

## New floristic records in the Balkans: 52\*

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\* Reports for Bulgaria have been reviewed and edited by V. Vladimirov, for Greece by Kit Tan, for Republic of North Macedonia by V. Matevski and R. Čušterevska, and for Turkey-in-Europe by M. Aybeke.

**Abstract.** New chorological data are presented for 164 species and subspecies from Bulgaria (1, 2, 76, 127-139, 142, 158-162), Greece (32-62, 77-126, 140-141, 143-157, 163, 164), Republic of North Macedonia (63-75), and Turkey-in-Europe (3-31). The taxa belong to the following families: *Alliaceae* (61, 77-81, 137), *Amaryllidaceae* (2, 82), *Anacardiaceae* (4, 32), *Apiaceae* (5-16, 129, 143, 144), *Araceae* (85), *Arecaceae* (85), *Asclepiadaceae* (33), *Asparagaceae* (138), *Asphodelaceae* (125, 162), *Aspleniaceae* (127), *Asteraceae* (17-26, 44-48, 63, 118, 145, 159-161), *Berberidaceae* (140), *Betulaceae* (163), *Boraginaceae* (64, 65, 146), *Brassicaceae* (49, 147), *Campanulaceae* (66, 67), *Capparaceae* (34), *Caryophyllaceae* (142, 150), *Casuarinaceae* (35), *Chenopodiaceae* (50), *Colchicaceae* (86), *Convallariaceae* (155, 156), *Convolvulaceae* (51), *Cyperaceae* (87-89), *Equisetaceae* (3), *Ericaceae* (52), *Euphorbiaceae* (27, 53, 54), *Fabaceae* (68, 69, 119), *Grossulariaceae* (130), *Hyacinthaceae* (90-93), *Iridaceae* (94-98, 126, 139, 141, 158), *Juncaceae* (99, 100), *Lamiaceae* (55, 56, 120, 131, 151), *Liliaceae* (101), *Lythraceae* (28, 132), *Moraceae* (121), *Oleaceae* (36), *Onagraceae* (37, 70), *Ophioglossaceae* (1), *Orchidaceae* (75, 76), *Orobanchaceae* (29), *Pinaceae* (128), *Plantaginaceae* (152), *Plumbaginaceae* (38), *Poaceae* (30, 31, 43, 102-117, 157), *Portulacaceae* (57), *Primulaceae* (71, 122), *Ranunculaceae* (123, 133, 148), *Rosaceae* (72, 134, 135), *Rutaceae* (153), *Santalaceae* (58, 154), *Scrophulariaceae* s.l. (73, 124), *Simaroubaceae* (39), *Solanaceae* (40-42, 59, 164), *Thymelaeaceae* (60), *Typhaceae* (62), *Ulmaceae* (136), and *Violaceae* (74, 149). A new taxon for a country is: Greece – *Berberis aquifolium* (140).

The publication includes contributions by: A. Asenov (1), A. Asenov & P. Avreyska (2), M. Aybeke (3-31), B. Biel & Kit Tan (32-43), C. Cattaneo & M. Grano (44-62), D. Dimitrov (63-75), I. Gavalas, R. Jahn & Kit Tan (77-117), V. Ioannidis, D. Doulkeridou, K. Marianthi & A. Strid (118-126), T. Karakiev (127-139), D. Mermygkas & M. Dimaki (140, 141), S. Stoyanov & Y. Marinov (142), Kit Tan & G. Kofinas (143-149), Kit Tan & Sister Pachomia (150-157), V. Trifonov (158), V. Vladimirov (159-162), and G. Zarkos & Kit Tan (163, 164).

**Key words:** Balkan Peninsula, Bulgaria, Greece, new plant records, Republic of North Macedonia, South-East Europe, Turkey-in-Europe, vascular plants

**Citation:** Vladimirov, V., Aybeke, M., Matevski, V., Čušterevska, R., Tan, Kit & al. 2023. New floristic records in the Balkans: 52. – *Phytologia Balcanica*, 29(3): 421-460 -- ISSN 1310-7771 (print), 1314-0027 (online).

## Report 1

**Asen Asenov**

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### *Ophioglossaceae*

#### 1. *Botrychium lunaria* (L.) Sw. (Fig. 1)

**Bu** Mt Sredna Gora (*Western*): Mt Lozenska, in a deep wet valley with a stream, among mosses on silicate rock in the shade of a *Pinus nigra* forest plantation, near the trail and the village of Lozen, 798 m, 42°35'35"N, 23°30'03"E, 08.06.2023, coll. A. Asenov (SO 108 228).

New for the Sredna Gora (*Western*) floristic region (cf. Assyov & Petrova 2012).



Fig. 1. *Botrychium lunaria* (photo A. Asenov).

## Report 2

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### *Amaryllidaceae*

#### 2. *Galanthus nivalis* L. (Fig. 2)

**Bu** Rhodopi Mts (*Central*): river Slivov Dol, tributary of river Chepelarska, above Slivodolsko Padalo waterfall, in the area of Chereshovo Padalo waterfall, 22.01.2023, P. Avreyska obs. (photo).

New for the Rhodopi Mts (*Central*) floristic region (cf. Assyov & Petrova 2012).



Fig. 2. *Galanthus nivalis* (photo P. Avreyska).

17.05.1985, coll. G. Dalgıç & N. Başak, det. M. Aybeke (EDTU 98); Keşan, Keşan – Uzunköprü, 23.05.1987, coll. N. Başak & G. Dalgıç, det. M. Aybeke (EDTU 864); Merkez, Söğütlük forest, riverside, 10.08.1989, coll. F. Dane, det. M. Aybeke (EDTU 3831).

New for A1(E) Edirne in European Turkey. According to Cullen (1965), this taxon was reported for A2(E) Istanbul.

## Reports 3–31

**Mehmet Aybeke**

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This is a report of 29 new records of species belonging to different families from European Turkey.

### *Equisetaceae*

#### 3. *Equisetum arvense* L.

**Tu(E)** A1(E) Edirne: Merkez, Söğütlük location,

### *Anacardiaceae*

4. *Pistacia terebinthus* L. subsp. *palaestina* (Boiss.) Engler

**Tu(E)** A1(E) Edirne: Enez, Vakif, 22.07.1995, coll. G. Dalgıç, det. *M. Aybeke* (EDTU 6022).

New for A1(E) Edirne in European Turkey. According to Yaltırık (1967), this taxon was reported for A1(E) Çanakkale and Tekirdağ, and A2(E) Istanbul.

## Apiaceae

### 5. *Anthriscus caucalis* M. Bieb.

**Tu(E)** A1(E) Çanakkale: Gelibolu, between Gelibolu and Bolayır on the 3<sup>rd</sup> km, 10.05.1987, coll. *F. Dane*, det. *M. Aybeke* (EDTU 672).

New for A1(E) Çanakkale in European Turkey. According to Hedge & Lamond (1972), this taxon was reported for A1(E) Edirne, Tekirdağ and Kırklareli, and A2(E) Istanbul.

### 6. *Bupleurum odontites* L.

**Tu(E)** A1(E) Edirne: Keşan, Mercan Pond location, 11.06.1987, coll. *F. Dane* & *H. Arda*, det. *M. Aybeke* (EDTU 1290); Enez, Karaincirlik village, sunflower fields, 21.06.1994, coll. *M. Kireç*, det. *M. Aybeke* (EDTU 7194).

— A1(E) Kırklareli: Babaeski, between Babaeski and Edirne on the 10<sup>th</sup> km, cemetery, 22.06.1987, coll. *A. Asan*, *F. Dane* & *H. Arda*, det. *M. Aybeke* (EDTU 1565); Babaeski, between Pancarlı and Nadırlı, 3<sup>rd</sup> km, 06.07.1987, coll. *A. Asan* & *H. Arda*, det. *M. Aybeke* (EDTU 1664).

New for A1(E) Edirne and Kırklareli in European Turkey. According to Snogerup (1972) this taxon was reported for A1(E) Tekirdağ and A2(E) Istanbul.

### 7. *Bupleurum flavum* Forssk.

**Tu(E)** A1(E) Çanakkale: Gelibolu, Korudağı recreational facilities, 07.07.1987, coll. *H. Arda* & *F. Dane*, det. *M. Aybeke* (EDTU 1724).

New for A1(E) Çanakkale in European Turkey. According to Snogerup (1972), this taxon was reported for A1(E) Edirne and Tekirdağ.

### 8. *Chaerophyllum temulum* L.

**Tu(E)** A1(E) Edirne: Merkez, between Karakasım and Tayakadın arası, rice fields, 07.06.1989, coll. *F. Dane* & *N. Polat*, det. *M. Aybeke* (EDTU 3282).

New for A1(E) Edirne in European Turkey. According to Hedge & Lamond (1972), this taxon was reported for only for A1(E) Kırklareli.

### 9. *Daucus guttatus* Sm.

**Tu(E)** A1(E) Edirne: Merkez, Musabeyli village, pasture, 28.04.1989, coll. *F. Dane* & *N. Aktaş*, det. *M. Aybeke* (EDTU 3535).

New for A1(E) Edirne in European Turkey. According to Cullen (1972), this taxon was reported for A1(E) Kırklareli and A2(E) Istanbul.

### 10. *Eryngium creticum* Lam.

**Tu(E)** A1(E) Edirne: Lalapaşa – Taşlımüsellim road, 06.07.1987, coll. *H. Arda* & *A. Asan*, det. *M. Aybeke* (EDTU 1595).

New for A1(E) Edirne in European Turkey. According to Davis (1972), this taxon was reported for A1(E) Tekirdağ and A2(E) Istanbul.

### 11. *Scandix pecten-veneris* L.

**Tu(E)** A1(E) Edirne: Uzunköprü, Uzunköprü – Havsa entrance, 25.04.1989, coll. *F. Dane*, *N. Polat* & *N. Kaptanoğlu*, det. *M. Aybeke* (EDTU 3676); Centre, Ortakçı village, pasture, 10.04.1990, coll. *F. Dane* & *N. Polat*, det. *M. Aybeke* (EDTU 4493); Süloğlu, 20.05.1989, coll. *G. Dalgıç*, det. *M. Aybeke*, 19.03.2010 (EDTU 4755); Enez, Yenice village, Kepirler locality, wheat field, 21.06.1994, coll. *M. Kireç*, det. *M. Aybeke* (EDTU 5901).

New for A1(E) Edirne in European Turkey. According to Hedge & Lamond (1972), this taxon was reported for A1(E) Çanakkale and A2(E) Istanbul.

### 12. *Tordylium apulum* L.

**Tu(E)** A1(E) Tekirdağ: Şarköy, on the beach, 18.05.1989, coll. *F. Dane*, det. *M. Aybeke* (EDTU 4144).

New for A1(E) Tekirdağ in European Turkey. According to Alava (1972), this taxon was reported for A1(E) Çanakkale and A2(E) Istanbul.

### 13. *Tordylium maximum* L.

**Tu(E)** A1(E) Edirne: Merkez, Tunca surroundings, 21.08.1989, coll. *F. Dane*, det. *M. Aybeke* (EDTU 4106).



New for A1(E) Edirne in European Turkey. According to Alava (1972), this taxon was reported for A2(E) Istanbul.

**14. *Torilis arvensis*** (Huds.) Link. subsp. *neglecta* (Spreng.) Thell.

**Tu(E)** A1(E) Tekirdağ: Şarköy, 02.08.1987, coll. F. Dane, det. M. Aybeke (EDTU 1814); Şarköy, 16.08.1989, coll. F. Dane, det. M. Aybeke (EDTU 4071, 4086).

New for Tekirdağ in European Turkey. According to Cullen (1972), this taxon was shown in A1E Kırklareli.

