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18 new species and four noteworthy records of bryophytes in Finland

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15 species of mosses (Bryophyta: *Arctoa anderssonii*, *Dicranum schljakovii*, *Didymodon validus*, *Encalypta driva*, *E. pilifera*, *Meesia minor*, *M. minutissima*, *Orthotrichum pulchellum*, *Oxyrrhynchium hians* sensu stricto, *O. swartzii*, *Pohlia vexans*, *Polytrichum densifolium*, *Tomentypnum involutum*, *Tortella robusta*, *Ulota crispula*) and three species of liverworts (Marchantiophyta: *Apopellia megaspora*, *Bazzania flaccida*, *Liochlaena subulata*) are presented as new for Finland. *Acaulon muticum*, *Fossombronina incurva* and *Lescurea patens*, previously considered to be regionally extinct from Finland, are reported to being found again. Finally, *Gyroweisia tenuis* has been found on the second locality in Finland and therefore reported to widen its' distribution in the country significantly.

Introduction

Since 2002 the Finnish Bryophyte Expert Group has regularly published updates on distribution of bryophytes in Finland. These publications have included species new to the country but also changes in distributions within Finland by adding or excluding records in biogeographical provinces. The published data serve as the basis for updating Finnish bryophyte checklist that is published yearly in the home page of the Finnish Biodiversity Information Facility (FinBIF, laji.fi/en)

and for revising distribution data of bryophyte species reported therein. In addition, these publications provide more detailed background data of the new findings which is not available in the FinBIF.

Criteria for accepting the species in the Finnish checklist are strict, and only observations with a confirmed specimen in public herbaria (preferably in Finland) are accepted. In this article we publish records of the species that have been found as new to Finland after the latest up-

date on distribution tables was published (Pihlaja et al. 2023), i.e. between June 2023 and March 2026. The list of new species also includes some species whose name has already appeared in the Finnish checklist but whose species delimitation has been recently changed. They are reported because of the need to select new voucher specimens following the new species concept, and confirming the distribution of the newly defined taxon in Finland. The same requirement for confirmed voucher specimens applies to species reported as new to biogeographical provinces. Unlike in previous publications with updates on national distribution, this time we have not filtered the content of the Finnish Biodiversity Information Facility (FinBIF, laji.fi/en) to get a complete list of species new to biogeographical provinces (see Pihlaja et al. 2023). However, we still report some noteworthy observations of species which have not been found in Finland for several decades.

Methods

New records reported here are based on field work, revising material in herbarium collections or molecular studies in connection to diverse research projects. Only findings that are based on public herbarium specimens were accepted. The finding of *Dicranum schljakovii* was based on DNA-metabarcoding and laboratory protocols and molecular data resulting in the find is described in Huttunen et al. (2023).

The nomenclature follows the European checklist for bryophytes (Hodgetts et al. 2020) except in cases of taxa that have been described or revised after that publication (*Apopellia megaspora*, *Encalypta driva*, *Meesia*, *Oxyrrhynchium*, *Tortella*). Abbreviations for herbaria follow the Index Herbariorum (Thiers 2018): H = Botanical Museum, Finnish Museum of Natural History, University of Helsinki, OULU = Botanical Museum, University of Oulu, TUR = Herbarium, University of Turku. Following abbreviations are used for IUCN Red List categories in the text: Regionally Extinct = RE, Critically Endangered = CR, Endangered = EN, Vulnerable = VU, Near Threatened = NT, Data Deficient = DD and Least Concern = LC.

Results and discussion

We present 18 new species for the country and 4 new findings of noteworthy species. One species, *Plagiothecium decursivifolium* Kindb. was reported as new to Finland in the revision of European *Plagiothecium* by Wolski (2025) but without citing any specimens. The same applies also to *Pellia borealis* Lorb. (Czochór et al. 2025). Therefore, these species are not included in the current publication. The four noteworthy species, *Acaulon muticum*, *Fossombronina incurva*, *Gyroweisia tenuis*, and *Lescuraea patens*, are all very rare species in Finland. They have been reported in the 2010 Red List as RE in Finland (Syrjänen et al. 2010) and then newly found after several decades. *Gyroweisia tenuis* was found again from its only known locality in Southwestern Finland already in 2017 and the finding reported here is based on its' second locality which also significantly widens its distribution in the country. One species, *Oxyrrhynchium hians* (Hedw.) Loeske has been included in the Finnish checklist for decades, but it is included here because the species delimitation has recently changed (Hedenäs 2024). There is thus a need to select a new voucher specimen to confirm the presence of the newly defined taxon in the country.

The majority of the findings that are reported here result from fieldwork by several persons. Presence of one species, *Tomentypnum involutum* in Finland was confirmed based on revision of herbarium material in two herbaria, TUR and OULU. We are aware that many species reported here as new to the country, such as *Meesia minor* Brid., *Meesia minutissima* Hedenäs, *Polytrichum densifolium* Wilson ex Mitt., *Oxyrrhynchium hians* (Hedw.) Loeske sensu stricto and *O. swartzii* (Turner) Warnst., are more widely distributed in Finland than presented here. The material of these species in Finnish herbaria should be revised to get more detailed data on their abundances and geographical distribution in the country.

Of each species we briefly declare the current taxonomic status, the distribution and habitat preferences in other parts of the world and the current situation of the species in Finland.

New species for Finland

Apopellia megaspora

(R.M. Schust.) Nebel & D. Quandt

ripsiliuskasammal, storsporspellia

FINLAND. Regio kuusamoënsis (Ks). Salla. Aatsinginhauta. Ravine of the River Haudanjoki, east bank. A shady basal cavity of dolomite rock-wall. On moist silty soil over rock outcrops at the flooding zone of Haudanjoki rapids. Abundant in the bottom of the cavity. Coll. & det. Kimmo Syrjänen 4.VIII.2024 (TUR <http://mus.utu.fi/TBR.132032>).

New species for Finland. The presence of two other thalloid liverwort species of genus *Apopellia* in addition to *A. endiviifolia* in Europe is based on rather new observations (Konstatinova et al. 2023, Czochór et al. 2025).

Apopellia endiviifolia is a common species on moist clayey soils at calcareous districts throughout temperate Europe and in southernmost Finland. It is easy to recognize based on autumnal fragile thin branching innovations of shoot apices. Late autumn these *Metzgeria* spp. or *Riccia fluitans* -resembling network of caducous branches can cover almost the whole thallus. Two other European *Apopellia* species lack these apical branches. All species of the genus share short cylindrical perichaetia with lobed – ciliate-dentate mouth. *Apopellia* species are dioicous, but both females and males are common. Sporophytes are short-lived and only met during springtime.

