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Original Scientific Paper

New records and noteworthy data of plants, algae and fungi in SE Europe and adjacent regions, 19

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ABSTRACT:
This paper presents new records and noteworthy data on the following taxa in SE Europe and adjacent regions: mycorrhizal fungus *Russula sapinea,* parasitic fungus *Podosphaera polemonii,* saprotrophic fungi *Ophiognomonia melanostyla* and *Plagiostoma apiculatum,* diatom alga *Nitzschia reskoi,* stonewort *Nitellopsis obtusa,* liverwort *Mannia triandra,* mosses *Buxbaumia viridis* and *Leptodon smithii,* monocots *Epipactis purpurata* and *Orchis* × *beyrichii* and dicots *Euphorbia orjeni, Fallopia* × *bohemica, Nuphar lutea* and *Saxifraga pedemontana* subsp. *cymosa*.

Keywords:
new report, *Buxbaumia viridis, Epipactis purpurata, Euphorbia orjeni, Fallopia* × *bohemica, Leptodon smithii, Mannia triandra, Nitellopsis obtusa, Nitzschia reskoi, Nuphar lutea, Ophiognomonia melanostyla, Orchis* × *beyrichii, Plagiostoma apiculatum, Podosphaera polemonii, Russula sapinea, Saxifraga pedemontana* subsp. *cymosa,* SE Europe

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***Buxbaumia viridis* (Moug. ex Lam. & DC.) Brid. ex Moug. & Nestl., fam. Buxbaumiaceae (moss, bryophyte)**
Contributors: Sorin Ștefănuț
Geographical focus: Romania
New record and noteworthy data: This is the first record for the Poiana Ruscă Mountains, Romania. The species is listed in the Bern Convention. A rare and threatened species.
Specimen data: Romanian Western Carpathians, Fierului Valley, Ștei, Hunedoara County, N 45.550346°, E 22.642279°, 849 m a.s.l.; N 45.550333°, E 22.642139°, 851 m a.s.l.; N 45.550167°, E 22.641917°, 858 m a.s.l.; 26 August 2024; det. Ștefănuț S.
Voucher: photo documentation by Ștefănuț S.

The report of *Buxbaumia viridis* from the Poiana Ruscă Mountains is new for this area and for the Coridorul Rusca Montană-Țarcu-Retezat NATURA 2000 site (ROSCI0292). Predictions for the range size and habitat suitability under the most likely climate change scenarios for this species in Romania indicate a negative trend (Ștefănuț *et al.* 2023), with an even more drastic decrease expected in neighbouring Serbia (Pantović *et al.* 2023a). For this NATURA 2000 site, 42 new reports were made from the Țarcu Mountains, in the Netiș, Bucova and Zeicani valleys. The species were found on rotten logs of spruce and beech with two sporophytes on detached rotten maple bark (*Acer pseudoplatanus* L.). *Buxbaumia viridis* was recorded a total of 45 times, always with *Herzogiella seligeri* (Brid.) Z. Iwats.

***Epipactis purpurata* Sm., fam. Orchidaceae (monocot, vascular plant)**
Contributors: Vladan Djordjević and Sara Stanković
Geographical focus: Serbia
New records and noteworthy data: This is the first record of this species in the region of Northeastern Serbia and its first record for the Djerdap National Park. The species is protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
Specimen data: Northeastern Serbia, Mt. Miroč, Radulova čuka – Veliki Štrbac, N 44.597063°, E 22.293480°, MGRS 34T FQ03, ass. *Fagetum submontanum* (Rudski 1949) B. Jovanović 1976, limestones with cherts, exp. NE, incl. 25°, 615 m a.s.l.; 10 July 2024; leg. Djordjević V, Stanković S.; det. Djordjević V.
Vouchers: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, vascular plant collection (BEOU) 72200; photo documentation of Djordjević V.

Epipactis purpurata is mainly distributed in the temperate zone of western and central Europe, extending southwards and south-eastwards; rarely in the Atlantic region; eastwards to Lithuania, Poland and the Republic of Moldova; southwards to northern Italy, southern Romania and Greece (Buttler 1991). The species was recorded for the first time for Serbia on Mt. Maljen in Northwestern Serbia (Djordjević *et al.* 2010). Later, this taxon was found in a large number of localities in Western and Southwestern Serbia, as well as in the region of Central Serbia (Djordjević *et al.* 2017; Sabovljević *et al.* 2023 and the references therein). The new finding of this species on Mt. Miroč is the first record of this species in the eastern part of the Serbian territory and in the region of Northeastern Serbia. This is the northeastern most limit of the species' distribution in Serbia and the Central Balkans. Moreover, this is the first record of this species in the MGRS 34T FQ03 10 × 10 km and also in FQ 100 × 100 km UTM grid cells.

