









Original Scientific Paper

New records and noteworthy data of plants, algae and fungi in SE Europe and adjacent regions, 25

Marko S. SABOVLJEVIĆ^{1,2,3*}, Gordana TOMOVIĆ^{1*}, Milica RAT⁴, Bojana BOKIĆ⁴, Péter SZÚCS⁵, Kristóf FÖLDI⁵, Richard HRIVNÁK⁶, Matúš HRIVNÁK⁷, BORIS RADAK⁴, Jovan PEŠKANOV⁴, Katerina BAČEVA ANDONOVSKA⁸, Antony VAN DER ENT⁹, János CSIKY¹⁰, Génesis Katherine DELA CAMPOS¹⁰, Pavel ŠIRKA⁷, JAN KUČERA¹¹, Sanja ŠOVRAN¹, Ermin MAŠIĆ¹², Zbigniew SZELAĞ¹³, Dimitar STOYKOV¹⁴, Sorin ȘTEFĂNUȚ¹⁵, Boris ASSYOV¹⁴, Monica SLAVOVA¹⁶, Siniša ŠKONDRIC¹⁷, Ranko PERIĆ¹⁸, Jelena KNEŽEVIĆ¹⁹, Vladan DJORDJEVIĆ¹, Gordana KASOM²⁰, Sead HADŽIABLAHOVIĆ²⁰, Dragana JENAČKOVIĆ GOCIĆ²¹, Bojan ZLATKOVIĆ²¹, Andrea SASS-GAYRMATI²², József Pál FINK²³, Matej DUDÁŠ², Veselin V. SHIVAROV¹⁴ and Snezhina POPOVA²⁴

- 1 Institute for Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11 000 Belgrade, Serbia
- 2 Department of Botany, Institute of Biology and Ecology, Faculty of Science, Pavol Jozef Šafárik University in Košice, Mánosova 23, 040 01 Košice, Slovakia
- 3 Center of Plant Biotechnology and Conservation (CPBC), Takovska 43, 11000 Belgrade, Serbia
- 4 University of Novi Sad, Faculty of Sciences, Department of Biology and Ecology, Trg Dositeja Obradovića 2, 21000 Novi Sad, Serbia
- 5 Institute of Biology, Eszterházy Károly Catholic University, Leányka u. 12, HU-3300 Eger, Hungary
- 6 Institute of Botany, Plant Science and Biodiversity Centre, Slovak Academy of Sciences, Dúbravská cesta 9, SK-845 23 Bratislava, Slovakia
- 7 Department of Phytology, Faculty of Forestry, Technical university in Zvolen, T. G. Masaryka 24, SK-960 01 Zvolen, Slovakia
- 8 Research Center for Environment and Materials, Macedonian Academy of Sciences and Arts, Skopje 1000, North Macedonia
- 9 Laboratory of Genetics, Wageningen University and Research, Wageningen 6708 PB, The Netherlands
- 10 Institute of Biology, Faculty of Sciences, University of Pécs, Ifjúság útja 6., H-7624 Pécs, Hungary
- 11 Department of Botany, Faculty of Science, University of South Bohemia, Czech Republic
- 12 Faculty of Sciences, University of Sarajevo, Zmaja od Bosne 33-35, 71000 Sarajevo, Bosnia and Herzegovina
- 13 Institute of Biology and Earth Sciences, University of the National Education Commission, Podchorążych 2, 30-084 Kraków, Poland
- 14 Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, 2 Gagarin St., 1113 Sofia, Bulgaria
- 15 Institute of Biology – Bucharest, Romanian Academy, 296 Splaiul Independentei, 060031 Bucharest, Romania
- 16 Faculty of Biology, University of Plovdiv “Paisii Hilendarski”, 24 Tsar Assen Str., 4000 Plovdiv, Bulgaria.
- 17 Faculty of Natural Sciences and Mathematics, University of Banja Luka, Mladena Stojanovića 2, 78000 Banja Luka, Republic of Srpska, Bosnia and Herzegovina
- 18 Institute for Nature Conservation of Vojvodina province, Radnička 20a, 21000 Novi Sad, Serbia
- 19 Botanical Society “Andreas Wolny”, Trg Dositeja Obradovića 2, 21000 Novi Sad, Serbia
- 20 Environmental Protection Agency, IV Proleterske 19, 81000 Podgorica, Montenegro
- 21 Department of Biology and Ecology, Faculty of Sciences and Mathematics, University of Niš, Višegradska 33, 18000 Niš, Serbia
- 22 Institute of Biology, Eszterhazy Karoly University, Pf 43, 3301 Eger, Hungary
- 23 Marin Dracea National Institute for Research and Development in Forestry, 65 Horea st., 400275 Cluj-Napoca, Romania
- 24 Faculty of Biology, University of Sofia, 9 Dragan Tsankov Boulevard, 1164 Sofia, Bulgaria

*column editors, to whom contribution should be sent (marko@bio.bg.ac.rs)



ABSTRACT:

This paper presents new records and noteworthy data on the following taxa in SE Europe and adjacent regions: brown alga *Heribaudiella fluviatilis*, fungi *Holmiella sabina*, *Lysurus cruciatus*, and *Psathyrella ammophila*, lichen *Umbilicaria subpolyphylla*, liverwort *Kurzia pauciflora*, mosses *Climacium dendroides*, *Dicranella howei*, *Fissidens rivularis*, *F. viridulus*, and *Sphagnum papillosum*, dicots *Hesperis matronalis* subsp. *candida*, *Hieracium gaudryi*, *Lythrum hyssopifolia*, *Lythrum tribracteatum*, and *Taraxacum janchenii* and monocots *Allium moschatum*, *Cyperus esculentus*, *Dactylorhiza × aschersoniana*, *Dactylorhiza incarnata*, *Ophrys insectifera*, and *Schoenoplectus litoralis*.

Keywords: new report, *Allium moschatum*, *Climacium dendroides*, *Cyperus esculentus*, *Dactylorhiza × aschersoniana*, *Dactylorhiza incarnata*, *Dicranella howei*, *Fissidens rivularis*, *F. viridulus*, *Heribaudiella fluviatilis*, *Hesperis matronalis* subsp. *candida*, *Hieracium gaudryi*, *Holmiella sabina*, *Kurzia pauciflora*, *Lysurus cruciatus*, *Lythrum hyssopifolia*, *Lythrum tribracteatum*, *Ophrys insectifera*, *Psathyrella ammophila*, *Schoenoplectus litoralis*, *Sphagnum papillosum*, *Taraxacum janchenii*, *Umbilicaria subpolyphylla*, SE Europe.

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***Allium moschatum* L., fam. Amaryllidaceae (monocot, vascular plants)**

Contributors: Milica RAT and Bojana BOKIĆ

Geographical focus: Serbia

New records and noteworthy data: Confirmation of the historical floristic records for the Pannonian biogeographical region in Serbia.

Specimen data: Serbia, Bačka, Landscape of Outstanding Features Subotička pešćara, Čavolj, N 46.160868°, E 19.622355°, sands, along a road within a weekend settlement, 95 m a.s.l.; 6 August 2024; leg. Bokić B, Rat M., det. Anačkov G.

Vouchers: Herbarium of the University of Novi Sad, vascular plant collection (BUNS), 26038.

Allium moschatum is distributed from north-western Iran and the Caucasus through eastern, central, and southern Europe (POWO 2025). The species inhabits open, dry and rocky grasslands, of base- and colloid-rich soils in Mediterranean, sub-Mediterranean, and continental climates, from lower-mountain to submontane regions.

In the Balkan Peninsula, the species is widespread, occurring across all its previously cited habitat preferences, from lowlands to high altitudes. However, in the Pannonian biogeographical region, where it reaches its northern edge in Europe, its distribution is limited to sandy areas on calcareous substrate in the region of the Transdanubian Mountains in Hungary, with one known location in the far southwest of the Pannonian plain, in Croatia (NIKOLIĆ 2015+; BARTHA *et al.* 2021+).

In Serbia, *A. moschatum* is cited as a widespread species (TATIĆ 1975; NIKETIĆ & TOMOVIĆ 2018). However, in Vojvodina, within the Pannonian region, the species is known only from historical records in the Subotička pešćara and Deliblatska pešćara (LÁNYI 1914; JÁVORKA 1925; BROZ 1951). The sole herbarium record was collected by Teodor Soška in “Čoka, 25. VII 1943”, PZZP collection of T. Soška, Inv. No. 14 [auth. int. Deliblatska pešćara. Čoka].

