

New and noteworthy records of lichenized, lichenicolous and allied fungi from Estonia

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Herewith, we continue to upgrade the Estonian checklist of lichenized, lichenicolous and allied fungi, and report 14 fungal species new for Estonia, nine of them lichenized (*Absconditella pauxilla*, *Aquacidia trachona*, *Arthonia helvola*, *A. reniformis*, *Lecidea fuliginosa*, *Lempholemma chalazanum*, *Lepraria membranacea*, *Phaeophyscia hirsuta* and *Trapelia elacista*), and four lichenicolous (*Bryostigma phaeophysciae*, *Endococcus verrucosus*, *Everniicola flexispora* and *Tetramelas pulverulentus*), while *Melaspilea bagliettoana* is doubtfully lichenized. In addition, four species (*Fuscidea cyathoides*, *Ophioparma ventosa*, *Rhizocarpon oederi* and *Sphaerophorus globosus*) have been rediscovered, and the presence of one species, *Physcia dimidiata*, previously known from the literature (Mereschkowski, 1913) has been confirmed based on herbarium material. *Physcia magnussonii* is excluded from the checklist of Estonian lichens.

The cited specimens are deposited in the herbarium of Tallinn Botanic Garden (TALL) and in the fungarium of the Natural History Museum, University of Tartu (TUF). Extracted DNA samples are deposited in the DNA and Environmental Sample Collection (TUE).

The specimens were identified using standard microscopy techniques and spot tests commonly employed for the identification of lichens (Randlane & Saag, 2004; Smith et al., 2009). Lichen substances in the specimen of *Lepraria membranacea* were detected using thin

layer chromatography method (TLC, solvent A; Orange et al., 2001). In addition, we amplified the internal transcribed spacer (ITS) or mitochondrial small subunit (mtSSU) DNA region to confirm the determinations of some species. The workflow from DNA extraction to sequencing is described in previous papers (e.g. Jüriado et al., 2022). To identify or to confirm species' identification, all new sequences were blasted against sequences in GenBank (<https://www.ncbi.nlm.nih.gov>). The new sequences were then deposited either in UNITE (<https://unite.ut.ee>; Abarenkov et al., 2023) or GenBank database and made publicly accessible. In the text, new sequences are marked as UNITE: UDB-code or NCBI: GenBank accession code.

The abbreviations of the country regions follow Randlane & Saag (1999): NE – northeastern part, NW – northwestern part, SE – southeastern part, SW – southwestern part, WIs – Western islands. Frequency classes also follow Randlane & Saag (1999): rr – very rare (1–2 localities), r – rare (3–5 localities). The following abbreviations are used for persons: AS – Ave Suija, EO – Ede Oja, IJ – Inga Jüriado, LM – Ljudmilla Martin, LM-O – Liis Marmor-Ohtla, SL – Siiri Liiv, TR – Tiina Randlane. Lichenicolous fungi are marked with # and non- or doubtfully lichenized species are marked with +.

NEW SPECIES FOR ESTONIA

ABSCONDITELLA PAUXILLA Vězda & Vivant – NE: Lääne-Viru Co., Väike-Maarja comm., Triigi (59.1333°N, 26.3833°E), on the bark of a dead branch of *Pinus sylvestris*, leg. LM 5 Oct. 1993, det LM 4 Nov. 1999 (TUF093045). Freq.: rr.

The thallus of this species is inconspicuous, olivaceous to dark green, gelatinous. Apothecia are scattered, semi-immersed in the thallus, with a slightly concave, yellowish white disc and a smooth, pale, waxy yellow proper margin. Ascospores are 3(–5)-septate, fusiform-acicular, the apices acuminate, 25–28 × 1.5–2 µm (van den Boom et al., 2015; Cannon et al., 2024a; Nimis, 2025). Other species of *Absconditella* recorded in Estonia possess either 1-septate spores or, in the case of 3-septate spores, have a greater spore width (≥ 4 µm).