According to Konstatinova et al. (2023), in *A. megaspora* the mouth of perichaetia is strongly incised and laciniate-dentate lobes have long one seriate ending cilia (can be up to 20 elongated cells in length). In separate narrow male plants antheridia form unclearly defined groups of numerous tubercles in one or two groups at different branches. Scientific name refers to the large size of spores (70–80 × 90–110 µm) compared to *A. endiviifolia* (35–45 × 70–80 µm). In *A. endiviifolia* perithecia has a lobulate mouth with mostly two or more cells wide relatively short cilia (sometimes one-cell wide single cilia up to 5 cells long can occur). Antheridia are in one, two and sometimes three irregular rows on the dorsal side along midrib.

Apopellia alpicola shares ciliate perichaetia mouth with *A. megaspora*, but it, for example, lacks thickening of cell walls in the mid thallus present in *A. endiviifolia* and *A. megaspora*.

Antheridia are sparse in male shoots. *A. alpicola* is more (sub)arctic-alpine species of non-calcareous environments in late snow areas, alpine meadows, and tundra vegetation. It has not yet been confirmed from Fennoscandia.

A. megaspora has a circumpolar distribution. It is widely spread in North America but seems to grow in northern parts of Eurasia as well. It has been known from European Russia in Arkhangelsk province but so far this is the first observation from Fennoscandia. The species is assumed to be strictly calciphilous sharing similar ecology with the Finnish growing site throughout its' range.

Arctoa anderssonii Wich.

luminapasammal, liten jökelmossa

FINLAND. Lapponia enontekiensis (EnL/Le). Enontekiö, Ritniöohkka. SW from the top, 1250 m a.s.l. Upper oro-arctic zone, *Ranunculus glacialis* boulder field. On a sample plot of a vegetation study, on soil. Coll. Risto Virtanen, 25. VII.1990, det. Sanna Huttunen 2023 (OULU <http://id.herb.oulu.fi/GAL.19511>).

New species for Finland. The species was published as new for Finland by Huttunen et al. (2024). It was found in six sample plots in the context of examining specimens for a vegetation study in the Ritniöohkka area. *Arctoa anderssonii* is a middle to high Arctic species. In Europe it is included in the regional red lists in UK (Callaghan 2023), Norway (Høitomt et al. 2021a) and Sweden (SLU Artdatabanken 2020) and assessed as VU in the European red list of bryophytes (Hodgetts & Lockhart 2020). The most important threat for the species is small population size and changes in habitat quality due to warming climate. Three of the Finnish collections were composed of only few shoots among other mosses, but one collection was larger, ca. 2 × 2 cm pure colony (OULU <http://id.herb.oulu.fi/GAL.19510>). All specimens lacked sporophytes.

Bazzania flaccida (Dumort.) Grolle

harsusahasammal

FINLAND. Ostrobothnia kajanensis (Kn/Ok). Puolanka. Paljakka Strict Nature Reserve, on the lowest part of the slope of Mustarinta. On a wet side of a stone by the edge of a groundwater affected spruce mire. On the vertical surface of the stone near water level. Relatively abundant, a patch of 2 dm². Coll. & det. Timo Kypärä 3320, 26.VIII.

2020, conf. Kimmo Syrjänen 2024 (TUR <http://mus.utu.fi/TBR.128123>).

New species for Finland. According to Meier and Hofmann (2024) *Bazzania flaccida* is a small to medium-sized liverwort, which is dioicous but rarely fertile. Like other *Bazzania* species, the leaves are ovate-rectangular with a few large teeth at the apex. The underleaves are rectangular with almost entire margins and are about 1.5 times wider than the stem. *Bazzania flaccida* greatly resembles a small-sized *B. tricrenata*, but differs from it by very sparse leaf orientation which allows the stem and individual leaves to be visible. The leaves of *B. flaccida* are also loosely attached, so that the older shoots can be almost leafless.

Bazzania flaccida is endemic to Europe and may be a relict of the more humid and milder Tertiary era (Damsholt 2002). It occurs widely in alpine habitats in Central Europe. It prefers shady conifer forests where it grows on silicate stones or on ground in moist conditions (Meier & Hofmann 2024). In Europe, the species is considered as LC (Schnyder 2019). Nationally, it has been classified as CR in Slovakia, VU in Bulgaria, Czech Republic, Italy, Luxembourg and Poland, and DD in Slovenia (Hodgetts & Lockhart 2020).

In Finland, *Bazzania flaccida* was found in a single location in Paljakka Strict Nature Reserve growing in a natural spruce mire, about 260 m a.s.l. The habitat and substrate resemble those in Central Europe but growing so far from the main distribution area is a mystery. However, Damsholt (2002) has anticipated certain relict species from the Tertiary era to be found in Nordic countries eventually, *Bazzania flaccida* being one of them.

***Dicranum schljakovii* Ignatova & Tubanova
vuorikynsisammal**

FINLAND. Lapponia enontekiensis (EnL/Le). Enontekiö. Kilpisjärvi, Saanajärvi. NW end of lake Saanajärvi near the snowmobile track. Eutrophic low herb snowbed. On mineral soil. Alt. 743 m. Coll. Kati Pihlaja, Suvi Leskinen & Saana Mattanen 7.VIII.2021, det. Sanna Huttunen 2024 (TUR <http://mus.utu.fi/TBR.130455>)

New species for Finland. The ITS sequences matching with *Dicranum schljakovii* sequences in GenBank were found from DNA-metabarcoding of the sample collected in the research project on

Finnish snowbed species and habitats (Huttunen et al. 2023). After that, the morphology of specimens collected from sequenced study plots were studied and the presence of the species was confirmed.

Dicranum schljakovii was described as new to science in 2015 by Ignatova et al. (2015) based on the molecular systematic study of Russian *Dicranum* species. It is closely related to *D. spadiceum*, which was actually also the original identification of the sequenced Finnish specimens. Differences between these two species are mainly quantitative. Compared to *D. spadiceum*, leaves in *D. schljakovii* are shorter and narrower and with more gradually narrowing acumen.

