



Original Scientific Paper

New records and noteworthy data of plants, algae and fungi in SE Europe and adjacent regions, 12

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ABSTRACT:

This paper presents new records and noteworthy data on the following taxa in SE Europe and adjacent regions: red algae *Hildenbrandia rivularis*, saprotrophic fungus *Cryptomarasmius corbariensis*, lichenised fungi *Lecanora stenotropa*, *Micarea misella* and *Sticta sylvatica*, liverworts *Fossombronia caespitiformis* and *Peltolepis quadrata*, mosses *Dicranoweisia cirrata* and *Fissidens exilis*, horsetail *Equisetum × moorei*, gymnosperm *Juniperus virginiana*, monocots *Galanthus reginae-olgae* subsp. *vernalis* and *Spiranthes spiralis* and dicots *Linaria pelisseriana*, *Parthenocissus quinquefolia*, *Pilosella rhodopea* and *Taraxacum erythrospermum* are given within SE Europe and adjacent regions.

Keywords:

new report, *Cryptomarasmius corbariensis*, *Dicranoweisia cirrata*, *Equisetum × moorei*, *Fissidens exilis*, *Fossombronia caespitiformis*, *Galanthus reginae-olgae* subsp. *vernalis*, *Hildenbrandia rivularis*, *Juniperus virginiana*, *Lecanora stenotropa*, *Linaria pelisseriana*, *Micarea misella*, *Parthenocissus quinquefolia*, *Peltolepis quadrata*, *Pilosella rhodopea*, *Spiranthes spiralis*, *Sticta sylvatica*, *Taraxacum erythrospermum*, SE Europe

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Cryptomarasmius corbariensis (Roum.) T.S. Jenkinson & Desjardin, fam. Physalacriaceae (fungus, saprotrophic)

Contributor: Boris ASSYOV

Geographical focus: Bulgaria

New records and noteworthy data: These are the first records of *Cryptomarasmius corbariensis* in Bulgaria and the first collections from plants of *Olea europaea* L. in cultivation outside the Mediterranean parts of the Balkan Peninsula (TKALČEC & MEŠIĆ 2002; ZERVAKIS *et al.* 2004; DENCHEV & ASSYOV 2010; BOZOK *et al.* 2018).

Specimen data: 1) The southern River Strouma valley, Blagoevgrad Province, Sandanski municipality, Lebница village, approx. N 41.520963°, E 23.240509°, on the fallen leaves of ornamental *Olea europaea*; ca. 135 m a.s.l., 24 November 2019; leg. Iliev D.; det. Assyov B.; 2) Kresna municipality, Kresna gorge north of Kresna town, approx. N 41.730962°, E 23.153604°, on the fallen leaves of planted *O. europaea*; ca. 210 m a.s.l., 27 November 2021; leg./det. Assyov B.; *idem*, 5 December 2021; leg./det. Assyov B.; *idem*, 23 January 2023; leg./det. Assyov B.

Vouchers: Mycological Collection of the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences (SOMF), 30812, 30813, 30814, 30817.

On the Balkan Peninsula *C. corbariensis* is so far only known from Croatia and Greece and the above specimens mark the first national record of the fungus in Bulgaria (TKALČEC & MEŠIĆ 2002; ZERVAKIS *et al.* 2004; DENCHEV & ASSYOV 2010; BOZOK *et al.* 2018). It is a minute marasmioid species, appearing in the late autumn and winter (ANTONÍN & NOORDELOOS 2010; BOZOK *et al.* 2018), which makes it particularly easy to overlook. It is thus feasible that it could be present in other Balkan countries on the Adriatic coast with developed olive plantations, such as Albania, Bosnia and Herzegovina, and Montenegro, where it may be further sought. The only prior findings of *C. corbariensis* in non-Mediterranean Europe are on potted olives in Belgium (BOOMSLUITER 2017). The Bulgarian collections thus appear to also be the first records on plants in cultivation outside of the Mediterranean parts of the Peninsula.

Cryptomarasmius corbariensis is primarily associated with the dead leaves of *O. europaea*, but it is also known from the litter of other plants from the family Oleaceae Hoffmanns. & Link., namely shrubs of the genera *Syringa* L. and *Phillyrea* L. (ANTONÍN & NOORDELOOS 2010). *Phyllirea media* L. is present in the area of one of the localities reported here (Kresna gorge), including in the immediate vicinity of olive trees. The observations so far have not revealed the presence of *C. corbariensis* on this plant, but given the apparent ability of the fungus to inhabit its remains, this locality should be monitored further.

