



New national and regional bryophyte records, 84

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J. Wilbraham^a, F. Abdirasulov^b, O. M. Afonina^c, D. J. Alvarez^{d,e}, R. Andrade^f, Anurag^g, G. Bacilliere^h, M. Bučarⁱ, J. Csiky^j, I. V. Czernyadjeva^k, B. V. Dangar^l, G. K. Dela Campos^m, M. Doboš^m, O. D. Dugarovaⁿ, R. B. Elias^f, J. Enroth^o, B. Espinoza-Prieto^p, N. Eszik^j, L. Fatková^q, V. E. Fedosov^r, R. Gabriel^f, S. Gey^s, S. R. Gradstein^t, A. Graulich^u, T. Hallingbäck^v, A. S. Kartasheva^r, E. Yu. Kuzmina^c, Yu. S. Mamontov^w, D. Melamed^x, P. M. Mir-Roselló^y, W. Pisarek^z, O. Yu. Pisarenko^{aa}, T. Pócs^{ab}, M. Pöltl^{ac}, M. Puglisi^h, R. D. Raviya^l, A. Rimacⁱ, V. Sahu^{g,ad}, D. S. Salas^{ae}, J. R. Shevock^{af}, A. Sipos^j, J. G. Segarra-Moragues^{ag}, D. Skowron^{ah}, D. Spitale^{ai}, M. Staniaszek-Kik^{aj}, A. Stebel^{ak}, G. M. Suárez^{d,e}, P. Szűcs^{ab}, D. T. N. Tran^j and R. H. Zander^{al}

^aNatural History Museum, Cromwell Road, London, SW7 5BD, UK; ^bDepartment of Botany, Samarkand State University named after Sharof Rashidov, University Boulevard, Samarkand, Uzbekistan; ^cKomarov Botanical Institute of the Russian Academy of Sciences, Prof. Popov Str., 2, St. Petersburg, 197022, Russia; ^dUnidad Ejecutora Lillo (UEL; FML-CONICET). Miguel Lillo 251, (4000) S.M. de Tucumán, Argentina; ^eFacultad de Ciencias Naturales e Instituto Miguel Lillo, Universidad Nacional de Tucumán, Miguel Lillo 205, (4000) S.M. de Tucumán, Argentina; ^fUniversity of the Azores, CE3C/GBA—Centre for Ecology, Evolution and Environmental Changes / Azorean Biodiversity Group, CHANGE—Global Change and Sustainability Institute. PT-9700-042 Angra do Heroísmo, Portugal; ^gPlant Diversity, Systematics, and Herbarium Division, CSIR—National Botanical Research Institute, Rana Pratap Marg, Lucknow, 226 001, Uttar Pradesh, India; ^hDepartment of Biological, Geological and Environmental Sciences, University of Catania, Piazza Università, 2, I-95131 Catania, Sicily, Italy; ⁱUniversity of Zagreb, Faculty of Science, Department of Biology, Marulićev trg 20, 10000 Zagreb, Croatia; ^jUniversity of Pécs, Faculty of Sciences, Institute of Biology, Ifjúság útja 6., H-7624 Pécs, Hungary; ^kCentre of Excellence for Wildlife and Conservation Studies, Bhakta Kavi Narsinh Mehta University, Junagadh, India; ^lDepartment of Life Sciences, Bhakta Kavi Narsinh Mehta University, Junagadh, India; ^mOsječka 58, 34308 Jakšić, Croatia; ⁿInstitute of General and Experimental Biology SB RAS, Sakhjanovoy Str., 6, Ulan-Ude, 670047, Russia; ^oBotanical Museum, University of Helsinki, P.O. Box 7, FI-00014, Helsinki, Finland; ^pDepartamento de Briología y Pteridología, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Av. Arenales 1256, Lima, Peru; ^qCharles University, Faculty of Science, Institute for Environmental Studies, Prague, Czech Republic; ^rLomonosov Moscow State University, Moscow, Russia; ^sWestendstraße 30, 83527 Haag in Oberbayern, Germany; ^tMeise Botanic Garden, 1860 Meise, Belgium; ^uDonceel, Belgium; ^vMuseum of Evolution, Uppsala University, Norbyvägen 16, SE-752 36 Uppsala, Sweden; ^wTsitsin Botanical Garden of the Russian Academy of Sciences, Moscow, 127276, Russia; ^x39 Shmuel Tamir St., Tel-Aviv 6963720, Israel; ^yDepartament de Biologia, Universitat de les Illes Balears, Balearic Islands, Spain; ^zBOTANIK Włodzimierz Pisarek, Rumiankowa Street 3/32, 11-041 Olsztyn, Poland; ^{aa}Central Siberian Botanical Garden, Novosibirsk, Russia; ^{ab}Institute of Biology, Eszterházy Károly Catholic University, Eger, Pf.43, Hungary; ^{ac}Centre of Natural Sciences, Universalmuseum Joanneum, Graz, Austria; ^{ad}Academy of Scientific and Innovative Research (AcSIR), Ghaziabad 201002, Uttar Pradesh, India; ^{ae}Natural Science Department, College of Arts and Sciences, University of Southeastern Philippines, Inigo Street, Davao City, Mindanao, 8000, Philippines; ^{af}California Academy of Sciences (CAS), 55 Music Concourse Drive, Golden Gate Park, San Francisco, CA 94118, USA; ^{ag}Departamento de Botánica y Geología, Facultad de Ciencias Biológicas, Universitat de València, C/ Dr. Moliner s/n, E-46100, Burjassot (Valencia), Spain; ^{ah}Białystok University of Technology, Institute of Forest Sciences, Scientific and Research Centre, Piłsudskiego Street 1A, 17-200 Hajnówka, Poland; ^{ai}ad MuSe Museo delle Scienze, Corso del Lavoro e della Scienza, Trento, Italy; ^{aj}Department of Geobotany and Plant Ecology, University of Łódź, Poland; ^{ak}Department of Pharmaceutical Botany, Medical University of Silesia in Katowice, Sosnowiec, Poland; ^{al}Missouri Botanical Garden, 4344 Shaw Blvd., St. Louis, Missouri 63110, USA

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1. ***Barbulastrum linearifolium*** (Müll.Hal.) M.J.Cano & J.A.Jiménez

Contributor. R. H. Zander

Brazil. Estado de São Paulo, Municipio de Ribeira, 24°38'S, 48°58'W, along road, rocky calcareous banks, partial shade, 11 May 1983, *leg.* D. M. Vital 10977, *det.* R. H. Zander (MO).

Barbulastrum linearifolium is rare, with several known stations in a narrow band along the Andes in Argentina, Bolivia and Ecuador. This is the first report from Brazil, a major range extension to a mountainous area of south-eastern Brazil with dense Atlantic forest. The specimen exactly matches the detailed description and illustration by Jiménez et al. (2009), except that the rhizoids in the Brazil specimen bare abundant very dark-brown superficially mammillose spheric or short-elliptic brood-

bodies, 100–150(–200) µm in diameter, of 10–20 cells, borne on short, multiseriate stalks scattered on the elongate red-brown rhizoids. The segregation of this species as a genus in its own right by Cano et al. (2021) is justified by the unique combination of weakly differentiated perichaetial leaves, broadly elliptic cauline leaves that bulge broadly adaxially with very broadly recurved margins, costa with two stereid bands and lack of adaxial elaboration, and KOH reaction yellow.

2. ***Cheilolejeunea aneogyna*** (Spruce) A.Evans

Contributor. S. R. Gradstein

Democratic Republic of the Congo. Kwilu province, Kikwit, 4°20'S, 19°00'E, on bark in gallery forest, alt. ca. 400 m a.s.l., January 1914, *leg.* H. Vanderijst s.n. (BR [BR040101365009] as *Lejeunea flava* (Sw.) Nees).

