Report on the annual excursion of the BLAM to Slovakia from September 18th to 22nd 2024

Bericht zur Jahresexkursion der BLAM in die Slowakei vom 18. bis 22. September 2024

PAVEL ŠIRKA, STEFAN GEY, MARTINA PÖLTL and ANNA BÉREŠOVÁ

At an international bryology meeting in Latvia in 2022, Steffen Caspari and other members of the BLAM suggested to Pavel Širka that the annual excursion be held in Slovakia in 2024 after many years that elapsed since the first meeting organized in Slovakia in 1999 (ŠOLTÉS et al. 1999). The meeting was held from August 15 to 20, 1999, in the village of Stará Lesná, located at the foothills of the Vysoké Tatry Mts. It included excursions to the Tatra National Park (exploring the Bielovodská, Furkotská, Mengusovská, Temnosmrečianska dolina, and Dolina Siedmich prameňov valleys, as well as Skalné vráta Mt.) and the adjacent Slovenský raj National Park (Suchá Belá gorge) and Hornádska kotlina Basin (visiting the Sivá Brada and Dreveník Nature Reserves). Another excursion, involving some BLAM members, took place in Slovakia in 2011 as part of a working group known as "The Beech Boys" which focused on several primeval forests (ADAMČÍK et al. 2016).

The main organizer, Pavel Širka (Technical University in Zvolen), gladly accepted the challenge and embraced and expanded upon an idea proposed by fellow bryologist Katarína Mišíková to hold the meeting in the Cerová Vrchovina Protected Landscape Area (PLA). He compiled a list of known bryophyte species and an overview of bryophyte research within the PLA and was responsible for the bryological excursions. Anna Bérešová (Plant Science and Biodiversity Centre, Slovak Academy of Sciences) prepared an excursion guide for lichenologists including a brief overview of history of lichenological explorations in the area and list of published species. The Cerová vrchovina Highlands are a botanically appealing mountain range, characterized by mostly thermophilic flora, particularly oak forests dominated by *Quercus cerris*, growing on various volcanic rock formations. Additionally, the adjacent Southern Slovak Basin contains other intresting sites, some of which are under the administration of the same PLA. Both regions are bryologically and lichenologically quite underexplored. The meeting was therefore based in the city of Rimavská Sobota, serving as a good starting point for excursions (Fig. 1).

A total of 66 bryologists and lichenologists participated in the event, including the Slovak experts and employees of the PLA administration. Participants came mainly from Germany and Austria, but also Latvia, Hungary, Croatia, Bulgaria and Ukraine (Fig. 2).

Results

Throughout the excursions during the BLAM meeting in the Cerová vrchovina PLA, we have so far documented over 230 taxa of bryophytes, including ca. 205 mosses and ca. 27 liverworts, and up to 270 lichens. Also, lichenicolous fungi have been collected and identified. The identification is in progress both in bryological and lichenological group and complete lists will be published later. Nomenclature of bryophytes follows HODGETTS et al. (2020). Their threat status was assessed according to the latest Red list of mosses

(MIŠÍKOVÁ et al. 2020) and liverworts and hornworts (MIŠÍKOVÁ et al. 2021) of Slovakia. Nomenclature of lichens as well as lichenicolous fungi follows NIMIS (2025). Categories of threat were assigned from the available Red list of lichens of Slovakia (PIŠÚT et al. 2001).