Epipactis purpurata was found on the route Radulova čuka – Veliki Štrbac (Mt. Miroč) in the forest community *Fagetum submontanum*. The following accompanying taxa were recorded at the site with *E. purpurata*: *Fagus moesiaca* (Domin, Maly) Czecz., *Acer platanoides* L., *A. pseudoplatanus* L., *Fraxinus ornus* L. and *Carpinus betulus* L. The species was found on limestones with cherts, on moderately moist soil, in the shade, at an altitude of 615 m, on a northeast-facing slope with an inclination of 25°. The newly recorded population of this species on Mt. Miroč consists of four individuals within an area of ca. 100 m². The estimated IUCN status of this species in Serbia is vulnerable (VU) (Djordjević *et al.* 2017).

***Euphorbia orjeni* Beck, fam. Euphorbiaceae (dicot, vascular plants)**
Contributors: Sanja Z. Djurović and Božo Frajman
Geographical focus: Serbia
Novel and remarkable data: The first report for the Vojvodina province in Serbia and the second known locality of *E. orjeni* in Serbia
Specimen data: Srem, Mt. Fruška Gora, Iriški Venac, sector 38; 14 April 2000, 22 July 2000; leg. Stojšić V.
Voucher: Regional Nature Conservation Institute (PZZP) s/n

Caković & Frajman (2020) consider *E. orjeni* a vulnerable species (VU) globally. It was only recently rediscovered after 100 years in only two sites on the Balkan Peninsula: at its type locality on Mt. Orjen in Montenegro, and in Višnjička Kosa in Belgrade, Serbia. Djurović *et al.* (2022) analysed the *Euphorbia* specimens deposited in the BEO and BEOU and confirmed the occurrence of *E. orjeni* in Serbia only at the Belgrade site to date.

In 2023, the first author revised the herbarium material of *Euphorbia* in various collections and found two specimens of *E. orjeni* deposited in PZZP. They were collected in 2000 by Vida Stojšić on Mt. Fruška Gora, representing the first record of *E. orjeni* for the Vojvodina province in Serbia and the third known locality of this species in its global population. We have sequenced the

ITS region of the DNA for the specimens collected on Mt. Fruška Gora, and also molecularly confirmed their identity as *E. orjeni*.

***Fallopia* × *bohemica* (Chrtek & Chrtková) J. P. Bailey., fam. Polygonaceae (dicot, vascular plant)**
Contributors: Petya Boycheva and Mariya Kaschieva
Geographical focus: Bulgaria
New records and noteworthy data: The spread of an invasive species. This is the first report of the distribution of the species in the region of the Northern Black Sea coast.
Specimen data: Northern Black Sea coast, Varna region; N 43.2331°, E 27.9646°; 07 August 2023; leg/det. Boycheva P, Kaschieva M.
Voucher: Herbarium of Sofia University St. Kliment Ohridski (SO) 108236.

The record was made at the exit of the Vinitsa district, Varna city next to a karting track. The plants were found between road pavements and buildings, as well as in open spaces on private property. We registered a small number of adult plants in the habitat, which had been mowed, leading to the formation of numerous, dense clumps of young plants. The population has significant potential into spread in nearby areas. *Fallopia* × *bohemica* originated in Europe as a result of spontaneous hybridisation between the introduced *F. japonica* (Houtt.) Ronse Decr. and *F. sachalinensis* Ronse Decr. It is widespread as an ornamental plant in many European countries and has subsequently established itself in wild areas. Both parent species are of East Asian origin (Petrova *et al.* 2013). *Fallopia* × *bohemica* is included in the lists of invasive species for Bulgaria (Petrova *et al.* 2013), in the list of „*Worst invasive alien species threatening biodiversity in Europe*" and the EPPO invasive species list (EPPO 2024).

***Leptodon smithii* (Hedw.) F. Weber & D. Mohr. fam. Neckeraceae (moss, bryophyte)**
Contributor: Péter Szűcs
Geographical focus: Slovenia
New records and noteworthy data: The first record for North East Slovenia.
Specimen data: Northeastern Slovenia, the sub-Pannonian region, Hodoš village boundary, 250 m from Dolenski Potok, along the forest road, on the edge of *Quercus* forest, on the bark of old *Quercus petraea* (Matt.) Liebl., with *Isothecium alopecuroides* (Lam. ex Dubois) Isov. and *Hypnum cupressiforme* Hedw.; N 46.857303°, E 16.295684°, 270 m a.s.l.; 30 May 2014; leg/det: Szűcs P.
Voucher: Bryophyte Herbarium of Department of Botany and Plant Physiology, Eszterházy Károly Catholic University, Eger (EGR), s.n.

