eds), Red Data Book of the Republic of Bulgaria. Vol. **1**, Plants and Fungi, p. 629. BAS & MoEW, Sofia.
- Petrova, A.** 2009. *Ophrys mammosa*. – In: **Petrova, A. & Vladimirov, V.** (eds), Red List of Bulgarian vascular plants. – *Phytol. Balcan.*, **15**(1): 85.
- Petrova, A.** 2013. Reports 43–53. – In: **Vladimirov, V. & al.** (comp.), New floristic records in the Balkans: 23. – *Phytol. Balcan.*, **19**(3): 382-384.
- Petrova, A., Assyov, B. & Vassilev, R.** 2007. Reports 28-61. – In: **Vladimirov, V. & al.** (comp.), New floristic records in the Balkans: 5. – *Phytol. Balcan.*, **13**(2): 266-271.
- Petrova, A. S., Hristov, H. & Trifonov, V.** 2008. Report 79. – In: **Vladimirov, V. & al.** (comp.), New floristic records in the Balkans: 7. – *Phytol. Balcan.*, **14**(1): 142.
- Petrova, A., Sopotlieva, D. & Apostolova, I.** 2015. Reports 202–206. – In: **Vladimirov, V. & al.** (comp.), New floristic records in the Balkans: 26. – *Phytol. Balcan.*, **21**(1): 76-77.
- Petrova, A., Vassilev, R., Gerasimova, I. & Venkova, D.** 2013a. Reports 87–99. – In: **Vladimirov, V. & al.** (comp.), New floristic records in the Balkans: 22. – *Phytol. Balcan.*, **19**(2): 283-285.
- Petrova, A., Vladimirov, V. & Georgiev, V.** 2013b. Invasive Alien Species of Vascular Plants in Bulgaria. IBER-BAS, Sofia.
- Popova, M.** 2011. *Rosaceae*. – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria, pp. 170-198. Agrarian Univ. Acad. Press, Plovdiv (in Bulgarian).
- Rothmaler, W.** 1944. Floristische Ergebnisse einer Reise nach dem Peloponnes. – *Bot. Jahrb. Syst.* **73**(4): 418-452.
- Sciandrello, S., Giusso del Galdo, G. & Minissale, P.** 2016. *Euphorbia hypericifolia* L. (*Euphorbiaceae*), a new alien species for Italy. – *Webbia*, **71**(1): 163-168.
- Stanev, S.** 1983. Materials and critical notes on the flora of Bulgaria. – *Izv. Mus. S. Bulgaria*, **9**: 41-46 (in Bulgarian).
- Stefanoff, B.** 1965. Zur Kenntnis von zwei bisher nicht beschriebenen Arten aus der Flora Bulgariens. – *Izv. Bot. Inst. (Sofia)* **14**: 191-199 (in Bulgarian).
- Stefanova, B.** 1984. *Verbascum adrianopolitanum*. – In: **Velchev, V.** (ed.), Red Data Book of PR Bulgaria. V. **1**. Plants, p. 329. Sofia, BAS Publishing House.
- Stefanova-Gateva, B.** 1995. *Verbascum*. – In: **Kožuharov, S.** (ed.) Fl. Reipubl. Popularis Bulgaricae. Vol. **10**, pp. 26-100. In *Aedibus Acad. Sci. Bulgaricae, Serdicae* (in Bulgarian).
- Stefanova-Gateva, B.** 2006. *Verbascum adrianopolitanum*. – In: **Petrova, A.** (ed.), Atlas of Bulgarian Endemic Plants, p. 230. Gea-Libris Ltd., Sofia.
- Stojanov, N. & Kitanov, B.** 1946. Flora der Insel Thasos. – *God. Sofiisk. Univ. Fiz.-Mat. Fak.*, **42**: 89-196.
- Stojanov, N., Stefanov, B. & Kitanov, B.** 1966. *Cydonia* Mill. – In: Flora of Bulgaria. Ed. 4, vol. **1**, pp. 521-522. Nauka & Izkustvo, Sofia (in Bulgarian).
- Stoyanov, S. & Goranova, V.** 2014. Reports 107–112. – In: **Vladimirov, V. & Tan, Kit** (comp.), New floristic records in the Balkans: 24. – *Phytol. Balcan.*, **20**(1): 117-118.
- Strid, A.** 2016. Atlas of the Aegean flora. Part **1**: Text & plates. Part **2**: Maps. Botanic Garden and Botanical Museum, Freie Universität Berlin, Berlin.
- Strid, A. & Tan, Kit** (eds). 1997. Flora Hellenica. Vol. **1**. Koeltz Scientific Books, Königstein.

