

New Estonian records and amendments: Lichenized fungi

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Ten lichenized fungi are reported as new to Estonia: *Atla wheldonii*, *Bacidia coprodes*, *Bacidina assulata*, *Bacidina brandii*, *Candelariella lutella*, *Gyalidea fritzei*, *Piccolia ochrophora*, *Protoparmelia oleagina*, *Sclerophora amabilis* and *Strangopora deplanata*. One lichenized fungus, *Lepetogium subtile*, has been reported from Estonia earlier, but all the specimens of this species in the herbarium of University of Tartu appeared to be misidentifications; currently the species has one certain locality in Estonia. The abbreviations are used as follows: (1) for the country regions: NE – northeastern part, SE – southeastern part, SW – southwestern part, WIs – western islands; (2) for frequency classes (Freq.): rr – very rare (1–2 localities), st fq – rather frequent (11–20 localities), according to Randlane & Saag (1999). Cited specimens are kept in the lichenological herbarium of the University of Tartu Natural History Museum and Botanic Garden (TU).

ATLA WHELDONII (Travis) Savić & Tibell – WIs: Saare Co., Lääne-Saare comm., Eeriksaare peninsula (58.3372°N 21.8872°E), on open alvar grassland, on soil. Leg. E. Oja 22 June 2015, det. E. Oja 2016 (TU79534). Freq.: rr. – The species has probably more localities in Estonian open alvar grasslands, but is due to its small size overlooked. It is a crustose lichen with spherical perithecia that are immersed in the basic soil (Savić & Tibell, 2008).

BACIDIA COPRODES (Körb.) Lettau – WIs: Lääne Co., Vormsi island, Huitberg (59.00°N 23.18333°E), on limestone. Leg. R. Allmäe (coll. no. 88) July 1987, det. J. Gerasimova 2015, previously determined as *Mycobilimbia sabuletorum* and later tentatively as *Bacidia trachona* (TU40307). Freq.:

rr. – This saxicolous species is a member of the *Bacidia coprodes* group. It is closely related to *Bacidia notarisiana* and *B. granosa*, but differs in the hypothecium color, which is concolorous or darker than the surrounding proper exciple (Ekman, 2014).

BACIDINA ASSULATA (Körb.) Vězda – NE: Jõgeva Co., Kursi forestry, close to Puurmani (58.58333°N 26.28333°E), on *Populus tremula*. Leg. A.-L. Sõmermaa 17 June 1966, det. J. Gerasimova 2015, previously determined as *B. phacodes* (TU3597); Lääne-Viru Co., Haljala comm., Selja jõe Landscape Reserve (59.52083°N 26.33083°E), *Aegopodium* boreo-nemoral forest site type, on snag, Leg. E. Leppik, L. Marmor, T. Tõrra 19 May 2009, det. J. Gerasimova 2015, previously determined as *B. phacodes* (TU66023). Freq.: rr. – *B. assulata* is very similar to *B. phacodes*, but differs mainly by granular thallus, at least partly dissolving into goniocysts, darker apothecia, and curved and non-septate conidia (Ekman, 1996).

BACIDINA BRANDII (Coppins & van den Boom) M. Hauck & V. Wirth – NE: Järva Co., Väätsa comm., Lõõla (58.925°N 25.40°E), on *Ulmus glabra*. Leg. M. Nõmm 7 Aug 2004, det. J. Gerasimova 2015, previously determined as *B. arnoldiana* (TU30126); SE: Tartu Co., Järvselja, Järvselja nature protection area (58.26667°N 27.30°E), on windthrow. Leg. T. Randlane 7 June 2002, det J. Gerasimova 2015 (TU20006). Freq.: rr. – *B. brandii* is characterized by having a dark brown hypothecium which resembles *B. arnoldiana*, *B. egenula* and *B. sulphurella*, but differs in its effuse, thin to areolate, never sore diose thallus and pale apothecia.