The species prefers coniferous wood; more rarely it grows on siliceous rocks in forests (Cannon et al., 2024a; Nimis, 2025). The Estonian specimen was found on the bark of a dead branch of *Pinus sylvestris* in a 60-years-old *Vaccinium*-type pine stand. According to GBIF, the species has been recorded in Europe, mainly in the United Kingdom, Sweden and Poland (GBIF, 2025a). This small and inconspicuous species is rare, but probably also very much overlooked (Nimis, 2025).

AQUACIDIA TRACHONA (Ach.) Aptroot [syn. *Bacidia trachona* (Ach.) Lettau] – WIs: Saare Co., Saaremaa comm., Panga village, Emassoo (58.56853°N, 22.33578°E), on granite stone in the forest, leg. R. Melsas 31 Dec. 2024, det. AS 1 July 2025 (TUF095516); Vöhma village, Lammaslaht (58.537798°N, 22.317635°E), on granite stone in the forest, leg. R. Melsas 5 Feb. 2025, det. AS 28 June 2025 (TUF095489; UNITE: UDB07677590). Freq.: rr.

Aquacidia trachona is a crustose species that prefers to grow on siliceous rocks in shady habitats and is known in the Northern Hemisphere (Llop & Ekman, 2007), including Fennoscandia (Westberg et al., 2021). The Estonian specimen has abundant sessile pycnidia containing bacilliform conidia. Best matches according to blastn search are the sequences with GenBank accession numbers OQ717688 and AY756456 (both *Aquacidia trachona*) with 99.5% of similarity.

ARTHONIA HELVOLA Nyl. – NW: Harju Co., Tallinn, Astangu-Mäeküla (59.394°N, 24.626°E; 59.395°N, 24.620°E; 59.395°N, 24.622°E; 59.395°N, 24.623°E; 59.395°N, 24.624°E; 59.396°N, 24.621°E; 59.405°N, 24.623°E; 59.405°N, 24.624°E; 59.406°N, 24.621°E), on *Alnus glutinosa*, *Betula* sp., *Populus tremula* and *Pinus sylvestris*, leg. EO 11 Apr. – 1 May 2024, det. EO 16 Aug. – 19 Sept. 2024 (TALL L014469, TALL L014470, TALL L014471, TALL L014472, TALL L014473, TALL L014474, TALL L014475, TALL L014476, TUF069739, TUF069800, TUF069801, TUF069802, TUF069803, TUF069852); Astangu-Mäeküla (59.40519°N, 24.61785°E), on *Betula* sp., leg. EO 30 Apr. 2024, det. EO, LM-O, AS 17 Oct. 2024 (TUF069760; NCBI: PV878416); Tallinn, by Lake Ülemiste (59.37989°N, 24.75572°E; 59.38028°N, 24.75934°E; 59.38067°N, 24.75224°E; 59.38164°N, 24.75631°E; 59.38207°N, 24.75508°E), on *A. glutinosa* and *Betula* sp., leg. EO 2–17 Apr. 2025, det. EO 9–23 Apr. 2025 (TALL L016090a, TALL L016091, TALL L016092, TALL L016098, TUF073352); by Lake Ülemiste (59.37716°N, 24.78100°E; 59.383°N, 24.752°E), on *A. glutinosa*, leg. LM-O 16 Apr. – 15 May 2025, det. LM-O 2–20 June 2025 (TALL L016893, TALL L017209, TALL L017210); Viimsi comm., Muuga (59.48611°N, 24.94552°E; 59.48688°N, 24.94153°E), on *A. glutinosa*, leg. LM-O 31 Mar. 2025, det. LM-O 11 Apr. 2025 (TALL L016803, TALL L016804). Freq.: r.