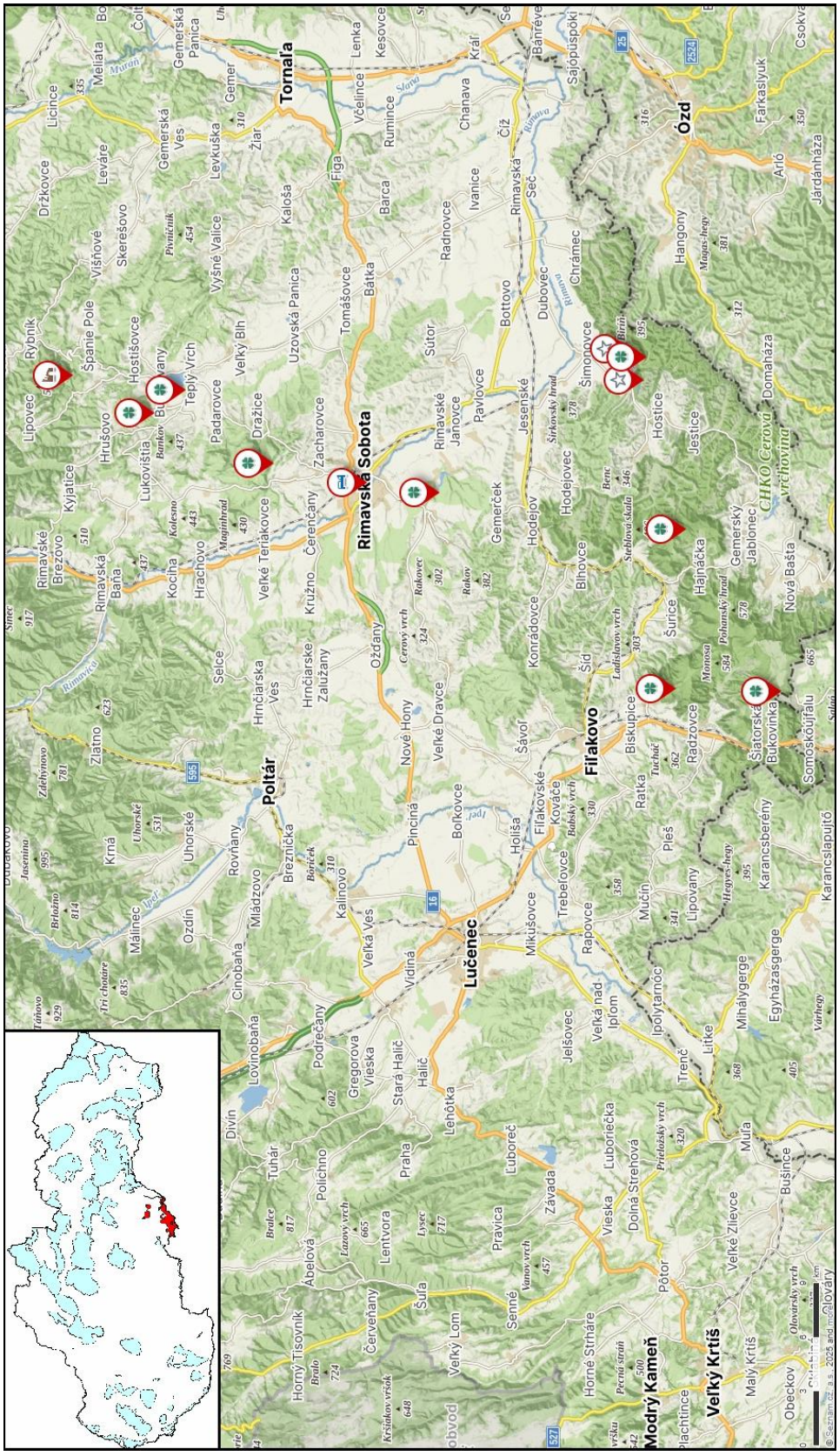

Fig. 1: Visited localities within the Cerová vrchovina Protected Landscape Area during the annual excursion of the BLAM in September 2024. Source of the map: en.mapy.cz, modified by P. Širka

1 László Lőkös, 2 Michael Berger, 3 Peter Gruber, 4 Anna Bérešová, 5 Norbert Stapper, 6 Katharina Rambau, 7 Franz Berger, 8 Sophia Katholnigg, 9 Othmar Breuss, 10 Daniel Vlčák, 11 Christoph Langer, 12 Miriama Chrastinová, 13 Dietmar Teuber, 14 Patrik Neumann, 15 Rainer Cezanne, 16 Thomas Wolf, 17 Rasmus Kray, 18 Martin Feulner, 19 Christian Berg, 20 Fritz Volkers, 21 Christian Dolnik, 22 Jens Schramm, 23 Sophia Knaus, 24 Peter Erzberger, 25 Volker Otte, 26 Kalina Hable, 27 Christian Printzen, 28 Martina Pöltl, 29 Lilith Weber, 30 Beáta Papp, 31 Līga Strazdiņa, 32 Wolfgang Wiehle, 33 Josef Maynollo, 34 Anna Mežaka, 35 Ilze Barone, 36 Margarita Delles, 37 Richard Ehrlacher, 38 Evita Ojehnoviča, 39 Ludwig Treuter, 40 Silvia Schrey, 41 Josephin Hartmann, 42 Nóra Varga, 43 Marija Bučar, 44 Linda Gerra-Inohosa, 45 Marko Doboš, 46 Matthias Kaltenböck, 47 Baiba Bambe, 48 Andrea Berger, 49 Marianne Gruber, 50 Csaba Balázs, 51 Stefan Gey, 52 Beppo Fischer, 53 Felix Faltner, 54 Maren Kaiser, 55 Pavel Širka, 56 Christie Philipp, 57 Marion Eichler, 58 Christiane Boden

Participants not in the photo: Sergey Kondratyuk, Snezhina Popova, Eva Belanová, Veronika Rízová, Jana Garayová, Martin Matúš, Lenka Papáčová, Želmíra Ružičková.