Dicranoweisia cirrata (Hedw.) Lindb. ex Milde, fam. Rhabdoweisiaceae (moss, bryophyte)

Contributors: Marko S. SABOVLJEVIĆ and Lado KUTNAR

Geographical focus: Slovenia

New records and noteworthy data: A data deficient (DD) species in Slovenia, records made 160 years (2006) since the previous one (1846)

Specimen data: 1) SE Slovenia, Drganja sela near Dolenjske Toplice/Novo Mesto, N 45.74720597°, E 15.08519488°, forestry association *Hedero-Fagetum* var. geogr. *Epimedium alpinum* (*Quercus-Fagetum*), forest of European beech (*Fagus sylvatica* Gaertn.) and sessile oak [*Quercus petraea* (Matt.) Liebl.] with admixed Norway spruce [*Picea abies* (L.) H. Karst.]; sampled on deadwood and tree bark; 300 m a.s.l., 27 July 2006; leg. Kutnar L.; det. Sabovljević MS.; 2) SW Slovenia, Križ near Tomaj/Sežana, N 45.74177603°, E 13.85612273°, forestry association *Ostryo-Quercetum pubescentis*, thermophilic forest of downy oak (*Quercus pubescens* Willd.) and European hop-hornbeam (*Ostrya carpinifolia* Scop.) with admixed black pine (*Pinus nigra* J.F. Arnold), sampled on tree bark, 317 m a.s.l., 17 July 2006; leg. Kutnar L.; det. Sabovljević MS.

Vouchers: Herbarium of the Slovenian Forestry Institute s/n.

Dicranoweisia cirrata is a moss of temperate distribution in Europe, where it is generally widespread. Its overall European population is estimated to be stable (CAMPISI & COGONI 2019a). It is found in both natural and man-made habitats, as a pioneer moss colonising tree trunks, freshly decomposing wood, wooden fences and a variety of other organic substrates, but sometimes also on exposed rocks and old stone walls in mountainous regions up to 1500 m in altitude (CAMPISI & COGONI 2019a). The species is considered tolerant to air pollution and can tolerate acid rain to some extent (DIERSSEN 2001; ATHERTON *et al.* 2010). However, this species has been considered as endangered (EN) in Romania, and in some other regions it is Data Deficient (DD), such as in Slovenia and Latvia (HODGETTS & LOCKHART 2020).

MARTINČIČ (2016) noted that the only known record in Slovenia is from Mt. Snežnik, and since it was made a very long time ago (BIASOLETTO 1846), it is considered as a Data Deficient (DD) species in Slovenia. The new records presented here were made 160 years after the previous one. The species is therefore confirmed for Slovenia, but studies on its distribution in the country are still needed.

Equisetum* × *moorei* Newman., fam. Equisetaceae (horsetail, vascular plant)*Contributors:** Petya BOYCHEVA and Dobri IVANOV**Geographical focus:** Serbia**New records and noteworthy data:** The first record for Southeast Serbia**Specimen data:** Eastern Serbia, Mt. Stara Planina, N 43.150532°, E 22.856099°, 1 January 2023; leg./det. Boycheva P, Ivanov D.**Voucher:** Herbarium of Sofia University St. Kliment Ohridski (SO) 108218.

A confirmed hybrid for the flora of Serbia (NIKETIĆ *et al.* 2018), its habitat is registered along the eco-path in the direction of Slavinjsko grlo, Slavinja, (Mt. Stara Planina); a wet grassy habitat, near the Rosomačka River. More than 20 specimens were registered. This is the first record of *Equisetum* × *moorei* in the region of Eastern Serbia. Although it was listed for the flora of Serbia, data about its presence were given without any precise locality by NIKETIĆ *et al.* (2018). Species habitat data have been published for Vojvodina (NIKETIĆ & TOMOVIĆ 2018).

Fissidens exilis* Hedw., fam. Fissidentaceae (moss, bryophyte)*Contributors:** Beata PAPP and Jovana PANTOVIĆ**Geographical focus:** North Macedonia**New records and noteworthy data:** Newly recorded for North Macedonia**Specimen data:** Southwestern part of North Macedonia, Mt. Jablanica, between Gorna Belica and Vevčani, towards Jankov Kamen, N 41.236944°, E 20.576111°, in *Fagetum*, on soil, 1198 m a.s.l., 21 June 2018; leg. Papp B, Pantović J, Sabovljević MS, det. Papp, B.**Voucher:** Department of Botany, Hungarian Natural History Museum, s/n.

