Lichenicolous Biota (Nos 361–380)

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HAFELLNER Josef 2022: Lichenicolous Biota (Nos 361–380). - Fritschiana (Graz) 100: 13–29. - ISSN 1024-0306.

Abstract: The 16th fascicle (20 numbers) of the exsiccata 'Lichenicolous Biota' is published. The issue contains material of 15 non-lichenized fungal taxa (10 teleomorphs of ascomycetes, 4 anamorphic states of ascomycetes, 1 basidiomycete) and 5 lichenized ascomycetes, including paratype material of *Lichenostigma supertegentis* Ihlen & R.Sant. (no 375) and *Verrucoccum spribillei* V.Atienza et al. (no 380). Furthermore, collections of the type species of the following genera are distributed: *Dacampia* (*D*. *hookeri*), *Mixtoconidium* (*M*. *canariense*), and *Paralecanographa* (*P*. *grumulosa*).

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Introduction

The exsiccata 'Lichenicolous Biota' is continued with fascicle 16 containing 20 numbers.

The exsiccata covers all lichenicolous biota, i.e., it is open not only to non-lichenized and lichenized fungi, but also to myxomycetes, bacteria, and even animals, whenever they cause a characteristic symptom on their host (e.g., discoloration or galls). Consequently, the exsiccata contains both highly host-specific and plurivorous and even only facultatively lichen-inhabiting species, as long as the individuals clearly grow or fructifications develop upon a lichen and the collection is homogeneous, so that identical duplicates can be prepared.

The five complete sets are sent to herbaria of the following regions: Central Europe (Graz [GZU]), Northern Europe (Uppsala [UPS]), Western Europe (Bruxelles [BR]), North America (New York [NY]), Australasia (Canberra [CANB]). Incomplete sets will preferably be distributed to Barcelona [BCN], Edinburgh [E], Saint Petersburg [LE], Munich [M], and Prague [PRM] (herbarium acronyms sec. HOLMGREN et al. 1990, continued by the New York Botanical Garden as electronic database “Index Herbariorum”). Also in the future, it is planned to publish at least one fascicle per year, consisting of a variable number of decades.

The grid reference preceded by the abbreviation 'GF' refers to the grid used by the project 'Floristische Kartierung Mitteleuropas' (floristic mapping of Middle Europe, e.g., EHRENDORFER & HAMANN 1965).

For the 16th fascicle, I gratefully acknowledge the contribution of 1 collection each by Bertil FRÖDIN, Rolf SANTESSON (†), and Toby SPRIBILLE.

In fieldwork I received support by Angela HAFELLNER, Lucia MUGGIA, and Mauro TRETIACH.

Violeta ATIENZA, Paul DIEDERICH, Walter OBERMAYER, and Rolf SANTESSON (†) contributed to the scientific content of the fascicle by the identification of either lichenicolous fungi or hosts or by providing data on secondary chemistry.

Christian SCHEUER and Walter OBERMAYER are thanked for critically reading the manuscript.

I would be much obliged to colleagues who send material of lichenicolous biota for distribution in future fascicles. The collections should be divided up into at least 5 (up to 10) duplicates, preferably already prepared. Unprepared collections should be rich enough to obtain at least 5 duplicates.

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361. ***Arthonia varians*** (Davies) Nyl.

in Lichenes Scandinaviae: 260 (1861). – Bas.: *Lichen varians* Davies in Transactions of the Linnean Society, Botany 2: 284, tab. 28 (1794). – Syn.: *Celidium varians* (Davies) Arnold in Flora (Regensburg) 45: 313 (1862). – *Arthonia glaucomaria* Nyl. in Mémoires de la Société Imperiale des Sciences Naturelles de Cherbourg 4: 98 (1856), non *Lecidea glaucomaria* Nyl. (1852) quid est *Phacographa glaucomaria* (Nyl.) Hafellner.