Fig. 2: Participants of the BLAM meeting in 2024 in Slovakia. Photo taken in the Šomoška National Nature Reserve (Photo: Pavel Širka).

Wednesday, 18th of September 2024

Participants who arrived in time made a half-day excursion in the afternoon to the nearby Kurinecká dubina Nature Reserve in the village of Kurinec. At a parking lot near the Zelená voda bus stop, we were welcomed by employees of the Cerová vrchovina PLA Jana Garayová and Lenka Papáčová, as well as Peter Slovák from the Sustainable Urban Development Cooperative Council of the Rimavská Sobota city, who gave us a brief introduction about the reserve and its surrounding area. Roughly a kilometer-long walk from the parking lot took us along the Kurinec water reservoir and the Lukava stream to explore an oak forest where some individuals of English oak (*Quercus robur*) reach extraordinary age and dimensions. These tree giants serve as a good nesting place and habitat for the European roller (*Coracias garrulus*) and other birds, as well as bats, small mammals and insects. Here, we recorded ca 50 bryophyte species. The epiphytic and epixylic bryophyte communities included species such as *Anomodon longifolius*, *A. viticulosus*, *Dicranoweisia cirrata*, *Dicranum tauricum*, *Homalia trichomanoides*, *Leskea polycarpa*, *Lewinskya affinis*, *L. speciosa*, *Nyholmiella obtusifolia*, *Pseudanomodon attenuatus*, *Pseudoleskeella nervosa* and *Pylaisia polyantha*. On the forest floor and near the trail species such as *Dicranella schreberiana* var. *schreberiana* (recognized as a new taxon in Slovakia, previously not identified at a variety level), *Fissidens taxifolius*, *Marchantia polymorpha*, *Oxyrrhynchium schleicheri, Ptychostomum rubens,* and vulnerable *Pohlia melanodon* were found. Lichen communities included crustose species, e.g. *Biatoridium monasteriense*, *Graphis scripta*, *Lecidella elaeochroma*, *Phlyctis argena*, *Pseudosagedia aenea*, rarely also pin lichens (members of the genus *Chaenotheca*), as well as common foliose species e.g. *Parmelia sulcata* and *Physcia tenella*. In the evening, at the main meeting venue – the AM Hotel Wellness in Rimavská Sobota, where most participants were accommodated – Csaba Balázs, a zoologist from the Cerová Vrchovina PLA, delivered an introductory presentation about the area and its fauna, speaking also on behalf of Eva Belanová, the PLA director. Following this, Pavel Širka and Anna Bérešová gave talks on the bryophytes and lichens of the Cerová Vrchovina Highlands and the Southern Slovak Basin, respectively. Practical details for the upcoming days, including excursion departures, group arrangements, meal plans, and other logistics, were also discussed.

Thursday, 19th of September 2024

For the full-day excursions, such as the one on Thursday, a bus was rented. Our first destination was one of the most remarkable sites in the Cerová Vrchovina Highlands – the Šomoška National Nature Reserve in Šiatorská Bukovinka. Here, we were guided by Csaba Balázs. A few minute-exploration of the first trees near the parking lot led to the discovery of a new species for the Slovak bryophyte flora, *Cryphaea heteromalla* (ELLIS et al. 2025, Fig. 3). After taking a group photo, we followed a scenic tourist trail through forests of *Fagus sylvatica* and *Quercus cerris*, alongside the Šomošský potok stream, to the Šomoška castle ruins. The trail also included the famous "Stone Waterfall" (Fig. 4) and "Stone Sea" basalt outcrops. Among a total of ca 100 bryophytes identified, several species of conservation concern were found, such as the endangered *Rhyncho-stegium rotundifolium* (Fig. 5), vulnerable *Pterygoneurum subsessile*, *Rhynchostegiella tenella*, near-threatened *Lewinskya striata* and *Orthotrichum patens*. Additionally, some species not included in the latest Slovak checklist of mosses (MIŠÍKOVÁ et al. 2020) were recorded, including *Brachytheciastrum salicinum*, *Hedwigia emodica*, *Lewinskya fastigiata* and *Tortula schimperi*.