The species was found in deciduous and mixed stands, mainly in humid old forests, including old *Alnus* swamp woods. Eighteen specimens have been collected on *A. glutinosa*, five on *Betula* sp., one on *Populus tremula* and one on *Pinus sylvestris*. In addition to the collected specimens there are nine observations of *A. helvola* on *A. glutinosa* and ten observations on *Betula* sp. made by EO 11 April – 1 May 2024 in Astangu-Mäeküla, and made by EO and LM-O 2 April – 16 May 2025 by Lake Ülemiste, registered in PlutoF workbench. Our findings suggest that the species can be relatively abundant in well-suited habitats, and it is possible that there may be some more undiscovered localities in Estonia. *A. helvola* is somewhat similar to *A. spadicea* and *A. vinosa* with its orange apothecia and *Trentepohlia* as photobiont. It can be clearly distinguished from these two

species by the 2-septate spores. The spores of Estonian specimens are $8\text{--}12 \times 3\text{--}5 \mu\text{m}$ and fit the descriptions by Foucard (2001) and Wirth et al. (2013). The apothecia are flat, with orange internal structures reacting with K⁺ purple. The closest match of the mitochondrial small subunit rDNA (mtSSU) sequence based on a blastn search was *Arthonia incarnata* with 89 to 90% of identity (GenBank accession codes OQ646091, KY983974, etc.). According to GBIF, the species has been recorded in Europe and North America (GBIF, 2025b). It is present, though infrequent, in Latvia, Finland and Sweden (Westberg et al., 2021; GBIF, 2025b).

ARTHONIA RENIFORMIS (Pers.) Röhl. – NW: Harju Co., Tallinn, Astangu-Mäeküla (59.39933°N, 24.61788°E), on an old *Corylus avellana*, leg. LM-O 7 May 2024, det. LM-O 3 June 2024 (TALL L013852.a; NCBI: PV891343). Freq.: rr.

The species has a thin, whitish to greyish crustose thallus with *Trentepohlia* as photobiont. The flat, black, round to irregular apothecia are crowded and partly confluent. The epithecium is brown and the hypothecium is colourless. The spores of Estonian specimen are hyaline, (3–)4–5-septate, ca $14.5\text{--}19.5 \times 5\text{--}5.5 \mu\text{m}$ (n=10), with smooth walls and rounded apices, wider at one end compared to the other, but without a markedly enlarged apical cell, fitting the descriptions by Nimis (2025) and Wirth et al. (2013), with the exception of smaller septation in some of the spores. According to Nimis (2025), the spores of *A. reniformis* are 5–6-septate, (12–)13–18(–20) \times 4–6(–7) μm , with smooth walls, narrowly ellipsoid, pointed at one end, and according to Wirth et al. (2013) 5–6-septate, 13–20 \times 4–6 μm , without a markedly enlarged apical cell. The closest match of mtSSU was *Arthothelium ruanum* (OQ646094, MG495137, etc.) with c. 93% of identity.

Arthonia reniformis is a rather rare species in Europe occurring mainly in the Alps and it was previously not known from the Baltic region (GBIF, 2025c). The species grows on smooth bark in humid deciduous woodlands (Nimis, 2025), sharing similar habitats with another rare species *Swinscowia glabra* (Wirth et al., 2013). In Estonia, the species was found in a broad-leaved slope forest by limestone outcrop growing together with *S. glabra* and *Graphis scripta*.

BRYOSTIGMA PHAEOPHYSCIAE (Grube & Matzer) S.Y. Kondr. & Hur – SE: Tartu Co., Tartu, Ülejõe park (58.3825°N, 26.7270°E), on *Phaeophyscia orbicularis*, leg. Miia Puidet 22 Nov. 2024, det. AS 5 Mar. 2025 (TUF095428). Freq.: rr.

The fungus is identifiable by almost roundish to ellipsoid, flat and brown ascomata formed on the thallus of *Phaeophyscia* species (Grube & Matzer, 1997). The ascospores of our specimen, however, are slightly bigger than those in the original description, measuring $12\text{--}17 \times 4.5\text{--}6 \mu\text{m}$ (n=10). The species has a scattered distribution in Europe, North America and Japan (Frisch et al., 2020; GBIF, 2025d), even though the host is common.