**15. *Torilis japonica*** (Houtt.) DC.

**Tu(E)** A1(E) Edirne: Centre, Faculty campus area, 09.06.1989, coll. F. Dane, det. M. Aybeke (EDTU 3375).

New for A1(E) Edirne in European Turkey. According to Cullen (1972), this taxon was reported for A2(E) Istanbul.

**16. *Turgenia latifolia*** (L.) Hoffm.

**Tu(E)** A1(E) Tekirdağ: Tekirdağ, 07.05.1989, coll. G. Dalgıç, det. M. Aybeke (EDTU 3871).

New for A1(E) Tekirdağ in European Turkey. According to Cullen (1972), this taxon was reported for A1(E) Kırklareli and A2(E) Istanbul.

## Asteraceae

**17. *Anthemis arvensis*** L.

**Tu(E)** A1(E) Edirne: Centre, Faculty of Medicine Campus, 23.05.1985, coll. G. Olgun & A. Asan, det. M. Aybeke (EDTU 128); Süleoğlu, 25.05.1987, coll. G. Olgun, F. Dane & N. Başak, det. M. Aybeke (EDTU 730); Keşan, Mecidiye, 17.05.1988, coll. F. Dane, det. M. Aybeke (EDTU 2800); Enez, Yeniceköy, Kepirler Mevkii, wheat field, 03.05.1994, coll. M. Kireç, det. M. Aybeke (EDTU 6804).

New for A1(E) Edirne in European Turkey. According to Grierson & Yavin (1975), this taxon was reported for A1(E) Çanakkale, Kırklareli and A2(E) Istanbul.

**18. *Anthemis chia*** L.

**Tu(E)** A1(E) Edirne: Centre, 15.04.1989, coll. F. Dane, det. M. Aybeke (EDTU 2993).

New for A1(E) Edirne in European Turkey. According to Grierson & Yavin (1975), this taxon was reported for A2(E) Istanbul.

**19. *Anthemis tinctoria*** (L.) J. Gay ex Guss. var. *tinctoria*

**Tu(E)** A1(E) Edirne: Centre, Balkanköyü – Büyükişmailce, 04.06.1985, coll. G. Olgun & N. Başak, det. M. Aybeke (EDTU 151); Enez, Gala Lake, 19.06.1986, coll. N. Başak & G. Dalgıç, det. M. Aybeke (EDTU 490); Centre, 4<sup>th</sup> km between Sığircalı and Meşeli, 09.06.1987, coll. F. Dane & A. Asan, det. M. Aybeke (EDTU 964); Centre, between Saçlımüsellim – Sığircalı, 09.06.1987, coll. F. Dane, G. Dalgıç & N. Başak, det. M. Aybeke (EDTU 1120); Centre, between Orhaniye – Elçili, 1<sup>st</sup> km, under forest 09.06.1987, coll. F. Dane, G. Dalgıç & N. Başak, det. M. Aybeke (EDTU 1148); Centre, between Sığircalı – Meşeli, 4<sup>th</sup> km, 09.06.1987, coll. N. Başak, G. Dalgıç & F. Dane, det. M. Aybeke (EDTU 1255); Uzunköprü, Değirmenci Dam, 11.06.1987, coll. F. Dane, N. Başak, G. Dalgıç & H. Arda, det. M. Aybeke (EDTU 1270); Lalapaşa, Taşlımüsellim road, 06.07.1987, coll. H. Arda & A. Asan, det. M. Aybeke (EDTU 1593, 1603); Uzunköprü, Değirmenci Dam, 08.07.1988, coll. F. Dane, G. Dalgıç, N. Polat & H. Arda, det. M. Aybeke (EDTU 2314); Keşan, Mecidiye road turnoff, 08.07.1988, coll. F. Dane, G. Dalgıç, N. Polat & H. Arda, det. M. Aybeke (EDTU 2351); Centre, opposite Kapıkule Mensucat Santral Picnic area, 13.07.1988, coll. F. Dane, H. Arda & N. Kaptanoğlu, det. M. Aybeke (EDTU 2389); Centre, Campus, Around the Faculty of Medicine, roadside, 16.06.2007, coll. F. Dane, det. M. Aybeke (EDTU 11761).

— A1(E) Kırklareli: Demirköy, between İslambeyli and Demirköy, 16.06.1987, coll. G. Olgun & A. Aydın, det. M. Aybeke (EDTU 1367); Demirköy, 02.07.1988, coll. C. Yarcı, det. M. Aybeke (EDTU 2257); Pınarhisar, 20.05.1995, coll. G. Dalgıç, det. M. Aybeke (EDTU 3283).

— A1(E) Çanakkale: Eceabat, between Eceabat and Gelibolu, 10<sup>th</sup> km, 07.07.1987, coll. G. Dalgıç, N. Başak & G. Olgun, det. M. Aybeke (EDTU 1729).

New for A1(E) Edirne, Kırklareli and Çanakkale in European Turkey. According to Grierson & Yavin

(1975), this taxon was reported for A1(E) Tekirdağ and A2(E) Istanbul.

#### 20. *Bellis perennis* L.

**Tu(E)** A1(E) Tekirdağ: Kumbağ, 23.04.1992, coll. G. Dalgıç, det. M. Aybeke (EDTU 4782); Merkez, near Işıklar village, forest clearing, 19.05.1999, coll. N. Güler & N. Başak, det. M. Aybeke, 20.03.2010 (EDTU 7926).

New for A1(E) Tekirdağ in European Turkey. According to Grierson (1975), this taxon was reported for A1(E) Kırklareli and A2(E) Istanbul.

#### 21. *Calendula arvensis* L.

**Tu(E)** A1(E) Edirne: Centre, near the Faculty campus, 25.04.1989, coll. F. Dane, det. M. Aybeke (EDTU 3401).

New for A1(E) Edirne in European Turkey. According to Meikle (1975), this taxon was reported for A1(E) Çanakkale.

#### 22. *Conyza canadensis* (L.) Cronq.

**Tu(E)** A1(E) Tekirdağ: Şarköy, roadside, 28.07.2013, coll. F. Dane, det. M. Aybeke (EDTU 13454-13455).

New for A1(E) Tekirdağ in European Turkey. According to Grierson (1975), this taxon was reported for A1(E) Edirne and A2(E) Istanbul.

#### 23. *Centaurea cyanus* L.

**Tu(E)** A1(E) Kırklareli: Demirköy, İğneada, Saka lake, 12.06.1991, coll. G. Dalgıç & C. Yarcı, det. M. Aybeke (EDTU 5153).

New for A1(E) Kırklareli in European Turkey. According to Wagenitz (1975), this taxon was reported for A1(E) Edirne, Tekirdağ and A2(E) Istanbul.

#### 24. *Helminthotheca echioides* (L.) Holub

**Tu(E)** A1(E) Tekirdağ: Şarköy, 27.07.1987, coll. F. Dane, det. M. Aybeke (EDTU 1805); Şarköy, 16.08.1989, coll. F. Dane, det. M. Aybeke (EDTU 4068).

New for A1(E) Tekirdağ in European Turkey. According to Lack (1975), this taxon was reported for A1(E) Çanakkale and A2(E) Istanbul.

#### 25. *Otanthus maritimus* (L.) Hoffm. & Link.

**Tu(E)** A1(E) Edirne: Keşan, Mecidiye coastal road, 13.10.2009, coll. G. Dalgıç, det. M. Aybeke (EDTU 11802-11803).

New for A1(E) Edirne in European Turkey. According to Grierson (1975), this taxon was reported for A1(E) Kırklareli.

#### 26. *Xanthium strumarium* L. subsp. *strumarium*

**Tu(E)** A1(E) Edirne: Merkez, Balkan Yerleşkesi, 26.09.2011, coll. Ö. Demirkıran & P. Alparslan, det. M. Aybeke (EDTU 894).

New for A1(E) Edirne in European Turkey. According to Kupicha (1975), this taxon was reported for A2(E) Istanbul.

### **Euphorbiaceae**

#### 27. *Chrozophora tinctoria* (L.) Rafin.

**Tu(E)** A1(E) Edirne: Centre, campus surroundings, 13.07.1989, coll. F. Dane, det. M. Aybeke (EDTU 3779).

New for A1(E) Edirne in European Turkey. According to Radcliffe-Smith (1982), this taxon was reported for A1(E) Tekirdağ and A2(E) Istanbul.

### **Lythraceae**

#### 28. *Ammannia auriculata* Willd. var. *arenaria* (Kunth) Koehne

**Tu(E)** A1(E) Edirne: Centre, Thrace Agricultural Research Institute, paddy lands, 18.08.2005, coll. M. Aybeke & H. Sürek, det. M. Aybeke (EDTU 9474).

New for European Turkey. According to Chamberlain (1972), this taxon was reported for A9 Çoruh.

### **Orobanchaceae**

#### 29. *Orobanche cernua* Loefl.

**Tu(E)** A1(E) Edirne: Centre, Thrace Agricultural Research Institute Lands sunflower fields, 20.07.2009, coll. G. Evci & M. Aybeke, det. M. Aybeke (EDTU 9652).

New for A1(E) Edirne in European Turkey. According to Gilli (1982), this taxon was reported for A1(E) Tekirdağ and A2(E) Istanbul.

**Poaceae****30. *Eragrostis pilosa* (L.) P. Beauv.**

**Tu(E)** A1(E) Edirne: Centre, Thrace Agricultural Research Institute, paddy fields, 26.08.2007, coll. H. Sürek, det. M. Aybeke (EDTU 9622).

New for A1(E) Edirne in European Turkey. According to Tan (1985), this taxon was shown in A1(E) Kırklareli and A2(E) Istanbul.

**31. *Echinochloa oryzoides* (Ard.) Fritsch**

**Tu(E)** A1(E) Edirne: İpsala, Kumdere location, paddy field, 06.08.2009, coll. H. Sürek & M. Aybeke, det. M. Aybeke (EDTU 10314); İpsala, Koyuntepe village, Bağlık locality, paddy field, 06.08.2009, coll. H. Sürek, det. M. Aybeke (EDTU 10315).

New for A1(E) Edirne in European Turkey. According to Scholz (1970), this taxon was reported for A2(E) Istanbul.

**Reports 32–43****Burkhard Biel & Kit Tan\***

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This is the eleventh report of new plant-records for the island of Milos (phytogeographical region Kiklades, Nomos Kikladon, Eparchia Milou) based on annual visits in 2019–2023. The 12 records listed are new for the island unless otherwise stated. Six of the species were found to be new for the floristic region Kiklades (Kik) as circumscribed in *Flora Hellenica* (Strid & Tan 1997), and the total number of new records we have so far found for this floristic region are now 107. Occurrence on the other Kikladean islands is briefly summarized.

**Anacardiaceae****32. *Rhus coriaria* L.**

**Gr** Nomos Kikladon, Eparchia Milou: SE of Pera Triovasalos, rocky phrygana slope above main road to Adamas, 80 m, 36°44'10"N, 24°26'29"E, 31.10.2023, *Biel* obs. (photo).

New for the Kiklades.



**Fig. 3.** *Capparis spinosa* var. *canescens* (photo B. Biel).

**Asclepiadaceae****33. *Periploca graeca* L.**

**Gr** Nomos Kikladon, Eparchia Milou: Plaka centre, road margin and park at Archaeological Museum, 165 m, 36°44'37.76"N, 24°25'26.29"E, 31.10.2023, *Biel* obs. (photo).

Reported from Naxos and Tinos. In Greece, mainly reported from the northeast.

**Capparaceae****34. *Capparis spinosa* var. *canescens* Cosson (Fig. 3)**

**Gr** Nomos Kikladon, Eparchia Milou: Adamas, road margins in village, 20 m, 36°43'33"N, 24°26'42"E, 24.05.2023, *Biel* obs. (photo).

