Lichenicolous Biota (Nos 301–320)

Josef HAFELLNER*


Abstract: The 13th fascicle (20 numbers) of the exsiccata 'Lichenicolous Biota' is published. The issue contains material of 18 non-lichenized fungal taxa (16 teleomorphs of ascomycetes, 2 basidiomycetes). Collections of the type species of the following genera are distributed: Lichenochora (L. obscuroides, syn. L. thallina) and Nesolechia (N. oxyspora). The new combination Sphaerellothecium arnoldii (A.Massal.) Hafellner is proposed.

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Introduction

The exsiccata 'Lichenicolous Biota' is continued with fascicle 13 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 and updated as electronic database by THIERS 2019+ and hosted at New York Botanical Garden under http://sweetgum.nybg.org/science/ih/). 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 13th fascicle, I gratefully acknowledge the contribution of 2 collections by Rolf SANTESSON (†).

In fieldwork I received support by Angela HAFELLNER and Jolanta MIADLIKOWSKA.

Rolf SANTESSON (†) 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.
Nomenclatural novelty:

*Sphaerellothecium arnoldii* (A.Massal.) Hafellner *combinatio nova*

MycoBank number: MB 833734


Note 1: *Phaeospora arnoldii* Hepp is usually regarded as newly described species. It is doubtful that this was the intention of the author. When Hepp introduced the name *Phaeospora arnoldii* he listed some synonyms. Among others he cited a legitimate name with priority, *Tichothecium arnoldii* A.Massal. (1856), which he ought to have adopted. Therefore, it could well be that Hepp intended to make a new combination rather than to describe a new species, because in the 19th century new combinations were often made without citing the author of the basionym in brackets.

Note 2: Massalongo (1856) indicated the type with the phrase “In thallo Urceolariae scruposae bryophylae (iridatae Massal.) in Franconia superiori. Arnold”, whereas Hepp (1860) uses the phrase “Parasitisch auf Urceol. scruposa var. iridata (Mass.) auf steinigem Boden zwischen Winterhof und Ruppersbuch, bei Eichstädt; F. Arnold”. So, evidently both collections come from the same area but do not come necessarily from the same locality because Arnold (1858: 702) listed 4 localities in Franconia, where he had collected this lichenicolous fungus.

Note 3: The offprint of the publication by Massalongo (1856) available to us looks like a booklet, but it has a confusing pagination imprinted. It starts from [35] to “42” and continues with “13” (meaning 43) onwards. Therefore page “27” several pages later – the page on which *Tichothecium arnoldii* A.Massal. is described (compare e.g. Keissler 1930: 402) – should be read 57. And further back in the text, the page numbers “35” (meaning 65) to “42” (meaning 72) turn up a second time continuing this time with the pages “43” (meaning 83) to “46” (meaning 86). Such a copy is also available from Bayerische Staatsbibliothek Digital (url: https://reader.digitale-sammlungen.de/de/fs1/object/display/bsb10301610_00005.html). In contrast, a copy with re-arranged chapters and corrected pagination (p. [35]–75) but with part of the text missing is incorporated in the volume edited by Lazzarin (1991) containing several of the rarer papers of Massalongo’s lichenological oeuvre. The explanation why the pagination of all versions known to us does not start with page number 1 is imprinted at the end: “Estratto dal Volume pubblicato in occasione delle Nozze Bizio-Pazienti” (whole volume not seen by us) in which Masslongo’s work was evidently not the first in a series of papers dealing with various subjects.

Note 4: The shape of the asci of the species indicates a closer relationship to *Sphaerellothecium araneosum* (Rehm ex Arnold) Zopf rather than to *Polycoccum trypethelioides* (Th.Fr.) R.Sant. Additionally, the small ascomata are connected to a net of brown superficial hyphae, little conspicuous under the dissecting microscope but very distinct in preparations for the light microscope. These pigmented vegetative hyphae had already been noticed by Hepp (l.c., “Mycelium braun, wie bei den Sphaerien!”), the reason why he was uncertain about the generic placement of this species.
301. **Cercidospora epipolytropa** (Mudd) Arnold


**Host:** *Lecanora polytropa* var. *polytropa* (apothecia)

**Europe, Austria:** Styria, Eastern Alps, Seetaler Alpen, Zirbitzkogel massif W above the village Obdach, Sabathyalm, on the E edge NE below the summit of Oberer Schlaferkogel, NE-side of a small mountain top, 47°04′40″N / 14°34′36″E, 2060 m alt., GF 8953/1, mosaic of patches of Loiseleurietum and bare mineral soil, on pebbles of mica schist.

**Note 1:** *Lecanora polytropa* is the type host of *Cercidospora epipolytropa*.

**Note 2:** Accompanying thalli of *Rhizocarpon geographicum* may be infected with *Endococcus macrosorus* (Hepp ex Arnold) Nyl. (e.g., seen on specimen sent to UPS).

6. VIII. 2008 leg. J. Hafellner (79744), det. J. Hafellner

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

302. **Cercidospora stereocaulorum** (Arnold) Hafellner


**Host:** *Stereocaulon* spec. (thallus)

**Europe, Austria:** Vorarlberg, Eastern Alps, Verwall-Gruppe, Hochjoch massif E above of the market town Schruns, by the trail from the lookout Sauerbleis to Schwarzsee, 47°04′15″N / 09°59′00″E, c. 2100 m alt., GF 8925/2, outcrops of mica schist in alpine vegetation on steep slope exposed to the N, along fissures of the outcrops.