In Russia *D. schljakovii* occurs in the southern part of Asian Russia, Yakutia, Russian Far East (Primorsky Territory, Kamchatka, Sakhalin and Kuril Islands), Urals and Taimyr, but one locality is also known from Murmansk Province in Khibiny Mts (Ignatova et al. 2015). This far it has not been reported from other European countries.

***Didymodon validus* Limpr.
vankkatumpurasammal**

FINLAND. Nylandia (U/N). Helsinki. Suomenlinna, Suisaari, Tykistölahti. On an old wall or other nutrient rich stone substrate by a walking path. Probably partially on an old mortar of the wall. Open place, N exposition. As separate patches among other bryophytes. Coll. & det. Antti Kotilainen 8.XI.2023, conf. Kimmo Syrjänen 2023 (TUR <http://mus.utu.fi/TBR.129683>).

New species for Finland. *Didymodon validus* was found by Antti Kotilainen in Suomenlinna fortress (Kotilainen 2023). The species is closely related to more common *Didymodon rigidulus* and it is often recognized at intraspecific level as *D. rigidulus* Hedw. var. *validus* (Limpr.) Düll. Recently Ochya and Bednarek-Ochya (2017) have shown *D. validus* to be a synonym of *D. rigidulus* var. *giganteus* (Schlieph. ex Warnst.) Ochya & Bednarek-Ochya. According to these authors the only real differences between the species are the smooth laminal and entirely unistratose leaf margins in *D. validus*.

However, in the European checklist it is accepted at the species rank based on Jiménez (2006). The Latin name *validus* (robust, strong, mighty etc.) refers to its more robust size (almost two-fold). Species also lack rhizoidal tubers typi-

cal of *D. rigidulus*. For morphological description see also Wu et al. (2023).

The distribution of *Didymodon validus* is poorly known in Europe. Hodgetts and Lockhard (2020) list it as VU in the European Red list with confirmed occurrences only in France, Italy, Slovenia, Austria and probable observations from Poland, Switzerland and Croatia. In Norway there are seven observations in the database of Artsdatabanken. There are no confirmed observations from Sweden. *D. validus* seems to be a rare but probably overlooked moss species in Europe.

Encalypta driva K.Hassel & Høitomt

kissankellossammal, snöclockmossa

FINLAND. Lapponia enontekiensis (EnL/Le). Kilpisjärvi. Malla Strict Nature Reserve, Pikku-Malla fell, W-part, at southern side of Mallalampi ponds. On bare mineral soil at calcareous ledge, about 5 cm² patch, together with *Encalypta alpina*. Coll. & det. Timo Kypärä 6.VII. 2023, conf. Kimmo Syrjänen 2025 (OULU <http://tun.fi/GAT.2477>).

New species for Finland. *Encalypta driva* was described as new to science in the year 2022 by Kristian Hassel et al. (2022). It is closely related to *Encalypta vulgaris* and has been confused also with *E. mutica*. All three species lack a peristome and have lingulate-obtuse leaves without a hair-point. *Encalypta mutica* has a fringed base of calyptra (vs. eroded) and the capsule is (almost) smooth and with persistent annulus of small cells at capsule mouth (vs. disintegrating annulus of large cells). The upper part of leaf costa of *E. mutica* bears papillae at the dorsal side, whereas the upper dorsal costa is smooth or with denticulate projections at cell-ends in two other species. In many macro- and microscopic characters *E. vulgaris* is larger than *E. driva*, but these characters somewhat overlap. Most reliable differences are based on less and shortly striated capsules with wider capsule mouth cells (15–25 µm) in *E. vulgaris* than *E. driva* (12.5–17.5 µm wide) and with broadly striate to ribbed capsules.

As the Swedish vernacular name implies, *E. driva* was thought to be mainly arctic-alpine on distribution. In Finland *E. driva* has been met so far from calcareous districts in NW parts of the country but also a few locations in SW, with distribution resembling *E. mutica*. *E. vulgaris* seems to have a more southern distribution in Finland. The Finnish vernacular name refers to habitats

which *E. driva* shares with *Campanula rotundifolia* and *Antennaria* sp.

Encalypta pilifera Funck

soikkokellossammal, oval klockmossa

FINLAND. Regio aboënsis (V/Ab). Parainen. Houtskari, Åvensör, middle part of Kirmo. On top of a rock near an abandoned limestone quarry. About 1 dm² patch. Leg. & det. Timo Kypärä 17.IV.2023 (OULU <http://tun.fi/GAT.24158>).

New species for Finland. *Encalypta pilifera* (syn. *E. obovatifolia* Nyholm) was described as new to science in 1995. The species has scattered occurrences in the northern hemisphere, but the distribution is still poorly known. In Sweden it is relatively common in Gotland and Öland but does not occur elsewhere in the country (SLU Artdatabanken 2025a). In Norway it was first discovered in 2011 and it seems to occur in the southern part of the country (Artsdatabanken 2025).

According to the description given in SLU Artdatabanken (2025a), *E. pilifera*, like other species in the genus, prefers calcareous habitats. It grows in dry and sunny conditions on limestone rocks, usually on a thin layer of soil or on bare rock surface. The species is monoicous and has almost always sporophytes. The capsule is striated and lacks a peristome. The spores are 30–40 µm in size. *Encalypta pilifera* resembles *E. vulgaris* but differs from it by more obovate-spathulate leaf shape and the excurrent costa with a hyaline hair-point.

In Finland, the species was found in the Archipelago Sea in SW Finland. It is worth keeping the species in mind when surveying similar habitats in southern parts of the country.

Liochlaena subulata (A.Evans) Schljakov

suppulippasammal, spetsig rörsvepemossa

FINLAND. Tavastia borealis (PH/Tb). Rautalampi. Etelä-Konnevesi National Park, Hanhitaipale. In the southern part of the National Park, east of Kirkkovuori cliff by the Kirkkolahti Bay. On a rotten piece of wood in a wet crevice of the cliff. A patch of 5 dm². Coll. & det. Timo Kypärä 4522, 13.IX.2023, conf. Kimmo Syrjänen 2024 (TUR <http://mus.utu.fi/TBR.130870>).

New species for Finland. *Liochlaena subulata* has remained a controversial taxon for decades. It has sometimes been treated as a variety of the more common species *Liochlaena lanceo-*

lata Nees and sometimes as a species of its own rights. In the latest European checklist, it is treated at a species level (Hodgetts et al. 2020).

