

Lichenicolous Biota (Nos 341–360)

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Abstract: The 15th fascicle (20 numbers) of the exsiccata 'Lichenicolous Biota' is published. The issue contains material of 19 non-lichenized fungal taxa (17 teleomorphs of ascomycetes, 3 anamorphic states of ascomycetes), including paratype material of *Lawreya glyphidiphila* U.Braun et al. (no 347). Furthermore, collections of the type species of the following genera are distributed: *Arthophacopsis* (*A. parmeliarum*), *Illosporiosis* (*I. christiansenii*), *Lawreya* (*L. glyphidiphila*), and *Lichenopeltella* (*L. maculans*). *Corticifraga nephromatis* is herewith reported for the first time in Central Europe.

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Introduction

The exsiccata 'Lichenicolous Biota' is continued with fascicle 15 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 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 15th fascicle, I gratefully acknowledge the contribution of 4 collections by Wolfgang v. BRACKEL and 1 collection each by Franz BERGER, Ralph COMMON (handed over by Paul DIEDERICH), Walter OBERMAYER, and Domenico PUNTILLO.

In fieldwork I received support by Angela HAFELLNER, Lucia MUGGIA, Pier-Luigi NIMIS and Mauro TRETACH.

Franz BERGER, Wolfgang v. BRACKEL, Paul DIEDERICH, Walter OBERMAYER, and Domenico PUNTILLO contributed to the scientific content of the fascicle by the identification of either lichenicolous fungi or hosts.

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.

341. *Abrothallus acetabuli* Diederich

in Mycotaxon 37: 298 (1990).

Host: *Pleurosticta acetabulum* (thallus)

Europe, Italy: Basilicata, prov. di Potenza, Monte Vulture SW above the town Melfi, near “Femmina morta”, 40°57'17"N / 15°37'30"E, c. 1205 m alt., old pine forest, on bark of *Pinus nigra*.

Note 1: *Pleurosticta acetabulum* is the type host of *Abrothallus acetabuli*.

Note 2: Apart from the ascomata, two types of pycnidial structures may be present on the host thallus, the *Vouxiomyces*-type anamorphic state of the *Abrothallus* (checked on the specimens for BR, GZU, LE, M, NY, PRM, UPS and marked) and the pycnidia of the host lichen.

Note 3: It is worth to remember that the host pycnidia have at one stage been misinterpreted as those of a lichenicolous fungus (see Petrak in Kryptogamische Forschungen 2(2): 190, 1931, sub *Pleurosticta lichenicola*) giving rise to the currently used generic name for the host (see Lumbsch et al., Mycotaxon 33: 447–455, 1988).

22. VIII. 2010 leg. W. v. Brackel (5661) & G. v. Brackel, det. W. v. Brackel
distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

342. *Arthonia molendoi* (Heufl. ex Frauenf.) R.Sant.

in Thunbergia 3: 2 (1986). – Bas.: *Tichothecium molendoi* Heufl. ex Frauenf. [as note to] Arnold, Verhandlungen der K.-K. Zoologisch-Botanischen Gesellschaft in Wien 14: 462 (1864). – Syn.: *Bryostigma molendoi* (Heufl. ex Frauenf.) S.Y.Kondr. & Hur in Kondratyuk et al., Acta Botanica Hungarica 62 (1-2): 100 (2020).

Host: *Xanthoria (Rusavskia) elegans* (thallus, apothecia)

Europe, Italy: Valle d'Aosta, prov. Aosta, Western Alps, Monte Bianco (Mont Blanc) group, Val Veny W of the village Courmayeur, ridge W above the Rifugio Elisabetta Soldini, 45°45'45"N / 06°50'15"E, c. 2250 m alt., cliffs and boulders of Jurassic limestone on slope exposed to the N, on steep rock faces of calcareous cliffs.

Note 1: The type host of *Arthonia molendoi* is *Xanthoria elegans* (named *Physcia pusilla* in the protologue).

