

New floristic records in the Balkans: 4*

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

Abstract: New chorological data are presented for 103 species and subspecies from Bulgaria (records no. 53, 69-103), Greece (1-37), Macedonia (41-52, 54-68), and Turkey-in-Europe (38-40). The taxa belong to the following families: *Apiaceae* (1, 2, 60, 69, 89), *Asteraceae* (3-5, 42, 90, 95-97), *Blechnaceae* (41), *Boraginaceae* (6, 7), *Brassicaceae* (8, 9, 43-49, 70), *Campanulaceae* (10, 11, 98), *Caryophyllaceae* (12-14, 50, 71, 72), *Chenopodiaceae* (15), *Crassulaceae* (61, 91), *Cyperaceae* (22, 23), *Dryopteridaceae* (59), *Fabaceae* (62, 73-75, 92, 99), *Geraniaceae* (63), *Lamiaceae* (76, 77), *Liliaceae* (24-27), *Onagraceae* (17), *Orchidaceae* (28), *Papaveraceae* (18), *Plantaginaceae* (78), *Poaceae* (29-37, 87-98, 94, 101-103), *Polygonaceae* (19, 79), *Primulaceae* (51), *Ranunculaceae* (20, 38-40, 54-56, 64-66), *Rosaceae* (52, 53, 65, 66, 80-84), *Rubiaceae* (85, 93), *Saxifragaceae* (57), *Scrophulariaceae* (21, 86, 100), *Urticaceae* (58).

Cerastium decalvans subsp. *decalvans* var. *kitanovii* D. Dimitrov (50) is described as a new for science taxon.

First reports for countries are: Greece – *Atriplex littoralis* (15), *Gagea saxatilis* (27); for Macedonia – *Alchemilla mollis* (52), *Parietaria lusitanica* subsp. *serbica* (58). *Ranunculus brevifolius* (65) is confirmed for the flora of Macedonia.

The publication includes contributions by B. Biel & Kit Tan (1-37), F. Dane (38-40), D. Dimitrov (41-58), M. Niketić, L. Melovski & G. Tomović (59-68), K. Vassilev (69-88), K. Vassilev, T. Meshinev & I. Apostolova (89-94), K. Vassilev, H. Pedashenko & S. Bancheva (95-103).

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

Reports 1-37

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This is the third report of new plant-records for the island of Samothraki (N Aegean islands) based on fieldwork carried out in the years 2000-2002 and 2006. The 37 records listed are all new to the island of Samothraki and when specifically stated, to the floristic region N Aegean (NAe) as circumscribed in *Flora Hellenica* (Strid & Tan 1997). Two of the records, *Atriplex littoralis* L. and *Gagea saxatilis* (Mert. & Koch) Schult. & Schult. f. are new for Greece.

Apiaceae

1. *Echinophora tenuifolia* subsp. *sibthorpiana* (Guss.) Holmboe

Gr Samothraki: NE of Kamariotissa, grassy road embankment directly above beach along the coastal road to Therma, 8 m, 40°28'58"N, 25°28'46"E, 06.10.2006, *Biel* 06.592. Several fruiting plants were seen on each side of the road.

New for the N Aegean islands.

2. *Peucedanum longifolium* Waldst. & Kit.

Gr Samothraki: N-NE of Pachia Ammos, open phrygana on low summit, on basalt and schist, 820 m, 40°24'57"N, 25°36'58"E, 03.10.2006, *Biel* 06.481.

This is the second report for Samothraki, the first was from the northern part of the island (*Tzanoudakis* 10941, UPA).

Asteraceae

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

Gr Samothraki: SW of Xiropotamos, *Platanus* alluvial forest on gravelly sand, 80 m, 40°24'21"N, 25°35'08"E, 11.04.2006, *Biel* 06.299.

New for the N Aegean islands.

4. *Hedypnois cretica* subsp. *tubaeformis* (Ten.) Nyman

Gr Samothraki: SW of Xiropotamos, pasture with olive trees, on basalt and porphyry, 100 m, 40°26'27"N, 25°31'08"E, 11.04.2006, *Biel* 06.300.

Confirming the literature records of *H. tubaeformis* Ten. by Stojanoff & Kitanoff (1944: 453).

5. *Lactuca saligna* L.

Gr Samothraki: E of Alonia, heavily grazed steep slope, on green schist and basalt, 360 m, 40°27'42"N, 25°31'53"E, 27.05.2002, *Biel* 02.016;

NE of Kamariotissa, fallow field on coastal limestone slope, 60 m, 40°28'47"N, 25°29'13"E, 06.10.2006, *Biel* 06.587. Another locality was noted near Kamariotissa, c. 1 km to the northeast.

These are recent collections confirming the literature record published by Ade & Rechner (1938: 139).

Boraginaceae

6. *Buglossoides arvensis* subsp. *gasparrinii* (Guss.) R. Fern.

Gr Samothraki: E-SE of Chora, low macchie on rocky SW slopes of Saos ridge, on basalt and granite, 1040 m, 40°27'48"N, 25°34'21"E, 14.04.2006, *Biel* 06.360.

New for the N Aegean islands.

7. *Buglossoides arvensis* subsp. *sibthorpiana* (Griseb.) R. Fern. (Fig. 1)

Gr Samothraki: E-SE of Chora, low macchie on rocky SW slopes of Saos ridge, on basalt and granite, 1040 m, 40°27'48"N, 25°34'21"E, 14.04.2006, *Biel* 06.361.



Fig. 1. *Buglossoides arvensis* subsp. *sibthorpiana* (photo B. Biel).

New for the N Aegean islands.

Both subspecies were growing near each other.

Brassicaceae

8. *Clypeola jonthlaspi* subsp. *microcarpa* (Moris) Arcang.

Gr Samothraki: SW of Kamariotissa, open phrygana on low hill, coastal limestone, 18 m, 40°28'01"N, 25°27'36"E, 02.04.2006, *Biel* 06.022.

9. *Erophila macrocarpa* (Boiss. & Heldr.) Boiss.

Gr Samothraki: SE of Profitis Ilias, rocky slope with open phrygana near chapel at Kremniotissa, on granite, 250 m, 40°24'21"N, 25°35'08"E, 10.04.2006, *Biel* 06.252.

Recorded for Thasos.

Campanulaceae

10. *Campanula patula* L. subsp. *patula*

Gr Samothraki: E of Chora (Samothraki), dwarf mountain scrub on Saos ridge, on rocky basalt and granite, 1470 m, 40°28'01"N, 25°34'52"E, 05.10.2006, *Biel* 06.575; N-NE of Pachia Ammos, open phrygana with two small streams, on basalt and schistose substrate, 820 m, 40°25'23"N, 25°36'12"E, 03.10.2006, *Biel* 06.478.

A small population was found within *Pteridium* near one of the streams. New for the N Aegean islands.

11. *Campanula rotundifolia* L.

Gr Samothraki: S-SE of Therma, rocky open vegetation on Saos ridge, N-NW of Fengari summit, on basalt and granite, 1570 m, 40°27'54"N, 25°34'57"E, 05.10.2006, *Biel* 06.584.

This is the second collection, the first was published in New Floristic Records in the Balkans series 3, report no. 30 (*Biel* & Tan 2006: 415).

Caryophyllaceae

12. *Arenaria deflexa* Decaisne

Gr Samothraki: E of Chora (Samothraki), rocky open vegetation on Saos ridge, on basalt and granite, 1470 m, 40°28'01"N, 25°34'52"E, 05.10.2006, *Biel* 06.580 & 06.580a.