ENDOCOCCLUS VERRUCOSUS Hafellner – SW: Pärnu Co., Häädemeeste comm., Nepste (58.10658°N, 24.6359°E), on *Aspicilia caesiocinerea* on granite stone at the forest path, leg. IJ & EO 22 July 2023, det. AS 18 June 2024 (TUF069431.a; UNITE: UDB07675749). Freq.: rr.

The specimen has 2-celled ascospores measuring $10\text{--}14 \times 4\text{--}6 \mu\text{m}$ (n=10), hymenial gel I+ blue. According to a blastn search, the closest match was *Endococcus fusigera* (FJ645262; 85.26% of identity). The genus *Endococcus* is considered to be host-specific and the species found on *Aspicilia* is treated as *E. verrucosus* (e.g. Diederich et al., 2018). There is, however, a need to clarify the phylogeny of this genus and the degree of host species specificity.

EVERNICOLA FLEXISPORA D. Hawksw. – WIs: Hiiu Co., Hiiumaa comm., Sarve Landscape Conservation Area (58.83445°N, 23.02379°E), on fallen *Evernia prunastri*, leg. AS 26 Sept. 2024, det. AS 2 Oct. 2024 (TUF095302). Freq.: rr.

This anamorphic fungus has hyaline aseptate strongly curved conidia of characteristic shape (Hawksworth, 1982). The type host is *Evernia prunastri*, although it has also been recorded on *Nephroma arcticum*, *Usnea subfloridana*, and some other species (Kocourková & van den Boom, 2005). The species is reported from the Northern Hemisphere (GBIF, 2025e).

LECIDEA FULIGINOSA Taylor – WIs: Saare Co., Saaremaa comm., Rahtla (58.44694°N, 22.16014°E), on granite, leg. R. Melsas 10 July 2024, det. AS 1 Aug 2024, and leg. EO & M. Oja 1 July 2024, det. EO 9 July 2024 (TUF095339, TUF069724;

UNITE: UDB07676377, UDB07676261); Rahtla (58.44730°N, 22.15471°E), on granite, leg. R. Melsas 10 July 2024, det. AS 5 Dec. 2024 (TUF095338; UNITE: UDB07676378). Freq.: rr.

Lecidea fuliginosa is a crustose lichen with brown convex to subglobose thallus areoles forming small pillows which are rather loosely attached to the rock; apothecia are black with a soon convex disc and excluded proper margin; the spores are colourless, simple, (6.5–)7–10(–12) × 4–6 µm (Smith et al., 2009; Nimis, 2025). The spores of Estonian specimens are 7–10 × (3–)4–5(–6) µm, fitting the description.

The species has been recorded in different parts of Europe, including Finland and Sweden, and in some localities outside of Europe (Westberg et al., 2021; GBIF, 2025f). It grows on siliceous rocks in open habitats (Nimis, 2025). The Estonian specimens were collected on granite boulders in wet meadows.

LEMPHOLEMMA CHALAZANUM (Ach.) B. de Lesd. – NW: Harju Co., Tallinn, Astangu-Mäeküla (59.39988°N, 24.61379°E), on bryophytes growing on a limestone cliff, leg. EO 1 May 2024, det. EO 26 July 2024 (TUF069787.a); Astangu-Mäeküla (59.39967°N, 24.61481°E), on an old limestone wall beside the cliff, leg. LM-O 7 May 2024, det. LM-O 29 May 2024 (TALL L013828), and on bryophytes on a limestone cliff, leg. EO 13 May 2024, det. EO 21 May 2024 (TUF069721; NCBI: PV891342). Freq.: rr.