Host: *Lecanora bicincta* (apothecia)

Europe, **Austria**: Kärnten (= Carinthia), Eastern Alps, Steirisches Randgebirge, Koralpe, Großes Kar, along the trail from the Grillitschhütte towards the uppermost cirque floor, near the base of the W slopes of the mountain Hühnerstütze, 46°48’ 05’’N / 14°58’30’’E, c. 1800 m elev., GF 9155/4, small solitary cliff surrounded by subalpine pastures, gneiss, on subvertical rock faces exposed to the W.

Note 1: The type host of *Arthonia varians* is *Lecanora rupicola* (see Hafellner, Fritschiana 76: 49, 2013).

30. X. 2022 leg. J. Hafellner (84397) & A. Hafellner, det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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362. ***Lichenodiplis pertusariicola*** (Nyl.) Diederich

in Herzogia 16: 62 (2003). – Bas.: *Spilomium pertusariicola* Nyl. in Mémoires de la Société Impériale des Sciences Naturelles de Cherbourg 5: 91, foot note (1858) [as ‘*pertusaricola*’]. – Syn.: *Coniothecium pertusariicola* (Nyl.) Keissl. in Arkiv før Botanik 18(16): 12 (1923). – *Lichenoconium pertusariicola* (Nyl.) D.Hawksw. in Transactions of the British Mycological Society 65(2): 233 (1975). – *Laeviomyces pertusariicola* (Nyl.) D.Hawksw. in Bulletin of the British Museum for Natural History 9(1): 29 (1981).

Host: *Pertusaria pertusa* agg. (thallus, fertile warts)

Africa, **Canary Islands**: El Hierro, gentle slopes c. 1.5 km N above the village Taibique, 27°42’30’’N / 17°42’30’’W, c. 880 m elev., extensively used cultured land with some dispersed fig trees on slope exposed to SE, on branches of *Ficus carica*.

Note 1: In the protologue no host is mentioned. When restudying the species, Hawksworth (Transactions of the British Mycological Society 65(2): 233–234, 1975) designated a lectotype originating from France and identified the host as *Pertusaria pertusa*.

Note 2: The congenerity of *Lichenodiplis lecanorae* (conidia 1-septate) and *Laeviomyces pertusariicola* (conidia unicellular), the type species of the two genera, has been formally established by Diederich (l.c.: 57 ff.), allowing herewith some variability in conidia-septation.

Note 3: The key provided by Chambers et al. (The lichens of Great Britain and Ireland, p. 673−687, 2009) has been used for the determination of the host, but the name is still tentative because of characters intermediate to *P. leioplaca* (apothecia per wart 1–4, most asci 4-spored).

8. II. 1995 leg. J. Hafellner (48357), det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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363. ***Mixtoconidium insidens*** (Vouaux) Etayo & P.Boom

in Boom & Etayo, Ascomycete.org 9(4): 125 (2017). – Bas.: *Celidium insidens* Vouaux in Pitard & Harmand, Bulletin de la Société Botanique de France 58, Mémoires 22: 70 (1911). – Syn.: *Mixtoconidium canariense* Etayo in Mycotaxon 53: 426 (1995) [heterotypic synonym given to the anamorphic state].

Host: *Ramalina bourgaeana* s.l. (thallus, apothecia)

Africa, **Canary Islands**: Lanzarote, a short distance W of the village Ye, 29°11’ 45’’N / 13°29’25’’W, c. 360 m elev., scattered basaltic boulders in abandoned cultivated land, on slightly inclined rock faces of boulders (30–50 cm in diam.).

Note 1: The type host of *Celidium insidens* is *Ramalina fraxinea*. As the holotype could not be located among the remnants of the Vouaux herbarium (see Rondon, Revue Bryologique et Lichénologique 36(3–4): 737–745, 1969), a neotype has been designated by Boom & Etayo (l.c.), the host of which is an undetermined corticolous *Ramalina* species. The type host of the heterotypic anamorphic state is *Ramalina canariensis.*

Note 2: The teleomorph-anamorph connection has been established by Boom & Etayo (l.c.). In the material distributed here only the anamophic state is present.

