

New floristic records in the Balkans: 13*

Compiled by Vladimir Vladimirov¹, Feruzan Dane² & Kit Tan³

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 Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: feruzandane@gmail.com

³ Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk

Abstract: New chorological data are presented for 102 species and subspecies from Bulgaria (reports 35-43, 49-66, 71-73, 83-102), Greece (3-23, 44-47, 74-82, 84), and Turkey-in-Europe (1, 2, 24-34, 48, 67-70). The taxa belong to the following families: *Amaranthaceae* (52), *Aquifoliaceae* (83), *Araceae* (80, 81), *Asclepiadaceae* (74), *Asteraceae* (44-46, 48, 53-55, 71, 85, 92-95), *Boraginaceae* (3, 24-29), *Caryophyllaceae* (30-35, 75, 86, 87, 96, 97), *Chenopodiaceae* (98-99), *Convolvulaceae* (4), *Cyperaceae* (59, 73), *Fabaceae* (2, 36, 37, 67-70), *Fagaceae* (56), *Ericaceae* (76), *Euphorbiaceae* (5, 72), *Geraniaceae* (6), *Juncaceae* (60), *Lamiaceae* (77), *Liliaceae* s.l. (9, 10, 47, 82), *Oleaceae* (38), *Onagraceae* (78), *Orchidaceae* (49-51, 84), *Plumbaginaceae* (39), *Poaceae* (1, 11-23, 41-43, 61-65, 88-91, 100-102), *Resedaceae* (7), *Rhamnaceae* (79), *Rosaceae* (57), *Scrophulariaceae* (8, 40), *Trapaceae* (58) and *Typhaceae* (66).

First reports for countries are: Greece – *Hieracium dimonieii* (45), *Hieracium neodivergens* (44), *Hieracium guthnikianum* (46) and *Oenothera speciosa* (78).

The publication includes contributions by M. Aybeke (1), M. Aybeke, C. Kurt & A. Semerci (2), B. Biel & Kit Tan (3-23), F. Dane & E. Aytin (24-29), F. Dane, A. Soykan & G. Dalgıç (30-34), V. Goranova, K. Vassilev & H. Pedashenko (35-43), G. Gottschlich & E. Bergmeier (44), G. Gottschlich, L. Meierott, Th. Gregor & F. Krendl (45, 46), Z. Kypriotakis & Kit Tan (47), Ç. Meriç, F. Dane & G. Yılmaz (48), H. Pedashenko (49-51), A.S. Petrova (52-66), G. Savaş, G. Yılmaz, N. Başak & F. Dane (67-70), S. Stoyanov (71-73), Kit Tan, A. Bonetti & T. Lafranchis (74-82), A. Tashev (83, 84), N. Velev, K. Vassilev, Z. Rozbrojová, I. Apostolova, M. Delcheva & S. Bancheva (85-91), V. Vladimirov & A.S. Petrova (92-102).

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

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

Report 1

Mehmet Aybeke

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

Poaceae

1. *Echinochloa oryzoides* (Ard.) Fritsch (Fig. 1)

Tu(E) A1(E) Edirne, İpsala, Kumdere locality, rice fields, 36 m, 40°52'00"N, 26°22'00"E, 06.08.2009, coll. H. Sürek & M. Aybeke, det. M. Aybeke (EDTU 10314); İpsala, Koyuntepe village, Bağlık locality, rice fields, 53 m, 40°46'00"N, 26°20'00"E, 06.08.2009, coll. H. Sürek & M. Aybeke, det. M. Aybeke (EDTU 10315).

New for A1(E) Edirne. So far the species has been known from A2(E) Istanbul, Hisarlı to Ormanlı, and denoted that the taxon was naturalised in southern C Europe, S Russia, Caucasia, Iran (Scholz 1985).



Fig. 1. *Echinochloa oryzoides* – plant with inflorescence, scale bar: 2 cm (photo M. Aybeke).

Report 2

Mehmet Aybeke¹, Cengiz Kurt² & Arif Semerci²

¹ Department of Biology, Faculty of Science and Arts,
University of Trakya, 22030 Edirne, Turkey,
e-mail: mehmetaybeke@yahoo.com

² Department of Forage Crops, Trakya Agricultural
Researches Institute, Edirne, Turkey, e-mail:
cengizkurt69@hotmail.com, arifsemerci@ttae.gov.tr

Fabaceae

2. *Lupinus hispanicus* Boiss. & Reut. (Fig. 2)

Tu(E) A1(E) Edirne, Meriç, Nasuhbeyli village, Kulaklık locality, sandy waste, 46 m, 41°14'01.5"N, 26°20'22.7"E, 26.05.2004, coll. M. Aybeke, C. Kurt & A. Semerci, det. M. Aybeke (TTAE 1331).

Specimens of this taxon have been collected from Anatolia, B1 İzmir, C1 Aydın (Chamberlain 1970). According to the author, it is distributed in W Spain, Portugal, NW Africa, and Greece. Furthermore, in the International Legume Database & Information Service (ILDIS) the taxon was reported from Europe, Portugal and Spain.

During our fieldwork, it was collected from a locality near the Greek frontier. New for the flora of European Turkey.



Fig. 2. *Lupinus hispanicus* – general view of plant (photo C. Kurt).

Reports 3-23

Burkhard Biel¹ & Kit Tan²

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@bio.ku.dk (author for correspondence)

This is the twelfth report of new plant-records for the island of Samothraki (N Aegean islands, Nomos Ev-

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

rou, Eparchia Samothrakis) based on fieldwork carried out during 2006–2009. The records listed are all new to the island, or to the floristic region N Aegean (NAe) as circumscribed in *Flora Hellenica* (Strid & Tan 1997). The occurrence on the other N Aegean islands is also provided.

Boraginaceae

3. *Myosotis laxa* subsp. *caespitosa* (Schultz) Hyl. ex Nordh.

Gr Samothraki: E-SE of Therma, large coastal wetland in alluvial forest, 2 m, 40°29'34"N, 25°38'48"E, 20.06.2008, *Biel* 08.291.

New not only for the N Aegean islands but apparently the first record for the Aegean islands.

Convolvulaceae

4. *Convolvulus althaeoides* L.

Gr Samothraki: S of Chora, old walled cemetery above the sports field, on basalt/porphyritic substrate, 280 m, 40°28'48"N, 25°31'32"E, 10.06.2008, *Biel* 08.102.

Previously noted in 2001 at Anomeria-Kipos and in 2002 at Alonia. Observed in eight other localities. Its occurrence on Samothraki was documented in a list of species found together with *Chamaesyce prostrata* (Biel & Tan 2006: 417). Schuler collected it in 1999, above Xiropotamos on the western part of the island but the record (*Schuler* 99/395, B) has never been published. Also reported from Limnos in the N Aegean area.

Euphorbiaceae

5. *Euphorbia paralias* L.

Gr Samothraki: W of Kamariotissa, gravelly coastal embankment at peninsula, 2 m, 40°28'06"N, 25°27'15"E, 11.07.2009, *Biel* 09.112.

Only found once and apparently uncommon on Samothraki. However, it has been noted from several coastal localities on the islands of Thasos, Limnos and Ag. Evstratios in the N Aegean.

Geraniaceae

6. *Geranium tuberosum* L. (Fig. 3)

Gr Samothraki: SW of Kamariotissa, grassy edge of coastal lagoon, on loam and gravel, 4 m, 40°27'38"N, 25°27'35"E, 02.04.2006, *Biel* 06.036.

Another population was noted at the edge of a dirt road in between fields, ca. 2 km E-SE. *Geranium tuberosum* was erroneously published by us as the rather similar *G. macrostylum* Boiss. (Biel & Tan



Fig. 3. *Geranium tuberosum* (photo B. Biel).

2006: 417). The literature record of *G. tuberosum* by Stojanov & Kitanov (1944: 441) from the northern part of the island is now confirmed. However, no voucher could be located at the Institute of Botany (SOM) or at the University of Sofia (SO), the latter being the institute where Stojanov's material is usually deposited. We thank Ana Petrova (Institute of Botany, Sofia) for helping us with the search. Stojanov & Kitanov (1946: 111) also record it from the island of Thasos in the N Aegean. Their material has been described as *G. tuberosum* subsp. *thasium* Stoj. & Kitanov.

Resedaceae

7. *Reseda luteola* L.

Gr Samothraki: SW of Kamariotissa, heavily grazed slope with open phrygana, 18 m, 40°28'03"N, 25°27'35"E, 12.07.2009, *Biel* 09.126.

Observed in same vicinity in June 2000, also at Kato Kariotes and Therma. Confirming the literature record of Katsikopoulos (1936: 6). Also as ruderal on the islands of Thasos and Limnos in the N Aegean.

Scrophulariaceae

8. *Kickxia spuria* (L.) Dumort.

Gr Samothraki: SW of Kamariotissa, embankment

of dirt road with phrygana, on coastal limestone, 10 m, 40°27'49"N, 25°27'32"E, 18.06.2007, *Biel* 07.049a; SW of Kamariotissa, uncultivated field near Ag. Andreas, coastal limestone, 10 m, 40°27'53"N, 25°27'22"E, 27.06.2007, *Biel* 07.285.

Three other sites were noted in the vicinity of Kamariotissa, Therma and Xiropotamos-Makrilies. New for the N Aegean islands.

Liliaceae

9. *Allium flavum* subsp. *tauricum* (Rchb.) Richt. (Fig. 4)

Gr Samothraki: E-SE of Chora, rocky hill slope with open phrygana, on granite/schist, 900 m, 40°27'46"N, 25°33'33"E, 14.04.2006, *Biel* 06.358 (cultivated material at Höchberg); SE of Chora, rocky slope above stream bed, phrygana, 780 m, 40°27'40"N, 25°33'21"E, 21.06.2007, *Biel* 07.156; NE of Kamariotissa, road embankment with oak trees, 20 m, 40°29'20"N, 25°29'40"E, 08.06.2008, *Biel* 08.034; Pachia Ammos, granitic rocks at western edge of beach, 3 m, 40°23'34"N, 25°34'38"E, 13.06.2008, *Biel* 08.168; Therma, shrubby road margins in village, 50 m, 40°29'38"N, 25°36'31"E, 21.06.2008, *Biel* 08.305.

Also noted at six other localities from various parts of the island, and on Thasos and Ag. Evstratios in the N Aegean.



Fig. 4. *Allium flavum* subsp. *tauricum* (photo B. Biel).

10. *Scilla autumnalis* L. (Fig. 5)

Gr Samothraki: SW of Kamariotissa, open coastal slopes with phrygana, on limestone, 18 m, 40°28'01"N, 25°27'36"E, 30.09.2006, *Biel* 06.401; *loc. ibid.*, 18.06.2007, *Biel* 07.240; E of Chora, rocky ridge, phrygana on basalt/porphyritic substrate, 1320 m, 40°28'09"N, 25°34'13"E,

05.10.2006 *Biel* 06.573; W of Kamariotissa, 40°29'N, 25°28'E, 03.10.1998, *Kit Tan & al.* 21103 (bulbs collected for cultivation at C).

Other localities include Anomeria-Kerasia, Pachia Ammos and Therma. Recorded from the N Aegean island of Thasos.



Fig. 5. *Scilla autumnalis* (photo B. Biel).