Note 2: *Arthonia molendoi* appears to be restricted to species of the *Xanthoria elegans* group (*Rusavskia* S.Y.Kondr. & Kärnefelt) and the *Caloplaca saxicola* group (*Calogaya* Arup et al.), in the temperate ecozone usually on populations at higher altitudes. A collection on *Caloplaca arnoldii-confusa* has been distributed as Lichenicolous Biota No. 244.

30. VII. 2001 leg. J. Hafellner (85856), det. J. Hafellner
(together with P. L. Nimis & M. Tretiach)
distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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343. *Clypeococcum cetrariae* Hafellner

in Herzogia 10: 4 (1994).

Host: *Cetraria islandica* (thallus)

Europe, Germany: Bayern (Bavaria), Oberpfalz, district Cham, industrial area Sanddickicht at NW edge of Altenkreith, c. 4 km NW of the town Roding, 49°12'47"N / 12°29'03"E, c. 390 m alt., GF 6740/4, sandy forest road in pine forest (*Pinus sylvestris*) with understorey rich in lichens, on the ground.

Note 1: *Cetraria islandica* is the type host of *Clypeococcum cetrariae*.

Note 2: *Clypeococcum* D.Hawksw. as commonly understood is probably not uniform/monophyletic. The delimitation from *Polycoccum* Saut. ex Körb. is still not properly resolved (compare Ertz et al., Fungal Diversity 74(1): 53–89, 2015).

17. X. 2021

leg. W. v. Brackel (8650), det. W. v. Brackel

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

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344. *Corticifraga fuckelii* (Rehm) D.Hawksw. & R.Sant.

in Bibliotheca Lichenologica 38: 125 (1990). – Bas.: *Phragmonaevia fuckelii* Rehm in Rabenhorst's Kryptogamen-Flora von Deutschland, Österreich und der Schweiz, 2. Aufl., 1(3): 166 (1888). – Syn.: *Peziza fuckelii* (Rehm) Sacc. in Sylloge Fungorum 8: 85 (1889).

Host: *Peltigera didactyla* agg. (thallus)

Europe, Germany: Bavaria (Bayern), Oberpfalz, district Neumarkt, SE of the town Neumarkt in der Oberpfalz, N of the village Weichselstein, near the parking area for hikers, 49°14'50"N / 11°28'33"E, c. 440 m alt., GF 6734/4, forest edge, on sandy soil.

Note 1: The type host of *Corticifraga fuckelii* is a *Peltigera* not determined to species level.

Note 2: The specimens are partly co-infected with *Refractohilum peltigerae* (Keissl.) D.Hawksw. Material of that species is distributed as Lichenicolous Biota No. 358.

Note 3: *Nectriopsis lecanodes* (Ces.) Diederich & Schroers and *Didymocyrtis peltigerae* (Fuckel) Hafellner have additionally been observed in the investigated *Peltigera* population (Brackel, in litt.).

28. V. 2021

leg. W. v. Brackel (8615), det. W. v. Brackel

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

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345. *Corticifraga nephromatis* Pérez-Ort.

in Spribille et al., *The Lichenologist* 52(2): 93 (2020).

Host: *Nephroma bellum* (thallus)

Europe, Italy: Trentino-Alto Adige, prov. Bolzano (Südtirol), Southern Alps, Dolomiti, Val di Bráies (Pragser Tal) S of the village Monguelfo (Welsberg), ca. 0.5 km N of Lago di Bráies (Pragser Wildsee), 46°42'20"N / 12°05'10"E, c. 1500 m alt., mixed coniferous forest in permanently moist ravine, on dead twigs of *Picea abies* c. 0.5–1.5 m above the ground.

Note 1: *Nephroma bellum* is the type host of *Corticifraga nephromatis*.

Note 2: The existence of a *Corticifraga* species invading *Nephroma bellum* (and *N. laevigatum*) was first indicated by Santesson (Santesson et al., Lichen-forming and lichenicolous fungi of Fennoscandia: 107, 2004). In this book it is listed under *Corticifraga nephromae* but that name remained a "nomen nudum". According to this source, the species is apparently widespread in Sweden and Norway.

