# New floristic records in the Balkans: 2*

**Compiled by Vladimir Vladimirov[1], Feruzan Dane[2], Toni Nikolić[3], Vladimir Stevanović[4] & Kit Tan[5]**

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

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

[3] Department of Botany, Faculty of Science, University of Zagreb, 20/2 Marulićev St., HR-10000 Zagreb, Croatia, e-mail: toni@botanic.hr

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

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

* Reports for Bulgaria have been reviewed by V. Vladimirov, for Turkey-in-Europe by F. Dane, for Macedonia by V. Matevski, for Croatia by T. Nikolić, for Bosnia & Herzegovina, Montenegro and Serbia by V. Stevanović, and for Greece by Kit Tan.

**Abstract:** New chorological data are presented for 100 species and subspecies from Bosnia & Herzegovina (reports no. 29, 72), Bulgaria (30-36, 38-53, 61-71, 74-87), Croatia (28), Greece (1-27, 88-95), Montenegro (54-56, 58, 73), Serbia (54, 55, 57, 59, 60, 96-100) and Turkey-in-Europe (37). The taxa belong to the following families: *Adoxaceae* (75), *Amaryllidaceae* (16), *Apiaceae* (1, 76), *Aspleniaceae* (54), *Asteraceae* (2, 20, 21, 35, 59, 72, 77), *Boraginaceae* (78, 79, 89), *Brassicaceae* (3-5, 30), *Caryophyllaceae* (55, 61), *Convolvulaceae* (36), *Crassulaceae* (39), *Cucurbitaceae* (6), *Cyperaceae* (52, 60, 68, 69, 84), *Ephedraceae* (74), *Equisetaceae* (88), *Fabaceae* (7, 22, 23, 37, 49, 62, 80-83, 87, 90, 91), *Gentianaceae* (8), *Geraniaceae* (28), *Grossulariaceae* (96), *Lamiaceae* (9, 31, 40-42), *Liliaceae* (17, 18, 26, 27, 45, 58, 85, 92-94, 98-100), *Linaceae* (63), *Oleaceae* (43), *Orchidaceae* (53), *Oxalidaceae* (24), *Plantaginaceae* (38), *Poaceae* (19, 34, 46-48, 70, 71, 86, 95), *Polygalaceae* (64), *Polygonaceae* (10, 25, 44), *Potamogetonaceae* (29), *Primulaceae* (11), *Ranunculaceae* (12-14, 32, 65), *Rosaceae* (33, 66, 97), *Rubiaceae* (56, 73), *Salicaceae* (50), *Scrophulariaceae* (51), *Valerianaceae* (15) and *Violaceae* (57, 67).

First reports for countries are: Bosnia & Herzegovina – *Lactuca visianii* (72), *Potamogeton rutilus* (29); Bulgaria – *Convolvulus pilosellifolius* (36), *Deschampsia caespitosa* subsp. *alpina* (34), *Plantago maritima* subsp. *serpentina* (38), *Thymus callieri* subsp. *callieri* (31); Montenegro – *Asperula hercegovina* (73); Serbia – *Allium paniculatum* subsp. *villosum* (98), *Viola obliqua* (57); Turkey-in-Europe – *Chamaecytisus jankae* (37).

The publication includes contributions by B. Biel & Kit Tan (1-19), N. Böhling (20-27), F. Conti & D. Uzunov (28), B. Davidović, J. Blaženčić & V. Stevanović (29), D. Dimitrov (30-34), D. Dimitrov & V. Trifonov (35-38), V. Goranova & K. Vassilev (39-48), M. Hájek, P. Hájková, I. Apostolova, D. Sopotlieva & N. Velev (49-52), N. Grozeva (53), D. Lakušić, V. Stevanović, S. Jovanović & G. Tomović (54-58), P. Lazarević (59-60), H. Pedashenko (61-71), V. Stevanović & D. Lakušić (72-73), S. Stoyanov (74-86), S. Stoyanov, V. Goranova & D. Stoykov (87), Kit Tan, G. Vold & G. Sfikas (88-95), and G. Tomović, M. Niketić, B. Zlatković, S. Vukojičić & V. Stevanović (96-100).

This is the second of a series of reports dealing with the new chorological data in the Balkans. For details on the presentation of information see the first contribution in Phytologia Balcanica, vol. 12(1), pp. 107-108. A few changes are made here concerning the abbreviation of the following two countries:

| | |
|---|---|
| Montenegro | Cg |
| Serbia | Sr |
| Serbia (Kosovo) | Sr(K) |
| Serbia (Vojvodina) | Sr(V) |

## Reports 1–19

**Burkhard Biel[1] & Kit Tan[2]**

[1] Am Judengarten 3, D-97204 Höchberg, Germany, e-mail: b.biel@arcor.de
[2] Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bi.ku.dk (author for correspondence)

The following records are all new to the island of Samothraki (N Aegean islands) and when specifically stated, to the floristic region of N Aegean (NAe) as circumscribed in *Flora Hellenica* (Strid & Tan 1997).

*Apiaceae*

**1. *Anthriscus caucalis*** M. Bieb.

**Gr** Samothraki: SW of Kamariotissa, road margins in harbour area, 3 m, 40°28′40″ N, 25°28′20″ E, 03.11.2005, *Biel* 06.201. Another locality was found E of Profitis Ilias village.

*Asteraceae*

**2. *Bellis sylvestris*** M. Bieb.

**Gr** Samothraki: SE of Kamariotissa, road margins in harbour area, 3 m, 40°28′44″ N, 25°29′36″ E, 24.10.2002, *Biel* 02.142. Three other localities were found near Kamariotissa and Ano Meria.

New for the N Aegean islands.

*Brassicaceae*

**3. *Calepina irregularis*** (Asso.) Thell.

**Gr** Samothraki: N of Therma village, oak scrub, on porphyritic or basalt substrate, 30 m, 40°29′53″ N, 25°36′26″ E, 05.04.2006, *Biel* 06.122. Other localities are within Therma and near Profitis Ilias village.

**4. *Malcolmia maritima*** (L.) R. Br.

**Gr** Samothraki: SW of Kamariotissa, at edge of flat coastal lagoon, on sand and loamy ground, 2 m, 40°27′26″ N, 25°27′38″ E, 09.05.2001, *Biel* 01.089.

New for the N Aegean islands.

**5. *Thlaspi perfoliatum*** L.

**Gr** Samothraki: SE of Chora (Samothraki), edge of dirt track near chapel of Ag. Georgios, on basalt and schist, 300 m, 40°27′46″ N, 25°31′53″ E, 03.04.2006, *Biel* 06.088. Other localities exist near Profitis Ilias village (08.04.2006, *Biel* 06.218) and north of Pachia Ammos.

*Cucurbitaceae*

**6. *Bryonia alba*** L.

**Gr** Samothraki: SW of Palaeopolis, on basalt and loamy soils, 5 m, 40°29′45″ N, 25°30′17″ E, 03.05.2002, *Biel* 02.071.

New for the N Aegean islands.

*Fabaceae*

**7. *Lotus gebelia*** Vent.

**Gr** Samothraki: SW of Profitis Ilias village, oak scrub in small ravine, on basalt, 90 m, 40°25′07″ N, 25°32′41″ E, 29.05.2002, *Biel* 02.046. Also found near Therma.

*Gentianaceae*

**8. *Centaurium maritimum*** (L.) Fritsch

**Gr** Samothraki: NE of Therma village, olive grove with phrygana, 5 m, 40°30′01″ N, 25°36′30″ E, 09.05.2001, *Biel* 01.087.

New for the N Aegean islands.

*Lamiaceae*

**9. *Ballota nigra*** subsp. ***meridionalis*** (Bég.) Bég.

**Gr** Samothraki: SW of Kamariotissa, fallow field near harbour, on basalt and loamy ground, 3 m, 40°28′40″ N, 25°28′20″ E, 24.10.2002, *Biel* 02.135.

*Polygonaceae*

**10. *Persicaria maculosa*** S.F. Gray

**Gr** Samothraki: NE of Therma village, on sandy clay, 2 m, 40°29′34″ N, 25°38′48″ E, 31.05.2002, *Biel* 02.091.

*Primulaceae*

**11. *Asterolinon linum-stellatum*** (L.) Duby

**Gr** Samothraki: W of Makrilies (Xiropotamos) village, sandy loam by river, 30 m, 40°25′59″ N, 25°30′58″ E, 07.04.2006, *Biel* 06.194. Other localities are close to Xiropotamos and Therma on the north coast.

*Ranunculaceae*

**12. *Clematis cirrhosa*** L.

**Gr** Samothraki: SW of Palaeopolis, edge of dirt track, fields with shrubs, on basalt and porphyritic substrate, 20 m, 40°29′37″ N, 25°30′29″ E, 29.04.2001, *Biel* 01.031. Several localities near Alonia, Ano Meria, Chora, Kamariotissa, Kato Kariotis, Profitis Ilias, Therma and Xiropotamos were also noted.

**13. *Consolida phrygia*** (Boiss.) Soó

**Gr** Samothraki: NW of Chora (Samothraki), fallow field near road to Kamariotissa, on basalt and schist, 140 m, 40°28′29″ N, 25°29′53″ E, 29.05.2002, *Biel* 02.066.

**14. *Myosurus heldreichii*** Lév. (Fig. 1)

**Gr** Samothraki: SW of Kamariotissa, meadows and fields flooded in spring, directly behind beach wall, on sandy loam, 2 m, 40°27′21″ N, 25°27′56″ E, 04.04.2006, *Biel* 06.014. Another locality *c.* 1 km to the NW, near flat coastal lagoon, 25.05.2006, *Biel* 06.400 (herbarium voucher from plants grown at Höchberg).

**Fig. 1.** *Myosurus heldreichii*

*Valerianaceae*

**15. *Centranthus calcitrapae*** (L.) Dufresne

**Gr** Samothraki: NE of Makrilies (Xiropotamos) village, grassy edge of water channel, on basalt, 170 m, 40°27′05″ N, 25°32′04″ E, 03.05.2001, *Biel* 01.060.

*Amaryllidaceae*

**16. *Galanthus elwesii*** Hook.

**Gr** Samothraki: NW of Makrilies (Xiropotamos) village, *Platanus* alluvial forest, on gravelly sand, 80 m, 40°26′33″ N, 25°31′26″ E, 11.04.2006, *Biel* 06.298. Another eight localities were noted on river banks near Therma and Ano Meria.

***Agrimonia agrimonoides*** (*Biel* 06.159) and ***Fritillaria pontica*** (see following text), were also collected in the same locality on 16.04.2006.

*Liliaceae*

**17. *Allium nigrum*** L.

**Gr** Samothraki: SW of Kamariotissa, fallow field below phrygana slope, coastal limestone, 10 m, 40°28′09″ N, 25°27′33″ E, 28.04.2001, *Biel* 01.002. Three other localities were noted near Kamariotissa and the village of Alonia.

**18. *Fritillaria pontica*** L.

**Gr** Samothraki: NE and E of Therma village, on the banks of the river Tsivdogiani, on gravelly sand, 50 m, 40°29′39″ N, 25°36′35″ E, 16.04.2006, *Biel* 06.380. Five other localities were noted near Therma and Ano Meria on the north coast, and N of Pachia Ammos in the south.

*Poaceae*

**19. *Aegilops caudata*** L.

**Gr** Samothraki: SE of Kamariotissa, grazed phrygana with shrubs, on low hilltop, limestone and sandstone, 40 m, 40°29′20″ N, 25°29′21″ E, 01.05.2001, *Biel* 01.113.

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

## *Report 20–27*

**Niels Böhling**

Römersteinstr. 12, D-73230 Kirchheim/Teck, Germany; e-mail: consult@flora-x.de

*Asteraceae*

**20. *Cynara cornigera*** Lindley

**Gr** Rhodes and islets: Prasonisi, 8 km S of Kattavia, open phrygana with *Achillea cretica, Genista acanthoclada, Juniperus macrocarpa, Teucrium brevifolium, Euphorbia acanthothamnos* and others, *c.* 50 m, 10.04.2002, *N. Böhling* obs. (photo); Lindos, phrygana, *c.* 50 m, 10.04.2002, *N. Böhling* obs.

This species occurring from S Greece and the Aegean to Cyprus is considered rare in the East Aegean islands. First records for Rhodes. In the region otherwise known from the Karpathos archipelago and Tilos.

**21. *Taraxacum scolopendrinum*** Dahlst.

**Gr** Rhodes: coast opposite Prasonisi, 6.5 km S of Kattavia, ruderal, calcareous places at a small

fishers port, 1–2 m, 35°53′43″ N, 27°46′05″ E, 04.04.1998, *N. Böhling* 7468 (B), det. *A.J. Richards* 1999.