Poaceae

11. *Agrostis stolonifera* subsp. *scabriglumis* (Boiss. & Reut.) Maire

Gr Samothraki: E-NE of Kamariotissa, shady river bank in between fields, 20 m, 40°28'55"N, 25°28'58"E, 17.06.2007, *Biel* 07.041; NE of Kamariotissa, roadside ditch on way to Therma, 3 m, 40°29'07"N, 25°29'02"E, 17.06.2007, *Biel* 07.045a; N-NE of Pachia Ammos, wet slopes above rocky bed of Kousianda river, 880 m, 40°25'41"N, 25°36'17"E, 29.06.2007, *Biel* 07.305; E of Profitis Ilias, wet places by open water channel, 400 m, 40°26'01"N, 25°32'51"E, 21.07.2009, *Biel* 09.273; N-NE of Pachia Ammos, steep river bank bordered by *Alnus*, 830 m, 40°25'23"N, 25°36'05"E, 24.07.2009, *Biel* 09.306.

All the specimens have been identified by H. Scholz (Berlin). He has also found earlier documentation of occurrence on mainland Greece, Kerkira and Crete, based on material in Berlin (B). New for the N Aegean islands and other Aegean islands excepting Crete. Additional specimens may be found in various herbaria incorrectly assigned to *Polypogon viridis* (Gouan) Breistr. (Syn.: *Agrostis verticillata* Vill.).

12. *Anthoxanthum ovatum* Lag.

Gr Samothraki: N-NW of Anomeria, coastal swamp

S of Fonias tower, area heavily grazed, 3 m, 40°29'21"N, 25°39'34"E, 15.07.2009, *Biel* 09.183. New for the N Aegean islands.

13. *Bothriochloa ischaemum* (L.) Keng
[Syn.: *Andropogon ischaemum* L., *Dichanthium ischaemum* (L.) Roberty]

Gr Samothraki: E-NE of Palaepolis, coastal embankment, stony ground with ruderal vegetation, 5 m, 40°30'16"N, 25°31'55"E, 19.07.2009, *Biel* 09.235.

New for the N Aegean islands.

14. *Brachypodium retusum* (Pers.) P. Beauv.

Gr Samothraki: NE of Kamariotissa, steep road embankment on coastal limestone, 30 m, 40°29'32"N, 25°29'31"E, 12.07.2009, *Biel* 09.135.

Other localities are Kamariotissa and Pachia Ammos.

New for the N Aegean islands.

15. *Bromus diandrus* Roth [Syn.: *Anisantha diandra* (Roth) Tutin ex Tzvelev]

Gr Samothraki: W-SW of Kamariotissa, ruderal places on gravelly beach near small lagoon, 3 m, 40°28'19"N, 25°27'25"E, 12.07.2009, *Biel* 09.119; S of Kamariotissa, grassy field margins near petrol station, 30 m, 40°28'11"N, 25°28'26"E, 19.07.2009, *Biel* 09.251a.

Other localities are at Xiropotamos and Chora.

Recorded from the N Aegean island of Limnos.

16. *Elymus hispidus* (Opiz) Melderis [Syn.: *Elytrigia intermedia* (Host) Nevski]

Gr Samothraki: SW of Kamariotissa, *Thymus-Sarcopoterium* phrygana on coastal limestone slope, 10 m, 40°27'57"N, 25°27'24"E, 17.06.2007, *Biel* 07.024 & *Biel* 07.027; SW of Kamariotissa, embankment of dirt road, phrygana on coastal limestone, 10 m, 40°27'49"N, 25°27'32"E, 18.06.2007, *Biel* 07.053.

Confirming literature record by Katsikopoulos (1936: 12). Also on Thasos (sub nom. *Agropyron intermedium*) and Ag. Evstratios.

17. *Gastridium phleoides* (Nees & Meyen) C.E. Hubb.

Gr Samothraki: Therma, shrubby road margins in village, 50 m, 40°29'38"N, 25°36'31"E, 09.06.2008, *Biel* 08.078.

Also observed at Pachia Ammos. Recorded from Thasos and Ag. Evstratios in the N Aegean area.

18. *Hainardia cylindrica* (Willd.) Greuter [Syn.: *Monerma cylindrica* (Willd.) Coss. & Durieu]

Gr Samothraki: E-NE of Kamariotissa, shady river bank

in between fields, 20 m, 40°28'55"N, 25°28'58"E, 17.06.2007, *Biel* 07.040; N-NW of Therma, seasonal pool beside the road junction to Therma, open phrygana, 5 m, 40°30'01"N, 25°36'30"E, 19.06.2007, *Biel* 07.091; S-SW of Alonia, wet road embankment south of river valley, 35 m, 40°26'46"N, 25°29'58"E, 23.06.2007, *Biel* 07.192.

There is an earlier collection by Rechinger (18.06.1936, *Rechinger* 9699b, W) between Kamariotissa and Chora. Also on the island of Thasos.

19. *Lolium multiflorum* Lam.

Gr Samothraki: E of Profitis Ilias, open water channel by road, 370 m, 40°26'01"N, 25°32'51"E, 21.07.2009, *Biel* 09.267.

Other localities are near Kamariotissa and Pachia Ammos. Recorded as *L. multiflorum* var. *excelsum* Griseb. from the island of Thasos.

20. *Phalaris minor* Retz.

Gr Samothraki: Chora, road margins, open wall gaps and cracks, 260 m, 40°28'20"N, 25°31'32"E, 18.06.2007, *Biel* 07.066.

Recorded from Limnos, otherwise new for the N Aegean islands.

21. *Phleum arenarium* subsp. *caesium* H. Scholz

Gr Samothraki: N-NE of Pachia Ammos, gorge of Kousianda river, 800 m, 40°25'21"N, 25°36'30"E, 18.06.2008, *Biel* 08.258.

This was determined as *Ph. arenarium* subsp. *caesium* by Scholz. The records by Stojanov & Kitanov (1944: 417) and Ade & Rechinger (1938: 142) are of *Ph. arenarium* and have not been checked. *Phleum arenarium* s.str. has been reported from Thasos, Limnos and Ag. Evstratios.

22. *Phleum exaratum* subsp. *aegaeum* (Vierh.) M. Dogan

Gr Samothraki: E of Therma, gravelly beach east of Fonias tower, 2 m, 40°29'21"N, 25°39'37"E, 15.06.2008, *Biel* 08.208.

Ade & Rechinger (1938: 142) cites *Ph. exaratum* from Samothraki. Material from Limnos and Ag. Evstratios (*non vide*) has been determined as *Ph. exaratum* subsp. *exaratum* by Snogerup.

23. *Poa glauca* Vahl aggr.

Gr Samothraki: E-SE of Alonia, rocky hill with phrygana, along wet dirt track, 690 m, 40°27'29"N, 25°32'58"E, 11.06.2008, *Biel* 08.114;

SW of Therma. Exposed mountain ridge of Fengari, on granitic or basaltic rock, 1510 m, 40°27'55"N, 25°35'01"E, 20.07.2009, *Biel* 09.263.

We are grateful to Hildemar Scholz (Berlin) for determining and confirming the identity of all *Poaceae* material. Cited vouchers are provisionally kept in the private herbarium of B. Biel at Höchberg (herb. Biel).

Reports 24-29

Feruzan Dane & Ergül Aytin

Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: feruzandane@yahoo.com, ergul_1984@hotmail.com

Boraginaceae

24. *Anchusa leptophylla* subsp. *incana* (Ledeb.) D.F. Chamb.

Tu(E) A1(E) Kırklareli: Demirköy, Karanlık village – Karadere village, 3 km, 244 m, 41°49'17"N, 27°45'38"E, 03.09.1989, coll. C. Yarcı (EDTU 4242).

New for A1(E) Kırklareli. So far the species has been known from A1(E) Edirne (Chamberlain 1978).

25. *Buglossoides arvensis* (L.) I.M. Johnst.

Tu(E) A1(E) Edirne: Centre, Musabeyli village, pasture and dry grassland, 109 m, 41°41'00"N, 26°40'00"E, 28.04.1989, coll. F. Dane, det. A. Baytop (EDTU 3537).

New for A1(E) Edirne. So far the species has been known from A1(E) Tekirdağ, A2(E) Istanbul and A3(E) Çanakkale (Edmondson 1978).

26. *Echium italicum* L.

Tu(E) A1(E) Kırklareli: Babaeski, Alpulla – Hayrabolu, 1 km, roadside, 55 m, 41°25'57"N, 27°05'35"E, 22.06.1987, coll. F. Dane & al. (EDTU1472).
— A1(E) Tekirdağ: Muratlı, Muratlı – Lüleburgaz, 15 km, 78 m, 41°10'17"N, 27°30'11"E, 22.06.1987, coll. F. Dane & al. (EDTU 1546).

New for A1(E) Kırklareli and Tekirdağ. So far the species has been known from A1(E) Edirne and A2(E) Istanbul (Edmondson 1978).

27. *Echium vulgare* L.

Tu(E) A1(E) Edirne: Centre, river edge between Tayakadın – Karakasım, 29 m, 41°31'00"N, 26°38'00"E, 19.10.1997, coll. G. Savaş (EDTU

3837); Karaağaç: behind the old Vocational School, 74 m, 41°03'00"N, 26°32'00"E, 22.09.1999, coll. N.Ç. Demirkan & C. Yarcı (EDTU 7711).

New for A1(E) Edirne. So far the species has been known from A1(E) Istanbul (Edmondson 1978).

28. *Heliotropium europaeum* L.

Tu(E) A1(E) Edirne: Center, Musabeyli village, pasture and dry grassland, 109 m, 41°41'00"N, 26°40'00"E, 15.09.1989, coll. F. Dane & N. Polat (EDTU 3987); Keşan: Mecidiye village, 61 m, 40°38'20"N, 26°32'14"E, 10.07.1992, coll. F. Dane & G. Dalgıç (EDTU 5191).

New for A1(E) Edirne. So far the species has been known from A1(E) Çanakkale and A2(E) Istanbul (Riedl 1978).

29. *Myosotis stricta* Roem. & Schult.

Tu(E) A1(E) Edirne: Centre, Musabeyli village, pasture, 109 m, 41°41'00"N, 26°40'00"E, 28.04.1989, coll. F. Dane, det. A. Baytop (EDTU 3539).

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

Reports 30-34

Feruzan Dane, Asude Soykan & Güler Dalgıç

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

Caryophyllaceae

30. *Dianthus calocephalus* Boiss.