New noteworthy floristic records for this species confirm previously known literature data for the Subotička pešćara region (LÁNYI 1914). One population, with fewer than 250 individuals, is located within the protected Landscape of Outstanding Features Subotička pešćara, at Čavolj. Numerous surveys in other parts of the Subotička pešćara, as well as in the Deliblatska pešćara, have not confirmed its current presence. Therefore, the significance of this floristic record is considerable, as it represents the northernmost location in Serbia today within the Pannonian biogeographical region, isolated from other known popula-

tions. The population is situated within a weekend settlement, along a roadside, in small patches of open sandy habitat, surrounded by houses with small gardens and planted pine forests. The main threats to the species include habitat fragmentation, urbanisation, tourism, road development, forest expansion, inadequate management of sandy forest ecosystems, and the overall scarcity of suitable sandy habitats.

Conservation measures should focus on developing *in situ* programmes for this species within protected areas. Based on its main identified requirements, the proposed measures are: 1) conserving and restoring habitat by removing successional forest and shrub species and maintaining open sandy areas; 2) providing spatial protection by prohibiting or strictly controlling urban development and road infrastructure in the immediate vicinity of the species' location; 3) regularly monitoring populations and habitat conditions, and implementing adaptive management plans with periodic restoration of sandy surfaces; 4) raising awareness among local residents and tourists about the ecological and cultural importance of this species, highlighting its value as a wild relative of onion and its inclusion in medicinal and edible plants. In addition, it is also necessary to develop *ex situ* conservation measures to ensure long-term population regeneration and stabilisation. These may include cultivation in botanical gardens, seed banking, and the establishment of genetic resource collections to support potential reintroduction and regeneration efforts.

***Climacium dendroides* (Hedw.) F.Weber & D.Mohr. fam. Climaciaceae (moss, bryophyte)**

Contributors: Péter SZÚCS and Kristóf FÖLDI

Geographical focus: Albania

New records and noteworthy data: The second record for Albania.

Specimen data: Eastern part of Albania, Dibër region, near the North Macedonian border, Mount Korab, in calcareous fen, N 41.801595°, E 20.559881°, 2150 m a.s.l.; 12 Sept 2025; leg: Földi K, Nagy L, Nyitrai E.; det: Szűcs P.

Voucher: Eszterházy Károly Catholic University, Eger, Bryophyte Herbarium of Department of Botany and Plant Physiology (EGR), s.n.

Climacium dendroides is a pleurocarp moss with a circumpolar-boreal distribution. The species is relatively frequent in Europe (CAMPISI & COGONI 2019a) and widespread in southeastern Europe (SABOVLJEVIĆ *et al.* 2008), but rather sporadic around the Mediterranean region (ROS *et al.* 2013). In the first list of bryophytes of Albania, COLACINO & SABOVLJEVIĆ (2006) reported that this species had not been documented in Albania. The first record of this moss in Albania was reported from Guri i Mëngjesit near Shishtavec village in Kukës County by MARKA & SABOVLJEVIĆ (2011). This record was subsequently included in checklists of the bryophyte flora of Albania (ROS *et al.* 2013; COLACINO 2023). The present record is the second confirmed occurrence for Albania. Interestingly, this species is not mentioned in the extensive list of new and confirmed species in Albania published by MARKA *et al.* (2018). However, the species is likely to be more widespread in the country than currently documented, indicating the low level of knowledge of bryophyte flora of Albania.

***Cyperus esculentus* L., fam. Cyperaceae (monocot, vascular plants)**

Contributor: Milica RAT

Geographical focus: Serbia

New records and noteworthy data: The first record for Serbia.

Specimen data: Srem, Batajnica, Danube River, N 44.925250°, E 20.317883°, coast, sand, 71 m a.s.l.; 18 August 2024; leg/det. Rat M.

Vouchers: Herbarium of the University of Novi Sad, vascular plant collection (BUNS), 26038.

Cyperus esculentus is a globally widespread weed species which has long been used as animal feed, in medicine and for ecological and social purposes, as a source of fuel and food. For this reason, its native range has been estimated differently: ranging from the tropics and subtropics to North America (POWO 2025) or as the Mediterranean region and south-west Asia (FOLLAK *et al.* 2016). In Central Europe, however, it is considered a naturalised alien plant which mainly occurs on arable land and spreads into the surrounding areas (FOLLAK *et al.* 2015).

This is the first record of *C. esculentus* in Serbia. A population was found on the sandy bank of the Danube in the region of the protected area of Loess Profile Kapela in Batajnica near the village of Batajnica, Srem. There are no records of the cultivation of this species as a crop in Serbia, neither in the literature nor in the official legal regulations. Due to the lack of data, it is not possible to determine the current invasive status of the species in Serbia, other than classifying it as an alien (allochotone) species. Considering the distribution of the species in the wider region, the species may be widespread along the banks of the Danube or on arable land in the vicinity as a weed species.

***Dactylorhiza* × *aschersoniana* (Hausskn.) Borsos & Soó, fam. Orchidaceae (monocot, vascular plant)**

Contributors: Richard HRIVNÁK and Matúš HRIVNÁK

Geographical focus: Croatia

New record and noteworthy data: This represents the first clearly localised data on the occurrence of this hybrid in Croatia; previously, only general information on its distribution in Gorski Kotar was available.

Specimen data: North-Western Croatia, Leskova Draga near the village of Kupjak, on grassland along the roadside between Šije and Leskova Draga, near the road bridge beneath the highway, N 45.3858300°, E 14.8986364°, 787 m a. s. l.; 12 May 2025; leg. Hrivnák R, Hrivnák M.; det. Hrivnák R.; rev. Vlčko J.

Vouchers: Photo documentation of Hrivnák R. and Hrivnák M.

Dactylorhiza × *aschersoniana* is an interspecific and highly variable hybrid between *D. incarnata* (L.) Soó and *D. majalis* (Rchb.) P. F. Hunt & Summerh. The hybrid is distributed throughout Europe (GBIF.org (11 March 2025); POWO 2025). In Croatia, this taxon was not mentioned in the comprehensive work on the vascular flora of the country, *Flora Croatica* (NIKOLIĆ 2020a). However, KRANČJEV (2005) previously reported its occurrence in Croatia. More recently, in their study on the distribution of *Dactylorhiza* taxa in Croatia, ČIČMIR *et al.* (2025) stated that the taxon was only recorded in the Gorski Kotar region (north-western Croatia). However, no detailed locality data were provided. The authors also suggested that the taxon may be more widespread. This hybrid is relatively frequent in the mountainous landscapes of Central Europe, in the Czech Republic and Slovakia (PRŮŠA 2019; see also Pladias.sk).

We documented a relatively large population of *D. × aschersoniana* together with *D. majalis* (Rchb.) P.F. Hunt & Summerh. in the Gorski Kotar region, occurring in grasslands partially modified by human activity (a slope above a road). Morphologically, the hybrid individuals resemble *D. majalis* more than *D. incarnate* (L.) Soó.

***Dactylorhiza incarnata* (L.) Soó, fam. Orchidaceae (monocot, vascular plant)**

Contributors: Boris RADAČ and Jovan PEŠKANOV

Geographical focus: Serbia

New records and noteworthy data: A new site is given for this strictly protected taxon in Serbia (OFFICIAL GAZETTE RS 2010–2016), marking its northernmost point of distribution in the Banat region.

Specimen data: Banat, Kikinda, Ribolovačko Carstvo, N 45.785665°, E 20.377246°, MGRS 34T DR57, purple willow scrub (*Salix purpurea* L.), alluvium

(grey sand with gravel), exp. flat, 73 m a.s.l.; 20 June 2020; leg. Radak B., Radak Dj.; det. Radak B, Peškanov J.

Voucher: The herbarium of the University of Novi Sad, vascular plant collection (BUNS), 2-2248; photo documentation of Radak B.

Dactylorhiza incarnata is widespread across Europe and temperate Asia, ranging from central Spain to Northwestern China. Its northern limits of distribution extend to Scotland and northern Scandinavia, while it is found as far south as northern Italy, Greece, and northwest Anatolia (DELFORGE 2006; HARRAP & HARRAP 2010; KÜHN *et al.* 2019). It is widespread in numerous localities in Western Serbia (DJORDJEVIĆ 2021). Known sites in Vojvodina include the vicinity of Subotica, the area of Carska Bara, Gornje Podunavlje, the Apatin floodplain, Bački Monoštor (KOVAČEVIĆ 2000), and the Deliblato Sands (HABIJAN-MIKEŠ 1998). The newly recorded population of *D. incarnata* represents the northernmost point of distribution in the Serbian Banat region.