First record for Rhodes. This Greek member of sectio *Scariosa* is otherwise known in the region from Kasos and Karpathos, the only localities in the Cretan area, and Nisiros, the only locality in the East Aegean.

*Fabaceae*

**22. *Hedysarum coronarium*** L.

**Gr** Rhodes: alluvial pan 2 km SE of Kattavia, browsed margin of a dust road in an area of seasonally wet grassland grazed by cattle, 20 m, 35°56′27″ N, 27°47′08″ E, 05.04.1998, *N. Böhling* 7495 (B, herb. N. Böhling); Viglas *c.* 5 km SE Kattavia, *Atriplex portulacoides* in swamp along a rivulet, on brackish, loamy sand, 1–2 m, 35°55′00″ N, 27°49′26″ E, 07.04.1998, *N. Böhling* obs.

Given as a casual alien for the East Aegean in the Medchecklist this species of the W and C Mediterranean Europe is probably a relict of cultivation for fodder. For Rhodes (and the East Aegean area) it should be classified as naturalized. Recently there has been no cultivation of this species.

**23. *Lens ervoides*** (Brign.) Grande

**Gr** Rhodes: Mt Prof. Ilias, S slopes, near sports area, moist place in *Pinus brutia* stand, on carbonate free sand, 600 m, 36°16′ N, 27°56′ E, 12.04.1998, *N. Böhling* 7696b (B); Ag. Isidoros, grassy phrygana on abandoned grape field on alluvial, calcareous deposits, 490 m, 36°10′25″ N, 27°52′13″ E, 05.05.1999, *N. Böhling* 9724 (B); Gaidouras valley between Laerma and Apollona, annual vegetation in open *Pinus brutia* stands, 135 m, 36°12′ N, 27°58′ E, 08.04.2002, *N. Böhling* 11826 (herb. N. Böhling).

New for Rhodes and the neighbouring islands and islets. Next localities on Karpathos and Chios. The known distribution of the species looks quite scattered which might be considered as due to overlooking the species. However, following my field experience it is frequent on Rhodes, but rare otherwise in the Southern Aegean islands. On Rhodes its occurrence seems to be connected with semi shady places in pine stands.

*Oxalidaceae*

**24. *Oxalis corniculata*** L.

**Gr** Karpathos: Olympos village, wall crevices, 250 m, 35°44′28″ N, 27°10′29″ E, 29.10.1999, *N. Böhling* 10473 and *T. Raus* (B).

New for the Karpathos archipelago and closing a gap between Crete and Rhodes.

*Polygonaceae*

**25. *Fallopia dumetorum*** (L.) Holub

**Gr** Kythira: Milopotamos, near Nereida waterfall, in a vegetation of shrub and perennial herbs under a Plane tree, 250 m, 36°14′ N, 22°56′ E, 19.09.1997, *N. Böhling* 6302 (B).

Southernmost locality in Greece. Next known occurrence is in Sterea Ellas. The determination of the specimen is confirmed by *S. Snogerup* 2000.

*Liliaceae*

**26. *Allium dentiferum*** Webb & Bertol.

**Gr** Kythira: Milopotamos, way side in an Olive grove, 300 m, 22.06.2000, *N. Böhling* 10725, det. *D. Tzanoudakis* 2000 (B, UPA); Rhodes: between Archipoli and Psinthos, in abandoned field, 150–200 m, 36°16′ N, 28°04′ E, 22.06.1999, *N. Böhling* 10195, det. *D. Tzanoudakis* 2000 (B, UPA).

First records for Kythira and Rhodes.

**27. *Allium trifoliatum*** Cyr.

**Gr** Rhodes: Kattavia alluvial pan, ruins in a *Plantago crassifolia* vegetation on clayey soil, 20 m, 35°56′27″ N, 27°47′08″ E, 05.04.1998, *N. Böhling* 7492/z, cultivated in B/EW, det. *T. Raus* (B).

First record for Rhodes.

## Report 28

**Fabio Conti[1] & Dimitar Uzunov[2]**

[1] Dipartimento di Scienze Ambientali, Università di Camerino, Centro Ricerche Floristiche dell'Appennino, Parco Nazionale del Gran Sasso e Monti della Laga. S. Colombo, 67021 Barisciano (AQ), Italia, e-mail: fabio.conti@unicam.it
[2] Museo di Storia Naturale della Calabria ed Orto Botanico, Università della Calabria, 87036 Arcavacata di Rende (CS), Italia, e-mail: duzunov@libero.it

*Geraniaceae*

**28. *Geranium subcaulescens*** L'Hér. ex DC.

**Ct** Mt Mosor, Spalato above the chalet Umberto Girometti, behind overhanging rise, NE exposition, 973 m, 43°31.640′ N, 16°37.261′ E. Margins of *Prunus mahaleb, Acer monspessulanum, Ostrya carpinifolia*

and *Fraxinus ornus* shrub community, rocky calcareous slope, 23.05.2003, coll. *F. Conti* (herb. APP).

In the same locality it was recorded by Knuth (1912, from Bornmüller, It. Dalmat. a. 1886) but no longer confirmed. This species belongs to *G.* subg. *Erodioidea* sect. *Subacaulia* and is known for West Asia (Turkey) and SE Europe (Albania, Greece, R Macedonia, South Montenegro and South Serbia) (Aedo 1996). Aedo cited a specimen collected by Maly in Dalmatia but it was considered an erroneous locality, no other specimens for Dalmatia were found there (Aedo, in litt.). The new finding extends the actually known range considerably towards the north.

## Report 29

**Biljana Davidović[1], Jelena Blaženčić[2] & Vladimir Stevanović[2]**

[1] Faculty of Natural Sciences and Mathematics, University of Banja Luka, 2 Mladena Stojanovića St., 78000 Banja Luka, Republic of Srpska, Bosnia & Herzegovina, e-mail: biljanadavidovic@yahoo.com
[2] Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, 43 Takovska St., 11000 Belgrade, Serbia, e-mail: vstev@bfbot.bg.ac.yu; jblaz@eunet.yu.

*Potamogetonaceae*

**29. *Potamogeton rutilus*** Wolfg.

**BH** Bosnia (*Northcentral*): village Bardača near mouth of Vrbas river into Sava, Bardača fishponds – Rakitovac pond, 45°06′37.2″ N, 17°27′12.3″ E, XK-99, 30.08.2005, coll. *B. Davidović,* det. *V. Stevanović* (BEOU).

New for Bosnia and Herzegovina. The species is distributed mainly in boreal and temperate zones of Eurasia inhabiting un-polluted mesotrophic and eutrophic lakes and ponds. It is extremely rare in the Balkans where only few localities are known: Vražije glacial lake in Mt Durmitor, N Montenegro (Aalto & al. 1972), Plavsko lake and Martinovićko marsh in the vicinity of village Plav, SE Montenegro (Blaženčić & Blaženčić 1989).

Fishpond of Bardača represents a new locality of this rare macrophyte in the Balkans, *c.* 280 km NW from the nearest known locality in Montenegro. It inhabits deep water in only one artificial fishpond named Rakitovac (85 ha) together with *Ceratophyllum demersum* and *Myriophyllum spicatum, Najas minor, Potamogeton gramineus* etc. In comparison to another fishponds of Bardača, Rakitovac pond is much deeper, water transparency is significantly higher, water temperature lower as well as trophic stage is rather mesotrophic than eutrophic.

## Reports 30–34

**Dimitur Dimitrov**

National Natural History Museum, Bulgarian Academy of Sciences, 1 Tzar Osvoboditel Blvd., 1000 Sofia, Bulgaria, e-mail: dimitroff@mail.bg

*Brassicaceae*

**30. *Hymenolobus procumbens*** (L.) Nutt.

**Bu** Black Sea Coast (*Southern*): in salty sands along the shore of lake Atanasovsko, south of the road dividing the lake, NH-30, 14.05.2005, coll. *D. Dimitrov* (SOM 162078).

This species (as *Hornungia procumbens*) is classified as threatened (Anchev 1984) and was last found by Vihodtsevsky around the saltworks of Pomorie, 04.1940 (SO 28387). This halopsamophyte was first reported for the Bulgarian flora by Stojanoff & al. (1928). It is hard to find owing to its small size, short phenological development, as there is only one month from germination to fruiting (April to May), and decrease of its Black Sea Coast habitats.

*Lamiaceae*

**31. *Thymus callieri*** Borbás ex Velen. subsp. ***callieri***

**Bu** Thracian Lowland: in rocky places of the highest part of Dzhendem Tepe, Plovdiv, LG-16, 14.05.2004, coll. *D. Dimitrov* (SOM 162118).

According to Markova (1989) this subspecies does not occur in Bulgaria.

*Ranunculaceae*

**32. *Ranunculus circinatus*** Sibth.

**Bu:** Vitosha Region: Mt Plana, in a temporary puddle near the right bank of Palakariya River, Mechkata locality, before Samokov town, GN-00, 26.06.2006, coll. *D. Dimitrov* (SOM 162795).

— Rhodopi Mts (*Central*): along the left bank of

Trigradska River, above Trigrad village, close to the Horse base, KG-80, 30.06.2006, coll. *D. Dimitrov* (SOM 162796, 162797).

Confirms the distribution of the species in Bulgaria, which has been so far accepted under question (Penev 1970; Assyov & Petrova 2006).

*Rosaceae*

**33. *Potentilla pedata*** Willd. ex Spreng.

**Bu** Pirin Mts (*Southern*): supra pagum Gorno Spanchevo, Sandanski district, 400 m, GL-09, 07.05.1952, coll. *N. Stojanov* & *B. Achtarov* (SOM 90935).

— Toundzha Hilly Country: calcareous places around Topolovgrad, MG-45, 01.06.1948, coll. *N. Stojanov* & *B. Achtarov* (SOM 38999, sub *Potentilla hirta* var. *pedata*, rev. *R. Kamelin*).

*Poaceae*

**34. *Deschampsia caespitosa*** subsp. ***alpina*** (L.) Tzvelev

**Bu** Pirin Mts (*Northern*): in damp grassy spots by the stream flowing into lake Muratovo, 2200 m, GM-03, 12.09.1994, coll. *D. Dimitrov* (SO 96765).

This subspecies is characteristic of North Europe: Wales, Scotland, North Ireland, Finland – in damp, stony places and rocks, usually on the mountains (Clarke 1980).

## *Reports 35–38*

**Dimitur Dimitrov[1] & Vladimir Trifonov[2]**

[1] National Natural History Museum, Bulgarian Academy of Sciences, 1 Tzar Osvoboditel Blvd., 1000 Sofia, Bulgaria, e-mail: dimitroff@mail.bg

[2] Regional Inspectorate of Environment and Water, 14 Dobroudzha St., 6300 Haskovo, Bulgaria, e-mail: vtrifonof@riosv-hs.org

*Asteraceae*

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

**Bu** Black Sea Coast (*Southern*): Bourgas, weedy places along the streets, NH-30, 04.08.2005, coll. *I. Iliev* (SOM 162500).

*Convolvulaceae*

**36. *Convolvulus pilosellifolius*** Desr.

**Bu** Black Sea Coast (*Southern*): rocks around the mouth of the Ropotamo River, NG-68, 13.08.2005, coll. *I. Iliev* (SOM 162577; SO 103996); on coastal sands above Nesebur town, MH-52, 21.08.1968, coll. *R. Yankova* (SO 59037, sub *C. cantabricus* L.).

This taxon differs from *C. cantabricus* by its narrow leaves (1.2 mm), glabrous capsules and smaller petals (Stace 1982).

*Fabaceae*

**37. *Chamaecytisus jankae*** (Velen.) Rothm.

**Tu(E)** Istanbul: grassy places around Constantinopol (Istanbul), Bijuk-Han station, 16.05.1915, coll. *B. Davidov* (SOM 43786).

So far this Balkan endemic has been reported from Albania, Bosnia and Herzegovina, Macedonia, Serbia, and Bulgaria (Heywood & Frodin 1968; Diklić 1972).

*Plantaginaceae*

**38. *Plantago maritima*** subsp. ***serpentina*** (All.) Arcang.

**Bu** Rhodopi Mts (*Eastern*): humid places in the plateau, peak Kartal Bunar Tepe, above Gorni Yurutsi village, *c.* 1000 m, MG-07, 13.07.2004, coll. *V. Trifonov* (SOM 162566).

So far this taxon has been reported from most European countries, except for the Azores, the Balearic Islands, Bulgaria, Greece, and Turkey (Chater & Cartier 1974).

## *Reports 39–48*

**Valentina Goranova & Kiril Vassilev**

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

*Crassulaceae*

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

**Bu** Znepole Region: Mt Viskyar, in calcareous rocky places above Babintsi village, KH-75, 23.05.2005, coll. *K. Vassilev* (SOM 162612).