Tu(E) A1(E) Edirne: Centre, Saraypınar cemetery, 135 m, 41°46'39"N, 26°28'51"E, 09.06.1988, coll. G. Dalgıç, det. G. Dalgıç (EDTU 2154); Sigircili – Meseli, 7 km, by a field, 106 m, 41°24'40"N, 26°38'59"E, 09.06.1987, coll. G. Dalgıç & N. Basak (EDTU 983); Kesan: Yerlisu, 100 m, 40°46'00"N, 26°39'00"E, 21.06.1984, coll. G. Dalgıç & N. Basak, det. G. Dalgıç (EDTU 70); pine groove, 100 m, 40°46'00"N, 26°39'00"E, 14.06.1985, coll. G. Dalgıç & H. Demiriz, det. H. Demiriz (EDTU 227); picnic site, 100 m, 40°46'00"N, 26°39'00"E, 14.06.1985, coll. H. Demiriz & al. (EDTU 233); Korudag 108 m, 40°51'21"N, 26°37'49"E, 14.07.1986, coll. G. Dalgıç (EDTU 518); Mecidiye seaside, oak groove, 0 m,

40°38'20"N, 26°32'14"E, 11.06.1987, coll. G. Dalgıç & N. Basak (EDTU 1074); Mecidiye: seaside 61 m, 40°38'20"N, 26°32'14"E 11.06.1987, coll. G. Dalgıç (EDTU 1317); Suleoglu, near Suleoglu dam, 156 m, 41°46'02"N, 26°54'43"E, 08.05.1986, coll. G. Dalgıç (EDTU 778); Enez: Vakıf village, 58 m, 40°37'00"N, 26°15'00"E, 08.07.1986, coll. G. Dalgıç (EDTU 517).

- A1(E) Kırklareli: Demirköy, Demirköy – Igneada, 2 km, 244 m, 41°49'17"N, 27°45'38"E, 16.06.1987, coll. G. Dalgıç & al. (EDTU 1383); Demirköy: Igneada, around Mert Lake, 244 m, 41°49'17"N, 27°45'38"E, 17.06.1987, coll. G. Dalgıç & al. (EDTU 1432); Koruköy, 448 m, 41°51'00"N, 27°18'00"E, 25.05.1986, coll. G. Dalgıç (EDTU 409); Dereköy, in creek, 446 m, 41°55'58"N, 27°22'00"E, 18.06.1986, coll. G. Dalgıç (EDTU 476); Kofcaz, 445 m, 41°55'42"N, 27°09'40"E, 19.06.1986, coll. G. Dalgıç & N. Basak (EDTU 483).
- A1(E) Tekirdağ: Muratlı – Lüleburgaz, 15 km, 78 m, 41°10'17"N, 27°30'11"E, 22.06.1987, coll. G. Dalgıç & al. (EDTU 1564); Sarköy, Ganos mountains, 36 m, 40°45'00"N, 27°19'00"E, 13.07.1986, coll. G. Dalgıç & al. (EDTU 519).

New for A1(E) Edirne, Kırklareli and Tekirdağ in European Turkey. So far the species has been known from A1(E) Çanakkale and A2(E) Istanbul (Reeve 1966).

31. *Dianthus giganteus* d'Urv.

Tu(E) A1(E) Edirne: Kesan, Yerlisu, 100 m, 40°46'00"N, 26°39'00"E, 03.08.1984, coll. G. Dalgıç, det. G. Dalgıç (EDTU 97) & 14.06.1985, coll. G. Dalgıç & H. Demiriz (EDTU 238); Enez: near seaport, 5 m, 40°43'29"N, 26°04'57"E, 30.06.1988, coll. G. Dalgıç & F. Dane (EDTU 2220).

New for A1(E) Edirne. So far the species has been known from A1(E) Kırklareli and A2(A) Istanbul (Reeve 1966).

32. *Dianthus ingoldbyi* Turrill

Tu(E) A1(E) Edirne: Kesan, Mecidiye, seaside, 0 m, 40°38'20"N, 26°32'14"E, 04.06.1993, coll. G. Dalgıç, det. G. Dalgıç (EDTU 5438); Mecidiye seaside, Military camps, 0 m, 40°38'20"N, 26°32'14"E, 20.07.1995, coll. G. Dalgıç (EDTU 5983); Mecidiye, rocky slopes, 156 m, 40°41'20"N, 26°27'49"E, 06.07.1999, coll. N. Guler & N. Basak (EDTU 7492).

New for A1(E) Edirne. So far the species has been known from A1(E) Çanakkale (Reeve 1966).

Endemic to Turkey.

33. *Dianthus leptopetalus* Willd.

Tu(E) A1(E) Edirne: Kesan, Mecidiye, seaside 0 m, 40°38'20"N, 26°32'14"E, 03.05.1987, coll. G. Dalgıç, det. G. Dalgıç (EDTU 2692).

New for A1(E) Edirne. So far the species has been known from A1(E) Tekirdağ, A1(A) Çanakkale and A2(A) Istanbul (Reeve 1966).

34. *Dianthus pinifolius* Sm.

Tu(E) A1(E) Edirne: Lalapasa, Sinanköy, 181 m, 41°48'00"N, 26°43'00"E, 07.06.1984, coll. G. Dalgıç, det. G. Dalgıç (EDTU 87).

New for A1(E) Edirne. So far the species has been known from A2(A) Istanbul (Reeve 1966).

Reports 35-43

Valentina Goranova, Kiril Vassilev & Hristo Pedashenko

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

Caryophyllaceae

35. *Cerastium fontanum* Baumg.

Bu Valley of River Mesta: wet meadows around the village of Hadzhidimovo, Gotse Delchev district, GL-39, 12.06.2009, coll. V. Goranova, H. Pedashenko & K. Vassilev (SOM 165522).

A new species for this floristic region.

Fabaceae

36. *Chamaecytisus absinthioides* (Janka) Kuzmanov

Bu Valley of River Mesta: on the hills between Slashten and Valkosel villages, Gotse Delchev district, KF-59, 03.10.2009, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 165527).

This species is a Balkan endemic known only from SW Bulgaria (Terziiski 2003; Assyov & Petrova 2006). A new species for the Valley of River Mesta.

37. *Onobrychis caput-galii* (L.) Lam.

Bu Valley of River Mesta: on the hills E from the road between Sadovo village and Ilinden border checkpoint, Gotse Delchev district, GL-39, 04.10.2009, coll. K. Vassilev, V. Goranova & H. Pedashenko (SOM 165524).

This species is spread in the southern part of the

country but it has not been reported for the Valley of River Mesta (Terziiski 2003; Assyov & Petrova 2006).

Oleaceae

38. *Fraxinus pennsylvanica* H. Marshall

Bu Valley of River Mesta: around Hadzhidimovo village, Gotse Delchev district, GL-39, 12.06.2009, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 165526).

Fraxinus pennsylvanica is an adventive species for the Bulgarian flora that originates from North America. So far it has been known from the Sofia region and Danubian Plain only (Cheshmedzhiev 2003; Assyov & Petrova 2006).

Plumbaginaceae

39. *Plumbago europaea* L.

Bu Valley of River Mesta: in a scrubland along the road between Slashten and Godeshevo villages, Hadzhidimovo Municipality, Gotse Delchev district, KF-59, 03.10.2009, coll. K. Vassilev, H. Pedashenko & V. Goranova, det. S. Stoyanov (SOM 165523).

This species is widespread in the country (Delipavlov 2003; Assyov & Petrova 2006) but it has not been reported so far for the Valley of River Mesta.

Scrophulariaceae

40. *Verbascum ovalifolium* Sims

Bu Valley of River Mesta: in the outskirts of the hills along the river Mesta at the village of Beslen, Hadzhidimovo Municipality, Gotse Delchev district, GL-49, 02.10.2009, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 165528).

A new species for this floristic region.

Poaceae

41. *Micropyrum tenellum* Link

Bu Valley of River Mesta: dry grasslands at the frontier post close to Petrelik village, Hadzhidimovo Municipality, Gotse Delchev district, GL-49, 11.06.2009, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 165555).

A new species for this floristic region.

42. *Poa angustifolia* L.

Bu Valley of River Mesta: on dry grasslands in the hills, at about one kilometer SE from Hadzhidimovo, Gotse Delchev district, 12.06.2009, GL-39, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 165556).

A new species for this floristic region.

43. *Stipa epilosa* Martinovský

Bu Valley of River Mesta: rocky places NE from Banichan village, Gotse Delchev district, GM-21, 13.06.2009, coll. K. Vassilev, H. Pedashenko & V. Goranova (SOM 165554).

A new species for this floristic region.

Report 44

Günter Gottschlich¹ & Erwin Bergmeier²

¹ Hermann-Kurz-Str. 35, D-72074 Tübingen, Germany, e-mail: ggtuebingen@yahoo.com

² Albrecht-von-Haller-Institut für Pflanzenwissenschaften, Georg-August-Universität Göttingen, Untere Karspüle 2, D-37073 Göttingen, e-mail: erwin.bergmeier@bio.uni-goettingen.de

Asteraceae

44. *Hieracium neodivergens* Gottschl. (Fig. 6)

[Syn.: *Hieracium divergens* Nägeli & Peter, nom. illeg., non Jord. ex Boreau 1857]

Gr Epirus, Nom. Ioannina, Timfi, N Katafygio,



Fig. 6. *Hieracium neodivergens* (photo G. Gottschlich).

above Konitsa, 40°00'12"N 20°46'03"E, subalpine meadow, limestone, 1675 m, 19.08.2007, *Bergmeier* 07-457 (Hb. *Bergmeier*, Hb. *Gottschlich* 55260).

New for Greece. Owing to its dense indumentum, *H. neodivergens* belongs to *H.* sect. *Pannosa*. It differs from *H. pannosum* that is common for the Southern Balkans by an always aphyllipodous and higher stem (*H. pannosum* is generally hypophyllipodous) and a greater number of stem leaves. The taxon is interpreted as an intermediate species between *H. pannosum* and *H. brevifolium*. So far it has been known only from Bulgaria (e.g. southern foothills of Mt Vitosha and northern foothills of the Rhodopi Mts).

Because of the illegitimate name of *H. divergens*, a new name was recently chosen (Gottschlich in Greuter & Raab-Straube 2009).

Hieracium neodivergens was found on the rocks of a hard limestone outcropping in a steep north-facing non-grazed meadow. It is associated with a species-rich vegetation, with such grasses as *Festuca koritnicensis*, *Brachypodium pinnatum*, *Dactylis glomerata*, *Phleum alpinum* and *Trisetum tenuiforme*, such herbs as *Achillea abrotanoides*, *Armeria canescens*, *Bupleurum falcatum*, *Dianthus integer* subsp. *minutiflorus*, *Eryngium amethystinum*, *Geranium subcaulescens*, *Helleborus odorus* subsp. *cyclophyllus*, *Knautia drymeia* subsp. *nympharum*, *Primula veris* subsp. *columnae*, *Scabiosa ochroleuca*, *Selinum silaifolium*, *Trifolium pratense*, *T. repens*, *Veronica chamaedrys*, *V. jacquinii*, and such woody species as *Cotoneaster nebrodensis*, *Lonicera alpigena* subsp. *formanekiana*, *Rhamnus alpinus* subsp. *fallax*, *Rosa heckeliana*, *R. montana*, *R. pulverulenta*, *Sorbus cretica* and *S. umbellata*.

Reports 45-46

Günter Gottschlich¹, Lenz Meierott², Thomas Gregor³ & Franz Krendl⁴

¹ Hermann-Kurz-Str. 35, D-72074 Tübingen, Germany, e-mail: ggtuebingen@yahoo.com

² Am Happach 43, D-97218 Gerbrunn, email: lenz.jutta.meierott@t-online.de

³ Siebertshof 22, D-36100 Schlitz, email: thomas.gregor@senckenberg.de

⁴ Wörthgasse 26a/2/3/13, A-2500 Baden

Asteraceae

45. *Hieracium dimonieii* Zahn (Fig. 7)

Gr Epirus, Nom. Ioannina, M. Timfi, E-NE slope of Astraka, 2 km S-SW mountain refuge, 39°57'51"N 20°46'55"E, 2100 m, limestone rocks, 30.07.2009, Meierott GR-09-225 & Gregor 5613 (FR, Hb. Meierott GR-09-225, Hb. *Gottschlich* 54194).