This species is reported for the first time from North Macedonia (ROS *et al.* 2013; HODGETTS & LOCKHART 2020). It was recorded on the clayey substrate within the beach forest. This taxon is rather significant from the conservation point of view. It is under-recorded in many European countries and thus data-deficient (DD) in Bulgaria, Montenegro and Spain, while in some others it is near threatened (NT): Estonia, Finland, Hungary, Norway, Slovakia, Switzerland, and Romania (HODGETTS & LOCKHART 2020). In Ireland and Slovenia, it is considered a vulnerable species (VU), while in Portugal and Austria, it is endangered (EN) (ERZBERGER 2016; MARTINČIČ 2016; HODGETTS & LOCKHART 2020). Some recent European records are known from Slovenia (TOMOVIĆ *et al.* 2021), Hungary (ELLIS *et al.* 2018), Italy (POPONESSI *et al.* 2020) Serbia (PAPP *et al.* 2006), and Ukraine (MAMCHUR *et al.* 2018). Although the species is rare, the overall European population of *F. exilis* seems to be stable (CAMPISI & COGONI 2019b).

Fossombronia caespitiformis* (Raddi) De Not. ex Rabenh. fam. Fossombroniaceae (liverwort, bryophyte)*Contributors:** Aneta D. SABOVLJEVIĆ and Marko S. SABOVLJEVIĆ**Geographical focus:** Montenegro**New record and noteworthy data:** The second known records from Montenegro**Specimen data:** Godinje near Lake Skadar, N 42.226091°, E 19.103594°, on wet soil in the shade, protected by rock, in pseudomacchia, 26 m a.s.l.; 17 Februar 2023; leg./det. Sabovljević AD, Sabovljević MS.**Voucher:** Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, bryophyte collection Bryo (BEOU), s/n.

Fossombronia caespitiformis is an ephemeral leafy liverwort often reported from the Mediterranean area. Here, we report the second annotation in Montenegro. Previously, it was reported by DRAGIĆEVIĆ *et al.* (2008) in the Morača river basin north of Podgorica. It is probably more widespread in Montenegro but should be sought in the late winter- early spring period (SABOVLJEVIĆ 2019). Only the specimens with sporophytes can be identified properly, but it often produces sporophytes in the appropriate period of its ephemeral appearance. The sample collected belongs to the type subspecies, but other subspecies are also expected to be present in Montenegro.

Climate change and increased drought severity and longevity can affect this species. The species is adapted to the interchange of drought and wet periods, but dry winters and spring time may present a huge potential risk. In its overall European range, it is considered to have a stable population, but it is Near Threatened (NT) in Italy and Data Deficient (DD) in Switzerland (SABOVLJEVIĆ 2019).

Galanthus reginae-olgae* Orph. subsp. *vernalis* Kamari, fam. Amaryllidaceae (monocot, vascular plant)*Contributors:** Elvedin ŠABANOVIĆ and Filip JOVANOVIĆ**Geographical focus:** Bosnia and Herzegovina**New records and noteworthy data:** A confirmed snowdrop subspecies for the flora of Bosnia and Herzegovina.**Specimen data:** 1) Maslačevo cemetery, N 42.9813889°, E 17.7080556°, MGRS 33T YH26, ca. 330 m a.s.l.; 2) Cerovo, N 42.9928278°, E 17.7378889°, YH26, ca. 260 m a.s.l., both habitats with underbrush and garrigue vegetation, 19 January 2022, leg. Šabanović E, Ilić B.; det. Šabanović E., Jovanović F.**Vouchers:** Museum of the Franciscan Monastery in Visko – Herbarium Collection of Fr. Ivo Radman, 00313; photo documentation: E. Šabanović, A. Emrić.

The first possible record of *Galanthus reginae-olgae* subsp. *vernalis* for Bosnia and Herzegovina comes under the name common snowdrop (*G. nivalis* L.) from the litera-

ture data from the beginning of the 20th century from the Trebinje forest (BECK-MANAGETTA 1904). Both snowdrop taxa have appanate vernation, narrow linear leaves, and a single green mark at the tip of each inner perianth segment, but the upper leaf surface of *G. reginae-olgae* subsp. *vernalis* has a conspicuous glaucous stripe running down the middle of the leaf (DAVIS 1999, 2001). *Galanthus reginae-olgae* Orph. was also reported from Bosnia and Herzegovina by ŠILIC (1996), and recent literature data indicate the occurrence of the subspecies *vernalis* in the southwestern part of the former Yugoslavia (Croatia, Bosnia and Herzegovina, and Montenegro) (DAVIS 1999, 2001), although exact locations are not given. The findings of *G. reginae-olgae* subsp. *vernalis* reported here are the first confirmed records of this subspecies for the territory of Bosnia and Herzegovina. In addition to previous findings, this is a new 10 × 10 km UTM grid cell in the Mediterranean area of Bosnia and Herzegovina.