Leptodon smithii is a mediterranean-atlantic distributed moss typically found on tree bark in woodlands and parks, and occasionally on walls and calcareous stones in warmer regions (Dierssen 2001). It is widely known in the Mediterranean (Hodgetts & Lockhart 2020), and the species is found in all countries of South East Europe (Sabovljević *et al.* 2008; Alataş *et al.* 2016).

In Slovenia, relevant occurrences are known only in two phytogeographical units (the Julijske Alpe and Submediterranean regions) in the west part of the country. In addition, there are two herbarium records from the Dinaric and pre-Alpine regions, which date back to more than 50 years ago (Martinčič 2024).

***Mannia triandra* (Scop.) Grolle, fam. Aytoniaceae (liverwort, bryophyte)**
Contributors: Aneta D. Sabovljević and Marko S. Sabovljević
Geographical focus: Bosnia and Herzegovina
New record and noteworthy data: Confirmation of the presence of this liverwort species in Bosnia and Herzegovina; red-listed as vulnerable (VU) both in Europe and in EU27+UK (Hodgetts *et al.* 2019). An EU habitat Directive species (Annex II) and Bern Convention species (Annex I).
Specimen data: Southeastern Bosnia and Herzegovina, Republic of Srpska, Mt. Bijela Gora, east of Trebinje, in the vicinity of Donji Orahovac village, N 42.688331°, E 18.499031°, on soil under limestone rocks, in a crevice by the road in a shady north exposed area, surrounded by a forest of *Fagus sylvatica* L. and *Pinus heldreichii* Christ.; 06 April 2024; leg./det. Sabovljević AD, Sabovljević MS.
Voucher: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, Bryophyte Collection (BEOU-Bryo) s.n.

Mannia triandra is a small thalloid liverwort, greyish blue green in colour, which seems to have a short life strategy. It disappears during dry periods, after spore dispersal. This occurs in early spring in lowland areas to early summer at higher altitudes. It inhabits sheltered and shady habitat types, crevices and slopes in forests and ravines. It is often found on small dolomite, schist, sandstone and limestone rock accumulations with protosoil covering it (Nemeth & Papp 2011), contributing to its ephemeral nature. It is a Holarctic species which is mainly distributed east of North America and Europe, with rare records in Eastern Asia (Borovichev & Bakalin 2016). Its centre of European distribution is around the Alps and Apennines, but it is also recorded in Scandinavia, and Central and Eastern Europe. In south-eastern Europe, i.e. the Balkans, most of the records are from northern and western parts (Dragićević & Berg 2023). According to Sabovljević *et al.* (2019) and Hodgetts *et al.* (2019) it is considered vulnerable (IUCN: VU), both in Europe and EU27+UK.

Here we report the first records in Bosnia and Herzegovina after almost 100 years. According to Pavletić

(1955), the only reports in this country were recorded by Maly (1928), from the surroundings of the town of Konjic. The species is present in many Balkan countries but the status of its populations is not uniformly documented. In SE Europe, its regional distribution is relatively well-documented in Slovenia (Strgulc Krajšek & Martinčič 2017), and Montenegro (Dragićević & Berg 2023), while further field investigations are required in other countries of the region (e.g. Croatia; Bučar *et al.* 2023). The species is red-listed or generally considered threatened: critically endangered (CR) in the Czech Republic, endangered (EN) in Italy, Bulgaria, Montenegro and Hungary, and vulnerable (VU) in Austria, Germany, Switzerland and Romania. In Slovakia and Croatia, it is classified as insufficiently known.

Bosnia and Herzegovina harbours rich bryophyte flora, but recent investigations seem to be rare. Thus, many new species as well as significant species records are expected as field research increases (e.g. Pantović *et al.* 2022, 2023b).

***Nitellopsis obtusa* (Desvaux) J.Groves 1919 fam. Characeae (stonewort, algae)**

Contributors: Ivana Trbojević and Aleksandra Marković

Geographical focus: Serbia

New record and noteworthy data: Five new sites are reported for Serbia. So far, eight records are known from the Drina (3), Danube (4) and Nera (1) river floodplains. *Nitellopsis obtusa* is considered a rare and strictly protected species in Serbia.