New for the Kiklades. We assign it as a variety of *C. spinosa* following POWO (accessed 2023) based mainly on its more slender habit and dense white indumentum.

**Casuarinaceae****35. *Casuarina equisetifolia* L. (Fig. 4)**

**Gr** Nomos Kikladon, Eparchia Milou: N of Zefiria, edge of field at road junction, near well, 15 m, 36°42'46"N, 24°29'27"E, 31.01.2022, *Biel* 22.002.

Planted, native to coastal areas in India, South East Asia, Australia and W Pacific. Also noted N of Adamas.





Fig. 4. *Casuarina equisetifolia* (photo B. Biel).

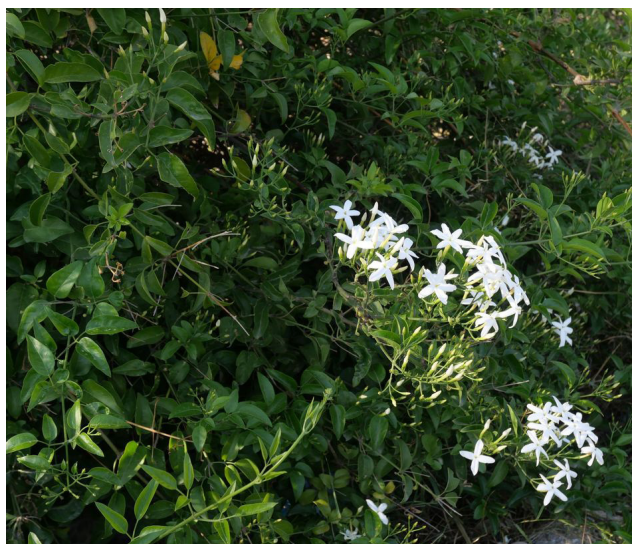


Fig. 5. *Jasminum officinale* (photo B. Biel).

### Oleaceae

#### 36. *Jasminum officinale* L. (Fig. 5)

**Gr** Nomos Kikladon, Eparchia Milou: SE of Pera Triovasalos, road margins at olive plantation, 80 m, 36°44'16"N, 24°26'35"E, 18.05.2023, *Biel* obs. (photo).

New for the Kiklades, established escape from cultivation. Native from Transcaucasia to south central China.

### Onagraceae

37. *Oenothera lindheimeri* (Engelm. & A. Gray) W.L. Wagner & Hoch

**Gr** Nomos Kikladon, Eparchia Milou: Adamas, eastern part of village, at parking area, 5 m, 36°43'34"N, 24°26'52"E, 28.10.2019, *Biel* obs. (photo).

New for the Kiklades, now spreading and established in several parts of Greece. Native to southern U.S.A. (Texas and Louisiana).

### Plumbaginaceae

#### 38. *Plumbago auriculata* Lam.

**Gr** Nomos Kikladon, Eparchia Milou: Plaka centre, ruderal places at parking area, 150 m, 36°44'36"N, 24°25'26"E, 31.10.2023, *Biel* obs. (photo).

Reported from Amorgos. Native to SE Africa.

### Simaroubaceae

#### 39. *Ailanthus altissima* (Mill.) Swingle

**Gr** Nomos Kikladon, Eparchia Milou: Adamas, waste ground in village, 30 m, 36°43'32"N, 24°26'42"E, 24.05.2023, *Biel* obs. (photo).

Introduced, recorded from the larger islands of the Kiklades, e.g., Naxos and Andros. Native to China.

### Solanaceae

#### 40. *Datura ferox* L.

**Gr** Nomos Kikladon, Eparchia Milou: Triovasalos, SE edge of village, cereal field in a broad valley, 110 m, 36°44'36.59"N, 24°26'07.04"E, 31.10.2023, *Biel* obs. (photo).

New for the Kiklades. Native to southern U.S.A. and Mexico.

#### 41. *Datura innoxia* Mill.

**Gr** Nomos Kikladon, Eparchia Milou: W of Adamas, parking area behind sandy beach, 2 m, 36°43'30"N, 24°26'31"E, 04.11.2023, *Biel* 23.291; SW of Embourios, phrygana by road and field margins near chapel Isodia Theotokou, 150 m, 36°41'48"N, 24°22'14"E, 06.11.2023, *Biel* obs. (photo).

Often confused with *D. wrightii*, see following. The stem indumentum comprises erect, glandular hairs, whereas in *D. wrightii*, the hairs are short, curved and eglandular. Native to southern U.S.A. and Mexico.





Fig. 6. *Sorghum drummondii* (photo B. Biel).

#### 42. *Datura wrightii* Regel

**Gr** Nomos Kikladon, Eparchia Milou: Adamas, waste ground in village, 30 m, 36°43'32"N, 24°26'42"E, 26.10.2023, *Biel* 23.262; S of Plaka, rocky slope with abandoned gardens, at cobblestone steps, 140 m, 36°44'26"N, 24°25'19"E, 24.10.2019, *Biel* obs. (photo); NE part of Adamas, wasteground, 10 m, 36°43'38"N, 24°27'07"E, 13.06.2021, *Biel* obs. (photo).

New for the Kiklades, reported with certainty from Limnos (N Aegean islands) and the Mani Peninsula (Peloponnese). Several more localities were noted on Milos, mostly in the northern part of the island. Native to SW and south central U.S.A to Mexico.

#### Poaceae

43. *Sorghum drummondii* (Steud.) Millsp. & Chase (Fig. 6)

**Gr** Nomos Kikladon, Eparchia Milou: Triovasalos, SE part of village, cereal field in a broad valley, 110 m, 36°44'36"N, 24°26'07"E, 31.10.2023, *Biel* 23.284.

Reported from Naxos (Kiklades) and Rodos (E Aegean islands). Introduced from tropical Africa.

Cited vouchers are provisionally kept in the private herbarium of B. Biel at H6chberg (herb. Biel).

## Reports 44–62

### Cristina Cattaneo\* & Mauro Grano

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Several new records from the Dodecanese islands of Kalimnos, Pserimos and Telendos are presented below.

#### Asteraceae

44. *Carthamus dentatus* subsp. *ruber* (Link) Hanelt (Fig. 7)

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, fallow field near the port, 14 m, 36°59'53"N, 26°55'10"E, 06.08.2023, *Cattaneo & Grano* obs. (photo); island of Pserimos, fallow field, 17 m, 36°56'16"N, 27°08'05"E, 04.08.2023, *Cattaneo & Grano* obs. (photo).

New for both islands.

45. *Centaurea cariensis* subsp. *maculiceps* (O. Schwarz) Wagenitz (Fig. 8)

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: Kalimnos, Mt Profitis Ilias, 600 m, 36°58'47"N, 26°58'17"E, 07.08.2023 *Cattaneo & Grano* 2420 (herb. Cattaneo); Mt Psili Rhiza, 470 m, 36°59'02"N, 26°57'40"E, 09.08.2023, *Cattaneo & Grano* 2422 (herb. Cattaneo).

In phrygana together with *Noaea mucronata*, *Thymbra capitata*, *Genista acanthoclada* and *Ballota acetabulosa*, 450–690 m. Reported from Samos, Rodos and W Anatolia.

46. *Cichorium spinosum* L.

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Pserimos, Vathy beach, 3 m, 36°56'09"N, 27°09'01"E, 04.08.2023, *Cattaneo & Grano* obs. (photo).



Fig. 7. *Carthamus dentatus* subsp. *ruber*, Telendos Island (photo C. Cattaneo).

New for Pserimos, occurring on almost all Aegean islands.

**47. *Erigeron sumatrensis* Retz.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: Kalimnos, Masouri and Mirties, at roadsides, 74 m, 36°59'47"N, 26°56'14"E, 10.08.2023, Cattaneo & Grano obs. (photo).

New for island and eparchia.

**48. *Onopordum illyricum* L.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, ruderal places near village, 14 m, 36°59'51"N, 26°55'09"E, 06.08.2023, Cattaneo & Grano obs. (photo).

New for Telendos; from eparchia Kalimnou, reported from Leros and Kalimnos.

***Brassicaceae***

**49. *Aurinia saxatilis* (L.) Desv.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: Kalimnos, Aghios Fotis, crevices of limestone cliffs together with *Ptilostemon chamaepeuce* and *Capparis spinosa*, 114 m, 36°57'25"N, 26°55'18"E, 15.08.2023, Cattaneo & Grano obs. (photo).

Probably belonging to *A. s.* subsp. *megalocarpa* (Hauskn.) T.R. Dudley which occurs in southeastern Greece and W Anatolia.

***Chenopodiaceae***

**50. *Salsola squarrosa* Steven ex Moq.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, coastal area, 0 m, 36°59'54"N,





Fig. 8. *Centaurea cariensis* subsp. *maculiceps*, Kalimnos Island (photo C. Cattaneo).

26°55'19"E, 06.08.2023, Cattaneo & Grano 2401 (herb. Cattaneo).

New for Telendos.

### **Convolvulaceae**

#### **51. *Cressa cretica* L. (Fig. 9)**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: Kalimnos, Sykati Bay, pre-dunal belt of beach on damp and saline soil together with *Mentha pulegium*, 37°00'10"N, 27°00'30"E, 11.08.2023, Cattaneo & Grano 2392 (herb. Cattaneo).

Scattered in the Aegean area; from same eparchia, reported from the islands of Astipalea and Lipsi.

### **Ericaceae**

#### **52. *Erica manipuliflora* Salisb.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, coastal area, phrygana, 18 m, 37°00'41"N, 26°55'04"E, 03.08.2023, Cattaneo & Grano obs. (photo).

New for Telendos. Widespread in the E Aegean islands.

### **Euphorbiaceae**

#### **53. *Euphorbia chamaesyce* L.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Pserimos, along a dirt path, 57 m, 36°56'39"N, 27°08'03"E, 04.08.2023, Cattaneo & Grano 2426 (herb. Cattaneo).

New for Pserimos; from eparchia Kalimnou, reported also from Kalimnos.

#### **54. *Euphorbia prostrata* Aiton**





Fig. 9. *Cressa cretica*, Kalimnos Island (photo C. Cattaneo).



Fig. 10. *Datura stramonium*, Pserimos Island (photo C. Cattaneo).

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: Kalimnos, Pothia, road margins, 119 m, 36°56'33"N, 26°58'58"E, 08.08.2023, *Cattaneo & Grano* 2424 (herb. Cattaneo).

New for eparchia.

### **Lamiaceae**

#### **55. *Phlomis lycia* D. Don**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, phrygana, 59 m, 37°00'01"N, 26°55'02"E, 06.08.2023, *Cattaneo & Grano* obs. (photo).

New for Telendos; restricted to a few SE Aegean islands and SW Anatolia.

#### **56. *Teucrium polium* subsp. *capitatum* (L.) Arcang.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, phrygana, 296 m, 37°00'40"N, 26°54'34"E, 06.08.2023, *Cattaneo & Grano* obs. (photo).

New for Telendos.

### **Portulacaceae**

#### **57. *Portulaca oleracea* aggr.**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Pserimos, near beach, on sandy soil, 3 m, 36°55'57"N, 27°08'03"E, 04.08.2023, *Cattaneo & Grano* obs. (photo).

New for Pserimos; from same eparchia, reported from Astipalea and Kalimnos.

### **Santalaceae**

#### **58. *Thesium humile* Vahl**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, rocks with phrygana, 13 m, 37°00'21"N, 26°55'24"E, 03.08.2023, *Cattaneo & Grano* 2403 (herb. Cattaneo).

New for Telendos.

### **Solanaceae**

#### **59. *Datura stramonium* L. (Fig. 10)**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Pserimos, near beach, on sandy soil, 3 m, 36°55'57"N, 27°08'03"E, 04.08.2023, *Cattaneo & Grano* obs. (photo).