- Tashev, A., Vitkova, A. & Russakova, V.** 2006. Distribution of *Ophrys apifera* Huds. (*Orchidaceae*) in Bulgaria. – *Fl. Medit.*, **16**: 247-252.
- Terziiski, D.** 2011. *Vicia*. – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), *Key to the Plants of Bulgaria*, pp. 229-232. Agrarian Univ. Acad. Press, Plovdiv (in Bulgarian).
- Thornberg, M. & Tan, Kit** 2016. Reports 160–162. – In: **Vladimirov, V. & al.** (comp.), *New floristic records in the Balkans*: 30. – *Phytol. Balcan.*, **22**(2): 286.
- Tihomirov, V.** 1988. *Trapa natans*. – In: **Golovanov, V.** (ed.), *Red Data Book of RSFR*. Pp. 431-432. Rosagropromizdat, Moscow (in Russian).
- Tosheva, A. & Traikov, I.** 2010. New chorological data on some submerged macrophytes in Bulgaria. – *Biotech. & Biotechnol. Eq.*, **24** SE: 91-94.
- Tzonev, R. & Gushev, Ch.** 2016. Reports 97–101. – In: **Vladimirov, V. & al.** (comp.), *New floristic records in the Balkans*: 29. – *Phytol. Balcan.*, **22**(1): 113-114.
- Valev, S.** 1970. *Sedum*. – In: **Jordanov, D.** (ed.), *Fl. Reipubl. Popularis Bulgariae*. Vol. **4**, pp. 620-643. In *Aedibus Acad. Sci. Bulgariae, Serdicae* (in Bulgarian).
- Valev, S.** 1973. *Cydonia* Mill. – In: **Jordanov, D.** (ed.), *Fl. Reipubl. Popularis Bulgariae*. Vol. **5**, pp. 321-322. In *Aedibus Acad. Sci. Bulgariae, Serdicae* (in Bulgarian).
- Vladimirov, V.** 2006. Reports 83–95. – In: **Vladimirov, V. & al.** (eds), *New floristic records in the Balkans*: 1. – *Phytol. Balcan.*, **12**(1): 125-126.
- Vladimirov, V.** 2009. *Erigeron sumatrensis* (*Asteraceae*): a recently recognized alien species in the Bulgarian flora. – *Phytol. Balcan.*, **15**(3): 361-365.
- Vladimirov, V.** 2011. Reports 124–130. – In: **Vladimirov, V. & al.** (comp.), *New floristic records in the Balkans*: 17. – *Phytol. Balcan.*, **17**(3): 379-380.
- Vladimirov, V.** 2012. *Senecio*. – In: **Peev, D.** (ed.), *Fl. Reipubl. Bulgariae*. Vol. **11**, pp. 432-449. In *Aedibus Acad. Prof. Marin Drinov, Serdicae* (in Bulgarian).
- Vladimirov, V.** 2013. Reports 105–112. – In: **Vladimirov, V. & al.** (comp.), *New floristic records in the Balkans*: 23. – *Phytol. Balcan.*, **22**(3): 393-394.
- Vladimirov, V.** 2014. Reports 137–141. – In: **Vladimirov, V. & al.** (eds), *New floristic records in the Balkans*: 24. – *Phytol. Balcan.*, **20**(1): 127-128.
- Vladimirov, V. & Kuzmanov, B.** 2012. *Erigeron*. – In: **Peev, D.** (ed.), *Fl. Reipubl. Bulgariae*. Vol. **11**, pp. 196-208. Editio Acad. “Prof. Marin Drinov”, Serdicae (in Bulgarian).
- Vladimirov, V. & Petrova, A.** 2009a. *Senecio inaequidens* (*Asteraceae*): a new alien species for the Bulgarian flora. – *Phytol. Balcan.*, **15**(3): 373-375.
- Vladimirov, V. & Petrova, A.** 2009b. A new alien species of *Euphorbia* (*Euphorbiaceae*) to the Bulgarian flora. – *Phytol. Balcan.*, **15**(3): 343-345.
- Webb, D.A., Akeroyd, J.R. & Hart, H.'t.** 1993. *Sedum*. – In: **Tutin, T.G.** (ed.), *Flora Europaea*. 2nd ed. Vol. **1**, pp. 429-436. Cambridge Univ. Press, Cambridge.
- Zarkos, G., Christodoulou, V., Tan, Kit & Vold, G.** 2015. Reports 137-238. – In: **Vladimirov, V. & al.** (comp.), *New floristic records in the Balkans*: 28. – *Phytol. Balcan.*, **21**(3): 387-397.
- Zervou, S., Raus, T. & Yannitsaros, A.** 2009. Additions to the flora of the island of Kalimnos (SE Aegean, Greece). – *Willdenowia*, **39**: 165-177.