Fig. 7. *Hieracium dimonieii* (photo G. Gottschlich).

New for Greece. *Hieracium dimonieii* is a very rare plant in the Balkan Peninsula. It is only known from the Korab Mountains in East Albania, where it has been collected in 1908. The only further collections were made by the brothers Otto & Ernst Behr at the Pepelak Mountain of the Golešnica Planina (Behr & al. 1937) and at the Ljuboten Mountain (Behr & al. 1939) in Macedonia.

Hieracium dimonieii has some similarity to *H. pilosum*, which is scattered in the Balkan Peninsula. It differs by the subplumose hairs and lower number of stem leaves. It differs with less toothed hairs from *H. pannosum*, which has distinctly plumose hairs.

46. *Hieracium guthnikianum* Hegetschw. (Fig. 8)

[Syn.: *Pilosella guthnikiana* (Hegetschw.) Soják]

Gr Epirus, Nom. Ioannina, Tomaros, 1950 m, 20.07.1985, Krendl & Burri (W); Epirus, Nom.

Ioannina, Grammos, ridge between Tsouka Petsik and Perifano, 40°20'17"N 20°48'34"E, 2300 m, stony slopes, 04.08.2009, *Meierott* GR-09-328 & *Gregor* (Hb. *Meierott* GR-09-328, Hb. *Gottschlich* 54184).

New for Greece. *Hieracium guthnikianum* has the shape of *H. cymosum* but is easily distinguished from this species by its mixed, yellow-orange coloured flowers. The taxon is interpreted as an intermediate species between *H. cymosum* and *H. aurantiacum*. However it is not a recent hybrid taxon but a fixed combination, because it exists in the Balkans without the suspected parental species of *H. aurantiacum*.

The hitherto known southernmost locality of *H. guthnikianum* lies in the Korab Mts, between Debar and Krčin in West Macedonia, leg. *Micevski* (MKNH, rev. *Gottschlich*, unpublished).

Concerning the species epithet, it must be noted that „*guthnikianum*“ is the correct spelling instead of the traditionally used „*guthnickianum*“. Although the Swiss pharmacist is written in the historical botanical literature sometimes as „Guthnick“, the widest used spelling is „Guthnik“ used by Hegetschweiler to name his new species.



Fig. 8. *Hieracium guthnikianum* (photo L. Meierott).

Report 47

Zacharias Kypriotakis¹ & Kit Tan²

¹ Technological Educational Institute, School of Agricultural Technology, Estavromenos, 71500 Iraklion, Crete, e-mail: kypriot@staff.teicrete.gr

² Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk (author for correspondence)

Liliaceae

47. *Scilla autumnalis* subsp. *latifolia* Iatrou & Kit Tan
Gr Crete: Nomos Chanion, Eparchia Kissamou, islet of Ponticonisi, 35°35'N, 23°29'E, *Kypriotakis* s.n. (herb. Kypriotakis).

New for Crete. *Scilla autumnalis* subsp. *latifolia* differs conspicuously from the other taxa in the *S. autumnalis* complex. Its leaves are 4–15 (not 1–2) mm broad, more or less procumbent (not erect) and growing parallel to the ground for their greater part, curving upwards only towards their tips. It was first discovered at the tip of the Mani Peninsula near the villages of Vathia and Gerolimenas, down to Cape Tainaron in the far south, and also on the island of Kithira and considered restricted to the S Peloponnese. The recent discovery on the small islet of Ponticonisi, ca. 10 km W of Cape Gramvousa in NW Crete, links the Greek mainland and Crete, the islands providing “stepping stones in the South Aegean arc”. The plants were growing on coastal limestone cliffs together with the rare *Allium platakisii* and *Achillea cretica*.

Report 48

Çiler Meriç, Feruzan Dane & Gülden Yılmaz

Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: cilermeric@trakya.edu.tr, feruzandane@yahoo.com, guldenyilmaz2009@yahoo.com

Asteraceae

48. *Aster squamatus* (Spreng.) Hieron (Fig. 9).

Tu(E) A1(E) Edirne: Centre, around Faculty of Medicine, near a stream, 26 m, 41°40'28"N, 26°33'39"E, 05.10.2004, coll. Ç. Meriç, det. K. *Alpınar* (EDTU 9470); 21.10.2002, coll. Ç. Meriç (EDTU 8541); Karaagac, in field, 11.10.2009, coll. *F. Dane* (EDTU 10339); Coop. Hauses, at the road side, 11.10.2009, coll. *F. Dane* (EDTU 10332).

A new record for the European Turkey. Annual or biennial, 30–100 cm. Stem erect or ascending, glabrous. Leaves mostly linear or linear-lanceolate, entire. Capitula in symmetrical panicles, involucrel bracts in three rows, oblong to oblanceolate, tapered near the purplish, serrulate apex to an acute or mucronate point, adpressed, the longest 5–6 mm. Ligules violet blue, about as long as the pappus, more numerous than the tubular florets (Yeo 1976).

It is widely naturalized in Central and South America; introduced and spreading in the Mediterranean and Caucasia. The species is extending its distribution area in Europe to the Balkan Peninsula. It occurs in Southwest Europe and also in the Central and East Mediterranean, as well as in Azerbaijan, Colombia, Costa Rica, Gabon, Greece, Yugoslavia, Luxembourg and Saudi Arabia. It has been recently recorded in Sicilia (Yeo 1976).

The closest known locality of this species is in Greece (Yeo 1976). Therefore, it is not surprising that the taxon was recorded in the centre of Edirne in European Turkey.



Fig. 9. *Aster squamatus* (photo Ç. Meriç).

Reports 49-51

Hristo Pedashenko

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

Orchidaceae

49. *Dactylorhiza kalopissii* E. Nelson

Bu Mt Sredna Gora (*Western*): in a wet meadow, along the spring southwards of peak Lalina Mogila – Mt Lozenska, at Mateyna Cheshma

locality, GN-01, 19.06.2008, coll. H. Pedashenko, det. A. Petrova (SOM 164215).

Dactylorhiza kalopissii is a Balkan endemic species occurring in Greece, Macedonia (Delforge 2006) and Bulgaria (Linding & Linding 1991; Assyov & Petrova 2006). So far it has been known from three different localities in Bulgaria: the Balkan Range (*Eastern*), Rhodopi Mts (*Central*) and Tundzha Hilly Country (Petrova & al. 2009). The local distribution and the narrow ecological requirements of the species give grounds to add it to the Annex II of Directive 92/43/EEC and the *Red List of Bulgarian vascular plants* (Petrova 2009).

The locality on Mt Lozenska lies in a permanently damp calcareous flush with south exposition and deep loamy soil, at 939 m a.s.l. It is hard to estimate the numbers of the population, because only 63 flowering plants were counted but there were more than 150 individuals altogether. The community belongs to the alliance *Caricion davallianae* Klika 1934 dominated in the moss layer by *Campylium stellatum* and *Pallustriella commutata*. Other species with high cover were: *Eleocharis quinqueflora*, *Eriophorum latifolium*, *Carex panicea*, *Juncus articulatus*, *Succisa pratensis*, *Parnassia palustris*, and *Equisetum arvense*. Occurrence of genus *Chara* in the community, with a cover over 10% and tufa deposits prove the high concentration of carbonate minerals in the spring water.

The habitat type of the community is 7220 *Petrifying springs with tufa formation (*Cratoneurion*), which is a priority habitat from Annex I of the Directive 92/43 EEC. This fact, as well as the presence of *Dactylorhiza kalopissii* (included in Annex II of the same Directive) in the locality, require designation of special areas of conservation. Documentation for designation of a protected site (NATURA 2000 site) on the territory of Mt Lozenska was submitted to the European Commission in March 2007. The south border of the proposed protected site is only 250 meters N of the population of *D. kalopissii* and habitat 7220, which call for extension of the territory of the proposed site so as to include the priority habitat and one of the biggest populations of *D. kalopissii* in the country.

50. *Epipactis atrorubens* (Bernardi) Besser (Fig. 10)

Bu Mt Sredna Gora (*Western*): in Scots Pine

plantation on the south slopes of peak Mala Rakovichka Mogila – Mt Lozenska, GN-01, 28.06.2009, photo: *H. Pedashenko*, det. *A.S. Petrova*.

A single individual was found in the locality, which was the reason why it was not collected. According to Delforge (2006), the species is widespread in most parts of Europe but the author considers it rare in the Mediterranean zone.



Fig. 10. *Epipactis atrorubens* (photo *H. Pedashenko*).

51. *Ophrys apifera* Huds. (Fig. 11)

Bu Mt Sredna Gora (*Western*): in a sparse Scots Pine plantation on the south slopes of peak Mala Rakovichka Mogila – Mt Lozenska, GN-01, 28.06.2009, photo *H. Pedashenko*.

This species is not common for the country and so far has not been reported from Mt Sredna Gora.

Acknowledgements. The author is grateful for the support to the project "Nature conservation and regional development in Southeast Europe" (NatuRegio) funded by the Deutsche Bundestiftung Umwelt and the Alfred Toepfer Stiftung F.V.S., and its partners: Alfred Toepfer Akademie für Naturschutz, EUROPARC Federation, Stiftung Europäisches Naturerbe – EURONATUR and Universität Lüneburg.



Fig. 11. *Ophrys apifera* (photo *H. Pedashenko*).

Reports 52-66

Antoaneta S. Petrova

Botanical Garden, Bulgarian Academy of Sciences, P.O. Box 664, 1000 Sofia, Bulgaria, e-mail: petrovabotgar1@abv.bg

Amaranthaceae

52. *Amaranthus deflexus* L.

Bu Rhodopi Mts (*Eastern*): in cracks on the pavements in Ivailovgrad town, MF-29, 14.08.2009, coll. *A.S. Petrova* (SOM 165323); Malko Gradishte village, near farm buildings, MG-12, 14.08.2009, coll. *A.S. Petrova* (SOM 165324).

An antropophite with so far unregistered distribution in this floristic region.

Asteraceae

53. *Centaurea iberica* Spreng.

Bu Rhodopi Mts (*Eastern*): Malko Gradishte village, near farm buildings, MG-12, 14.08.2009, coll. *A.S. Petrova* (SOM 165322); foothills of Momina Skala W of Madzharovo town, MG-00, 18.07.2009, obs. *A.S. Petrova*.

— Thracian Lowland: in grasslands near Sadovo, Plovdiv district, LG-26, July 1885, coll. *V. Stribrny* (SOM 83883) and 11.09.1914, coll. *I. Mrkvička* (SOM 83892, 93890); in grasslands along the

road Bryagovo village – Harmanli town, Haskovo district, LG-94, 17.07.2009, obs. A.S. Petrova. New for both floristic regions. Probably overlooked, due to its superficial similarity with *C. calcitrapa* L.

54. *Cirsium candelabrum* Griseb.

Bu Rhodopi Mts (*Western*): SW of Dospat town, along the road to Gotse Delchev town, GM-24, 17.08.2009, coll. A. Petrova (SOM 165198).