This small cyanolichen, with *Nostoc* as photobiont, has a blackish thallus with marginal lobation and laminal apothecia with widening brown disc; the asci contain 8 simple, colourless spores, 20–33 × 9–15 µm in size (Jørgensen, 2007). The spores of Estonian specimens are (18–)20–24(–29) × 9–12.5 µm and fit the description, being larger compared to the similar species *L. polyanthes*.

Lempholemma chalazanum grows on dry calcareous ground, mainly on and among bryophytes, but also on bare calcareous soil and on crumbling mortar, e.g. on wall tops (Jørgensen, 2007; Smith et al., 2009; Stenroos et al., 2021). In Estonia it was found on the upper edge of a limestone cliff. The species has been recorded in Europe, including Finland and Sweden, also in some localities outside of Europe (Westberg et al., 2021; GBIF, 2025g). The closest match of

the mtSSU sequence was *Lempholemma chalazanum* (PQ160747) with 100% identity.

LEPRARIA MEMBRANACEA (Dicks.) Vain. – NW: Harju Co., Haljala comm., Lahemaa National Park, Merinõmme (59.58°N, 26.12°E), on granite, leg. Eva Nilson 4 Aug. 1975, det. E. Nilson 12 Oct. 1977, ver. EO 29 May 2025 (TALL L015263). Freq.: rr.

Lepraria membranacea has an irregularly rosette-forming thallus with lobed margins and contains pannaric acid, rocellic or angardianic acid and sometimes atranorin (Stenroos et al., 2021). The identification of the Estonian sample was verified based on the results of TLC. Chemically and also evolutionally it is close to *L. vouauxii* (Hue) R.C. Harris which is distinguished by leprose to cottony thallus with only obscure lobes occasionally present; furthermore, the diagnostic substance of *L. vouauxii* is not pannaric acid but pannaric acid 6-methylester (Saag et al. 2009). *Lepraria membranacea* is recorded in all continents (GBIF, 2025h). In Europe, it is known in several countries, including Finland and Sweden (Westberg et al., 2021).

+ MELASPILEA BAGLIETTOANA Zahlbr. – NE: Ida-Viru Co., Alutaguse comm., Roostoja (59.0971°N, 27.13925°E), on *Populus tremula*, leg. AS 4 May 2025, det. AS 7 May 2025 (TUF095477; UNITE: UDB07677584). Freq.: rr.

This doubtfully lichenized species has scattered localities in Europe (GBIF, 2025i), the nearest are in Norway (Jordal et al., 2022). The species has lirelliform ascomata externally very similar to those in *Opegrapha* and allied genera. The species, however, has two-celled asymmetric ascospores that are hyaline when young and brown when mature (e.g. Jordal et al., 2022). The ascospores of the examined specimen measure 13–14 × 5–7 µm.

PHAEOPHYSCIA HIRSUTA (Mereschk.) Essl. – SE: Põlva Co., Põlva (58.055°N, 27.065°E), on *Acer platanoides*, leg. SL 24 Aug. 1974, det. SL 3 Apr. 1978 (TALL L015252, TALL L015253). Freq.: rr.

Phaeophyscia hirsuta is a foliose macrolichen with an orbicular to irregular thallus, greyish, K– upper surface, primarily marginal or terminal soralia and fine hyaline hairs near the lobe ends (Svoboda, 2007; Nimis, 2025). The last feature is a key characteristic for distinguishing

it from the superficially similar common species *P. orbicularis*.

The species grows on isolated deciduous trees and also on rocks (Wirth et al., 2013; Nimis, 2025). In Estonia, it was found on two trees in a small-town cemetery. The species is known from several continents, including Europe, whereas there are no additional records from the Fennoscandian and Baltic countries; the nearest localities are in Poland (Svoboda, 2007; Westberg et al., 2021; GBIF, 2025j).