Note 3: For the determination of the host the key offered by Aptroot & Schumm (Sauteria 15: 21–57, 2008) has been used.

4. IV. 1999 leg. J. Hafellner (47558) & A. Hafellner, det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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364. ***Paralecanographa grumulosa*** (Dufour) Ertz & Tehler

in Fungal Diversity 49(1): 57 (2011). – Bas.: *Opegrapha grumulosa* Dufour in Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts 87: 214 (1818). – Syn.: *Lecanactis grumulosa* (Dufour) Fr. in Lichenographia Europaea Reformata: 375 (1831). – *Lecanographa grumulosa* (Dufour) Egea & Torrente in Bibliotheca Lichenologica 54: 134 (1994).

Host: *Roccella maderensis* (thallus)

Africa, **Madeira**: Ponta de São Lourenço, 5 km E of the village Caniçal, N above of Ponta do Buraco, 32°44’30’’N / 16°41’55’’W, c. 50 m elev., volcanic outcrops and small cliffs, in overhangs exposed to the SE.

Note 1: Lichenicolous growth is not mentioned in the protologue.

Note 2: In the distributed material the infections are restricted to the thallus tips of the host lichen and appears to be severely pathogenic causing a final split-off of the tips.

Note 3: For the determination of the host the key offered by Tehler et al. (Symbolae Botanicae Upsalienses 34(1): 405–428, 2004) has been used. At this locality *Roccella maderensis* (sorediate, TLC by W. Obermayer: erythrin, lecanoric acid) grew intermingled with a fertile *Roccella* which has been found equally infected (Hafellner 84404 in GZU). The distributed duplicates may therefore include some branches of the second *Roccella* species too.

13. II. 1990 leg. J. Hafellner (84401) & A. Hafellner, det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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365. ***Phacopsis usneae*** C.W.Dodge

in British, Australian and New Zealand Antarctic Research Expedition 1929–1931, Scientific Reports, Series B (Zool. Bot.), 7: 264 (1948).

Host: *Usnea antarctica* (thallus)

Antarctica, **South Shetland Islands**: Robert Island, 62°24'S / 59°30'W, elev. not indicated but probably near the sea, on volcanic rock.

Note 1: The host indicated in the protologue is *Usnea trachycarpa* originating from the Kerguelen Islands. As the holotype could not be located in FH, a neotype has been designated, the host of which is *Usnea antarctica* (Hawksworth & Iturriaga, Antarctic Science 18(3): 298, 2006).

Note 2: The only geographic information given on the original label is the island's name (as "Roberts Island"). No coordinates are indicated. The given approximate lat. / long. values have been fixed by the use of Google Earth and are those of the center of the island (they point to a location on the inland ice sheet!). Material of the host lichen collected by B. Frödin on Robert Island has been distributed as Lichenes Selecti Exsiccati Upsalienses no. 22. However, the coordinates given there are definitely wrong as they point to a location in the sea well N of the island.

Note 3: Substrate information is that of rock fragments adhering to the base of some *Usnea* thalli (compare also Smellie et al., British Antarctic Survey Scientific Reports 87: 1–85, 1984).

I.–II. 1953 leg. B. Frödin (s.n.), det. R. Santesson

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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366. ***Rhizocarpon effiguratum*** (Anzi) Th.Fr.

in Lichenographia Scandinavica 2: 613 (1874). – Bas.: *Buellia effigurata* Anzi in Catalogus lichenum quos in Provincia Sondriensi et circa Novum-Comum collegit: 90 (1860). – Syn.: *Catocarpus effiguratus* (Anzi) Arnold in Flora (Regensburg) 54: 148 (1871).

Host: *Pleopsidium oxytonum* (thallus, apothecia)

Europe, **Italy**: Lombardia, prov. Brescia, Eastern Alps, Central Alps, Southern Rhaetian Alps, Adamello group, Passo Gallinera c. 7 km S above of the village Vezza d'Oglio, NW above the pass in the lowermost part of the ridge to Monte Aviolo, 46°10'55''N / 10°24'45''E, c. 2340 m elev., cliffs of siliceous schist on the crest, on vertical to slightly overhanging rock faces.