Cheilolejeunea aneogyna is a characteristic neotropical rainforest species that is recorded here for the first time from Africa. In tropical America the species grows on bark in the canopy of lowland rainforests and in plantations, usually in rather open environments, and is common in Amazonia (Bastos 2012; Bastos and Gradstein 2020a; Gradstein 2021). The African collection comes from the Congo basin, gathered over a hundred years ago and erroneously identified as *Lejeunea flava*. *Cheilolejeunea aneogyna* is recognised by its brownish-green colour, thin-walled leaf cells, small and sometimes reduced lobules (to 1/4 of leaf length), and, especially, two small, closely associated teeth at the lobule apex. The paired lobule teeth may be difficult to observe because the lobule apex is often incurved and the teeth are frequently overlapping. *Cheilolejeunea aneogyna* may be confused with *C. rigidula* (Mont. & Nees) R.M.Schust. (Campos et al. 2022), another common neotropical rainforest species, but the latter differs from *C. aneogyna* in lighter green colour, leaf cells with distinct trigones, and lobules never reduced and with a single tooth. Moreover, *C. rigidula* is normally dioicous (*C. aneogyna* is autoicous), has gynoeical innovations (usually lacking in *C. rigidula*) and lacks caducous leaves (sometimes present in *C. aneogyna*). The record of *C. aneogyna* from the Congo adds a further liverwort species to the growing list of Afro-American bryophytes (Gradstein 2013). In view of its commonness in South American rainforests, the species may be more widespread in the Congo basin where it has probably been overlooked.

3. *Chenia leptophylla* (Müll.Hal.) R.H.Zander

Contributors. D. Melamed and J. G. Segarra-Moragues
Israel. Northern Negev, Sde Boker, 30°52'25.68"N, 34°47'32.28"E, on wet soil, shade at margin of lawn under *Callistemon* sp. tree, 2 February 2024, *leg.* D. Melamed 0001048002 (HUJ-HERB-BR); 14.820 (VAL-Brief.).

Chenia R.H.Zander is represented in the Mediterranean area by two species, the cosmopolitan *C. leptophylla* and *C. ruigtevleia* Hedd. & R.H.Zander (Ellis, Aleffi, et al. 2016; Segarra-Moragues and Puche 2016). These plants spread vegetatively through detached propaguliferous leaves and rhizoidal tubers. These are likely to be the only means of reproduction since sporophytes have not been reported in the Mediterranean area for *C. leptophylla* and are unknown for *C. ruigtevleia* (Hedderson and Zander 2008). Their dispersal is facilitated by agriculture and gardening practices, and they are usually found in anthropogenic habitats. During bryological field work in the Negev area of Israel samples of a species of *Chenia* were found. The plants were identified as *C. leptophylla* based on the smooth leaf cells. The plants were sterile, as generally reported in this species. The

plants were growing on bare, humid soil of a garden, which is the typical habitat favoured by this species. This report adds a new genus of mosses and a species to the bryophyte flora of Israel. This species has been extensively reported in western European countries, but records become more scattered in eastern Mediterranean countries, especially those with drier climates. The nearest records to the area are those from Egypt (Lashin et al. 2022), Georgia (Ellis et al. 2024), and Saudi Arabia (Taha et al. 2020).

4. *Chionoloma orthodontum* (Müll.Hal.) M.Alonso, M.J.Cano & J.A.Jiménez

Contributors. O. D. Dugarova and O. M. Afonina.

Russia. Republic of Buryatia, Kurumkan District, Barguzinsky Range, middle part of the Ulyugna River, approximately 6 km northwest of the mouth of the Bol'shiye Karpusy River, 55°02'25.1"N, 110°47'19.5"E, alt. 1008 m a.s.l., in front of the Arshan, larch-rhododendron-cowberry-green moss forest, 27 June 2016, *leg.* O. D. Dugarova (Tumurova), *det.* O. M. Afonina, Ba-3 (LE B-0048999, UUH).

This species was reported as new for Russia by Alonso et al. (2019) based on the study of one of two specimens found in Dagestan, in the Caucasus, which were previously reported as *Pseudosymblepharis bombayensis* (Müll.Hal.) P.Sollman by Ignatova et al. (2012). In 2021, for the Republic of Buryatia (Eastern Sayan, Tunkinsky National Park), *Pseudosymblepharis* cf. *bombayensis* was also reported (Afonina 2021) on the basis of erroneous identification; in reality it was *Chionoloma orthodontum*. Thus, for the Republic of Buryatia, *C. orthodontum* is indicated for the first time from two locations—Barguzinsky Range and Eastern Sayan, Tunkinsky National Park. In Russia, in addition to the listed locations, DNA barcoding has revealed the presence of *C. orthodontum* in Ingushetia (the Caucasus) (Kuznetsova et al. 2024). Outside of Russia the species is known from Georgia, Nepal, Bhutan, Pakistan, Japan, Vietnam, Sri Lanka, several countries in Africa, Central and South America, and the Hawaiian Islands (Ignatov et al. 2025).

5. *Cololejeunea papillosa* (K.I.Goebel) Mizut.

Contributors. S. R. Gradstein and T. Pócs

Colombia. Risaralda, Mistrato, west side of the Cordillera Occidental, trail Jeguadas to Puerto de Oro, 1600 m a.s.l., mossy lower montane forest on ridge, on twigs with *Cololejeunea microscopica* (Taylor) Schiffn., 26 July 1992, *leg.* S. R. Gradstein 8505 p.p. (GOET, as *C. cyathiphylla* Herzog).

Cololejeunea papillosa is a widespread species that has been recorded from many locations in Southeast Asia and the Neotropics, and also from Australia (Pócs and Bernecker 2009; Pócs 2016). The species is surprisingly not yet known from tropical Africa where it may be expected to occur as well. *Cololejeunea*

papillosa is reported here as new to Colombia. The duplicate specimen in GOET was identified in 1996 by the second author as *C. cyathiphylla* Herzog, which is a synonym of *C. papillosa*. The record remained unnoticed, however, and was not included in the catalogue of Colombia (Gradstein and Uribe 2016) and is also missing in the liverwort manual of the country (Gradstein 2021). As the species is known from several localities in neighbouring Ecuador (Schäfer-Verwimp et al. 2013), its occurrence in Colombia had been predicted. *Cololejeunea papillosa* is a minute plant, less than 0.4 mm wide, with leaves mostly reduced, linear, with entire or crenulate margins and the dorsal surface smooth or with a few, scattered, conically elevated cells. The species grows epiphyllously or, occasionally, on twigs in rainforests and scrub, from near sea level to 2850 m (Schäfer-Verwimp et al. 2013). The species is closely similar to *C. gracilis* (Jovet-Ast) Pócs, another widespread species, and the two have sometimes been confused. *Cololejeunea gracilis* differs from *C. papillosa* in having reduced leaves with toothed margins and the dorsal surface roughened by conically elevated cells (well illustrated in Jovet-Ast 1947, fig. 11, as *Aphanolejeunea gracilis* Jovet-Ast).

6. *Crossidium crassinervium* (De Not.) Jur.

Contributor. P. M. Mir-Rosselló

Spain. Balearic Islands, Cabrera, Camí de Sa Serra des Canal de Ses Figueres, 39°08'32.9"N, 2°56'29.8"E, 65 m a.s.l., on calcareous soil, 22 March 2024, *leg.* P. M. Mir-Rosselló (UIB:CBI:2024.0955).