New for Pserimos; from same eparchia, reported from Astipalea and Kalimnos.

### **Thymelaeaceae**

#### **60. *Thymelaea tartonraira* subsp. *argentea* (Sm.) Holmboe**

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, phrygana, 74 m, 37°00'05"N, 26°54'58"E, 03.08.2023, *Cattaneo & Grano* obs. (photo).

New for Telendos, reported from several other islands in the E Aegean.



**Alliaceae**

**61. *Allium sphaerocephalon*** subsp. *trachypus* (Boiss. & Spruner) K. Richt.

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: island of Telendos, crevices of limestone cliffs, 250 m, 37°00'23"N, 26°54'21"E, 03.08.2023, *Cattaneo & Grano* 2415 (herb. Cattaneo).

New for Telendos, from nomos Dodekanisou, reported only from Nisiros (eparchia Ko).

**Typhaceae**

**62. *Typha domingensis*** Pers.

**Gr** Nomos Dodekanisou, Eparchia Kalimnou: Kalimnos, Kamari, along Roukouni stream, 64 m, 36°59'13"N, 26°56'08"E, 09.08.2023, *Cattaneo & Grano* obs. (photo).

New for Kalimnos; from eparchia Kalimnou, reported also from Astipalea.

**Reports 63–75****Dimitar S. Dimitrov**

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**Asteraceae**

**63. *Cirsium tymphaeum*** Hausskn.

**Mk** Mt Yablanitsa: on the slope of peak Strizhak, 1800 m, 23.08.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 177 060).

A new locality. According to Werner (1976), that endemic species is distributed in N and C Greece and S Albania. It is mentioned for the Macedonian part of Mt Shar (Bornmüller 1928) and Mt Pelister. That species was reported by Stevanović & al. (1993) for the Serbian flora.

**Boraginaceae**

**64. *Alkanna graeca*** Boiss. & Spruner

**Mk** Mt Yablanitsa: above Radolishta village, Struga Municipality, 1300 m, 04.05.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 172487).

A new locality (*cf.* Matevski 2010).

**65. *Cynoglottis barrelieri*** (All.) Vural & Kit Tan

**Mk** Demir Kapija: in the bushes in Krastavets locality, 800 m, 16.04.1947, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 166 733).

A new locality (*cf.* Matevski 2010).

**Campanulaceae**

**66. *Campanula cervicaria*** L.

**Mk** Mt Deshat: in a beech forest above lake Gorno, 1600 m, 07.08.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 177111).

A new locality.

**67. *Campanula scheuchzeri*** Vill.

**Mk** Mt Deshat: in stony places on the eastern slope of peak Velivar, 2300 m, 07.08.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 171 820, Fig. 11).

A new locality.

**Fabaceae**

**68. *Astragalus depressus*** L. var. *depressus*

**Mk** Mt Yablanitsa: in stony places above lake Labunishko, 14.08.1947, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 177 070).

A new locality (*cf.* Micevski 2001).

**69. *Chamaecytisus heuffelii*** (Griseb. & Schenk) Rothm.

**Mk** Mt Yablanitsa: peak Pupolyak, on limestone rocks, 1798 m, 17.07.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 177 092).

A new locality (*cf.* Micevski 2001).

**Onagraceae**

**70. *Epilobium tetragonum*** L.

**Mk** Mt Yablanitsa: in damp places near river Belishka, 1600 m, 27.07.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 171 829).

A new locality (*cf.* Micevski 2001).

**Primulaceae**

**71. *Androsace hedraeantha*** Griseb.



Fig. 11. *Campanula scheuchzeri*, herbarium specimen SOM 171820.

**Mk** Mt Petrino: in grassy places on a ridge, 01.05.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SO 100137).

A new locality (*cf.* Micevski 1998).

### Rosaceae

#### 72. *Potentilla speciosa* Willd. var. *speciosa*

**Mk** Mt Yablanitsa: peak Pupolyak, on limestone rocks, 1840 m, 17.07.1948, coll. *B. Kitanov*, det. *D. Dimitrov*.

A new locality (*cf.* Micevski 1998).

### Scrophulariaceae

#### 73. *Linaria simplex* (Willd.) DC.

**Mk** Mt Yablanitsa: on limestone rocks westwards of Labunishte village, Struga Municipality, 800 m, 14.07.1948, coll. & det. *B. Kitanov*.

A new locality.

### Violaceae

#### 74. *Viola alba* subsp. *thessala* (Boiss. & Sprun.) Hayek

**Mk** Mt Yablanitsa: on the slope of peak Strizhak, 1899 m, 15.08.1947, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 171797).

A new locality (*cf.* Micevski 1995).

### Orchidaceae

#### 75. *Gymnadenia frivaldii* (Griseb.) P. E. Hunt.

**Mk** Mt Deshat: in damp places eastwards of Velivar, 1700 m, 07.08.1948, coll. *B. Kitanov*, det. *D. Dimitrov* (SOM 172 527).

A new locality.

## Report 76

### Plamen Dimitrov\* & Galina Veleva

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### Orchidaceae

#### 76. *Cypripedium calceolus* L.

**Bu** Rhodopi Mts (*Central*): Mursalitsa Ridge,

on a steep slope facing south/southwest, KG81, 10.06.2023, with flowers, *P. Dimitrov* & *G. Veleva* obs. (Fig. 12).

Four individuals were localized, two of them with single stems, one with eight and one with 17 flowering stems. The habitat was at the edges of a mixed, predominantly Norway Spruce (*Picea abies*) forest, with beech (*Fagus sylvatica*) and fir (*Abies alba*). The individuals were close to each other, in a slightly flattened and partially open position, among shrubs (*Lonicera* sp., *Viburnum lantana*, *Rosa* sp.). The accompanying species in the ground layer were the grasses *Lusula* sp., *Euphorbia amygdaloides*, *Veronica chamaedrys*, etc. Other orchid species observed in the area were *Orchis militaris* and *Epipactis helleborine*. The authors' searches in a relatively wide perimeter, as far as the steep terrain permitted, were fruitless. No more specimens were found.

Presently, that is the second locality of the species in the Central Rhodopi floristic subregion (Petrova & al. 2023), after the best known one in the Dobrostan Range. It lies much closer to the locality in Mt Devinska in the Western Rhodopi floristic subregion (Perry & Perry 2014; Popatanasov 2015).

That relict species has a high conservation status. According to a recent evaluation for Europe, it rates as Near Threatened (Bilz & al. 2011). It is included in Annexes IIB & IVb of the Directive 92/43/EEC; Annex I of the Berne Convention; Annex II of CITES. In Bulgaria, it is rated as Critically Endangered (Petrova 2009; Petrova 2015). The plant and its habitats are protected by the national Biodiversity Act (Annexes 2 & 3). The new locality reported here is located in the Natura 2000 area (SCI) BG0001030 Rodopi – Zapadni.

**Note:** The exact coordinates are not indicated for reasons of protection of the plants and habitat from damages and trampling. Petrova & al. (2023) have mentioned trampling by nature lovers and photographers in the immediate vicinity of the individuals as a reason for the loss of two young individuals in the population in Mt Devinska. The authors' observations (25.05.2018) confirm massive careless trampling close to the flowering individuals of the same population.





Fig. 12. *Cypripedium calceolus*, 10.06.2023 (photo: a. P. Dimitrov; b. G. Veleva).



**Acknowledgements.** The authors are grateful to Dr. Antoaneta Petrova (Botanical Garden, Bulgarian Academy of Sciences, Sofia) for the help with the bibliography and for the friendly and generous attitude. They also extend their thanks to Michaela Yordanova for her love for the *Orchidaceae* family shared with us.

## Reports 77–117

**Ioannis Gavalas, Ralf Jahn & Kit Tan\***

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A continuation of new floristic records for the island of Iraklia (Nomos Kikladon, Eparchia Thiras); the first part (Pteridophytes to *Fabaceae*) was presented in Gavalas & al. (2022), the second part (*Orchidaceae*) and third part (remaining dicotyledonous families) in Gavalas (2023) and Gavalas & al. (2023). The listing of monocotyledons completes the series.

### Alliaceae

77. *Allium ampeloprasum* L.

**Gr** Nomos Kikladon, Eparchia Thiras: Iraklia island, Livadi, sandy shore, 3 m, 36°51'03"N, 25°28'22"E, 25.05.2011, *Gavalas* 301.

Common in fields and olive groves.

78. *Allium bourgeaui* subsp. *cycladicum* Bothmer

**Gr** Nomos Kikladon, Eparchia Thiras: 830 m SW of Livadi beach, in sparse scrub, 19 m, 36°50'39"N, 25°28'13"E, 17.06.2014, *Gavalas* 1232.

In only one small locality.

79. *Allium commutatum* Guss.

**Gr** Nomos Kikladon, Eparchia Thiras: Islet Mikros Avelas, rocky shore, 12 m, 36°49'40"N, 25°23'43"E, 15.06.2011, *Gavalas* 396.

Restricted to high cliffs and this islet.

80. *Allium sphaerocephalon* subsp. *aegaeum* (Heldr. & Halácsy) Karavok. & Tzanoud.

**Gr** Nomos Kikladon, Eparchia Thiras: Islet Megalos Avelas, rocky shore, 20 m, 36°49'44"N, 25°24'37"E, 01.08.2011, *Gavalas* 451.

Single locality on rocky shore facing NW, occurring only on this islet.

81. *Allium staticiforme* Sm.

**Gr** Nomos Kikladon, Eparchia Thiras: Livadi, 1 m, sandy shore, 36°51'06"N, 25°28'21"E, 02.06.2011, *Gavalas* 376.

In only one small locality.

### Amaryllidaceae

82. *Narcissus obsoletus* (Haw.) Steud.

**Gr** Nomos Kikladon, Eparchia Thiras: 200 m W of Dexameni, 95 m, traditional path with stone walls, phrygana and few shrubs, 36°50'52"N, 25°27'20"E, 20.11.2011, *Gavalas* 472.

Common in open habitats.

### Araceae

83. *Arum concinatum* Schott

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, in garden, 36°51'31"N, 25°28'06"E, 21.04.2008, *Gavalas* obs. (photo).

Noted on street pavements and gardens. Native.

84. *Zantedeschia aethiopica* Spreng.

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, in garden, 36°51'31"N, 25°28'06"E, 21.04.2008, *Gavalas* obs. (photo).

Planted and naturalized in shaded places.

### Areaceae

85. *Phoenix canariensis* H.Wildpret

**Gr** Nomos Kikladon, Eparchia Thiras: 300 m S-SW of Livadi, 6 m, dry stream bed, 36°50'55"N, 25°28'21"E, 11.12.2007, *Gavalas* obs. (photo).

Planted on residential land, many trees attacked or destroyed by the red palm weevil (*Rhynchophorus ferrugineus*). Endemic to Canary Islands.

### Colchicaceae

86. *Colchicum pusillum* Sieber



Fig. 13. *Carex extensa* (photo I. Gavalas).

**Gr** Nomos Kikladon, Eparchia Thiras: 200 m W of Dexameni, 95 m, old path, 36°50'52"N, 25°27'20"E, 18.10.2011, *Gavalas* 462.

### **Cyperaceae**

**87. *Carex extensa*** Gooden. (Fig. 13)

**Gr** Nomos Kikladon, Eparchia Thiras: Livadi, 2 m, coastal saline marsh, 36°51'01"N, 25°28'28"E, 24.05.2012, *Gavalas* 864.

Single locality.

**88. *Carex flacca*** subsp. *serrulata* (Spreng.) Greuter

**Gr** Nomos Kikladon, Eparchia Thiras: 50 m SW of Dexameni, macchie, 90 m, 36°50'50"N, 25°27'28"E, 14.04.2012, *Gavalas* 734.

Rare, only found once.

