

NEW CHOROLOGICAL DATA OF THE VASCULAR FLORA OF BULGARIA

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Abstract

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The territory of Bulgaria consists of 20 floristic regions. Partial revision of 14 floristic regions was conducted. 39 species from the Bulgarian flora were found. New for the floristic regions: Struma valley-1 species, Western Stara Planina Mt-6, Eastern Stara Planina Mt-2, Western Predbalkan-5, Eastern Predbalkan-2, Southern Black Sea Coast-1, Sofia region-1, Vitosha region-4, Northern Pirin-3, Rila-1, Western Rodopi-1, Middle Rodopi-1, Western Sredna Gora-10 and Western border mountains-1. The Balkan endemics are four species: *Seseli peucedanoides* (M. Bieb.) Kos.-Pol, *Anthemis rumelica* (Velen.) Stoj & Acht., *Minuartia bosniaca* (G. Beck) K.Maly and *Galium rigidifolium* Krendl. Protected species for Bulgaria is *Anthemis rumelica* (Velen.) Stoj & Acht. Two alien species are *Impatiens glandulifera* Royle. and *Phytolacca americana* L.

Key words: Balkan endemic, protected species, alien species, flora, floristic regions

Introduction

The investigation was conducted with the purpose of determining and complementing the chorological information for the Bulgarian flora.

During the characterization of the vegetation in the biotopes of the 14 floristic regions the following species were found: 39 new species, there of one - *Anthemis rumelica* (Velen.) Stoj & Acht - protected in the category vulnerable (Evstatieva 2009), four species are Balkan endemics: *Seseli peucedanoides* (M. Bieb.) Kos.-Pol, *Anthemis rumelica* (Velen.) Stoj & Acht., *Minuartia bosniaca* (G. Beck) K. Maly. and *Galium rigidifolium* Krendl. The two alien species are: *Impatiens glandulifera* Royle. and *Phytolacca americana* L.

Material and Methods

During the field investigations aiming at characterizing and determining the floristic constitution of the above described 10 floristic regions the routing and trans section methods were used. The herbaria materials were determined according to Jordanov (1963-1982), Kozuharov and Kuzmanov (1995), Peev (2012).

Results and Conclusion

Apiaceae

1. *Seseli peucedanoides* (M,Bieb.) Kos.-Pol.

West frontier mountain – Vlahina mt. Komatinskite Skali by the village of Brestovo, FM 63, 17.07.2009, coll D. Dimitrov, SOM 165738

Asteraceae

2. *Anthemis rumelica* (Velen.) Stoj & Acht.

Balkan Range (Western), on the rocks places in the basalt quarry of Bov, FN 96, 05.08 2011, coll. Dimitrov, SOM 167623, 167624.

3. *Hieracium caespitosum* Dumort. subsp. *caespitosum*.

Sredna gora mountain (Western): between village Belica and Poibrene, left over the road, GN 31, 03.06.2011. coll. D. Dimitrov, SOM 167606

4. *Hieracium heterogynum* (Froel.) Gut.

Sredna Gora Mountain Western: 4 km south of the village Oborichte, KH 51, 03.06.2011, coll. D. Dimitrov, SOM 167605.

5. *Taraxacum alpinum* (Hoppe) Rogetschw.

Pirin mountain Northern: on the Djamjjevi Skali, limestone, GM 03, 07. 2008 coll.D. Dimitrov, V. Vutov, SOM 167202

Balsaminaceae7. *Impatiens glandulifera* Royle

Fore Balcan Western: on the right bank on the river in the village Varbeshnica, Mezdra district, GN 18, 31.07.2011, coll. D. Dimitrov, SOM 167603.

Brassicaceae8. *Alyssum pulvinare* Velen.

Balkan Range (Western) Sofiiska Mala Planina: on the calcareous places south of the village of Ponor, FN 75, 26.10.2011, coll. D. Dimitrov, SOM 167625.

Callitrichaceae9. *Callitriche stagnalis* Scop.

Fore Balkan (Eastern) in the swampy places by the spring Zlatna Panega, Jablanica district, KH 67 11.07.1949, coll. B. Achtarov, SOM 95484. Fore Balkan Western Bog over the hut Parshevica, Vrachanski Balcan GN 08, 05.09.2009 coll. V. Valchev, SOM 167147; Struma valley (North): village Kocherino, FM 76, 30.08.1973, coll. P. Panov, SOM 163274.