Small, sterile plants of *Crossidium crassinervium* were found growing with *Aloina aloides* (W.D.J.Koch ex Schultz) Kindb. (previously reported in Wilbraham et al. 2025) on dry, calcareous soil. This is the first record for this species on the island, where there is a clear dominance of acrocarpous, xerophilous mosses from the family Pottiaceae (Sáez 2020) due to the arid conditions of the locality.

7. *Fissidens brevipes* Besch.

Contributors. D. J. Alvarez and G. M. Suárez

Argentina. Entre Ríos, (1) Departamento Uruguay, Isla Tambor, growing near the margin of the island, 32°45'57"S, 58°10'31"W, 22 November 2022, *leg.* D. J. Alvarez and P. G. Aceñolaza 252 (DTE, LIL, MFA); (2) Isla Colón Grande, growing near the margin of the island, 32°46'03"S, 58°09'59"W, 23 November 2022, *leg.* D. J. Alvarez and P. G. Aceñolaza 261 (DTE, LIL, MFA); (3) 32°46'03"S, 58°09'58"W, *leg.* D. J. Alvarez and P. G. Aceñolaza 262A (DTE, LIL); (4) Isla Campichuelo, growing near the margin of the island, 32°40'49"S, 58°11'09"W, 25 November 2022, *leg.* D. J. Alvarez and P. G. Aceñolaza 287 (DTE, LIL, MFA). **Corrientes,** Departamento Ituzaingó, Estancia "La Mosca", 27°30'46.7"S, 56°32'01"W, 25 February

2023, *leg.* D. J. Alvarez 399 (DTE, LIL, MFA); 27°30'46.7"S, 56°32'01.3"W, on a decaying trunk near a water body, *leg.* D. J. Alvarez 400B (LIL).

Fissidens brevipes is a neotropical species known from Brazil, Paraguay and Guyana. In Argentina, it was previously recorded only from the northern provinces of Formosa and Misiones (Matteri 2003), with an additional record from Chaco (Jiménez 2024). According to Pursell (2007), the species typically inhabits moist, shaded microhabitats and is most frequently corticolous, occurring on thin branches, trunks and occasionally on lianas in lowland forests and riparian vegetation. The new collections from Corrientes and Entre Ríos represent the southernmost known occurrences of *F. brevipes*. The specimens were found on the bark of *Labatia gardneriana* (A.DC.) Alves-Araújo (aguay-guazú), *Cupania vernalis* Cambess. (cedrillo) and *Nectandra angustifolia* Nees & Mart. (laurel de río). These trees form part of the riverine forests of the Upper Paraná and Lower Uruguay rivers, habitats characterised by periodic flooding, high humidity and dense gallery vegetation. The species was consistently observed in shaded microsites on trunks and branches, matching its ecological preferences elsewhere in neotropical regions. These findings extend the distribution of *F. brevipes* by approximately 400–500 km southwards from its previously known Argentine range and highlight the importance of riparian island systems as corridors for bryophyte diversity.

8. *Fissidens gardeneri* Mitt.

Contributor. V. Sahu

India. (1) Uttarakhand, Champawat Tanakpur, Purnagira Temple, 29°9'3.6792"N, 80°11'39.3288"E, alt. 688 m a.s.l., epiphytic, 9 March 2024, *leg.* V. Sahu 373942 C (BR 20048 LWG); (2) Madhya Pradesh, Shahdol, 23°18'60"N, 81°20'14"E, alt. 450 m a.s.l., epiphytic, 27 July 2025, *leg.* V. Sahu (BR 20102 B).

In India, about 84 taxa of the moss genus *Fissidens* Hedw. (Fissidentaceae) have been reported (Gangulee 1971; Nath et al. 2005, 2011; Gupta et al. 2017; Manjula et al. 2022; Srivastava et al. 2023, Jindial et al. 2025). *Fissidens gardeneri* is reported here for the first time from the Western Himalaya and Central India. Previously, this species was reported from Meghalaya, the Eastern Himalaya and South India (Asthana and Srivastava 2014). Plants of *F. gardeneri* are bright green, with semi prostrate, unbranched shoots that are minute at only 2–4 mm long and 1.0 mm wide, including leaves. The leaves are oblong lingulate, with margins crenulate by projecting cells, an obtuse apex, an absent limbidium and the costa reaching 3/4th of the leaf length. The leaves are in 6–12 pairs on a shoot, with the sheathing lamina comprising about 2/3rd of the leaf length. Sporophytes have not been observed.

9. *Fontinalis perfida* Cardot

Contributor. E. Yu. Kuzmina

Russia. Kamchatka Territory, Koryak Area, Northern Koryakia, Olyutorsky District, Khailino Village, Tygovayam River, 63°58'10"N, 166°52'23"E, alt. 55 m a.s.l., from river water at a depth of 0.5 m, on pebbles, 1 August 2021, *leg.* E. Yu. Kuzmina B0025904 (LE).

The aquatic moss *Fontinalis perfida* was described from Korea (Cardot 1909). It is found in Japan, as well as in the Russian Far East (Chukotka, Magadan region, Kamchatka, Sakhalin, Kuril Islands, Primorsky Krai), in Transbaikalia, Yakutia, on the Anabar Plateau and in Alaska. This species has not been found west of Lake Baikal. It is reported here new to Northern Koryakia. Compared with other taxa of *Fontinalis* Hedw. with keeled leaves, *F. perfida* can be distinguished by its consistently smaller leaves that are indistinctly keeled below and concave or flat in the upper part (Maksimov and Ignatov 2020; Ignatov, Maksimov et al. 2020).

10. *Grimmia crinita* Brid.

Contributors. M. Bučar, M. Doboš, S. Gey and A. Rimac
Croatia. (1) Slavonia, Papuk Mt., close to to Gornji Vrhovci settlement, on open, south-facing rocks (Krušljiva Sokolina), 45.46162222°N, 17.56548056°E, alt. 525 m a.s.l., 27 January 2024, *leg.* M. Doboš, *det.* S. Gey, M. Bučar and A. Rimac (ZA 82936); (2) Istria, close to Labin settlement, ruins of sv. Hadrian chapel, south-facing lime mortar, 45.083132°N, 14.141281°E, alt. 391 m a.s.l., 16 November 2025, *leg.* M. Bučar, *det.* M. Bučar, S. Gey and A. Rimac (ZA 82938).

Grimmia crinita, a rare Western Palaearctic moss species, is considered vulnerable in Europe (Hodgetts et al. 2019). In Southeastern Europe, it has been recorded in Serbia, while it is data deficient in Albania and Slovenia, vulnerable in Bulgaria and Romania, and critically endangered in Hungary (Hodgetts and Lockhart 2020). These are the first two records of the species in Croatia. In 2024, *G. crinita* was found on open, south-facing, predominantly carbonate rock in Papuk Mt. in the continental part of Croatia. The locality is a part of the Natura 2000 area, surrounded by thermophilic downy oak and manna ash forest, and the accompanying species include *Dicranum albus* L., *Asplenium ceterach* L., *Sempervivum globiferum* L., *Melica ciliata* L. and *Tortula muralis* Hedw. Although the accompanying species mostly indicate an alkaline substrate, some parts of the rockery where *Grimmia crinita* grows incorporate quartz pebbles, resulting in an interesting surrounding lichen flora of both basophilous and acidophilous species. In 2025, *G. crinita* was found for the second time, this time in the Mediterranean part of the country. Here, it was found on an artificial surface, on the walls of the ruins of an old chapel, more specifically on the mortar between the stone blocks. The species

was very abundant, more so on the south-facing wall, but occurring in very small and scattered patches, accompanied by *Tortula muralis*, *Asplenium trichomanes* L. and *A. ceterach*. This locality is also surrounded by the thermophilous downy oak forest and some conifer plantations.