CANDELARIELLA LUTELLA (Vain.) Räsänen – SW: Viljandi Co., Nässu study plot (58.590219°N 25.247284°E), 6 Oct 2015; SE: Põlva Co., Maltsi study plot (58.179391°N 27.405358°E), 30 Sept 2015; Mooste study plot (58.118563°N 27.207182°E), 1 Oct 2015; Tartu Co., Hannu study plot (58.27712°N 26.663795°E), 18 Sept 2015; Laaska study plot (58.32633°N 26.555539°E), 15 Sept 2015; Mägri study plot (58.501008°N 26.906524°E), 17 Sept 2015; Pikste study plot (58.503908°N 26.837119°E), 17 Sept 2015; Põhja study plot (58.189381°N 26.301397°E), 23 Sept 2015; Sikka study plot (58.231747°N 27.313199°E), 30 Sept 2015; Valga Co., Kauru study plot (57.970928°N

26.494761°E), 2 Oct 2015; Orandu study plot (57.752289°N 26.255128°E), 24 Sept 2015; Reku study plot (57.874772°N 26.104393°E), 23 Sept 2015; Uniküla study plot (57.906173°N 26.104515°E), 23 Sept 2015. All specimens were collected from midterm (14- to 15-year old) plantations of *Populus × wettsteinii* (Tullus et al. 2015), on the bark of hybrid aspen (except one specimen from Laaska which grew on small branches of *Betula pendula*); the samples were collected and identified by T. Randlane (collection date added to each locality), and are kept in TU. Freq.: st fq. – *Candelariella lutella* is characterised by small apothecia (d = 0.15–0.4 mm) and by minute areoles forming very small yellow patches typically at the base of small twigs or along cracks in the bark; asci are 24- to 32-spored (Westberg 2007); the species is probably not rare in Estonia but has been overlooked due to its very small size (Fig. 1).

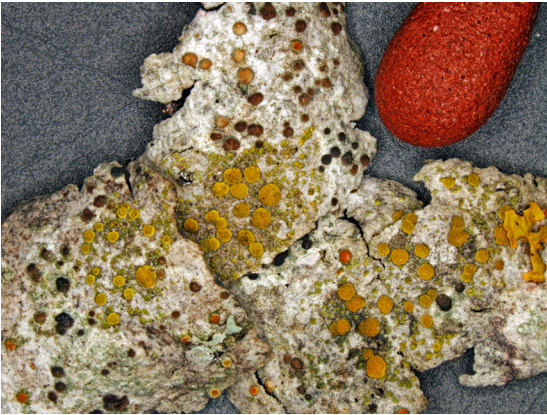


Fig. 1. *Candelariella lutella* (light yellow apothecia and areoles in the centre) on hybrid aspen in Estonia, Maltsi study plot (58.179391°N 27.405358°E); head of the matchstick (red figure on the right) was used as a size scale. Photo Andres Saag.

GYALIDEA FRITZEI (Stein) Vězda – NE: Lääne-Viru Co., Tamsalu comm., Porkuni Landscape Reserve, Porkuni limestone outcrop, on vertical wall (59.18722°E 26.18731°E). Leg. A. Suija & J. Liira 8 April 2015, det. A. Suija 2016 (TU78894). Freq.: rr. – *Gyalidea fritzei* is a species of basic, siliceous rocks and pebbles in somewhat moist situations (Gilbert et al., 2009; Thüs & Schulz, 2009). Similar species with muriform

ascospores, but growing on dry limestone rocks is *G. lecideopsis*, which differs by having smaller ascospores, (17–)22–30(–36) × 10–12(–15) μm (Gilbert et al., 2009). The measurements of ascospores of our specimen are 25–40 × 11–12 μm.

LEPTOGIUM SUBTILE (Schrad.) Torss. – SE: Põlva Co., Vastse-Kuuste comm., Kiidjärve, Pimmlaan (58.17069°N 27.00009°E), on bark of deciduous tree. Leg. A. Saag 8 Sept 2016, det. E. Oja 2016 (TU79551). Freq.: rr. – All specimens from Estonia which were previously identified as *L. subtile* have been reidentified as *Leptogium imbricatum* (TU25964, TU25965, TU25967) or as *L. pulvinatum* (TU25961, TU25962, TU25963, TU42609). *Leptogium subtile* has numerous globular, fisheye-like apothecia and the lobes are stellately arranged around them, the species grows on rotting bark or plant debris (Jørgensen, 2007; Fig. 2).