Note 1: The species has originally not been indicated to be lichenicolous. As shown by the distributed material, *R. effiguratum* is a (?facultative) juvenile parasite and thalli may become independent when getting older.

Note 2: Lichenicolous growth of *Rhizocarpon effiguratum* on *Pleopsidium oxytonum* has previously been reported, e.g., by Hertel, Herzogia 2: 60 (1970, sub *R. superficiale*) and by Poelt, Mitteilungen der Botanischen Staatssammlung München 29: 526 (1990).

25. VII. 2006 leg. J. Hafellner (87011), det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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367. ***Sagediopsis fissurisedens*** Hafellner

in Herzogia 9(3–4): 757 (1993).

Host: *Aspilidea myrinii* (thallus)

Europe, **Austria**: Salzburg, Lungau, Eastern Alps, Niedere Tauern, Schladminger Tauern, Preber NE of the town Tamsweg, Preberkessel, at the orographically right (W) side of the cirque bottom, 47°12’44’’N / 13°51’06’’E, c. 2070 m elev., GF 8749/3, relict rock glacier overgrown with some juvenile *Larix decidua* and patches of *Pinus mugo*, large boulders at the base of the front slope, paragneiss, on inclined rock faces.

Note 1: *Aspilidea myrinii* is the type host of *Sagediopsis fissurisedens*.

1. IX. 2019 leg. J. Hafellner (86271), det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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368. ***Sclerococcum griseisporodochium*** Etayo

in Nova Hedwigia 61(1–2): 193 (1995).

Host: *Opegrapha dolomitica* (thallus)

Europe, **Italy**: Friuli-Venezia Giulia, prov. Udine, Southern Alps, Julian Alps, Laghi di Fusine E of the town Tarvisio, surroundings of the upper lake, 46°28’45’’N / 13°40’20’’E, c. 930 m elev., montane *Picea-Fagus*-forest over mesozoic limestone, on ± vertical rock faces of large boulders in the shade.

Note 1: In the protologue the host of the type has been tentatively determined as *Opegrapha paraxanthodes*.

Note 2: As phenotypic characters of conidiophores and conidia indicate, the species is apparently not congeneric with the type species, *Sclerococcum sphaerale*. Compare, e.g., Lichenicolous Biota nos 43, 87, 189!

27. VII. 2003 leg. J. Hafellner (86875) & M. Tretiach, det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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369. ***Stigmidium heterodermiae*** Etayo

in Bibliotheca Lichenologica 84: 124 (2002).

Host: *Heterodermia borphyllidiata* (thallus)

Africa, **Canary Islands**: Tenerife, Macizo de Anaga, N above the road from Las Mercedes to El Bailadero, c. 4 km E of Las Casas de la Cumbre, 28°32' 50''N / 16°12'45''W, c. 700 m elev., cliff of volcanic conglomerate in *Laurus*-forest belt (fayal-brezal formation), on steep rock faces exposed to the N.

Note 1: The type host of *Stigmidium heterodermiae* is *Heterodermia boryi*, in the past often treated as an infraspecific taxon of *Heterodermia leucomelos*.

Note 2: The ascospores of the *Stigmidium* have been found to be broader than given (with lower length-width ratio) by Etayo (l.c.) but otherwise the material fits perfectly the protologue.

Note 3: For the *Heterodermia leucomelos* group the genus *Leucodermia* has been proposed (see Mongkolsuk et al., Phytotaxa 235(1): 33–38, 2015). However, recently this split has been questioned (Souza et al., The Lichenologist. 54(1):25–44, 2022). At the investigated locality *Heterodermia borphyllidiata* (lobes with marginal phyllidia) grows in a mixed population with *H. boryi* (lobes with soralia on lower side, Hafellner 84407 in GZU). Therefore, both species may be present in the distributed duplicates. Only *H. borphyllidiata* has been found infected.