**89. *Cyperus longus*** subsp. *badius* (Desf.) Bonnier & Layens

**Gr** Nomos Kikladon, Eparchia Thiras: St George beach, 2 m, garden, 36°51'43"N, 25°28'08"E, 09.10.2011, *Gavalas* 456.

One small locality near sandy shore and one locality in garden.

### **Hyacinthaceae**

**90. *Bellevalia hyacinthoides*** (Bertol.) K. Perss. & Wendelbo

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, roadside, 36°51'31"N, 25°28'06"E, 23.01.2012, *Gavalas* 489.

Common in open habitats.

**91. *Hyacinthus orientalis*** L.

**Gr** Nomos Kikladon, Eparchia Thiras: 300 m E-NE of Panagia church, 144 m, dry garden, 36°50'18"N, 25°27'28"E, 15.01.2014, *Gavalas* obs. (photo).



Fig. 14. *Crocus cancellatus* subsp. *mazziaricus* (photo I. Gavalas).

Planted, also escaping from cultivation and naturalized near villages.

**92. *Ornithogalum collinum* Guss.**

**Gr** Nomos Kikladon, Eparchia Thiras: 120 m SE of Agia Paraskevi church, 130 m, unirrigated field, 36°50'15"N, 25°27'32"E, 02.04.2012, *Gavalas* 596.

Single locality at field margins.

**93. *Prospero autumnale* L. s.l.**

**Gr** Nomos Kikladon, Eparchia Thiras: 200 m W of Dexameni, 95 m, stony path, 36°50'52"N, 25°27'20"E, 18.10.2011, *Gavalas* 461.

Common in open habitats.

**Iridaceae**

**94. *Crocus cancellatus* subsp. *mazziaricus* (Herb.) B. Mathew (Fig. 14)**

**Gr** Nomos Kikladon, Eparchia Thiras: 200 m W of Dexameni, 95 m, old path, 36°50'52"N, 25°27'20"E, 24.11.2011, *Gavalas* 475.

Uncommon in open habitats, two localities with scattered plants.

**95. *Crocus laevigatus* Bory & Chaub. (Fig. 15)**

**Gr** Nomos Kikladon, Eparchia Thiras: 750 m SW of Tourkopigado, 93 m, phrygana, 36°49'45"N, 25°28'03"E, 05.12.2011, *Gavalas* 660.

Common in phrygana.

**96. *Crocus tournefortii* J. Gay (Fig. 16)**

**Gr** Nomos Kikladon, Eparchia Thiras: 200 m W of Dexameni, 95 m, stony path, 36°50'52"N, 25°27'20"E, 20.11.2011, *Gavalas* 476.

Common in phrygana.

**97. *Iris tuberosa* L.**





Fig. 15. *Crocus laevigatus*  
(photo I. Gavalas).



Fig. 16. *Crocus tournefortii*  
(photo I. Gavalas).

**Gr** Nomos Kikladon, Eparchia Thiras: 210 m S-SW of Panagia church, 175 m, stony path, 36°50'08"N, 25°27'14"E, 05.03.2012, *Gavalas* 533.

Two small localities with a few scattered plants.

**98. *Romulea bulbocodium*** (L.) Sebast. & Mauri (Fig. 17)

**Gr** Nomos Kikladon, Eparchia Thiras: 90 m SW of Dexameni, 95 m, unirrigated field, 36°50'49"N, 25°27'27"E, 15.02.2012, *Gavalas* 505.

Three different localities with scattered plants.

### ***Juncaceae***

**99. *Juncus acutus*** L. subsp. *acutus*

**Gr** Nomos Kikladon, Eparchia Thiras: Livadi, 1 m, coastal saline marsh, 36°51'03"N, 25°28'25"E, 14.05.2011, *Gavalas* 176.

Two localities on sandy shores.





Fig. 17. *Romulea bulbocodium* (photo I. Gavalas).

**100. *Juncus bufonius* L.**

**Gr** Nomos Kikladon, Eparchia Thiras: 35 m SW of St George School, 23 m, open phrygana, 36°51'35"N, 25°28'02"E, 24.03.2013, *Gavalas* 1046.

Single locality, the area now destroyed by re-building.

**Liliaceae**

**101. *Gagea rigida* Boiss. & Spruner**

**Gr** Nomos Kikladon, Eparchia Thiras: 100 m NW of Antliostasio, 63 m, rock pool on old path, 36°50'45"N, 25°27'40"E, 05.03.2012, *Gavalas* 541.

Common in open phrygana.

**Poaceae**

**102. *Aeluropus lagopoides* (L.) Trin. ex Thwaites**

**Gr** Nomos Kikladon, Eparchia Thiras: 500 m, E-NE of the port, 2 m, rocky shore, 36°51'52"N, 25°28'34"E, 20.06.2012, *Gavalas* 891.

Uncommon on rocky shores.

**103. *Arundo donax* L.**

**Gr** Nomos Kikladon, Eparchia Thiras: St George beach, 2 m, abandoned sandy field, 36°51'42"N, 25°28'09"E, 06.03.2008, *Gavalas* obs. (photo).

Planted and established on sandy shores. Native.

**104. *Corynephorus articulatus* (Desf.) P.Beauv.**

**Gr** Nomos Kikladon, Eparchia Thiras: Livadi, 1 m, sandy shore, 36°51'06"N, 25°28'21"E, 14.05.2011, *Gavalas* 174.

Rare.

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

**Gr** Nomos Kikladon, Eparchia Thiras: Aiolos hotel, 76 m, in garden, 36°51'26"N, 25°28'07"E, 02.10.2020, *Gavalas* obs. (photo).

Rare, as weed in gardens.

**106. *Echinochloa colonum* (L.) Link**

**Gr** Nomos Kikladon, Eparchia Thiras: St George beach, 2 m, unirrigated field, 36°51'42"N, 25°28'09"E, 01.11.2011, *Gavalas* 469.

Only found once.

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

**Gr** Nomos Kikladon, Eparchia Thiras: Aiolos hotel, 76 m, in garden, 36°51'26"N, 25°28'07"E, 09.11.2019, *Gavalas* obs. (photo).

Rare, as weed in gardens.

**108. *Eragrostis cilianensis* (All.) Vignolo ex Janch.**

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, in garden, 36°51'31"N, 25°28'06"E, 13.07.2011, *Gavalas* 448.

As weed in gardens.

**109. *Hordeum vulgare* L.**

**Gr** Nomos Kikladon, Eparchia Thiras: Ftero Dematou, 120 m, phrygana, 36°49'11"N, 25°27'57"E, 15.05.2011, *Gavalas* 249.

Uncommon in open habitats.

**110. *Poa infirma* Kunth**

**Gr** Nomos Kikladon, Eparchia Thiras: Dexameni, damp places, 82 m, 36°50'51"N, 25°27'29"E, 12.02.2013, *Gavalas* 1022.

Uncommon in damp places.

**111. *Poa trivialis* subsp. *sylicola* (Guss.) H. Lindb.**

**Gr** Nomos Kikladon, Eparchia Thiras: Ftero Dematou, unirrigated field, 70 m, 36°49'35"N, 25°28'04"E, 24.03.2013, *Gavalas* 1043.

Rare, in open habitats.

**112. *Polypogon monspeliensis* (L.) Desf.**

**Gr** Nomos Kikladon, Eparchia Thiras: 70 m W of St George church, 18 m, dry stream bed, 36°51'39"N, 25°28'03"E, 23.05.2012, *Gavalas* 847.

Single locality in shaded dry stream bed.

**113. *Rostraria smyrnaea* (Trin.) H. Scholz**

**Gr** Nomos Kikladon, Eparchia Thiras: 700 m W-SW of Taxiarchis church, 50 m, phrygana, 36°51'24"N, 25°27'35"E, 12.04.2012, *Gavalas* 726.

Uncommon in open habitats.

**114. *Setaria adhaerens* (Forssk.) Chiov.**

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, in garden, 36°51'31"N, 25°28'06"E, 02.06.2011, *Gavalas* 373.

As weed in gardens.

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

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, in garden, 36°51'31"N, 25°28'06"E, 18.05.2013, *Gavalas* 1150.

As weed in gardens.

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

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 4 m, in garden, 36°51'32"N, 25°28'18"E, 07.09.2011, *Gavalas* 455.

As weed in gardens.

**117. *Vulpia myuros* (L.) C.C. Gmel.**

**Gr** Nomos Kikladon, Eparchia Thiras: St George village, 38 m, roadside, 36°51'31"N, 25°28'06"E, 02.06.2011, *Gavalas* 374.

Rare in open habitats.

**Acknowledgements.** All taxa of *Alliaceae* have been identified by D. Tzanoudakis except *A. bourgeaui* subsp. *cycladicum*.

## Reports 118–126

### Vassilis Ioannidis\*, Despina Doukeridou, Kozoni Marianthi & Arne Strid

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The following records are new for nomos Kilkis in northcentral/northeast Greece.

#### Asteraceae

**118. *Tephroseria papposa* (Rchb.) Schur**

**Gr** Nomos & Eparchia Kilkis: Mt Belles, high mountain vegetation, 1432 m, 41°20'7.91"N, 22°48'54.55"E, 14.06.2015, *Ioannidis* obs.

#### Fabaceae

**119. *Lathyrus saxatilis* (Vent.) Vis.**

**Gr** Nomos Kilkis, Eparchia Peonias: Mt Paiko near the village Karpi, woodland and scrub, 633 m, 40°59'45.04"N, 22°24'01.22"E, 21.04.2023, *Ioannidis* obs.

#### Lamiaceae

**120. *Stachys tymphaea* Hausskn.**

**Gr** Nomos Kilkis, Eparchia Peonias: Near Metaleiou



lake, woodland and scrub, 306 m, 41°02'02.58"N, 22°28'32.83"E, 24.05.2023, *Ioannidis* obs.

### Moraceae

#### 121. *Morus nigra* L.

**Gr** Nomos & Eparchia Kilkis: Near village Kato Potamia, agricultural and ruderal habitats, 148 m, 40°57'25.56"N, 22°55'16.13"E, 11.06.2023, *Ioannidis* obs.

### Primulaceae

#### 122. *Anagallis foemina* Mill.

**Gr** Nomos Kilkis, Eparchia Peonias: Mt Paiko near the village Karpi, woodland and scrub, 501 m, 40°59'33.26"N, 22°24'16.13"E, 21.04.2023, *Ioannidis* obs.

### Ranunculaceae

#### 123. *Ranunculus paludosus* Poir.

**Gr** Nomos & Eparchia Kilkis: Near Vakoufi village, agricultural and ruderal habitats, 57 m, 40°54'49.68"N, 22°42'39.14"E, 09.04.2023, *Ioannidis* obs.

### Scrophulariaceae

#### 124. *Verbascum roripifolium* (Halácsy) I. K. Ferguson.

**Gr** Nomos Kilkis, Eparchia Peonias: Near Metaleiou lake, woodland and scrub, 309 m, 41°01'49.08"N, 22°27'59.95"E, 24.05.2023, *A. Athanasiadis* & *Ioannidis* obs.

*Verbascum roripifolium* is a species of the southern Balkans with records in southern Bulgaria and northeastern Greece. To date, the species has been recorded in Greece only in the floristic area located further east of the Axios River (NE). With this report, the species extends its distribution for the first time to a location further west of the Axios river, in the north central floristic region of Greece. The new location is located on the eastern slopes of Mt Paiko, 8 km northeast of Axioupoli Kilkis and 2 km southeast of the mine lake in a location very close to the provincial road of Pigis-Mine lake.

### Asphodelaceae

#### 125. *Asphodelus fistulosus* L.

**Gr** Nomos & Eparchia Kilkis: Metalliko Kilkis, agricultural and ruderal habitats, 127 m, 41°01'33.67"N, 22°48'23.99"E, 15.05.2022, *Ioannidis* obs.