11. *Grimmia incurva* Schwägr.

Contributors. M. Puglisi and G. Bacilliere

Italy. Basilicata region, Santa Croce mountain (municipality of Bella, Potenza), 40°46'42.6"N, 15°35'13.416"E, alt. 1387 m a.s.l., on rocky substrate, 12 June 2024, *leg.* S. Sciandrello (CAT s/n).

Grimmia incurva is a circumpolar boreal-montane species that is quite widespread in Europe but very rare in the southern part of the continent (Hodgetts and Lockart 2020). It is a sciophilous and acidophilous species that forms rounded dark-green cushions on rocks or boulders on hill and mountain summits (Dierßen 2001). In Europe its altitudinal range goes from 210 m a.s.l. (Great Britain), up to 3,131 m a.s.l. in Switzerland (Gabriel and Sim-Sim 2019). *Grimmia incurva* is very rare in Italy, where it is reported only for the northern part of the peninsula along the alpine arc (Aleffi et al. 2023). The new locality, in the Basilicata region, marks the southern limit of the Italian geographical range of the species. Here, the species was found growing in loose tufts together with *Tortella squarrosa* (Brid.) Limpr., *Bryum argenteum* Hedw. and *Polytrichum piliferum* Hedw. From a conservation point of view, *G. incurva* is considered Least Concern at the European level; however, it is assessed as Vulnerable in Finland, Luxembourg and Hungary, Near Threatened in Spain, and Data Deficient in The Netherlands, Slovakia, Switzerland, Albania, Bulgaria and Slovenia (Hodgetts and Lockart 2020). In Italy it is reported as Vulnerable (VU) in the recent red list of Italian mosses (Puglisi et al. 2024).

12. *Grimmia triformis* Carestia & De Not.

Contributors. G. Bacilliere, L. Fatková, R. Andrade, R. B. Elias and R. Gabriel

Azores. Pico Island, 38.4667°N, 28.3990°W, alt. 2250 m a.s.l., on rocky substrate, 1 July 2024, *leg.* L. Fatková and R. Gabriel, *det.* G. Bacilliere (Azu).

Grimmia triformis is an acrocarpous moss species that grows on siliceous rocks in mountain regions and, as an alpine species, can occur at elevations up to 3000 m a.s.l. Although closely related to *G. donniana* Sm., it is currently recognised as a distinct species based on a combination of morphological features, including a narrow triangular peristome, thick-walled exothecial cells, leaves with a hyaline hair point up to 1.5 mm long, a group of elongated hyaline cells at the basal leaf margin, and a short seta (0.5–1 mm). In Europe, *G. triformis* is currently known from just a few scattered localities in Norway,

Sweden (where it is considered rare), France, Italy and Austria (Hodgetts 2015), with severely fragmented populations. The specimen found in the summit caldera of Pico Island, at 2250 m a.s.l., in a rocky, exposed environment, with sparse nano-shrubs of *Thymus caespitius* Brot. and *Calluna vulgaris* (L.) Hull, represents the first record for Macaronesia. This finding highlights the limited understanding of the species' distribution and the need for further research to clarify its conservation status (Hodgetts et al. 2019). Associated species include *Grimmia incurva* Schwägr., *G. elongata* Kaulf., *Rhynchostegiella azorica* Hedenäs & Vanderp. and several *Racomitrium* Brid. species.

13. *Hedwigia filiformis* (Michx.) P.Beauv.

Contributor. A. Graulich

France. Pyrenees: (1) Ariège, Val-de-Sos, valley of a tributary of "ruisseau de Sentenac", 42°47'16.5"N, 1°28'57"E, on shaded granite boulders under *Corylus avellana* L., associated with *Grimmia hartmanii* Schimp., *Hypnum cupressiforme* Hedw., *Plagiomnium cuspidatum* (Hedw.) T.J.Kop., *Porella platyphylla* (L.) Pfeiff., *Pseudoleskella nervosa* (Brid.) Nyholm, *Ptychostomum moravicum* (Podp.) Ros & Mazimpaka and *Sciurohypnum populeum* (Hedw.) Ignatov & Huttunen, alt. 1040 m a.s.l., 14 August 2025, leg. A. Graulich (herb. Graulich FR223/25; LG); (2) Val-de-Sos, valley of "ruisseau de Sentenac", 42°47'17.5"N, 1°28'56"E, on shaded granite boulders under *Corylus avellana*, associated with *Grimmia hartmanii*, *Hypnum cupressiforme*, *Leucodon sciuroides* (Hedw.) Schwägr., *Plagiomnium undulatum* (Hedw.) T.J.Kop., *Pseudanomodon attenuatus* (Hedw.) Ignatov & Fedosov and *Ulota hutchinsiae* (Sm.) Hammar, alt. 1050 m a.s.l., 14 August 2025, leg. A. Graulich (herb. Graulich FR226/25; LG); (3) Val-de-Sos, valley of "ruisseau de Suc", 42°48'3.5"N, 1°26'40.5"E, on shaded granite boulders under *Tilia platyphyllos* Scop., associated with *Grimmia hartmanii*, *Hedwigia ciliata* (Hedw.) P.Beauv., *Hypnum cupressiforme*, *Lewinskya rupestris* (Schleich. ex Schwägr.) F.Lara, *Pseudanomodon attenuatus*, *Pseudoleskella nervosa* and *Pterygynandrum filiforme* Hedw., alt. 1120 m a.s.l., 19 August 2025, leg. A. Graulich (herb. Graulich FR374/25; LG); (4) Illier-et-Laramade, valley of "le Siouré", 42°46'52.5"N, 1°31'59"E, on shaded granite boulders, associated with *Grimmia hartmanii*, *Grimmia lisae* De Not. and *Hypnum cupressiforme*, alt. 690 m a.s.l., 21 August 2025, leg. A. Graulich (herb. A. Graulich FR388/25); (5) Aulus-les-Bains, valley of "le Garbet", 42°47'2.5"N, 1°21'5"E, on shaded granite boulders under *Corylus avellana*, *Fagus sylvatica* L. and *Tilia platyphyllos*, associated with *Alleniella complanata* (Hedw.) S.Olsson, Enroth & D.Quandt, *Grimmia hartmanii*, *Hypnum cupressiforme*, *Isothecium alopecuroides* (Lam. ex Dubois) Isov., *Isothecium myosuroides* Brid., *Loeskeobryum brevirostre* (Brid.) M.Fleisch. ex Broth., *Pseudanomodon attenuatus*,

Sciurohypnum populeum (Hedw.) Ignatov & Huttunen and *Thuidium delicatulum* (Hedw.) Schimp., alt. 830 m a.s.l., 18 August 2025, leg. A. Graulich (herb. Graulich FR344/25; LG).

Hedwigia filiformis has a wide distribution across the temperate regions of the Holarctic (Ignatova et al. 2016; De Luna 2022; Huang et al. 2024). Due to its superficial similarity to the widespread *Hedwigia ciliata* (Hedw.) P.Beauv., it has long been treated as a variety of that species in western Europe (De Luna 2022; Graulich 2025). However, *H. filiformis* can be distinguished by its stem leaves with short hyaline apices, straight or weakly sinuose mid-leaf cell walls, and smaller spores (Ignatova et al. 2016). In western Europe, it is already known from Belgium (Ardenne) and France (Vosges) (Graulich 2025). These new records from the French Pyrenees suggest that *H. filiformis* is likely widespread in the wooded, deeply incised valleys of many western European mountain ranges, where it grows on shaded boulders in association with a rich bryoflora.