Specimen data: 1) Banat, Bela Crkva, Vračevgajsko lake, N 44.890097°, E 21.386521°; 21 June 2021; leg. Trbojević I, Milovanović, V.; det. Trbojević I.; **2)** Banat, Bela Crkva, Biserno lake, N 44.87814°, E 21.391427°; 11 August 2021; leg. Trbojević I, Milovanović V.; det. Trbojević I.; **3)** Banat, Bela Crkva, Šljunkara lake, N 44.884877°, E 21.39898°; 09 August 2021; leg. Trbojević I, Milovanović V.; det. Trbojević I.; **4)** Banat, Bela Crkva, Nera gravel pit lake, N 44.877578°, E 21.432971°; 12 August 2021; leg./det. Trbojević I.; **5)** Šumadija, Belgrade, Sava lake, near the dam, N 44.777921° E 20.373465°; male specimens; 15 July 2018; leg. Marković B.; det. Marković A.

Voucher: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade (BEOU), Charophyte collection 2743, 2749, 2751, 2753, 2754, 2775, 2777, 2782, 2789, 2796, 2806; Institute of Chemistry, Technology and Metallurgy, University of Belgrade, charophyte collection (BIOLACHC), 43.

Nitellopsis obtusa is currently known in Serbia from eight localities, half of which are concentrated in the very south-east of the Vojvodina province, in the Danube floodplain. Until 2014, *N. obtusa* was known from only three localities in Serbia, Ada Čibuklija island and Dolnice bay on the Danube (Stevanović *et al.* 2003) and the nearby gravel pit, in the Nera river floodplain (Blaženčić 2014; Marković *et al.* 2023). In the past decade, the number of records has increased. Damnjanović *et al.* (2019) reported three new sites of *N. obtusa* in gravel pits situated in the floodplain of the river Drina in western Serbia, and stable populations were also found in two small ponds at the Labudovo okno Ramsar Site (Trbojević *et al.* 2020; Milovanović *et al.* 2024). One of those ponds, Dulin pond, has been subjected to near-complete drying during the summer months since 2022, resulting in the disappearance of the charophyte population.

Here we report the finding of *Nitellopsis obtusa* in five new localities. Four of these new localities were found in the vicinity of Bela Crkva during the investigation of submerged macrophytes in June-August 2021 in the Bela Crkva lakes – Vračevgajsko, Biserno and Šljunkara, and in one gravel pit near the river Nera, close to the previously known habitats reported in Blaženčić (2014). The population detected in Vračevgajsko lake consisted of both female and male specimens and was stable. At this locality *N. obtusa* dominated the submerged vegetation, while findings in the other localities in this region were rare. *Nitellopsis obtusa* was detected in the Sava lake in Belgrade in a mixed population together with other macrophytes and charophyte algae, at depths greater than 4m, which is characteristic for this species considering it is one of the largest charophyte algae. Only male specimens were found.

In 2014, Blaženčić (2014) assessed *N. obtusa* as critically endangered (CR) in Serbia, while in the broader Balkans region (Blaženčić *et al.* 2006) it is considered vulnerable (VU). However, outside its native range (Europe and Asia, where it is locally red-listed), it is classified as an invasive alien species in the USA, where its mass proliferation has resulted in numerous negative consequences for ecosystems and biodiversity (Larkin *et al.* 2018). Based on a study in its native range, Pelechaty *et al.* (2022) recently postulated that *N. obtusa* exhibits the characteristics of a superior competitor with detrimental effects on the local macrophyte biodiversity in both its native and invasive range particularly in less fertile waters, whereby its mass development outcompetes other macropytes for space, light and nutrients. Given the controversial and still not fully known ecology of *N. obtusa*, further careful studies on its occurrence, spread and distribution in Serbia is strongly suggested.