Liochlaena subulata is considered mostly Asian species with a wide but relictual circumpolar boreal-montane distribution (Damsholt 2002). In Europe, it is rare and classified as NT (Konstantinova 2019). In Sweden it has had only one confirmed occurrence in 1914 and is classified as RE (SLU Artdatabanken 2025b). The situation in Norway is unclear and there are no confirmed occurrences at the moment (Artsdatabanken 2026).

According to Damsholt (2002) *Liochlaena subulata* is a leafy liverwort resembling greatly *L. lanceolata*. In contrast to *L. lanceolata*, *L. subulata* is smaller in size, dioicous, rarely fertile and gemmiparous shoots are common. The gemmae are pale green in colour, two-celled and develop at the apex of the reduced leaves of attenuate shoots. The species grows on damp decaying logs in forests with a moist microclimate and on damp soil along brooks and rivulets (Konstantinova 2019).

***Meesia minor* Brid.**

pikkunuijasammal, liten svanmossa

FINLAND. Lapponia enontekiensis (EnL/Le). Enontekiö, Kilpisjärvi, Malla Strict Nature Reserve, Iso-Malla, upper reach of the River Ráššája at N-side of track "Kalottireitti". Small dolomite rock outcrops and boulders at bottom of rivulet. On moist soil at the bank of a brook in many places. Coll. Kimmo Syrjänen 28.VII. 2011 [as *Meesia uliginosa* Hedw.] det. K. Syrjänen 2026, (TUR <http://mus.utu.fi/TBR.115227>).

New species for Finland. Lars Hedenäs (2020) showed that *Meesia uliginosa* s.l. contains three clearly separate lineages that differ in their morphological characters. These taxa can be distinguished by a combination of two characters, seta length and peristome structure, especially the ornamentation of the exostome. Additional distinguishing features are the shape of the leaf apex, the capsule size and the spore size (Hedenäs 2020). Ripe capsules are needed for a reliable identification, but they are common in autoicous *M. uliginosa* s.l. Although *Meesia minor* was described already in 1827 by Bridel-Brideri, it has been mainly recognized as a variety *M. uliginosa* Hedw. var. *alpina* (Funck) B. eur. or as a species *M. angustifolia* Brid.

The exostome of *M. minor* is yellow-brown, 40–70 % of length of the endostome; the lower outside of the exostome has a well-developed reticulate or cross-striolate pattern; spores about 50–70 µm; seta 1–4 cm. Leaf apex mostly acute or obtuse or rarely acuminate or rounded. Median leaf lamina cells (4.5)5.5–12.0(14.5) µm. Shoots medium-sized, mostly 2–12 mm tall. *Meesia minor* is intermediate between *M. uliginosa* and *M. minutissima* but differs in well-developed ornamentation on the outer surface of the exostome (at most faintly developed in the other two species) and by on the average larger spores (46.0) 48.0–66.0 (69.5) µm versus (37.0) 38.5–58.0 (62.5) µm (Hedenäs 2020).

Brotherus (1923) gives several locations for *Meesia trichodes* (L.) Spruce var. *minor* (Brid.) I.Hagen throughout the Scandian mountain range and mentions it to be very common in the Regio alpina in uppermost NW Finland "Le. Kilpisjärvi (Norrl.) In allen Fjelden um den Kilpisjärvi, in der alpinen Region." However, Brotherus considers the variety to be only stunted *M. uliginosa* growing in harsh alpine environments. It is characterized by a short seta (hardly 1 cm) and linear-lanceolate leaves with obtuse or acute apex. Probably the oldest collections under name var. *minor* in Finnish herbaria belong to this taxon, but they can also include *M. minutissima* or even stunted *M. uliginosa* and specimens should be studied carefully.

***Meesia minutissima* Hedenäs**

keronuijasammal, pyttesvanmossa

FINLAND. Lapponia enontekiensis (EnL/Le). Enontekiö. Malla Strict Nature Reserve, upper part of the River Ráššája, on the N side of the hiking path "Kalottireitti". On the side of a calcareous stone. On humus. Two patches of 1 dm², with sporophytes. Coll. & det. Timo Kypärä 4366, 29.VI.2023 (OULU <http://tun.fi/GAT.2451>)

New species for Finland. *Meesia minutissima* shares with *M. uliginosa* the pale yellowish or, when old, sometimes dark yellow exostome that is 20–50 % of the height of the endostome. In both species the outer surface of the exostome is almost smooth or only faintly striolate or reticulate in the lower part. *Meesia minutissima* has smaller spores than *M. minor*, about 40–60 µm. Seta is 4–17 mm tall in *M. minutissima* (in *M. uliginosa* 17–70 mm). Leaves of *M. minutissima* are

acuminate or acute (occasionally obtuse; in *M. uliginosa* typically lingulate leaves have rounded or obtuse apex). Median lamina cells are (4.0) 5.0–10.5 (12.5) μm wide in *M. minutissima* (in *M. uliginosa* (5.5) 6.5–14.5 (18.0) μm wide). Shoots are mostly 2–7 mm tall while in *M. uliginosa* shoots are 6–30 mm. Compared with two other species *M. minutissima* is smaller in size of shoots and seta. In Sweden it is thought to be less common than *M. minor* (Hedenäs 2020); the same pattern seems to occur in Finland.

Both species grow on bare, peaty soil or often in rock crevices, in base-rich habitats. *Meesia minutissima* is often in more exposed habitats than *M. minor*. In Fennoscandia both species are widespread in the mountains, where they can grow adjacent in the same habitat. In Finland these species are found only in the uppermost Lapland.

Orthotrichum pulchellum Brunt.

punahiippasammal, rödtandad hättemossa

FINLAND. Regio aboënsis (Ab/V). Turku. Pihlajaniemi, urban herb-rich forest, on Sorbus at 170 cm height, alt. ~1 m a.s.l. Coll. Annika Metso 21.VI.2024, det. Annika Metso and Kati Pihlaja 2024 (TUR <http://mus.utu.fi/TBR.130770>).

New species for Finland. *Orthotrichum pulchellum* is a widespread species in the Northern hemisphere. It occurs mostly in oceanic parts of western Europe and western North America (Plášek et al. 2022). In Fennoscandia it is found in southwestern Sweden and Norway (Hallingbäck et al. 2008). Typically, *O. pulchellum* grows as an epiphyte on twigs of *Salix* (British Bryological Society 2021) or bark of deciduous trees in sheltered habitats (Hallingbäck et al. 2008).