### Iridaceae

#### 126. *Gladiolus illyricus* W.D.J. Koch

**Gr** Nomos Kilkis, Eparchia Peonias: Between Skra and Xamilo village, cliffs, rocks, boulders, ravines, 354 m, 41°07'16.91"N, 22°23'56.8"E, 02.06.2023, *Ioannidis* obs.

## Reports 127–139

### Todor Karakiev

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### Aspleniaceae

#### 127. *Asplenium scolopendrium* L.

**Bu** Black Sea Coast (*Southern*): Nesebar town, on the walls of a well, 7 m, 42°39'56"N, 27°42'54"E, 17.08.2022, *T. Karakiev* obs.

A new species for this floristic region (cf. Stoyanov & al. 2023).

### Pinaceae

#### 128. *Pinus mugo* L.

**Bu** Mt Slavianka: NE slopes of Gotsev Vrah peak, 2080 m, 41°22'41"N, 23°37'39"E, 01.07.2023, *T. Karakiev* obs. (Fig. 18).

A new species for this floristic region (cf. Stoyanov & al. 2023).

### Apiaceae

#### 129. *Torilis leptophylla* (L.) Rchb. f.

**Bu** Znepole Region: Mt Erulska, between Dushintsi village and Golemi Vrah peak, 1150 m, 42°42'05"N, 22°40'11"E, 13.06.2023, coll. *T. Karakiev* (SOM178658).



**Fig. 18.** *Pinus mugo*: a. habit; b. branches and cones – close look (photo T. Karakiev).

A new species for this floristic region. So far, the species has been known from localities up to 800 m a.s.l. (cf. Stoyanov & al. 2023).

### Grossulariaceae

#### 130. *Ribes alpinum* L.

**Bu** Mt Slavianka: eastern slopes of Shabran peak in *Juniperus sibirica* scrub, subalpine vegetation, 2020 m, 41°23'02"N, 23°36'37"E, 01.07.2023, coll. T. Karakiev (SOM 178654).

A new species for this floristic region. So far the species has been reported from the floristic regions of Balkan Range (*Western, Central*), Znepole Region, West Frontier Mountains, Vitosha Region, Rila Mts, Pirin Mts, and Rhodopi Mts (*Western, Central*) (Stoyanov & al. 2023).

### Lamiaceae

#### 131. *Thymus perinicus* (Velen.) Jalas

**Bu** Mt Slavyanka: NE ridge of Gotsev Vrah peak, 2170 m, 41°22'35"N, 23°37'26"E, 01.07.2023, coll. T. Karakiev (SOM 178655).

A new species for this floristic region. So far it has been reported from the floristic region of Pirin (*Northern*) (Stoyanov & al. 2023).

### Lythraceae

#### 132. *Lythrum portula* (L.) D.A. Webb



**Fig. 19.** *Lythrum portula* (photo T. Karakiev).

**Bu** Znepole region: Mt Erulska, between Dushintsi village and Golemi Vrah peak in a puddle on a dirt road, 1200 m, 42°42'00"E, 22°40'03"E, 13.06.2023, T. Karakiev obs. (Fig. 19).

A new species for this floristic region (cf. Stoyanov & al. 2023).

### Ranunculaceae

#### 133. *Consolida hellespontica* subsp. *macedonica* (Hall & Charrel) Chater

**Bu** Mt Sredna Gora (*Western*): E of Barata village, in grasslands on S slope, 1010 m, 42.522654°N, 23.850645°E, 21.06.2023, coll. T. Karakiev (SOM 178662).

A new taxon for this floristic region. So far it has been reported from the floristic regions of Valley of River Struma, Thracian Lowland, and Tundzha Hilly Country (Stoyanov & al. 2023).

### Rosaceae

#### 134. *Amygdalus webbii* Spach

**Bu** Valley of River Struma (*Northern*): Skrinjo Gorge, E of Vukovo village, S slope, about 10 specimens observed on eroded limestone conglomerate, 580 m, 42.192491°N, 22.971117°E, 13.06.2021, coll. T. Karakiev (SOM178663)..

— Valley of River Struma (*Southern*): N of Zlatolist



village, E of St. George Monastery, southern part of Melnik sands pyramids, W-SW slope, about five specimens observed on eroded leached cinnamon forest soils on glacial deluvial sand deposits, 364 m, 41.4988879°N, 23.416983°E, 08.05.2019, *T. Karakiev* obs.

These are new localities of the species. So far it has been reported for the West Frontier Mts and Valley of River Struma (*Southern*) floristic regions (Vladimirov 2014).

**135. *Rubus saxatilis* L.** (Fig. 20)

**Bg** Znepole region, Mt Erulska, N slopes of Golemi Vrah peak in a beech forest on limestone rocks, 1390 m, 42°42'08"N, 22°39'14"E, 22.06.2023, coll. *T. Karakiev* (SOM 178656).

A new species for this floristic region. So far, this species has been reported from the Balkan Range (*Central*), Mt Slavianka, Pirin Mts, and Rhodopi Mts (*Western, Central*) (Stoyanov & al. 2023).

**Ulmaceae**

**136. *Celtis australis* L.**

**Bu** Rhodopi Mts (*Western*): valley of river Chepinska, near Marko Nikolov railway station. 373 m, 42°08'03"N, 24°07'31"E, 07.05.2023, coll. *T. Karakiev* (SOM 178660).

A new species for this floristic subregion. So far the species has been reported from the floristic regions of Black Sea Coast (*Southern*), Northeast Bulgaria, Forebalkan (*Eastern*), Balkan Renge (*Eastern*) (doubtfully present), Valley of River Struma, Rhodopi Mts (*Central, Eastern*), Thracian Lowland, Tundzha Hilly Country, and Mt Strandzha (Stoyanov & 2023).

**Alliaceae**

**137. *Allium vineale* L.**

**Bu** Znepole region: Mt Erulska, in mesophilic grasslands, between Erul village and Golemi Vrah peak, 1240 m, 42°43'36"N, 22°38'46"E, 22.06.2023, *T. Karakiev* obs. (Fig. 21)

A new species for this floristic region (cf. Stoyanov & al. 2023).



Fig. 20. *Rubus saxatilis* (photo T. Karakiev).



Fig. 21. *Allium vineale* (photo T. Karakiev).

**Asparagaceae**

**138. *Polygonatum verticillatum* (L.) All.**

**Bu** Znepole region: Mt Erulska, N slope of Golemi Vrah peak, in a beech forest, 1370 m, 42°42'11"N, 22°39'19"E, 22.06.2023, *T. Karakiev* obs (Fig. 22).

A new species for this floristic region (cf. Stoyanov & al. 2023).





Fig. 22. *Polygonatum verticillatum* (photo T. Karakiev).

### **Iridaceae**

139. *Crocus randjeloviciorum* Kernd., Pasche, Harpke & Raca

**Bu** Znepole region: Mt Erulska, between Erul village and Golemi Vrah peak in limestone rocky dry grasslands, 1260 m, 42°44'46"N, 22°39'15"E, 19.03.2023, T. Karakiev obs. (Fig. 23).

Confirming the species for this floristic region. So far, its occurrence in this region has been doubtful (cf. Stoyanov & al. 2023).

### **Reports 140–141**

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### **Berberidaceae**

140. *Berberis aquifolium* Pursh (Fig. 24)



Fig. 23. *Crocus randjeloviciorum* (photo T. Karakiev).





Fig. 24. *Berberis aquifolium* (photo D. Mermygkas).

**Gr** Nomos Arkadias, Eparchia Mandinias: Mt Menalon. 4<sup>th</sup> km of Chrysovitsi - Vytina provincial road, west of holiday resort. Road edges and slopes in mixed *Abies cephalonica*-*Pinus nigra* forest, 1320 m, 37°33'42"N, 22°10'22"E, 30.04.2023, Mermygkas 3025 (ATH).

First record of species as naturalized for Greece. An apparent escape from cultivation at a nearby resort; however, it is fully naturalized and self-propagating. Approximately 20 individuals were noted growing in the forest at a distance of *ca.* 120 m from the road.

*Berberis aquifolium* (syn. *Mahonia aquifolium* (Pursh) Nutt.) is native to western North America. It is frequently cultivated, especially in W and C Europe, and locally naturalized (Webb 1993).

### **Iridaceae**

**141.** *Iris hellenica* Mermygkas, Kit Tan & Yannitsaros (Fig. 25)

**Gr** Nomos Arkadias, Eparchia Gortinias: Mt Menalon, near fire lookout station, 400 m south



Fig. 25. *Iris hellenica* (photo D. Mermygkas).

of Madhara peak. Rocky openings in *Juniperus oxycedrus* subsp. *deltoides* scrub, on limestone, 1560 m, 37°38' 10"N, 22°08'24"E, 30.04.2023, Dimaki & Mermygkas obs.

New for Mt Menalon and nomos Arkadias. A very small population of five individuals were observed just east of the Madhara fire lookout station. The plants were characteristically low in stature, *ca.* 15–20 cm. This is the southernmost record of the species that is so far known from Mts Erimanthos, Lambia, Chelmos, Killini, Saitas and Farmakas in the north Peloponnese and Mt Iti in Sterea Ellas (Giannopoulos & al. 2019).

### **Report 142**

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### **Caryophyllaceae**

**142.** *Silene tenuiflora* Guss. (Fig. 26)



Fig. 26. *Silene tenuiflora* (photo S. Stoyanov).

**Bu** Tundzha Hilly Country: Mt Sakar, ca. 2.5 km NE of Izvorovo village, Harmanli Municipality, Haskovo district, in grassy roadside strips, 480 m, 41.98481°N, 26.16056°E, with flowers, 21.05.2023, S. Stoyanov & Y. Marinov (SOM 178623).

*Silene tenuiflora* was first mentioned for the Bulgarian flora by Greuter (1997). Due to lack of herbarium records, Assyov & Petrova (2012) reported it as a species with a doubtful occurrence in the country. It was confirmed for Bulgaria only recently, in a few localities in the Eastern Rhodopi Mts (Kunев & Kostadinov 2021). The species, erroneously reported as *S. cretica* L., also occurred in the floristic regions of the Black Sea Coast (*Southern*), Valley of River Struma (*Southern*), Mt Slavyanka, and Mt Strandzha (Panov 1975; Pashaliev & Dimitrov 1995). This was the first record of *S. tenuiflora* in the Tundzha Hilly Country floristic region.

**Acknowledgements.** This study was carried out within the framework of the project “Flora, vegetation and natural habitats of Bulgaria and the Balkan Peninsula” of the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences.

## Reports 143–149

**Kit Tan\* & Giannis Kofinas**

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### *Apiaceae*

**143. *Ferulago trachycarpa*** Boiss. [syn.: *Ferulago insularis* H. Wolff] (Figs. 27–29)

**Gr** Nomos Irakliou, Eparchia Viannou: Kriti, Mt Dikti, crevices of steep limestone cliffs, 1600 m, 35°03'N, 25°30'E, 02.06.2012 & 31.07.2023, Kofinas s.n. (ATH, C).

New for Mt Dikti, and second record for Kriti; previously reported from Thriptis Ori in Nomos Lasithiou (Constantinidis & Kalpoutzakis 2019). Also known from Mt Kerkis on the E Aegean island of Samos. On Mt Dikti, found growing together with *Dianthus juniperinus* subsp. *aciphyllus* (Ser.) Turland.