TETRAMELAS PULVERULENTUS (Anzi) A. Nordin & Tibell – NW: Lääne-Viru Co., Haljala comm., Vaindloo island (59.81722°N, 26.36028°E), on *Physcia* sp. on granite, leg. AS 30 June 2024, det. AS 11 July 2024 (TUF095295.a; UNITE: UDB07676363). Freq.: rr.

The ascospores of this parasitic lichenized fungus are brown, (2–)4-celled, 18–22 × 7–8 µm (n=5), the paraphyses are widened at the tip with a brown cap, thus fitting with the description (e.g. Nordin & Tibell, 2005). The species is globally known, recorded from Europe, North and South America, Asia and even from Antarctica (GBIF, 2025k). The closest match of the ITS sequence was *Tetramelas pulverulentus* (KX512860 and KX512940, 99.77%).

TRAPELIA ELACISTA (Ach.) Orange – WIs: Hiiu Co., Hiiumaa comm., Pihla-Kaibaldi Nature Reserve (58.97336°N, 22.66744°E), on a piece of sandstone on sandy ground, leg. AS 28 Sept. 2024, det. AS 2 Dec. 2024 (TUF095304; UNITE: UDB07676370). Freq.: rr.

Trapelia elacista is a crustose species with pale grey, C+ red thallus, looking very similar to *T. coarctata*. White-pruinose fissures between the apothecia and adjacent thallus are often seen in *T. elacista* and help to distinguish the species; however, the two species may sometimes be difficult to distinguish based on morphology (Orange, 2018). The identification of the Estonian specimen was confirmed using a comparison of the fungal ITS sequence. The closest match was sequence with GenBank accession code KX961332 (*Trapelia elacista*, 99.51%). The spores of the Estonian specimen are 16–18 × 8–11 µm, fitting the description by Orange (2018).

According to the specimens and observations recorded so far, *T. elacista* is a rare species

with scattered records from Europe, including a couple of records from Finland (GBIF, 2025l). It grows on natural rocks, often in moist habitats, and on stones and brick fragments lying on the ground, on low, ruined walls etc. (Orange, 2018).

REDISCOVERED SPECIES

FUSCIDEA CYATHOIDES (Ach.) V. Wirth & Vězda – WIs: Saare Co., Saaremaa comm., Merise (58.49832°N, 22.17887°E), on granite (erratic boulder), leg. EO & M. Nõmm 22 July 2024, det. EO 8 Aug. 2024 (TUF069731; UNITE: UDB07676356); Rahtla (58.44703°N, 22.14836°E), on granite (erratic boulder), leg. EO & M. Oja 1 July 2024, det. EO 9 Aug 2024 (TUF069732); Võhma (58.55066°N, 22.34261°E), on granite, leg. R. Melsas 25 Oct. 2024, det. AS 19 Dec. 2024 (TUF095394); Kugalepa (58.50040°N, 22.20332°E), on granite, leg. R. Melsas 10 Feb. 2025, det. AS 23 May 2025 (TUF095511); Kugalepa (58.50369°N, 22.17898°E), leg. R. Melsas 7 Feb. 2025, det. AS May 2025 (TUF095520); Panga (58.55613°N, 22.30226°E), on granite, leg. R. Melsas 13 Jan. 2025, det. AS 21 May 2025 (TUF095512). Freq.: r.

Fuscidea cyathoides is a crustose species with greyish thallus, dark prothallus, conspicuous apothecia with dark disc, and bean-shaped spores (Cannon et al., 2024b; Nimis, 2025). The species was considered to be Regionally Extinct (RE) according to the last assessment of the threat status of Estonian lichens based on the IUCN system (Randlane et al., 2024). Its presence in Estonia was known based on two herbarium specimens (TUF004740, TUF042879), both collected in the 19th century by Andreas Bruttan in the Island of Saaremaa but without exact localities. The recent records are concentrated in the northwestern part of the island Saaremaa.