***Nitzschia reskoi* Acs, Duleba, C.E.Wetzel & Ector 2018, fam. Bacillariaceae (diatom, algae)**

Contributors: Ljubica Vlaović and Danijela Vidaković

Geographical focus: Serbia

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

Specimen data: 1) Banat, Kikinda, the Plava banja artificial saline pond, N 45.8028764°, E 20.4485607°; 24 April 2023; leg. Vidaković D.; **2)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.802519°, E 20.451333°; 24 April 2023; leg. Ćirić M.; **3)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.804722°, E 20.450278°; 24 April 2023; leg. Vidaković D.; **4)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.8028764°, E 20.4485607°; 6 July 2023; leg. Milovanović Ž.; **5)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.802519°, E 20.451333°; 6 July 2023; leg. Milovanovič Ž.; **6)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.804722°, E 20.450278°; 6 July 2023; leg. Milovanovič Ž.; **7)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.8028764°, E 20.4485607°; 30 October 2023; leg. Milovanović Ž.; **8)** Banat, Kikinda, the Plava banja artificial saline pond, N 45.802519°, E 20.451333°; 30 October 2023; leg. Milovanovič Ž.; **9)** Banat, Kikinda, the Plava banja artificial saline pond N 45.804722°, E 20.450278°; 30 October 2023; leg. Milovanovič Ž.
Vouchers: University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Diatom Collection of Serbia (DCSR), Plava banja, Slides DCSR 000498/A, 000499/A, 000500/A, 000501/A, 000515/A, 000516/A, 000517/A, 000518/A, 000539/A, 000540/A, 000541/A, 000542/A.

Nitzschia reskoi has narrow, linear valves tapering to slightly subcapitate apices. The valve length is 18.7–35.2 µm, and the width is 2.2–3.33 µm. The striae are visible in LM and their number is 24–26/10 µm, while the fibulae range is 11–13/10 µm.

This species was observed for the first time in Serbia in the epilithic and epiphytic communities in the Plava banja artificial saline pond. This pond is characterised by high pH (above 9) and conductivity varying from 9400 µS/cm to 10300 µS/cm. *Nitzschia reskoi* was described from saline water bomb crater ponds in the Danube-Tisa Interfluve plain, Hungary (Földi *et al.* 2018). Its resemblance to *Nitzschia frustulum* is probably the reason for its recent discovery and the lack of data on its presence in other saline ponds in Vojvodina. So far it has been recorded in several soda pans throughout Hungary (e.g. Duleba *et al.* 2021).

***Nuphar lutea* (L.) Sm., fam. Nymphaeaceae (dicot, vascular plants)**
Contributors: Dragana Jenačković Gocić and Danijela Nikolić
Geographical focus: Serbia
New records and noteworthy data: Although the first data regarding its presence in the central part of Serbia was published for the Osredak Special Nature Reserve (Prodanović *et al.* 2008; Petrović *et al.* 2022), the records presented here correspond to the westernmost distributed populations in this region of the country. It is a rare and protected species.

Specimen data: 1) Central Serbia, Vrnjačka Banja, Podunavci settlement, on the right bank of the West Morava river, N 43.69132°, E 20.83630°, 222 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.69249°, E 20.83571°, 224 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.69392°, E 20.83702°, 232 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.697509°, E 20.838464°, 225 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.693990°, E 20.83848°, 184 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.688512°, E 20.839516°, 222 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; **2)** Central Serbia, Trstenik, Stopanja settlement, on the right bank of the Zapadna Morava river, N 43.594924°, E 21.150650°, 190 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.59543°, E 21.14987°, 186 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.; N 43.594044°, E 21.14938°, 194 m a.s.l.; 21 September 2022; leg./det. Jenačković Gocić D, Nikolić D, Raca I.
Vouchers: Herbarium Moesiacum Niš, University of Niš, Faculty of Sciences and Mathematics, Department of Biology and Ecology, Niš, Serbia – Wet Collection (HMN) 18511, 18512.

According to the literature sources, the distribution of *N. lutea* in Serbia is well documented only for the Vojvodina province (e.g. Knežević *et al.* 2008; Polić *et al.* 2008), while data regarding its presence in parts of Serbia south of the right banks of the Danube and Sava rivers are limited to a few records (e.g. Damnjanović *et al.* 2019; Petrović *et al.* 2022). At both of the investigated localities, individuals of *N. lutea* inhabit ponds with shallow water and muddy bottoms, forming monodominant communities or participating in the composition of phytocoenoses dominated by submerged (*Ceratophyllum demersum* L.) or flotant macrophytes (*Potamogeton nodosus* Poir. and *Lemna gibba* L.). Although the ponds inhabited by *N. lutea* are primarily surrounded by natural, alluvial forests, both pond complexes are encircled by agricultural land and have been devastated by sand and gravel exploitation. A significantly higher number of individuals was recorded in the pond complexes located in the vicinity of the Podunavci settlement compared to the second investigated locality. However, the spatial proximity of the pond complex adjacent to the Stopanja settlement to the Osredak Special Nature Reserve makes it easier to consider expanding the boundaries of this protected area to include this pond complex.