Out of already identified lichens, the following epiphytic species were recorded: *Alyxoria varia*, *Arthonia radiata*, *Bacidia rubella*, *Caloplaca obscurella*, *Coenogonium pineti* and *Diarthonis spadicea*. Basalt rocks hosted species such as *Gallo-wayiopsis obtegens*, *Glaucomaria rupicola*, *Heppia lutosa*, *Psilolechia lucida*, *Rhizocarpon distinctum* or *R.*

geographicum. Lichenologists were also glad to record a species so far not checklisted from Slovakia (GUTTOVÁ et al. 2013, and online addenda available at https://ibot.sav.sk/en/lichens-in-slovakia/) – *Hymenelia obtecta* forming strikingly orange thalli on basalt rocks of the „Stone sea“.

Fig. 3: *Cryphaea heteromalla*, a new species in the Slovak bryophyte flora (Photo: Stefan Gey).

Fig. 4: Exploring the “Stone waterfall” in the Šomoška National Nature Reserve (Photo: Pavel Širka).

The second visited locality on Thursday was the Belinské skaly Natural Monument (Fig. 6), which is characterized by thermophyllic *Quercus* spp. stands on basalt rocks. Besides some already mentioned species (*Hedwigia emodica*, *Lewinskya striata*, *Orthotrichum patens*), other quite interesting records were made, e.g. *Riccia ciliata* (NT), *Ulota crispula* (not included in the latest Slovak checklist), *Mannia fragrans*, *Cynodontium strumiferum*, *Dichranella schreberiana* var. *schreberiana*, *Racomitrium elongatum*, *R. heterostichum*, *Syntrichia montana*, *S. papillosa,* etc. Apart from macrolichens such as rock tripes (*Umbilicaria* sp.), rock-shield lichens (*Xanthoparmelia* sp.), saxicolous lichenobiota included e.g. *Circinaria caesiocinerea*, *Diploschistes scruposus*, *Lambiella furvella*, *Lecanora argopholis* (Fig. 7), *Physcia subalbinea* (Fig. 8), and epiphytic species e.g. *Amandinea punctata*, *Catillaria nigroclavata*, *Parmelia sulcata*, *Parmelina tiliacea*, *Punctelia subrudecta* or *Pyrenula nitida*.

On the way to Rimavská Sobota, participants stopped for a joint dinner at the Hamilton restaurant in the village of Fiľakovské Kováče. In the evening, Anna Mežaka presented the occurrence of some rare, threatened or otherwise interesting bryophyte and lichen species in Latvia.

Fig. 5: *Rhynchostegium rotundifolium* in the Šomoška National Nature Reserve (Photo: Stefan Gey).

Fig. 6: At the Belinské skaly Natural Monument (Photo: Pavel Širka).

Fig. 7: *Lecanora argopholis* at the Belínske skaly Natural Monument (Photo: Rainer Cezanne).

Fig. 8: *Physcia subalbinea* at the Belínske skaly Natural Monument (Photo: Rainer Cezanne).