The current status of *G. reginae-olgae* Orph. in Bosnia and Herzegovina is estimated as Data Deficient – DD. Although more than 500 individuals were recorded at both sites, this taxon is believed to have a wider distribution and larger population size in the country considering the presence of suitable habitats. The monitoring of this taxon is needed to assess any potential threats which may affect the taxon and to monitor population dynamics. The degree of leaf development at flowering time, usually used as a taxonomic characteristic to distinguish between the two subspecies of *G. reginae-olgae* (DAVIS 1999, 2001), suggests that in addition to subsp. *vernalis*, subsp. *reginae-olgae* may also occur on the eastern Adriatic coast (pers. comm. A. Alegro, Zagreb). However, according to SHUKA *et al.* (2011), different degrees of leaf development are observed in the habitats of this species; therefore, the evidence of this subspecies should be considered with a degree of reservation.

***Hildenbrandia rivularis* (Liebmann) J. Agardh fam. Florideophyceae (red algae)**

Contributors: Sanja ŠOVRAK and Ana KNEŽEVIĆ

Geographical focus: Serbia

New records and noteworthy data: New localities in Serbia for *H. rivularis*, which is considered to be threatened in Serbia.

Specimens data: 1) Southeastern Serbia, Mt. Milevske Planine, Dejanov brook, N 43.632303°, E 22.387884°, 1165 m a.s.l., 27 July 2022; leg./det. Šovran S.; 2) Southeastern Serbia, Mt. Milevske Planine, Bratin Dol brook, N 43.595162°, E 20.411266°, 1000 m a.s.l., 27 July 2022; leg./det. Šovran S.; 3) Southeastern Serbia, Mt. Milevske Planine, Božička River, N 43.517681°, E 22.448541°, 846 m.a.s.l., 27 July 2022; leg./det. Šovran S.; 4) Southeastern Serbia, Mt. Dukat Planina, Bresnička River, N 43.435236°, E 22.488264°, 799 m a.s.l., 28 July 2022; leg./det. Šovran S.; 5) Southeastern Serbia, Mt. Dukat Planina, Dragovištica River, N 42.428034°, E 22.520615°, 730 m.a.s.l., 28 July 2022; leg./

det. Šovran S.; 6) Southeastern Serbia, Mt. Dukat Planina, Brankovačka River, N 42.416573°, E 22.502112°, 737 m.a.s.l., 28 July 2022; leg./det. Šovran S.; 7) Southeastern Serbia, Mt. Dukat Planina, Zlidolska River, N 42.414416°, E 22.484344°, 774 m.a.s.l., 28 July 2022; leg./det. Šovran S.; 8) Southeastern Serbia, Mt. Dukat Planina, Mala River, N 42.363221°, E 22.430951°, 893 m.a.s.l., 28 July 2022; leg./det. Šovran S.; 9) Southeastern Serbia, Mt. Dukat Planina, Popovska River, N 42.342845°, E 22.5363937°, 1054 m.a.s.l., 28 July 2022; leg./det. Šovran S.; 10) Eastern Serbia, Mt. Stara Planina, Ravnobučka River, N 42.405143°, E 22.513299°, 525 m.a.s.l., 11 August 2022; leg./det. Knežević A.; 11) Eastern Serbia, Mt. Stara Planina, Golema River, N 42.407652°, E 22.591179°, 856 m.a.s.l., 11 August 2022; leg./det. Knežević A. 12) Eastern Serbia, Mt. Devica, Sokobanjska Moravica River, N 43.630178° E 21.991876°, 426 m.a.s.l., 30 October 2022; leg./det. Šovran S.

Vouchers: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, Department of Algology, Mycology and Lichenology – algae wet collection (BEOU) 6659, 6660, 6661, 6662, 6684, 6689, 6696, 6697, 6699, 6703, 6706, 6707.

The first record of freshwater red algae *H. rivularis* in Serbia was recorded in the Dragovištica River in the village Radičevci (Bosilegrad) in 2008 (SIMIĆ 2008). After that, this species was found in the Cvetića brook and Bi-oštanska Banja brook, the tributaries of the Vrutci Reservoir in Western Serbia (BLAGOJEVIĆ *et al.* 2017).

New findings of the freshwater red algae *H. rivularis* in Serbia are presented here. The material was sampled during the summer of 2022. All the thalli of *H. rivularis* were found on larger stones and rocks in the streams and rivers at depths of up to 0.5 m, in shaded conditions. In all the localities, the water was moderately cold (< 15°C), alkaline (> 7) and with a high concentration of oxygen (> 9.2 mg/L).

Hildenbrandia rivularis has been recorded in clean and fast flowing waters in some European countries: Denmark, Belgium, Poland, Latvia, Finland, Sweden (KUMANO 2002; ELORANTA *et al.* 2011; KNAPPE & HUTH 2014) to date.