In spite of its genus, *O. pulchellum* resembles *Ulotia* rather than *Orthotrichum* (British Bryological Society 2021). The leaves are curled, the capsule has a long seta reaching well above the leaves, the calyptra is hairless and with dark smudges in the base and the outer peristome teeth are intense orange or red in colour. The species is possible to distinguish in the field with a little experience.

In Finland, Annika Metso first discovered *O. pulchellum* in a young shady herb-rich forest near the sea shore by the city of Turku. Later, it was also discovered some 5 km away from the first site in a similar habitat. It is probable that the spe-

cies has spread to Finland very recently and is now gaining a foothold here. If it spreads further, it could be found in suitable habitats in southwestern Finland.

In two recent decades, there has been a significant range expansion of *Orthotrichum pulchellum* in Europe towards the east (Plášek et al. 2022). In countries where it has been growing for a longer time, the species has also become more abundant (British Bryological Society 2021). This might be due to climate change and improving air quality. Hodgetts & Lockhart (2020) report the species to be EN in Romania, VU in Spain and Switzerland and DD in Slovenia.

Oxyrrhynchium hians (Hedw.) Loeske **tarharikkasammal**

FINLAND. Tavastia australis (EH/Ta). Pälkäne. Padankoski, Kyläjärvi. On clayey soil on the edge of a field, fairly abundant. Coll. Tuomo Kuitunen 3299, 29.10.2016, det. Tuomo Kuitunen 2025 (TUR <http://mus.utu.fi/TBR.131620>).

New species for Finland. The morphologically variable species *Oxyrrhynchium hians* sensu lato has been puzzling taxonomists for decades. Recently, Lars Hedenäs sequenced specimens mostly from Nordic countries and found three morphologically and molecularly distinct taxa: *Oxyrrhynchium hians* sensu stricto, *O. swartzii* and *O. distichum* (Hedenäs 2024). In the article, Hedenäs reported *O. hians* s.str. and *O. swartzii* to occur in Finland. Material of *O. hians* s.l. in Finnish herbaria have not been re-identified yet, but the presence of the species in the country has been confirmed by some newly collected herbarium specimens.

Hedenäs (2024) reports *O. hians* sensu stricto to have a widespread distribution in southern Sweden up north to Uppland biogeographical province. Some scattered occurrences are reported from southern Norway and southern Finland, and in central Europe the species is relatively common. The species seems to avoid higher elevations.

Oxyrrhynchium hians is the largest species of the three taxa mentioned. According to Hedenäs (2024), the shoots of *O. hians* are usually recognizable by their wide and distinctly concave leaves that are evenly arranged around stems and branches. The species grows more often on shady and humid soil than the other two species. It pre-

fers nutrient-rich habitats and can also grow on rocks and rotten wood.

Hedenäs (2024) reports one specimen from Regio aboënsis biogeographical province. In Finnish herbaria we have only one confirmed specimen of this taxon so far. It is collected from Pälkäne, Tavastia australis biogeographical province where it is growing abundantly on clayey soil on the edge of a field. The old herbarium material of *O. hians* sensu lato needs to be revised in order to get a clear picture of the distribution, abundance and habitat preferences of the species in Finland.

***Oxyrrhynchium swartzii* (Turner) Warnst.
savirikkasammal**

FINLAND. Tavastia australis (EH/Ta). Pälkäne. Padankoski, Salimäki. Growing under garden plants in shady and moist microclimate, on garden soil, sparse. Coll. Tuomo Kuitunen 1917 [as *Oxyrrhynchium hians* (Hedw.) Loeske], 4.V.2012, det. Tuomo Kuitunen 2025 (TUR <http://mus.utu.fi/TBR.131619>).

New species for Finland. *Oxyrrhynchium swartzii* is one of the new taxa splitted from *O. hians* sensu lato (Hedenäs 2024). Although the species has been originally described in 1905 by Turner, the nomenclature of the species has been confused with that of *O. hians*.

According to Hedenäs (2024), *Oxyrrhynchium swartzii* is the most common species of these three taxa separated from *O. hians* s.l., both in Fennoscandia and in Europe. It grows primarily on soil and is more common in open areas than the other two taxa. It can grow both in nutrient-poor and nutrient-rich habitats. Morphologically *O. swartzii* can be separated from the other two taxa by narrower and plane stem leaves, shorter and wider branch leaf cells and longer costa.

Hedenäs (2024) reports three specimens from Finland: from Alandia, Regio aboënsis and Nylandia provinces. In Finnish herbaria we have two confirmed specimens so far, one from Regio aboënsis and one from Tavastia australis provinces. It is probable that *O. swartzii* is more common in Finland than *O. hians* s.str. To get more detailed information on the distribution and abundance of the species, the old herbarium material of *O. hians* s.l. need to be revised.

***Pohlia vexans* (Limpr.) H.Lindb.**

kultavarstasammal, gultandsnicka

FINLAND. Lapponia kittilensis (KiL/Lkk). Kolari. Äkäsjokisuu, Kalkkikangas. Near the abandoned limestone quarry, on a roadside. On mineral soil, sparsely along the area of a couple of square meters. Coll. & det. Timo Kypärä 3690, 29.VII.2021, conf. Kimmo Syrjänen 2024 (TUR <http://mus.utu.fi/TBR.127324>).

New species for Finland. *Pohlia vexans* is a rare arctic-alpine species with a disjunct distribution in Europe. It occurs in Central Europe in the Alps, in northern Europe along the Scandes and in northern Russia. All of the subpopulations are considered to be small and isolated (Baudraz & Schnyder 2019). The species is also known from Siberia and North America. In Europe it has been evaluated as EN, and nationally VU in Switzerland and DD in Slovenia (Hodgetts & Lockhart 2020).

According to Hallingbäck et al. (2008), the identification of *Pohlia vexans*, like many other *Pohlia* species, requires ripe capsules. *Pohlia vexans* is dioicous but sporophytes are often encountered. The ripe capsule is reddish brown, hanging and almost spherical. The spores are 14–18 µm in size. The outer peristome is yellow, in contrast with *Pohlia atropurpurea* and *P. melanodon* that have a reddish brown peristome. Unlike *P. lescuriana*, *P. vexans* has cryptopore stomata.

Pohlia vexans is a pioneer species growing on bare clayey or sandy soil near rivers, brooks and glaciers and it prefers humid and neutral to base-rich substrates (Hallingbäck et al. 2008). It has also been found in human-affected habitats, such as on the sides of paths and roads in the alpine zone.