This species is comparatively widespread on the terri-

tory of Bulgaria, but so far has not been reported from this floristic region (Dimitrov 2002).

*Lamiaceae*

**40. *Salvia argentea*** L.

**Bu** Mt Slavyanka: in open grassy and stony places on Dela Hill near Nova Lovcha village, GL-28, 19.06.2004, coll. *V. Goranova* (SOM 162624).

Markova (1989) reported this species from Mt Slavyanka, but in the subsequent general sources on the flora of Bulgaria (Markova 1992; Dimitrov 2002; Cheshmedzhiev 2003) it was not referred to this floristic region. The species has been known so far from the Black Sea Coast, Northeast Bulgaria, Danubian Plain, the Forebalkan, Znepole Region, Valley of Strouma River, Rhodopi Mts (*Central*), and Thracian Lowland (Dimitrov 2002).

**41. *Salvia viridis*** L.

**Bu** Mt Slavyanka, on the meadows above Nova Lovcha village, GL-28, 19.06.2004, coll. *V. Goranova* (SOM 162619).

The species has been reported to Mt Slavyanka by Markova (1989), but in the later general sources on the flora of Bulgaria (Markova 1992; Dimitrov 2002; Cheshmedzhiev 2003) it was not referred to this floristic region. According to Dimitrov (2002) this species has comparatively limited distribution in Bulgaria: Black Sea Coast, Znepole Region, Valley of Strouma River, Valley of Mesta River and Thracian Lowland. Grozeva & Georgieva (2005) reported *S. viridis* from the Balkan Range (*Eastern*).

**42. *Thymus moesiacus*** Velen.

**Bu** Znepole Region: Mt Viskyar, on open dry grassy and stony places above Babintsi village, KH-75, 23.05.2005, coll. *K. Vassilev* (SOM 162620); above Dolni Romantsi village, FN-53, 23.05.2005, coll. *K. Vassilev* (SOM 162621).

The species has been known so far from the Forebalkan, Balkan Range, Sofia Region, West Frontier Mts, Mt Slavyanka, Pirin Mts, Rila Mts, Mt Sredna Gora (*Western*), Rhodopi Mts, and Thracian Lowland (Dimitrov 2002).

*Oleaceae*

**43. *Jasminum fruticans*** L.

**Bu** Rhodopi Mts (*Western*): along the road from Krichim town to Krichim dam, KG-95, 12.08.2005, coll. *V. Goranova* (SOM 162624).

The species has been so far known from the Black Sea Coast, Balkan Range (*Eastern*), Valley of Strouma River, Rhodopi Mts (*Central* & *Eastern*), Thracian Lowland, Toundzha Hilly Country and Mt Strandzha (Dimitrov 2002).

*Polygonaceae*

**44. *Rumex crispus*** L.

**Bu** The Forebalkan: meadows along the road between Lovni Dol and Kozi Rog villages, Sevlievo district, LH-56, 16.07.2005, coll. *V. Goranova* (SOM 162618).

The species has been so far known from the Black Sea Coast, Danubian Plain, Northeast Bulgaria, Balkan Range, Vitosha Region, Rila Mts and Thracian Lowland (Dimitrov 2002).

*Liliaceae*

**45. *Allium fuscum*** Waldst. & Kit.

**Bu** The Forebalkan: on open grassy places above Skalsko village, Dryanovo district, along the road to the quarry, LH-65, 15.07.2005, coll. *V. Goranova* (SOM 162615).

This species is with limited distribution on the territory of the country and it has been so far known only from Northeast Bulgaria, Valley of Strouma River and Rhodopi Mts (*Western* & *Central*) (Dimitrov 2002).

*Poaceae*

**46. *Achnatherum bromoides*** (L.) P. Beauv.

**Bu** Thracian Lowland: on open grassy places along the road from Harmanli town to Ostur Kamuk village, MG-03, 23.06.2005, coll. *V. Goranova* (SOM 162622).

This species is distributed in the Black Sea Coast, Balkan Range, Znepole Region, West Frontier Mts, Mt Slavyanka, Pirin Mts (*Southern*), Rila Mts, Rhodopi Mts, and Mt Strandzha (Dimitrov 2002).

**47. *Agrostis stolonifera*** L.

**Bu** The Forebalkan (*Eastern*): on the meadows along the road between Lovni Dol and Kozi Rog villages, Sevlievo district, LH-65, 16.07.2005, coll. *V. Goranova* (SOM 162617).

This species is with limited distribution in Bulgaria: Black Sea Coast (*Northern*), Danubian Plain, Northeast Bulgaria, Balkan Range (*Eastern*) and Thracian Lowland (Dimitrov 2002).

**48. *Festuca rubra*** L.

**Bu** Mt Sredna Gora (*Western*): on open grassy places in the area of experimental field, W of Koprivshtitsa town, KH-82, 25.07.2005, coll. *V. Goranova* (SOM 162616).

This species is with limited distribution in the Bulgarian flora and has been so far known only from the Balkan Range (*Central*), Vitosha Region, and Rhodopi Mts (*Western* & *Central*) (Dimitrov 2002).

## Report 49–52

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

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

### *Fabaceae*

**49. *Lathyrus palustris*** L. (Fig. 2)

**Bu** Sofia Region: SE from Tsruklevtsi village, 42°57′10″ N, 23°09′10″ E, 800 m, 30.06.2006, coll. *M. Hájek, P. Hájková, I. Apostolova, D. Sopotlieva & N. Velev* (SOM 162782).

Only four localities have been so far known for this species in Bulgaria: Gebedzhe (Black Sea Coast), Choklyovo Blato (Znepole Region), Kazichensko Blato (Sofia Region) and Batashko Blato (Rhodopi Mts – *Western*). The last collection was from 1958 and since then the species has not been reported for the country. The species is protected by the *Biodiversity Law* (2002). Within the framework of the *Red Lists of Bulgarian Vascular Plants and Fungi* Project, 2003–2005 *Lathyrus palustris* was evaluated according to the IUCN Criteria (IUCN 2001, 2003a, b) by Tosheva, Assyov & Denchev (unpubl.) as Regionally Extinct (RE). The established new locality consists of hundreds of individuals. At the end of June they start to flower. The species occupies a community dominated by *Carex disticha* Huds., which is a species listed in the *Bulgarian Red Data Book* (Markova 1984). This community was described as *Caricetum distichae* Steffen 1931 association within *Caricion gracilis* alliance. Water conductivity was 559 μs/cm/20 °C; water pH 6.9.

**Fig. 2.** *Lathyrus palustris*. Photo: I. Apostolova.

### *Salicaceae*

**50. *Salix rosmarinifolia*** L.

**Bu** Sofia Region: SE of Tsruklevtsi village, 42°56′42″ N, 23°08′07″ E, 800 m, 30.06.2006, coll. *P. Hájková, M. Hájek, I. Apostolova, D. Sopotlieva & N. Velev* (SOM 162781).

This species has been so far known from the Znepole Region in the surroundings of Choklyovo Blato. Starting at the 1960s and up to the early 1990s the fen was drained and the territory used for peat mining. Drainage caused severe damage to the habitats and complete extinction of the species there. Within the framework of the *Red Lists of Bulgarian Vascular Plants and Fungi* Project, 2003–2005, *Salix rosmarinifolia* was evaluated according to the IUCN Criteria (IUCN 2001, 2003a, b) by Peev & Tzoneva (unpubl.) as Regionally Extinct (RE). The new locality proves its existence in the country. The population is numerous, vital and forming large polycormons. The species is a component of the *Junco effusi-Molinietum caeruleae* Tüxen 1954 association within *Molinion* alliance. This association represents intermittently wet meadows on acidic soils. Water pH was 5.6; water conductivity 95 μs/cm/20 °C. Vegetation was dominated by *Juncus conglomeratus, Deschampsia caespitosa* and *Carex panicea*. The species is protected by the *Biodiversity Law* (2002).

### *Scrophulariaceae*

**51. *Pedicularis palustris*** L.

**Bu** Sofia Region: SE of Tsruklevtsi village, 42°57′10″ N, 23°09′10″ E, 800 m, 30.06.2006, coll. *M. Hájek, P.*

*Hájková, I. Apostolova, D. Sopotlieva & N. Velev* (SOM 162783).

This very rare species has been so far reported for the Kazichensko Blato locality (Sofia Region), wet meadows close to the town of Samokov (Rila Mts) and in the surroundings of Choklyovo Blato (Znepole Region). In the last decade the above mentioned localities have been strongly influenced by human activities and the habitats were destroyed, with the exception of the locality near Samokov where the species still can be found.

The newly established locality in the Sofia Region contains about hundred individuals spread over 5000 $m^2$. The individuals are vital and fertile. Within the framework of the *Red Lists of Bulgarian Vascular Plants and Fungi* Project, 2003–2005 *Pedicularis palustris* was evaluated according to the IUCN Criteria (IUCN 2001, 2003a, b) by Stanimirova (unpubl.) as Critically Endangered (CR). The community belongs to the *Caricion davallianae* Klika 1933 alliance and is dominated by *Eriophorum latifolium, Carex panicea* and *Blysmus compressus*. Water conductivity was 633 µs/cm/20 °C; water pH 6.8. The species is protected by the *Biodiversity Law* (2002).

***Cyperaceae***

**52. *Carex lasiocarpa*** Ehrh.

**Bu** Rila Mts: 1 km W of Samokov town, 42°20′17″ N, 23°31′53″ E, 29.06.2006, coll. *M. Hájek, P. Hájková & I. Apostolova* (SOM 162804).

This species was established as new for Bulgaria by Hájek & al. (2005) at two localities in Rhodopi Mts (*Western*). At the Rhodopean localities the species was not fertile. In the new locality close to the town of Samokov the species forms extensive growths and occurs together with another rare sedge *Carex buxbaumii*. As in the previously reported localities, it grows mostly without reproductive stems, but three fertile shoots were found. Water pH varied between 5.8–6.3; water conductivity between 102–173 µs/cm/20 °C.

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## *Report 53*

**Neli Grozeva**

Section of Botany, Department of Biology, Faculty of Agriculture, Trakia University, Students Campus, 6000 Stara Zagora, Bulgaria, e-mail: grozevaneli@hotmail.com

***Orchidaceae***

**53. *Ophrys apifera*** Huds. (Fig. 3)

**Bu** Thracian Lowland: between Malka Vereya village and Trakia University, on a glade among *Quercus pubescens* and *Carpinus orientalis* shrubs, 300 m, LG-89, with flowers, 28.05.2006, observed and photographed by *N. Grozeva*.

A new species for the Thracian Lowland. The population is small – two plants were observed in 2004 and five in 2006. After rediscovering the species for the Bulgarian flora in 1997 (Gerasimova & al. 1998) it has been found in a number of floristic regions: the Black Sea Coast (Nyagolov & al. 2002); Northeast Bulgaria (Radoslavova 2002); Sofia Region (Petrova & al. 2002); Mt Strandzha (Bancheva & al. 2002); Balkan Range (*Eastern*) (Grozeva & al. 2004), and the Forebalkan (*Western*) (Vladimirov 2006).

**Fig. 3.** *Ophrys apifera*

## Reports 54–58

**Dmitar Lakušić, Vladimir Stevanović, Slobodan Jovanović & Gordana Tomović**

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

### *Aspleniaceae*

**54. *Asplenium onopteris*** L.

**Cg** Boka Kotorska bay: Kostajnica, shists, 30 m, chestnut forests *Lauro-Castanetum sativae*, CN-00, 20.02.1993, coll. *V. Stevanović* (BEOU 953/93); Strp, CN-01, 20.02.1993, coll. *V. Stevanović* (BEOU 968/93); Luštica, Stari Krašići, limestone, 80 m, maquis, CM-09, 27.07.1996, coll. *D. Lakušić* & *B. Lakušić* (BEOU 2218/96); Buljarice toward Lučica, 50 m, shady limestone rocks, CM-37, 18.07.1998, coll. *D. Lakušić* (BEOU 9142); Sveti Stefan, CM-28, 01.09.1992, coll. *D. Lakušić* (BEOU 674/92); Herceg Novi, *Laurus nobilis* forest near cemetery Savina, BN-90, *V. Stevanović* obs.

**Sr** Serbia (*Central*): Gorge of Ibar river, Maglić, serpentine, scrubs *Asplenio-Carpinetum orientale*, DP-63, 30.06.1998, *D. Lakušić* (BEOU 8708).

The species is very common in shady forest habitats in the Mediterranean and submediterranean regions of Montenegro. So far the following records have been reported: Rijeka (Crnojevića), Mali Lonac in Sutorman, Bar, Ulcinj, Vir(pazar), Danilovgrad, Trsteno bay near Budva, Donji and Gornji Stoliv in Boka Kotorska bay, Boljevići (Rohlena 1942: 37; Pulević 2005: 42).