The species has been repeatedly observed since 1995, with single individuals along the roads Dospat – Batak, Dospat – Sarnitsa.

55. *Galinsoga ciliata* (Raf.) S.F. Blake

Bu Valley of River Mesta: on stony banks of river Mesta, S of Mesta village, GM-22, 17.08.2009, with flowers, coll. A.S. Petrova (SOM 165324).

First registration for the floristic region.

Fagaceae

56. *Quercus robur* L.

Bu Sofia region: single old trees (about 90 years) in the Botanical Garden near Dragalevtsi Residential District, FN-82, 08.09. 2009, coll. A.S. Petrova (SOM 165241). Observed also in the Malinova Dolina Residential District.

Not given for the region in the main floristic sources on the Bulgarian flora (Ganchev & Bondev 1966; Anchev 1992; Terziiski 2003, etc.). In the area of Sofia cattle basin below Mt Vitosha there are single preserved century old oak trees, both of *Q. robur* and *Q. pedunculiflora*, which is more common for Bulgaria.

Rosaceae

57. *Agrimonia procera* Wallr.

Bu Pirin Mts (*Northern*): meadows at Krushe locality, SW of Razlog town, GM-03, 17.08.2009, coll. A.S. Petrova (SOM 165187).

Agrimonia procera is a species with a wide distribution in the temperate areas of the Northern Hemisphere but more scattered than the common *A. eupatoria*. A species new for this floristic region.

Trapaceae

58. *Trapa natans* L.

Bu Rhodopi Mts (*Eastern*): in river Arda, about 3 km W of Madzharovo town, MG-00, 18.07.2009 and in flooded areas along the river, W of Dolno Cherkovishte village, LG-90, 14.08.2009, observed by A.S. Petrova.

The water chestnut is a tertiary relict species, with

progressively declining global population. It is included in the Appendix 1 – Flora of the Bern Convention (1979), protected by the Biological Diversity Act (2007) and evaluated as Endangered in Bulgaria (Peev & Tsoneva 2009). It is an annual species with significant fluctuations in the population's numbers (Tihomirov 1988). In the river Arda valley the species was first found 10 years ago (Petrova & al. 2004), in a pond for rubble quarrying, near Dolno Cherkovishte village. The second observation in 2009 was very close to that location. This year, single plants were observed in river Arda W of Madzharovo town and some 30–35 individuals in the second locality. The distance between the two localities is about 8.5 km.

Cyperaceae

59. *Schoenoplectus mucronatus* (L.) Palla

Bu Valley of River Mesta: east of Gotse Deltchev town, eastwards of river Mesta, GM-20, 17.08.2009, with young fruits, coll. A.S. Petrova (SOM 165246).

A new species for this floristic region. It was found in the most humid places in a specific habitat, on grey clayey soil, where a uniform community developed dominated by *Juncus* spp.

Juncaceae

60. *Juncus maritimus* Lam.

Bu Valley of River Mesta: east of Gotse Deltchev town, east of river Mesta, GM-20, 17.08.2009, with young fruits, observed by A.S. Petrova.

A new species for this floristic region; a dominant in a community formed on wet clayey soil.

Poaceae

61. *Agrostis stolonifera* L.

Bu Vitosha region: in a wet meadow at a depression along the road between Bistritsa and Pancharevo residential districts of Sofia city, FN-91, 22.07.2003, coll. A.S. Petrova (SOM 165588).

A species with underestimated distribution in the country; thus this record confirms it for the Vitosha floristic region.

62. *Elymus elongatus* (Host) Runemark subsp. *elongatus*

Bu Rhodopi Mts (*Eastern*): in a mesophylous meadow about 3 km eastwards of Malki Voden village, MG-11, 18.07.2009, coll. A.S. Petrova (SOM 165211).

A new species for this floristic region.

63. *Elymus elongatus* subsp. *ponticus* (Podp.) Melderis

Bu Thracian Lowland: in small meadows along the road Brjagovo village – Harmanli town, Haskovo district, LG-94, 17.07.2009, coll. A.S. Petrova (SOM 165214); in mesophilous meadows between Dlagnevo village and Merichleri, LG-86, 19.07.2009, coll. A.S. Petrova (SOM 165210).

A new subspecies for the Thracian Lowland region.

64. *Leersia orysooides* (L.) Sw.

Bu Valley of River Mesta: east of Gotse Deltchev town, east of river Mesta, GM-20, 17.08.2009, with young fruits, coll. A.S. Petrova (SOM 165231).

A new species for this floristic region. It was found in the most humid places in a specific habitat, on grey clayey soil, where a uniform community was developed dominated by *Juncus maritimus*.

65. *Stipa pulcherrima* Koch

Bu Tundzha Hilly Country: east of Zornitsa village, Haskovo district, MG-99, 25.05.2009, coll. B. Milchev, det. A.S. Petrova (SOM 165250).

A new species for this floristic region.

Typhaceae**66. *Typha domingensis* (Pers.) Steud.**

Bu Sofia region: between the Winter Pallace and river Suhata, Studentski Grad Residential District, FN-93, 10.07.2009, coll. A.S. Petrova (SOM 165261).

This is a species with a more southern distribution, found in Bulgaria along the Black Sea Coast, Valley of River Struma, Thracian Lowland and Tundzha Hilly Country (Assyov & Petrova 2006). In Sofia, this species was found in an area with very intensive building activities during the last two decades and it was difficult to determine if the distribution was native, or due to human activities.

Reports 67-70**Gülsemin Savaş, Gülden Yılmaz, Nesibe Başak & Feruzan Dane**

Department of Biology, Faculty of Science and Arts, University of Trakya, 22030 Edirne, Turkey, e-mail: feruzandane@yahoo.com, guldenyilmaz2009@yahoo.com

Fabaceae**67. *Trifolium arvense* L. var. *arvense***

Tu(E) Edirne: Centre, Elcili village, 53 m,

41°27'04"N, 26°37'16"E, 07.06.1989, coll. F. Dane & N. Polat (EDTU 3314); Karaagac: Sogutluk, 23 m, 41°39'28"N, 26°31'25"E, 10.08.1998, coll. F. Dane & S. Okan (EDTU 3810); around Faculty of Medicine, 26 m, 41°40'28"N, 26°33'39"E, 20.05.1999, coll. G. Savas (EDTU 7369); Kesan: Yerlisu village, 162 m, 40°44'00"N, 26°43'00"E, 22.05.1999, coll. N. Basak & N. Guler (EDTU 7455); Enez: Abdurrahim village, 40 m, 40°38'31"N, 26°15'25"E, 22.05.1999, coll. G. Savas (EDTU 7409); Mecidiye, seaside, 0 m, 40°38'20"N, 26°32'14"E, 11.06.1997, coll. N. Basak & N. Guler (EDTU 7475); Suloglu: near dam, 156 m, 41°46'02"N, 26°54'43"E, 28.05.1994, coll. G. Dalgiç (EDTU 5216); Demirhanli village, 123 m, 41°41'51"N, 26°44'24"E, 16.07.1999, coll. G. Savas (EDTU 7420).

New for A1(E) with the specimens collected from Edirne in European Turkey. So far this species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Zohary 1970).

68. *Trifolium cherleri* L.

Tu(E) Edirne: Enez, Abdurrahim village, 40 m, 40°38'31"N, 26°15'25"E, 22.05.1999, coll. G. Savas (EDTU 7410); Lalapasa, 172 m, 41°50'00"N, 26°44'00"E, 08.06.1999, coll. N. Basak & N. Guler (EDTU 7438); Suloglu: near dam, 156 m, 41°46'02"N, 26°54'43"E, 01.06.1999, coll. N. Basak & N. Guler (EDTU 7441).

New for A1(E), with the specimens collected from Edirne in European Turkey. So far this species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Zohary 1970).

69. *Trifolium hirtum* All.

Tu(E) Edirne: Centre, around Faculty of Medicine, 26 m, 41°40'28"N, 26°33'39"E, 31.05.1988, coll. F. Arslanoglu (EDTU 2073); around Faculty of Education, 26 m, 41°40'28"N, 26°33'39"E, 16.05.1998, coll. G. Savas (EDTU 7337); Havsa: near lake Sinit, 65 m, 41°33'01"N, 26°49'13"E, 20.05.1999, coll. G. Savas (EDTU 7364); Kesan: Celebi village, 113 m, 40°40'00"N, 26°21'00"E, 22.05.1999, coll. G. Savas (EDTU 7402); Yerlisu village, 162 m, 40°44'00"N, 26°43'00"E, 25.05.1999, coll. N. Basak & N. Guler (EDTU 7456); Enez: Abdurrahim village, 40 m, 40°38'31"N, 26°15'25"E, 22.05.1999, coll. G. Savas (EDTU 7406); Lalapasa: Taslimusellim village,

193 m, 41°49'N, 26°47'E, 01.06.1987, coll. G. Olgun, F. Dane, H. Arda & A. Asan (EDTU 702).

New for A1(E), with the specimens collected from Edirne in European Turkey. So far this species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Zohary 1970).

70. *Trifolium lappaceum* L.

Tu(E) Edirne: Centre: around Faculty of Education, 26 m, 41°40'28"N, 26°33'39"E, 28.05.2000, coll. G. Savas (EDTU 7494); Kesan: Celebi village, 113 m, 40°51'21"N, 26°37'49"E, 22.05.1999, coll. G. Savas (EDTU 7400); Enez: Mecidiye, 61 m, 40°38'20"N, 26°32'14"E, 26.05.1997, coll. N. Basak & N. Guler (EDTU 7465).

New for A1(E), with the specimens collected from Edirne in European Turkey. So far this species has been known from A1(E) Tekirdağ and A2(E) Istanbul (Zohary 1970).

Reports 71-73

Stoyan Stoyanov

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

Asteraceae

71. *Eclipta prostrata* (L.) L.

Bu Black Sea Coast (*Southern*): along the mouths of the freshwater streams flowing into the sea at the main beach of Lozenets village, Burgas district, NG-67, 28.08.2009, coll. S. Stoyanov (SOM 165552).

This alien species was reported for the first time for the Bulgarian flora by Tzonev (2007) from the floristic region of Northeast Bulgaria (Danubian Aleko islands group) and then it has been collected from several places along the banks of the Danube (Vladimirov & Petrova 2009).

Euphorbiaceae

72. *Euphorbia maculata* L.

Bu Northeast Bulgaria: N of Marten town, Ruse district, on the muddy banks of Danube, at kilometer 481, MJ-26, 25.09.2008, coll. S. Stoyanov (SOM 164815).

This alien species has been so far known from the Black Sea Coast, Danubian Plain, Forebalkan (*Eastern*), Sofia region, Valley of River Struma,

Rhodopi Mts (*Eastern*), and Mt Strandzha (Assyov & Petrova 2006).

Cyperaceae

73. *Cyperus strigosus* L.

Bu Black Sea Coast (*Southern*): along the mouths of the freshwater streams flowings into the sea at the main beach of Lozenets village, Burgas district, NG-67, 28.08.2009, coll. S. Stoyanov (SOM 165553).

This alien species was reported for the first time for the Bulgarian flora by Tzonev & al. (2003) from the Danubian Plain floristic region.