14. *Himantocladium giulianettii* (Broth.) M.Fleisch.

Contributors. J. Enroth, D. S. Salas and J. R. Shevock
Philippines. Mindanao Island, (1) Bukidnon Province, on secondary trail paralleling mid-slope of Mt. Malimumu toward overview of upper watershed area of Opis River above waterfalls, NAD 83: 07°52'32.3"N, 125°24'31.8"E, alt. 935 m a.s.l., mixed hardwood forest with tree ferns and *Pandanus* Parkinson, on hardwood trunk in filtered light, 19 July 2022, leg. J. R. Shevock 59734 with L. C. Lubos and R. Patano (BRIT, CAS, CMUH, H, MO); (2) Bukidnon Province, eastern section of Kalatungan Range, Mt. Nebo Barangay, Sitio Migtulod, Valencia Municipality, forest area locally known as Hinanawan, WGS 84, 7.95717°N, 124.94173°E, alt. 1430 m a.s.l., forest patch of corn and banana in a mixed evergreen hardwood tropical rain forest, on hardwood trunk in filtered light, 7 July 2023, leg. J. R. Shevock 61753 with A. P. Yorong and R. Patano (BRIT, BUKH, CAS, CMUH, H, MO, PNH, PTBG, SING, TNS); (3) Bukidnon Province, trail to Kumaykay River (upper reach) from Dahilayan I-P Park and Resort, WGS 84, 8.19198°N, 124.86633°E, alt. 1325 m a.s.l., mixed lower disturbed hardwood tropical rain forest with giant bamboo, on hardwood trunk in filtered light, 4 June 2024, leg. J. R. Shevock 63418 with L. C. Lubos and A. P. Yorong (BRIT, CAS, CMUH, H, MO); (4) Davao del Sur Province, Region XI: Talomo-Lipadas watershed, Sitio Lipadas, Barangay Manuel Guianga, northern slope of Mt. Talomo, 7.06841°N, 125.36418°E, alt. 1201 m a.s.l., dipterocarp forest with *Shorea* Roxb. ex C.F.Gaertn., tree ferns, palms and *Pandanus*, on trunk of hardwood tree in filtered light, 5 July 2025, leg. D. Salas 3133 with S. Pescozo (BUKH, CAS, CMUH, H, PNH); (5) Davao del Sur Province. Mt. Talomo, Sitio Saro, Barangay Manuel

Guianga, Davao City Municipality, on trail, lower slopes of Mt. Talomo, WGS 84, 7.06650°N, 125.36262°E, alt. 1240 m a.s.l., tropical hardwood forest with tree ferns and *Pandanus*, on hardwood trunk in filtered light, 19 July 2025, leg. J. R. Shevock 65037A with G. Maglanque (CAS, H).

Himantocladium (Mitt.) M.Fleisch. (Neckeraceae) is a SE Asian-Oceanian genus of five species (Olsson et al. 2016). All of them are synoicous and frequently with sporophytes, but the species can be distinguished from each other only by gametophytic features. *Himantocladium giulianettii* is distinct in having a somewhat “shaggy” habit caused by octastichous, patent to spreading leaves with strongly widened bases; in the other species, the leaves are rather complanate and the bases less strongly widened (Enroth 1989, 1992). Some expressions of *H. plumula* (Nees) M.Fleisch. resemble *H. giulianettii*, but in the former the apical and median leaf cells are the same size, whereas in *H. giulianettii* the median leaf cells are clearly longer than the apical ones. *Himantocladium giulianettii* was previously known from Indonesia (Bacan, Buru), Papua New Guinea and Tahiti in the Society Islands (Enroth 1992). It seems to be strictly epiphytic; the specimens cited by Enroth (1989, 1992) as well as the ones reported here from Mindanao Island in the Philippines, were collected from tree trunks, branches or shrubs. In SE Asia it has not been collected below 800 m a.s.l. (Enroth 1992).

15. *Homalothecium sericeum* (Hedw.) Schimp.

Contributors. V. E. Fedosov and O. Yu. Pisarenko

Russia. Northern periphery of Altai Mountains, Altai Kray (Altay Terr.), Altayskiy District, the left bank of Katun River opposite Izvestkoviy settlement, 51.7624°N, 85.7227°E, alt. 340 m a.s.l., at the foot of a southeast-facing slope with extensive limestone outcrops, on boulder under the canopy of a pine-birch forest, 28 September 2025, leg. V. E. Fedosov and O. Yu. Pisarenko (MW9134456; NSK2010704).

Homalothecium sericeum has a wide distribution in the Holarctic with sparse localities outside it. It is common in Europe and also occurs in Madeira, North Africa, Newfoundland in North America, Turkey, Caucasus and few localities in Middle European Russia, mostly in southern and western areas, although in areas where limestone occurs it reaches the northern Urals. No records of this species in the Asian part of Russia were known, but in Middle Asia it is reported for Kazakhstan, Tadjikistan and Kyrgyzstan (Ignatov 2020), while a few records are known from western China, in Sichuan and Xinjiang (GBIF). In Russian Altai this species is locally abundant on limestone outcrops. Earlier only *Homalothecium philippeanum* (Spruce) Schimp. was reported for the Altai Mountains based on a single record from the vicinity of Teletskoe Lake (Ivanov et al. 2017). According to Huttunen et al.

(2008), this species is closely related to *H. sericeum*, and both originated as a result of sympatric speciation from a common ancestor. Our data show that their distributions in Asia indeed resemble each other.

16. *Imbribryum tenuisetum* (Limpr.) D.Bell & Holyoak

Contributors. A. Stebel and M. Staniaszek-Kik

Poland. (1) Central Poland, South Masovian Uplands, Sulejów Landscape Park, in the forest, plot 2390 near the village of Lubiaszów, 51°26'21.1"N, 19°52'04.7"E, forming a large population on moist soil surrounding a forest pond that periodically dries out, 9 September 2025, leg. M. Staniaszek-Kik, det. A. Stebel (LOD 17048); (2) Southern Poland, Silesian Lowland, Kobylice near Reńska Wieś, 50°19'01.0"N, 18°09'17.6"E, moist soil on stubble field, small turf, together with *Bryum* sp. and *Dicranella staphylina* H.Whitehouse, 27 September 2008, leg. and det. A. Stebel (SOSN 55039).

Imbribryum tenuisetum is a small, perennial moss that produces distinctive yellow rhizoidal tubers. In Europe the species is widely distributed across the boreo-temperate zone but is rare in southern regions (Holyoak 2021). It typically occurs in open, moist habitats with sandy or peaty substrates, often near ditches, ponds, or depressions in cultivated fields (Crundwell and Nyholm 1964; Ellis, Alataş, et al. 2016; Holyoak 2021). In Poland, the species is very rare, until now known only from two stations located in the southwestern part of the country, although most probably its true distribution is underestimated. For the first time it was reported from Lower Silesia region by Crundwell and Nyholm (1964), based on the specimens collected by Schulze in 1871. Karczmarz (1975) added another locality, also from Lower Silesia, based on J. Zimmermann's specimens from 1886. The new records presented here originate from two additional sites in central and southern Poland. *Imbribryum tenuisetum* is an example of a suboceanic species whose range has been shifting eastwards in recent years, therefore further discoveries in Poland can be expected.

17. *Lejeunea boryana* Mont.