The species is very rare in Serbia, where it is generally replaced at serpentine habitats by the related species *A. cuneifolium*. First records of *A. onopteris* in Serbia have been reported from several localities in surroundings of Kraljevo: Metikoš, Čava, Oštra Čuka, river Ribnica (Novak 1926: 47-49). New record in C Serbia (Gorge of Ibar river – Maglić) is very close to known localities near Kraljevo and represents additional confirmation of the occurrence of this rare Mediterranean species in Serbia.

### *Caryophyllaceae*

**55. *Polycarpon tetraphyllum*** (L.) L.

**Cg** Herceg Novi, wall of old fortress, *Parietarion judaicae*, BN-09, 12.07.1994, coll. *S. Čepić, J. Mihajlo* & *M. Cokić* (BEOU 164/94), 12.06.1995, coll. *S. Jovanović* (BEOU 613/95); Kotor, wall of old fortress, *Parietarion judaicae*, CN-10, 13.06.1995, coll. *S. Jovanović* (BEOU 678/95), 05.07.1990, coll. *D. Lakušić* (BEOU 1622/90), 10.08.1990, coll. *S. Jovanović* & *R. Petanović* (BEOU 2329/90); Budva, wall of old fortress, CM-28, 11.08.1990, coll. *S. Jovanović* & *R. Petanović* (BEOU 2347/90).

**Sr** Serbia (*Northeast*): Iron Gate – Đerdap gorge, Tekija, ruderal places around motel, FQ-14, 14.07.2002, coll. *A. Ržaničanin* (BEOU 20209).

Widely distributed ruderal plant in the Mediterranean and W Europe. Adventive in C Europe, extending northward to Germany and S Slovakia. It is common ruderal plant in the whole Mediterranean-submediterranean part of the Balkan Peninsula. Records in the cities of Niš and Belgrade (Stevanović et al. 1993: 40) and most recent in Tekija, indicate that the species is rapidly spreading along the main roads from Macedonia and Aegean region toward inland part of the peninsula. Locality in the city of Tekija represents the northernmost point of distribution in the Balkans.

The species is also very common in ruderal habitats in the Mediterranean and sub-mediterranean regions of Montenegro. However, its distribution is not well documented. It is recorded only in the following localities: Bar, Drušić, Ulcinj, Danilovgrad (Rohlena 1942: 37).

### *Rubiaceae*

**56. *Putoria calabrica*** (L. f.) DC.

**Cg** Budva, Jaz, flish rocks, CM-18, 23.05.1991, coll. *V. Stevanović, S. Jovanović* & *D. Lakušić* (BEOU 194/91); Buljarice, limestone, *Crithmo-Limonetea*, CM-37, 10.08.2003, coll. *D. Lakušić* & *B. Lakušić* (BEOU 17224); Sutomore, along road toward Bar, CM-46, 11.07.1974, coll. *V. Stevanović* (BEOU 3004); Tivat, islet Sveti Marko, flysch cliffs, CM-09, 20.08.2004, coll. *V. Stevanović* (BEOU 20403).

The species is relatively common in a vegetation of rocky crevices in the costal zone of Montenegro, but

it is recorded only in two localities: Bar and Ulcinj (Rohlena 1942: 324).

*Violaceae*

**57. *Viola obliqua*** Hill

**Sr** Serbia (*Northcentral*): Belgrade, Zvezdara township, street Vojvode Savatija, ruderal habitat, DQ-56, 06.07.2006, coll. *D. Lakušić* (BEOU 20937).

The species belongs to *V.* sect. *Viola* subsect. *Borealiamaericanae* W. Becker which includes naturally distributed taxa in North America. In Europe, the plant is naturalized from gardens in Switzerland and Italy (Valentine 1968: 276; Pignati 1982: 108). Small naturalized population of the species in Belgrade is probably escaped from civil gardens. This record represents the easternmost occurrence of species in the Europe and the first one in the Balkans.

*Liliaceae*

**58. *Gagea fistulosa*** (Ramond ex DC.) Ker-Gawl.

**Cg** Mt Durmitor: surrounding of glacial lake Modro jezero, *c.* 1600 m, 43°05.147′ N, 19°04.472′ E, CN-49, 27.05.2006, coll. *D. Lakušić* & *G. Tomović* (BEOU 20936); Valovito lake, *c.* 1700 m, subalpine meadows along N bank of the lake, 43°05′47.6″ N, 19°04′18.9″ E, CN-49, 29.05.2005, *D. Lakušić* & *V. Stevanović* obs.

The species belongs to *G.* sect. *Nudiscaposae* subsect. *Fistulosae* which includes *c.* 10 taxa chiefly distributed in the Caucasus and mountains of C Asia. It is a single representative of this subsection in Europe inhabiting highmountain regions of C & S Europe and is closely related to the Caucasian species *G. anisanthos*. In the Balkans *G. fistulosa* is distributed in the mountains of N Greece, W Bulgaria, S Serbia, SE Montenegro, FYR Macedonia and E & N Albania. The species is critically endangered (CR-Srb B1) in Serbia, and endangered (EN YU B1) in former FR Yugoslavia (Serbia and Montenegro) (Lakušić & Krivošej 1999: 340).

Till recently it has been known only from one locality in Montenegro: Mt Prokletije close to Albanian border (Prokletije, Maja Kolata, 2400 m, *Salicetea retusae*, DN-00, 05.07.1995, coll. *V. Stevanović, D. Lakušić, M. Niketić* & *Z. Bulić* (BEOU 310/95) (Lakušić & Krivošej 1999: 339). Large population has been found around the snow patch in Mt. Durmitor in NW Montenegro. This record represents the northwesternmost occurrence of the species on the Balkan Peninsula.

## *Reports 59–60*

**Predrag Lazarević**

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

*Asteraceae*

**59. *Crepis praemorsa*** subsp. ***dinarica*** (Beck) P.D. Sell

**Sr** Serbia (*Southwest*): Pešter Plateau, between village Karajukića Bunari and Trojan hill, dry limestone meadows and pastures, *c.* 1170 m, 43°06′30″ N, 20°09′50″ E, DN-27, 20.05.2000, coll./det. *P. Lazarević* (BEOU).

The subspecies is distributed from SE Alps through whole Dinaric Alps where it is very common at altitudes between (900) 1200 and 2200 (2400) m. Easternmost limit of *C. praemorsa* subsp. *dinarica* distribution is in Mt Prokletije in SW Serbia (Kosovo and Metochia province), N Albania and SE Montenegro. The newly discovered locality is *c.* 50 km northward from Mt Prokletije and represents easternmost point of the subspecies distribution in the Balkans.

*Cyperaceae*

**60. *Cyperus serotinus*** Rottb.

**Sr** Serbia (*East*): Ostrovička Banjica, Sićevo Gorge near Niš. Banks of thermal spring, *c.* 257 m, 43°19′24″ N, 22°06′43″ E, EN-99, 24.06.2005, coll. *P. Lazarević*, det. *M. Niketić* (BEOU 16082).

The distribution of the species in Serbia is insufficiently known. It is recorded only at several localities: Danube in the vicinity of Belgrade, Loznica – NW Serbia (Pančić 1874); along Danube accumulation between mouth of Nera river and islet Žilovo at several microlocalities (Stevanović & al. 2003), foothill of Fruška Gora (Obradović 1966). The record in the surrounding of Niš represents southernmost point of distribution in Serbia.

## Reports 61–71

**Hristo Pedashenko**

Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl. 23, 1113 Sofia, Bulgaria,
e-mail: hristo_pedashenko@yahoo.com

*Caryophyllaceae*

**61. *Dianthus cartusianorum*** L.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, along the way to Vlakovete locality, above Lozen village, GN-01, 12.06.2005, coll. *H. Pedashenko* (SOM 162632).

First record of this species for Mt Sredna Gora. The species has been known so far from the Danubian Plain, Vitosha Region (Delipavlov 2003), the Forebalkan and Balkan Range (*Western*) (Petrova 1975, 1992).

*Fabaceae*

**62. *Hippocrepis comosa*** L.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, along the way to peak Lalina Mogila, GN-01, 12.06.2005, coll. *H. Pedashenko* (SOM 162628); *loc. ibid.,* 22.05.1938; coll. *Rufanov* & *Radev* (SOM 48481); peak Bachul and peak Rakovichka Mogila, GN-01, 13.07.1955, coll. *Ganchev* (SOM 90583); around Srednogorets village on the cretaceous south slope in herbaceous community, KH-52, 28.05.1964, coll. *I. Ganchev* & *V. Velchev* (SOM 154461, 154433).

Confirms the distribution of the species in Mt Lozenska. This species has been so far known from the Znepole Region, Valley of Strouma River (*Southern*), Pirin Mts and Rhodopi Mts (*Western* & *Central*) (Terziiski 2003), Mt Sredna Gora (*Western*) (Kožuharov 1976, under question). The locality from Lozenska Mt is mentioned by Gančev (1961) but has not been entered in the Bulgarian floristic literature afterwards.

*Linaceae*

**63. *Linum corymbulosum*** Rchb.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, along the way to Vlakovete locality, above Lozen village, GN-01, 12.06.2005, coll. *H. Pedashenko* (SOM 162629).

This is the first record of the species for Mt Sredna Gora. This species has been known so far from Black Sea Coast (*Southern*), Northeast Bulgaria, Danubian Plain, Balkan Range (*Eastern*), Valley of Strouma River, Valley of Mesta River, Rhodopi Mts, Thracian Lowland, Toundzha Hilly Country, Mt Strandzha (Cheshmedzhiev 2003), and the Black Sea Coast (*Northern*) (Petrova 2004a).

*Polygalaceae*

**64. *Polygala oxyptera*** Rchb.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, Vlakovete locality above Lozen village, GN-01, 12.06.2005, coll. *H. Pedashenko* (SOM 162627); *loc. ibid.,* in calcareous rocky places, 25.04.1952, coll. *I. Ganchev* (SOM 111904).

This species has been so far known from the Danubian Plain, Balkan Range (*Western* & *Central*), Vitosha Region, Mt Slavyanka, Rhodopi Mts (*Western* & *Central*) and Pirin Mts (Cheshmedzhiev 2003).

*Ranunculaceae*

**65. *Adonis vernalis*** L.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, above Lozen village, peak Bachun and in a meadow S of peak Lalina Mogila, GN-01, 29.04.2006, coll. *H. Pedashenko* (SOM162683); on eastern slopes of Mt Lozenska, GN-01, 11.05.1901, coll. *A. Toshev* (SOM 29478).

— Mt Sredna Gora (*Eastern*): in cretaceous places under peak Drenaka on the left side of the road between Yagoda and Zmeyovo villages, Stara Zagora district, LH-80, 03.03.2004, coll. *D. Stojanov* & *R. Tsonev* (SOM159896).

This species has been so far known from Black Sea Coast (*Southern*), Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range (*Eastern*), Sofia Region, Znepole Region, Vitosha Region and Toundzha Hilly Country (Popova 2003).

*Rosaceae*

**66. *Potentilla cinerea*** Chaix ex Vill.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, on the southern foots of peak Polovrak, GN-01, 09.04.2006, coll. *H. Pedashenko* (SOM162684); Lalina Mogila Peak, GN-01, 30.04.1999, coll. *A. Vitkova* (SOM 156487).

This species has been so far known from the Black Sea Coast, Northeast Bulgaria, the Forebalkan (*Western*), Balkan Range (*Western* & *Central*), Sofia Region,

Znepole Region, West Frontier Mts, Mt Slavyanka and Rhodopi Mts (*Central*) (Popova 2003).

***Violaceae***

**67. *Viola pumila*** Chaix

**Bu** Vitosha Region: Mt Vitosha, in wet meadows above Kokalyane village, FN-91, 15.05.2004, coll. *H. Pedashenko* (SOM 160106).

This species was reported in the Red Data Book of Bulgaria (Delipavlov 1984: 234) with category Extinct. Andreev (1993) rediscovered it in our country. At present *V. pumila* is known from the Sofia and Znepole Regions (Delipavlov 2003).

***Cyperaceae***

**68. *Carex humilis*** Leyss.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, peak Bachun, NW of peak Rakovichka Mogila, GN-01, 01.04.2006, coll. *H. Pedashenko* (SOM 162626).

This is the first record of the species for Mt Sredna Gora. It has been so far known from Northeast Bulgaria, Danubian Plain, Balkan Range, Znepole Region, West Frontier Mts, Rila Mts, Mt Strandzha (Delipavlov 2003) and Rhodopi Mts (Markova 1992).

**69. *Carex vesicaria*** L.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, along the way to peak Gola Mogila above Dolni Pasarel village, E of Strazharski Dol, GN-01, 28.05.2005, coll. *H. Pedashenko* (SOM 162631); in marshland along the way to Cherven Krust – peak Poluvrak, GN-01, 05.06.1986, coll. *M. Stoeva* (SOM 159718).