The plants were bright to dark red, forming more or less regularly circular discs, up to 3 cm in diameter. The basal layer of filaments was composed of radiating rows of somewhat elongate cells. The erect filaments were densely aggregated, simple or more rarely dichotomously branched and composed of almost isodiametric cells, from 6 to 11 µm in diameter.

This species is considered rare in Europe (ELORANTA *et al.* 2011) and is included on the Red Lists of some European countries and regions (SIEMIŃSKA *et al.* 2006; TEMNISKOVA *et al.* 2008; FOERSTER *et al.* 2018). According to the national legislation (OFFICIAL GAZETTE RS 2010–2016), *Hildenbrandia rivularis* is a strictly protected species in Serbia.

Juniperus virginiana* L., fam. Cupressaceae (Gymnosperms, vascular plants)*Contributors:** Petya BOYCHEVA and Dobri IVANOV**Geographical focus:** Bulgaria**New records and noteworthy data:** The spread of invasive and alien species**Specimen data:** Northeastern Bulgaria, Varna region, the land in Lyuben Karavelovo village, N 43.339393°, E 27.806550°, 15 October 2022; leg./det. Boycheva P, Ivanov D.**Voucher:** Herbarium of Sofia University St. Kliment Ohridski (SO) 108220.

One specimen in the fruiting phase with galbuli was registered on the territory of the Natura 2000 protected area of the Batova River Valley (BG 0000102), next to a deciduous forest.

Juniperus virginiana is a foreign species for the flora of Bulgaria. The native range of this species is in North America. It is a tree and grows primarily in the temperate biome (IPNI 2022). In Bulgaria it is grown as an ornamental plant (STOYANOV *et al.* 2021).

Lecanora stenotropa* Nyl., fam. Lecanoraceae (lichenized fungi)*Contributor:** Gordana R. ALEKSIĆ**Geographical focus:** Kosovo (Serbia)**New record and noteworthy data:** This is the first record for Kosovo i.e. Serbia.**Specimen data:** Kosovo, Zvečan Fortress, a prominent elevation with a medieval town, 2 km North of Kosovska Mitrovica, N 42.904167°, E 20.846389°, on siliceous rocks, 700 m a.s.l., 3 March 2019 and 2 April 2019; leg./det. Aleksić G.**Voucher:** Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade (BEOU), lichen collection 376/c and 381/c.

The two specimens of this taxon were recorded from the same site and habitat and here we report *Lecanora stenotropa* for the first time for Kosovo i.e. Serbia (TIBELL & TIBELL 2006; MAYRHOFER *et al.* 2016). The area was subjected to serious industrial pollution (by the industrial complex RMHK Trepča) during the late 20th century and it is probably still loaded with heavy metals (BEQIRI *et al.* 1983).

It is assumed that *L. stenotropa* could be more widespread not only in Kosovo, but also in the nearby areas. However, it can be easily overlooked due to its high similarity with *L. polytropia*. However, *L. stenotropa* seems to tolerate pollution better than closely related *L. polytropia* (DOBSON 2011), and thus these new records come as no surprise. We are not aware of any other Balkan records, and the nearest reported population is most probably the one in Italy (NIMIS 2016).

Linaria pelisseriana* (L.) Mill., fam. Plantaginaceae (dicot, vascular plants)*Contributors:** Gordana TOMOVIĆ and Marjan NIKETIĆ**Geographical focus:** Serbia**New records and noteworthy data:** A new site is presented for this insufficiently known plant, previously recorded from only several localities in Serbia. This is the first record for the region of eastern Serbia which corresponds to the northernmost population in Serbia.**Specimen data:** Eastern Serbia, Mt. Stara Planina, Topli Do village, Golema Njiva, N 43.3437202°, E 22.711749°, MGRS 34T FP30, ass. *Festucetum valesiacae*, silicate, ca. 990 m a.s.l.; 14 July 2022; leg. Niketić M, Tomović G, Ranimirović M.; det. Niketić M, Tomović, G.**Vouchers:** Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade (BEOU), vascular plant collection BBD_10331; Natural History Museum in Belgrade, General Herbarium of the Balkan Peninsula (BEO), 100139.

To date, the distribution of *L. pelisseriana* was entirely linked with the confluence of the River Južna Morava in Serbia. In the Kosovo and Metohija province it is present in the vicinities of Dobroševac, Đakovica and Prizren as well as on Mts. Šar Planina (TOMOVIĆ *et al.* 2003). The new record on Mt. Stara Planina is the first for the region of eastern Serbia, as well as the first associated with the confluence of the Nišava River. In Golema Njiva near the village of Topli Do *L. pelisseriana* inhabits rocky ground on silicate. Several hundred individuals were recorded within an area of 300 m² and this acidophilous plant is expected to have a wider distribution on Mt. Stara Planina bearing in mind such adequate habitats.