Small scattered populations were found at the base of cliffs, together with *Arabis bryoides*, *Astragalus thracicus* subsp. *parnassi*, *Asyneuma limonifolium*, *Bellardiochloa variegata*, *Berberis cretica*, *Corydalis solida* subsp. *incisa*, *Minuartia anatolica*, *Ornithogalum fimbriatum* and *Polygonum icaricum*. New for the N Aegean islands.

13. *Minuartia setacea* (Thuill.) Hayek

Gr Samothraki: SE of Profitis Ilias, rocky slope with open phrygana, on granite, 250 m, 40°24'21"N, 25°35'08"E, 03.10.2006, *Biel* 06.493. Another locality was noted E-SE of Chora.

Recorded by Stojanoff & Kitanoff (1944: 426) but omitted by Kamari (1997) from *Flora Hellenica*.

14. *Sagina apetala* Ard.

Gr Samothraki: SE of Profitis Ilias, rocky slope with open phrygana near the chapel of Kremniotissa, on granite, 250 m, 40°24'21"N, 25°35'08"E, 10.04.2006, *Biel* 06.258.

This is a recent collection confirming the literature record of Ade & Rechinger (1938: 139).

Chenopodiaceae

15. *Atriplex littoralis* L.

Gr Samothraki: Therma, sandy river bed with shrubs, near village, basaltic rock, 60 m, 40°29'33"N, 25°36'31"E, 01.10.2006, *Biel* 06.435.

This was noted near Kamariotissa in 2001. New for Greece.

Crassulaceae

16. *Sedum caespitosum* (Cav.) DC.

Gr Samothraki: SW of Kamariotissa, phrygana on coastal limestone slope, 10 m, 40°27'57" N, 25°27'24"E, 02.04.2006, *Biel* 06.017.

Onagraceae

17. *Epilobium collinum* C.C. Gmel.

Gr Samothraki: N-NE of Pachia Ammos, open phrygana with two small streams, on basalt and schistose substrate, 820 m, 40°25'23"N, 25°36'12"E, 03.10.2006, *Biel* 06.479.

A small population was found within *Pteridium* near one of the streams, together with *Alnus glutinosa*, *Campanula patula*, *Corydalis solida* subsp. *incisa*, *Crocus pulchellus*, *Erophila verna*, *Juncus minutulus*, *Montia arvensis*, *Pteridium aquilinum*, *Quercus pubescens*, *Satureja montana*, *Saxifraga carpetana* subsp. *graeca* and *Urtica dioica*. Recorded from Thasos in the N Aegean area.

Papaveraceae

18. *Fumaria bastardii* Bor

Gr Samothraki: SW of Kamariotissa, phrygana on coastal limestone slope, 10 m, 40°27'57"N, 25°27'24"E, 04.04.2006, *Biel* 06.101.

New for the N Aegean islands.

Polygonaceae**19. *Persicaria lapathifolia* (L.) Delarbre**

Gr Samothraki: E-SE of Therma, coastal wetland in alluvial forest, 2 m, 40°29'34"N, 25°38'48"E, 31.05.2002, *Biel* 02.091. A small population was found at the eastern edge of a seasonal pond drying out in the summer.

The only other record (from Chora, Samothraki) from the N Aegean islands is by Ade & Rechinger (1938:116).

Ranunculaceae**20. *Ranunculus neapolitanus* Ten.**

Gr Samothraki: NW of Anomeria-Isomata, *Quercus* slope on each roadside, on basalt and porphyry, 150 m, 40°26'43"N, 25°40'13"E, 12.04.2006, *Biel* 06.332.

Scrophulariaceae**21. *Linaria simplex* (Willd.) DC.**

Gr Samothraki: SW of Xiropotamos, gravelly river bed with olive trees and shrubs, 30 m, 40°25'46"N, 25°30'45"E, 07.04.2006, *Biel* 06.187a.

New for the N Aegean islands.

Cyperaceae**22. *Carex nigra* (L.) Rchb.**

Gr Samothraki: E of Profitis Ilias, steep ravine with *Platanus* trees, W of chapel Ag. Bati, on basalt, 720 m, 40°26'01"N, 25°34'12"E, 08.04.2006, *Biel* 06.222.

New for the N Aegean islands.

23. *Carex sylvatica* Huds.

Gr Samothraki: E of Therma, grassy verge of foot path between fields and gardens, on basaltic loam, 20 m, 40°29'36"N, 25°36'31"E, 16.04.2006, *Biel* 06.387a.

New for the N Aegean islands.

Liliaceae**24. *Gagea chrysantha* (Jan) Schult.**

Gr Samothraki: N of Anomeria-Isomata, *Quercus* grove edged by phrygana, on basalt, 140 m, 40°28'00"N, 25°40'23"E, 12.04.2006, *Biel* 06.334.

Recorded from Thasos.

25. *Gagea peduncularis* (J. & C. Presl) Pascher

Gr Samothraki: E-SE of Alonia, rocky summit with phrygana, by dirt track, on schist and basalt, 690 m, 40°27'29"N, 25°32'58"E, 03.04.2006, *Biel* 06.097.

Associated taxa include *Arabis verna*, *Asplenium ceterach*, *A. septentrionale*, *Aurinia saxatilis*, *Cerasus prostrata*, *Erophila verna*, *Gagea pratensis*, *Genista acanthoclada*, *Ornithogalum montanum*, *Polygonum icaricum*, *Satureja montana* and *Symphyanthra samothracica*. New for the N Aegean islands.

26. *Gagea pratensis* (Pers.) Dumort.

Gr Samothraki: E-SE of Alonia, rocky summit with phrygana by dirt track on schist and basalt, 690 m, 40°27'29"N, 25°32'58"E, 03.04.2006, *Biel* 06.089.

Confirming record by Stojanoff & Kitanoff (1944).

27. *Gagea saxatilis* (Mert. & Koch) Schult. & Schult. f. (Fig. 2)

Gr Samothraki: E of Chora, open dwarf scrub on Saos ridge, on basalt and granite, 1480 m, 40°28'12"N, 25°34'34"E, 15.04.2006, *Biel* 06.376.

New for Greece. Accompanying flora: *Berberis cretica*, *Corydalis solida* subsp. *incisa*, *Crocus chrysanthus*, *Erophila verna*, *Ranunculus ficaria*, *Scilla bifolia* agg., *Symphyanthra samothracica*, *Trifolium uniflorum* and *Viola samothracica*.



Fig. 2. *Gagea saxatilis* (photo B. Biel).

Orchidaceae**28. *Spiranthes spiralis* (L.) Chevall. (Fig. 3)**

Gr Samothraki: E of Therma, above Phonias valley, grazed plateau with phrygana and olive trees, porphyritic substrate, 30 m, 40°29'05"N, 25°39'10"E, 01.10.2006, *Biel* obs.

Poaceae**29. *Aeluropus littoralis* (Gouan) Parl.**

Gr Samothraki: SW of Kamariotissa, grassy edge of seasonal coastal pool, on loam and gravel, 4 m, 40°27'38"N, 25°27'35"E, 06.10.2006, *Biel* 06.597.

First noted in 2001 S-SW of Kamariotissa (lacking voucher).

30. *Bellardiocloa variegata* (Lam.) Kerguelen

Gr Samothraki: E of Chora, dwarf mountain scrub on

Saos ridge, on rocky basalt and granite, 1470 m, 40°28'01"N, 25°34'52"E, 05.10.2006, *Biel* 06.578.

New for the N Aegean islands. *Bellardiochloa variegata* was published by Ade & Rechinger (1938:143), but as *Poa violacea* based on a Dörfler collection.

31. *Brachypodium sylvaticum* subsp. *glaucovirens* Murb.