Friday, 20th of September 2024

On Friday, participants headed to the Driencanský Karst Special Area of Conservation. They were divided into two groups, with the first group being dropped off in the village of Driencany. This group, accompanied by the PLA director Eva Belanová, Jana Garayová, and Hungarian colleagues, explored the Driencanský Karst educational trail. This picturesque trail features a number of protected plants and animals (*Lathyrus transsilvanicus, Matteuccia struthiopteris, Mentha pulegium, Rosalia alpina, Upupa epops*), but also natural manifestations of karst relief such as scraps, sinkholes, caves, karst lakes, as well as wet meadows, oak forests, steppes and the Blh river. At the end of the trail, visitors can enjoy historical and cultural landmarks, including a sundial, a fairy-tale labyrinth, and the former rectory of Pavol Dobšinský – a renowned Slovak writer, collector of Slovak folktales, storyteller, and folklorist – which now serves as the Museum of Slovak Fairy Tales. From a total of over 70 bryophytes, many species typical for limestone rocks and basic soil were recorded, among others *Alleniella besseri*, *A. complanata*, *Brachythecium tommasinii*, *Cirriphyllum crassinervium*, *Ctenidium molluscum*, *Encalypta streptocarpa*, *Exsertotheca crispa*, *Fissidens dubius*, *Mnium stellare*, *Plagiomnium rostratum*, *Plasteurhynchium striatulum* (NT), *Rhodobryum onteriense*, *Taxiphyllum wissgrillii*, and *Tortella tortuosa* s.l. Perhaps one of the more interesting findings were *Eucladium verticillatum* and *Seligeria pusilla* found at the Veľká driencanská jaskyňa cave. On limestone pavements and karst rock formations in open grasslands, lichenologists observed and collected saxicolous species e.g. *Bagliettoa* sp., *Lathagrium cristatum*, *Lobothallia radiosa*, *Placocarpus schaereri*, on bryophytes *Agonimia opuntiella* and *A. tristicula*. Of epiphytic lichenobiota we recorded e.g. pin lichens – *Chaenotheca chrysocephala* or *Calicium glaucellum*, recently very frequently occurring *Lecania croatica*, and other species, e.g. *Hyperphyscia adglutinata*, *Lecanora thysanophora*, *Scytinium teretiusculum*. In the humid section of the trail along the watercourse of the Blh river we collected *Reichlingia leopoldii*. The novelty for lichen biota of Slovakia represented *Fellhanera viridisorediata* growing on wood of fallen pine tree.

The second group continued from Driencany and stopped between the villages of Rybník and Španie Pole (Španie Pole, rázcestie bus stop). Joined by Lenka Papáčová and Želmíra Ružičková from the PLA administration, the group followed the Drienok educational trail through *Carpinus-Quercus-Fagus* forests to reach the Drienok castle ruins. Along the way

they also explored a former quarry, where a lot of bryophytes and lichens could be found. On the way back, the attendees went along the Drienok stream and researched riparian vegetation in *Alnus glutinosa*-dominated stands (Fig. 9). A similar composition of calciphilous bryophytes was observed, as well as some other interesting species not recorded elsewhere – *Neckera pumila* (VU), *Schistidium* cf. *robustum* (NT), *Syntrichia cal-cicola* (DD), *Aneura pinguis*, *Campylophyllopsis calcarea*, *Cololejeunea calcarea*, *Dichodontium pellucidum*, *Flexitrichum flexicaule*, *Homalothecium philippeanum*, *Pedinophyllum interruptum* (Fig. 10), *Plagiopus oederianus* (Fig. 11), *Pseudoamblystegium subtile*, *Ptychostomum pseudotriquetrum* var. *pseudotriquetrum*, *Serpoleskea confervoides, Thuidium recognitum*, *Tortella inclinata, Ulota crispa* s. str., *Weissia controversa* var. *controversa*. Important lichen findings are representd by the epiphytes rarely occurring in Slovakia – *Bacidia fraxinea*, *Phlyctis agelaea* and *Sclerophora pallida*.

Fig. 9: Exploring the banks of the Drienok stream (Photo: Pavel Širka).

Fig. 10: *Pedinophyllum interruptum* on shady rock walls near the Drienok stream (Photo: Stefan Gey).

Fig. 11: *Plagiopus oederianus* on limestone rocks near the Drienok stream (Photo: Stefan Gey).

In the afternoon, participants regrouped and had just enough time to visit together the Hikóriový porast Protected Area. This fenced area was established at the end of 19th century as a study site for the acclimatization of non-native hickory trees (*Carya* spp.). Today, these mature stands, mixed with some native woods such as *Carpinus betulus* and *Quercus* spp., provide excellent habitats for cavity-nesting birds and other wildlife. In addition to common epiphytic and epixylic bryophytes, some noteworthy species were observed along the forest roads, including *Pohlia melanodon* (VU), *Microeurhynchium pumilum* (classified as Data Deficient in Slovakia,) and *Physcomitrium patens*. The hickory tree wood is a valuable habitat for epiphytic lichens, mainly *Inoderma byssaceum*, listed as extinct in the Slovak Red list of lichens (Pišút et al. 2001). On the northern side, the area is bordered by the Teplý Vrch water reservoir, where a species of the rare liverwort *Fossombronia* was also found near the water. Unfortunately, the specimens were sterile and could not be identified further.

In the evening, the BLAM had its annual general meeting.