Reports 74-82

Kit Tan¹, Andrea Bonetti² & Tristan Lafranchis³

¹ Institute of Biology, University of Copenhagen, Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark, e-mail: kitt@bio.ku.dk (author for correspondence)

² c/o P.O. Box 4656, Pylos 24001, Greece

³ c/o Diakopto, Achaïas 25003, Greece

Asclepiadaceae

74. *Araujia sericifera* Brot. (Fig. 12)

Gr Nomos Achaïas, Eparchia Kalavriton: in citrus orchard between village of Diakopto and the



Fig. 12. *Araujia sericifera* (photo T. Lafranchis).

Vouraikos gorge, 38°08'N, 22°14'E, 09.01.2010, *Lafranchis* (photo).

New for the Peloponnese, no previous published records exist for Greece except from Crete (Jahn & Schönfelder 1995: 55). Numerous lemon and orange trees in the orchard supported this climber with cream-coloured flowers and very showy fruits. It was found twice in the gardens around Diakopto and nearby villages (from which it had probably escaped) and a single plant was also observed on the main Athens to Patra railway line. It is discarded, with fruits attached, as garden refuse (observed inland of Kamares in N Peloponnese). The population in the Diakopto orchard is the largest in the area comprising more than 100 plants (including 20 in fruit) and is certainly well established with seedlings too densely packed to be counted. *Hedera helix* is its ground competitor.

This invasive weed originates from S America (S Brazil, Paraguay, Uruguay, N Argentina). It had also been noted in 2007 near the castle at Parga in S Pindos on the western mainland (Nomos Prevevis, Eparchia Nikopoleos-Pargas). In the Mediterranean area it is documented as naturalized in Portugal, Spain and France and as a casual in Italy. As far as we know it is not documented as part of the naturalized flora of Greece; however, it will surely spread, flowering in June and fruiting in the winter months of December to February.

Caryophyllaceae

75. *Petrorhagia graminea* (Sm.) P.W. Ball & Heywood

Gr Nomos Messinias, Eparchia Pili: sand dunes near Pylos, 36°55'N, 21°41'E, flowering October 2008, *Bonetti* (photo).

New for the Messinian Peninsula. This late-flowering species is certainly under-collected in the Peloponnese, coastal mainland and Ionian islands.

Ericaceae

76. *Erica multiflora* L.

Gr Nomos Levkados, Eparchia Levkados: island of Lefkada, village of Athani, in macchie, 30 m, 38°39'N, 20°34'E, 08.05.1996, *Čarni* 6961 (Biološki Inštitut, SAZU, image of specimen seen).

Confirming the literature record of Hofmann (1968: 241) from Levkas at Ag. Nikolaos which is new for the Ionian islands and presumably the first published

report for Greece. The species was also observed by Per Lassen (Lund) in May 2002 from the western part of the Greek mainland (Nomos Thesprotias, Eparchia Souliou in the S Pindos). We thank Charles Nelson (Heather Society, U.K.) for conveying this information from Andraž Čarni and the latter for kindly sending us his locality data and an image of the herbarium voucher.

Lamiaceae

77. *Nepeta argolica* Bory & Chaub. subsp. *argolica*

Gr Nomos Argolidos, Eparchia Argous: north-facing limestone slopes of Mt Skiathis (part of the Oligirtos chain), ca. 1360 m, 37°47'N, 22°24'E, 27.06.2009, *Bonetti* (photo).

New for the mountain range Oligirtos and Eparchia Argous. This is an unusual form of *N. argolica* subsp. *argolica* where the corolla is completely white without any purple markings/spots on the lips. More than 30 plants were found in clearings dominated by ungrazed vegetation at the upper limits of *Abies cephalonica* forest. Other endemics in the vicinity include *Centaurea affinis* subsp. *laconiae*, *C. raphanina* subsp. *mixta*, *Cerastium candidissimum*, *Marrubium velutinum* subsp. *cylleneum*, *Pteroccephalus perennis* and *Sedum laconicum* subsp. *laconicum*. There were also excellent populations of *Sideritis clandestina*, the inflorescences of which plant are collected, dried and sold under the name “tsai vouno” or “mountain tea”.

Onagraceae

78. *Oenothera speciosa* Nutt.

Gr Nomos Viotias, Eparchia Levadias: Boeotian plain, northwestern margin of dried-up lake Kopais, 200–210 m, 38°25'N, 23°05'E, 26.07.2009, *A. Mazarákis* photo (det. *Kit Tan* 2010).

Apparently first record for Greece. *Oenothera speciosa* is a herbaceous perennial growing to 50 cm tall and spreading easily by its runners and seeds. The flowers are white and turn rose-pink from the outer edge inwards as they age. The throat of the flower, stamens and stigmas are greenish-yellow or pale yellow. It is native to Mexico and southeastern United States and in some areas there, has developed into an aggressive weed along roadsides and in disturbed places. Photograph sent by G. Sfikas to Kit Tan for identification. Further monitoring of the site will reveal whether it is a casual alien or naturalized. Lake margins are often a rich source of new alien plants for Greece and worth visiting.

Rhamnaceae**79. *Rhamnus sibthorpiana* Schult.**

Gr Nomos Argolidos/Arkadias, Eparchia Argous/Mandiniyas: limestone rocks below summit of Mt Trachi, 1690 m, 37°43'N, 22°24'E, 27.06.2009, *Bonetti* obs.

New for Mt Trachi. *Achillea holosericea*, *A. umbellata*, *Minuartia stellata* and *Fritillaria graeca* (in fruit) were in the area, they are also new records for the mountain. Trachi, as known from current botanical exploration, seems to be the southernmost locality in the Peloponnese for *Minuartia stellata* other than the rare occurrences on the Taigetos range even further south.

Araceae**80. *Arum alpinum* Schott & Kotschy (Fig. 13)**

Gr Nomos Serron, Eparchia Sintikis: Mt Beles, by stream in forest, 800 m, 41°19'N, 23°05'E, 22.04.2008, *Bonetti* photo (det. *Kit Tan* 2010).

New for the phytogeographical region Northeast. *Arum alpinum* occurs in Crete, the Peloponnese and



Fig. 13. *Arum alpinum* (photo A. Bonetti).

mainland Greece but this is the first time it has been noted from northeastern Greece. It was growing together with *Allium ursinum* (see following).

81. *Biarum rhopalospadix* C. Koch

Gr Nomos Arkadias, Eparchia Mandiniyas: southern rocky limestone slopes of Mt Skiathis, 1590 m, 37°46'N, 22°24'E, 27.06.2009, *Bonetti* obs.; rocky limestone slopes of Mt Lirkio, 1720 m, 37°42'N, 22°24'E, 27.06.2009, *Bonetti* obs.; also at a lower altitude, at the archaeological site of Orchomenos, 843 m, 37°43'N, 22°19'E, 23.05.2009, *Bonetti* (photo).

New for Mts Skiathis and Lirkio. On Lirkio were also *Centaurea affinis* subsp. *laconiae*, *C. raphanina* subsp. *mixta*, *Pterocephalus perennis* and *Sideritis clandestina* subsp. *peloponnesiaca*, all new for the mountain. A *Dianthus* resembling *D. biflorus* in its petal colour combination of red above and pale yellow beneath was noted. However, the red of the upper petal limb surface is not bright cinnabar-orange, but a much paler pink. It deserves further study.

Liliaceae**82. *Allium ursinum* L.**

Gr Nomos Serron, Eparchia Sintikis: Mt Beles, by stream in forest, 800 m, 41°19'N, 23°05'E, 22.04.2008, *Bonetti* photo (det. *Kit Tan* 2010).

New for Mt Beles and Nomos Serron in northeastern Greece. *Allium ursinum* has been reported in this phytogeographical region but only from the more southern *nomi* of Chalkidikis and Thessalonikis.

Reports 83-84**Alexander Tashev**

Department of Dendrology, Faculty of Forestry,
University of Forestry, 10 Kliment Ochridski Blvd.,
Sofia 1756, Bulgaria, e-mail: atashev@mail.bg

Aquifoliaceae**83. *Ilex aquifolium* L.**

Bu Rhodopi Mts (*Western*): On the territory of the Borino Sate Forestry Farm, in Kremakliev Dol locality, in the middle of an E slope with inclination of 30°, close to a wet and shady gully, at 1348 m a.s.l., 41°42'08.1"N, 24°17'00.2"E, KG-69, 28.11.2009, coll. A. *Tashev* (SOM 165562, 165563).

One specimen in a 70-year old natural forest of *Picea abies* was identified. It was a shrub with 14 stems, the highest reaching 0.85 m, while some of the peripheral

stems were lying on the ground. There was also a dead old stem, 32 mm thick at the base. The projection cover of the *Picea abies* in the first floor was up to 90 %, while the undergrowth had a projection cover of 20 %. The ground floor was dominated by representatives of *Bryophyta* (70–80 %). Of the low shrubs were identified *Vaccinium myrtillus*, *V. vitis-idaea*, *Bruckenthalia spiculifolia*, and of the herbal species, singly or in small groups, occurred *Dryopteris filix-mas*, *Calamagrostis arundinaceae*, *Melica uniflora*, *Carex sylvatica*, *Aegopodium podagraria*, *Anthriscus sylvestris*, *Aremonia agrimonoides*, *Asarum europaeum*, *Cirsium appendiculatum*, *Cruciata glabra*, *Euphorbia amygdaloides*, *Fragaria vesca*, *Geranium robertianum*, *Hieracium muro-rum*, *Hypericum perforatum*, *Mycelis muralis*, *Oxalis acetosella*, *Potentilla mycrantha*, *Primula veris*, *Salvia glutinosa*, *Sanicula europaea*, etc.

This is the second identified locality of this species in the Rhodopi Mts (*Western*), after the one described close to Dospat town. This second locality is situated at the highest altitude at which this species has been so far found in Bulgaria. The species was found for the first time in a pure *Picea abies* forest and this renders new information on the ecological niche of this threatened and relic species of the Bulgarian flora (Tashev 2001: 20-21).

Orchidaceae

84. *Goodyera repens* (L.) R. Br. (Fig. 14)

Bu Rhodopi Mts (*Western*): On the territory of the Dospat State Forestry Farm, in the territory of



Fig. 14. *Goodyera repens* (photo A. Tashev).

Brashten village, in Apandisita locality, close to the frontier with Greece. On the crest of a NE slope with inclination of 3°, 1500 m, 41°31'09.1"N; 24°11'07.5"E, KG-60, 22.07.2009, with flowers, coll. A. Tashev (SOM 165564, 165565).

Several scores of flowering plants were identified, in small groups of 4–7 individuals, as well as basal rosettes of virginal plants. They were found in a natural, 90-year old forest of *Pinus sylvestris*, with undergrowth of *Picea abies* and *Abies alba*, covering an area of 100–150 m². The individual plants were found among undergrowth of *Picea abies* and *Vaccinium myrtillus*, while the herbaceous cover was dominated by *Luzula luzuloides*, *Lerchenfeldia flexuosa*, *Calamagrostis arundinaceae*, *Pyrola* sp., *Hieracium* sp., etc.

This endangered and relic species has been known so far only from the Rhodopi Mts (*Central*) (Delipavlov 2003; Assyov & Petrova 2006).