Micarea misella* (Nyl.) Hedl., fam. Pilocarpaceae (lichenised fungus)*Contributor:** Veselin V. SHIVAROV**Geographical focus:** Bulgaria**New record and noteworthy data:** The finding of *Micarea misella* represents the first record of this lignicolous lichen from Bulgaria.**Specimen data:** The Balkan Range, Petrohan Pass, near Petrohan Chalet, N 43.11482°, E 23.13137°, on the decorated wood of *Pinus sylvestris* L., 1463 m a.s.l.; 15 October 2022; leg./det. Shivarov VV.**Voucher:** Bulgarian Academy of Sciences, Mycological Collection of the Institute of Biodiversity and Ecosystem Research (SOMF) 31108.

Micarea is a large genus of 120 species, of which 76 are known from Europe (ARCADIA 2022). The members of the genus occur on a wide range of substrates: wood, bark, soil, rock, and bryophytes. A common characteristic of the genus is its preference for acidic substrates with low nutrient enrichment (COPPINS 1983). In Bulgaria, *M. misella* was found on a snag of *P. sylvestris* close to bo-

gland in an area with frequent fog. The diversity of the genus in Bulgaria consists of five species (DENCHEV *et al.* 2022), but a much higher number of species might be expected for the Bulgarian lichenised mycota.

***Parthenocissus quinquefolia* (L.) Planch., fam. Vitaceae (dicot, vascular plants)**

Contributors: Petya BOYCHEVA and Galina YANEVA

Geographical focus: Bulgaria

New records and noteworthy data: The spread of invasive species.

Specimen data: Southern Bulgaria, the Central Rhodopes, N 41.75801°, E 24.69965°; 18 August 2022; leg./det. Boycheva P, Yaneva G.

Voucher: Herbarium of Sofia University St. Kliment Ohridski (SO) 108219.

The habitat is registered next to Republic road II-86, in the Plovdiv-Smolyan direction, 4 km before the town of Chepelare, on the right side of the road; altitude – 1065 m.

The species is not new to the Central Rhodopes floristic region (ASSYOV & PETROVA 2012), but until now there was no information about its ascent to an altitude of over 600 m above sea level. *Parthenocissus quinquefolia* is distributed in several floristic regions of Bulgaria (ASSYOV & PETROVA 2012), including in the Rhodopes (Central) floristic region (VLADIMIROV *et al.* 2007). To date, the data on the distribution of the species are up to 600 m above sea level (PETROVA *et al.* 2013). We report a habitat of *P. quinquefolia* over 1000 m above sea level and the potential danger for its spread in mountainous areas. This is an invasive species for Europe and Bulgaria (STOYANOV *et al.* 2021), and it originates from North America. In Europe and Bulgaria, it was deliberately introduced as an ornamental plant, from where it spread in nature. It was recently registered as feral (VLADIMIROV *et al.* 2006), but self-propagation of the species began long ago (PETROVA *et al.* 2013).

***Peltolepis quadrata* (Saut.) Müll. Frib., fam. Cleveaceae (liverwort, bryophyte)**

Contributors: Sorin ȘTEFĂNUȚ and Constantin-Ciprian BÎRSAN

Geographical focus: Romania

New record and noteworthy data: This is the first record for the Parâng Mountains

Specimen data: Vâlcea County, the Southern Carpathians, Mts. Parâng, Găuri Valley, N 45.365858°, E 23.595420°, 2014 m a.s.l.; 27 July 2021; leg. Ștefănuț S, Bîrsan C.-C.; det. Ștefănuț S.

Voucher: Herbarium of the Institute of Biology - Bucharest, Romanian Academy, bryophyte collection (BUCA) B12150.

Peltolepis quadrata is a rare liverwort species which was reported in Romania from the Bucegi Massif, Mts. Pi-

atra Craiului and Mts. Făgăraș only (ȘTEFĂNUȚ 2008). The samples from Mt. Postăvarul (Mt. Cristianul Mare), 1600 m a.s.l., 30 May 1961, leg. Boros Á., det. Boros Á., BP 27789/H, 31000/H, 31002/H (BOROS & VAJDA 1967) have been revised to *Reboulia hemisphaerica* (L.) Raddi, (rev. Ștefănuț S. 2012). The records from Mts. Ciucaș are doubtful (ȘTEFĂNUȚ 2008) and require confirmation.

The fertile samples with sporophytes of *P. quadrata* were found on soil, below Găuri peak, along with other liverworts such as *Clevea hyalina* (Sommerf.) Lindb., *Conocephalum salebrosum* Szweyk., Buczk. & Odrzyk., *Marchantia quadrata* Scop. and *Reboulia hemisphaerica* (L.) Raddi.