This taxon occupies a variety of habitats, including inland and coastal marshes, fens, wet meadows, and stream margins, and has been recorded at elevations up to 2400 m a.s.l. Its preferred habitats are typically open, sun-exposed with damp to swamp conditions, most often on alkaline to neutral substrates, and occasionally on acidic soils (FAY *et al.* 2024). In Serbia, this taxon most commonly grows on Quaternary sediments, ophiolite mélange, and carbonate clastites (DJORDJEVIĆ 2021). Individuals of this taxon at the Ribolovačko Carstvo site were observed in willow scrub dominated by *Salix purpurea*. Other woody species present included *S. caprea* L. and juvenile individuals of *Populus alba* L., *P. ×euroamericana* Guinier, and *Prunus mahaleb* L. The herbaceous layer was dominated by *Calamagrostis epigejos* (L.) Roth, with 90% of ground cover, while *Mentha longifolia* (L.) L., and *Equisetum arvense* L. were also recorded.

In the European Red List, this taxon is classified as Least Concern (LC) (BILZ *et al.* 2011) and listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In Serbia, it is strictly protected (OFFICIAL GAZETTE RS 2010–2016), with its estimated national IUCN conservation status being Near Threatened (NT) (DJORDJEVIĆ 2021). Given that the Ribolovačko Carstvo site serves as both a tourist and fishing destination, this population is vulnerable to trampling due to its high accessibility.

***Dicranella howei* Renauld & Cardot, fam. Dicranellaceae (moss, bryophyte)**

Contributors: Katerina BAČEVA ANDONOVSKA and Antony VAN DER ENT

Geographical focus: North Macedonia

New record and noteworthy data: A new species for North Macedonia.

Specimen data: Allchar, Southern Deposit, N 41.1489417°, E 21.9523806°, 799 m a.s.l., 2 July 2025; leg. Bačeva Andonovska K, van der Ent A, Jakovljević K.; det. Sabovljević M.

Voucher: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, bryophyte collection Bryo (BEOU), s/n.

Dicranella howei is an acrocarpous moss, which in Europe is mainly distributed in the Mediterranean region, extending northwards to the Netherlands and Germany (HODGETTS & LOCKHART 2020). According to the IUCN Red List, it is assessed as Least Concern (LC) (CAMPISI & COGONI 2019b), whereas its status at national level is classified as Vulnerable (VU) in Switzerland, Near Threatened (NT) in Hungary and Serbia (B2ab(ii,iv)), and Data Deficient (DD) in Bulgaria and Slovenia (HODGETTS & LOCKHART 2020; SABOVljević *et al.* 2024).

The finding of *Dicranella howei* in the Allchar region, in the southern part of North Macedonia near the Greek border is the first record for this country. Misidentification with the morphologically similar *D. varia* (Hedw.) Schimp., a species already known in North Macedonia (HODGETTS & LOCKHART 2020; BONFIM

SANTOS *et al.* 2021), may have led to the species being overlooked. Furthermore, this is the first record of the species from metalliferous sites characterised by the dominance of arsenic (As) and thallium (Tl) minerals and varying concentrations of antimony (Sb) and gold (Au) (JANKOVIĆ & JELENKOVIĆ 1994). The presence of this species in such a geochemically extreme environment suggests that *D. howei* may exhibit a greater ecological tolerance than previously assumed, offering new insights into its habitat range and potential adaptive capacity.

***Fissidens rivularis* (Spruce) Schimp., fam. Fissidentaceae (moss, bryophyte)**

Contributors: János CSIKY and Génesis Katherine DELA CAMPOS

Geographical focus: Croatia

New records and noteworthy data: A new species for Croatia (HODGETTS & LOCKHART 2020).

Specimen data: Slavonia, Mt. Papuk, Slatinski Drenovac – Jankovac Forest Park, in the Kovačica stream bed, on migmatite boulders below the travertine waterfall (Skakavac), in association with *Fissidens crassipes*, N 45.523006°, E 17.683064°, 467 m a.s.l., 7 November 2025; leg. Csiky J, Dela CGK, det. Csiky J, Dela CGK, Sipos A, conf. Šegota V, Rimac A.

Voucher: Herbarium of the University of Pécs (JPU) s/n., Zagreb University Herbarium (ZA) ZA82952.

Fissidens rivularis (Spruce) Schimp typically occurs on moist, acidic substrates, such as silicate rocks in shaded ravines, and is only exceptionally recorded on calcareous rocks (BLOCHEEL *et al.* 2014). In adjacent land-bordering countries, the species also occurs in Hungary, Serbia, and Bosnia & Herzegovina (HODGETTS *et al.* 2019; SABOVLJEVIĆ *et al.* 2024; WILBRAHAM *et al.* 2025). This hydrophilous species is a small- to medium-sized representative of the genus. The main morphological features comprise a thick limbidium which merges into an excurrent costal nerve, forming a stout mucro of around 150 µm in length at the leaf tip (ERZBERGER 2016).

The Skakavac waterfall within the Jankovac Forest Reserve forms a prominent travertine cascade which ultimately joins the steep cascades of the Kovačica stream. In the Kovačica stream bed, the migmatite boulders are constantly sprayed by water dripping from the nearly 20 m high travertine waterfall, covering the silicate surface covered with a thin calcareous deposit. This likely favours the dominant *F. crassipes*, while *F. rivularis* remains extremely rare in these conditions. Only seven individual shoots of *F. rivularis* were documented among some 250 *F. crassipes* shoots. Under these conditions, *F. rivularis* exhibits a poorly developed limbidium on the dorsal lamina, resembling specimens found in Krasnodar (Russia) (IGNATOV *et al.* 2023a), and exhibits an unusually narrow width (10–20 µm). It is assumed that more substantial *F. rivularis* populations may occur along the upper course of the stream, as well as in the side valleys of its lower sections where the influence of calcareous rocks on the water becomes negligible or absent.

***Fissidens viridulus* (Sw. ex anon.) Wahlenb. fam. Fissidentaceae (moss, bryophyte)**

Contributors: Pavel ŠIRKA and Jan KUČERA

Geographical focus: Serbia

New records and noteworthy data: New records of a Vulnerable (VU) species in Serbia (SABOVLJEVIĆ *et al.* 2024).

Specimen data: Eastern Serbia, Braničevo District, Žagubica, in the foothills of Mt. Beljanica, on privately owned mesophilous grassland currently used as a sheep pasture, on base-rich soil; N 44.1967739°, E 21.7587572°, 310 m a.s.l.; 20 May 2025; leg. Širka P.; det. Širka P, Kubešová S.; rev. Hradílek Z, Kučera J.

Vouchers: Herbarium of the Technical University in Zvolen (ZV), s.n.

Fissidens viridulus is a critical taxon belonging to a taxonomically complex species group. Although it is considered relatively widespread across Europe, its true distribution remains unclear due to differing taxonomic concepts (HRADÍLEK 2005; CAMPISI & COGONI 2019c). As the type of *F. viridulus* originates from Sweden, it is likely that in the strict sense this species corresponds to what IGNATOV *et al.* (2023a, b) call *F. viridulus* 'sibiricus', which seems to be a mostly North and Central European species. We barcoded the specimen molecularly for the ITS region (GenBank accession PZ019503), which confirmed its identity as part of the *F. viridulus* 'sibiricus' lineage *sensu* IGNATOV *et al.* (2023a, b). The species typically grows on basic to slightly acidic, clayey, moist, and shaded soils in a variety of habitats, including soil cuttings, stream banks, woodlands, among rocks, and on shallow soils overlying rock in calcareous regions (HRADÍLEK 2005; ERZBERGER 2016).

Despite being overlooked rather than genuinely rare, in Serbia the species has only been documented from Mt. Avala near Belgrade (SABOVLJEVIĆ & CVETIĆ 2003) and the Đerdap National Park (PAPP *et al.* 2006). In addition, one unpublished herbarium specimen is known from the Vršачke planine Mts (leg./det. M. Sabovljević, 11 March 2001, BEOU-Bryo 00636). At the locality in Žagubica, accompanying species included *Brachythecium albicans* (Hedw.) Schimp., *Ceratodon purpureus* (Hedw.) Brid., *Oxyrrhynchium hians* s. str. (Turner) Warnst., *Plagiomnium cuspidatum* (Hedw.) T.J.Kop., *Rhynchostegium megapolitanum* (Blandow ex F.Weber & D.Mohr) Schimp., *Tortula acaulon* (With.) R.H.Zander, *T. caucasica* Broth., *Trichodon cylindricus* (Hedw.) Schimp., *Weissia controversa* Hedw. and *W. longifolia* Mitt.

***Heribaudiella fluviatilis* (Areschoug) Svedelius fam. Phaeophyceae (brown alga, algae)**

Contributors: Sanja ŠOVRAK and Ermin MAŠIĆ

Geographical focus: Bosnia and Herzegovina

New record and noteworthy data: A new species record for Bosnia and Herzegovina.

Specimen data: Bosnia and Herzegovina, near Šipovo, the Janj River, N 44.212167°, E 17.131972°; 559 m.a.s.l.; 30 July 2025; leg./det. Šovran S, Mašić, E.