OPHIOPARMA VENTOSA (L.) Norman – Saare Co., Saaremaa comm., Kugalepa (58.50050°N, 22.20578°E), on granite, observed and det. R. Melsas 2 July 2024. Freq.: r.

This distinctive species with thick, yellowish grey or pale grey thallus and red, lecanorine apothecia was previously found in Estonia in Pärnu Co., Kaseküla alvar in 1989 by Ingvar Kärnefelt and in the Island of Saaremaa, Lõo alvar in 1989 by I. Kärnefelt and Hans Trass.



Fig. 1. Habitat of *Sphaerophorus globosus* in Mohni island in a coastal pile of granite rocks.



Fig. 2. A sample of *Sphaerophorus globosus* in Mohni island (14 August 2024).

PHYSICIA DIMIDIATA (Arnold) Nyl. – NE: Lääne-Viru Co., Haljala comm., Lahemaa National Park, Altja village (59.582°N, 26.116°E), on granite (erratic boulder), leg. Enel Sander & TR 1974, det. TR & IJ 28 Oct. 2024 (TALL L014066). Freq.: rr.

The specimen was identified based on the marginal granular soredia and P+ faintly yellow cortical spot test, which both are diagnostic features in separating *P. dimidiata* from *P. caesia* and *P. dubia* (Trass & Randlane, 1994; Moberg, 2002). The specimen was earlier identified as *Physcia magnussonii* Frey. *Physcia dimidiata* was previously known from Estonia based on literature data only, reported from the beginning of the 20th century from the vicinity of Tallinn (Mereschkowski, 1913; Randlane & Saag, 1999).

As there are no other records of *P. magnussonii* in Estonia, the species, PHYSICIA MAGNUSSONII Frey, must be excluded from the checklist of Estonian lichens.

RHIZOCARPON OEDERI (Weber) Körb. – NW: Harju Co., Tallinn, Astangu-Mäeküla (59.39634°N,

24.62620°E), on granite, leg. LM-O 13 May 2024, det. LM-O 8 July 2024 (TALL L014287); WIs: Saare Co., Saaremaa comm., Merise (58.49835°N, 22.17706°E), on granite, leg. R. Melsas 2 July 2024, det. AS 29 July 2024 (TUF095297; UNITE: UDB07676375); Mullutu (58.25848°N, 22.37610°E), on granite, leg. R. Melsas 17 May 2024, det. R. Melsas & AS 29 July 2024 (TUF095388); Vöhma (58.55632°N, 22.38333°E), on granite, leg. R. Melsas 22 June 2024, det. AS 2024 (TUF095379). Freq.: r.

This crustose species with rust-coloured thallus and black apothecia has previously been found in Estonia only once, in Muhu Island in the 19th century (TUF037874) by A. Bruttan and was therefore considered to be extinct in Estonia (Randlane et al., 2024).

SPHAEROPHORUS GLOBOSUS (Huds.) Vain. – NW: Harju Co., Lahemaa National Park, Mohni Island (59.68488°N, 25.79183°E), on granite (Figs 1 and 2), leg. TR & A. Saag 14 Aug. 2024, det. TR 14 Aug. 2024; WIs: Saare Co., Saaremaa comm., Rahtla (58.45314°N, 22.14902°E), on granite (on

a big erratic boulder), observed & det. R. Melsas 20 June 2024, ver. AS, and observed and det. EO 1 July 2024. Freq.: r.

Sphaerophorus globosus, a conspicuous macrolichen with fruticose, coralloid thallus has been found previously in Estonia in Tallinn, Nõmme at the beginning of the 20th century by Paul Wasmuth and in the Island of Saaremaa, Lõo alvar in 1980s by H. Trass; subsequent repeated searches in these locations have yielded no results. Recent new findings show that this lichen has survived in the Estonian biota. In Mohni, at least five samples in good condition were observed, while in Saaremaa two small thalli were present. The species has been rediscovered recently also in Latvia (Moisejevs et al., 2024).

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