***Polytrichum densifolium* Wilson ex Mitt.**

louhukarhunsammal, östlig skogsbjörnmossa

FINLAND. Karelia borealis (PK/Kb). Rautavaara. Tiilikajärvi National Park, Konttimäki -NW. South of Pumpulikirkko, near the nature path. Narrow passage between cliffs, abundant on boulders. Coll. & det. Kimmo Syrjänen 14.VIII.2025 (TUR <http://mus.utu.fi/TBR.131935>).

New species for Finland. *Polytrichum densifolium* was confirmed to be a valid species already a decade ago (Ivanova et al. 2015) based on molecular characters associated with several stable morphological differences. In Flora of North America (Smith Merrill 2007) the taxon is called

Polytrichastrum formosum var. *densifolium* (Mitten) Z. Iwatsuki & A. Noguchi. Marginal leaf lamina of this taxon is 3–5 (–10) cells wide and upper cells of lamina elliptic, not or only slightly thickened compared with 2–5 cells wide marginal lamina and rounded and thickened lamina upper cells in var. *formosum* (Smith Merrill 2007). He presented the taxon to occur through boreal North America being common in the Northeastern part but absent in the Arctic. Especially in NE North America most observations under name *P. formosum* belong to this taxon. In Russia most specimens that have been named as *P. formosum* were also transferred into *P. densifolium* (Ivanova et al. 2015). The general distribution *P. densifolium* is circumpolar and it seems to be a common species across the boreal region.

Ivanova et al. (2015) provides a sense to the relation of *Polytrichum formosum* and *P. longisetum* in Northern Europe. In all three species the upper lamina cell is $\pm$ rounded (or ovate-elliptic, slightly taller than wide). *Polytrichum* species have in general leaves with differentiated sheath and blade, and especially the size and form of hyaline sheath cells are important in determination of these three species. The number of marginal lamina cells in mid-leaf is also useful but can overlap. At least in Northern Europe distinctive characteristics used to separate *P. formosum* and *P. longisetum* earlier (e.g. Smith 2004), especially the number of marginal cells at the middle part of leaf lamina 1–5 in *P. formosum* vs. over 6 in *P. longisetum*, was partly misleading.

Shoots lacking sporophytes can also be identified based on sheath cells (Ivanova et al. 2015). *Polytrichum longisetum* median sheath cells are short-rectangular (3–4:1), ((30–) 50–60 (–70 μ m long)) and marginal lamina 4–9 (–20) cells wide. In two other species the median sheath cells are long-rectangular (5–9:1) and marginal mid-leaf lamina mainly 2–4 cells wide. *Polytrichum formosum* median sheath cells are slightly longer, (60–) 70–80 (–110) μ m long, when compared to *P. densifolium* with (50–) 60–70 (–90) μ m long sheath cells. The marginal cells of the lamellae are rounded with thicker outer walls in *P. formosum*, while they are slightly longer than wide and thin walled in *P. densifolium* (Ivanova et al. 2015).

Shoots with ripe capsules provide many more diagnostic characters. In *P. longisetum* capsules are obtusely 5–6-angled; epiphragm (thin membrane covering the mouth of the capsule) is easily detached, often missing in older open capsules; spores 15–23 μ m. In two other species the capsules are $\pm$ sharply 4-angled; epiphragm moderately firmly attached, persistent in open capsules and spores smaller 12–15 μ m. Several other sporophyte differences are listed in detail in Ivanova et al. (2015).

Ivanova et al. (2015) already mention the species in the Baltic countries and Finland but without any precise locations. In preliminary studies *P. densifolium* seems to be a more common species in Finland than *P. formosum* and it has also been confused with *P. longisetum*. All three species share somewhat similar ecology: they can be met together on windthrow stumps along brooks in coniferous forests, at bases and cracks of sheltered siliceous cliffs and boulders or forested boulder screens. All three are growing on soil or peaty humus. *P. formosum* prefers more nutrient-rich sites and is also found on soil in herb-rich broad-leaved or mixed coniferous forests. *P. longisetum* is more oligotrophic and can grow on peat or peaty soil. It can form extensive stands on abandoned peat fields or peat excavation sites.

***Tomentypnum involutum* (Limpr.) Hedenäs & Ignatov
tunturikultasammal, krypgyllenmossa**

FINLAND. Lapponia enontekiensis (EnL/Le). Enontekiö. Koutavankka (Govdávaggi). Coll. A. J. Huuskonen 1.VIII. 1965, det. Sanna Huttunen 2024 (OULU <http://id.herb oulu.fi/GAL.16752>).

New species for Finland. The presence of the species was first confirmed by studying herbarium specimens in TUR and OULU collected from eutrophic tundra heaths. This first scanning of material resulted in three old records from Enontekiö region: Mt. Koutavankka (Govdávaggi), Mt. Guonjarvárri and Mt. Saana. During summer 2024 Sanna Huttunen and Risto Virtanen found two additional localities from Mt. Saana.

Tomentypnum involutum was elevated to species level by Hedenäs et al. (2020) based on combined molecular phylogenetic and morphological analysis. It is closely related to *T. nitens* but prefers drier habitats, usually eutrophic low Arctic *Dryas* heaths. Morphologically *T. involutum*

is differentiated from *T. nitens* by the scarcity of rhizoids and the strongly involute margin in leaf acumen.

According to Hedenäs et al. (2020) the species is widespread in the northern hemisphere with occurrences from Scandinavia and Svalbard to Siberia and arctic regions in Alaska, Canada and Greenland. In Finland it could probably be found on the highest fjells with calcareous bedrock in Lapponia enontekiensis biogeographical province.

***Tortella robusta* (Pfeff.) Köckinger & Hedenäs
pohjankiertosammal, fjällkalkmossa**

FINLAND. Lapponia enontekiensis (EnL/Le). Enontekiö. Lake Njellalanjävi, SW-side of the lake, NE-rigde of fjeld Lafolvärri. Eutrophic heathlike snowbed. On mineral soil. Coll. Inka Kuusisto & Saana Mattanen 3.VIII.2021, det. Johannes Merz 2025 (TUR <http://mus.utu.fi/TBR.127826>). Voucher specimen for DNA extraction SH2147.

New species for Finland. The species was described as new to science by Köckinger & Hedenäs (2023). They split the former *Tortella tortuosa* complex into eight species in Europe. In the publication, only one of these presented species, *Tortella robusta*, is reported to occur in Finland. This Arctic-montane species is specialised in eutrophic late snow areas, but also occurs on shaded and humid, N-facing rocks and moist calcareous gravel and sand (Köckinger & Hedenäs 2023).