Voucher: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, Department of Algology and Micology – algae wet collection (BEOU) 6689.

Brown algae (class Phaeophyceae) are predominantly found in marine environments, while their freshwater counterparts are rarely studied or documented, making reports of their presence rather uncommon. This represents the first documented occurrence of the freshwater brown alga *Heribaudiella fluviatilis* in Bosnia and Herzegovina. During the summer of 2025, *H. fluviatilis* was collected from the Janj River near Šipovo. At the time of sampling, the river's water was slightly cold (12.4°C), alkaline (pH 7.34), and well-oxygenated (11.23 mg O₂/l).

Although *H. fluviatilis* was described in detail as far back as 1930, available data on this species remain limited and dispersed, originating from sporadic reports across Europe (ATHANASIADIS 1996; LUDWIG & SCHNITTLER 1996; WEHR 2003; WHITTON *et al.* 2003; MCCAULEY & WEHR 2007; ELORANTA *et al.* 2011; TÄUSCHER 2016), North America (WEHR & PERRONE 2003; WEHR 2015; WEHR *et al.* 2019), Japan (YOSHIZAKI *et al.* 1984), and China (JAO 1941). Detailed accounts of its distribution in Europe and Asia were provided by WEHR & STEIN (1985) and STOYNEVA *et al.* (2003), based on the data available at the time. In the southeastern part of Europe, occurrences of *H. fluviatilis* have been reported from Greece (ANAGNOSTIDIS 1968), Bulgaria (STOYNEVA *et al.* 2003), Croatia (KOLETIĆ *et al.* 2018), and most recently Serbia (SABOVLJEVIĆ *et al.* 2023). *Heribaudiella fluviatilis* is listed on the red lists of algal species in some coun-

tries, including Bulgaria (TEMNISOVA *et al.* 2008) and Germany (FORSTNER *et al.* 2018), where it is considered regionally rare or threatened due to its limited distribution and ecological specificity.

Heribaudiella fluviatilis typically colonises rocky and stony substrates in streams, rivers, and small watercourses. Its thalli appear as brown, crust-like patches on the surface of stones, often inconspicuous in appearance, which contributes to the species being easily overlooked during field investigations (HOLMES & WHITTON 1975). The brownish thalli consist of creeping and repeatedly branching filaments which form closed discs. The discs give rise to vertical filaments, which are densely packed and 5 to 15 cells high. Unilocular sporangia may develop at the tip of the vertical filaments (ELORANTA *et al.* 2011).

This species demonstrates a broad ecological tolerance, inhabiting waters with varying trophic status ranging from oligotrophic to eutrophic systems. It thrives in environments with neutral to slightly alkaline pH values and is capable of withstanding a wide range of concentrations of key nutrients, including inorganic calcium, phosphorus, and nitrogen. *H. fluviatilis* is found under various light conditions, from heavily shaded habitats to fully exposed sites (WEHR & STEIN 1985).

***Hesperis matronalis* L. subsp. *candida* (Kit.) Hegi & Em. Schmid (dicot, vascular plant)**

Contributors: Richard HRIVNÁK and Matúš HRIVNÁK

Geographical focus: Croatia

New record and noteworthy data: New distribution data from natural habitats in north-eastern Croatia and the first record from Mts Papuk.

Specimen data: North-Eastern Croatia, Velika village, north of the village, on a mountain ridge between Ivačka glava (933 m) and Korpivnato brdo (851 m) hills, N 45.5159978°, E 17.6425469°; 870 m a. s. l.; 16 May 2024; leg. Hrivnák R., Hrivnák M.; det. Hrivnák R.

Vouchers: Photo documentation of Hrivnák R. and Hrivnák M.

Hesperis matronalis is treated in Croatia as a part of the *H. matronalis* agg., together with *H. dinarica* Beck and *H. sylvestris* Crantz. Within *H. matronalis*, three subspecies, subsp. *candida* (Kit.) Hegi & Em. Schmid, subsp. *cladotricha* (Borbas) Hayek, and subsp. *matronalis* are recognised in Croatia (NIKOLIĆ 2020b). The distribution of the species (including all subspecies) in Croatia is scattered, with relatively more frequent occurrences in the northern part of the country, while records from other regions are rare (NIKOLIĆ 2015+).

Subspecies *candida* has been recorded from several localities between Karlovac and Varaždin in northern Croatia and from the vicinity of the town of Novi Grad on the Croatia-Bosnia and Herzegovina border (NIKOLIĆ 2015+). A new locality of the taxon was discovered in Mts Papuk, in montane beech forests of the alliance *Aremonio-Fagion* (Horvat 1950) Borhidi in Török *et al.* 1989, where the population comprised several individuals. To date, only *H. sylvestris* Crantz has been reported from Mts Papuk (TOMAŠEVIĆ 2006; PANDŽA 2010). However, *H. matronalis* (without subspecies determination) has previously been recorded in areas adjacent to Mts Papuk, near the towns of Slatina (on canal banks; PRLIĆ 2012) and Požega (MILIČIĆ *et al.* 1958; TOMAŠEVIĆ 1998).

***Hieracium gaudryi* Boiss. & Orph., fam. Asteraceae (dicot, vascular plants)**

Contributor: Zbigniew SZELĄG

Geographical focus: Greece

New record and noteworthy data: The first records of a rare species in the Giona (Γκιώνα) Mountains.

Specimens data: 1) Mts Giona, calcareous scree in a dry ravine above a gravel road, 1.5 km NE of Mt. Plativouna (Πλατυβούνα), N 38.659°, E 22.282°, 1780–

1800 m a.s.l.; 29 July 2018; leg./det. Szelağ Z. 2) Mts Giona, N of the Rikas-Gourlomyta-Giona (Ρικάς-Γουρλομύτα-Γκιώνα) nature reserve, on the calcareous rocks alongside a gravel road, N 38.639°, E 22.286°, 2160 m a.s.l.; 29 July 2018; leg./det. Szelağ Z.

Vouchers: Private author's collection (Herb. Hierac. Z. Szelağ).

Hieracium gaudryi was described from Mts Parnassos (Παρνασσός) in 1856 and since then it is known only from this mountain ridge (ΔΙΜΟΠΟΥΛΟΣ *et al.* 2013). According to BUTTLER (1991), no herbarium specimens of this species have been collected since the 19th century. The newly discovered localities in Mts Giona are located *ca.* 35 km NW from Mt. Parnassos. Numerous flowering plants of *H. gaudryi* were observed in both the mentioned regions.

Hieracium gaudryi combines the morphological features of *H. gymnocephalum* Griseb. *ex* Pant. and *H. pannosum* Boiss., and probably originated as a hybrid of the two taxa. The diploid population of *H. gymnocephalum* is currently known only from Montenegro (SZELAĞ & ILNICKI 2011). *Hieracium gaudryi* is most likely a relict species originating from some sexually reproducing Greek populations of *H. gymnocephalum*.

***Holmiella sabina* (De Not.) Petrini, Samuels & E. Müll., fam. Patellariaceae (fungus, saprotrophic)**

Contributor: Dimitar STOYKOV

Geographic focus: Bulgaria

New records and noteworthy data: The first record of *Holmiella sabina* in the valley of the Struma River on a newly reported host, and the southern-most finding in Bulgaria according to FAKIROVA (1993).

Specimen data: Valley of the Struma River, Blagoevgrad District, Kresna Gorge, Tisata Reserve, N 41.745194°, E 23.159194°, *ca.* 236 m a.s.l., on old bark of *Juniperus excelsa* M. Bieb.; 10 May 2014; leg./det. Stoykov D.

Voucher: Bulgarian Academy of Sciences, Mycological Collection of the Institute of Biodiversity and Ecosystem Research (SOMF), 31896.

Only two collections, under the name *Eutrybliidiella sabina* (De Not.) Höhn., have been reported on dry bark of *Juniperus* sp. in Northern Bulgaria: 1) from the Vitosha region, SOMF 21264 (n_1), collected in March 1994, and 2) from the Sredna Gora Mts, Lozenska planina, Kokaljane village, SOMF 20515 (n_2), collected in December 1978 (FAKIROVA 1993). The present finding represents the first record in Kresna Gorge, and the southern-most record of *Holmiella sabina* on old bark of *Juniperus excelsa* M. Bieb. in Bulgaria.