Contributor. B. Espinoza-Prieto

Peru. Department Loreto, Requena province, Tapiche district, Bosque de colina baja, epiphyte on *Ocotea* sp., 05°55'39.77"S, 73°58'42.845"W, alt. 134 m a.s.l., 5 March 2023, leg. R. Soplín 008 (USM[USM-340919]) & 009 (USM[USM-340920]).

Lejeunea boryana is widely distributed in the West Indies and tropical South America (Pagán 1942; Reiner-Drehwald and Goda 2000; Gradstein and Ilkiu-Borges 2009; Bastos and Gradstein 2020b; Gradstein 2021). Pagán (1942) reported *Crossotolejeunea* (= *Lejeunea*) *boryana* (Mont.) Schiffn. from Peru; however, no voucher specimen was cited. Consequently, this species was considered doubtful in the most recent

checklist of liverworts and hornworts of Peru (Söderström et al. 2025). This study confirms its presence in the country.

This monoicous species is characterised by its plane to slightly recurved, acute to apiculate leaf apices and crenate margins. Its leaf cells have distinct trigones, usually with intermediate thickenings, and a densely papillose cuticle. The lobules are 1/3 the length of the leaf, fully inflated, with an incurved free margin, a crenate and curved keel, and a long, straight to falcate tooth. Underleaves are distant, typically 2/3 bifid or sometimes slightly deeper, with acuminate segments ending in a row of 1–2 cells; the sinus is V- or U-shaped; and the margins bear a single tooth (1–3 cells long) per side. Androecia are spicate, lateral on the main stems, with two bracteoles restricted to the base. Gynoecia are terminal, with one innovation. Perianths are five-keeled, with each keel crenate, toothed, or ciliate-laciniate; the beak consists of a single vertical layer of translucent cells. Vegetative reproduction occurs through elongated regenerants on leaf margins (*leg.* Soplín 008), a feature previously reported only in one of the type specimens (G-010118) by Reiner-Drehwald and Goda (2000).

18. *Notothylas javanica* (Sande Lac.) Gottsche

Contributors. B. V. Dangar and R. D. Raviya

India. (1) Gujarat, Junagadh district, Girnar Wildlife Sanctuary, 21°29'44.3"N, 70°29'08.4"E, alt. 171 m a.s.l., on soil, 5 August 2025, *leg.* B. Dangar *s.n.* (Herb. Bhakta Kavi Narsinh Mehta University); (2) Girnar Wildlife Sanctuary, 21°29'11.3"N, 70°32'05.6"E, alt. 195 m a.s.l., on soil, 17 October 2025, *leg.* B. Dangar *BH-A-07* (BKNMU).

This study represents the first record of *Notothylas javanica* for the bryophyte flora of Gujarat, India. The species was found growing on the moist lateritic soil of a shaded forest floor dominated by dry deciduous vegetation. DNA barcoding of the specimen using the *rbcl* marker showed over 99% sequence similarity to *N. javanica*, supporting the morphological identification. The thallus is yellowish-green to green, flat, 0.8–1 cm broad, with a slightly dissected margin and involucre exhibiting modest longitudinal crests. The sporophytes are short and horizontal with faint longitudinal brownish streaks, measuring 1.2–1.7 mm in length. Pseudoelaters were not observed, consistent with the descriptions of Stieperaere and Matcham (2007). The dehiscence line is absent as reported by Ruklani et al. (2016). *Notothylas* is a unique genus of hornworts characterised by short, horizontally oriented sporophytes (Zhang et al. 2018). Earlier literature has reported *N. javanica* from Gauhati based on collections from 1953 (Mehra and Kachroo 1962). The present discovery from Girnar Wildlife Sanctuary extends the known geographical range of the species and emphasises the unexplored bryodiversity of western India.

19. *Nyholmiella gymnostoma* (Bruch ex Brid.) Holmen & E. Warncke

Contributors. D. Skowron and W. Pisarek

Poland. Nizina Północnopodlaska (=North Podlasie Lowland), Równina Bielska (=Bielska Plain), Białowieża Forest: (1) Browsk Forest District, compartment 101C-b, 52°48'34.2"N, 23°46'12.3"E, alt. 166 m a.s.l., on the bark of the trunk of a freshly fallen *Populus tremula* L. stump in an oak-hornbeam forest, in association with *Lewinskya speciosa* (Nees) F. Lara, Garilleti & Goffinet and *Orthotrichum diaphanum* Schrad. ex Brid., ATMOS grid square Cg-45, 6 November 2018, *leg.* and *det.* W. Pisarek, *conf.* A. Stebel (Herb. Natural Forest Department, Sękocin, No. 295/1); (2) in the vicinity of the village of Skupowo, 52°49'25.1"N, 23°42'04.6"E, 140 m a.s.l., on the bark of a *Populus tremula* trunk by the roadside, in association with *Frullania dilatata* (L.) Dumort. and *Pylaisia polyantha* (Hedw.) Schimp., ATMOS grid square Cg-44, 24 January 2025, *leg.* and *det.* D. Skowron, *conf.* V. Plášek and R. Ochyra (BLS B-4279, KRAM B-282834).

Nyholmiella gymnostoma was last recorded in Poland in 1977 in the Sejny Lake District in the north-eastern corner of the country (Ellis et al. 2024). The only other known record of this species from this part of Poland from the Białowieża Forest dates back to 1885; however, due to the lack of precise locality data, it remains uncertain whether the specimen originated from the Polish or Belarusian side of the forest (Szafnagel 1908). In Poland, *N. gymnostoma* is widely distributed but occurs sporadically. It has been reported from Lower Silesia (Milde 1869), the southern uplands (Karczmarz 1960; Szafran 1961; Kuc 1964), Western Pomerania and Warmian-Masurian Voivodeship (Dietzow 1938). In the Red List of Polish mosses (Stebel and Żarnowiec 2025), the species is classified as Endangered. This study reports the recent rediscovery of *N. gymnostoma* in the Białowieża Forest, where it was found in two ATMOS grid squares (Ochyra and Szmajda 1981). *Nyholmiella gymnostoma* is a boreo-montane species (Hill and Preston 2008), typically found on the bark of *Populus* L. species in open habitats (Dierßen 2001). It is most commonly recorded in the boreal zone of Europe (Lara and Estébanes 2014), while it remains rare in Central Europe (Schäfer-Verwimp 2001). However, recently it has been increasingly reported from the Mediterranean region (e.g. Lara et al. 2004; Sabovljević et al. 2008; Ellis, Alegro, Bednarek-Ochyra, et al. 2012; Cezón and Muñoz 2013).

20. *Pallavicinia subciliata* (Austin) Steph.

Contributors. Yu. S. Mamontov and A. S. Kartasheva

Russia. Sakhalin Region, Kuril Islands, Urup Island, Van-der-Lind Cape, Rybnyi Creek valley, 46°40'45.0"N, 149°31'36.0"E, on cliff, 28 August 2021, *leg.* A. S. Kartasheva *Yu-1-4-10014* (MHA barcode 9123635).

Pallavicinia subciliata is an oceanic temperate-tropical montane Asian species, which is known from China (Piippo 1990; So and Zhu 1996; Zhu et al. 1998; Koponen et al. 2000), Taiwan (Piippo 1990), Japan (Yamada and Iwatsuki 2006), the Republic of Korea (Choi et al. 2021), and the south of the Russian Far East (Mamontov et al. 2015). We report this species for the first time from Urup, one of the two major islands of the North Kurils. Prior to this finding *P. subciliata* was known in the Kurils from Kunashir (Mamontov et al. 2015), one of the major islands of the South Kurils. The studied plants from Urup agree with the treatment of *P. subciliata* in Mamontov et al. (2015) in the uniformly ciliate thalli, which bear marginal cilia of 3–6(–9) super-imposed elongate cells and do not bear marginal slime hairs.