19. II. 1989 leg. J. Hafellner (84405) & A. Hafellner, det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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370. ***Tremella brodoae*** (P.Pinault & Cl.Roux) Diederich, Millanes & Hafellner

in Diederich et al., Flora of Lichenicolous Fungi 1: 140 (2022). – Bas.: *Epicladonia brodoae* P.Pinault & Cl.Roux in Bulletin de la Société Linnéenne de Provence 71: 67 (2020).

Host: *Brodoa intestiniformis* (thallus)

Europe, **Austria**: Tirol (= Tyrol), Osttirol, Eastern Alps, Hohe Tauern National Park, Venediger group, in the valley Innergschlöß NW of the town Matrei, a short distance E of the Venedigerhaus, close to the orographically left bank of the creek "Gschlöß Bach", 47°07'35''N / 12°27'40''E, c. 1690 m elev., GF 8840/4, scattered boulders in a subalpine pasture, on inclined rock faces of boulders, mica schist.

Note 1: *Brodoa intestiniformis* is the type host of *Tremella brodoae*.

Note 2: In the distributed duplicates mature basidia may be rare but among other characters the partly brown irregular galls are diagnostic.

4. IX. 1998 leg. J. Hafellner (57108), det. P. Diederich & J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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371. ***Caloplaca epierodens*** Cl.Roux & M.Bertrand

in Bulletin d'Informations de l'Association Francaise de Lichénologie 44(1): 2 (2019). – Syn.: *Variospora epierodens* (Cl.Roux & M.Bertrand) Cl.Roux & M.Bertrand in Bulletin de la Société Linnéenne de Provence 72: 74 (2021).

Host: *Pyrenodesmia erodens* (thallus)

Europe, **Austria**: Steiermark (= Styria), Eastern Alps, Steirisches Randgebirge, Grazer Bergland, on the mountain Hochlantsch c. 6 km NE of the village Mixnitz, a short distance S below the summit cross, 47°21'45''N / 15°25'28''E, c. 1715 m elev., GF 8658/2, large boulders and small cliffs of Paleozoic limestone, on rock faces inclined to the SW.

Note 1: *Pyrenodesmia erodens* (sub *Caloplaca e*.) is the type host of *Caloplaca epierodens*.

Note 2: The species has already been mentioned from the same locality as unidentified lichenicolous *Caloplaca* of the *C. velana* group (see Hafellner & Muggia, Mitteilungen des Naturwissenschaftlichen Vereines für Steiermark 135: 44, 45 Abb. 9, 2006).

Note 3: *Variospora* may well be treated as subgenus within a broader circumscribed genus *Caloplaca* (see, e.g., Arup et al., Nordic Journal of Botany 31: 16–83, 2013).

15. X. 2005 leg. J. Hafellner (64422), det. J. Hafellner

distributed to: BCN, BR, CANB, GZU, NY, UPS

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372. ***Dacampia hookeri*** (Borrer) A.Massal.

in Sulla *Lecidea Hookeri* di Schaerer nota: 7 (1853). – Bas.: *Verrucaria hookeri* Borrer in English Botany Suppl.: tab. 2622 (1831). – Selected syn.: *Catapyrenium hookeri* (Borrer) Flot. [sub "*Catopyrenium*"] in Jahresbericht der Schlesischen Gesellschaft für Vaterländische Cultur 27: 135, note (1849). – *Leptosphaeria hookeri* (Borrer) Sacc. & P.Syd. in Sylloge Fungorum 19: 1104 (1910). – *Xenosphaeria hookeri* (Borrer) Vain. in Acta Societatis pro Fauna et Flora Fennica 49(2): 141 (1921). – *Pleospora hookeri* (Borrer) Keissl. in Report of the Scientific Results of the Norwegian Expediton to Novaya Zemlya 1921, 38: 3 (1928).