This species has been known so far from Northeast Bulgaria, Balkan Range (*Western*), Sofia Region, Znepole Region, Vitosha Region, West Frontier Mts, Valley of Strouma River, Mt Belasitsa, Mt Slavyanka, Valley of Mesta River, Rhodopi Mts, Thracian Lowland (Delipavlov 2003), and Rila Mts (Petrova 2004b).

***Poaceae***

**70. *Festuca rubra*** L.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, peak Lalina Mogila, GN-01, 12.06.2005, coll. *H. Pedashenko* (SOM 162633).

This is the first record of the species for Mt Sredna Gora. This species has been so far known the from Balkan Range (*Central* & *Eastern*), Vitosha Region, Rila Mts (Delipavlov 2003), Rhodopi Mts (*Western* & *Central*) (Dimitrov 2002) and the Black Sea Coast (Kozhuharov 1992).

**71. *Stipa epilosa*** Martin.

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, peak Lalina Mogila, GN-01, 12.06.2005, coll. *H. Pedashenko* (SOM 162630); along the cretaceous, stony slope W of Garvanets, GN-01, 25.04.1952, coll. *I. Ganchev* (SOM 111904).

This species has been so far known from Black Sea Coast (*Southern*), Northeast Bulgaria, Danubian Plain, the Forebalkan, Balkan Range, Znepole Region, Mt Slavyanka, Pirin Mts, Rila Mts, Rhodopi Mts (*Central*), Thracian Lowland, and Toundzha Hilly Country (Delipavlov 2003).

## *Reports 72–73*

**Vladimir Stevanović & Dmitar Lakušić**

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

***Asteraceae***

**72. *Lactuca visianii*** Bornm.

Syn. *Mycelis sonchifolia* (Vis. & Pančić) Hayek; *Lactuca aurea* (Sch.Bip. ex Pančić) Stebbins; *L. sonchifolia* Pančić.

**BH** Mt Volujak, NE slopes, stream Suški potok, *Fagion*, limestone, 988 m, 43°17′86.4″ N, 18°41′53.8″ E, CN-19, 17.07.2006, coll./det. *V. Stevanović* & *D. Lakušić* (BEOU 20966).

New for Bosnia & Herzegovina. The species is endemic to the Balkans reaching westward to SE Montenegro (Rohlena 1942) and northwards to SW Romania, Banat region – Baile Herculane (Nyarady 1965), while it is doubtfully recorded for Turkey-in-Europe (Jeffrey 1975). It is rare and scattered distributed species in E & C Serbia, W Macedonia (?), N & E Albania, Bulgaria (mainly western part) and NW & NE Greece (Fig. 4). Main part of range is situated in E Serbia and W Bulgaria. Record from Mt Volujak in E Bosnia represents westernmost point of species distribution, *c.* 100 km NE from neighbouring locality in SE Montenegro.

*Rubiaceae*

**73. *Asperula hercegovina*** Degen

**Cg** Mt Durmitor, deep slopes of Mali Štuoc peak toward the canyon of river Tara, limestone cliffs, *Asplenietea rupestris*, 1460 m, 43°11′50.4″ N, 19°04′85.9″ E, CN-48, 17.07.2006, coll./det. *V. Stevanović* & *D. Lakušić* (BEOU 20965).

New for Montenegro. The species is endemic to C Dinaric Alps, known from mountains of C Bosnia – Mts Bjelašnica, Hranisava and Vlahinja and Herzegovina – Mts Čabulja, Čvrsnica, Velež, Prenj and Plasa (Beck & al. 1974: 62-63). New record in Mt Durmitor represents easternmost point of species distribution being *c.* 80 km E-SE from neighbouring locality in Herzegovina (Fig. 5).

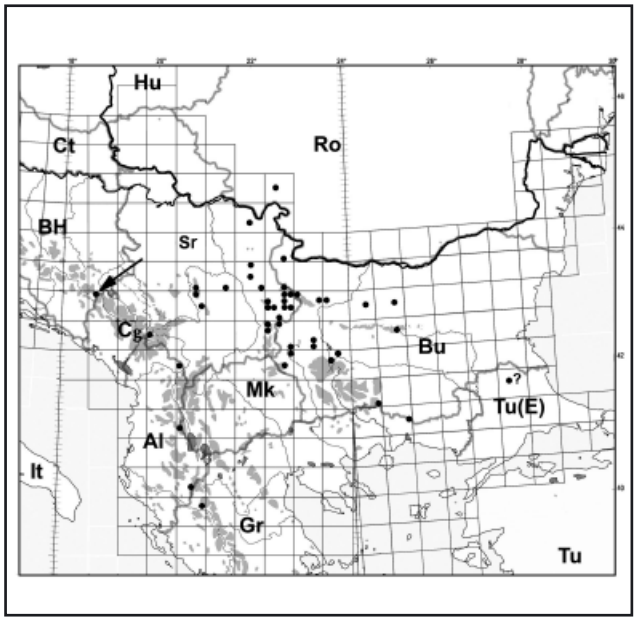


**Fig. 4.** Range of *Lactuca visianii* based on literature data and herbarium sources (BEOU, SOM). The arrow indicates new record of the species in BH. Each dot represents UTM grid cell 10x10 km.

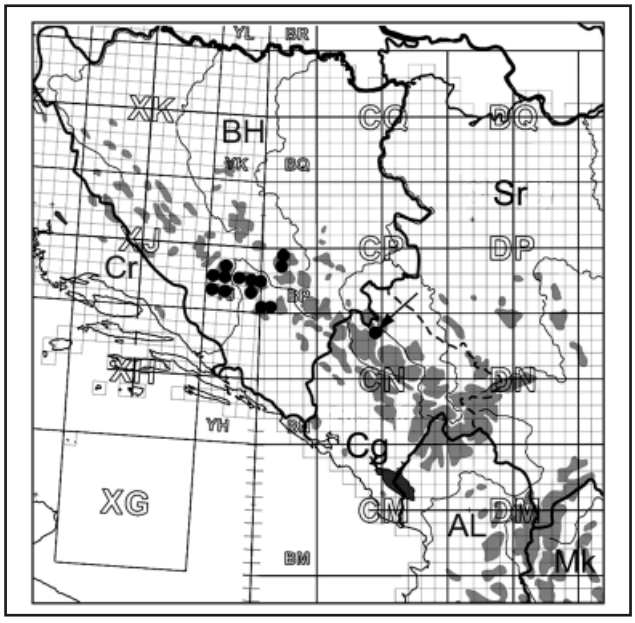


**Fig. 5.** Range of *Asperula hercegovina* presented at UTM grid 10x10 km. The arrow indicates the new locality in Montenegro.

## *Reports 74–86*

**Stoyan Stoyanov**

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

*Ephedraceae*

**74. *Ephedra distachya*** L.

**Bu** Toundzha Hilly Country: Bourgas region, in rocky spots on the hills between Bulgarovo town and Malka Polyana village, with male strobiles, NH-21, 21.05.2004, coll. *S. Stoyanov* (SOM 160946).

Until now the species has been known from the Black Sea Coast, Danubian Plain, the Forebalkan, Sofia Region, Rhodopi Mts, Thracian Lowland, and Mt Strandzha (Delipavlov 2003).

*Adoxaceae*

**75. *Adoxa moschatellina*** L.

**Bu** Northeast Bulgaria: Dobrich region, Suha Reka, between Karapelit and Dryanovets villages, in *Carpinus orientalis* forest, with flowers, NJ-43, 04.04.2004, coll. *S. Stoyanov* (SOM 160280); Loudogorie, the forest near Zurnevo village, Tervel municipality, NJ-23, 30.05.1975, coll. *B. Kitanov* (SO 98399); Dobrich region, the forest N of Zhitnitsa village, NJ-54, 02.06.1975, coll. *B. Kitanov* (SO 98374).

According to Markova (1995) *A. moschatellina* does not occur in the floristic regions of the Black Sea Coast, Northeast Bulgaria, Danubian Plain, Sofia Region, Valley of Strouma River, Valley of Mesta River, Toundzha Hilly Country. Besides the above mentioned regions Delipavlov (2003) excludes also the Balkan Range (*Central* & *Eastern*). However, *A. moschatellina* was collected in the Balkan Range (*Central*) by *H. Kochev* (SOM 113623) and *M. Stoeva* (SOM 149719).

On the basis of the deposited herbarium specimens in SO (already mentioned above) Kitanov & Penev (1980) for the first time reported the species for the Northeast Bulgaria. However, this data was not taken into consideration by Markova (1995) and Delipavlov (2003) in the later editions related to the flora of Bulgaria.

*Apiaceae*

**76. *Hippomarathrum cristatum*** (DC.) Boiss.

**Bu** Toundzha Hilly Country: Derventski Hills, N of Golyam Dervent village, Elhovo municipality, on limestone stony terrain near the road fork to the Gyol Bounar (Strandzhata) chalet, MG-75, with flowers, 23.06.2005, coll. *S. Stoyanov* (SOM 162657).

Until now the species was known from the Valley of Strouma River, Pirin Mts (*Southern*), Rhodopi Mts (*Central* & *Eastern*), and Thracian Lowland (Delipavlov 2003).

*Asteraceae*

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

**Bu** Thracian Lowland: on the limestone Kourtкaya Hill, between Sladoun and Varnik villages, Svilengrad municipality, MG-53, with flowers, 18.06.2005, coll. *S. Stoyanov* (SOM 162656).

Until now the species has been known from the Black Sea Coast (*Northern*), Northeast Bulgaria, Znepole Region, Vitosha Region, and the Valley of Strouma River (Delipavlov 2003). Owing to the vast and well preserved karst terrains the localities of *S. radiata* in the Znepole Region are the most numerous ones and strong in numbers. Summary of the chorological data regarding the species in the Znepole Region is made by Assyov & Vassilev (2004). *S. radiata* is with more limited distribution in the Black Sea Coast (*Northern*) and Northeast Bulgaria because of narrowing of its natural habitats under human influence.

The classical way of movement of the steppe species' populations in Bulgaria is from east to west, through Dobroudzha, Loudogorie and Danubian Plain. The record of *S. radiata* for Thracian Lowland is another proof that the steppe species, except from east to west, also move from north to south, using the Black Sea Coast as a migratory route.

*Boraginaceae*

**78. *Alkanna stribrnyi*** Velen. subsp. ***stribrnyi***

**Bu** Toundzha Hilly Country: Derventski Hills, SE of Malko Kirilovo village, Elhovo municipality, in dry stony and grassy places, MG-65, with flowers, 16.05.2005, coll. *S. Stoyanov* (SOM 162660); Derventski Hills, W of Golyam Dervent village, Elhovo municipality, dry grassy places, MG-74, with flowers, 27.05.2005, coll. *S. Stoyanov* (SOM 162659); at Topolovgrad, in calcareous places, MG-45, 01.06.1948, coll. *N. Stojanov* & *B. Achtarov*, sub *A. primuliflora* Griseb., rev. *S. Kozhuharov*, 11.11.1983, sub *A. stribrnyi* (SOM 90831).

According to Kožuharov (1989) and Popova (2003) the species is known from Mt Slavyanka, Pirin Mts (*Southern*), Rhodopi Mts (*Central*), and Thracian Lowland. *A. stribrnyi* had been collected earlier in the Toundzha Hilly Country, but the herbarium specimen (SOM 90831, already quoted) was omitted when the summary of the chorological data in the contemporary botanical publications was made. The species was also recently reported for the Rhodopi Mts (*Eastern*) by Petrova & al. (2004), the Balkan Range (*Western*) and Mt Sredna Gora (*Eastern*) by Assyov & Petrova (2006).

**79. *Buglossoides glandulosa*** (Velen.) R. Fern.

**Bu** Black Sea Coast (*Northern*): Varna region, on dry sandy and stony terrains of the Pobiti kamani habitat type, in the direction of Razdelna village, near the old graveyard of Beloslav town, NH-58, with flowers, 17.04.2005, coll. *S. Stoyanov* (SOM 162035).

According to Andreev & Peev (1989) and Popova (2003) the species is known only from the Thracian Lowland. After detailed morphological study Kiryakov & Petrova (2003) indicated a wider distribution of *B. glandulosa*: besides in the Thracian Lowland this species occurs at the Black Sea Coast (*Southern*), in Northeast Bulgaria, the Forebalkan, Rhodopi Mts, and Toundzha Hilly Country.