Gr Samothraki: NE of Kamariotissa, heavily grazed fallow field on coastal limestone slope, north of a small stream, 50 m, 40°28'53"N, 25°29'19"E, 06.10.2006, *Biel* 06.589.

New for the N Aegean islands.

32. *Crypsis schoenoides* (L.) Lam.

Gr Samothraki: SW of Kamariotissa, grassy edge of seasonal coastal pool, on loam and gravel, 4 m, 40°27'38"N, 25°27'35"E, 06.10.2006, *Biel* 06.596; E-SE of Therma, large coastal wetland in alluvial forest, 2 m, 40°29'34"N, 25°38'48"E, 01.10.2006, *Biel* 06.426.

A larger population was found at the eastern edge of a pond drying out in summer time. New for the N Aegean islands.

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

Gr Samothraki: Therma, shrubby road embankment within village, 50 m, 40°29'38"N, 25°36'31"E, 01.10.2006, *Biel* 06.436.

New for the N Aegean islands.

34. *Eragrostis minor* Host

Gr Samothraki: SW of Xiropotamos, gravelly river bed with olive trees and shrubs, 30 m, 40°25'46"N, 25°30'45"E, 02.10.2006, *Biel* 06.449 & 06.452.

35. *Setaria pumila* L.

Gr Samothraki: Anomeria-Kantaratika, wet field margins in village, on basalt and porphyritic substrate, 150 m, 40°27'34"N, 25°40'12"E, 04.10.2006, *Biel* 06.539.

New for the N Aegean islands.

36. *Sorghum halepense* (L.) Pers.

Gr Samothraki: E of Makrilies, grassy road embank-

ment, on porphyritic substrate, 80 m, 40°26'02"N, 25°31'11"E, 02.10.2006, *Biel* 06.464.

Two other sites were noted near Kamariotissa and Xiropotamos.

37. *Taeniatherum caput-medusae* subsp. *crinitum* Schreb.

Gr Samothraki: SW of Xiropotamos, gravelly river bed with olive trees and shrubs, 30 m, 40°25'46"N, 25°30'45"E, 02.10.2006, *Biel* 06.448.

New for the N Aegean islands.

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



Fig. 3. *Spiranthes spiralis* (photo B. Biel).

Reports 38-40

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Ranunculaceae

38. *Anemone blanda* Schott & Kotschy

Tu(E) Edirne: Budakdoganca village, near dry forests, 120 m, 41°45'37"N, 26°20'33"E, 25.03.1974, coll. A. Baytop, E. Tuzlaci & Y. Doganlar (ISTE 27275); 150 m, 15.04.1987, coll. F. Dane (EDTU 312).

— Tekirdag: Saray, 4 km to Saray, 170 m, 41°26'26"N, 27°55'19"E, 20.03.1974, coll. A. Baytop & E. Tuzlaci (ISTE 27243).

New for A1(E): Edirne and Tekirdag in European Turkey. Until now the species was known from A1(A):

Canakkale (Davis & al. 1965). Also reported for European Turkey by Baytop (1984).

39. *Anemone coronaria* L.

Tu(E) Kirklareli: Babaeski, Katranca village, near stream, 150 m, 41°21'N, 27°03'E, 18.04.1987, coll. *F. Dane* (EDTU 681).

- Tekirdag: Center, 0 m, 40°58'50"N, 27°30'54"E, 25.03.1968, coll. *A. Baytop* & *G. Atilla* (ISTE 14940); Seymen village, on the top of the hills, 84 m, 41°05'37"N, 27°56'56"E, 14.04.1969, coll. *A. Baytop* & *B. Cubukcu* (ISTE 14940); Sarkoy, Kizilcaterzi village, at roadsides, 100 m, 40°35'00"N, 26°59'00"E, 18.04.1986, coll. *F. Dane* (EDTU 321).
- Canakkale: Gelibolu, at roadsides, near grassland, 50 m, 40°35'00"N, 26°53'00"E, 18.04.1986, coll. *F. Dane* (EDTU 320); Eceabat-Kabatepe, at roadsides, 0 m, 40°11'02"N, 26°21'23"E, 18.04.1986, coll. *F. Dane* (EDTU 313); Kavak, in grassland, 102 m, 40°36'11"N, 26°52'55"E, 18.04.1986, coll. *F. Dane* (EDTU 315).

New for A1(E): Kirklareli, Tekirdag and Canakkale in European Turkey. Until now the species has been known from A2(E): İstanbul (Davis & al. 1965). Colour variants often form pure populations with scarlet flowers (*A. c.* var. *coccinea*). Populations with pink (*A. c.* var. *rosea*), violet-blue (*A. c.* var. *cyanea*) and white (*A. c.* var. *alba*) flowers were not found in European Turkey.

40. *Anemone pavonina* Lam.

Tu(E) Edirne: Center, Orhaniye village, 150 m, 41°31'00"N, 26°39'00"E, 10.04.1986, coll. *F. Dane* (EDTU 277); Elcili village, 50 m, 41°27'04"N, 26°37'16"E, 10.04.1986, coll. *F. Dane* (EDTU 276); Havsa, Azatlı village, Sazlidere slope, 50 m, 41°30'08"N, 26°41'51"E, 10.04.1986, coll. *F. Dane* (EDTU 276); Kircasalih, Kurttepe village, near a grassland, 150 m, 41°22'00"N, 26°43'00"E, 10.04.1986, coll. *F. Dane* (EDTU 274); Hamidiye, Altinyazi village, Cesme slope, near a grassland, 150 m, 41°04'13"N, 26°34'32"E, 10.04.1986, coll. *F. Dane* (EDTU 272); Ipsala, Tevfikiye village, Korhendek place, near a grassland and scrubs, 100 m, 41°04'00"N, 26°29'00"E, 10.04.1986, coll. *F. Dane* (EDTU 279); Kesan, Kizkapan village, near Kizilcikli stream: 150 m, 40°44'00"N, 26°29'00"E, 17.04.1986, coll. *F. Dane* (EDTU 312); Camlica old road, near a stream, 50 m, 40°46'00"N, 26°39'00"E, 17.04.1986, coll. *F. Dane* (EDTU 311); Uzunkopru,