This is the first record of *Peltolepis quadrata* for Mts. Parâng. The nearest localities of this species to Romania are in Bosnia and Herzegovina and Slovakia (HODGETTS & LOCKHART 2020). The conservation status of *P. quadrata* in Romania remain unchanged, i.e. Vulnerable – VU B2b(ii,iii,v) (ȘTEFĂNUȚ & GOIA 2012).

***Pilosella rhodopea* (Griseb.) Szeląg, fam. Asteraceae (dicot, vascular plants)**

Contributor: Zbigniew SZELĄG

Geographical focus: Romania

New record and noteworthy data: The first report in the Făgăraș Mts.

Specimen data: The Southern Carpathians, Mts. Făgăraș, near Lake Bâlea, in herbosis alpinis, N 45.600°, E 24.620°, August 1964; leg. Negrean G. (as *Hieracium alpinum* L.); rev. Szeląg Z.

Voucher: Herbarium O.Ö. Landesmuseum Linz (LI 516835, LI 517230).

Pilosella rhodopea (Griseb.) Szeląg belongs to *Pilosella* sect. *Alpicolinae* (Nägeli & Peter) Szeląg and occurs in the highest mountain ridges on the Balkan Peninsula (Albania, Bulgaria, Greece, and North Macedonia) and very rarely in the Southern Carpathians in Romania (SZELĄG 2008). In the Carpathians only two localities are known, in Mts. Cozia discovered by Gyula E. Nyárady in 1950 (SB 117668) and in Mts. Căpățâni discovered by Maria Ciurchea in 1950 (CL 444641) (NYÁRADY 1965; ŠINGLIAROVA & MRÁZ 2009).

The locality reported here in Mts. Făgăraș is the northernmost occurrence in the whole area of the species, and is disjoined ca. 50 km from the nearest locality in Mts. Cozia In 2017 and 2022, I was unable to find *Pilosella rhodopea* in the surroundings of Lake Bâlea. This area is greatly disturbed due to the tourist infrastructure, however, finding the species in other parts of the Făgăraș Mts. should be possible.

Spiranthes spiralis* (L.) Chevall., fam. Orchidaceae (monocot, vascular plant)*Contributors:** Vladan DJORDJEVIĆ and Eva KABAŠ**Geographical focus:** Serbia**New records and noteworthy data:** The first records of this species in the area of Mt. Maljen. The species is on the CITES list.**Specimen data:** 1) Northwestern Serbia, Mt. Maljen, Pitomine, N 44.125684°, E 20.016009°, MGRS 34T DP28, ass. *Danthonietum calycinae*, harzburgites, 1005 m a.s.l., 10 October 2022, leg. Djordjević V, Kabaš E., det. Djordjević V.; 2) Northwestern Serbia, Mt. Maljen, Tometino Polje (Divnića Polje), N 44.071014°, E 20.016926°, MGRS 34T DP28, ass. *Danthonietum calycinae*, harzburgites, 628 m a.s.l., 10 October 2022, leg. Djordjević V, Kabaš E., det. Djordjević V.**Vouchers:** Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, vascular plant collection (BEOU) 17904, 17905.

Spiranthes spiralis is distributed in western, central and southern Europe, southern and central Russia, the Caucasus, Asia Minor, north to southern Sweden, south to North Africa, west to Ireland and Portugal, and east to Iran (DELFORGE 2006; JACQUEMYN & HUTCHINGS 2010). New findings of this species on Mt. Maljen are the first records of *S. spiralis* in this mountain area and also the first record of this species in the MGRS 34T DP28 10 × 10 km UTM grid cell. Previously, this species was recorded in five 10 × 10 km UTM grid cells in northwestern Serbia (DJORDJEVIĆ 2021). The species was found at both sites on serpentine steppes, in the community *Danthonietum alpinae* Cincović et Kojić 1962 *sensu lato* within the alliance *Chrysopogono-Danthonion calycinae* Kojić 1959.

The newly recorded subpopulations on Mt. Maljen consisted of the following numbers of individuals: 12 individuals within an area of 4 m² (Pitomine) and two individuals within an area of 1 m² (Tometino Polje). The species is regionally extinct in Denmark, whereas it has the status of a critically endangered species (IUCN: CR) in Ukraine, the Netherlands, the Czech Republic and Slovakia, an endangered species (IUCN: EN) in Liechtenstein and Austria, and a vulnerable species (IUCN: VU) in Georgia, Bulgaria and Slovenia (KULL *et al.* 2016). Its conservation status is near threatened (IUCN: NT) in France, Switzerland, the United Kingdom and Hungary, and least concern (IUCN: NT) in Cyprus, Spain and Greece (KULL *et al.* 2016).