***Ophiognomonia melanostyla* (DC.) Berl., fam. Gnomoniaceae (fungus, saprotrophic)**
Contributor: Dimitar Stoykov
Geographic focus: Bulgaria

New records and noteworthy data: The second report of *Ophiognomonia melanostyla* from Bulgaria (according to Stoykov 2016).
Specimen data: Sofia region, Sofia city, Vrana Park, N 42.641°, E 23.43825°, on fallen, overwintered leaves of *Tilia platyphyllos* Scop., ca. 560 m a.s.l., 01 June 2024; leg./det. Stoykov D.
Vouchers: Bulgarian Academy of Sciences, Mycological Collection of the Institute of Biodiversity and Ecosystem Research (SOMF), 31569, 31570.

The small perithecia of this interesting microscopic fungus were easily observable from the underside of the leaf blades with a hand lens, usually recognised by their typical, very long, slender and filiform, dark coloured perithecial beaks, measuring about 750–1375 µm long in the examined Bulgarian materials. Barr (1978) reported *O. melanostyla* with beaks ca. 750 µm long, while according to Monod (1983) the length of its beaks varies within the range of 350–1100 µm. This species shares certain morphological features with another long-beaked species of the *Gnomoniaceae* family, i.e. *Gnomonia gnomon* (Tode) J. Schröt., almost exclusively found on dead overwintered leaves of hazel, but the latter has shorter beaks, reaching up to 560 µm in Bulgarian collections preserved in SOMF. Its asci are up to 40 µm long, and the ascospores up to 25 µm long, they are shorter than those of *O. melanostyla*; and the perithecia of *O. gnomon* typically collapse inwards when dried, almost to and slightly below the level of the leaf blade. In the adjacent Balkan countries, *O. melanostyla* was reported in Turkey (Stoykov 2016). It is a comparatively rarely reported gnomoniaceous fungus in Europe, known also from Austria, the Czech Republic, Germany, Italy, Switzerland, Ukraine, and the UK (Barr 1978; Monod 1983; Stoykov 2016).

***Orchis* × *beyrichii* (Rchb. f.) A. Kern. nothosubsp. *beyrichii*, fam. Orchidaceae (monocot, vascular plant)**
Contributors: Vladan Djordjević and Svetlana Krdžić
Geographical focus: Serbia
New records and noteworthy data: This is the first record for Serbia proper and the second record for Serbia.
Specimen data: Eastern Serbia, Mt. Rtanj, Rašinac – Šiljak (Baba), N 43.768156°, E 21.923603°, MGRS 34T EP74, ass. *Syringo-Fraxinetum orni* Borza, 1958, limestones, sandstones and dolomites, exp. NE, incl. 20°, 862 m a.s.l.; 03 May 2024; leg. Djordjević V., Krdžić S.; det. Djordjević V.
Voucher: Herbarium of the Institute of Botany and Botanical Garden Jevremovac, University of Belgrade, vascular plant collection (BEOU) 72202; photo documentation of Djordjević V.

Orchis × *beyrichii* nothosubsp. *beyrichii* is a natural hybrid between two closely related orchid species (*Orchis militaris* L. subsp. *militaris* and *O. simia* Lam.). It is distributed in Europe in the following countries: Austria, France, Germany, Hungary, Italy, Crimea, Spain, Switzerland, and the countries of the former Yugoslavia (POWO 2024).

The new finding of this hybrid on Mt. Rtanj is the first record for the region of Eastern Serbia and also for Serbia proper. This is the first record of this hybrid in the MGRS 34T EP74 10 × 10 km and also in EP 100 × 100 km UTM grid cells. Previously, it was recorded in Vojvodina (Radak *et al.* 2019). In addition, the new finding of this hybrid on Mt. Rtanj is the only known record of this hybrid in the Central Balkans.

A specimen of *Orchis* × *beyrichii* nothosubsp. *beyrichii* was found on the route Rašinac – Šiljak (Mt. Rtanj), in the community *Syringo-Fraxinetum orni*. The following accompanying taxa were recorded at the site with the hybrid: *Fraxinus ornus* L., *Syringa vulgaris* L., *Acer monspessulanum* L., *Viburnum lantana* L. and *Carpinus orientalis* Mill. The hybrid was found on limestones, sandstones and dolomites, at an altitude of 862 m, on a northeast-facing slope with an inclination of 20°. It was recorded at the site where the two parental species grow in sympatry and the population size of *O. simian* (three individuals) was larger than that of *O. militaris* subsp. *militaris* (one individual). *Orchis* × *beyrichii* nothosubsp. *beyrichii* and its two parental species are protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). According to Serbian legislation, *Orchis militaris* subsp. *militaris* is classified as a strictly protected species, whereas *O. simia* is classified as a protected species in Serbia.