The asci from our specimen, SOMF 31896, examined under LM in water, measured (85) 90–110 (120) × 27–35 (45) μm , $n = 5$, and the ascospores were 1-septate, dark brown, measuring 23–31 (39) × 11–16 (18) μm (mean \pm 1SD = 26.5 \pm 2.8 × 13 \pm 1.9), $n = 21$, with unequal spores cells observed. They correspond well with the data obtained from the two previous Bulgarian collections: 25–33 × 13–16 μm ($n_1 = 7$), 26–35 × 11.5–17 μm ($n_2 = 15$), broad-ellipsoid in shape, straight, dark brown, with a median septum, and unequal spore cells observed. The examination of an additional specimen of *Holmiella sabina*, identified as *Trybliidiella sabina* (De Not.) Nannf., SOMF 6165, collected on the dry branches of *Juniperus commimis* L. from Hungary, also exhibited 1-septate, dark brown ascospores, with unequal spore cells present, measuring 21–33 × 11.5–18 μm (mean \pm 1SD = 26.3 \pm 3.1 × 14 \pm 1.6), $n = 21$, in water.

The molecular study of fresh collections of *H. sabina* on *Juniperus excelsa* from Kresna Gorge could reveal the exact position of the present finding in the *Holmiella* clade, family *Patellariaceae*, as a recent study carried out by PEM *et al.* (2018) showed that some members of the genus *Holmiella* could be host-specific.

Kurzia pauciflora* (Dicks.) Grolle, fam. Lepidoziaceae (liverwort, bryophyte)*Contributors:** Sorin ȘTEFĂNUȚ**Geographical focus:** Romania**New record and noteworthy data:** Confirmation of the presence and new records of a rare liverwort in Romania.**Specimen data:** The Eastern Carpathians, **1)** Tăurile Chendroaiei (Tăul de la Gutăi) Peatbog, Gutăi Massif, Maramureș County, N 47.710043°, E 23.835395°, 1057 m a.s.l.; 20 April 2024; leg./det. Ștefănuț S.; **2)** Vlășchinescu Peatbog, Igniș Massif, Maramureș County, N 47.746802°, E 23.722598°, 884 m a.s.l.; 19 April 2024; leg./det. Ștefănuț S.; **3)** Iezerul Mare (Tinovul Hărnicestilor) Peatbog, Igniș Massif, Maramureș County, N 47.808075°, E 23.826159°, 1007 m a.s.l.; 21 April 2024; leg./det. Ștefănuț S.**Vouchers:** Bryophyte collection of the Herbarium of the Institute of Biology – Bucharest, Romanian Academy, Bryophyte Collection (BUCA), B12664–B12657; photo documentation of Ștefănuț S.

Kurzia pauciflora was reported as new to Romania in 1982 from Vlășchinescu peatbog (leg. 27 August 1975, as *Telaranea setacea* (Web.) Müll. Frib.), but the samples were sterile and male or female fertile samples are need for identification (PLĂMADĂ & COLDEA 1982; ȘTEFĂNUȚ 2008). In 2024, male plants of *K. pauciflora* were recorded in Vlășchinescu Peatbog.

Both female and male plants of *K. pauciflora* were found in the Tăurile Chendroaiei and Iezerul Mare peatbogs, on the edges of water pools, in association with *Odontoschisma fluitans* (Nees) L. Söderstr. & Văna and *Myliia anomala* (Hook.) Gray. *K. pauciflora* is frequent in the Tăurile Chendroaiei and Iezerul Mare peatbogs, where the water pools are large, and very rare in the Vlășchinescu peatbog, where the water pools have almost disappeared.

Lysurus cruciatus* (Lepr. & Mont.) Henn., fam. Phallaceae (fungus, saprotrophic)*Contributors:** Boris ASSYOV and Monica SLAVOVA**Geographic focus:** Bulgaria**New records and noteworthy data:** These are new findings of the non-native species *L. cruciatus* in Bulgaria (ASSYOV & GASHTAROV 2007).**Specimen data:** **1)** Blagoevgrad Province, near the road from Starchevo village to Petrich town (Bulgaria), N 41.465628°, E 23.245366°, ca. 130 m a.s.l., ruderal grasslands; 10 November 2016; leg. Slavova M.; det. Slavova M, Assyov B.; **2)** south of Kresna town (Bulgaria), approx. N 41.707917°, E 23.158722°, ca. 155 m a.s.l., grasslands close to the Strouma River; 11 November 2025; leg. Angelova L.; det. Assyov B.**Vouchers:** Bulgarian Academy of Sciences, Mycological Collection of the Institute of Biodiversity and Ecosystem Research (SOMF), 30977, 30978.

Certain exotic members of the order Phallales have been long known to occur in Europe and some of them even seem to be spreading rapidly, including in some Balkan or neighbouring countries (BÎRSAN *et al.* 2021; PIETRAS *et al.* 2021; DEMETER 2025; JELASKA & LEVAČIĆ 2025). *Lysurus cruciatus* is a non-native species on the European continent, sporadically recorded from several countries since 1902 (KREISEL 2001; ASSYOV & GASHTAROV 2007; LOCSMÁNDI & KOVÁCS 2019). Its first Balkan finding was documented from the river Strouma valley in Bulgaria almost two decades ago (ASSYOV & GASHTAROV 2007). Since then, it has been more recently reported in some new localities which are reported herein. This is possible evidence of its persistence and spread, although KREISEL (2001) considered it as “unstable under temperate or in Mediterranean climates”. The pathways of its introduction in Bulgaria remain uncertain, but the Strouma valley is a region with extensive agriculture, including greenhouse cultivation and

the fungus might have been introduced inadvertently with crops or ornamental plants. However, two of the known occurrences in the area were located far from cultivated areas at the time of the findings, thus making this question unresolved at present. The occurrence reported here is near Starchevo village and close to the first finding of *L. cruciatus* in the vicinity of Rupite. Thus, it seems plausible that the two might have come from a single introduction event. The locality in the vicinity of Kresna town is the most recent and the northernmost of the three, situated some 40 km north of the other two sites. This might indicate spread in this direction although *de novo* introduction with seedlings or substrate from adjacent greenhouses is also possible. Attention ought to be paid to further occurrences of *L. cruciatus* in this and adjacent countries so as to clarify its pathways of introduction and assess whether it might be spreading spontaneously.

***Lythrum hyssopifolia* L., fam. Lythraceae (dicot, vascular plants)**

Contributors: Siniša ŠKONDRIĆ and Ranko PERIĆ

Geographical focus: Bosnia and Herzegovina

New records and noteworthy data: A new record of rarely reported species *Lythrum hyssopifolia* in Bosnia and Herzegovina, and the first confirmed record in the Republic of Srpska after more than half a century.

Specimen data: Republic of Srpska, Ramsar site Bardača Wetland, Bajinci, N 45.08214°, E 17.45383°, in ruts of a seasonal dirt road, 89 m a.s.l.; 12 June 2023; leg. Škondrić S.; det. Škondrić S, Perić R.

Voucher: Herbarium of the Institute for Nature Conservation of the Vojvodina province (PZZP) s/n.

During field investigations at the Ramsar site Bardača wetland, the species *Lythrum hyssopifolia* was found. Several individuals of this species were recorded growing on bare soil in the ruts of a seasonal dirt road running alongside the channelised section of the Brzaja River. This species has been rarely recorded in the flora of Bosnia and Herzegovina. Our finding of this species is located in the peri-Pannonian part of Bosnia and Herzegovina, relatively close to some of the historical records (BECK VON MANNAGETTA 1927; RITER-STUDNIČKA 1952, 1953; BJELČIĆ 1954; SLAVNIĆ & BJELČIĆ 1963). Recently, this species was confirmed for the Hutovo Blato Nature Park area (MASLO 2022). Our data represents the first confirmed record of this species in the Republic of Srpska after more than half a century.

***Lythrum tribracteatum* Spreng., fam. Lythraceae (dicot, vascular plants)**

Contributors: Siniša ŠKONDRIĆ and Jelena KNEŽEVIĆ

Geographical focus: Bosnia and Herzegovina

New records and noteworthy data: The first confirmed records of *Lythrum tribracteatum* for Bosnia and Herzegovina.