*Fabaceae*

**80. *Astragalus asper*** Jacq.

**Bu** Black Sea Coast (*Northern*): Varna region, Ekrene (Kranevo) village, NH-89, 18.07.1924, coll. *D. Jordanov* (SO 43335), along the roads and dry places around Aladzha Monastery, NH-89, 22.08.1923, coll. *D. Jordanov* (SO 43332), along the seacoast, NH-78, 05.1897, coll. *V. Stribrnyi* (SO 43330).

According to Terziiski (2003) *A. asper* is known from Northeast Bulgaria, Danubian Plain, and Toundzha Hilly Country. Available herbarium specimens in SO

from the Black Sea Coast (*Northern*) have been overlooked when summarising the chorological data about this species in the contemporary botanical publications.

**81. *Astragalus monspessulanus*** subsp. ***illyricus*** (Bernh.) Chater

**Bu** Toundzha Hilly Country: Derventski Hills, W of Chernozem village, Elhovo municipality, dry grassy places, MG-66, 13.05.2005, coll. *S. Stoyanov* (SOM 162655).

Until now this subspecies has been known from Northeast Bulgaria, the Forebalkan (*Western*), Balkan Range (*Central*), Znepole Region, Valley of Strouma River (*Southern*), Mt Slavyanka, Pirin Mts, Rhodopi Mts (*Central*), and Thracian Lowland (Terziiski 2003).

**82. *Lupinus graecus*** Boiss. & Spruner

**Bu** Mt Strandzha: Bourgas region, in dry grassy places and around the forests, S of Evrenozovo village, NG-26, with flowers, 23.05.2004, coll. *S. Stoyanov* (SOM 161383).

Until now the species has been known from the Black Sea Coast (*Southern*), Valley of Strouma River (*Southern*), Rhodopi Mts (*Eastern*), Thracian Lowland, and Toundzha Hilly Country (Terziiski 2003), as well as Valley of Strouma River (Assyov & Petrova 2006).

The southernmost parts of Bulgaria with Mediterranean climatic influence mark the northern borderline of the Balkan-Aegean distribution of *L. graecus*.

**83. *Oxytropis pilosa*** (L.) DC.

**Bu** Northeast Bulgaria: Dobrich region, W of Loznitsa village, in a dry valley close to the Bulgarian-Romanian frontier, in dry grassy places, NJ-76, with flowers, 08.06.2004, coll. *S. Stoyanov* (SOM 160954); Dobroudzha close to the Romanian borderline, 11.07.1920, coll. *B. Davidov*, sub *Astragalus dasyanthus*, rev. *R. Kamelin*, 1978, sub *O. pilosa* (SOM 47549).

Until now the species has been known from the Balkan Range (*Eastern*), Znepole Region, and Valley of Strouma River (*Northern*) (Terziiski 2003).

*Oxytropis pilosa* has been first collected from Northeast Bulgaria by *B. Davidov* (SOM 47549), but wrongly deposited in SOM as *A. dasyanthus*. The lack of information on the herbarium specimen label makes impossible any localisation and therefore the species has not been reported so far from Northeast Bulgaria.

This species grows in typical steppe habitats, small sections of which are preserved in this part of Dobroudzha thanks to the border area. The populations are quite isolated and low in number (less than 500 mature individuals).

***Cyperaceae***

**84. *Carex pilosa*** Scop.

**Bu** The Forebalkan (*Western*): Vidin region, in *Carpinus orientalis* forest, above Dafininska neighbourhood of Granichak village, Belogradchik municipality, FP-23, with flowers, 11.04.2004, coll. *S. Stoyanov* (SOM 160273).

Until now the species has been known from Northeast Bulgaria, Danubian Plain, Balkan Range (*Western* & *Central*), Sofia Region (Mt Lyulin), Vitosha Region, and Mt Sredna Gora (Delipavlov 2003).

Dimitrov (2005) reported *C. pilosa* for the Balkan Range (*Eastern*).

***Liliaceae***

**85. *Asphodeline liburnica*** (Scop.) Rchb.

**Bu** Znepole Region: Mt Golo Burdo, in meadows on the northern slope of peak Ostritsa, on limestone, FN-61, 26.07.1965, coll. *N. Vihodtsevski* (SO 11436); Mt Chepan, below peak Petrov Krust, in grassy screes with southern exposition, 880 m, FN-55, 27.07.1953, coll. *V. Velchev* (SOM 103536).

— Vitosha Region: above the road before entering Bosnek village, FN-70, 28.06.2004, coll. *D. Stoyanov* (SOM 161056).

— Toundzha Hilly Country: Derventski Hills, S of Vulcha Polyana village, Elhovo municipality, in thin forests of *Quercus cerris*, near the border fencing, MG-74, with flowers, 18.07.2005, coll. *S. Stoyanov* (SOM 162654); Derventski Hills, grassy places and around the forests between Strandzha and Golyam Dervent villages, MG-95, 19.07.1936, coll. *D. Jordanov* (SO 11434); Derventski Hills, in shrubs and young forests southeast of Razdel village, Elhovo municipality, MG-75, 27.06.1941, coll. *D. Jordanov* (SO 11435); Sveti Iliyski Hills, the eastern part, in spots of young forests, MG-48, 13.07.1942, coll. *D. Jordanov* (SO 11437).

According to Popova (2003) *A. liburnica* is known from the Black Sea Coast, Northeast Bulgaria, Balkan Range (*Eastern*), Valley of Strouma River, Mt Belasitsa, Mt Slavyanka, Valley of Mesta River, Rhodopi Mts, and Thracian Lowland. In the past century the species has been repeatedly collected in the floristic regions of the Toundzha Hilly Country, Znepole Region, and Mt Sredna Gora. Despite the existing herbarium specimens in SOM and SO they have not been taken into

consideration while summarising the chorological data in the contemporary publications.

***Poaceae***

**86. *Vulpia unilateralis*** (L.) Stace

**Bu** Black Sea Coast (*Northern*): Dobrich region, on the marl limestone above Touzlata, Balchik municipality, NJ-90, with flowers, 30.04.2004, coll. *S. Stoyanov* (SOM 160270).

— Thracian Lowland: Pazardzhik region, Kochagovski Hill, S of Aleko Hydroelectric Station, close to Aleko Konstantinovo village, KG-76, 17.04.1999, coll. *D. Georgiev* [SO 100189, sub *Nardurus tenuiflorus* (Schrad.) Boiss.].

— Toundzha Hilly Country: Stara Zagora region, on the rocky limestone and grassy terrain above Matsa limestone quarry, before Polski Gradets village, Radnevo municipality, MG-37, 17.05.2001, coll. *D. Stoyanov* [SO 101439, sub *Nardurus maritimus* (L.) Murb.].

According to Delipavlov (2003) *V. unilateralis* occurs in the floristic regions of Balkan Range (*Eastern*), Valley of Strouma River (*Southern*), Mt Slavyanka, Pirin Mts (*Southern*), and Rhodopi Mts (*Eastern*).

The species is with limited distribution in Bulgaria and according to the IUCN criteria (IUCN 2001, 2003a, b) is rated as Endangered (EN). It is close in morphology and ecology to *Micropyrum tenellum* (L.) Link. In the past both species were referred to genus *Nardurus*. Their distinguishing, especially in the phase after seeds, when only glumes are left from the spikelets, is very difficult. Moreover, *V. unilateralis* has a very short life span (2–3 weeks), and is small and hard to notice among the other plants. This explains the limited number of localities and reports about the species.

## Report 87

**Stoyan Stoyanov, Valentina Goranova & Dimitur Stoykov**

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

***Fabaceae***

**87. *Astragalus physocalyx*** Fisch. (Fig. 6)

**Bu** Valley of Strouma River (*Southern*): E of Koulata village, Petrich distict, Kartalets Hill, on a grassy and sandy slope with E-SE exposition, FL-98, 18.05.2006, plants with young fruits, coll. *S. Stoyanov, V. Goranova* & *D. Stoykov* (SOM 162681, 162682).

The species has been found in two localities in Bulgaria – Dzhendemtepe (*locus classicus*) in Plovdiv and Koulata village, Petrich district, both destroyed later (Velčev & Bondev 1961; Stanev 1970; Velchev 1984). For almost 50 years *A. physocalyx* was considered extinct in the Bulgarian flora. The recently found population consists merely of 15 individuals.

The species is a Tertiary relict, considered a Balkan endemic (Greuter & al. 1989) with isolated localities in Macedonia (Micevski 1972) and Greece (Greuter & Raus 1986). Subsequently it was found in the Anatolian part of Turkey (Nydegger-Hügli 2002), which extends its distribution area outside the Balkan Peninsula.

*Astragalus physocalyx* has a very high conservation value. It is a legally protected species in Bulgaria, listed in the national *Biodiversity Law* (2002). Also, the species is included in the Appendix 1 of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). In the IUCN Red List of Threatened Plants (Walter & Gillet 1998) it has been rated in the Extinct/Endangered category.

**Fig. 6.** *Astragalus physocalyx*. Photo: D. Stoykov.

## Reports 88–95

**Kit Tan[1], Gert Vold[2] & George Sfikas[3]**

[1] Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bi.ku.dk (author for correspondence)
[2] Botanical Garden, University of Copenhagen, Øster Farimagsgade 2C, DK-1353 Copenhagen K, Denmark
[3] 2 Vyzantiou Str., Argyroupolis, Athens, Greece

*Equisetaceae*

**88. *Equisetum ramossisimum*** Desf.

**Gr** Nomos Lakonias, Eparchia Lakedemonos: western foothills of Taigetos, main road from Kalamata to Sparta, 500 m, 37°05′ N, 22°20′ E, 11.04.2006, *Thornberg* s.n. (herb. Thornberg).

New record for the Taigetos range and also for the Eparchia of Lakedemonos in south Peloponnese.

*Boraginaceae*

**89. *Omphalodes runemarkii*** Strid & Kit Tan

**Gr** Nomos Lakonias, Eparchia Epidavrou-Limiras: Mt Gaidourovouni, southern limestone slopes, *c.* 1000 m, 36°54′ N, 22°56′ E, 18.04.2006, *Sfikas* 13710 (herb. Sfikas).

New for Mt Gaidourovouni. Not previously recorded for this mountain although listed for the other low mountains in the same area at the southern tail of the Parnonas range (see Strid & Tan 2005).

*Fabaceae*

**90. *Astragalus drupaceus*** Orph. ex Boiss.

**Gr** Nomos Achaias, Eparchia Egialias: SW of Kalamias, phrygana on calcareous soil, in recently burnt *Pinus halepensis* forest, 38°13′ N, 22°26′ E, 04.2006, *H. & G. Kretzchmar* 4500 (herb. Kretzschmar & photo!). Together with *Cistus* spp., *Orchis italica* Poiret and *Ophrys fusca* Link.

New for both eparchia and nomos (district and province) in N Peloponnese.

**91. *Glycyrrhiza echinata*** L.

**Gr** Nomos Fokidos, Eparchia Doridos: Filothei to Lidoriki, wet and slippery slope in *Platanus* forest, by stream ending in small waterfall, 1300 m, 38°30′ N, 22°00′ E, 26.05.2006, *Kit Tan* & *G. Vold* obs.

No voucher was collected as the plants were just out of reach by the waterfall but they were easily recognizable by their dense, globose inflorescences and echinate legumes. In Greece this species occurs mainly in the North East and North Central, with a scattered record from S Pindos. This is the first record for Sterea Ellas providing documentation for the southernmost limit of its occurrence in Greece. A voucher will be attempted at the next visit to the locality.

*Liliaceae*

**92. *Asphodeline taurica*** (M. Bieb.) Kunth

**Gr** Nomos Larisis, Eparchia Larisis: Mt Vounasa, rocky deforested limestone slopes, *c.* 1500 m, flowering, 39°57′ N, 21°45′ E, 21.05.2006, *Sfikas* 13715 (herb. Sfikas).

New for Mt Vounasa in north central Greece. A species of relatively rare occurrence in Greece, existing mainly in N Pindos (Smolikas), North East (Falakro) and North Central (Tzena).

**93. *Fritillaria sp.*** aff. *F. graeca* Boiss. & Spruner or *F. davisii* Turrill

**Gr** Nomos Lakonias, Eparchia Lakedemonos: Mt Taigetos, opening in *Pinus nigra* forest near footpath leading to Ag. Varvara, limestone, schist and flysch, 1300 m, 36°57′ N, 22°23′ E, flowering and fruiting, 19.05.2006, *Kit Tan* & *G. Vold* 2006-42-2 (C, GB; living material for cultivation); alpine region of Taigetos, 22.06.1975, *Sfikas* 1939 (herb. Sfikas); above EOS Katafygion, *c.* 1500 m, 36°59′ N, 22°24′ E, flowering, 01.05.1981, *Sfikas* 5635 (herb. Sfikas); Magganiaris spring to Katafygion, *c.* 1300 m, flowering, 01.05.1984, *Sfikas* 5640 (herb. Sfikas); Magganiaris spring, 1200 m, fruiting, 13.06.1992, *Sfikas* 9736 (herb. Sfikas).