***Plagiostoma apiculatum* (Wallr.) L.C. Mejía, fam. *Gnomoniaceae* (fungus, saprotrophic)**
Contributor: Dimitar Stoykov
Geographic focus: Bulgaria
New records and noteworthy data: The first report of *Plagiostoma apiculatum* from the Sofia region and the fourth record in Bulgaria (according to Stoykov 2012, 2017).
Specimen data: Sofia region, Sofia city, Vrana Park, N 42.639122°, E 23.436722°, on a dead, fallen apical branch of *Salix alba* L., ca. 560 m a.s.l.; 11 May 2024; leg./det. Stoykov D.
Voucher: Bulgarian Academy of Sciences, Mycological Collection of the Institute of Biodiversity and Ecosystem Research (SOMF), 31577.

The present collection exhibits oblong-ellipsoid one septate ascospores, about 17.5–20 × 5–7.5 µm in water, slightly larger when compared to the published data about ascospore measurements, e.g. in Stoykov (2012), which reported *Cryptodiaporthe apiculata* (Wallr.) Petr., (13) 17–24 × (3.5) 5–7 µm, from the Balkan range and Vitosha region, on *Salix* spp.; and in Stoykov (2017),

14.5–18 × (4.5) 5–6 µm, from the Forebalkans, on *Salix alba* L. This species is expected to have a much wider distribution in Bulgaria as the host-plants are common tree species throughout the country, but it remains an under-recorded diaporthalean fungus.

Plagiostoma dilatatum L.C. Mejía, similar to *P. apiculatum*, was described from France on dead, still attached twigs of *Salix caprea* L. and *S. irrorata* Andersson (Mejía *et al.* 2011). It differs from our record on *S. alba,* with slightly larger ascomata, perithecia with more expanded beaks and apexes, sometimes with two joined beaks, and renoid to oblong-ellipsoid ascospores. *Plagiostoma convexum* (Preuss) L.C. Mejía on twigs of *Salix* spp., and *P. salicellum* (Fr.) Sogonov, known from Europe on dead twigs, are attached to the trees of *S. alba*, *S. repens* L. and other *Salix* sp. and both have thinner spores constricted at the septum compared to *P. apiculatum* (Mejía *et al.* 2011).

***Podosphaera polemonii* (L. Junell) U. Braun & S. Takam., fam. Erysiphaceae (fungus, parasitic)**
Contributors: Vasilică-Claudiu Chinan and Ciprian Claudiu Mânzu
Geographical focus: Romania
New record and noteworthy data: This is the first report of *Podosphaera polemonii* in Romania.
Specimen data: Eastern Carpathians, Ciuc Depression, the Csemo-Vrabia swamp, N 46.220840°, E 25.887924°, on *Polemonium caeruleum* L., holomorph; 26 September 2014, 23 August 2018; leg./det. Chinan VC, Mânzu CC.
Voucher: Herbarium of Alexandru Ioan Cuza University of Iași, Romania (I) 182383, 207187.

Polemonium caeruleum exhibiting powdery mildew symptoms was found in 2014, in the Csemo-Vrabia swamp, Romania. Subsequently in 2018, additional diseased specimens were collected from the same location. The host plants displayed white patches on both surfaces of the leaves, stems, and sepals. The morphological features of the samples collected from Romania are as follows: Hyphae hyaline, 6–9 µm wide; Conidiophores erect, straight, with foot-cells about 53–74 × 10–11 µm, followed by 1–3 shorter cells; Conidia ellipsoid-ovoid to doliiform, hyaline, 26–36 × 12–17 µm; Chasmothecia gregarious, dark brown, 72–90 µm in diameter; Appendages 7-18, brown or paler to hyaline towards the tip, flexuous, 90–450 µm in length and 6–7 µm wide; Peridium cells irregularly poligonal, 11–25 × 9–17 µm; Asci ellipsoid-ovoid, 66–90 × 46–63 µm, 6–8-spored; Ascospores ellipsoid-ovoid, 16–25 × 10–14 µm.

Based on the morphological characteristics, the fungus was identified as *Podosphaera polemonii*, a species distributed in Asia and Europe (Braun & Cook 2012). Within Europe it has been recorded in Poland, Sweden (Braun & Cook 2012), and Lithuania (Grigaliūnaitė 1995).

In the monograph of the Erysiphaceae from Romania (Eliade 1990) there is no mention of any powdery mildew on *Polemonium* species. To the best of our knowledge, the Csemo-Vrabia swamp is the only known location of *Podosphaera polemonii* in Romania.