Saturday, 21st of September 2024

The plan for Saturday was equally ambitious. Our first destination lead us to the village of Drňa, where we wanted to explore sandstone formations in a forest-steppe environment. They provide important documentation of the geological and geomorphological development of the sandstone complex in the Cerová Vrchovina Highlands. Although these formations occur in several places across the region, only one site, the Jalovské vrstvy Natural Monument, is protected by law. These formations are scientifically valuable geological outcrops featuring the protected Rose Campion (*Silene coronaria*). To save time, we first had to convince the bus driver to navigate a bumpy dirt road. Eventually, we parked in the Studená dolina Valley, from where three groups set out on foot for their expeditions. The first group visited the aforementioned Jalovské vrstvy Natural Monument (Fig. 12), the second group researched sandstone formations beneath the Brezový vrch Hill (Fig. 13), while the third group explored the area near the Hostice water reservoir from the eastern side.

Fig. 12: The sandstone “terraces” underneath the Brezový vrch Hill (Photo: Pavel Širka).

Fig. 13: Landscape in the Jalovské vrstvy Natural Monument (Photo: Stefan Gey).

The most interesting bryophyte findings from these trips include the vulnerable *Didymodon luridus* and *Pterygoneurum subsessile*, near-threatened *Gymno-stomum calcareum*, *Lewinskya striata* and *Rhynchostegium megapolitanum*, *Chenia leptophylla* (not included in the recent Slovak checklist), as well as *Bryum violaceum*, *Pseudocrossidium revolutum*, *Schistidium brunnescens* and *Syntrichia ruraliformis*. Besides common lichens, such as *Protoblastenia rupestris*, *Protoparmeliopsis muralis*, or *Squamarina cartilaginea*, sandstone rocks were inhabited also by taxa so far not reported from Slovakia – *Circinaria subfarinosa* and *Xalocoa ocellata*.

When all groups reunited, they visited the Ragáč National Nature Reserve (Fig. 14, 15) in the village of Hajnáčka. Because of the narrow streets leading to the reserve, the bus was parked in the village center. That is why participants had to walk about 3 km to reach the summit of the Ragáč Hill (537 m a.s.l.). Along the way, on the edge of an arable field at the western foothill, *Riccia bifurca* (NT), *R. sorocarpa*, as well as *Chenia leptophylla* was discovered. The latter is a non-native moss, first reported in Slovakia only recently, from areas near Trenčín and Nové Mesto nad Váhom in the northwest (DŘEVOJAN et al., 2024). The reserve itself was established to protect significant geological and geomorphological features documenting the region's last volcanic activity, as well as the natural forest communities dominated by *Quercus cerris* in the Cerová vrchovina Highlands. It is also home to protected and rare, mostly thermophylic, plant and animal species.

Fig. 14: Basalt block heap in the Ragáč National Nature Reserve (Photo: Stefan Gey).

Fig. 15: View from the summit of the Ragáč Hill (537 m a.s.l.) (Photo: Pavel Širka).

The bryophytes of this area and surrounding hills were studied by PILOUS (1957), who recorded several remarkable and even new bryofloristic elements for Czechoslovakia, such as *Acaulon muticum*, *Campylophyllopsis sommerfeltii* (DD), *Fabronia pusilla* (now considered extinct in Slovakia), *Leptodon smithii* (also considered extinct with still the only known locality in the country in the nearby Zaboda Natural Monument), *Mannia fragrans*, *Porella cordaeana*, *Pyramidula tetragona* (CR), *Rhynchostegiella tenella* (VU), *Riccia ciliata* and *Schistidium confertum* (both NT). During the BLAM excursion, over 70 bryophyte species were recorded at Ragáč. On the basalt rocks and their crevices, species such as *Barbilo-phozia barbata*, *B. sudetica*, *Cynodontium strumiferum*, *Fissidens gracillifolius*, *Grimmia laevigata*, *G. ovalis*, *Hedwigia ciliata*, *H. emodica*, *Orthotrichum anomalum*, *Racomitrium heterostichum*, *Rhabdoweisia fugax* and other were found. Noteworthy findings also include *Bartramia pomiformis*, *Orthotrichum patens* (NT), *Plagiopus oederianus*, *Reboulia hemisphaerica* and *Tortula schimperi*. Volcanic rocks at

the summit were covered by diverse forms of lichen thalli – from foliose-umbilicate (e.g. *Umbilicaria pustulata*, Fig. 16), to foliose (members of the genera *Parmelia* or *Xanthoparmelia*), or placodioid (*Calogaya decipiens*, *Protoparmeliopsis garovaglii*), as well as crustose species e.g. *Gyrographa gyrocarpa*, *Lecanora orosthea*, *L. polytropa*, *Porpidia soredizodes*. Fallen decorticated branches and stumps of oaks were suitable substrates for *Cladonia* or *Placynthiella* species and hosted also *C. parasitica*. *Sphinctrina leucopoda* was found parasitising *Diploschistes scruposus* over vulcanic rock (Fig. 17).