Sticta sylvatica* (Huds.) Ach. fam. Peltigeraceae (lichenised fungi)*Contributor:** Gordana R. ALEKSIĆ**Geographical focus:** Kosovo (Serbia)**New record and noteworthy data:** This is the first record for Kosovo i.e. Serbia.**Specimen data:** Kosovo, the prominent elevation of Zvečan, ex vulcano, 2 km north of Kosovska Mitrovica, N 42.904167°, E 20.846389°, on siliceous rocks, among mosses, 700 m a.s.l., 5 May 2019; leg./ det. Aleksić G.**Voucher:** Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, lichen collection (BEOU) 629.

The species was found in the north-exposed places, under a massive granite rock among mosses, in a damp shady spot. According to the literature data, this is the first record for Kosovo i.e. Serbia (TIBELL & TIBELL 2006; MAYRHOFER *et al.* 2016). The nearest records of this species are in Bulgaria (MURATI 1992) and Italy (NIMIS 2016).

Taraxacum erythrospermum* Andr. ex Besser, fam. Asteraceae (dicot, vascular plant)*Contributor:** Matej DUDÁŠ and Vladislav KOLARČIK**Geographical focus:** Bulgaria**New record and noteworthy data:** This is a rarely reported taxon, expected to be present in a wide range of dry grasslands in Europe. It is often overlooked and included as an aggregate of *T. laevigatum* nom. inval.**Specimen data:** 1) Sofia region, Kostinbrod district, Mt. Stara Planina, Gradets, N 42.8843056°, E 23.2129722°, a calcareous roadside, a few plants, pollen regular, 805 m a.s.l., 12 May 2017; leg. Dudáš M.; det. Štěpánek J.; 2) Sofia region, Aprilovo, a field road on the way to the St. Simeon Chapel on the top of the hill, N 42.6613889°, E 23.6820833°, a few plants, pollen regular, field road, 620 m a.s.l., 12 May 2017; leg. Dudáš M.; det. Štěpánek J.**Voucher:** Herbarium of Botanical Garden, Pavol Jozef Šafárik University in Košice (KO) 34139, 34145.

Taraxacum erythrospermum (sect. *Erythrosperma*) is distributed from Western Europe to the European parts of Russia, namely France, Switzerland, the Pannonian part of Central Europe, Ukraine, the Balkan Peninsula and Turkey (GURDAL *et al.* 2017). However, the reports are rare. In Bulgaria, it is expected to be a widespread taxon growing in xerothermic grasslands (ASSYOV & PETROVA 2012). This is the only sexual diploid taxon from this section, and also the only one with evenly sized pollen grains. The plant size is usually smaller compared to other taxa from this section and the lateral lobes of the leaves are deeply toothed. It should be noted that the other species from the section could be similar to the other species (e.g. *T. cristatum* Kirschner, Štěpánek & Vašut or *T. parnassicum* Dahlst.). *Taraxacum parnassicum* is known to be present in the Balkans (ŠTĚPÁNEK

& KIRSCHNER 2014; DUDÁŠ & VAŠUT 2022), and *T. cristatum* is recently described from Central Europe (VAŠUT *et al.* 2005; DUDÁŠ 2019).

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REZIME



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SERBICA

Novi i značajni podaci o biljkama, algama i gljivama iz JI Evrope i susjednih regiona, 12

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U radu su prikazani novi i značajni podaci sa područja JI Evrope i susjednih regiona o sledećim taksonima: crvenoj algi *Hildenbrandia rivularis*, saprofitskoj gljivi *Cryptomarasmius corbariensis*, lihenizovanim gljivama *Lecanora stenotropa*, *Micarea misella* i *Sticta sylvatica*, jetrenjačama *Fossombronina caespitiformis* i *Peltolepis quadrata*, mahovinama *Dicranoweisia cirrata* i *Fissidens exilis*, rastaviću *Equisetum × moorei*, golosemenici *Juniperus virginiana*, monokotilama *Galanthus reginae-olgae* subsp. *vernalis* i *Spiranthes spiralis* i dikotilama *Linaria pelisseriana*, *Parthenocissus quinquefolia*, *Pilosella rhodopea* and *Taraxacum erythrospermum*.

Ključne reči: novi nalaz, *Cryptomarasmius corbariensis*, *Dicranoweisia cirrata*, *Equisetum × moorei*, *Fissidens exilis*, *Fossombronina caespitiformis*, *Galanthus reginae-olgae* subsp. *vernalis*, *Hildenbrandia rivularis*, *Juniperus virginiana*, *Lecanora stenotropa*, *Linaria pelisseriana*, *Micarea misella*, *Parthenocissus quinquefolia*, *Peltolepis quadrata*, *Pilosella rhodopea*, *Spiranthes spiralis*, *Sticta sylvatica*, *Taraxacum erythrospermum*, JI Evropa