*Ferulago trachycarpa* belongs to *F.* sect. *Anisotaenia* Boiss., a group of mainly Asiatic taxa occurring west of the Caspian area. Its only presence in Greece is documented by a specimen collected by Forsyth Major on Samos, “in saxosis calcareis regionis superioris montis Kierki, 6 maio 1887, foliigerum tantum et 8 aug. 1887 paullo supra sacellum Haghios Ilias” as *Hippomarathrum* sp. (Stefani & al. 1892: 43). This is also the type for *F. insularis* H. Wolff (Major 888, E, K, G, see Fig. 29). The type of *F. trachycarpa* is from W Anatolia, Manisa Dagh northeast of Samos, collected by P.E. Boissier in July 1842. The plants from Thriptis Ori were presented as new for Crete and Europe by Constantinidis and Kalpoutzakis in a poster at the Congress of the Hellenic Botanical Society, Athens 10–13 October 2019 and postulated as possibly representing an undescribed subspecies, based on some morphological features such as having shorter fruiting pedicels and bracts, and un-winged dorsal ribs on the fruits.

The fruits of the Mt Dikti plants appear superficially smooth and as the name “*trachycarpa*” implies scabrid-setulose fruits, we initially considered there was some justification in considering it to represent a separate taxon. However, in Turkish material the fruits are setulose when immature and when fully ripe, remain setulose or become more or less glabrous. A check on several other





Fig. 27. *Ferulago trachycarpa* on steep limestone cliff, Mt Dikti (photo G. Kofinas).



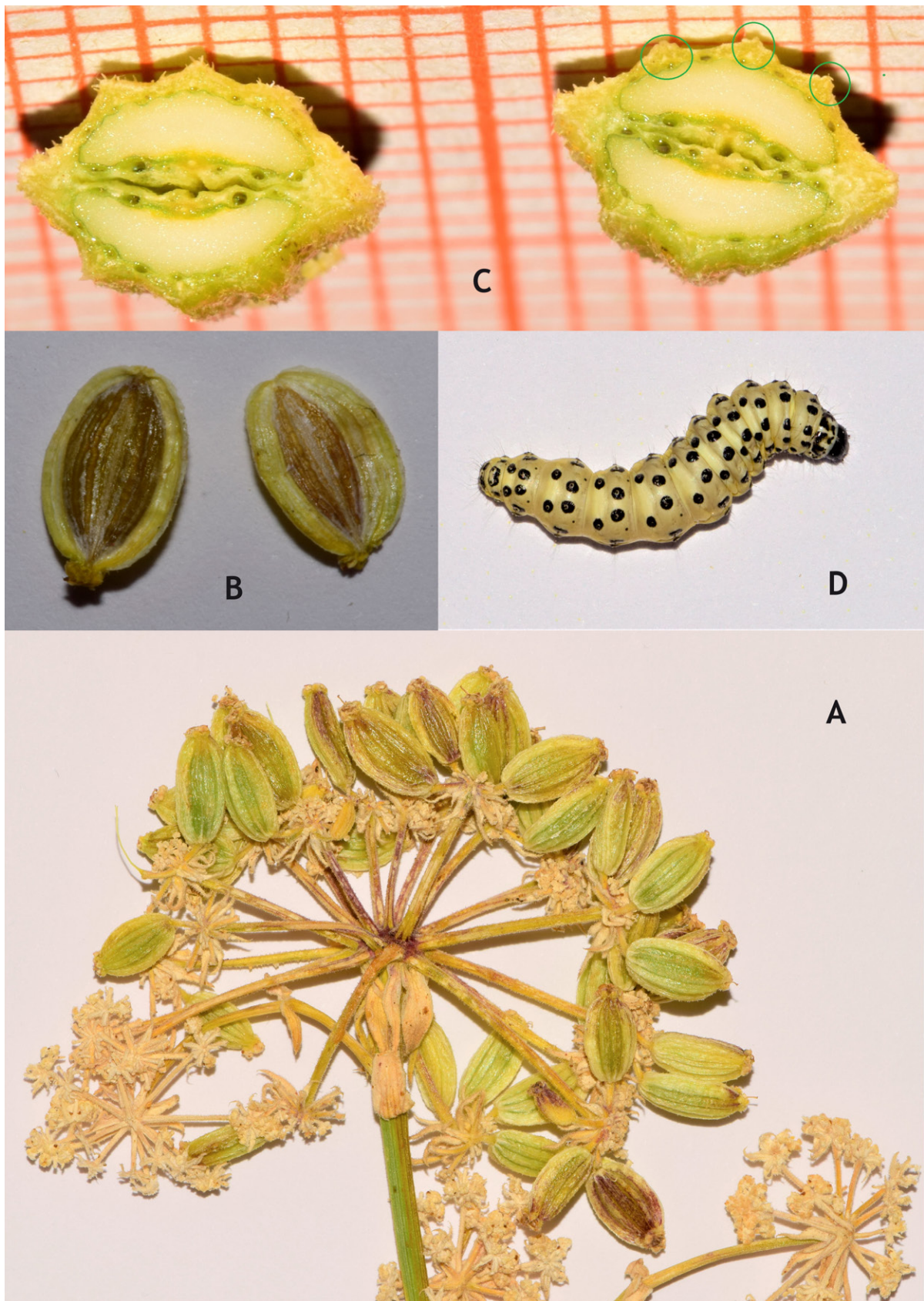


Fig. 28. *Ferulago trachycarpa*: A, infructescence; B, fruits; C, transverse section of immature fruits; D, larva of crambid moth *Sitochroa palealis* (photo G. Kofinas).



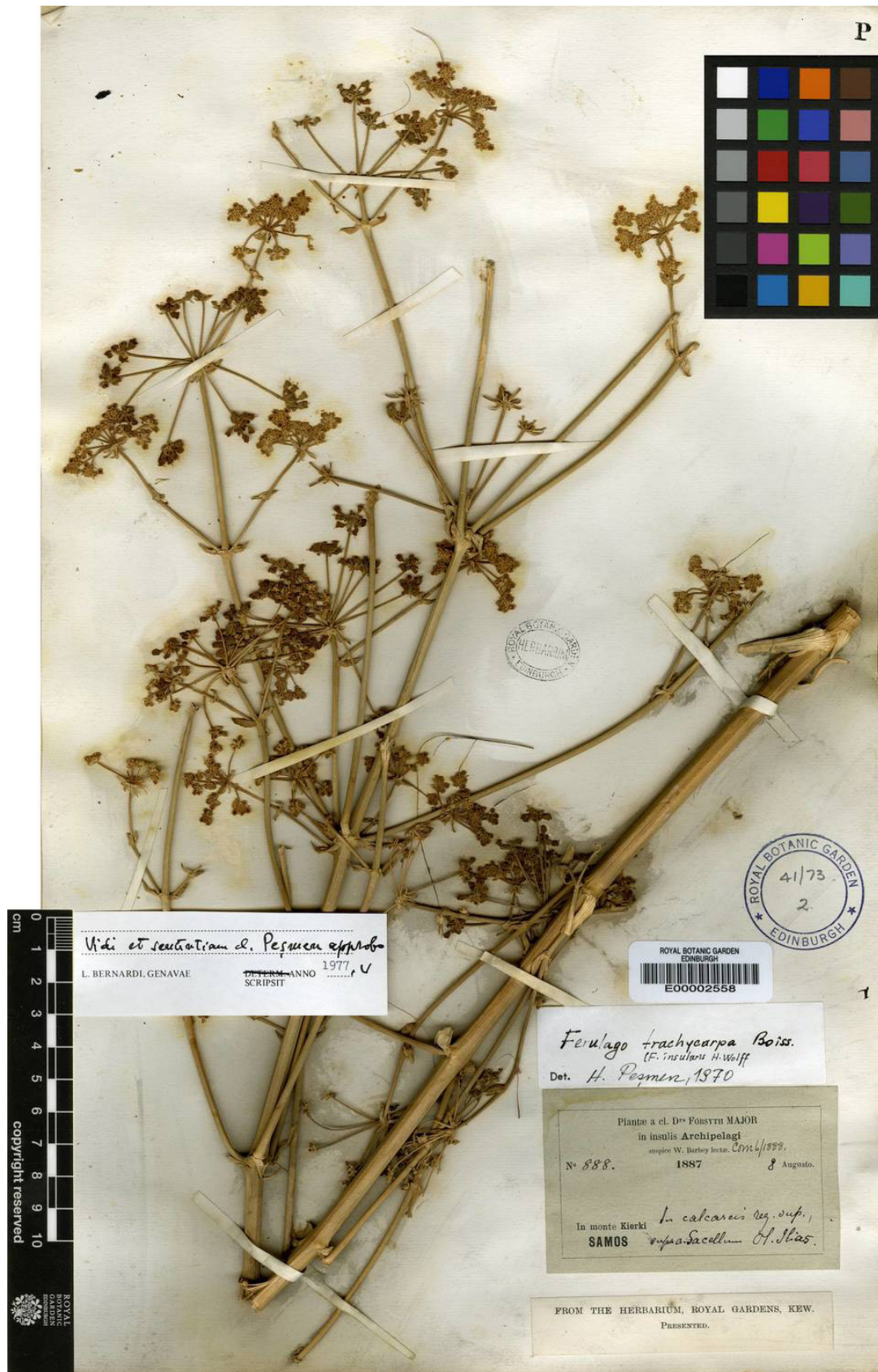


Fig. 29. *Ferulago insularis* H. Wolff (Major 888, isotype E).

morphological features confirm that the Cretan plants fall into the morphological variation of the species in Turkey (expressed within parentheses in following text) and thus do not justify separation into another taxon. The pedicels are 2.5–3.5 mm long but become accrescent in fruit (vs. 4–7 mm), the ultimate leaf segments are similar, apiculate and grooved, to 5 mm long (vs. 3–15 mm). The mericarps are elliptic, 10–11 × c. 8 mm (vs. narrower, 6–8 mm), remaining ± scabrid-setulose or becoming glabrous at maturity. The dorsal ribs are slightly winged; the lateral wings have a narrow 0.25 mm wide (vs. 0.5 mm wide) hyaline wing. The number of circular vittae (dorsal and commissural) are fewer than 20.

The presence of winged or unwinged dorsal ridges seems to be an important character and the 27 species in Turkey have been placed in two groups based on this character (Uruşak & Kizilarıslan 2013). *Ferulago trachycarpa* is placed in the group with winged dorsal ribs although stated as unwinged for the Cretan plants by Constantinidis & Kalpoutzakis (2019). A transverse section of immature fruits of plants from Mt Dikti shows slightly winged dorsal ribs, the wings of which may develop further with maturity (Fig. 28C). *Ferulago trachycarpa* is widely distributed, occurring in W, SW and S Anatolia, the East Aegean Islands (Samos), Crete, Israel and Lebanon; some morphological variation may be expected for such a broad geographical range.

The larvae of a crambid moth *Sitochroa palealis* (Denis & Schiffermüller, 1775) feed on the fleshy mericarps of *F. trachycarpa* and damages or destroys them completely (Fig. 28D).

**144. *Seseli arenarium* M. Bieb.**

**Gr** Nomos Fthiotidos, Eparchia Lokridos: Mt Kallidromo, roadside, 675 m, two localities at 38°46'N, 22°29'E, 28.05.2023, *Kofinas* obs. (photos).

New for Mt Kallidromo and eparchia Lokridos. Reported only once for nomos Fthiotidos, from eparchia Fthiotidos.

**Asteraceae**

**145. *Inula bifrons* (L.) L. (Fig. 30)**

**Gr** Nomos Larisis, Eparchia Tirnavou: Kato Olim-

bos, shady places in *Fagus* forest, 1250 m, 39°58'N, 22°31'E, 18.08.2023, *Kofinas* obs. (photos).

New for Kato Olimbos and North Central; reported only from North East (Rodopi and more recently, from Mt Tzena).