Specimen data: 1) Republic of Srpska, Ramsar site Bardača Wetland, Gaj, N 45.11776°, E 17.46989°, in ruts of a seasonal dirt road, 88 m a.s.l.; 24 July 2023; leg. Škondrić S.; det. Škondrić S, Knežević J.; 2) Gradiška, Donja Dolina, N 45.13240°, E 17.42413°, at the bottom of the excavated basin, 84 m a.s.l.; 21 June 2022; leg. Škondrić S.; det. Škondrić S, Knežević J.; 3) Gradiška, Donja Dolina, N 45.13230°, E 17.42434°, at the bottom of the excavated basin, 84 m a.s.l.; 22 July 2022; leg. Škondrić S.; det. Škondrić S, Knežević J.; 4) Gradiška, Donja Dolina, N 45.13249°, E 17.42405°, at the bottom of the excavated basin, 84 m a.s.l.; 9 August 2022; leg. Škondrić S.; det. Škondrić S, Knežević J.; 5) Gradiška, Donja Dolina, N 45.13229°, E 17.42373°, at the edge of the excavated basin, 86 m a.s.l.; 6 June 2024; leg. Škondrić S.; det. Škondrić S, Knežević J.; 6) Gradiška, Donja Dolina, N 45.13228°, E 17.42403°, at the edge of the excavated basin, 86 m a.s.l.; 8 July 2024; leg. Škondrić S.; det. Škondrić S, Knežević J.; 7) Kozarska Dubica, Dubičko Polje, N 45.19057°, E 16.84254°, on bare, moist soil on the margins of a cultivated field,

alongside the Moštanica River, near its confluence with the Una River, 94 m a.s.l.; 3 June 2025; leg. Škondrić S.; det. Škondrić S, Knežević J.

Vouchers: Herbarium of the Institute for Nature Conservation of the Vojvodina province (PZZP) s/n.

Lythrum tribracteatum was recorded during field research in the peri-Pannonian part of Bosnia and Herzegovina, specifically within the Ramsar site Bardača wetland, and in the area of the municipalities of Gradiška (Donja Dolina) and Kozarska Dubica (Dubičko polje). The species was observed several times during the vegetation seasons of 2022, 2024 and 2025. In the Ramsar site Bardača wetland, approximately 25 individuals were found growing along the ruts of a seasonal dirt road in the village of Gaj. In Donja Dolina, this species was recorded on bare soil at the bottom and on the edges of an excavated basin. This basin was dug in a pasture area, with a depth of approximately 2 m, and it fills with water during the rainy season, from autumn to spring. During the summer of 2022, the basin was dry, and individuals of this species were found on the bare soil at the bottom of the basin. In June and July of 2024, individuals of this species were recorded on the edges of the excavated basin, when the bottom of the basin was moist and partially filled with water. The edges of the excavated basin consisted of bare ground, likely due to compaction caused by the vehicles used in the excavation process. In the Dubičko polje area, *L. tribracteatum* was recorded in June 2025 near the confluence of the Moštanica and Una rivers. Several dozen individuals were found growing on bare, moist soil along the edge of a cultivated field, adjacent to a narrow, wet zone extending along the embankment of the Moštanica River.

Lythrum tribracteatum was first mentioned by SLAVNIĆ and BJELČIĆ (1963) for the territory of Bosnia and Herzegovina, describing it as a species found in the eastern part of the Posavina area, but absent in the western part of the region. However, their study does not provide specific locality data or herbarium specimens, making it difficult to verify their findings. Therefore, we consider our observations, which include precisely defined localities and herbarium specimens, to be the first definitive confirmation of the presence of this species in Bosnia and Herzegovina.

***Ophrys insectifera* L., fam. Orchidaceae (monocot, vascular plant)**

Contributor: Vladan DJORDJEVIĆ

Geographical focus: Serbia

New records and noteworthy data: This is the first record of this species for the region of Central Serbia and the first record for the Kopaonik National Park. The species is protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and assessed as threatened in Serbia.

Specimen data: Central Serbia, Mt. Kopaonik, Ravnište, Petrova ravan, N 43.266852°, E 20.859354°, MGRS 34T DN89, ass. *Juniperetum communis* s.l., sericite-chlorite schists, exp. SW, incl. 25, 1124 m a.s.l.; 03 June 2025; leg./det. Djordjević V.

Voucher: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, vascular plant collection (BEOU) 72613; photo documentation of Djordjević V.

Ophrys insectifera is a Central European species distributed from central and southern Ireland, central Scandinavia and the Baltic region to the mountains of northern Spain, the central Apennines, the Dinaric Mountains, Romania, northern and central Greece and the Ukraine, while it does not occur in the Mediterranean lowlands (FAY *et al.* 2015). In Serbia, this species has been recorded in the following regions and localities: Northwestern Serbia (the vicinity of Valjevo, Trešnjica River Canyon) (MAJSTOROVIĆ 1929; KARADŽIĆ *et al.* 2000); Western

Serbia (Mts. Zlatibor and Tara) (ZLATKOVIĆ *et al.* 2005; DJORDJEVIĆ *et al.* 2017); Southwestern Serbia (Mt. Jadovnik) (DJORDJEVIĆ *et al.* 2017); and Eastern Serbia (Mt. Vidlič) (ZLATKOVIĆ *et al.* 2005). The new finding of this species on Mt. Kopaonik is the first record of this species for the region of Central Serbia. This is the first record of this species in the MGRS 34T DN89 10 × 10 km and also in the DN3 50 × 50 km UTM grid cells.

Five flowering individuals of *O. insectifera* were found on Mt. Kopaonik within an area of 4 m², in the community *Juniperetum communis s.l.* In addition to *O. insectifera*, the following taxa were also found at this locality: *Juniperus communis* L., *Sesleria latifolia* (Adamovic) Degen, *Leucanthemum vulgare* Lam., *Teucrium chamaedrys* L., *Sanguisorba minor* Scop., *Festuca valesiaca* Schlecht. ex Gaudin, *Polygala major* Jacq., *Anacamptis morio* (L.) R. M. Bateman, Pridgeon & M. W. Chase subsp. *morio*, *Neotinea tridentata* (Scop.) R. M. Bateman, Pridgeon & M. W. Chase and *Orchis mascula* (L.) L. subsp. *speciosa* (Mutel) Hegi. The species was found on sericite-chlorite schists, at an altitude of 1124 m, on a southwestern-facing slope with an inclination of 25°. It has the status of a Critically Endangered species (IUCN: CR) in Ukraine, Denmark, the Netherlands, Bulgaria and the Czech Republic, an Endangered species (IUCN: EN) in Lithuania, Finland, Luxembourg and Hungary, a Vulnerable species (IUCN: VU) in Liechtenstein, the United Kingdom, Slovakia, Slovenia and Croatia, whereas in Estonia, Norway, Switzerland and Austria it has been classified as a Near Threatened species (IUCN: NT) (KULL *et al.* 2016). The estimated IUCN status of this species in Serbia is Endangered (EN) (DJORDJEVIĆ *et al.* 2017).

***Psathyrella ammophila* (Lév. & Durieu) P.D. Orton, fam. Psathyrellaceae (fungus, saprotrophic)**

Contributors: Gordana KASOM and Sead HADŽIABLAHOVIĆ

Geographical focus: Montenegro

New records and noteworthy data: The first record for Montenegro.

Specimen data: Ulcinj Municipality: island Ada Bojana, on the sand dunes among psammophilous vegetation; N 41.858882°, E 19.349084°; 0 m a.s.l.; 18 May 2023, leg. Kasom G. and Hadžiablahović S.; det. Kasom G.

Voucher: Photo documentation of Kasom G.

Psathyrella ammophila is a widely distributed saprotrophic fungus, occurring on all continents, except Antarctica (MAZURKIEWICZ-ZAPĄŁOWICZ *et al.* 2020). However, although it is widely distributed, it is considered rare and endangered in many countries (MAZURKIEWICZ-ZAPĄŁOWICZ *et al.* 2020; THE GLOBAL RED LIST OF FUNGI INITIATIVE 2023). In neighbouring countries, it has only been recorded in Croatia, where it was assessed as Critically Endangered (CR) and protected by national law (TKALČEC *et al.* 2008)

It is a psammophilous fungus which primarily occurs on beaches and sand dunes on the sea coast, while it is much rarer on inland dunes and sandy areas (KITS VAN WAVEREN 1977, 1985; TKALČEC *et al.* 2008; MAZURKIEWICZ-ZAPĄŁOWICZ *et al.* 2020).

According to MAZURKIEWICZ-ZAPĄŁOWICZ *et al.* (2020), the species may also be found, although much less frequently, in more stabilised habitats such as compact grasslands developed on sand and dunes covered with *Pinus halepensis* Miller and *P. pinea* L. trees, as well as in anthropogenic sites (e.g. state beaches and boulevards).

In Europe, the species has been recorded mainly on the sandy shores of the Atlantic Ocean, the North and Baltic Seas and the Mediterranean Sea (MAZURKIEWICZ-ZAPĄŁOWICZ *et al.* 2020). It is most often found among shoots of *Ammophila arenaria* (L.) Link and on dead and decaying remains of this plant, i.e. on the leaves and roots. Furthermore, it has been identified in association with dune grasses, including, among others, *Agrostis stolonifera* L. subsp. *maritima*

(Lam.) Vasc., *Cynodon dactylon* (L.) Pers., *Elymus farctus* (Viv.) Runemark ex Melderis, *E. repens* (L.) Gould, *Festuca vaginata* Waldst. & Kit. ex Willd., and *Leymus arenarius* (L.) Hochst., and herbaceous dicotyledonous plants, including *Cakile maritima* Scop., *Euphorbia paralias* L. and *Salsola kali* L. (MAZURKIEWICZ-ZAPAŁOWICZ *et al.* 2020).