Before the bus arrived, some participants (the Hungarian group), also explored the Hajnáčsky hradný vrch Nature Reserve, located in the village center. On the ruins of this medieval castle they found common saxicolous mosses such as *Anomodon viticulosus, Grimmia pulvinata*, *Homalothecium sericeum*, *Leucodon sciuroides*, *Orthotrichum anomalum*, *Tortula muralis* var. *muralis* and *Weissia condensa*.

Fig. 16: *Umbilicaria pustulata* in the Ragáč National Nature Reserve (Photo: Anna Bérešová).

Fig. 17: *Sphinctrina leucopoda* on *Diploschistes scruposus* over volcanic rock in the Ragáč National Nature Reserve (Photo: Rainer Cezanne).

Sunday, 22nd of September 2024

The last day of the meeting was reserved for the Pokoradzské Jazierka Nature Reserve. Located just about 6 km from the center of Rimavská Sobota, this protected area is notable for its natural lakes, transitional bogs and marshes, as well as open mining chambers – remnants of tuff sandstone extraction (Fig. 20, 21). These chambers now serve as important paleontological sites and habitats for bats. Above the chambers, an unmarked trail leads to the iconic “Stone Johny” (*Kamenný Janko*), a volcanic rock formation about 5 m high, composed of an andesite head and a tuff neck and body. Although the group was smaller due to some participants leaving earlier in the day, a total of ca 65 bryophyte species were recorded in the reserve. Along the damp banks of the lakes, we observed

liverworts *Riccia fluitans* agg. and *Ricciocarpos natans* (NT, Fig. 18), while exposed andesite slopes hosted species like *Imbribryum alpinum* and *Riccia bifurca* (Fig. 19), *R. ciliata* (both NT) and *R. sorocarpa*. Below *Kamenný Janko*, we discovered beautiful patches of *Mannia fragrans*. Notable epiphytic species found included *Lewinskya striata*, *Orthotrichum patens* and *Ulota crispula*. The occurrence of *Mannia fragrans* and *Ricciocarpos natans* had previously been reported from this site by Peciar (1970, 1979), who also documented other noteworthy species such as *Cephaloziella hampeana*, *Pyramidula tetragona*, and *Riccia ciliifera*. Of lichens not commonly recorded in Slovakia, we can mention saxicolous species *Glaucomaria swartzii*, *Olegblumia demissa* or *Scytinium magnussonii*.

Fig. 18: Terrestrial form of *Ricciocarpos natans* (Photo: Stefan Gey).

Fig. 19: *Riccia bifurca* at the Pokoradzské Jazierka Nature Reserve (Photo: Martina Pöltl).

Fig. 20: Exploring the tuff sandstone mining chambers (Photo: Pavel Širka).

Fig. 21: Experienced bryologists and lichenologists at the entrance to one of the mining chambers (Photo: Pavel Širka).

Conclusions

The response to the invitation to the BLAM meeting in Slovakia was overwhelmingly positive. It was truly exciting to witness a gathering of such a remarkable international group of experts, eager to contribute to the knowledge of bryophytes and lichens in Slovakia – a country where these groups of organisms remain understudied, primarily due to a lack of specialists. The valuable data collected during this meeting will help bridge this knowledge gap and contribute to a more effective conservation of certain species within the country. As a result, several new country records and red-listed taxa are reported. Comprehensive lists of the recorded species will be compiled and published, which will significantly contribute to the knowledge of these organism groups within the Cerová vrchovina Protected Landscape Area. Though the excursions were physically challenging at times, we could not have asked for better weather, and we hope the participants also had enough time to relax, discuss and enjoy. From this perspective, we conclude that the event was a great success. We would like to cordially thank all the participants for their company and contributions.

Acknowledgements

We thank employees of the Cerová vrchovina Protected Landscape Area for their help during field excursions and in organizing this event. Many thanks to R. Cezanne for providing photos. P. Širka was financially supported by the Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and Slovak Academy of Sciences under grant VEGA 2/0132/21.