***Russula sapinea* Sarnari, fam. Russulaceae (fungus, mycorrhizal)**
Contributor: Boris Assyov
Geographical focus: Bulgaria
New records and noteworthy data: These are the first records of *Russula sapinea* in Bulgaria (Denchev & Assyov 2010) and the Balkan Peninsula (Zervakis *et al.* 1998; Ivančević 2002; Tkalčec & Mešić 2003; Karadelev *et al.* 2018).
Specimen data: 1) Sofia Province, Samokov municipality, Rila Mts., below the Malyovitsa ski centre, N 42.218472°, E 23.398528°, under *Picea abies* H. Karst. and *Pinus sylvestris* L. among *Sphagnum* sp. in a wooded peat bog, ca. 1575 m a.s.l.; 19 July 2021; leg./det. Assyov B.; **2)** Sofia Province, Samokov municipality, Rila Mts,, Ovnarsko locality, N 42.2306631°, E 23.4292939°, under *Picea abies* and *Pinus sylvestris* among mosses at a stream, ca. 1450 m a.s.l.; 14 September 2020; leg./det. Assyov B.
Voucher: Mycological Collection of the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences (SOMF), 30911, 30912.

Russula sapinea is a characteristic species of the section *Laricinae* (Romagn.) Bon, distinguished in the field by a combination of a pinkish or pinkish violet pileus with a distinctly striate margin, distant yellowish lamellae, turning yellowish brown when damaged, a cavernose stipe developing yellowish to yellow brown spots with age, a yellow spore print, as well as its association with spruce, often in wet habitats (Sarnari 2005).

Russula sapinea is a recently separated and still little-known species of the genus. Originally described from Italy, it has subsequently been recorded from Finland, Norway, Slovakia and Sweden (Sarnari 2005; Knudsen *et al.* 2008; Kauffman 2016; Veselá *et al.* 2019). In addition to Europe, the species has also been reported in Asia from West Siberia (Filippova & Bulyonkova 2017). The present findings extend its European range to the Balkan Peninsula (Bulgaria), where it may be sought in suitable habitats elsewhere in the Balkan countries.

***Saxifraga pedemontana* All. subsp. *cymosa* Engl., fam. Saxifragaceae (dicot, vascular plants)**
Contributors: Marjan Niketić
Geographical focus: Serbia
New records and noteworthy data: This is the first record for the region of Southeastern Serbia.
Specimen data: Southeastern Serbia, Mt. Gloška Plani-

na, Puovica – Široko Bilo, N 42.5294123°, E 22.383827°, MGRS 34T FN10, rocks, silicate, ca. 1600 m a.s.l.; 22 August 2020; leg./det. Niketić M.
Vouchers: Herbarium of the Natural History Museum in Belgrade, General Herbarium of the Balkan Peninsula (BEO), s.n.

Saxifraga pedemontana subsp. *cymosa* is a high-mountain chasmophyte plant which is distributed only in Mts. Stara Planina (Babin Zub) in Serbia proper, as well as in Mts. Prokletije (Rudski 1949) and in Mts. Šar Planina (Nikolić *et al.* 1986) in Kosovo and Metohija.

On Mt. Gloška Planina this subspecies inhabits north-facing siliceous rocky cliffs at an elevation of ca. 1600 m. The population is very spatially restricted and consists of only several (ca. 10) individuals.

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REZIME

Botanica SERBICA

Novi i značajni podaci o biljkama, algama i gljivama iz JI Evrope i susednih regiona, 19

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U radu su prikazani novi i značajni podaci sa područja JI Evrope i susednih regiona o sledećim taksonima: mikoriznoj gljivi *Russula sapinea,* parazitskoj gljivi *Podosphaera polemonii,* saprotrofnim gljivama *Ophiognomonia melanostyla* i *Plagiostoma apiculatum,* dijatomeji *Nitzschia reskoi,* pršljenčici *Nitellopsis obtusa,* jetrenjači *Mannia triandra,* mahovinama *Buxbaumia viridis* i *Leptodon smithii,* monokotilama *Epipactis purpurata* i *Orchis* × *beyrichii* i dikotilama *Euphorbia orjeni, Fallopia* × *bohemica, Nuphar lutea* i *Saxifraga pedemontana* subsp. *cymosa*.

Ključne reči: novi nalaz, *Buxbaumia viridis, Epipactis purpurata, Euphorbia orjeni, Fallopia* × *bohemica, Leptodon smithii, Mannia triandra, Nitellopsis obtusa, Nitzschia reskoi, Nuphar lutea, Ophiognomonia melanostyla, Orchis* × *beyrichii, Plagiostoma apiculatum, Podosphaera polemonii, Russula sapinea, Saxifraga pedemontana* subsp. *cymosa,* JI Evropa

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