The species has been found in Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Great Britain, Hungary, Iceland, Ireland, Italy, Latvia, Norway, Portugal, Poland, Slovakia, Spain, Sweden, the Netherlands and the Russian Federation (MAZURKIEWICZ-ZAPAŁOWICZ *et al.* 2020).

In Montenegro, *P. ammophila* has been recorded on the sand dunes on the island of Ada Bojana in vegetation dominated by *Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter with the significant participation of *Echinophora spinosa* L., *Eryngium maritimum* L., but also the presence of *Medicago marina* L., *Calystegia soldanella* (L.) Roem. & Schult., *Cyperus capitatus* Vand., and *Tamarix dalmatica* B. R. Baum. The plant community has been recognised as *Cakilo-Xanthietum strumarii* (Beg. 1941) Pignatti 1958 (All. *Euphorbion peplidis* Tx. ex Oberd. 1952; Cl. *Cakiletea maritimae* Tx. et Preising ex Br.-Bl. et Tx. 1952). The community is present on the sand deposition zone, the coastal part of the beach following the aphytic zone. It is a species-poor community, strongly influenced by waves, intense sand movement and salt water spray. It occupies the nutrient-rich drift line (STEŠEVIĆ *et al.* 2020).

This species has been proposed for global threat assessment (THE GLOBAL FUNGAL RED LIST INITIATIVE 2023). It is included on the red lists of threatened species in some European countries, e.g. in Austria, Croatia, Germany, Italy, Norway and Poland (TKALČEC *et al.* 2008; MAZURKIEWICZ-ZAPAŁOWICZ *et al.* 2020; THE GLOBAL RED LIST OF FUNGI INITIATIVE 2023).

During field research in Montenegro, the species *P. ammophila* were documented in one location (area about 500 m²) with approximately fifty (50) basidiocarps, growing individually or in small groups among the shoots of psammophilous plants on sand dunes.

***Schoenoplectus litoralis* (Schrad.) Palla, fam. Cyperaceae (monocot, vascular plants)**

Contributors: Dragana JENAČKOVIĆ GOCIĆ and Bojan ZLATKOVIĆ

Geographical focus: Serbia

New records and noteworthy data: The first confirmed data of the species' presence in the flora of Serbia.

Specimen data: Two sites on the right bank of the Danube River, Northeastern Serbia, Negotin, Radujevac, littoral of pit-gravel, N 44.280511°, E 22.661206°, 76 m a.s.l.; 6 October 2022; leg. Jenačković Gocić, D.; det. Jenačković Gocić D, Zlatković B.; N 44.278306°, E 22.668029°, 64 m a.s.l.; 6 October 2022; leg. Jenačković Gocić D, det. Jenačković Gocić D, Zlatković B.

Vouchers: Herbarium Moesiacum Niš, University of Niš, Faculty of Sciences and Mathematics, Department of Biology and Ecology, Niš, Serbia (HMN), 18801, 18802.

According to POWO (2025), *Schoenoplectus litoralis* is distributed across tropical, subtropical, and temperate climate zones in three continents, namely Africa, Europe, and Asia. In Europe, the species has been typically found in damp habitats of southern regions (DEFILIPPS 1980) and has naturally expanded northwards to Austria (ADLER *et al.* 1994), Hungary (DEFILIPPS 1980), and Ukraine (PROKUDIN 1987). In the Balkan Peninsula, its occurrence has been documented in Croatia (KOVAČIĆ *et al.* 2000; STANČIĆ 2007; DÍTĚ *et al.* 2018), Montenegro (STEŠEVIĆ *et al.* 2020), Albania (RAKAJ *et al.* 2013; FANELLI *et al.* 2015), Greece (SARIKA *et al.* 2005; DIMOPOULOS *et al.* 2013), Bulgaria (KUZMANOV & KOŽUHAROV 1964; GEČEVA *et al.* 2011), and Romania (FĂGĂRAȘ *et al.* 2010), pre-

dominantly as part of coastal vegetation or in the littoral zones of freshwater ecosystems.

In Serbia, the species' presence has long remained doubtful, according to the *Annotated Checklist of Vascular Flora of Serbia* (NIKETIĆ & TOMOVIĆ 2018), likely due to unreliable historical records from the Vojvodina Province (KNEŽEVIĆ *et al.* 1997). However, a recently discovered population in the Danube River valley, within the Serbian section of the river, consists of over 500 individuals (remets), forming monodominant stands of the species-poor association *Scirpetum littoralis* Pignatti 1953. Within the same gravel pit, in deeper water adjacent to the *S. littoralis* stands, submersed macrophytes such as *Potamogeton perfoliatus* L., *Vallisneria spiralis* L., *Stuckenia pectinata* (L.) Börner, *Ceratophyllum demersum* L., and *Myriophyllum spicatum* L., were also observed. Their presence indicates mesotrophic to eutrophic environmental conditions in the studied ecosystem.

***Sphagnum papillosum* Lindb., fam. Sphagnaceae (moss, bryophyte)**

Contributors: Andrea SASS-GAYRMATI and József Pál FINK

Geographical focus: Romania

New record and noteworthy data: A new locality of the rare *Sphagnum papillosum* in Romania.

Specimen data: Eastern Carpathians, Dorna Depression, Poiana Stampei-Pilugani peat bog, N 47.34066°, E 25.16655° and N 47.341170°, E 25.167473°, 889 m a.s.l.; 7 August 2013; leg. Frink JP, Kovrig Z.; det. Sass-Gyarmati A.; conf. Ștefănuț M-M, Ștefănuț S.

Voucher: Eszterházy Károly Catholic University, Bryophyte Herbarium of the Department of Botany and Plant Physiology (EGR) and Babeș-Bolyai University, Cluj-Napoca (CL), 674543.

Sphagnum papillosum is widely distributed throughout North America, Europe and Asia. It is especially common to the western and northern parts of Europe and can extend as far south as the Himalayan Mountains (DANIELS & EDDY 1990). It is an oligo-mesotrophic species, commonly found in shaded, nutrient-poor fen habitats and acidophilous ombrotrophic peat bogs, where it forms hummocks and dense carpets. It can also be found at low to mid-elevations near streams, flushes or in transitional mires. These habitat types are mainly supplied by precipitation, therefore water availability is dependent on rainfall rates. In addition, nutrients such as nitrogen are particularly low and all these factors limit the growth and productivity of *S. papillosum* (VITOUSEK *et al.* 1997). Although the species favours habitats with consistent precipitation, it is relatively tolerant to water shortage stress (CLYMO & HAYWARD 1982).

The European distribution of *S. papillosum* covers Northern Europe (Russia, Finland, Norway, Sweden, Iceland, and Great Britain), Central Europe (Poland, Estonia, Ukraine, Slovakia, the Czech Republic, Germany, and Switzerland), the Balkans (Romania, Bulgaria, Serbia, and Slovenia), as well as some other Southern European countries such as Italy, France, Spain and Portugal (SABOVljević *et al.* 2008; HODGETTS & LOCKHART 2020).

Sphagnum papillosum was first reported in Romania from the Molhașul de la Călățele peat bog (GYÖRFFY & PÉTERFI 1919): Cluj county, 916 m a.s.l., 25 October 1915, leg./det. Györffy I., Péterfi M., conf. Ștefănuț M-M. (BP – Inv. No: 7427). For almost a hundred years, this was the only known locality of the species in Romania (MOHAN 1998; PLĂMADĂ 1998). In recent years, *S. papillosum* has been reported from the Tăul Obcioarei peat bog (Maramureș county, 1046 m a.s.l. - GOIA *et al.* 2018) and from Poiana Călineasa (Cluj county, N 46.56278°, E 22.81636°; 1367 m a.s.l., 1 October 2017, leg./det. Hájková P; BRNU – Inv. No: 680228). More recently, it was found in the Vlășchinescu peat bog (SABOVljević *et al.* 2025).

This new occurrence of the species was recorded in the Poiana Stampei-Pilugani peat bog (Dorna Depression, the Eastern Carpathians) at ca. 890 m alti-

tude. This is one of the largest exploited peatlands in Romania, with mechanical peat extraction ongoing since 1950. Consequently, the habitats of the species are severely disturbed; the moss cover has been altered on *ca.* 50% of the bog surface and eutrophication is extending. However, fragments of the characteristic peat bog vegetation remain in certain patches, with species such as *Andromeda polifolia* L., *Carex pauciflora* Lightf., *Eriophorum vaginatum* L., *Drosera rotundifolia* L., and *Vaccinium oxycoccus* L. (FRINK unpublished). Other bryophyte species documented at the site during our survey include *Bryum pseudotriquetrum* (Hedw.) P.Gaertn. et al., *Pleurozium schreberi* (Willd. ex Brid.) Mitt., *Polytrichum commune* Hedw., *Sphagnum capillifolium* (Ehrh.) Hedw., *Sphagnum flexuosum* Dozy & Molk., *Sphagnum palustre* L., and *Thuidium abietinum* (Hedw.) Schimp.