- near Degirmenci village dam, near a grassland, 200 m, 41°18'37"N, 26°42'02"E, 05.04.1986, coll. *F. Dane* & *G. Olgun* (EDTU 271); Kirkoy village, near a grassland, 200 m, 41°06'00"N, 26°44'00"E, 05.04.1986, coll. *F. Dane* & *C. Dane* (EDTU 270); Süleymaniye and Copkoy village road, 5 km off the Suleymaniye village, 300 m, 41°07'22"N, 26°48'30"E, 05.04.1986, coll. *F. Dane* & *C. Dane* (EDTU 268).
- Canakkale: Gelibolu, Kizilcaterzi village road, at roadsides, 100 m, 40°35'00"N, 26°59'00"E, 18.04.1986, coll. *F. Dane* (EDTU 321); Korukoy, near a grassland, 0 m, 40°11'00"N, 26°46'00"E, 18.04.1986, coll. *F. Dane* (EDTU 317); Bolayir, on Demirtepe road, near hills, 50 m, 40°30'41"N, 26°47'20"E, 18.04.1986, coll. *F. Dane* (EDTU 316); Eceabat, Camburnu place, at roadsides, 0 m, 40°11'02"N, 26°21'23"E, 18.04.1986, coll. *F. Dane* (EDTU 314); Kavak village road, near Demirci lake, 40 m, 40°50'00"N, 27°22'00"E, 17.04.1986, coll. *F. Dane* (EDTU 299).
- Tekirdag: Sarkoy, Kavakcesme village, in a grassland, 200 m, 40°52'00"N, 27°03'00"E, 17.04.1986, coll. *F. Dane* (EDTU 309); Isaklı village, 75 m, 40°44'37"N, 27°05'42"E, 17.04.1986, coll. *F. Dane* (EDTU 298); Golcuk village, 50 m, 40°40'56"N, 27°05'41"E, 17.04.1986, coll. *F. Dane* (EDTU 302); Yorguc village, 250 m, 40°42'34"N, 27°10'45"E, 17.04.1986, coll. *F. Dane* (EDTU 301); Malkara, Ballı village, near a grassland, 100 m, 40°49'54"N, 27°03'11"E, 17.04.1986, coll. *F. Dane* (EDTU 308).
- Kirklareli: Pehlivan koy, Doganca village, near a grassland and at the slopes, 100 m, 41°23'17"N, 26°59'35"E, 12.04.1986, coll. *F. Dane* (EDTU 280); Vize, Kucukyayla village, near dry forests, 300 m, 41°38'03"N, 27°45'03"E, 27.04.1986, coll. *F. Dane* (EDTU 333); 220 m, 41°34'21"N, 27°45'57"E, 27.04.1986, coll. *F. Dane* (EDTU 327); Komurkoy, near dry forests, 41°38'00"N, 27°53'00"E, 320 m, 27.04.1986, coll. *F. Dane* & *C. Dane* (EDTU 331); Kiyikoy, in dry forests, 320-300-200 m, 41°38'01"N, 28°05'40"E, 27.04.1986, coll. *F. Dane* (EDTU 332); Okcular village road, in dry forests, 220 m, 41°33'00"N, 27°50'00"E, 27.04.1986, coll. *F. Dane* (EDTU 328); Pinarhisar, Yenice village, at roadsides, 451 m, 41°43'58"N, 27°38'07"E, 13.04.1986, coll. *F. Dane* (EDTU 281); Derekoy, near shrubs, 300 m, 41°55'58"N, 27°22'00"E, 25.04.1986, coll. *F. Dane* (EDTU 325); Kapakli village, at roadsides,

in dry forests, 500 m, 41°54'00"N, 27°20'00"E, 25.04.1986, coll. *F. Dane* (EDTU 325).

New for A1(E): Edirne and Kirklareli in European Turkey. Until now the species has been known from A2(E): İstanbul and AI(E): Canakkale and Tekirdag (Davis & al. 1965). Colour variants often form pure populations with scarlet flowers (*A. p.* var. *ocellata*) or violet-blue (*A. p.* var. *purpure-violacea*), but in some populations several colour forms occur together: with scarlet (*A. p.* var. *ocellata*), violet-blue (*A. p.* var. *purpure-violacea*) and white (*A. p.* var. *alba*) flowers. The

populations with scarlet flowers occurred around Orhaniye, Havsa, Kircasalih, Ipsala, Hamidiye, and Keşan in Edirne, around Gelibolu and Eceabat in Canakkale, around Sarköy and Malkara in Tekirdag, and around Pehlivankoy in Kirklareli. The populations with violet-blue flowers were encountered only around Vize and Pinarhisar in Kirklareli. The populations with scarlet, violet-blue and white flowers were seen only around Uzunköprü in Edirne.

Reports 41-58

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Blechnaceae

41. *Blechnum spicant* (L.) Roth

Mk Mt Belasica: in the forests around Bansko village, Strumica district, 04.09.1981, coll. *R. Bouklev* (SO 50054).

Asteraceae

42. *Erigeron atticus* Vill.

Mk Mt Jablanica: on calcareous rocks on peak Pupoljak, 1830 m, 17.07.1948, coll. *B. Kitanov* (SO 100138).

Brassicaceae

43. *Alyssum hirsutum* M. Bieb.

Mk Trojaci village, Prilep district, 01.05.1918, coll. *T. Nikolov* (SO 29320 sub *Alyssum campestre* L., rev. *D. Dimitrov* sub *A. hirsutum*).

This species has been known from Ovce Pole, Bogoslovec, Probistip – Kostomar Monastery (Micevski 1985).

44. *Alyssum montanum* subsp. *gmelini* (Jord.) Em. Schmid

Mk Trojaci village, Prilep district, 15.04.1917, coll. *T. Nikolov* (SO 29378).

Reported for the flora of Macedonia (Micevski 1995).

45. *Alyssum murale* Waldst. & Kit.

Mk Mt Kozjak: Trojaci village, Prilep district, 10.06.1918, coll. *T. Nikolov* (SO 31028).

This species has been known so far from the Demir Kapija gorge, Sveti Nikole-Bogoslovec, Ovce Pole Railway Station (Micevski 1995).

46. *Barbarea vulgaris* R. Br. subsp. *vulgaris*

Mk Radobil village, Prilep district, 07.05.1918, coll. *T. Nikolov* (SO 27907).

47. *Berteroa obliqua* (Sm.) DC.

Mk On the beach of Lake Prespa, at Stene village, 26.08.1918, coll. *T. Nikolov* (SO 31224).

A new locality of this species so far known from Gevgelija and Bogdanci (Micevski 1995).

48. *Cardamine enneaphyllos* (L.) Crantz var. *enneaphyllos*

Mk Mt Karaorman: Struga district, in a beech forest along river Pesucanska, 1140 m, 14.04.1947, coll. *B. Kitanov* (SO 28314).

This species has so far been known from Mt Šar, Mavrovo district, Mt Koza, and Mt Bistra (Micevski 1995).

49. *Hesperis sylvestris* Crantz f. *sylvestris*

Mk Mt Jablanica: in stony places in the bush on the north slopes of peak Inzjol, 14.07.1948, coll. *B. Kitanov* (SO 99609).

This taxon has been reported for Kavadarci – Majdan, Strumica, Borisovo, and Mt Galicica (Micevski 1995).

Caryophyllaceae

50. *Cerastium decalvans* subsp. *decalvans* var. *kitanovii* D. Dimitrov var. n.

Calyx et 1-2 bracteis glanduloso-pilosae. Pedicellus hirsutus.

Mk Along Lake Ohrid, St. Stephen Bay, 30.07.1947, coll. *B. Kitanov* (SO 101872: holotypus).

Primulaceae**51. *Androsace hedraeantha*** Griseb.

Mk In herbaceous places in Mt Petrino, Ohrid district, 01.05.1948, coll. *B. Kitanov* (SO 100137).

Known so far from Mt Šar and Mt Korab (Micevski 1998).

Rosaceae**52. *Alchemilla mollis*** (Buser) Rothm.

Mk Mt Jablanica: above lake Labunica, 1600 m, 20.08.1947, coll. *B. Kitanov* (SO 98136).

New for the flora of Macedonia.

53. *Alchemilla viridiflora* Rothm.

Bu The Balkan Range (*Western*): beneath peak Izdremets, 07.1998, coll. *R. Natcheva* (SO 99945).

Ranunculaceae**54. *Ranunculus circinatus*** Sibth.

Mk Mavrovi Hanove: in a swamp, 1250 m, 17.06.1947, coll. *B. Kitanov* (SO 100250).

New for that region (Micevski 1985).

55. *Ranunculus sardous* Crantz

Mk Vinica village, 03.05.1980, coll. *R. Bouklev* (SO 100272).

A new locality of this rare plant (Micevski 1985).

56. *Trollius europaeus* L.

Mk Mt Desat: herbaceous places in clearings in a beech forest, beneath peak Turi Kas, 07.08.1948, coll. *B. Kitanov* (SO 97227).