Literature

ADAMČÍK, S., AUDE E., BÄSSLER C., CHRISTENSEN M., VAN DORT K., FRITZ Ö., GLEJDURA S., HEILMANN-CLAUSEN J., HOLEC J., JANČOVIČOVÁ S., KUNCA V. LACKOVIČOVÁ A., LÜTH M. & ÓDOR P. 2016. Fungi and lichens recorded during the Cryptogam Symposium on Natural Beech Forests, Slovakia 2011. – Czech Mycology **68**: 1–40.

ELLIS, L. T., ALVAREZ, D. J., BACILLIERE, G., BINDERNAGEL, J. R. D., CZERNYADJEVA, I. V., DE BEER, D., … ZHENG, T. X. 2025. New national and regional bryophyte records, 80. – Journal of Bryology **47**(1): 71–85. https://doi.org/10.1080/03736687.2025.2466983

GUTTOVÁ, A., LACKOVIČOVÁ, A. & PIŠÚT, I. 2013. Revised and updated checklist of lichens of Slovakia (May 2013). – Biologia **68**: 845–850. + 50pp electronic appendix.

HODGETTS, N. G., SÖDERSTRÖM, L., BLOCKEEL, T. L., CASPARI, S., IGNATOV, M. S., KONSTANTINOVA, N. A., LOCKHART, N., PAPP, B., SCHRÖCK, C., SIM-SIM, M., BELL, D., BELL, N. E., BLOM, H. H., BRUGGEMAN-NANNENGA, M. A., BRUGUÉS, M., ENROTH, J., FLATBERG, K. I., GARILLETI, R., HEDENÄS, L., HOLYOAK, D. T.,HUGONNOT, V., KARIYAWASAM, I., KÖCKINGER, H., KUČERA, J., LARA F. & PORLEY, R. D. 2020. An annotated checklist of bryophytes of Europe, Macaronesia and Cyprus. – Journal of Bryology **42**(1): 1–116.

MIŠÍKOVÁ, K., GODOVIČOVÁ, K., ŠIRKA, P. & ŠOLTÉS, R. 2020. Checklist and red list of mosses of Slovakia. – Biologia **75**: 21–37.

MIŠÍKOVÁ, K., GODOVIČOVÁ, K., ŠIRKA, P. & ŠOLTÉS, R. 2021. Checklist and red list of hornworts (Anthocerotophyta) and liverworts (Marchantiophyta) of Slovakia. – Biologia **76**: 2093–2103.

NIMIS, P. L. 2025. ITALIC – The Information System on Italian Lichens. Version 8.0. University of Trieste, Dept. of Biology, (https://dryades.units.it/italic), accessed on 2025, 01, 22. for all. All data are released under a CC BY-SA 4.0 licence.

PECIAR, V. 1970. Studia bryofloristica Slovaciae II. – Acta Facultatis Rerum Naturalium Universitatis Comenianae, ser. Botanica **16**: 27–35.

PECIAR, V. 1979. Studia bryofloristica Slovaciae XI. – Acta Facultatis Rerum Naturalium Universitatis Comenianae, ser. Botanica **27**: 151–161.

PILOUS, Z. 1957. Mechorosty Ragačských kopců u Fiľakova. – Biológia **4**: 241–254.

PIŠÚT, I., GUTTOVÁ, A., LACKOVIČOVÁ, A. & LISICKÁ, E. 2001. Červený zoznam lišajníkov Slovenska (december 2001), p. 23–30. In Baláž, D., Marhold, K. & Urban, P. (eds): Červený zoznam rastlín a živočíchov Slovenska. – Ochrana prírody **20**, Suppl. 1–160.

ŠOLTÉS, R., LISICKÁ, E. & LACKOVIČOVÁ, A. 1999. Bryophytes and lichens of selected protected areas of Slovakia, Bratislava, 22 p. ISBN 80-968220-8-X.

Author address

PAVEL ŠIRKA

Technical University in Zvolen, T.G. Masaryka 24, SK-96001 Zvolen, E-Mail: pavel.sirka@tuzvo.sk

STEFAN GEY

Westendstraße 30, D-83527 Haag i.OB , E-Mail: tayloria@my.mail.de

MARTINA PÖLTL

Weinzöttlstraße 16, A-8045 Graz, E-Mail: martina.poeltl@museum-joanneum.at

ANNA BÉREŠOVÁ

Plant Science and Biodiversity Centre of the Slovak Academy of Sciences, Dúbravská cesta 9, SK-84523 Bratislava , E-Mail: anna.beresova@savba.sk