4. IX. 2002

leg. J. Hafellner (85857), det. J. Hafellner

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

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**346. *Illosporiopsis christiansenii* (B.L.Brady & D.Hawksw.)
D.Hawksw.**

in Sikaroodi et al., *Mycological Research* 105: 457 (2001). – Bas.: *Hobsonia christiansenii* B.L.Brady & D.Hawksw. in Lowen et al., *Mycologia* 78: 842 (1986).

Host: *Physcia aipolia* (thallus, rarely also on apothecia)

Europe, Austria: Steiermark (Styria), Eastern Alps, Steirisches Randgebirge, Grazer Bergland, 3.9 km SSW of the village St. Jakob-Breitenau, 1 km SW of the summit of Hochlantsch, 0.7 km NE of the tavern "Zum Guten Hirten" by the path to the tavern "Steirischer Jokl", 47°21'28"N / 15°24'40"E, c. 1310 m alt., GF 8658/1, solitary deciduous trees in a pasture, on branches of *Acer pseudoplatanus*.

Note 1: The type host of *Illosporiopsis christiansenii* is *Candelaria concolor*.

Note 2: At the cited locality *Illosporiopsis christiansenii* was also observed upon *Physcia adscendens*. *Physcia aipolia* was additionally infected by *Heterocephalacria physciacearum* (Diederich) Millanes & Wedin (specimens in GZU). Such material may also be admixed in the distributed duplicates.

3. X. 2021

leg. W. Obermayer (15619), det. W. Obermayer

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

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**347. *Lawreya glyphidiphila* U.Braun, Common, Diederich & Ertz
Paratype**

in Diederich et al., Plant and Fungal Systematics 64(2): 261 (2019).

Host: *Glyphis scyphulifera* (thallus)

Northern America, U.S.A.: Florida, Pasco County, Zephyrhills, along Henry Avenue [Henry Drive], 28°14'54"N / 82°10'44"W, c. 25 m alt., roadside trees, on twigs of unnamed tree fallen to the ground after a storm.

Note 1: *Glyphis scyphulifera* is the type host of *Lawreya glyphidiphila*.

Note 2: The species is only known in its anamorphic state. Based on molecular data, the fungus could be assigned to the clade Dothideomycetes – Mycosphaerales – Teratosphaeriaceae (Diederich et al., l. c.).

30. XII. 2013

leg. R. Common (9578A), det. P. Diederich

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

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348. *Muellerella lichenicola* (Sommerf. : Fr.) D.Hawksw. s. l.

in Botaniska Notiser 132: 289 (1979). – Bas.: *Sphaeria lichenicola* Sommerf. in Supplementum Florae Lapponicae: 218 (1826); Fries, Elenchus Fungorum 2: 103 (1828). – Syn.: *Tichothecium lichenicola* (Sommerf. : Fr.) R.Sant. in Svensk Botanisk Tidskrift 54(4): 507 (1960).

Host: *Ochrolechia* spec. (apothecia, thallus)

Africa, Canary Islands: Tenerife, Cordillera Dorsal, by the road (TF-24) from the town La Laguna towards Observatorio Astrofísico, Bosque de la Esperanza, c. 4 km NE below Las Lagunetas, 28°25'40"N / 16°23'15"W, c. 1250 m alt., pine forest, on branches of *Pinus canariensis*.

Note 1: The type host of *Muellerella lichenicola* is *Caloplaca (Gyalolechia) flavovirescens* (holotype in O restudied by Triebel, Bibliotheca Lichenologica 35: 155, 1989).

Note 2: Strains of the *Muellerella lichenicola* group occasionally co-occur with *Lichenodiplis*-type anamorphs. There is some evidence that they constitute teleomorph-anamorph pairs (see Muggia et al., Fungal Biology 119: 115–1128, 2018).