This species has been known so far from Mt Šar (Micevski 1985).

Saxifragaceae**57. *Saxifraga marginata*** Sternb. var. *balcanica* (Hayek) Kuzmanov

Mk Mt Nidze, 24.04.1916, coll. *J. Mrkvicka* (SOM 35809, 35808, 35819).

Urticaceae**58. *Parietaria lusitanica*** subsp. *serbica* (Pančić) P.W. Ball

Mk Mt Nidze (Dobro Pole), 20.07.1916, coll. *J. Mrkvicka* (SOM 17026).

This subspecies is new for the flora of Macedonia (Micevski 1993).

Reports 59-68**Marjan Niketić¹, Ljupčo Melovski² & Gordana Tomović³**

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Dryopteridaceae**59. *Polystichum illyricum*** (Borbás) Hahne (pro hybr.)

Mk (*Southwestern*): Mt Jablanica, above lake Podgorečko, on limestone rocks, 1800-1850 m, DL-66, 18.07.2006, coll. *M. Niketić* (BEO, BEOU 21604).

This taxon was previously recorded from Mt Šar (Elak and Lešnica), Mt Korab (under the highest peak and above Tanuše village), Mt Mavrovsko (Kičica), and Mt Debar (Banjište village) (Micevski 1985). Considering that this plant has an independent, well-defined distribution area and is restricted only to some refugial high-mountain habitats, we can accept the hybridogenous concept of this taxon. Therefore, we propose this name to be transferred to a non-hybrid category, followed by the indication “(pro hybr.)”, under Art. 50 (Greuter & al. 2000).

Apiaceae**60. *Pancicia serbica*** Vis. [Syn. *Pimpinella serbica* (Vis.) Benth. & Hook. f. ex Drude]

Mk (*Southwestern*): Mt Jablanica, Malo Sedlo – Kokalo, limestone, in high-mountain pastures and rocky grounds, 1600-1700 m, DL-66, 15.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21406); Strižak, limestone, in high-mountain scree, 1800-2200 m, DL-67, 19.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21649); Mt Jablanica, between lakes Podgorečko and Vevčansko, limestone, in rocky grounds, 1800-1900 m, DL-66, 20.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21671).

This Balkan endemic plant was recorded in the Republic of Macedonia from Mt Šar, Mt Bistra, Mt Dešat (Krčin), and river Gorna Radika (Micevski 2005).

Crassulaceae**61. *Sempervivum kosaninii*** Praeger

Mk (*Southwestern*): Mt Jablanica, Crn Kamen, silicate, in high-mountain pastures and rocky grounds, 1600-1800 m, DL-66, 18.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21529).

A Balkan endemic described from Mt Šar in Serbia. Subsequently, it was also found in Mt Šar in Macedonia, as well as in Mt Korab, Mt Bistra, and river Gorna Radika (Adžina Reka) (Micevski 1998). This locality in Mt Jablanica represents the southernmost place of record of the entire species distribution.

Fabaceae**62. *Oxytropis purpurea*** (Bald.) Markgr.

Mk (*Southwestern*): Mt Jablanica, Mečkina Dupka (the hill Beličko Brdo), limestone, in high-mountain pastures and rocky grounds, 1900-1940 m, DL-66, 15.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21480).

This taxon was previously noted from Mt Galičica (above Carina, Tomoros, Stara Galičica, and Petrino villages), Mt Bistra and Mt Ilinska (Kamna) (Micevski 2001). The newly recorded locality of *O. purpurea* in SW Macedonia fits into its distribution pattern in the Republic of Macedonia.

Geraniaceae**63. *Geranium caeruleatum*** Schur [Syn. *G. sylvaticum* subsp. *caeruleatum* (Schur) D.A. Webb & I.K. Ferguson]

Mk (*Southwestern*): Mt Jablanica, near Strižak, limestone, in high-mountain screes, 1800-2200 m, DL-67, 19.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21618).

According to Micevski (2005), this plant grows in the Republic of Macedonia only on Mt Korab, the basin of river Gorna Radika and Mt Bistra, between Volkovija and Sence villages.

Ranunculaceae**64. *Pulsatilla vernalis*** (L.) Mill.

Mk (*Southwestern*): Mt Jablanica, Crn Kamen, silicate, in high-mountain pastures and rocky grounds, 1600-1800 m, DL-66, 18.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21527).

This plant is very rare in the flora of Macedonia. According to Micevski (1985), it was noticed only on Mt Šar (above Popova Šapka near Ceripašina). After consulting the distribution map in Jalas & Suominen

(1989), it becomes evident that the new finding in Mt Jablanica represents the southernmost locality of the species range in Europe.

65. *Ranunculus brevifolius* Ten. (Fig. 4)

Mk (*Southwestern*): Mt Jablanica, near Strižak, limestone, in high-mountain screes, 1800-2200 m, DL-67, 19.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21628).

In the first volume of *Flora of SR Macedonia* (Micevski 1985) this species was omitted from the list of the plants. Despite Horvat's (1938) record of this plant in the highest area of Mt Galičica, at an altitude of 2255 m, there is only a brief note in the *Flora of SR Macedonia* that, as there was no herbarium material for verification, the plant cannot be included in the list of the plants that grow on the territory of Macedonia. Evidently, this new find in Mt Jablanica confirms Horvat's record, and shows relation with the species distribution area in Greece and Montenegro.



Fig. 4. *Ranunculus brevifolius* (photo M. Niketić).

66. *Aconitum lycoctonum* subsp. *neapolitanum* (Ten.) Nyman (Syn. *A. lamarckii* Rchb.)

Mk (*Southwestern*): Mt Jablanica, above lake Podgorečko, limestone rocks, 1800-1850 m, DL-66, 18.07.2006, coll. *M. Niketić* (BEO).

Until now, this plant was recorded only in Mt Šar (Micevski 1985).

Rosaceae**67. *Potentilla apennina*** Ten. subsp. *apennina*

Mk (*Southwestern*): Mt Jablanica, Strižak, limestone, in high-mountain screes, 1800-2200 m, DL-67, 19.07.2006, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 21624); Mt Jablanica, between lakes

Podgorečko and Vevčansko, limestone, in rocky grounds, 1800-1900 m, DL-66, 20.07.2006, obs. *M. Niketić & G. Tomović*.

The only recorded locality of this Balkan-Apennine plant in Macedonia is in Mt Jakupica, peak Solunska Glava (Micevski 1998). According to the recent literature data (Kurtto & al. 2004), the new finding in Mt Jablanica represents the southern- and eastern-most locality of the subspecies range in the Balkan Peninsula.

68. *Potentilla speciosa* subsp. *illyrica* Soják

Mk (*Southwestern*): Mt Jablanica, Mečkina Dupka (the hill Beličko Brdo), limestone, in high-mountain

pastures and rocky grounds, 1900-1940 m, DL-66, 15.07.2006, coll. *M. Niketić & G. Tomović* (BEO, BEOU 21459); above lake Podgorečko, limestone rocks, 1800-1850 m, DL-66, 18.07.2006, coll. *M. Niketić* (BEO, BEOU 21588); Strižak, limestone, in high-mountain screes, 1800-2200 m, DL-67, 19.07.2006, coll. *M. Niketić & G. Tomović* (BEO, BEOU 21623).

This Balkan endemic subspecies is common only in the western part of Macedonia. The following records were reported for the Republic of Macedonia: Mt Šar, Mt Bistra, Mt Korab, Mt Šar (Adžina Reka), Mt Dešat, and Mt Galičica (Micevski 1998).