Caryophyllaceae10. *Dianthus cruentus* Griseb. subsp. *cruentus*.

Pirin Mountain (Northern): of the circus Kazana to the Djamdjievi Skali, GM 03, 02.08.2008, coll. D. Dimitrov, SO 105466.; Rhodopes Mountain-central meadow over the village of Chaushevo LG 24, 08.1894. coll. V. Stribrny, SOM 24867; in graminosis Mt. Pirin septentrionalis, valley Bajovi dupki cca 1800m s.m, solo calcareo, GM 03, 03.08.1939, coll. N. Stojanov, SO 22218, .22219

11. *Dianthus cruentus* Griseb. subsp. *turcicus* (Velen.) Stoj et Acht.

Black Sea coast (Southern) village Lozenec – Oasis in the fores, NG 67, 19.06.1989, coll. P.Panov, SOM 168152.

12. *Dianthus deltoides* L.

Pirin Mountain (Northern): Kadievi livadi locality 1200 m a.s.l., GM 21, 02.08.2008 coll. A. Asenov, SO 105395. Pirin Mountain (Southern): in pratis ad Papas Chair supra Nevro-cop (Gotse Delchev), kka 1430 m alt. MG 20, 24.07.1935, B. Achtarov, SOM 25039. West Frontier Mountain, Osogovska Mountain: on chadou bog places in the beach forest near the hut Osogovo, FM 37, 13.07.1966, coll. P. Panov SOM 143032.

13. *Cerastium luridum* Guss.

Fore Balkan (Western): Vrachanska Mountain – over the village Chelopek and Pavolche, GN 18, 05.06.2010, coll. D. Dimitrov, SOM 167669.

14. *Cerastium tauricum* Sprengel.

Sredna Gora Mountain (Western): south of the village of Oborishte KH 51, 03.06.2011, coll. D. Dimitrov, SOM 167611.

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

Balkan Range (Western) Mala Planina Mountain FN 75, 29.07 1983, coll P. Panov, SOM 167211.

16. *Minuartia setacea* (Thuill.) Hayek.

Dragoman, FN 55, 07.06.1972, coll.P.Panov, SOM 167208. Balkan Range (Western) Beledie Han FN 75, 07.06.1972, coll P. Panov, SOM 167209.

17. *Minuartia setacea* (Thuill.) Hayek ssp. *setacea*

Pirin mountain (Northern): over the hut Banderitsa, GM 03, 17.07.1971, coll P. Panov, SOM 167210.

18. *Minuartia vellutina* (Bois et Oroph.) Gaebn.

Rhodopes Mountain (Central) Asenova fortress, LG 24, 03.06.1972, coll. P. Panov, SOM 167205. Belovo quarry KG 57, 25.07.1971, coll. P. Panov, SOM 167206. Sestrimo GM 47, 21.05.1972, coll P. Panov, SOM 167207.

19. *Sillene heuffelii* Soo.

Balkan Range (Eastern) - Boasa pass- town Targovishte, MH 68, 11.06.1902 coll. A. Javashv SOM 167193

Cyperaceae20. *Carex hostiana* DC.

Struma valley (South) near the road to the village Karnalovo, Petrich district. GM 00, 26.04.1982, coll. P. Panov, SOM 168155. Sredna Gora Mountain (Western) 4 km south from the village of Oborishte, left of the road to the village of Muhovo, dolomite, GN 40, 03.06.2011, coll. D. Dimitrov, SOM 168154.

21. *Cyperus difformis* L.

Balkan range (Eastern) Sliven factory, MH 42, 13.08.1986, coll. P. Panov, SOM 168156.

Geraniaceae22. *Geranium purpureum* Vill.

Sofia – Eastern of the bridge Chavdar near the railway the station Poduene, FN 93, 04.08.2011, coll.D. Dimitrov, SOM 167609.

Hypericaceae

23. *Hypericum rumeliacum* Boiss. var. *vichodcevsky* D. Jord et Koz.

Fore Balkan (Western) over the village of Pavolche, by the horse path to the peak Vola GN 18, 05.06.2010, coll. D. Dimitrov, SOM 167666.