Note 3: A key to the lichenicolous fungi occurring on *Ochrolechia* has been provided by Zhurbenko et al. (Herzogia 31(1, Teil 2): 498–502, 2018), also indicating the occurrence of *Muellerella lichenicola* on *Ochrolechia*. Additionally, 3(!) species of *Lichenodiplis* are listed there, which might be a hint to an unresolved taxonomic problem in the *Muellerella lichenicola* group.

9. II. 1989

leg. J. Hafellner (84238) & A. Hafellner, det. J. Hafellner

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

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349. *Pronectria erythrinella* (Nyl.) Lowen

in Mycotaxon 39: 461 (1990). – Bas.: *Sphaeria erythrinella* Nyl. in Notiser ur Sällskapetets pro Fauna et Flora Fennica Förhandlingar, ser. 2, 1: 125 (1859). – Syn.: *Nectria erythrinella* (Nyl.) Tul. & C. Tul., Selecta Fungorum Carpologia, Vol. 3. Nectriei – Phacidiei – Pezizei: 95 (1865). – *Dialonectria erythrinella* (Nyl.) Cooke, Grevillea 12(64): 110 (1884). – *Nectriella erythrinella* (Nyl.) Fuckel ex Höhn. & Weese, Annales Mycologici 8(4): 466 (1910).

Host: *Peltigera leucophlebia* agg. (thallus)

Northern America, U.S.A.: Alaska, Matanuska-Susitna Borough, Alaska Range, Broad Pass, between George Parks Highway (Alaska Hwy 3) and the NW shore of Summit Lake, 63°18'45"N / 149°09'30"W, c. 720 m alt., open *Picea mariana* forest with shrub understorey at treeline ecotone, on soil.

Note 1: The type host of *Pronectria erythrinella* is a *Peltigera* not identified to species level.

Note 2: On the specimen in GZU the anamorphic state is present too and has also been marked on the duplicates sent to BR, NY and UPS.

Note 3: *Thelocarpon epibolum* Nyl. is present as admixture on the specimen in GZU (additional material also separated in a specimen stored under this name) and has also been marked on all other duplicates sent out to the herbaria receiving Lichenicolous Biota.

16. VIII. 2010 leg. J. Hafellner (85858) (together with L. Muggia), det. J. Hafellner
distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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350. *Stigmatidium 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: Oberösterreich (Upper Austria), Mühlviertel, Rannatal SSE of the village Neustift im Mühlkreis, c. 50 m S of the first ford, 48°28'55"N / 13°46'30"E, c. 330 m alt., GF 7548/2, deciduous forest rich in *Carpinus betulus* and *Tilia cordata* on steep slope, on snag of *Carpinus betulus*, on bark.

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

Note 2: The species does not belong to the core-group of *Stigmatidium* and the placement in this genus is regarded as provisional.

4. I. 2018 leg. F. Berger (32726), det. F. Berger
distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

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351. *Arthophacopsis parmeliarum* Hafellner

in Cryptogamie, Bryologie et Lichénologie 19: 159 (1998).

Host: *Parmelia sulcata* (thallus)

Europe, Italy: Trentino-Alto Adige, prov. Bolzano (Südtirol), Southern Alps, Dolomiti, Val di Bráies (Pragser Tal) S of the village Monguelfo (Welsberg), ca. 0.5 km N of Lago di Bráies (Pragser Wildsee), 46°42'20"N / 12°05'10"E, c. 1500 m alt., mixed coniferous forest in permanently moist ravine, on dead twigs of *Picea abies* c. 0.5–1.5 m above the ground.

Note 1: *Parmelia sulcata* is the type host of *Arthophacopsis parmeliarum*.

Note 2: *Parmelia saxatilis*, also growing on twigs in the immediate neighborhood, has not been found infected.

4. IX. 2002

leg. J. Hafellner (85859), det. J. Hafellner

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

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352. *Carbonea supersparsa* (Nyl.) Hertel

in Mitteilungen der Botanischen Staatssammlung München 19: 442 (1983). – Bas.: *Lecidea supersparsa* Nyl. in Flora (Regensburg) 48: 7 (1865). – Syn.: *Nesolechia supersparsa* (Nyl.) Rehm in Rabenhorst's Kryptogamen-Flora von Deutschland, Österreich und der Schweiz, 2. Aufl., 1(3): 318 (1888).