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Apiaceae

69. *Ferulago campestris* (Besser) Grecescu

Bu Znepole Region: Golo Burdo, peak Ostritsa, FN-61, 26.07.1936, coll. *B. Acharoff* (SOM 55806); on the calcareous rocky hill Tri Ushi, FN-55, 09.1957, coll. *V. Velčev* (SOM 116427); Golo Burdo, in dry calcareous places on the eastern slope of peak Golyamo Gradishte, FN-61, 20.06.1988, coll. *D. Stojanov* (SOM 147164).

The species has been reported for Znepole Region by Urumov (1904), Stojanoff & Acharoff (1936), but in the subsequent handbooks on the flora of Bulgaria (Peev 1982; Delipavlov & Cheshmedzhiev 2003; Assyov & Petrova 2006) it was not referred to this floristic region. The species has been known from the Black Sea Coast, Northeast Bulgaria, the Forebalkan, Balkan Range, Sofia Region, Vitosha Region, West Frontier Mts, Valley of Strouma River, Rila Mts, Mt Sredna Gora, Rhodopi Mts (*Eastern*), Thracian Lowland, Thoundzha Hilly Country (Assyov & Petrova 2006).

Brassicaceae

70. *Thlaspi kovatsii* Heuff.

Bu Znepole Region: in calcareous rocks S of Berende Izvor village, FN-56, 12.05.2006, coll. *K. Vassilev* (SOM 163443); Mt. Chepun, under peak Petrovski

Krust, FN-55, 26.03.1990, coll. *M. Anchev* (SOM 149033).

This species has been so far known from the Balkan Range, Vitosha Region, West Frontier Mts, Mt Belasitsa, Mt Slavyanka, Pirin Mts, Rila Mts, Mt Sredna Gora, and Rhodopi Mts (Popova 2003; Assyov & Petrova 2006).

Caryophyllaceae

71. *Cerastium velenovskiyi* Hayek

Bu Znepole Region: in open grassy and stony places S of Berende Izvor village, FN-56, 12.05.2006, coll. *K. Vassilev* (SOM 163413).

The species is a Bulgarian endemic (Petrova & Velčev 2006). It has been known so far from the Balkan Range (*Eastern*) and Rhodopi Mts (*Central*) (Delipavlov 2003; Assyov & Petrova 2006).

72. *Minuartia bosniaca* (Beck) K. Malý

Bu Sofia Region: N of the road between Gradets and Tsarichina villages, FN-75, 27.05.2006, coll. *K. Vassilev* (SOM 163429).

The species has been known so far from Znepole Region, West Frontier Mts, Mt Slavyanka, Valley of Mesta River, Pirin Mts (*Northern*), Rhodopi Mts (*Western & Central*) (Delipavlov 2003; Assyov & Petrova 2006).

Fabaceae**73. *Coronilla scorpioides* (L.) C. Koch**

Bu Sofia Region: S of Gradets village, on the calcareous hill, FN-75, 11.06.2006, coll. *K. Vassilev* (SOM 163430); the calcareous hills around Beledie Han, FN-75, 14.06.1971, coll. *B. Kuzmanov* (SOM 130423).

The species has been known so far from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, Balkan Range (*Western & Eastern*), Znepole Region, Vitosha Region, Valley of Strouma River, Mt Slavyanka, Pirin Mts, Mt Sredna Gora, Rhodopi Mts, Thracian Lowland, Toundzha Hilly Country, and Mt Strandzha (Terziiski 2003; Assyov & Petrova 2006).

74. *Hippocrepis comosa* L.

Bu Sofia Region: on open grassy and calcareous places around Gradets village, FN-75, 26.05.2006, coll. *K. Vassilev* (SOM 163442); on the calcareous hills around Beledie Han, FN-75, 18.05.1954, coll. *V. Velčev* (SOM 48474); on the calcareous hills around Beledie Han, FN-75, 14.06.1971, coll. *B. Kuzmanov* (SOM 130424).

The species has been known from the Balkan Range (*Western*), Znepole Region, Vitosha Region, Valley of Strouma River (*Southern*), Mt Slavyanka, Pirin Mts, Mt Sredna Gora (*Western*), Rhodopi Mts (*Central & Eastern*) (Terziiski 2003; Assyov & Petrova 2006).

75. *Lathyrus setifolius* L.

Bu The Balkan Range (*Western*): on the southern slope above Drumsha village, to the wood, FN-75, 04.06.2006, coll. *K. Vassilev* (SOM 163431).

The species has been known so far from the Black Sea Coast, the Forebalkan, Sofia Region, Znepole Region, Valley of Strouma River, Rhodopi Mts (*Eastern*), Thracian Lowland (Terziiski 2003; Assyov & Petrova 2006).

Lamiaceae**76. *Hyssopus officinalis* L.**

Bu Sofia Region: on the calcareous hill above Bezden village, FN-74, 18.07.2006, coll. *K. Vassilev* (SOM 163436, 163519).

The species has been known so far from the Forebalkan (*Western*), Balkan Range (*Western*), Znepole Region, Vitosha Region (Cheshmedzhiev 2003; Assyov & Petrova 2006).

77. *Thymus callieri* Borbás ex Velen.

Bu Sofia Region: on open grassy places around Gradets

village, FN-75, 26.05.2006, coll. *K. Vassilev* (SOM 163440); on the northern hill above Dragovishtitsa village, FN-75, 04.06.2006, coll. *K. Vassilev* (SOM 163438); on the northern hill between Gradets and Tsarichina villages, FN-75, 26.05.2006, coll. *K. Vassilev* (SOM 163414).

The species has been known from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range (*Central & Eastern*), Znepole Region, Vitosha Region, West Frontier Mts, Valley of Strouma River, Mt Slavyanka, Rhodopi Mts, Thracian Lowland (Markova 1989; Assyov & Petrova 2006).

Plantaginaceae**78. *Plantago argentea* Chaix**

Bu Sofia Region: on open grassy places above the stone quarry north of Gradets village, FN-75, 26.05.2006, coll. *K. Vassilev* (SOM 163441).

The species is distributed in Northeast Bulgaria, Balkan Range, Znepole Region, West Frontier Mts, Mt Slavyanka, Pirin Mts, Rila Mts, Mt Sredna Gora (*Western*), Rhodopi Mts (*Central*) (Petrova 1995; Assyov & Petrova 2006).

Polygonaceae**79. *Rumex hydropalatum* Huds.**

Bu Znepole Region: on the riverside of river Nishava near Berende Izvor village, FN-56, 23.07.2005, coll. *K. Vassilev* (SOM 163424).

The species has been known from the Black Sea Coast, Danubian Plain, Sofia Region, Mt Strandzha (Delipavlov 2003; Assyov & Petrova 2006).

Rosaceae**80. *Potentilla laciniosa* Waldst. & Kit. ex Nestl.**

Bu Sofia Region: on the calcareous hill between Gradets and Tsarichina villages, FN-75, 03.06.2006, coll. *K. Vassilev* (SOM 163496); on the calcareous hill between Tsruklevtsi and Vasilovtsi, FN-65, 24.05.2006, coll. *K. Vassilev* (SOM 163495).

The species has been known from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, Balkan Range (*Central*), Vitosha Region, West Frontier Mts, Valley of Strouma River, Pirin Mts, Rhodopi Mts (*Central & Eastern*), Thracian Lowland, and Toundzha Hilly Country (Markova 1973; Assyov & Petrova 2006).

81. *Potentilla pedata* Willd.

Bu Sofia Region: on the calcareous hill between Gradets and Tsarichina villages, FN-75, 03.06.2006, coll. *K. Vassilev* (SOM 163493).