Possibly a new species or a new subspecies of *F. graeca*. The perianth of the Taigetos Fritillary is rather narrowly campanulate, dark maroon, yellowish-brown within, without fascia or with very faint and yellowish-brown markings. The leaves are light green and not particularly glaucous. The capsules are broadly obconical-clavate, rounded and flat-topped at the apex, without wings or angles. In contrast, *F.*

*graeca* is distinguished by a clear fascia on the tepals and usually glaucous leaves. *F. graeca* subsp. *graeca* has not previously been recorded from the Taigetos range. *F. graeca* subsp. *guicciardii* (Heldr. & Sart. ex Boiss.) Zaharof with its distinctive, broad, green fascia is the more frequently encountered subspecies in the S Peloponnese.

**94. *Fritillaria conica*** Boiss. (Fig. 7)

**Gr** Nomos Lakonias, Epidavrou-Limiras Eparchya: hills above Velanidia, 450–500 m, in phrygana overlying limestone slopes, 36°28′ N, 23°08′ E, 05.04.2005, *Kit Tan* & *G. Vold* 27895 (GB, herb. Kit & photos); *loc. ibid.*, 08.04.2005, *Kit Tan* & *G. Vold* 27884 (C, GB; living material for cultivation), 27940 (herb. Kit).

New for the Malea Peninsula, the easternmost prong of the S Peloponnese. Previously reported only from the Messinian Peninsula, the westernmost prong. The existence of a yellow-flowered Fritillary in SE Peloponnese has never been documented before despite extensive investigations over many years on the genus within Greece (Kamari 1984, 1985, 1991). When first collected in flowering state it was not immediately identified as *F. conica* as the latter was thought to be restricted to the SW Peloponnese, including the island of Sapientza. Furthermore, the flowers were not pure yellow but greenish-yellow suffused orange-bronze. Bulbs were collected in April 2005 and grown on at the Göteborg Botanical Garden. At first flowering in spring 2006, it was realized there was a close resemblance to *F. conica* although the perianth was not so flared at the tips as usually the case in *F. conica* (Fig. 8). However, all other floral and vegetative characters appear to fall within the range of variation of the latter species so it was decided to treat the Malea plant as conspecific with *F. conica*. The record indeed provides a new and extended distribution of a taxon previously considered restricted to the tip of the Messinian Peninsula and *Fritillaria* should also be looked for near Cape Tenaro in the Mani Peninsula.

### *Poaceae*

**95. *Sphenopus divaricatus*** (Gouan) Rchb.

**Gr** Nomos Argolidos, Navplias Eparchya: W of Navplion, 37°34′ N, 22°48′ E, 13.04.2006, *Thornberg* s.n. (herb. Thornberg).

Apparently the first documentation from the Peloponnese.

**Fig. 7.** *Fritillaria conica.*

**Fig. 8.** *Fritillaria conica.*

## Reports 96–100

**Gordana Tomović[1], Marjan Niketić[2], Bojan Zlatković[3], Snežana Vukojičić[1] & Vladimir Stevanović[1]**

[1] Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, 43 Takovska St., 11000 Belgrade, Serbia, e-mail: gtomovic@bfbot.bg.ac.yu (author for correspondence); sneza@bfbot.bg.ac.yu; vstev@bfbot.bg.ac.yu
[2] Natural History Museum, 51 Njegoševa St., 11000 Belgrade, Serbia, e-mail: mniketic@nhmbeo.org.yu
[3] Institute of Biology and Ecology, Faculty of Natural Sciences, University of Niš, 33 Višegradska St., 18000 Niš, Serbia, e-mail: bojanzlat@yahoo.com

*Grossulariaceae*

**96. *Ribes multiflorum*** Kit. ex Roem. & Schult. subsp. ***multiflorum***

**Sr** Serbia (*East*): Mt Kučaj, Veliki Kršiore Peak, limestone, rocky places in beech forest, exp. N, 1100 m, EP-68, 15.06.1995, coll. *M. Niketić* (BEO).

— Serbia (*South*): the town of Vranje, Mt Kukavica, Oblik peak, near the peak, micashist, at the edge of beech forest, 1300 m, EN-72, 04.05.2002, coll. *M. Niketić*, *G. Tomović* & *B. Zlatković* (BEO, BEOU 15521).

This taxon was previously noted in Serbia only from NE Serbia at Mt Beljanica (Pančić 1874).

*Rosaceae*

**97. *Spiraea cana*** Waldst. & Kit.

**Sr** Serbia (*Southwest*): the town of Sjenica, Trijebine River Gorge, limestone, 1100 m, rocky places, DN-18, 29.04.2006, coll. *V. Stevanović*, *M. Niketić*, *S. Vukojičić* & *G. Tomović* (BEOU 20746).

The species was previously recorded in Serbia for W Serbia (Jovanović 1972). According to the recent literature data (Kurtto & al. 2004), the new founding near the town of Sjenica in Serbia represents southern- and easternmost locality of the total species range.

*Liliaceae*

**98. *Allium paniculatum*** subsp. ***villosulum*** (Halácsy) Stearn

**Sr** Serbia (*East*): the town of Dimitrovgrad, fragmented steppe meadows, FN-46, 15.08.2003, coll. *S. Vukojičić*, *G. Tomović* & *B. Zlatković* (BEOU 17528).

New subspecies for Serbia. The subspecies is distributed in the Balkan Peninsula in Bulgaria and Greece (Stearn 1980) and Turkey-in-Europe (Kollmann 1984). It grows in cultivated fields, vineyards, ruins and in fragmented steppe habitats at the lower altitudes. The newly discovered locality in the vicinity of Dimitrovgrad in E Serbia represents one of the westernmost points of the subspecies distribution in the Balkans.

**99. *Gagea minima*** (L.) Ker Gawl.

**Sr** Serbia (*Northeast*): Mt Kučaj, Malinik, Zlotska River Gorge, 1000 m, on limestone, EP-77, 02.05.1987, coll. *D. Lakušić* (BEOU 726/86; 125/87).

— Serbia (*West*): the town of Čačak, village Gornji Vujetinci (Oštrica hill), 650–800 m, on andesite, DP-76, 16.04.2004, coll. *M. Niketić* & *G. Tomović* (BEO, BEOU 19292).

— Serbia (*Northcentral*): the town of Belgrade, Mt Avala, DQ-64, coll. *S. Pavlović* (BEO), DQ-64, coll. *Petrović* (BEO); the town of Belgrade, Mt Avala, village Ripanj (locality Šuplja Stena), *in saxosis silicis*, DQ-64, 01.03.1900, coll. *Hoffman* (BEO).

— Serbia (*Central*): Mt Jastrebac, Kraljeva Česma, EP-40, 12.05.1959, coll. *N. Diklić* (BEO).

— Serbia (*Southwest*): Mt Javor, village Stup (Vrelo River Gorge), rocky places, 1200 m, on limestone, DN-29, 27.04.2006, coll. *V. Stevanović*, *M. Niketić*, *S. Vukojičić* & *G. Tomović* (BEOU 20681).

**Sr(K)** Serbia (*Kosovo and Metochia region*): Šar Mt, Ljuboten peak, EP-40, 01.06.1906, coll. *anonymous* (BEO).

The species was previously recorded for S Serbia: Mt Rujan (Ranđelović & Stamenković 1984) and vicinity of Vranje (Diklić 1975); Metochia region: Mt Koritnik (Diklić 1975); Vojvodina: Deliblatska and Subotička Sands (Obradović et al. 1982), surrounding of Subotica (Obradović & Boža 1985) and Stari Bečej and Bačka Topola (Boža 1979).

**100. *Gagea spathacea*** (Hayne) Salisb.

**Sr** Serbia (*West*): The town of Arilje, village Milićevo, 330 m, ass. *Querco-Carpinetum*, DP-24, 27.04.2006, coll. *V. Stevanović*, *M. Niketić* & *G. Tomović* (BEOU 20674).

This C European species is known from bordering

areas of the Balkans in Slovenia and Croatia (Aceto 1986; Jogan 2001). Its has been found recently in NW Serbia: Pocerina region (Krnić village) and surrounding of Valjevo (Divci village) southernmost and quite disjunct from neighbouring part of range in Croatia and Slovenia (Tomović & Niketić 2005). The new locality near the town of Arilje represents southernmost point of the plant occurrence in the Balkans, *c.* 30 km southward from a recently discovered locality in the surroundings of Valjevo.

## References


**Aalto, M., Hamet-Ahti, L., Rauuhijavi, R., Suominen, J., Taarna, K., Uotila, M., Uotila, P. & Vitikainenpo, O.** 1972. Botanical excursion to western Yugoslavia in 11.-25.VI. 1971, including a list of the collected vascular plants. – Pamphlets of Botanical Museum 5, Helsinki.

**Acetto, M.** 1986. *Gagea spathacea* in Slovenia. – Biol. Vestn., **34**(1): 125-126 (in Slovenian).

**Aedo, C.** 1996. Revision of *Geranium* subgenus *Erodioidea* (*Geraniaceae*). – Syst. Bot. Monogr., **49**: 1-104.

**Anchev, M.** 1984. *Hornungia procumbens* (L.) Hayek. – In: **Velchev, V.** (ed.), Red Data Book of the PR Bulgaria, Vol. **1**. Plants. P. 149. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).

**Andreev, N. & Peev, D.** 1989. *Buglossoides* Moench. – In: **Velčev, V.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **9**, pp. 115-126. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

**Andreev, N.** 1993. Materials and critical notes on the Bulgarian flora. – Hist. Nat. Bulg., **4**: 29-38 (in Bulgarian).

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

**Assyov, B. & Vassilev, R.** 2004. New chorological data and remarks on the distribution of some vascular plants in Bulgaria. – Phytol. Balcan., **10**(2-3): 191-199.

**Bancheva, S., Dimitrov, D., Denchev, C. & Gussev, Ch.** 2002. Second locality of *Ophrys apifera* (*Orchidaceae*) in Bulgaria. – In: **Ranđelović, N**. (ed.), Proc. 6th Symp. on flora of SE Serbia and adjacent territories, July 4-8, 2000, Sokobanja, Serbia. Pp. 73-75. Edit. Vuk Karadžić, Niš.

**Beck, G., Maly, K. & Bjelčić, Ž.** 1974. Flora of Bosna and Hercegovina. IV. *Sympetalae* Vol. **3**. National Museum of Bosnia and Herzegovina, Sarajevo (in Serbo-Croatian).

**Biodiversity Law.** 2002. Decree no. 283 accepted by the National Assembly on 02 August 2002. – Durzhaven Vestnik, no. 77/09.08.2002. Pp. 9-42 (in Bulgarian).

**Blaženčić, J. & Blaženčić, Ž.** 1989. Macrophytic flora and vegetation of Plavsko lake and Martinovičko marsh. – Glasn. Odjeljenje. Prir. Nauka Društvo Nauku Umjetn. Crne Gore, **7**: 25-43 (in Serbo-Croatian).

**Boža, P.** 1979. Contribution to the Flora of Serbia. – Zborn. Prir. Nauke, **57**: 179-184 (in Serbo-Croatian).

**Chater, A. & Cartier, D.** 1974. *Plantago* L. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. **4**, pp. 38-44. Cambridge Univ. Press, Cambridge.

**Cheshmedzhiev, I.** 2003. *Linaceae* (pp.246-249); *Polygalaceae* (254-255); *Lamiaceae* (320-339). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).

**Clarke, G.C.S.** 1980. *Deschampsia* Beauv. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. **5**, pp. 225-227. Cambridge Univ. Press, Cambridge.

**Delipavlov, D.** 1984. *Viola pumila* Chaix. – In: **Velchev, V.** (ed.), Red Data Book of the PR Bulgaria. Vol. **1**. Plants. P. 54. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).

**Delipavlov, D.** 2003. *Ephedra* L. (p. 38); *Caryophyllaceae*(65-88); *Viola* L. (108-112); *Adoxa* L.(288); *Hippomarathrum* Hoffm. & Link (265); *Serratula* L. (409); *Carex* L. (475-482); *Poaceae* (482-520). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).

**Diklić, N.** 1972. *Chamaecytisus* Link. – In: **Josifović, M.** (ed.), Flore de la Republique Socialiste de Serbie. Vol. **4**, pp. 497-515. Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

**Diklić, N.** 1975. *Gagea* Salisb. – In: **Josifović, M.** (ed.), Flore de la Republique Socialiste de Serbie. Vol. **7**, pp. 515-522. Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

**Dimitrov, D.** (ed.). 2002. Conspectus of the Bulgarian vascular flora. Distribution maps and floristic elements. Ed. 2. BSBCP, Sofia.