According to Köckinger & Hedenäs (2023), the species is variable in size, usually medium-sized to large, pale greyish-green or yellowish in colour and forms cushions. Morphologically, it resembles *Tortella dolomitica* and *T. tortuosa* s.str. In the field it can be distinguished by the pale colour and the incurved leaves when dry. Microscopic characters include a clear central strand in older stem parts and dense papillae in leaf lamina and dorsal costa surface.

Köckinger & Hedenäs (2023) report *Tortella robusta* from Regio kuusamoënsis biogeographical province, northeastern part of the country. There it has been collected once, by H. Köckinger from Oulanka National Park, near Rytisuo mire in 1990.

Recently, Johannes Merz has been re-identifying *Tortella tortuosa* sensu lato specimens in TUR collections. All of the specimens of *T. ro-*

busta re-identified so far have been collected from Lapponia enontekiensis. One of the morphologically confirmed and sequenced specimens was chosen as the voucher specimen. His work will be published separately in more detail later (Merz et al. in prep.). In the upcoming article he will clarify the distribution and abundance of the species of the *T. tortuosa* complex in Finland.

***Ulot crispula* Bruch**

kierotakkusammal, kortskafad ulota

FINLAND. Regio aboënsis (Ab/V). Turku. Majakkaran-ta. A small forest near the bridge to Hirvensalo. On the trunk of a broadleaved tree. Coll. & det. Annika Metso, 2.II.2025, conf. Francisco Lara 2025 (TUR <http://mus.utu.fi/TBR.130848>).

A new species for Finland. The *Ulota crispula* complex has been under debate for centuries whether it contains one or several species. The recent morphological and molecular evidence clearly shows three separate taxa worth of species rank: *Ulota crispula* sensu stricto, *U. crispula* and *U. intermedia* (Caparrós et al. 2016). In Finland *Ulota crispula* has been treated as one of taxa in the group *Ulota crispula* sensu lato. Brotherus (1923) recognised the three taxa of *Ulota crispula* complex at species level and reported them all from Finland. In contrast, Nyholm (1968) treated *Ulota crispula* s.l. as one species with three varieties but mentions that var. *crispula* could be a minor genetic variation or a modification growing in dry habitats. Also, Piippo (1981) distinguishes the three taxa only at varietal level based on the checklist published by Smith and Hill in 1975.

Most of *Ulota crispula* complex specimens from Finnish herbaria were revised during 2025, and based on these identifications no specimens of *Ulota crispula*, as defined by Caparrós et al. (2016), were found. Only 20 herbarium specimens from H still lack examination. New locality found in Turku during early 2025 on a trunk of a deciduous tree is thus currently the only observation of the *Ulota crispula* in Finland. In the recent description the most important characters of *U. crispula* reside in the sporophyte (Caparrós et al. 2016): *U. crispula* has irregular endostome teeth in dry condition, and the endostome segments have thin transverse walls. Moreover, the longitudinal exothecial bands on the sporophyte wall are separated from the peristome by at least

three rings of small rounded cells. These characters concur in the specimen collected in Turku. The location in the hemiboreal zone corresponds to the first locations on the Finnish mainland for species that expand their northernmost confines as a response to global warming.

Worldwide *Ulota crispula* has an ampho-Atlantic range in the Northern Hemisphere, and all species in the *Ulota crisper* complex occur in Europe (Caparrós et al. 2016).

New findings of noteworthy species

Acaulon muticum (Hedw.) Müll.Hal.

pampulasammal, pygmémossa

FINLAND. Regio aboënsis (V/Ab). Parainen. Lenholmen, east bird watching tower. On exposed loam at hiking trail, scattered. Coll. & det. Johannes Merz, 15.III.2025 (TUR <http://mus.utu.fi/TBR.131387>).

A new finding of a noteworthy species. *Acaulon muticum* (Hedw.) Müll.Hal. was previously considered as RE in Finland. Historical observations include three separate occurrences in the country. In Alandia, J. O. Bomansson collected the species from Saltvik commune in 1865 and 1879. In Regio aboënsis, it has been collected from Kiviniemi, Lohja (S. O. Lindberg, 1889) and from Ruissalo, Turku (A. V. Auer, 1933). Recently, there is also one observation documented in Finnish national database of threatened species LajiGIS from Lövkulla, Raasepori (Kimmo Syrjänen et al. 2016). However, this observation has not been accepted as an official record because no specimen has been deposited to public herbaria.

In Finland, *Acaulon muticum* has recently been discovered from two separate locations in Parainen, Regio aboënsis in early spring 2025 (Johannes Merz; also Annika Metso (<http://mus.utu.fi/TBR.131327>)). It seems that the species might have occurred in the country since the 1930's even though no observations have been made during that time. It is probable that the species occurs sporadically in suitable habitats in Alandia and Regio aboënsis biogeographical provinces. To gather more information of possible new occurrences requires identification of suitable open clayey areas with somewhat calcareous soil and moderate level of disturbance along with some luck with weather conditions. Early spring and

late autumn might be the most promising times for sporophyte production.

In Sweden and Norway *Acaulon muticum* occurs sporadically in southern parts of both countries. In Sweden and Denmark, it is considered LC, but in Norway EN (Hodgetts & Lockhart 2020). In Central and Southern Europe, the species is widespread but decreasing in population size. Therefore, it is considered as NT in Europe (Baudraz et al. 2019). The decline in population size in Europe is considered to be linked with agricultural intensification and other shifts in agriculture practices.

Acaulon muticum is a short-lived pioneer species, which prefers open loamy calcareous soils in ditches, field margins and paths. It produces sporophytes from early spring until late autumn, but it requires sunny, periodically wet habitats. The shoots are short-lived and can disappear from sight during dry conditions (Hallingbäck et al. 2008). The species is quite easily recognised by its small size (2 mm) and bud-like shoots where leaves cover the sporophytes. The spores are released only when the sporophyte breaks down (Hallingbäck et al. 2008).

Fossombronia incurva Lindb.

pikkuresusammal, sandbronia

FINLAND. Regio kuusamoënsis (Ks). Salla. Aatsinginhauta. Koutoiva. Forest road at western base of the hill below rich fen slope. On fine grained mineral soil at midline and verge of the road. Along a couple of ten meters, rather abundantly. Coll. & det. Kimmo Syrjänen 9.VIII.2024 (TUR <http://mus.utu.fi/TBR.132033>).