The species has been known so far from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range, Znepole Region, Vitosha Region, West Frontier Mts, Valley of Strouma River (*Northern*), Mt Belasitsa, Mt Slavyanka, Pirin Mts (*Southern*), Rila Mts, Mt Sredna Gora, Rhodopi Mts (*Central & Eastern*), Thracian Lowland, and Mt Strandzha (Markova 1973; Assyov & Petrova 2006).

82. *Potentilla pilosa* Willd.

Bu Sofia Region: on the calcareous hill N of Gradets village, FN-75, 11.06.2006, coll. K. Vassilev (SOM 163494).

The species has been reported for Sofia Region by Markova (1973), but in the subsequent handbooks on the flora of Bulgaria (Assyov & Petrova 2006; Markova 1992; Popova 2003) it was not referred to this floristic region. This species has been known so far from the Black Sea Coast, Northeast Bulgaria, the Forebalkan, Balkan Range (*Western & Eastern*), Vitosha Region, West Frontier Mts, Valley of Strouma River, Mt Belasitsa, Pirin Mts, Rila Mts, Mt Sredna Gora, Rhodopi Mts (*Western & Eastern*), Thracian Lowland, and Thoundzha Hilly Country (Assyov & Petrova 2006).

83. *Potentilla sulphurea* Lam.

Bu Znepole Region: on the calcareous hill NW of Berende Izvor village, FN-56, 17.07.2005, coll. K. Vassilev (SOM 163499, 163498).

The species has been known so far from the Black Sea Coast, Northeast Bulgaria, the Forebalkan, Balkan Range (*Western & Eastern*), Vitosha Region, West Frontier Mts, Valley of Strouma River, Pirin Mts, Rila Mts, Mt Sredna Gora (*Western*), Rhodopi Mts, Thracian Lowland, and Thoundzha Hilly Country (Markova 1973; Assyov & Petrova 2006).

84. *Pyrus bulgarica* Kuth. & Sachokia

Bu Znepole Region: on the right side of the road between Berende Izvor and Lipintsi villages, FN-56, 17.07.2005, coll. K. Vassilev (SOM 163434); on the rocky slopes, Mt Konyavska, FM-49, 12.05.1962, coll. I. Bondev & B. Kuzmanov (SOM 110089); the ridge of Mt Zemenska, FM-39, 02.06.1962, coll. I. Bondev (SOM 110088).

The species has been known so far from the Black Sea Coast, Balkan Range (*Eastern*), Vitosha Region, Toundzha Hilly Country, Mt Strandzha (Popova 2003; Assyov & Petrova 2006).

Rubiaceae

85. *Galium lovcense* Urum.

Bu Znepole Region: on the rocky slopes S of Berende Izvor village, FN-56, 23.07.2005, coll. K. Vassilev (SOM 163437).

Other specimens (SOM 131422, 154905, 154906, 160196, 131520) from Znepole Region, revised by F. Krendl in 2006, also belong to *G. lovcense*. The species has been known so far from the Black Sea Coast (*Northern*), Northeast Bulgaria, the Forebalkan, Balkan Range, Mt Slavyanka, Pirin Mts, Rhodopi Mts (*Eastern & Central*) (Ančev 1989; Assyov & Petrova 2006).

Scrophulariaceae

86. *Verbascum adamovicii* Velen.

Bu Znepole Region: on the hill N of Berende Izvor village, FN-56, 14.05.2005, coll. K. Vassilev (SOM 163492).

The species has been known from Mt Belasitsa and West Frontier Mts (Stefanova-Gateva 1995; Assyov & Petrova 2006). This is the third locality of this species in Bulgaria.

Poaceae

87. *Avenula compressa* (Heuff.) W. Sauer & Chmelitschek

Bu The Balkan Range (*Western*): on the southern slope above Drumsha village, by a forest, FN-75, 04.06.2006, coll. K. Vassilev (SOM 163432).

The species has been known so far from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range (*Eastern*), Sofia Region, Vitosha Region, West Frontier Mts, Mt Slavyanka, Pirin Mts, Rila Mts, Mt Sredna Gora (*Western*), Rhodopi Mts (*Central & Eastern*), Thracian Lowland, Toundzha Hilly Country, Mt Strandzha (Delipavlov 2003; Assyov & Petrova 2006).

88. *Stipa eriocalis* Borbás

Bu The Balkan Range (*Western*): in open grassy places S of Drumsha village, FN-75, 04.06.2006, coll. K. Vassilev (SOM 163439).

The species has been known from the Balkan Range (*Central*), Sofia Region, Znepole Region, Thracian Lowland, Toundzha Hilly Country (Delipavlov 2003; Assyov & Petrova 2006).

Reports 89-94**Kiril Vassilev, Tenyo Meshinev & Iva Apostolova**

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Apiaceae**89. *Seseli pallasii* Bess.**

Bu Sofia Region: on the calcareous hill SW of Ponor village, at the borders of an army firing grounds, near peak Popa, FN-75, 11.07.2006, coll. *T. Meshinev, I. Apostolova & K. Vassilev* (SOM 163445); in a mixed wood in the protected territory Kutinski Piramidi, FN-84, 07.07.2005, coll. *V. Vutov & D. Stoyanov* (SOM 161981).

The species has been known so far from the Forebalkan, Balkan Range (*Western*), Znepole Region, Mt Slavyanka, Rhodopi Mts (*Western*) (Peev 1982; Assyov & Petrova 2006).

Asteraceae**90. *Artemisia alba* L.**

Bu Sofia Region: on the calcareous hill SW of Ponor village, at the borders of an army firing grounds, FN-75, 11.07.2006, coll. *T. Meshinev, I. Apostolova & K. Vassilev* (SOM 163447).

The species has been known so far from the Black Sea Coast (*Northern*), Northeast Bulgaria, the Forebalkan, Balkan Range, Znepole Region, Mt Slavyanka, Pirin Mts, Rhodopi Mts (*Central*) (Delipavlov 2003; Assyov & Petrova 2006).

Crassulaceae**91. *Sempervivum marmoreum* Griseb.**

Bu Sofia Region: on the calcareous hill SW of Ponor village, at the borders of an army firing grounds, FN-75, 11.07.2006, coll. *T. Meshinev, I. Apostolova & K. Vassilev* (SOM 163448).

The species has been known so far from the Balkan Range, Znepole Region, Vitosha Region, West Frontier Mts, Mt Belasitsa, Mt Slavyanka, Pirin Mts, Rila Mts, Rhodopi Mts, Mt Strandzha (Cheshmedzhiev 2003; Assyov & Petrova 2006).

Fabaceae**92. *Chamaecytisus jankae* (Velen.) Rothm.**

Bu Sofia Region: on the hill between Tsruklevtsi and Vasilovtsi villages, FN-65, 24.05.2006, coll.

T. Meshinev, I. Apostolova & K. Vassilev (SOM 163453).

The species has been known from the Black Sea Coast, Northeast Bulgaria, the Forebalkan (*Western*), Znepole Region, Vitosha Region, West Frontier Mts, Pirin Mts, Rila Mts, Rhodopi Mts (*Eastern*), and Mt Strandzha (Terziiski 2003; Assyov & Petrova 2006).

Rubiaceae**93. *Galium lucidum* All.**

Bu Sofia Region: on the calcareous hill SW of Ponor village, at the borders of an army firing grounds, FN-75, 11.07.2006, coll. *T. Meshinev, I. Apostolova & K. Vassilev* (SOM 163449).

The species has been known so far from the Danubian Plain, the Forebalkan, Balkan Range (*Western & Central*), Znepole Region, Vitosha Region, West Frontier Mts, Valley of Strouma River, Mt Belasitsa, Mt Slavyanka, Pirin Mts, Rila Mts, Rhodopi Mts, Toundzha Hilly Country, and Mt Strandzha (Ančev 1989; Assyov & Petrova 2006).