Host: *Lecanora polytropa* (thallus, apothecia)

Europe, Austria: Salzburg, Eastern Alps, Hohe Tauern, Goldberg-Gruppe, Hüttwinkl Tal S of the village Rauris, Kolm-Saigurn on N slope foot of the mountain Hoher Sonnblick, NE above the inn Ammererhof, 47°04'10"N / 12°59'10"E, c. 1650 m alt., GF 8943/2, scattered boulders on a clearing in subalpine coniferous forest, on inclined rock faces of a boulder (sericite schist).

Note 1: *Lecanora polytropa* is the type host of *Carbonea supersparsa*.

Note 2: There is a second *Carbonea* which can occasionally be found on *Lecanora polytropa*, *C. aggregantula* (Müll.Arg.) Diederich & Triebel. A collection of that species has been distributed as Lichenicolous Biota No. 202.

27. V. 1978

leg. J. Hafellner (3395), det. J. Hafellner

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

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353. *Corticifraga fuckelii* (Rehm) D.Hawksw. & R.Sant.

in Bibliotheca Lichenologica 38: 125 (1990). – Bas.: *Phragmonaevia fuckelii* Rehm in Rabenhorst's Kryptogamen-Flora von Deutschland, Österreich und der Schweiz, 2. Aufl., 1(3): 166 (1888). – Syn.: *Peziza fuckelii* (Rehm) Sacc. in Sylloge Fungorum 8: 85 (1889).

Host: *Peltigera membranacea* (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 alt., montane *Picea-Fagus*-forest over mesozoic limestone, on inclined rock faces of boulders over thick layer of saxicolous bryophytes.

Note 1: The type host of *Corticifraga fuckelii* is a *Peltigera* not determined to species level.

Note 2: Conspicuous galls are also present on the samples. Such galls are usually caused by an infection with *Refractohilum peltigeræ* (compare Lichenicolous Biota No. 358), but no conidiphores of that species have been detected on the entire collection.

1. VIII. 2003

leg. J. Hafellner (85860), det. J. Hafellner

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

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354. *Endococcus propinquus* (Körb.) D.Hawksw.

in Botaniska Notiser 132: 287 (1979). – Bas.: *Microthelia propinqua* Körb. in Systema Lichenum Germaniae: 374 (1855). – Syn.: *Tichothecium propinquum* (Körb.) A.Massal. in Miscellanea lichenologica: 27 (1856).

Host: *Porpidia crustulata* (thallus)

Europe, Austria: Steiermark (Styria), Eastern Alps, Niedere Tauern, Seckauer Tauern, NW of the town Knittelfeld, Brandstätterkogel E above of the Ingeringsee, hardly inclined northern ridge N of the summit, 47°21'15"N / 14°42'03"E, c. 2210 m alt., GF 8654/1, mosaic of wind-swept heath rich in *Loiseleuria procumbens* and patches with stony paving and mats of *Rhacomitrium lanuginosum*, on pebbles of gneiss.

Note 1: The type host of *Endococcus propinquus* is *Porpidia tuberculosa*.

Note 2: Serusiaux et al. (Lejeunia, n. s. 162: 24–25, 1999) distinguished 3 *Endococcus* species capable to establish on various *Porpidia* species. For a strain with broadly ellipsoid ascospores exceeding 10 µm in length, as is the case in the material distributed here, the authors propose to apply the name *Endococcus propinquus*.

23. V. 2019

leg. J. Hafellner (85033), det. J. Hafellner

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

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355. *Lichenopeltella maculans* (Zopf) Höhn.

in Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften Wien, Math.-Naturw. Klasse, Abt. I, 128: 553 (1919). – Bas.: *Microthyrium maculans* Zopf in Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum 70(4): 255 (1898).