21. *Riccia boliviensis* Jovet-Ast

Contributors. V. Sahu and Anurag

India. Madhya Pradesh, (1) on the way to Tummi Hill, 23°19.1953'N, 81°09.9081'E, alt. 815 m a.s.l., on soil, 27 July 2025, *leg.* V. Sahu, (BR20121, BR20128 LWG); (2) Anuppur, 23°15.9132'N, 81°10.4277'E, 734 m a.s.l., on soil covered rock, 27 July 2025, *leg.* V. Sahu (BR20139 LWG).

About 39 validly published taxa of the genus *Riccia* L. have been reported in India (Singh 2014; Singh et al. 2016; Asthana and Srivastava 2020; Manju et al. 2021; Suresh and Cargil 2022). Singh (2014) and Singh et al. (2016) listed 11 species of *Riccia* from Central India. *Riccia boliviensis* is reported for the first time here from Central India, having been previously reported from the Eastern Ghats, Andhra Pradesh (Asthana and Srivastava 2020). *Riccia boliviensis* is recognised by its small green thallus with dichotomously branched, compact lobes 2–3 mm long and 2 mm wide, with a rounded apex. The dorsal groove presents apically and disappears near the base. The ventral scales are purple, semilunar, and project beyond the margin, which lacks papillae or cilia. This species is monoecious. Spores are yellowish brown, tetrahedral, 88–104 µm in diameter, the distal surface vermiculate areolated with tubercles at angles and the proximal surface sculpted with ridges. *Riccia boliviensis* approaches *R. okahandjana* S.W.Arnell but differs by the number of epidermal cell layers, with *R. okahandjana* bistratose and *R. boliviensis* unistratose.

22. *Riccia pusilla* subsp. *gothica* (Damsh. & Hallingb.) Pörtl & Berg

Contributors. D. Spitale and M. Pörtl

Italy. Lake of Paneveggio (also known as basin of Forte Buso), along the mud shores of the lake, 16 October 2025, 46°18'00.0"N, 11°43'50.6"E, alt. 1450 m a.s.l., *leg.* D. Spitale, *det.* M. Pörtl (GJO 0152840, JACQ-Virtual Herbaria).

The species was observed on the damp shores of an artificial lake used for hydropower production. At the time of sampling, the water level was very low, a situation that commonly occurs at least once a year. *Riccia pusilla* subsp. *gothica* was fairly common (approximately one rosette per square meter), growing together with a sterile, unidentified *Bryum* Hedw. species. *Riccia pusilla* subsp. *gothica* occurs in Northern Europe (Sweden), and in Central Europe it is so far known from Austria, Germany, Hungary, Slovenia and Switzerland (Pörtl et al. 2025). The taxon is morphologically very similar to other species of the *R. glauca* – *bifurca* group. A reliable determination is only possible using spore characteristics. The spores are light brown and kind of translucent in their mature state. The distal surface shows 7–12 areolae diagonally. On the proximal surface also complete areolae of similar size are developed. The spore wing is very narrow to almost absent. The wing edges are widely entire, sometimes irregularly notched (Damsholt and Hallingbäck 1986; Pörtl et al. 2025). *Riccia pusilla* subsp. *gothica* prefers base rich to calcareous, open ground in different habitats. The finding presented here reflects the highest sampling point of the taxon in Central Europe so far.

23. *Sphagnum beringiense* A.J.Shaw, R.E.Andrus & B.Shaw

Contributors. I. V. Czernyadjeva and E. Yu. Kuzmina

Russia. Arctic Part, Kara Sea, Nordenskiöld Archipelago, Bianka Island, Cape Povorotnyy, 76°44'39"N, 97°12'49"E, alt. 5 m a.s.l., bank of the stream, 6 September 2023, *leg.* I. V. Czernyadjeva 29–23, *det.* E. Yu. Kuzmina (LE B-0049465).

This species was recently described from Arctic Alaska (Shaw et al. 2008). In Russia, *Sphagnum beringiense* is found in the Arctic and subarctic of the Asian part—on the Yamal, Tazovsky and Taimyr Peninsulas, on the Anabar Plateau, in Yakutia in the lower reaches of the Lena and Indigirka Rivers, on New Siberian Islands Archipelago (Stolbovoy Island), on Wrangel Island and in Chukotka; isolated finds are known in the mountains of the Russian Far East and Eastern Siberia—in the Trans-Baikal Territory, in the south of Yakutia, on Kamchatka Peninsula, in Khabarovsk and Primorsky Territories, in the Magadan and in the Amur Provinces (Maksimov et al. 2016; Sofronova et al. 2016; Ivanov et al. 2017; Czernyadjeva et al. 2021). Thus the distribution generally corresponds to the Beringian pattern. This new discovery of *S. beringiense* on the Nordenskiöld Archipelago represents one of the most northerly localities in the world.

24. *Symphyogyna caduciloba* Burghardt & J. Uribe

Contributor. S. R. Gradstein

Colombia. Risaralda, Santa Rosa de Cabal, along trail Termales to volcano Otún, alt. 2650 m a.s.l., in humid

montane forest, on soil, 16–19 July 1980, *leg.* S. R. Gradstein 3597 (COL, GOET as *Symphyogyna brogniartii* Mont.).

Venezuela. Libertador, along trail Colonia Tovar to Puerto de Maya, 10°27'N, 67°21'W, alt. 2020m a.s.l., in montane cloud forest, on rock, 8 December 1982, *leg.* J. A. Steyermark, G. Davidse and R. Liesner 127788 (GOET, MO, VEN).

Symphyogyna Nees & Mont. (Pallaviciniaceae) is a common tropical and southern temperate thalloid liverwort genus with nine species in the northern Andes (Gradstein 2021). Burghardt and Uribe (2020) described a new species from the region, *S. caduciloba*, based on several recent gatherings made in the Andes of Ecuador, in the provinces Imbabura and Pichincha. The species is here recorded new to Colombia and Venezuela, where it had been collected in the 1980s. The Ecuadorian collections are from soil along trails in secondary lower montane forests and clearings at about 1400–1800 m a.s.l. Those from Colombia and Venezuela are from somewhat higher elevation, between 2000 and 2600 m a.s.l., growing on soil as well as on rock in humid montane forest and cloud forest. The morphological characteristics of *S. caduciloba* include its ascending to upright growth, the deeply lobed thallus with the incisions almost reaching the midrib, the lobes tipped by a small, 1–2-celled tooth, and especially, the frequently caducous thallus lobes. The species is closely similar to *S. brogniartii* Mont., a common and widespread neotropical species, and the Colombian collection of *S. caduciloba* had previously been identified as *S. brogniartii* (Uribe and Aguirre 1995). Both species have a deeply lobed thallus and thallus lobes terminating in a tooth. However, the thallus of *S. brogniartii* is prostrate, not ascending, the thallus lobes are not caducous, and the terminal tooth of the thallus lobes is longer (3–7 cells long).

25. *Syntrichia virescens* (De Not.) Ochyra

Contributors. P. Szűcs and F. Abdirasulov

Uzbekistan. Samarqand Region, Aman-Kutan, Bakhora Oromgokhi, alt. ca. 1440 m a.s.l., 39.302930°N, 66.941767°E, on the bark of a tree log, 8 May 2025, *leg.* P. Szűcs and F. Abdirasulov, *det.* P. Szűcs (EGR).