Gr Rhodopi Mts, near the Bulgarian frontier ca. 300 m SE of the frontier-mark No. 200 in Chadarkaya locality near the villages of Potami and Sidironeron, the upper part of E-SE slope with inclination of 20°, 1494 m, 41°30'53.7"N, 24°11'01.6"E, KF-69, 22.07.2009, with flowers, coll. A. Tashev (SOM 165570, 165571).

A new species for Greek Rhodopi Mts. A total of seven flowering plants were observed on an area of ca. 1.5 m². They grew in a century-old natural forest of *Pinus sylvestris* with undergrowth of *Picea abies*. The specimens were found among shrubs of *Juniperus communis* and stands of *Pteridium aquilinum*. The herbaceous cover was dominated by *Luzula luzuloides*, *Lerchenfeldia flexuosa*, *Calamagrostis arundinaceae*, *Fragaria vesca*, *Mycelis muralis*, *Hieracium* sp., etc.

Reports 85-91

Nikolay Velev^{1*}, Kiril Vassilev¹, Zuzana Rozbrojová^{2,3}, Iva Apostolova¹, Malina Delcheva¹ & Svetlana Bancheva¹

¹ Institute of Botany, Bulgarian Academy of Sciences, Acad. Georgi Bonchev St., bl.23, 1113 Sofia, Bulgaria

² Institute of Botany, Czech Academy of Sciences, Poříčí 3b, CZ-60300 Brno, Czech Republic

³ Department of Botany and Zoology, Faculty of Science, Masaryk University, Kotlářská 2, CZ-61137 Brno, Czech Republic

* corresponding author, e-mail: nvelev@bio.bas.bg

Asteraceae**85. *Tragopogon orientalis* L.**

Bu Znepole region: Before Vidritsa village, 830 m, FN-53, 03.06.2009, coll. N. Velev & K. Vassilev (SOM 164963).

This is the first publication of this species for the Znepole region. The species was found in *Arrhenatherum elatius*-dominated plant community. The place was utilized as pasture.

Caryophyllaceae**86. *Cerastium brachypetalum* Pers.**

Bu Znepole region: Babitsa village, 900 m, FN-53, 31.05.2009, coll. N. Velev & K. Vassilev (SOM 164964); near Tsegrilovtsi village, FN-23, 14.05.1972, coll. N. Vichodtsevski (SO 35685).

This species was found in a plant community dominated by *Trisetum flavescens* and *Festuca dalmatica*. The locality was used as pasture. Delipavlov (2003) reported this species (*C. b. ssp. brachypetalum*) for the Znepole region, but subsequently (Assyov & Petrova 2006) its presence was not corroborated. We confirm the species for this region.

87. *Stellaria palustris* Retz.

Bu Vitosha region: Eastern slopes of Mt Vitosha – the vicinities of Bistritsa village, 900 m, FN-91, 22.06.2009, coll. N. Velev & Z. Rozbrojová (SOM 164965).

So far this species has been known from the Rila Mts, Sofia region and the Rhodopes (*Western*) (Hájek & al. 2005, 2007; Assyov & Petrova 2006). The investigated habitat in Mt Vitosha is a mesic grassland.

Poaceae**88. *Bromus erectus* Huds.**

Bu Znepole region: Berende Izvor village, 500 m, FN-56, 17.06.2009, coll. N. Velev & K. Vassilev (SOM 164967); Kyustendil town, 06.1894, V. *Stribrny* (SO 07432); Tran town, 14.06.1895, coll. D. Mihaylov, rev. N. Vichodtsevski (SO 07435); Mt Ruy, 26.05.1961, coll. D. Jordanov & A. Yanev (SO 92689);

This is the first record of this species for the region.

89. *Cleistogenes serotina* (L.) Keng.

Bu The Rhodopi Mts (*Central*): On calcareous rocks along the road between Shiroka Laka and Devin, 700 m, KG-82, 28.07.2005, coll. N. Velev, M. Delcheva & S. Bancheva (SOM 164966).

A new species for this floristic region.

90. *Festuca pseudovina* Wiesd.

Bu Danubian Plain: Byala Voda village, LJ-43, 08.2004, coll. I. Apostolova (SOM 164968). So far this species has been known only from Northeast Bulgaria and Stara Planina Mts (*Eastern*) (Assyov & Petrova 2006).

91. *Festuca rupicola* Heuff.

Bu Northeast Bulgaria: South of Professor Ishirkovo village, 100 m, NJ-17, 17.05.2004, coll. N. Velev (SOM 164970). The lemmas were naked or barely hairy in the upper part.

— Vitosha region: In a pasture in the vicinities of Rudartsi village, 820 m, FN-71, 28.06.2009, coll. N. Velev & Z. Rozbrojová (SOM 164969). The lemmas were hairy in the upper part.

A new species for these floristic regions. According to Kozhuharov (1985) and Rothmaler (2007), the lemmas of *F. rupicola* show significant changeability regarding the size and hairiness.

Acknowledgements. Part of this investigation was implemented within an exchange project between the Czech and Bulgarian Academies of Sciences (2008–2010) and the long-term research plans of Masaryk University Nos MSM0021622416 and GACR 526/09/H025. The authors are also grateful to Assist. Prof. Hristo Pedashenko for provided assistance.

Reports 92-102**Vladimir Vladimirov¹ & Antoaneta S. Petrova²**

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

² Botanical Garden, Bulgarian Academy of Sciences, P.O. Box 664, 1000 Sofia, Bulgaria, e-mail: petrovabotgar1@abv.bg

Asteraceae**92. *Centaurea caliacrae* Prodán (Fig. 15)**

Bu Northeast Bulgaria: Malkiya Kairyak hill NW of Devnya town, NH-48, 12.07.2004, with flowers, coll. A.S. Petrova (SOM 165574); Ostriya Halm (Sivri tepe) hill NE of Devnya town, 43°15'N, 27°36'E, NH-58, 03.10.2009, obs. V. Vladimirov & A.S. Petrova.

A species from the *C. alba* group, endemic to the Dobrudzha region. It was reported for Bulgaria only for the Northern Black Sea Coast (Peev 1992;

Delipavlov 2003; Assyov & Petrova 2006), with collections mostly from Cape Kaliakra region.



Fig. 15. *Centaurea caliacrae* (photo A.S. Petrova).

93. *Helminthotheka echioides* (L.) Holub
[Syn.: *Picris echioides* L].

Bu Danubian Plain: the ferry harbour complex near Vidin town, 44.00719°N, 22.90359°E (SOM 165845) & 44.00869°N, 22.93702°E (SOM 165846), 21.09.2009, coll. V. Vladimirov.

— Znepole region: ca. 1 km before the Kalotina border checkpoint, at the road from Sofia, in eroded soil above the road, 42°59'17.4"N, 22°51'01.9"E, 11.08.2009, coll. V. Vladimirov & A. Petrova (SOM 165847).

These are new records for these floristic regions.

94. *Leontodon saxatilis* Lam.

Bu Balkan Range (*Western*): Godech town, in the park near the town hall, 43.01532°N, 23.04770°E, 13.08.2009, coll. V. Vladimirov & A. Petrova (SOM 165848).

The species has been recently reported for the Bulgarian flora (Dimitrova & al. 2005). This is second locality of the species in the country. At least two alternative versions can explain how *L. saxatilis* appeared in the park of Godech. One is that the seed

mixture used for the grasslands in the park contained seeds from *L. saxatilis*. The other is that seeds of the species arrived from the native grasslands surrounding the town of Godech. At present, none of the two hypotheses could be excluded. A further search for the species in the native meadows and pastures around the town is certainly needed.

95. *Pilosella onegensis* Norrl.

[Syn.: *Hieracium caespitosum* subsp. *brevipilum*]

Bu Mt Slavyanka: damp meadow in the Suhoto Ezero (Dry Lake) locality, 41.38087°N, 23.61267°E, 18.08.2009, coll. V. Vladimirov (SOM 165849).

A first record of this species for this floristic region. Only several individuals were observed.

Caryophyllaceae

96. *Gypsophila trichotoma* Wend.

Bu Northeast Bulgaria: along the railroad tracks at the railway station in the Kardam village, Dobrich district, 43.75365°N, 28.11535°E, 26.08.2009, coll. V. Vladimirov (SOM 165850); railway station in Devnya town, 43.21782°N, 27.59544°E, 27.08.2009, coll. V. Vladimirov & A.S. Petrova (SOM 165851), railway station in Sindel village, Varna district, 43.12063°N, 27.59920°E, coll. V. Vladimirov & A.S. Petrova (SOM 165852).

These are new records for this floristic region. The species belongs to the Pontic floristic element. It is included in the *Red List of Bulgarian vascular plants* as 'Endangered' (Petrova 2009). It is so far known for Bulgaria from the Black Sea Coast (*Northern*), where it grows in saline habitats, more often on clayey soil, and only occasionally on rocks (Cape Kaliakra area). Other localities of the species noted at the Black Sea Coast (*Northern*) are: along the railroad tracks at the Razdelna Shunting Yard station, 43.16748°N, 27.63644°E, 20.07.2009, coll. V. Vladimirov & A.S. Petrova (SOM 165853); railway station in Varna, along the railroad tracks, 43.20098°N, 27.90023°E, 31.08.2009, coll. A.S. Petrova (SOM 165306); along the railroad tracks at the ferry harbour complex, W of Beloslav town, Varna district, 43.18137°N, 27.66762°E, ca. 10 m, 02.10.2009, coll. V. Vladimirov, A.S. Petrova & I. Yankov (SOM 165854). These localities are in urban habitats. The observed populations are stable, in some localities (Varna and Razdelna railway stations, ferry harbour) numerous plants are scattered usually at significant distances, up to 2 km. Age structure is completed with juvenile, young and flowering

individuals. The species prospers on pebble substrate, flowering and fruiting abundantly.

97. *Silene lerchenfeldiana* Baumg.

Bu Mt Belasitsa: open rocky places on the top of the mountain E of Radomir peak, 41°19'N, 23°06'E, 17.08.2009, coll. V. Vladimirov (SOM 165855).

A first record of this species for this floristic region.

Chenopodiaceae

98. *Chenopodium chenopodioides* L. (Fig. 16)

Bu Danubian Plain: E of Belene town, on damp river bank, 43.63926°N, 25.15254°E, with young inflorescences, 01.10.2009, obs. A.S. Petrova & V. Vladimirov.

This species has a wide distribution in the temperate zone. It grows in damp to wet habitats, more often saline but also non-saline lake borders and river banks. In Bulgaria, it was so far known only from lake Shabla at the Black Sea Coast (*Northern*) (Grozeva 2009).



Fig. 16. *Chenopodium chenopodioides* (photo A.S. Petrova).

99. *Halimione pedunculata* (L.) Aellen

Bu Black Sea Coast (*Northern*): halophytic communities at the southern coastline of Devnya Lake, along the road to Razdelna village, W of Beloslav town, Varna district, 43.19012°N,

27.69393°E, 27.08.2009, coll. A.S. Petrova & V. Vladimirov (SOM 165310, 165856).

A rare species (Markova 1984), so far known only from localities at the Black Sea Coast (*Southern*).