Host: *Umbilicaria freyi* (thallus)

Europe, Italy: Calabria, prov. Cosenza, Southern Apennines, La Sila, Sila Grande, c. 2.5 km SW of the village Rovale, N slopes of Monte Cardoneto, 39°14'00"N / 16°31'30"E, c. 1450 m alt., pine forest with scattered siliceous boulders, on crystalline rock.

Note 1: The type host of *Lichenopeltella maculans* is *Umbilicaria hirsuta*.

Note 2: All thalli have been checked. At first sight some of them may look uninfected. However, on some thalli the glossy ascomata of the lichenicolous fungus have developed on the lower surface!

29. IX. 1985

leg. D. Puntillo (829aa), det. J. Hafellner

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

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356. *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 Groenlandiaequae hactenus cogniti: 275 (1860). – *Sychnogonia pygmaea* (Körb.) Trevis. in Conspectus Verrucarinarum: 18 (1860).

Host: *Lecidea lapicida* agg. (thallus)

Europe, France: Rhône-Alpes, Haute-Savoie, Western Alps, Mont Blanc group, slopes SE above the town Chamonix, SW of Refuge du Plan de l'Aiguille, 45°54'18"N / 06°52'56"E, c. 2200 m alt., scree and scattered boulders of siliceous schist in dwarf shrub heath somewhat above the tree line, on slope exposed to the NW, on inclined rock faces.

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

Note 2: Triebel (Bibliotheca Lichenologica 35: 159 ff., 1989) distinguished three varieties in *Muellerella pygmaea*, of which the material distributed here corresponds to var. *pygmaea*.

18. VIII. 2011

leg. J. Hafellner (82819), det. J. Hafellner

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

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357. *Pronectria robergei* (Mont. & Desm.) Lowen

in Mycotaxon 39: 462 (1990). – Bas.: *Nectria robergei* Mont. & Desm. in Plantes Cryptogames de France, sér. 2, fasc. 8, no. 374 (1856) and in Desmazières, Bulletin de la Société Botanique de France 4: 999 (1857). – Syn.: *Nectriella robergei* (Mont. & Desm.) Weese in Höhnel & Weese, Annales Mycologici 8(4): 467 (1910).

Host: *Peltigera didactyla* (thallus)

Europe, Austria: Salzburg, Lungau, Eastern Alps, Niedere Tauern, Radstädter Tauern, Speiereck-Massiv W above the market town Mauterndorf, by the road from the mountain station of Großeckbahn to Speiereckhütte (on mountain top of Großeck), 47°07'42"N / 13°38'45"E, c. 1995 m alt., GF 8847/4, embankment exposed to the S, on sandy soil overlaying paragneiss.

Note 1: The type host of *Pronectria robergei* is *Peltigera canina*.

Note 2: On several thalli the assumed anamorphic state *Illosporium carneum* Fr. has been detected, partly growing together with the teleomorph *Pronectria robergei* (separate specimen in GZU).

Note 3: *Pronectria robergei* is regarded to represent the teleomorphic state of *Illosporium carneum* Fr. (see, e.g., Hawksworth, Bulletin of the British Museum (Natural History), Botany series 6(3): 232 ff., 1979). However, an *Illosporium*-type anamorph is also reported for a second peltigericolous species, *Pronectria erythrinella* (Nyl.) Lowen (Lowen 1991, unpublished diss.; compare Lichenicolous Biota No. 349). Thus, it is not wise at this stage to use the anamorph name which would have priority under the current version of ICN.

31. VIII. 2019

leg. J. Hafellner (85861), det. J. Hafellner

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

Hafellner J. 2021: Lichenicolous Biota (Nos 341–360). - Fritschiana 97: 1–17.

358. *Refractohilum peltigerae* (Keissl.) D.Hawksw.

in Botanical Journal of the Linnean Society London 75: 208 (1977). – Bas.: *Ovularia peltigerae* Keissl. in Beihefte zum Botanischen Centralblatt 37, 2. Abt.: 276 (1920).