This moss has been found in neighbouring countries, including Kazakhstan, Kyrgyzstan, Turkmenistan and Tajikistan, as well as in several other regions of Eastern Europe and North Asia (Ignatov et al. 2006). Boborajabov (2010) mentioned it generally as occurring in the eastern Pamirs. However, as this study was based on phytogeographical regions, it does not specify particular countries. The checklist of mosses of East Europe and North Asia does not record *Syntrichia virescens* for Uzbekistan (Ignatov et al. 2006), neither has it been listed in any recent studies (Zhalov and Abdirasulov 2022; Zhalov et al.

2025a, 2025b). *Syntrichia virescens* is an acrocarpous moss that has a circumpolar distribution. It primarily occurs on the trunks and bases of old trees in open areas, as well as on soil, stones, walls, asphalt paths and concrete (Dierßen 2001).

26. *Thamnobryum neckeroides* (Hook.) E.Lawton

Contributors. J. Csiky, A. Sipos, G. K. Dela Campos, N. Eszik and D. T. N. Tran

Croatia. Papuk Mt., Slatinski Drenovac-Jankovac [0472.3] (Central European Mapping Scheme): (1) 45.520320°N, 17.679541°E, on gneiss rocks on the right side of the Kovačica stream, in ravine forest, alt. 516 m a.s.l., 23 October 2025, *leg.* J. Csiky, É. Csikyné R., *det.* J. Csiky, D. T. N. Tran, N. Eszik (JPU); (2) 45.520048°N, 17.678885°E, on gneiss boulders in the riverbed of the Kovačica stream, alt. 518 m a.s.l., 7 November 2025, *leg.* A. Sipos, J. Csiky, G. K. Dela Campos, N. Eszik, *det.* J. Csiky, A. Sipos, G. K. Dela Campos, D. T. N. Tran (JPU); (3) Slatinski Drenovac [0472.3], 45.538791°N, 17.659312°E, on gneiss rocks in a side valley of the Ratkovac stream, in ravine forest, alt. 407 m a.s.l., 7 November 2025, *leg.* J. Csiky, A. Sipos, G. K. Dela Campos, N. Eszik, *det.* J. Csiky (JPU), *conf.* A. Rimac, V. Segota (ZA 82947); (4) Novo Zvečevo [0471.3], 45.523862°N, 17.532921°E, on migmatite boulders in the riverbed of Jelovac, in beech forest, alt. 410 m a.s.l., 25 October 2025, *leg.* J. Csiky, É. Csikyné R., *det.* J. Csiky (JPU). Associated vascular plants: *Chrysosplenium alternifolium* L., *Fagus sylvatica* L., *Polystichum setiferum* (Forssk.) T.Moore ex Woyn.; associated bryophytes: *Ctenidium molluscum* (Hedw.) Mitt., *Metzgeria conjugata* Lindb., *Plagiothecium denticulatum* (Hedw.) Schimp., *Taxiphyllum densifolium* (Lindb. ex Broth.) Reimers.

Thamnobryum neckeroides has not been previously recorded from Croatia, and among neighbouring countries is known only from Hungary (Schröck et al. 2019; Hodgetts and Lockhart 2020; Ellis et al. 2022; Csiky et al. 2025). This species is most commonly associated with the humid forests of the montane belt (Schröck et al. 2019). With some experience, *T. neckeroides* can be distinguished in the field from *Thamnobryum alopecurum* (Hedw.) Gangulee, which is more common in the region and shares similar habitat preferences (Mastracci 2003). However, *T. neckeroides* is more selective regarding bedrock (preferring silicate substrates) and has a narrower heat tolerance range (van Zuijlen et al. 2023). In the Papuk Mountains, as in Hungary, *T. neckeroides* (classified as vulnerable at the European scale) is often associated with the endangered Pannonian-Caucasian *Taxiphyllum densifolium* (Sabovljević et al. 2019; Hodgetts and Lockhart 2020). In recent years several new populations of *T. neckeroides* have been discovered in Central Europe (Ellis, Alegro, Bansal, et al. 2012; Ellis et al. 2022; Stebel and Kapustyński 2024; Csiky et al.

2025). The estimated population size in the Papuk Mountains is 18 individual equivalents (Bergamini et al. 2019). Since these sites were found by chance while walking along roads and hiking trails, a systematic survey could reveal a much larger population size. This assumption is based on the fact that the Papuk Mountains contain numerous similar habitats of shady, damp valleys dominated by beech and underlain by silicate bedrock (Alegro et al. 2023).

27. *Tortula revolvens* (Schimp.) G.Roth

Contributor. T. Hallingbäck

Sweden. Öland province, Södra Möckleby parish, Albrunna kalkbrott, 56°20'10"N, 016°25'29"E, limestone quarry, 13 September 2025, *leg.* T. Hallingbäck TH 7101 (MO-5636094).

In 2025, a specimen of a moss belonging to the Pottiaceae was collected in South Sweden, Öland province. No sporophytes were recorded. It occurred on old asphalt along an old and less used road in a limestone quarry. The specimen was determined by Professor Richard H. Zander at Missouri Botanical Garden (MO) St. Louis, USA as *Tortula revolvens* var. *obtusata* Reimers. According to the most recent checklist (Lönnell et al. 2025), this species has not previously been recorded in the Nordic countries. This part of Sweden is considered comparatively well studied with many field surveys having been conducted. Since this taxon is mainly Mediterranean in distribution, the locality in Sweden maybe its northernmost finding, not least since this record may reflect the effects of global warming in this part of Europe.







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ORCID

J. Wilbraham  <http://orcid.org/0000-0003-4101-0611>
 F. Abdirasulov  <http://orcid.org/0000-0001-7285-3721>
 D. J. Alvarez  <http://orcid.org/0000-0001-7582-554X>
 J. Csiky  <http://orcid.org/0000-0002-7920-5070>
 I. V. Czernyadjeva  <http://orcid.org/0000-0002-7137-8604>
 B. V. Dangar  <http://orcid.org/0009-0005-8049-2459>
 G. K. Dela Campos  <http://orcid.org/0009-0002-9269-534X>
 J. Enroth  <http://orcid.org/0000-0002-2028-6910>
 B. Espinoza-Prieto  <http://orcid.org/0000-0001-7696-1279>
 N. Eszik  <http://orcid.org/0009-0004-3762-9512>
 V. E. Fedosov  <http://orcid.org/0000-0002-5331-6346>
 S. R. Gradstein  <http://orcid.org/0000-0002-3849-6457>
 A. S. Kartasheva  <http://orcid.org/0000-0002-9676-0279>
 E. Yu. Kuzmina  <http://orcid.org/0000-0002-8871-9604>
 Yu. S. Mamontov  <http://orcid.org/0000-0003-3851-0738>
 P. M. Mir-Roselló  <http://orcid.org/0000-0002-0004-1916>
 O. Yu. Pisarenko  <http://orcid.org/0000-0003-4108-4821>
 T. Pócs  <http://orcid.org/0000-0001-9087-8682>

R. D. Raviya  <http://orcid.org/0000-0003-2162-4202>
 V. Sahu  <http://orcid.org/0000-0002-4347-2468>
 D. S. Salas  <http://orcid.org/0000-0002-7229-076X>
 J. R. Shevock  <http://orcid.org/0000-0003-1283-0709>
 A. Sipos  <http://orcid.org/0009-0002-5041-0828>
 D. Skowron  <http://orcid.org/0009-0004-5252-0195>
 G. M. Suárez  <http://orcid.org/0000-0002-7131-0634>
 P. Szűcs  <http://orcid.org/0000-0002-3988-7062>
 D. T. N. Tran  <http://orcid.org/0009-0003-4168-0276>
 R. H. Zander  <http://orcid.org/0000-0003-3676-2667>

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