**Dimitrov, D.** 2005. Flora and vegetation of protected area "Orlitsite" in Vurbishka Mt (Stara planina – Eastern). – In: **Chipev, N. & Bogoev, V.** (eds), Biodiversity, Ecosystems, Global changes. Proc. First Natl. Conf. Ecology, 4-5.11.2004, Sofia. Pp. 237-247. Sofia (in Bulgarian).

**Gančev, I.** 1961. Die Vegetation des Lozen-Gebirges und die Besonderheiten in ihrer Entwicklung. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).

**Gerasimova, I., Petrova, A. & Venkova, D**. 1998. *Ophrys apifera* Hudson reestablished in the Bulgarian flora. – Phytol. Balcan., **4**(3): 53-55.

**Greuter, W. & Raus, T**. (eds). 1986. Med-Checklist Notulae, 13. – Willdenowia, **16**: 103-116.

**Greuter, W., Burdet, H.M. & Long, G.** (eds). 1989. Med-Checklist. Vol. **4**. A Critical Inventory of Vascular Plants of the Circum-mediterranean Countries. Dicotyledones (*Lauraceae-Rhamnaceae*). C.B. de Genève, Genève.

**Grozeva, N. & Georgieva, M.** 2005. New data about the flora of Sinite Kamani Natural Park – Sliven. – God. Sofiisk. Univ. "Kliment Ohridski" Biol. Fak., **96**(4): 63-70.

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

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

**Heywood, V. & Frodin, D.** 1968. *Chamaecytisus* Link. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. **2**, pp. 9-112. Cambridge Univ. Press, Cambridge.

**IUCN.** 2001. IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. Gland & Cambridge.

**IUCN.** 2003a. Guidlines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0. IUCN Species Survival Commission. Gland & Cambridge.

**IUCN.** 2003b. Guidlines for Using the IUCN Red List Categories and Criteria. IUCN Species Survival Commission. Gland &Cambridge.

**Jeffrey, C.** 1975. *Cicerbita* Wallr. – In: **Davis, P.** (ed.), Flora of Turkey and the East Aegean islands. Vol. **5**, pp. 766-772. Edinburgh Univ. Press, Edinburgh.

**Jogan, N.** (ed.). 2001. Materials for the Atlas of Flora of Slovenia. Center for Fauna and Flora Mapping, Ljubljana.

**Jovanović, B.** 1972. *Spireaceae* Maxim. – In: **Josifović, M.** (ed.), Flore de la Republique Socialiste de Serbie. Vol. **4**, pp. 1-10. – Acad. Serbe Sci. & Arts, Belgrade (in Serbo-Croatian).

**Kamari, G.** 1984. Caryosystematic studies on "*Fritillaria*" L. (*Liliaceae*) in Greece. 1. – Webbia, **38**: 723-731.

**Kamari, G.** 1985. *Fritillaria sporadum* (*Liliaceae*), a new species from N Sporades (Greece). – Willdenowia, **14**(2): 331-333.

**Kamari, G.** 1991. The genus *Fritillaria* L. in Greece: taxonomy and karyology. – Bot. Chron., **10**: 253-270.

**Kiryakov, I. & Petrova, A.** 2003. *Buglossoides glandulosa* (*Boraginaceae*): morphology and distribution in Bulgaria. – Phytol. Balcan., **9**(3): 517-527.

**Kitanov, B. & Penev, I.** 1980. Flora of Dobroudzha. Naouka & Izkoustvo, Sofia (in Bulgarian).

**Knuth, R.** 1912. *Geraniaceae* – In: **Engler, H.** (ed.), Das Pflanzenreich. Regni vegetabilis conspectus. Berlin.

**Kollmann, F.** 1984. *Allium* L. – In: **Davis, P.** (ed.), Flora of Turkey and the East Aegean islands. Vol. **8**, pp. 98-211. Edinburgh Univ. Press., Edinburgh.

**Kožuharov, S.** 1989. *Alkanna* Taush. – In: **Velčev, V.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **9**, pp. 137-145. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

**Kožuharov, S.** 1976. *Hippocrepis* L. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **6**, pp. 229-230. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

**Kozhuharov, S.** 1992. *Festuca* L. – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 598-605. Naouka & Izkoustvo, Sofia (in Bulgarian).

**Kurtto, A., Lampinen, R. & Junikka, L.** (eds). 2004. Atlas Florae Europaeae. Distribution of vascular plants in Europe. Vol. **13**. *Rosaceae* (*Spiraea* to *Fragaria*, excl. *Rubus*). The Committee for Mapping the Flora of Europe & Societas Biologica Fennica Vanamo, Helsinki.

**Lakušić, D. & Krivošej, Z.** 1999. *Gagea fistulosa* (Ramond ex DC.) Ker-Gawler. – In: **Stevanović, V.** (ed.), Red Data Book of Flora of Serbia. Vol. **1**, pp. 339-341. Ministry of Environment of R. Serbia,. Biol. Fac., Univ. Belgrade, Instit. Nat. Protect. R. Serbia.

**Markova, M.** 1984. *Carex disticha* Huds. – In: **Velchev, V.** (ed.), Red Data Book of the PR Bulgaria. Vol. **1**. Plants. P. 54. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).

**Markova, M.** 1989. *Thymus* L. (pp. 288-331); *Salvia* L. (442-466). – In: **Velčev, V.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **9**. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

**Markova, M.** 1992. *Cyperaceae* (pp. 349-361); *Lamiaceae* (471-496). – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Naouka & Izkoustvo, Sofia (in Bulgarian).

**Markova, M.** 1995. *Adoxaceae* Fritsch. – In: **Kožuharov, S.** (ed.), Fl. Reipubl. Bulgaricae. Vol. **10**, p. 372. Editio Acad. "Prof. Marin Drinov", Serdicae (in Bulgarian).

**Micevski, K.** 1972. *Astragalus physocalyx* Fish. and *Astragalus ponticus* Pall. new spicies for the flora of Macedonia and Yugoslavia. – Godišen Zborn. Prir.-Mat. Fak. Univ. Skopje, Biol., **24**: 67-72 (in Macedonian).

**Novak, F.** 1926. Ad florae Serbiae cognitionem additamentum primum. – Preslia, **4**: 37-56.

**Nyagolov, K., Dimitrov, M. & Profirov, R.** 2002. Remarks on the distribution of some Orchid species in the district of Burgas. – In: **Temniskova, D.** (ed.), Proc. 6th Natl. Conf. Bot., Sofia, June 18-20, 2001. Sofia. Pp. 507-512. Sofia Univ. "St. Kliment Ohridski" Press, Sofia.

**Nyarady, N.I.** 1965. *Lactuca* L. – In: **Nyarady, N.I.** (ed.), Fl. Reipubl. Popularis Romanicae. Vol. **10**, pp. 130-150. Editio Acad. Reipubl. Popularias Romanicae, Bucharest.

**Nydegger-Hügli, M.** 2002. Dreizehnte und letzte Erganzungen zu P.H. Davis "Flora of Turkey and the East Aegean Islands" 1-10 (1965-1988). – Bauhinia, **16**: 33-55.

**Obradović, M.** 1966. Pflanzengeographische Analyse der Flora des Fruška-Gora-Gebietes. Matica Srpska, Novi Sad (in Serbo-Croatian).

**Obradović, M. & Boža, P.** 1985. Some phytogeographical merits of spring flora of Subotica surroundings. – Zborn. Prir. Nauke, **68**: 65-74.

**Obradović, M., Panjković, V. & Budak, V.** 1982. Some similarities of the flora of Deliblatska and Subotička Sands. – Zborn. Prir. Nauke, **62**: 37-47.

**Pančić, J.** 1874. Flora principatus Serbiae. – State Printing House, Belgrade.

**Penev, I.** 1970. *Ranunculus* L. – In: **Jordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **4**, pp. 119-185. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).

**Petrova, A.** 1975. Reports. – In: **Löve, A.** (ed.), IOPB Chromosome number reports, 69. – Taxon, **24**(4): 510-511.

**Petrova, A.** 1992. *Dianthus* L. – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 297-305. Naouka & Izkoustvo, Sofia (in Bulgarian).

**Petrova, A.** 2004a. A contribution to the flora of East Bulgaria. – Phytol. Balcan., **10**(2-3): 201-205.

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

**Petrova, A., Gerassimova, I., Venkova, D. & Stojanov, Y.** 2002. New data of the distribution of orchid species (*Orchidaceae*) in Bulgaria. – In: **Temniskova, D**. (ed.), Proc. 6th Natl. Conf. Bot., Sofia, June 18-20, 2001. Sofia. Pp. 183-187. Sofia Univ. "St. Kliment Ohridski" Press, Sofia (in Bulgarian).

**Petrova, A., Vassilev, R., Christov, Ch. & Gerassimova, I.** 2004. New data and notes on the flora the Eastern Rhodopes (Bulgaria). – In: **Beron, P. & Popov, A.** (eds), Biodiversity of Bulgaria. 2. Biodiversity of Eastern Rhodopes (Bulgaria and Greece). Pp. 131-138. Pensoft & Natl. Mus. Nat. Hist., Sofia.

**Pignati, S.** 1982. Flora D'Italia. Vol. **2**. Edagricole, Bologna.

**Popova**, **M.** 2003. *Adonis* L. (pp. 52-53); *Rosaceae* (170-198); *Boraginaceae* (309-319); *Asphodeline* Rchb. (439-440). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).

**Pulevic, V.** 2005. Material for vascular flora of Montenegro, A Supplementum to "Conspectus Florae Montenegrinae" (J. Rohlena). Special. ed. Vol. **2**. The Republ. Inst. Protect. Nat., Podgorica (in Serbo-Croatian).

**Radoslavova, N.** 2002. The Orchids of Shoumensko Plato. ET "Snejanka Petkova-AZ", Shoumen (in Bulgarian).

**Ranđelović, N. & Stamenković, V.** 1984. Flora and vegetation of Rujan Mt in Southeast Serbia. – Leskovački Zborn., **24**: 375-392.

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

**Stace, C.A.** 1982. *Convolvulus* L. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. **3**, pp. 79-82. Cambridge Univ. Press, Cambridge.

**Stanev, S.** 1970. On the history of Bulgarian relict endemics. I. *Astragalus physocalyx* Fish. – Bull. Natur. Mus. Plovdiv, **1**: 31-36 (in Bulgarian).

**Stearn, W.T.** 1980. *Allium* L. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. **5**, pp. 49-69. Cambridge Univ. Press, Cambridge.

**Stevanović, V., Niketić, M. & Lakušić, D.** 1993. Distribution of the vascular plants in Yugoslavia (Serbia, Montenegro) and Macedonia I. – Bull. Inst. Jard. Bot. Univ. Belgrade, **24-25**: 33-54.

**Stevanović, V., Šinžar-Sekulić, J. & Stevanović, B.** 2003. On the distribution and ecology of macrophytic flora and vegetation in the river Danube reservoir between Žilovo islet and the mouth of the Nera tributary (river km 1090 and 1075). – Arch. Hydrobiol., Suppl., **147**(3-4): 283-295.

**Stojanoff, N., Stefanoff, B. & Georgieff, T.** 1928. Für die Flora Bulgariens neue und seltene Pflanzen. – Izv. Bulg. Bot. Druzh., **2**: 35-37.

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

**Strid, A. & Tan, Kit.** 2005. A new species of *Omphalodes* (*Boraginaceae*) from Southeast Peloponnese, Greece. – Phytol. Balcan., **10**(2-3): 69-72.

**Terziiski**, **D.** 2003. *Fabaceae* – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Pp. 199-236. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).

**Tomović, G. & Niketić, M.** 2005. *Gagea spathacea* (Hayne) Salisb. (*Liliaceae*) – new species for the flora of Serbia. – Arh. Biol. Nauka, **57**(4): 291-294.

**Valentine, D.H.** 1968. *Viola* L. – In: **Tutin, T.G. & al.** (eds), Flora Europaea. Vol. **2**, pp. 270-282. Cambridge Univ. Press, Cambridge.

**Velčev, V. & Bondev, I.** 1961. Neues material zur Flora Bulgariens aus dem Strumatal, Südlish des Kresnadurchbrusch. – Izv. Bot. Inst. (Sofia), **8**: 215-223. (in Bulgarian).

**Velchev, V.** 1984. *Astragalus physocalyx* Fish. – In: **Velchev, V.** (ed.), Red data book of the P R Bulgaria. Vol. **1**. Plants. P. 191. Publishing House Bulg. Acad. Sci., Sofia (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.

**Walter, K.S. & Gillet, H.J.** 1998. 1997 IUCN Red List of Threatened Plants. Compiled by the World Conservation Monitoring Centre. IUCN. – The World Conservation Union, Gland, Switzerland & Cambridge.