A new finding of a noteworthy species. *Fossombronia incurva* is a very rare species in Finland and it was assumed to be RE. There is only one old observation by Sextus Otto Lindberg in Nylandia biogeographical province, Pasila (Böle) in 1873. Nowadays this site is under the railroad area at the urban center of Helsinki capital. The species was found in August 2024 from NW Finland during Bioblitz in Salla National Park from moist fine sediment mineral soil at the side of a forest road (Pihlaja et al. 2024). In 2025 there was another observation from Suonenjoki commune in Savonia borealis, at a similar type of habitat.

In Salla *F. incurva* was growing together with *F. wondraczekii*. All *Fossombronia* spp. have bright purple rhizoids. *F. wondraczekii* is larg-

er (about 1 cm long) and monoicous with nearly plain or crispate horizontal or erect leaves. *F. incurva* is smaller (0,5 cm), dioicous and has dense rosettes with imbricate nearly transversely inserted leaves resembling miniature cultivated lettuce plants. Leaf margin of male *F. incurva* may have some one or two cells high teeth at margin. In *F. incurva* males' antheridia are clustered while in *F. wondraczekii* they are scattered along shoots. Sporophytes are common in both species in autumn. In *F. wondraczekii* spores (30–55 µm) have long parallel ridges that form high sharp spines at the margin of spore. In *F. incurva* spores are smaller (22–35 µm), lower ridges form a network and margin is less spiny – mainly crenulate. Spores separate in tetrads while spores of *F. wondraczekii* separate individually. *F. wondraczekii* is aromatic and *F. incurva* almost scentless.

Observations of *F. incurva* are very scattered in Europe, but the species is considered LC (Hodgetts & Lockhart 2020). It is widespread in the British Isles. In Swedish Red Data Book *F. incurva* is listed as VU and has been found along shores of lakes (e.g. Vänern) and along the Baltic shoreline in the Gulf of Bothnia. It is not known from Norway.

***Gyroweisia tenuis* (Hedw.) Schimp.**

nallikkasammal, knattemossa

FINLAND. Regio kuusamoënsis (Ks). Salla. Kurtinniitykuru. On a dolomite cliff, exposition E. One patch of 2 dm². Coll. & det. Mika Jokikokko, 6.X.2024, conf. Risto Virtanen 2024 (OULU <http://id.herb.oulu.fi/GAL.28331>).

A new finding of a noteworthy species. *Gyroweisia tenuis* was previously known in Finland only from Kuusisto castle ruins (Kaarina, Regio aboënsis biogeographical province), where it grows scattered on lime mortar between stones. The species was first collected in 1992 and most recently in 2025. In 2024, a second Finnish locality was discovered on a calcareous cliff in Kurtinniitynkuru, a gulch adjacent to Oulanka National Park in Salla, Regio kuusamoënsis biogeographical province, approximately 750 km from Kuusisto.

Gyroweisia tenuis is rare in the Nordic region. In Finland, it is classified as CR (Hyvärinen et al. 2019). In Sweden and Norway, the species has several dozen occurrences, reaching northern parts of both countries; it is assessed as NT

in Sweden (SLU Artdatabanken 2020) and VU in Norway (Høitomt et al. 2021b). It is listed as NT or threatened in eight other European countries (Hodgetts & Lockhart 2020), but as LC for Europe overall (Sabovljevic et al. 2019). The species is widespread in central and western Europe, reaching Macaronesia and northern Africa in the south and the Ural and Caucasus in the east (Blockeel et al. 2014). While most frequent in Europe, it has an almost cosmopolitan distribution, occurring – though apparently rarely – in North America (e.g., Steere 1939), Greenland (Mogensen & Zander 1999), South Africa (Hedderston 2021), southwestern Asia, and southern Siberia (Blockeel et al. 2014).

The species is minute, with shoots ca. 2 mm high. Identification is facilitated by its size, lingulate leaves with rounded apices, and brown, club-shaped rhizoidal gemmae (Hallingbäck et al. 2008). In the absence of gemmae, it may resemble small *Gymnostomum* spp. or even *Diphyscium foliosum*. The other European congener, *Gyroweisia reflexa*, differs by having reflexed leaves and peristome teeth (Atherton et al. 2010).

Gyroweisia tenuis tolerates shade and occurs in habitats with a moist microclimate, typically growing on soft, calcareous substrates such as limestone and sandstone flushed by calcium-rich water (Atherton et al. 2010, Blockeel et al. 2014, Hallingbäck et al. 2008). The species is most frequent in anthropogenic sites, including old quarries and lime mortar on, for example, church walls, but also inhabits natural boulders and cliffs (Blockeel et al. 2014, Hallingbäck et al. 2008). In Finland, the Kuusisto castle locality represents an anthropogenic habitat, whereas the new Kurtinniitynkuru record is from a natural site.

***Lescuraea patens* Lindb.**

raspikoukerosammal, raspbågmossa

FINLAND. Regio aboënsis (V/Ab). Lohja. Tytyri, limestone quarry. On the western edge of the old opencast quarry. Along a path that circles the quarry, on mineral soil. Probably scarce. The species was detected only when microscoping a mixed specimen. Coll. & det. Timo Kypärä 3862, 11.IX.2021, conf. Kimmo Syrjänen 2024 (TUR <http://mus.utu.fi/TBR.127327>).

A new finding of a noteworthy species. *Lescuraea patens* has been considered as RE in Finland. There has been only one previous occurrence of

the species by J. O. Bomansson who collected it from Saltvik commune, Alandia in 1892 (Ulvinen 2009). In 2021 the species was found from Lohja, southern Finland. In Lohja it was growing near a limestone quarry on open mineral soil.

According to Hedenäs et al. (2014), *Lescuraea patens* is a medium-sized pleurocarpous moss that grows as loose mats. It has weakly plicate leaves that are appressed to the stem as dry but squarrose when wet. The leaves have a stout costa and relatively short cells. The species is easy to recognise from other species of the same genus by a centrally placed mamilla in each leaf cell. The species is dioicous and rarely has sporophytes.

Lescuraea patens is widespread in the northern hemisphere and considered boreal-montane in Europe. It typically grows on calcareous and base-rich rocks and cliffs in shady and semi-open environments (Hedenäs et al. 2014). In Norway the species is considered as LC, but in Sweden it has a limited number of recent findings and therefore has the status of NT (Hodgetts & Lockhart 2020).

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