Poaceae

100. *Ammophila arenaria* (L.) Link (Fig. 17)

Bu Black Sea Coast (*Northern*): a beach N of the mouth of river Kamchia, 43°01'25.2"N, 27°53'19.0"E, 21.07.2009, viviparous individual, obs. A.S. Petrova & V. Vladimirov.

The species is well known from the Black Sea Coast floristic region but so far no viviparous form has been reported or collected in Bulgaria.



Fig. 17. *Ammophila arenaria* (photo A.S. Petrova).

101. *Elymus pycnanthus* (Godr.) Melderis

Bu Black Sea Coast (*Northern*): at the beach of the Luna Camping Site near Obzor, 42°50'38.1"N, 27°52'58.2"E, 21.07.2009, coll. V. Vladimirov & A.S. Petrova (SOM 165857).

A first report from this floristic subregion. The species is included in the *Red List of Bulgarian vascular plants* as 'Endangered' (Denchev & Assyov 2009).

102. *Vulpia fasciculata* (Forssk.) Samp.

Bu Black Sea Coast (*Northern*): at the beech of the Luna Camping Site near Obzor, 42°50'38.1"N, 27°52'58.2"E, 21.07.2009, coll. V. Vladimirov & A.S. Petrova (SOM 165858).

This is the northernmost locality of this taxon in Bulgaria. It supports the opinion about the natural distribution of the species in Bulgaria (Petrova & al. 2005).

Acknowledgements. Most of the species have been recorded during field work supported financially by the National Science Fund under Project DO-02-194 for study of the alien species in the Bulgarian flora. The authors are grateful to Dr. N. Grozeva for confirming the identification of *Chenopodium chenopodioides*.

References

- Ade, A. & Rechinger, K.H.** 1938. Samothrake. – Repert. Spec. Nov. Regni Veg. Beih., **100**: 106-146.
- Anchev, M.** 1992. *Fagaceae*. – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 441-445. Nauka & Izkustvo, Sofia (in Bulgarian).
- Assyov, B. & Petrova, A.** (eds). 2006. Conspectus of the Bulgarian Vascular Flora. Distribution Maps and Floristic Elements. Ed. 3. BBF, Sofia.
- Behr, O., Behr, E. & Zahn, K.H.** 1937. Beitrag zur Kenntnis der Hieracien der Balkanhalbinsel. – Glas. Skopsk. Naučn. Društva, **18**: 51-67.
- Behr, O., Behr, E. & Zahn, K.H.** 1939. Beiträge zur Kenntnis der Hieracien von Südserbien, Montenegro und Griechenland. – Glas. Skopsk. Naučn. Društva, **20**: 121-129.
- Bern Convention** (Convention on the Conservation of European Wildlife and Natural Habitats). **Appendix I**. 1979.
- Biel, B. & Tan, Kit.** 2006. Reports 13-70. – In: **Vladimirov, V. & al.** (eds), New floristic records in the Balkans: 3. – Phytol. Balcan., **12**(3): 415-419.
- Biological Diversity Act** (Act on Amending and Supplementing). 2007. Decree no. 354 accepted by the 40th National Assembly on 01 November 2007. – Darzhaven Vestnik, No. **94**/16.11.2007, pp. 2-44 (in Bulgarian).
- Chamberlain, D.F.** 1970. *Lupinus* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **3**, pp. 38-40. Edinburgh Univ. Press, Edinburgh.
- Chamberlain, D.F.** 1978. *Anchusa* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **6**, pp. 388-402. Edinburgh Univ. Press, Edinburgh.
- Cheshmedzhiev, I.** 2003. *Oleaceae*. – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Pp. 281-283. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Delforge, P.** 2006. Orchids of Europe, North Africa and the Middle East. A & C Black Publishers Ltd., London.
- Delipavlov, D.** 2003. *Asteraceae* (pp. 376-432); *Caryophyllaceae* (65-88); *Orchidaceae* (457-463); *Plumbaginaceae* (103-105); *Poaceae* (482-520). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Denchev, C.M. & Assyov, B.** 2009. *Elymus pycnanthus* (Godr.) Melderis. – In: **Petrova, A. & Vladimirov, V.** (eds), Red List of Bulgarian vascular plants. – Phytol. Balcan., **15**(1): 76.
- Dimitrova, D., Vladimirov, V. & Apostolova, I.** 2005. *Leontodon saxatilis* (*Asteraceae*) a new species for the Bulgarian flora. – Fl. Medit., **15**: 219-223.
- Directive 92/43/EEC.** 1992. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. – OJ L 206, 22.7.1992. Pp. 7-50.
- Edmondson, J.R.** 1978. *Buglossoides* Moench (pp. 315-317); *Echium* L. (318-324). – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **6**. Edinburgh Univ. Press, Edinburgh.
- Ganchev, I. & Bondev, I.** 1966. *Quercus* L. – In: **Yordanov, D.** (ed.), Fl. Reipubl. Popularis Bulgaricae. Vol. **3**, pp. 105-145. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Grau, J.** 1978. *Myosotis* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **6**, pp. 264-280. Edinburgh Univ. Press, Edinburgh.
- Greuter, W. & Raab-Straube, E. von.** 2009. Euro+Med Notulae, 4. – Willdenowia, **39**: 327-333.
- Grozeva, N.** 2009. Variation and evolutionary tendencies in the genus *Chenopodium* L. in Bulgaria. *PhD Thesis*. Inst. Bot., Bulg. Acad. Sci., Sofia (in Bulgarian, unpubl.).
- 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.
- Hájek, M., Velev, N., Sopotlieva, D., Apostolova, I. & Rozbrojova, Z.** 2007. Records 51-57. – In: **Vladimirov, V. & al.** (eds), New floristic records in the Balkans: 6. – Phytol. Balcan., **13**(3): 440-441.
- Hofmann, U.** 1968. Untersuchungen an Flora und Vegetation der Ionischen Insel Levkas. – Vierteljahrsschr. Naturf. Ges. Zürich, **113**(3): 209-256.
- ILDIS:** <http://www.ildis.org/LegumeWeb>
- Jahn, R. & Schönfelder, P.** 1995. Exkursionsflora für Kreta. Ulmer, Stuttgart.
- Katsikopoulos, I.** 1936. Contribution to the study of the flora of Samothraki island. – Geörgikon Deltion (in Greek).
- Kozhuharov, S.** 1985. Grasses (family *Poaceae*) of Bulgaria – genefund, chorology and evolutionary strategies. *DSc Thesis*. Inst. Bot., Bulg. Acad. Sci., Sofia (in Bulgarian, unpubl.).
- Lindig, C. & Lindig, D.** 1991. *Dactylorhiza kalopissii*: Erstnachweis für Bulgarien. – Die Orchidee, **42**(1): 34-36.
- Markova, M.** 1984. *Halimione pedunculata* (L.) Aellen. – In: **Velchev, V.** (ed.), Red Data Book of the PR Bulgaria. Vol. **1**. Plants, p. 109. Publishing House Bulg. Acad. Sci., Sofia (in Bulgarian).
- Peev, D.** 1992. *Asteraceae*. – In: **Kozhuharov, S.** (ed.), Field Guide to the Vascular Plants in Bulgaria. Pp. 142-227. Nauka & Izkustvo, Sofia (in Bulgarian).

- Peev, D. & Tsoneva, S.** 2009. *Trapa natans* L. – In: **Petrova, A. & Vladimirov, V.** (eds), Red List of Bulgarian vascular plants. – Phytol. Balcan., **15**(1): 80.
- Petrova, A.S.** 2009. *Dactylorhiza kalopissii* E. Nelson (p. 68); *Gypsophila trichotoma* Wend. (77). – In: **Petrova, A. & Vladimirov, V.** (eds), Red List of Bulgarian vascular plants. – Phytol. Balcan., **15**(1).
- Petrova, A., Meshinev, T., Apostolova, I. & Assyov, B.** 2005. *Vulpia fasciculata*: a new species for the Bulgarian flora. – Phytol. Balcan., **11**(2): 133-136.
- Petrova, A.S., Trifonov, G., Venkova, D. & Ivanova, M.** 2009. Reports 51-74. – In: **Vladimirov, V. & al.** (eds), New floristic records in the Balkans: 10. – Phytol. Balcan., **15**(1): 115-139.
- Petrova, A., Vasilev, R., Christov, Ch. & Gerasimova, I.** 2004. New data and notes on the flora of Eastern Rhodopes mountains. – In: **Beron, P. & Popov, A.** (eds), Biodiversity of Bulgaria. 2. Biodiversity of Eastern Rhodopes (Bulgaria and Greece). Pp. 131-138. Natl. Mus. Nat. Hist., Sofia.
- Reeve, H.** 1966. *Dianthus* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **2**, pp. 99-131. Edinburgh Univ. Press, Edinburgh.
- Riedl, H.** 1978. *Heliotropium* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **6**, pp. 248-255. Edinburgh Univ. Press, Edinburgh.
- Rothmaler, W.** 2007. Exkursionsflora von Deutschland. Bd. 3. Gefäßpflanzen: Atlasband. Elsevier GmbH, München.
- Scholz, H.** 1985. *Echinochloa* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **9**, pp. 591-592. Edinburgh Univ. Press, Edinburgh.
- Stojanov, N. & Kitanov, B.** 1944. Beitrage zur Kenntnis der Flora und der Vegetationsverhältnisse der Insel Samothrake. – God. Sofiisk Univ. Fiz.-Mat. Fak., **40**: 403-464.
- Stojanov, N. & Kitanov, B.** 1946. Flora der Insel Thasos. – God. Sofiisk Univ. Fiz.-Mat. Fak., **42**: 89-196.
- Strid, A. & Tan, Kit.** (eds). 1997. Flora Hellenica. Vol. **1**. Koeltz Scientific Books, Königstein.
- Tashev, A.** 2001. New locality of *Ilex aquifolium*. – Gora, **4**: 20-21 (in Bulgarian).
- Terziiski, D.** 2003. *Fabaceae* (pp. 199-237); *Fagaceae* (59-62). – In: **Delipavlov, D. & Cheshmedzhiev, I.** (eds), Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Tihomirov, V.** 1988. *Trapa natans* L. – In: **Golovanov, V.** (ed.), Red Data Book of RSFR. Pp. 431-432. Rosagropromizdat, Moscow (in Russian).
- Tzonev, R.** 2007. *Eclipta prostrata* (Asteraceae): a new alien species for the Bulgarian flora. – Phytol. Balcan., **13**(1): 79-80.
- Tzonev, R., Zieliński, J. & Tan, Kit.** 2003. *Cyperus strigosus* (Cyperaceae), a naturalized species new to Bulgaria. – Polish Bot. J., **48**(1): 47-49.
- Vladimirov, V. & Petrova, A.S.** 2009. Reports 92-102. – In: **Vladimirov, V. & al.** (eds), New floristic records in the Balkans: 12. – Phytol. Balcan., **15**(3): 449-451.
- Yeo, P.F.** 1976. *Aster* L. – In: **Tutin, T.G. & al.** (eds). 1976. Flora Europaea. Vol. **4**, pp. 112-116. Cambridge Univ. Press, Cambridge.
- Zohary, M.** 1970. *Trifolium* L. – In: **Davis, P.H.** (ed.), Flora of Turkey and the East Aegean Islands. Vol. **3**, pp. 384-448. Edinburgh Univ. Press, Edinburgh.
-