Host: no host left (see Note 2)

Europe, **Austria**: Salzburg, Lungau, Eastern Alps, Niedere Tauern, Radstädter Tauern, Speiereck massif W of the village Mauterndorf, on the mountain Kl. Lanschütz, uppermost slopes exposed to NE, 47°08'08''N / 13°37'32''E, c. 2300 m elev., GF 8847/4, low outcrops of calcareous schist surrounded by alpine meadows rich in dwarf shrubs, on soil.

Note 1: Originally the species has not been recognized as being lichenicolous.

Note 2: There are no thalli of a *Solorina* species present on the entire distributed material. The only *Solorina* detected in the field in the near neighbourhood (Hafellner 86060, GZU) shows an unusual combination of characters, with a reduced smooth thallus as in *S. bispora* and predominantly 4-spored asci as in *S. saccata* (but lacking a granular thallus as typical for *S. spongiosa*).

31. VIII. 2019 leg. J. Hafellner (86069), det. J. Hafellner

distributed to: BR, CANB, GZU, M, NY, PRM, UPS

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373. ***Endococcus physciae*** Y.Joshi

in Kavaka 51: 30 (2018).

Host: *Physcia aipolia* (thallus)

Europe, **Austria**: Steiermark (= Styria), Eastern Alps, Steirisches Randgebirge, Gleinalpe, mountains SW above the village Kirchdorf-Pernegg, Kirchkogel, W of the summit on the ridge towards Trafößberg, 47°21’04’’N / 15°20’12’’E, 740 m elev., GF 8658/2, low outcrops of serpentinite on clearings in open mixed forest rich in *Pinus sylvestris*, on inclined rock faces.

Note 1: The type host of *Endococcus physciae* is *Physcia gomukhensis*.

Note 2: *Sphaerellothecium aipoliae* (Vouaux) Nav.-Ros. & Cl.Roux is present as admixture on the specimen in GZU and may also be detected on the other duplicates. Duplicates of the latter species have been distributed as Lichenicolous Biota no. 326.

12. VI. 2020 leg. J. Hafellner (85832), det. J. Hafellner

distributed to: BR, CANB, GZU, NY, UPS

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374. ***Endococcus verrucosus*** Hafellner

in Herzogia 10: 8 (1994).

Host: *Aspicilia simoensis* (thallus)

Europe, **Austria**: Salzburg, Lungau, Eastern Alps, Niedere Tauern, Schladminger Tauern, Preber NE of the town Tamsweg, Preberkessel, at the orographically right (W) side of the cirque bottom, 47°12’44’’N / 13°51’06’’E, c. 2070 m elev., GF 8749/3, relict rock glacier overgrown with some juvenile *Larix decidua* and patches of *Pinus mugo*, large boulders at the base of the front slope, paragneiss, on inclined rock faces.

Note 1: The type host of *Endococcus verrucosus* is a strain of the *Aspicilia caesiocinerea* agg.

Note 2: It should be noted that the formation of vegetative diaspores typical of the host species is suppressed on strongly infected areolae.

1. IX. 2019 leg. J. Hafellner (86332), det. J. Hafellner

distributed to: BR, CANB, GZU, LE, NY, UPS

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375. ***Lichenostigma supertegentis*** Ihlen & R.Sant. Paratype

in Ihlen, The Lichenologist 36: 185 (2004).

Host: *Aspicilia supertegens* (thallus)

Europe, **Sweden**: Torne Lappmark [now Norrbottens län]: Kiruna kommun, Abisko National Park, [stream bank of] Kårsavaggejokk, near Abiskojokk [i.e., the river connecting the lakes Abiskojaure and Torneträsk], 68°19’50’’N / 18°44’40’’E, c. 420 m elev., stream bank, on boulders of siliceous schist temporarily submerged in running water.

Note 1: *Aspicilia supertegens* is the type host of *Lichenostigma supertegentis*.

Note 2: No coordinates are indicated on the original label. The given approximate lat. / long. values have been fixed by the use of Google Earth and are those of the indicated stream at the indicated elevation.