Poaceae**94. *Melica ciliata* L.**

Bu Sofia Region: on the calcareous hill SW of Ponor village, at the borders of the army firing grounds, FN-75, 11.07.2006, coll. *T. Meshinev, I. Apostolova & K. Vassilev* (SOM 163446); in the experimental field in Ovcha Koupel, FN-82, 22.06.1930, coll. *V. Stribrny* (SOM 109794); Sofia, near the thermo-electric power station in Drouzhba residential district, FN-82, 04.08.2006, coll. *D. Dimitrov* (SOM 163037); Sofia, E of the Poduene Railway Station, close to the bridge, FN-82, 09.08.2006, coll. *D. Dimitrov* (SOM 163026).

The species has been known from the Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range, Znepole Region, Vitosha Region, West Frontier Mts, Valley of Strouma River, Mt Slavyanka, Pirin Mts, Rila Mts, Rhodopi Mts, Toundzha Hilly Country, and Mt Strandzha (Delipavlov 2003; Assyov & Petrova 2006).

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*Asteraceae***95. *Tragopogon pterodes* Pančić**

Bu Sofia Region: on the calcareous hill N of Beledie Han, FN-75, 03.06.2006, coll. H. Pedashenko & K. Vassilev (SOM 163451).

The species has been known from the Znepole Region, Vitosha Region, Sredna Gora Mt, Rhodopi Mts (*Central*), and Thracian Lowland (Delipavlov 2003; Assyov & Petrova 2006).

96. *Centaurea pannonica* (Heuff.) Simonk.

Bu Mt Sredna Gora (*Western*): Mt Lozenska, in the meadow at the foot of peak Rakovichka Mogila, GN-01, 05.08.2006, coll. H. Pedashenko, det. S. Bancheva & H. Pedashenko (SOM 163426), on peak Rakovichka Mogila, GN-01, 07.08.2006, coll. H. Pedashenko, det. S. Bancheva & H. Pedashenko (SOM 163425), in *graminosis ad Germanski Manastir*, GN-01, 06.1907, coll. Bureš, Stojanov & Achtarov (SOM 84391).

The species has been known so far from the Black Sea Coast, Northeast Bulgaria, Vitosha Region, Valley of Strouma River, Rila Mts, and Rhodopi Mts (*Eastern*) (Delipavlov 2003; Assyov & Petrova 2006).

97. *Centaurea phrygia* L.

Bu Mt Sredna Gora (*Western*): Lozenska Mt, in the meadow at the foot of peak Rakovichka Mogila, GN-01, 05.08.2006, coll. H. Pedashenko, det. S. Bancheva & H. Pedashenko (SOM 163427); Sushtinska Sredna Gora, in Koloniite locality, 21.07.1935, coll. A. Radoslavov (SOM 83315); *loc. ibid.*, 20.08.1938, coll. A. Radoslavov (SOM 85324), *loc. ibid.*, 21.08.1939, coll. A. Radoslavov (SOM 84601); Sushtinska Sredna Gora, Mungura locality, 21.07.1935, coll. A. Radoslavov (SOM 84459, 84458).

The species has been known from the Northeast Bulgaria, the Forebalkan, Balkan Range, Sofia Region, Vitosha Region, Valley of Strouma River, Rila Mts, and Rhodopi Mts (*Central*) (Delipavlov 2003; Assyov & Petrova 2006).

*Campanulaceae***98. *Asyneuma anthericoides* (Janka) Bornm.**

Bu Sofia Region: on the calcareous hill above Beledie Han, FN-75, 03.06.2006, coll. H. Pedashenko & K. Vassilev (SOM 163450); *loc. ibid.*, 30.06.1919, coll. N. Stojanov (75392, 75403); on the calcareous hill between Gradets and Tsarichina villages, N of the road, FN-75, 03.06.2006, coll. K. Vassilev (SOM 163455).

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

*Fabaceae***99. *Corothamnus procumbens* (Waldst. & Kit.) C. Presl**

Bu Sofia Region: on the calcareous hill N of Beledie Han, FN-75, 03.06.2006, coll. H. Pedashenko & K. Vassilev (SOM 163452); *loc. ibid.*, 18.05.1971, coll. P. Panov (SOM 161764); on the northern calcareous hill above Gradets village, FN-75, 26.05.2006, coll. K. Vassilev (SOM 163454).

The species has been so far known from the Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range (*Central*), Znepole Region, Rila Mts, Mt Sredna Gora (*Western*), Thracian Lowland, and Toundzha Hilly Country (Terziiski 2003; Assyov & Petrova 2006).

*Scrophulariaceae***100. *Verbascum jankaeaeum* Pančić**

Bu Rhodopi Mts (*Western*): Pashino Burdo locality, Rakitovo Municipality, KG-55, 20.06.2005, with flowers and fruits, coll. S. Bancheva (SOM 163428).

The species is a Bulgarian endemic with a very restricted distribution area. It has been only known from the Rila Mts (Stefanova-Gateva 1995, 2006). The newly reported place represents the second locality of *Verbascum jankaeaeum* in Bulgaria.

Poaceae**101. *Festuca dalmatica*** (Hack.) K. Richt.

Bu Sofia Region: on the hill SW of Ponor village, FN-75, 11.07.2006, coll. *H. Pedashenko & K. Vassilev* (SOM 163418); on the calcareous hill above the road between Tsruklevtsi and Vasilovtsi villages, FN-65, 24.05.2006, coll. *H. Pedashenko & K. Vassilev* (SOM 163419); Beledie Han, FN-75, 20.05.1982, coll. *S. Kozhuharov* (SOM 87860, 130825).

— Znepole Region: on the southern slope of Mt Chepun, E of peak Petrovski Krust, FN-55, 07.07.2006, coll. *H. Pedashenko & K. Vassilev* (SOM 163422, 163415); on the southern slope of Mt Chepun, FN-55, 05.06.2004, coll. *H. Pedashenko & K. Vassilev* (SOM 163421).

The species has been known so far from the Balkan Range, Vitosha Region, West Frontier Mts, Mt Belasitsa, Mt Slavyanka, Pirin Mts, Rila Mts, and Rhodopi Mts (Kozhuharov 1992; Assyov & Petrova 2006).

102. *Festuca pseudodalmatica* Krajina ex Domin

Bu Znepole Region: on the SW slope of Mt Chepun,

FN-55, 07.07.2006, coll. *H. Pedashenko & K. Vassilev* (SOM 163416).

The species has been so far known from the Balkan Range (*Western*), Vitosha Region, Pirin Mts, Rila Mts, and Rhodopi Mts (Kozhuharov 1992; Assyov & Petrova 2006).

103. *Festuca rupicola* Heuff.

Bu Sofia Region: on the northern hill above Gradets village, FN-75, 26.05.2006, coll. *H. Pedashenko & K. Vassilev* (SOM 163420); above Bezden village, FN-74, 06.07.2006, coll. *H. Pedashenko & K. Vassilev* (SOM 163417).

— Znepole Region: on the southwest calcareous slope of Mt Chepun, FN-55, 05.06.2004, coll. *H. Pedashenko & K. Vassilev* (SOM 163423).

The species has been so far known from the Balkan Range (*Western*), West Frontier Mts, Valley of Strouma River, Pirin Mts (*Southern*), Rila Mts, Rhodopi Mts (*Central & Eastern*), Thracian Lowland, and Toundzha Hilly Country (Kozhuharov 1992; Assyov & Petrova 2006).

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