Host: *Peltigera didactyla* agg. (thallus)

Europe, Germany: Bavaria (Bayern), Oberpfalz, district Neumarkt, SE of the town Neumarkt in der Oberpfalz, N of Weichselstein, near the parking area for hikers, 49°14'50"N / 11°28'33"E, c. 440 m alt., GF 6734/4, forest edge, on sandy soil.

Note 1: The type host of *Corticifraga fuckelii* is *Peltigera rufescens*.

Note 2: The thalli of the specimens are partly co-infected with *Corticifraga fuckelii* (Rehm) D.Hawksw. & R.Sant. Material of that species is distributed as Lichenicolous Biota No. 344.

28. V. 2021

leg. W. v. Brackel (8615a), det. W. v. Brackel

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

Hafellner J. 2021: Lichenicolous Biota (Nos 341–360). - Fritschiana 97: 1–17.

359. *Sphaerellothecium contextum* Triebel s. l.

in Bibliotheca Lichenologica 35: 76 (1989).

Host: *Protoparmelia badia* (thallus, apothecia)

Europe, Austria: Steiermark (Styria), Eastern Alps, Seetaler Alpen range, Zirbitzkogel group W above the village Obdach, in the cirque “Linderkar” at the lowermost E slopes of the ridge connecting the mountains Scharfes Eck and Oberer Schlaferkogel, NE below the glacial lake Lindersee, 47°04'36"N / 14°34'24"E, c. 1970 m alt., GF 8953/1, relict rock glacier, boulders close to upper edge of the moderately steep front slope, paragneiss, on inclined rock faces.

Note 1: The type host of *Sphaerellothecium contextum* is *Sporastatia testudinea*.

Note 2: *Sporastatia testudinea* was also present at the surveyed locality. However, on the type host an infection with *Sphaerellothecium contextum* has not been noticed on that site.

8. VII. 2020

leg. J. Hafellner (85234), det. J. Hafellner

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

Hafellner J. 2021: Lichenicolous Biota (Nos 341–360). - Fritschiana 97: 1–17.

360. *Sphaerellothecium parmeliae* Diederich & Etayo

in Etayo & Diederich, The Lichenologist 30(2): 117 (1998).

Host: *Parmelia saxatilis* (thallus)

Europe, Italy: Trentino-Alto Adige, prov. Trento, Eastern Alps, Southern Rhaetian Alps, Ortler group (Stelvio group), Val di Mare c. 6 km N above the village Cógolo, SE of Malga Prabòn, 46°24'30"N / 10°41'25"E, c. 1780 m alt., coniferous forest (*Larix decidua*, *Pinus cembra*) with scattered boulders of mica-schist, on boulders in the shade.

Note 1: *Parmelia saxatilis* is the type host of *Sphaerellothecium parmeliae*.

Note 2: *Parmelia omphalodes* growing in the immediate neighborhood on some of the boulders was not found infected by *Sphaerellothecium parmeliae*.

27. VII. 2006

leg. J. Hafellner (85862), det. J. Hafellner

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

Taxon Synopsis:

Taxon	Exs. no.
Ascomycota	
Arthoniomycetes	
<i>Arthonia molendoi</i>	342
<i>Arthophacopsis parmiliarum</i>	351
Lecanoromycetes (incl. Ostropomycetidae)	
<i>Carbonea supersparsa</i>	352
<i>Corticifraga fuckelii</i>	344, 353
<i>Corticifraga nephromatis</i>	345
Leotiomycetes	
Sordariomycetes (incl. Hypocreales)	
<i>Pronectria erythrinella</i>	349
<i>Pronectria robergei</i>	357
Eurotiomycetes (incl. Verrucariales and Mycocaliciales)	
<i>Endococcus propinquus</i>	354
<i>Muellerella lichenicola</i>	348
<i>Muellerella pygmaea</i>	356
Dothideomycetes	
<i>Abrothallus acetabuli</i>	341
<i>Clypeococcum cetrariae</i>	343
<i>Lawreya glyphidiphila</i>	347
<i>Lichenopeltella maculans</i>	355
<i>Sphaerellothecium contextum</i>	359
<i>Sphaerellothecium parmeliae</i>	360
<i>Stigmatidium microspilum</i>	350
Anamorphic Fungi (unclassified)	
Hyphomycetes	
<i>Illosporopsis christiansenii</i>	346
<i>Refractohilum peltigerae</i>	358
Coelomycetes	
<i>Lawreya glyphidiphila</i>	347
Basidiomycota	
Agaricomycetes	
Pucciniomycetes	
Tremellomycetes	