20. VIII. 1943 leg. R. Santesson (s.n.), det. R. Santesson

distributed to: BR, CANB, GZU, NY, PRM, UPS

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376. ***Lopadium disciforme*** (Flot.) Kullh.

in Notiser ur Sällskapets pro Fauna et Flora Fennica Förhandlingar 11: 275 (1871). – Bas.: *Heterothecium pezizoideum* var. *disciforme* [”disciformis”] Flot. in Botanische Zeitung 8: 553 (1850). – Syn.: *Lopadium pezizoideum* b. [var.] *disciforme* (Flot.) Körb. in Systema Lichenum Germaniae: 211 (1855). – *Sporopodium pezizoideum* var. *disciforme* (Flot.) Vain. in Acta Societatis pro Fauna et Flora Fennica 53(1): 269 (1922).

Host: *Parmelia saxatilis* (thallus)

Europe, **Italy**: Friuli-Venezia Giulia, prov. Udine, Southern Alps, Julian Alps, Laghi di Fusine E of the town Tarvisio, surroundings of the upper lake, 46°28’45’’N / 13°40’20’’E, c. 930 m elev., montane *Picea-Fagus*-forest over mesozoic limestone, on bark of *Fagus sylvatica*.

Note 1: According to the protologue the type of the species is corticolous (“var. *β* wächst an nackter Rinde von Fichten"), and indeed this is the substrate niche where the species is occasionally found. Sometimes a spreading to corticolous bryophytes can be observed but lichenicolous growth is apparently rare.

Note 2: In the distributed material the lichenicolous species is present by its thallus consisting of dark olive-brownish, mostly adpressed subsquamulose areoles, but at least a few black, sessile, cupulate apothecia are present in all duplicates.

1. VIII. 2003 leg. J. Hafellner (86941), det. J. Hafellner

distributed to: BCN, BR, CANB, GZU, LE, NY, PRM, UPS

Hafellner J. 2022: Lichenicolous Biota (Nos 361–380). - Fritschiana 100: 13–29.

377. ***Muellerella pygmaea*** (Körb.) D.Hawksw.

in Botaniska Notiser 132: 289 (1979). – Bas.: *Tichothecium pygmaeum* Körb. in Denkschrift zur Feier ihres fünfzigjährigen Bestehens der Schlesischen Gesellschaft für Vaterländische Cultur: 236 (1853). – Syn.: *Microthelia pygmaea* (Körb.) Körb. in Systema Lichenum Germaniae: 374 (1855). – *Endococcus pygmaeus* (Körb.) Th.Fr. in Lichenes Arctoi Europae Groenlandiaeque hactenus cogniti: 275 (1860). – *Sychnogonia pygmaea* (Körb.) Trevis. in Conspectus Verrucarinarum: 18 (1860).

Host: *Lecidea lapicida* var. *pantherina* (thallus)

Europe, **Austria**: Steiermark (= Styria), Eastern Alps, Niedere Tauern, Wölzer Tauern, summit of the mountain Großer Rotbühel, S above of Planneralpe, 47°23’ 35’’N / 14°12’30’’E, c. 2000 m elev., GF 8651/1, boulders of mica schist in open meadows between patches of *Pinus mugo*, on inclined rock faces.

Note 1: The type host of *Muellerella pygmaea* is *Lecidea lapicida*.

8. VII. 2012 leg. J. Hafellner (80057) & L. Muggia, det. J. Hafellner

distributed to: BR, CANB, GZU, NY, UPS

Hafellner J. 2022: Lichenicolous Biota (Nos 361–380). - Fritschiana 100: 13–29.

378. ***Refractohilum intermedium*** Cl.Roux & Etayo

in Roux et al., Canadian Journal of Botany 75: 1597 (1997).