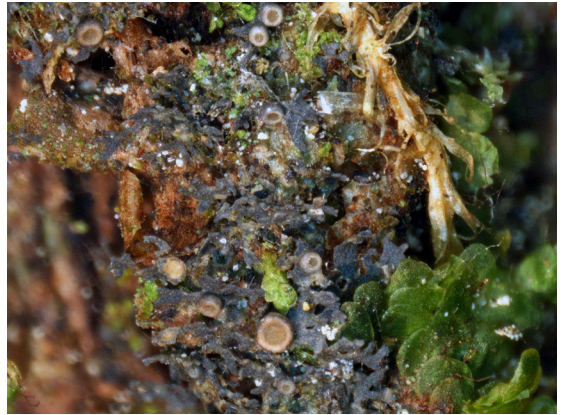


Fig. 2. *Leptogium subtile* (fisheye-like apothecia and stellately arranged lobes) on the bark of deciduous tree (TU79551). Photo Ede Oja.

PICCOLIA OCHROPHORA (Nyl.) Hafellner – SE: Tartu Co., Nõo comm., Nõgiaru (58.32729°N 26.55411°E), plantation of *Populus × wettsteinii*, on bark of hybrid aspen stumps. Leg. E. Oja Sept 2016, det. E. Oja 2016 (TU79535–TU79540). Freq.: rr. – The species has characteristic pale ochre to deep orange-red apothecia with orange pruina, and multispored asci with globose ascospores (Aptroot, 2009; Fig. 3).

PROTOPARMELIA OLEAGINA (Harm.) Coppins – Ws: Saare Co., Muhu comm., Paenase (58.64118°N 23.15386°E), on open alvar grassland, on bark of

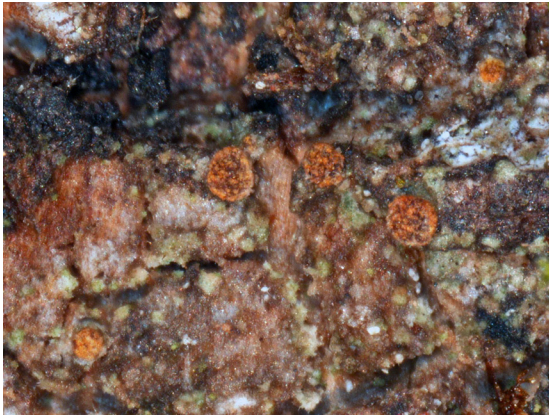


Fig. 3. *Piccolia ochrophora* (orange-red apothecia with orange pruina) on bark of hybrid aspen stump (TU79535). Photo Ede Oja.

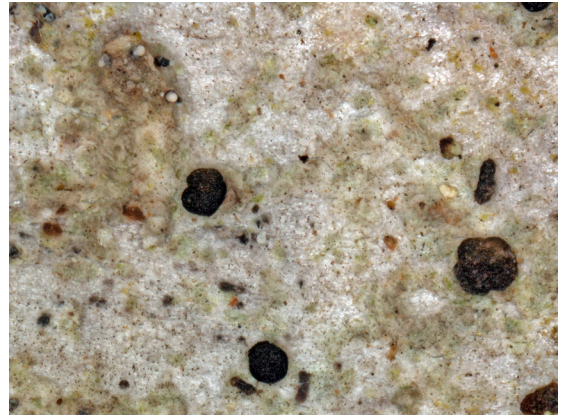


Fig. 4. *Strangospora deplanata* (dark apothecia and stalked pycnidia) on bark of hybrid aspen stump (TU79543). Photo Ede Oja.

Juniperus communis. Leg. E. Oja 11 June 2016, det. E. Oja 2016 (TU79533). Freq.: rr. – The species is epiphytic and has characteristic isidioid thallus (Coppins & Chambers, 2009).

SCLEROPHORA AMABILIS (Tibell) Tibell – SW: Pärnu Co., Saarde comm., Mustla, Sanga Nature Reserve (58.1224°N 25.0914°E), boreo-nemoral forest (120 yr old), snag of aspen, on well decayed wood. Leg. P. Lõhmus 18 August 2014, det. P. Lõhmus 2015 (TU79552). Freq.: rr. – The species is characterised by small globose spores (4–5 µm) (Tibell, 1999).

STRANGOSPORA DEPLANATA (Almq.) Clauzade & Cl. Roux – SE: Tartu Co., Nõo comm., Nõgiaru (58.32729°N 26.55411°E), plantation of *Populus × wettsteinii*, on bark of hybrid aspen stumps. Leg. E. Oja Sept 2016, det. E. Oja 2016 (TU79541–TU79546). Freq.: rr. – The species has multispored asci with globose ascospores and it differs from *S. moriformis* by having sessile to stalked pycnidia with globose conidia, and from *S. pinicola* by darker apothecia (James et al., 2009; Fig. 4).

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