Due to new records, which have extended the known distribution area of the species, the conservation status of *S. papillosum* in Romania has been recently changed from Critically Endangered - CR B1ab (ii,iii)+2ab(ii,iii) (ȘTEFĂNUȚ & GOIA 2012, HODGETTS & LOCKHART 2020) to Endangered - EN B2ab(ii,iii,iv) (SABOVLJEVIĆ *et al.* 2025). Its European Red List assessment is Least Concern (LC), but in some European countries like Serbia, Slovakia and Germany it is classified as Vulnerable (VU), while in Portugal it is Endangered (EN) (HODGETTS & LOCKHART 2020).

***Taraxacum janchenii* Kirschner & Štěpánek, fam. Asteraceae (dicot, vascular plant)**

Contributor: Matej DUDÁŠ

Geographical focus: Croatia

New record and noteworthy data: New records for Croatia of a long-unrecorded taxon, previously known only in the mountain ranges of Biokovo and Velebit.

Specimen data: Mts Velebit, Gračac, on a lateral gravel road in saddle Prezid (766 m), between the cities of Gračac and Obovac, on the western slope of Mt. Veliki Bat (1381 m), N 44.252222°, E 15.800833°, dolomite; 11 May 2016; leg. Dudáš M.; det. Štěpánek J.

Vouchers: Herbarium of the Botanical garden of Pavol Jozef Šafárik University, Košice, Slovakia (KO) 38710, 38500.

Taraxacum janchenii is one of the most widely distributed members of *Taraxacum* sect. *Erythrocarpa* in the Balkan peninsula (ŠTĚPÁNEK & KIRSCHNER 2022). Its geographical range extends from western Croatia to central Romania. Its centre of distribution is located in the mountains of Bosnia and Herzegovina, with an extension into the mountains in Albania, North Macedonia and Serbia. In Croatia its occurrence is documented by specimens collected in the Biokovo Mts, in Sv. Jure by E. Janchen in 1908 (deposited in WU) and in the Velebit Mts, in Mt. Seline, Mt. Velinac and Mt. Mali Bristovac by L. Vajda in 1938 (deposited in BP). This new locality lies in the southern part of the Velebit Mts, *ca.* 40 km as the crow flies south from Mt. Velinac.

***Umbilicaria subpolyphylla* Oxner, fam. Umbilicariaceae (fungus, lichenised)**

Contributors: Veselin V. SHIVAROV and Snezhina POPOVA

Geographical focus: Bulgaria

New record and noteworthy data: The finding of *Umbilicaria subpolyphylla* represents the first record of this taxon from Bulgaria.

Specimen data: Vitosha region: 1) Kopitoto, near the TV tower; N 42.63318°, E 23.2403°, 1347 m a.s.l.; 20 May 2010; leg./det. Shivarov VV.; 2) Cherni Vrah Peak, *ca.* 2290 m a.s.l.; 4 June 1962; leg. Zhelezova B.; det. Shivarov VV.

Vouchers: Bulgarian Academy of Sciences, Mycological Collection of the Institute of Biodiversity and Ecosystem Research (SOMF), 23898, 27962, 27988.

Umbilicaria subpolyphylla is closely related to *U. polyphylla* (L.) Baumg. and was previously regarded as an uncertain ecotype or infraspecific taxon of *U. polyphylla* (DAVYDOV *et al.* 2019). The species was long known only from its type locality in the Donetsk region in southern Ukraine (OXNER 1968). Unaware of this taxon, KRZEWICKA *et al.* (2009) described *Umbilicaria iberica* Sancho & Krzewicka, which is morphologically and genetically identical to *U. subpolyphylla* (DAVYDOV *et al.* 2019). During the last two decades, the species has been found in several localities in the Mediterranean mountains and is currently known from the Pyrenees to the Crimean Peninsula. In the Balkan Peninsula, it was reported from Bosnia and Herzegovina and Greece (CHRISTENSEN 2022).

In Bulgaria, the species was found on isolated granite boulders scattered across a meadow near the Kopitoto TV Tower, in the Vitosha region. This locality aligns well with the species' ecological preference for boulders in open areas. It was found mostly on the north-facing sides of the boulders, together with *Cornicularia normoerica* (Gunn.) Du Rietz, *Lasallia pustulata* (L.) Mérat, *Parmelia saxatilis* (L.) Ach., *Umbilicaria deusta* (L.) Baumg., *Xanthoparmelia pulla* (Ach.) O. Blanco *et al.*, *X. stenophylla* (Ach.) Ahti & D. Hawksw. and crustose lichens *Rhizocarpon geographicum* (L.) DC., *Lecanora* spp. and *Lecidea* spp. One old specimen identified by B. Zhelezova as *Umbilicaria deusta* from a locality near Cherni Vrah Peak, in the Vitosha region, also corresponds with the description of *U. subpolyphylla*. At high elevations, the thalli have a tendency to have a larger diameter.

The species is likely to be more widely distributed in Bulgaria, but it appears to be absent from the alpine zones of the Bulgarian mountains, where siliceous boulders are predominantly covered by *Umbilicaria cylindrica* (L.) Delise, *U. nylanderiana* (Zahlbr.) H. Magn., and *U. decussata* (Vill.) Zahlbr.

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REZIME

Novi i značajni podaci o biljkama, algama i gljivama iz JI Evrope i susednih regiona, 25

Marko S. SABOVLJEVIĆ, Gordana TOMOVIĆ, Milica RAT, Bojana BOKIĆ, Péter SZŰCS, Kristóf FÖLDI, Richard HRIVNÁK, Matúš HRIVNÁK, BORIS RADAČ, Jovan PEŠKANOV, Katerina BAČEVA ANDONOVSKA, Antony VAN DER ENT, János CSIKY, Génesis Katherine DELA CAMPOS, Pavel ŠIRKA, Jan KUČERA, Sanja ŠOVVRAN, Ermin MAŠIĆ, Zbigniew SZELAĞ, Dimitar STOYKOV, Sorin ȘTEFĂNUȚ, Boris ASSYOV, Monica SLAVOVA, Siniša ŠKONDRIĆ, Ranko PERIĆ, Jelena KNEŽEVIĆ, Vladan DJORDJEVIĆ, Gordana KASOM, Sead HADŽIABLAHOVIĆ, Dragana JENAČKOVIĆ GOCIĆ, Bojan ZLATKOVIĆ, Andrea SASS-GAYRMATI, József Pál FINK, Matej DUDÁŠ, Veselin V. SHIVAROV i Snezhina POPOVA

U radu su dati novi i značajni podaci sa područja JI Evrope i susednih regiona za sledeće taksoni: braon algu *Heribaudiella fluviatilis*, gljive *Holmiella sabina*, *Lysurus cruciatus* i *Psathyrella ammophila*, lišaj *Umbilicaria subpolyphylla*, jetrenjače *Kurzia pauciflora*, mahovine *Climacium dendroides*, *Dicranella howei*, *Fissidens rivularis*, *F. viridulus* i *Sphagnum papillosum*, dikotile *Hesperis matronalis* subsp. *candida*, *Hieracium gaudryi*, *Lythrum hyssopifolia*, *Lythrum tribracteatum* i *Taraxacum janchenii* i monokotile *Allium moschatum*, *Cyperus esculentus*, *Dactylorhiza* × *aschersoniana*, *Dactylorhiza incarnata*, *Ophrys insectifera* i *Schoenoplectus litoralis*.

Ključne reči: novi nalaz, *Allium moschatum*, *Climacium dendroides*, *Cyperus esculentus*, *Dactylorhiza* × *aschersoniana*, *Dactylorhiza incarnata*, *Dicranella howei*, *Fissidens rivularis*, *F. viridulus*, *Heribaudiella fluviatilis*, *Hesperis matronalis* subsp. *candida*, *Hieracium gaudryi*, *Holmiella sabina*, *Kurzia pauciflora*, *Lysurus cruciatus*, *Lythrum hyssopifolia*, *Lythrum tribracteatum*, *Ophrys insectifera*, *Psathyrella ammophila*, *Schoenoplectus litoralis*, *Sphagnum papillosum*, *Taraxacum janchenii*, *Umbilicaria subpolyphylla*, JI Evropa.