Host: *Gyalecta carneola* (thallus, apothecia)

Northern America, **U.S.A.**: Alaska, Matanuska-Susitna Borough, along Petersville Road, 2 km (air-line distance) WNW of Moose Creek, 62°19’15’’N / 150°28’50’’W, c. 200 m elev., mixed old-growth forest with codominant *Picea mariana*, *Picea glauca* and *Betula neoalaskana*, on old carpophores of a polypore developed on *Betula*.

Note 1: *Gyalecta carneola* (sub *Pachyphiale c.*) is the type host of *Refractohilum intermedium*.

Note 2: For determination the key offered by Roux et al. (l.c.) has been used. In the distributed material conidiophores exceeding 5 µm in width and predominantly 3-septate conidia partly exceeding 20 µm in length have been observed, characters which are diagnostic for the supposed Mediterranean *R. intermedium* rather than the temperate *R. pluriseptatum*, both described in the same publication.

Note 3: In the distributed material the species is easiest detected on infected apothecia. Conidiophores growing out of the exciple of decaying host apothecia give them a hairy appearance.

23. VIII. 2010 leg. J. Hafellner (87012), det. J. Hafellner

distributed to: BR, CANB, GZU, NY, UPS

Hafellner J. 2022: Lichenicolous Biota (Nos 361–380). - Fritschiana 100: 13–29.

379. ***Stigmidium microspilum*** (Körb.) D.Hawksw.

in Kew Bulletin 30(1): 201 (1975). – Bas.: *Arthopyrenia microspila* Körb. in Parerga lichenologica: 392 (1865). – Syn.: *Pharcidia microspila* (Körb.) G.Winter in Rabenhorst's Kryptogamen-Flora von Deutschland, Österreich und der Schweiz, 2. Aufl., 1(2): 346 (1885). – *Verrucaria microspila* (Körb.) Harm. in Bulletin de la Société des Sciences de Nancy, 2. sér., 16: 90 (1900).

Host: *Graphis scripta* (thallus)

Europe, **Austria**: Steiermark (= Styria), Eastern Alps, Steirisches Randgebirge, Grazer Bergland, Raabklamm W of the town Weiz, N below the castle Gutenberg, 47°12'50''N / 15°34'00''E, c. 500 m elev., GF 8759/3, mixed forest on the bottom of the canyon with quartzitic cliffs along the river, on bark of *Fraxinus excelsior*.

Note 1: The type host of *Stigmidium microspilum* is *Graphis scripta* var. *serpentina*.

Note 2: As indicated by some ascomatal characters, the species does not belong to the core group of *Stigmidium*.

23. VIII. 2009 leg. J. Hafellner (73867), det. J. Hafellner

distributed to: BR, CANB, GZU, NY, UPS

Hafellner J. 2022: Lichenicolous Biota (Nos 361–380). - Fritschiana 100: 13–29.

380. ***Verrucoccum spribillei*** V.Atienza, D.Hawksw. & Pérez-Ort. Paratype

in Mycologia 113(6): 1244 (2021).

Host: *Lobaria linita* (apothecia)

Asia, **Russia**: Khabarovskiy Krai, Komsomolsk-De Kastri route, Khomi Mountains, about halfway between Chernyy Mys and Tsimmermannovka, highest pass (Dchigdoni Mountain), between Dchigdoni and Utonza streams; a short distance above the main road on a logging road, 51°05'25''N / 138°57'07''E, 529 m elev., mixed coniferous-broad-leaved forest (*Abies*, *Picea*, *Betula*), on bark of *Betula costata*.

Note 1: *Lobaria linita* is the type host of *Verrucoccum spribillei*.

Note 2: The species belongs to a group of closely related species, all lichenicolous on species of Lobariaceae (Atienza et al., l.c.).

12. VII. 2009 leg. T. Spribille (30584) with L. Yakovchenko, C. Printzen, B. Kanz & E. Malashkina, dupl. det. V. Atienza

distributed to: BR, CANB, GZU, NY, UPS

Taxon Synopsis:

Taxon **Exs. no.**

Host Index:

Host taxon	Lichenicolous taxon	Exs. no.
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Geographic Index:

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