Lamiaceae24. *Thymus thracicus* Velen.

Sredna Gora Mountain (Western) , 4 km south of the village of Oborishte, KH 51 03.06.2011, coll, D. Dimitrov, SOM 167608. Lyulin Mountain, by the road from the Monastery meadow to the village of Suhodol, FN 73, 26.06. 2011, coll. D. Dimitrov, SOM 169130.

Orobanchaceae

25. *Orobanche caryophyllacea* Sm.

Fore Balkan (Western) over the villages of Chelopek and Pavolche, GN 18, 05.06.2010, coll. D. Dimitrov, SOM 167668

26. *Orobanche laserpitii-sileris* Reut ex Jord.

Fore Balkan (Western) by the road of the village of Chelopek to the peak Vola GN 18, 05.06.2019, coll. D. Dimitrov, SOM 167667.

Phytolaccaceae

27. *Phytolacca americana* L.

Balkan range (Western), village of Zasele by the road to town of Mezdra, GN 18, 05.08.2011, coll. D. Dimitrov, SOM 167622: Struma valley (North) on the street of the village of Usoika, Dupnica district, FM 77, 04.11.2012, coll. D. Dimitrov SOM 169127.

Poaceae

28. *Aegilops neglecta* Req ex Berol.

Sredna Gora Mountain (Western), 4 km south of the village of Oborishte by the road to the Muhovo, FN 40, 03.06.2011, coll. D. Dimitrov, SOM 167616.

29. *Melica ciliata* L.

Sredna Gora mountain (Western), 4 km south of the village of Oborishte, by the road to the village of Muhovo, FN 40 03.06.2011, coll. D. Dimitrov, SOM 167615.

30. *Poa angustifolia* L.

Sredna Gora Mountain (Western), 4 km South of the village of Oborishte, by the road to the village of Muhovo, FN 40, 03.06.2011, coll. D. Dimitrov, SOM 168153.

31. *Stipa tirsia* Stev.

Vitosha Mountain (South) over the reservoir Studena, on the path to the hotel Vitoshko = Studena. FN 71, 20.06.2010, coll. D. Dimitrov, SOM 167678.

Polygonaceae

32. *Rumex crispus* L.

Sredna Gora (Western), 4 km South of the village of Oborishte by the road to the village of Muhovo, GN 40, 03.06.2011, coll. D. Dimitrov, SOM 167614.

Ranunculaceae

33. *Ranunculus ophioglossifolius* Vill.

Sredna Gora Mt. (West) on the dam swamps under the peak, Malak Pop, locality Ravna Poljana over town Koprivstitsa, KH 82, 30.07.2008, coll. D. Dimitrov, SO 105152, 105153.

Rosaceae

34. *Aphanes microcarpa* (Boiss. & Reut.) Rothm.

Rhodopes Mt. (Western): Western from reservoir Dospat in the town of Sarnitsa, KG 52, 13.06.2007, coll. D. Dimitrov, SO 105132.

35. *Rosa elliptica* Tausch

Vitosha region on the calcareous rock places over the spring Duchlata by the village of Bosnek, FN 70, 25.05.2005, coll. D. Dimitrov SOM 163505.

36. *Rosa mollis* Sm.

Vitosha region over Dragalevci by the road from the hut Aleko, 1200 m a.s.l., FN 93, 25.06.2006, coll. D. Dimitrov, SOM 163755.

37. *Galium rigidifolium* Krendl.

Balkan range (Western) protected area Katinski Piryds, on the rock sand places, FN 34, 07.07.2005 coll. D. Dimitrov, V. Vutov, SOM 163579.

Santalaceae

38. *Thesium dollinerii* Murb.

Fore Balkan (Eastern) on the calcareous grass places over the quarry for morel Koritna by the village of Dobrevci, municipality Jablanitsa, KH 67, 25.10.2007, coll. D. Dimitrov, V. Vutov, SOM 163877.

Scrophulariaceae

39. *Veronica austriaca* L. subsp. *neiceffii* (Deg) Peev

Balkan range (Western) Dragomanski Chepan: on the calcareous grass places under the peak Petrov Krast, FN 55, 29.05.2006., coll. D. Dimitrov, SOM 163716

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