Host Index:

Host taxon	Lichenicolous taxon	Exs. no.
<i>Cetraria islandica</i>	<i>Clypeococcum cetrariae</i>	343
<i>Glyphis scyphulifera</i>	<i>Lawreya glyphidiphila</i>	347
<i>Graphis scripta</i>	<i>Stigmidium microspilum</i>	350
<i>Lecanora polytropa</i>	<i>Carbonea supersparsa</i>	352
<i>Lecidea lapicida</i>	<i>Muellerella pygmaea</i>	356
<i>Nephroma bellum</i>	<i>Corticifraga nephromatis</i>	345
<i>Ochrolechia spec.</i>	<i>Muellerella lichenicola</i>	348
<i>Parmelia saxatilis</i>	<i>Sphaerellothecium parmeliae</i>	360
<i>Parmelia sulcata</i>	<i>Arthophacopsis parmeliarum</i>	351
<i>Peltigera didactyla</i>	<i>Corticifraga fuckelii</i>	344
<i>Peltigera didactyla</i>	<i>Pronectria robergei</i>	357
<i>Peltigera didactyla</i>	<i>Refractohilum peltigerae</i>	358
<i>Peltigera leucophlebia</i>	<i>Pronectria erythrinella</i>	349
<i>Peltigera membranacea</i>	<i>Corticifraga fuckelii</i>	353
<i>Physcia aipolia</i>	<i>Illosporiosis christiansenii</i>	346
<i>Pleurosticta acetabulum</i>	<i>Abrothallus acetabuli</i>	341
<i>Porpidia crustulata</i>	<i>Endococcus propinquus</i>	354
<i>Protoparmelia badia</i>	<i>Sphaerellothecium contextum</i>	359
<i>Rusavskia elegans</i>	<i>Arthonia molendoi</i>	342
<i>Xanthoria elegans</i>	<i>Arthonia molendoi</i>	342
<i>Umbilicaria freyi</i>	<i>Lichenopeltella maculans</i>	355

Geographic Index:

BIOGEOGRAPHIC UNITS (see BRUMMITT 2001)

Country (or Archipelago)	Lichenicolous taxon	Exs. no.
1. EUROPE		
Austria	<i>Carbonea supersparsa</i>	352
	<i>Endococcus propinquus</i>	354
	<i>Illoporiopsis christiansenii</i>	346
	<i>Pronectria robergei</i>	357
	<i>Sphaerellothecium contextum</i>	359
	<i>Stigmatidium microspilum</i>	350
France	<i>Muellerella pygmaea</i>	356
Germany	<i>Clypeococcum cetrariae</i>	343
	<i>Corticifraga fuckelii</i>	344
	<i>Refractohilum peltigerae</i>	358
Italy	<i>Abrothallus acetabuli</i>	341
	<i>Arthonia molendoi</i>	342
	<i>Arthophacopsis parmiliarum</i>	351
	<i>Corticifraga fuckelii</i>	353
	<i>Corticifraga nephromatis</i>	345
	<i>Lichenopeltella maculans</i>	355
	<i>Sphaerellothecium parmeliae</i>	360
2. AFRICA		
Canary Islands (belonging to Spain)		
	<i>Muellerella lichenicola</i>	348
3. ASIA TEMPERATE		
4. ASIA TROPICAL		
5. AUSTRALASIA		
6. PACIFIC		
7. NORTHERN AMERICA		
U.S.A.	<i>Lawreya glyphidiphila</i>	347
	<i>Pronectria erythrinella</i>	349
8. SOUTHERN AMERICA (including CENTRAL AMERICA)		
9. ANTARCTIC		

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