**Boraginaceae**

**146. *Anchusa officinalis* subsp. *leucantha* (Selvi & Bigazzi) Kit Tan**

**Gr** Nomos Larisis, Eparchia Elassonos: near Akri, single individual in fenced plot outside village, 975 m, 40°03'N, 21°59'E, 27.05.2023, *Kofinas* obs. (photo); cultivated cereal field with ca. 10 plants, 39°55'N, 21°48'E; *loc. ibid.*, 40°00'N, 21°50'E, *Kofinas* obs. (photos).

Reported from almost the same locality by E. Willing in May 1993 (specimens at B). Occurring in North Central Greece, N Pindos, North Macedonia and SE Albania.

**Brassicaceae**

**147. *Hesperis theophrasti* Borbás**

**Gr** Nomos & Eparchia Grevenon: Kamvounia Ori, stony slope with *Juniperus*, 1520 m, 39°57'N, 21°46'E, 27.05.2023, *Kofinas* obs. (photos).

Reported from the same locality in an unpublished list of plants from Mt Vounása (Matsoukas 1990).

**Ranunculaceae**

**148. *Consolida hellespontica* (Boiss.) Chater**

**Gr** Nomos Kozanis, Eparchia Voiou: Siatista, at roadside, 726 m, 40°14'N, 21°34'E, 10.08.2020, *Kofinas* obs. (seed collected).

New for nomos and eparchia, second report for North Central Greece (first reported from Nomos Florinis). A link to its occurrence further south in N and S Pindos.

**Violaceae**

**149. *Viola arvensis* Murray**

**Gr** Nomos & Eparchia Grevenon: Kamvounia Ori, roadside, small population of ca. 20 individuals, 1500 m, 39°57'N, 21°46'E, 27.05.2023, *Kofinas* obs. (photos).





Fig. 30. *Inula bifrons* (photo G. Kofinas).

Reported from the same locality in an unpublished list of plants from Mt Vounása (Matsoukas 1990).

**Acknowledgements.** We thank Professors Emine Uruşak (Istanbul University) and Ali Dönmez (Hacettepe University, Turkey) for comparing our *Ferulago* collections with material from Turkey, and Giannis Gavalas (Irakleia, Greece) for help in the identification of *Sitochroa palealis* (the carrot seed moth).

## Reports 150–157

### Kit Tan\* & Sister Pachomia

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### Caryophyllaceae

150. *Silene fabarioides* Hausskn.

Gr Nomos & Eparchia Serron: Mt Menikio, subalpine meadows, 1111 m, 41°12'N, 23°46'E, 29.07.2022, *Sister Pachomia* & al. s.n. (herb. Monastery of Timios Prodromos, Serres).

New for eparchia and second confirmation for Mt Menikio.

### Lamiaceae

151. *Scutellaria albida* L.

Gr Nomos & Eparchia Serron: Mt Menikio, woodland and scrub, 979 m, 41°12'N, 23°46'E, 29.07.2022, *Sister Pachomia* & al. s.n. (herb. Monastery of Timios Prodromos, Serres).

New for Mt Menikio.

### Plantaginaceae

152. *Plantago indica* L.

Gr Nomos Serron, Eparchia Sintikis: Mt Beles, wet places at roadside on way from Ano Poroia, 492 m, 41°17'N, 23°01'E, 27.07.2023, *Sister Pachomia* & al. s.n. (herb. Monastery of Timios Prodromos, Serres).

New for Mt Beles.

### Rutaceae

153. *Dictamnus albus* L. (Fig. 31)

Gr Nomos Serron, Eparchia Sintikis: Mt Agkistro, stony limestone slopes in woodland, 502 m, 41°21'N, 23°28'E, 25.05.2022, *Sister Pachomia* & al. s.n. (herb. Monastery of Timios Prodromos, Serres).

New for nomos and eparchia. Mainly in North and Central Greece; rare in the Peloponnese, occurring in wooded areas at the foothills of Mts Taigetos and Parnon.

### Santalaceae

154. *Thesium linophyllum* subsp. *montanum* (Schrad.) Čelak. (Fig. 32)

Gr Nomos & Eparchia Serron: Mt Menikio, stony slopes, 458 m, 41°11'N, 23°48'E, 21.07.2022, *Sister Pachomia* & al. s.n. (herb. Monastery of Timios Prodromos, Serres).



Fig. 31. *Dictamnus albus* (photo Sister Pachomia).

New for Mt Menikio. *Thesium linophyllum* subsp. *linophyllum* has been reported from Menikio by Karagiannakidou & Kokkini (1987).

### **Convallariaceae**

#### **155. *Polygonatum multiflorum* (L.) All. (Fig. 33)**

**Gr** Nomos & Eparchia Serron: Mt Menikio, woodland and scrub, 989 m, 41°12'N, 23°46'E, 29.07.2022, *Sister Pachomia & al.* s.n. (herb. Monastery of Timios Prodromos, Serres).

Confirming report in a phytosociological study of *Fagus* forest on Mt Menikio by Stamellou (2011).

#### **156. *Polygonatum odoratum* (Mill.) Druce**

**Gr** Nomos Serron, Eparchia Fillidos: Mt Kerdylion, between Monastery of Timios Prodromos and Nea

Kerdylia, open woodland and scrub, 775 m, 40°47'N, 23°40'E, 15.04.2021, *Sister Pachomia & al.* s.n. (herb. Monastery of Timios Prodromos, Serres).

New for Mt Kerdylion, in ep. Fillidos, reported from Mt Pangeo.

### **Poaceae**

#### **157. *Poa bulbosa* L.**

**Gr** Nomos & Eparchia Serron: foothills of Mt Menikio, plot of land used by monastery for cultivating vegetables, 293 m, 41°13'N, 23°48'E, 21.06.2021, *Sister Pachomia & al.* s.n. (herb. Monastery of Timios Prodromos, Serres).

Second report for mountain although widespread in Greece.





Fig. 32. *Thesium linophyllum* subsp. *montanum* (photo Sister Pachomia).



Fig. 33. *Polygonatum multiflorum* (photo Sister Pachomia).



Fig. 34. *Crocus pallasii* (photo V. Trifonov).

## Report 158

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### Iridaceae

158. *Crocus pallasii* Goldb. (Fig. 34)

**Bu** Rhodopi Mts (*Eastern*): Municipal lot № 53429.27.1, Odrintsi village, Ivaylovgrad Municipality, on a rocky hill with southern exposure, in plant communities dominated by *Paliurus spina-christi*, *Pistacia terebinthus*, *Juniperus deltoides*, and *Chrysopogon gryllus* (Fig. 35), 250 m, 41°26'32.9"N, 26°08'18.7"E, 01.12.2023, coll. V. Trifonov (SOA 0663392).

New for that floristic region. About 50–60 flowering specimens have been observed on an area of 0.2 ha.



Fig. 35. Habitat of *Crocus pallasii* (photo V. Trifonov).





Fig. 36. *Alnus glutinosa* male (left) and female (right) catkins (photo G. Zarkos).

The species is included in Appendix 4 of Bulgarian Biological Diversity Act and in the Appendix (List of Medicinal Plants) to the Bulgarian Medicinal Plants Act.

**Acknowledgements.** The research was supported by the NPD-Plovdiv University “Paisii Hilendarski”, Grant No MUPD23-BF-008.

## Reports 159–162

### Vladimir Vladimirov

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### Asteraceae

#### 159. *Dittrichia graveolens* (L.) Greuter

**Bu** Valley of River Struma (*Northern*): by Struma

Motorway N of Mursalevo village, embankment of the road, *ca.* 370 m, 42.13013°N, 23.03443°E, 20.10.2019, coll. V. Vladimirov (SOM).

A new species for this floristic region. Numerous specimens observed on the embankment of the road. Apparently, the species in the locality is not of native origin. Most likely, seeds were brought in as a contaminant in the deicing salt spread during the winter for road maintenance. The seeds of the species are further spread along the road as a result of air currents caused by vehicles passing at high speed. So far, the species has been reported from the following floristic regions: Balkan Range (*Western, Eastern*), Sofia Region, Mt Sredna Gora (*Western*), Rhodopi Mts (*Eastern*), Thracian Lowland, Tundzha Hilly County (Stoyanov & al. 2023), and Znepole Region (Vladimirov & al. 2016).





Fig. 37. *Physalis ixocarpa* (photo G. Zarkos).

**160. *Erigeron bonariensis* L.**

**Bu** Forebalkan (*Eastern*): Lukovit town, by the road to Sofia, *ca.* 180 m, 43.19538 N, 24.15838 E, 26.10.2023, coll. V. Vladimirov (SOM).

A new species for this floristic region. So far the species has been reported from the following floristic regions: Black Sea Coast, Mt Belasitsa, Valley of River Struma, Valley of River Mesta, Thracian Lowland, Tundzha Hilly Country (Vladimirov 2012; Vladimirov & Kuzmanov 2012).

**161. *Petasites kablikianus* Bercht.**

**Bu** Mt Slavyanka: by a stream next to the road from Slavyanka Challet to Paril village, 897 m, 41.42611 N, 23.66719 E, 20.05.2023, coll. V. Vladimirov (SOM).

A second report of the species for this floristic region. Previously, the species was recorded on the banks of

river Goleshovska, which is W of Paril Saddle and is a tributary of river Struma. The present locality is situated E of Paril Saddle, along a stream which is a tributary to river Hambaritsa (Burovitsa) that flows into the river Mesta. So far, the species has been reported for Mt Slavyanka, Pirin Mts and Rhodopi Mts (*Central*) (Vladimirov & al. 2020).

***Asphodelaceae***

**162. *Hemerocallis fulva* (L.) L.**

**Bu** Forebalkan (*Western*): in a ditch by the road from Belogradchik town to Rabisha village, *ca.* 390 m, 43.64487 N, 22.65277 E, 28.06.2023, V. Vladimirov obs.; near Kireevo village, Makresh Municipality, in a ditch by the road from Rakovitsa village, 390 m, 43.79484 N, 22.40112 E, 29.06.2023, coll. V. Vladimirov (SOM).

A new species to this floristic subregion. A garden es-

cape. Apparently, the reported occurrences are the result of discarded garden waste with viable rhizomes of the species. Subsequently, the plant groups most likely grew as a result of vegetative propagation. So far, this alien for the Bulgarian flora species has been reported for the following floristic regions: Northeast Bulgaria, Forebalkan (*Eastern*), Sofia Region, Znepole Region, Vitosha Region, Valley of River Mesta, Rhodopi Mts (*Western, Central*), Thracian Lowland (Petrova & Vladimirov 2019).

## Reports 163–164

### George Zarkos & Kit Tan\*

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The following are new plant records based on floristic investigations in the prefecture of Achaïas in north Peloponnese.

### *Betulaceae*

**163.** *Alnus glutinosa* (L.) Gaertn. subsp. *glutinosa* (Fig. 36)

**Gr** Nomos Achaïas, Eparchia Egialias: small trees to 8 m tall on banks of the river Selinoundas, 162 m, 38°11'N, 22°03'E, 13.10.2023, Zarkos obs. (photos); *loc. ibid.*, 20.10.2023, Kit Tan & G. Vold obs.

New for eparchia Egialias, already reported from eparchia Kalavriton. Mainly in north and central Greece, along rivers and in mixed deciduous forest; the Egialias record is the furthest north in the Peloponnese. Widespread in most of Europe, NW Africa, SW Asia to Caucasus.

### *Solanaceae*

**164.** *Physalis ixocarpa* Brot. ex Hornem. (Fig. 37)

**Gr** Nomos Achaïas, Eparchia Egialias: banks of the river Selinoundas, 176 m, 38°11'N, 22°02'E, 28.10.2023, Zarkos obs. (photos).

New for eparchia, once reported from the Vouraikos gorge in eparchia Kalavriton. Established alien, native to Mexico. *Physalis ixocarpa* Nees refers to *P. angulata* L.

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