**Note 1:** The type host of *Cercidospora stereocaulorum* is *Stereocaulon alpinum*.

**Note 2:** The infection causes a strong deformation of phyllocladia (formation of galls), in which groups of ascomata of the lichenicolous fungus develop. These are not the cephalodia which are also present and are of greyish colour.

6. VIII. 2008 leg. J. Hafellner (79744), det. J. Hafellner

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS
303. **Endococcus umbilicariae** (Linds.) Hafellner


Host: *Lasallia pustulata* (thallus)

**Africa, Canary Islands:** Gran Canaria, a short distance N below the summit of Pico de las Nieves, 27°58′00″N / 15°34′20″W, c. 1870 m alt., conspicuous wall-like basaltic outcrop in pine forest, on steep rock faces exposed to the N.

Note 1: *Lasallia pustulata* is the type host of *Endococcus umbilicariae*.

Note 2: *Lasallia* has been reduced to subgeneric rank within *Umbilicaria* (compare Davydov et al., Taxon 66(6): 1282–1303, 2017), but this is not generally accepted.

26. II. 1994 leg. J. Hafellner (48136), det. J. Hafellner
distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS

304. **Heterocephalacria bachmannii** (Diederich & M.S.Christ.) Millanes & Wedin


Host: *Cladonia macroceras* (podetia)

**Europe, Austria:** Steiermark (Styria), Eastern Alps, Northern Limestone Alps, Mürzsteiger Alpen, eastern foothills of Veitsch Alpe, N of the town Kindberg, by the trail a short distance SE below the refuge Grundbauernhütte, 47°38′45″N / 15°28′55″E, c. 1420 m alt., GF 8358/4, talus of ravine, on raw humus between *Vaccinium myrtillus*.

Note 1: The type host of *Heterocephalacria bachmannii* is *Cladonia subrangiformis*.

Note 2: The basidiomata of the macroscopically similar *Tremella cladoniae* Diederich & M.S.Christ. are usually confined to the squamules of the primary thallus of *Cladonia* species. For distinguishing microscopical characters between the two species compare Diederich (Biblioth. Lichenol. 60: 32 Fig. 10 and 67 Fig. 30, 1996).

28. VII. 2012 leg. J. Hafellner (83934), det. J. Hafellner
distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS
305. Lichenochora obscuroides (Linds.) Triebel & Rambold


Host: Phaeophyscia orbicularis (thallus)

Europe, Austria: Kärnten (Carinthia), Eastern Alps, foothills of Saualpe W of the town Wolfsberg, c. 1 km W of the village St. Michael by the road to Lading, 46°50'05''N / 14°47'10''E, c. 550 m alt., GF 9154/4, fruit trees in a pasture, on twigs of Juglans regia fallen to the ground after strong wind.

Note 1: Phaeophyscia orbicularis is the type host of Lichenochora obscuroides.

Note 2: Lichenochora obscuroides is a heterotypic name of the type species of Lichenochora, L. thallina, and has priority over the latter.

25. XII. 2010 leg. J. Hafellner (77052), det. J. Hafellner distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS


306. Phacopsis cephalodioides (Nyl.) Triebel & Rambold


Host: Hypogymnia tubulosa (thallus)

Africa, Madeira: Pico do Arieiro, S below the summit on slope exposed to the S, 32°43'55''N / 16°55'45''W, c. 1700 m alt., tract of land reforested with pines, on bark of Pinus spec.

Note 1: The type host of Phacopsis cephalodioides is Hypogymnia physodes.

Note 2: Triebel & Rambold (l.c.) have reinvestigated authentic material originating from Denmark and have designated a lectotype.

Note 3: A strain of Nesolechia oxyspora is additionally present on the specimen kept in GZU and may also be seen on duplicates sent to other herbaria.

18. II. 1990 leg. J. Hafellner (70464) & A. Hafellner, det. J. Hafellner distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS
307. *Sphaerellothecium arnoldii* (A.Massal.) Hafellner


Host: *Diploschistes muscorum* (thallus, apothecia)

**Europe, Austria:** Kärnten (Carinthia), Eastern Alps, Gailltaler Alpen, on the mountain Reißkofel c. 11 km E of the market town Kötschach-Mauthen, by the trail from the bivouac along the western crest to the summit, 46°41'10''N / 13°08'10''E, c. 2060 m alt., GF 9344/2, low outcrops of Triassic limestone and fragments of Caricetum firmae, on soil.

Note 1: *Diploschistes muscorum* is the type host of *Sphaerellothecium arnoldii*.

Note 2: *Sphaerellothecium arnoldii* must not be confused with another lichenicolous fungus occurring on *Diploschistes* species, *Lichenothelia rugosa* (G.Thor) Ertz & Diederich, for which ascospores with an irregular sculpture are diagnostic.

21. VII. 2009 leg. J. Hafellner (76065), det. J. Hafellner

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

308. *Sphaerellothecium parietinarium* (Linds.) Hafellner & V.John


Host: *Xanthoria aureola* (thallus)

**Africa, Canary Islands:** Lanzarote, volcano Guanapay E above the village Teguise, NE margin of the crater, 29°03’30”N / 13°32’55”W, c. 450 m alt., on low outcrops of volcanic conglomerate on the outside of the crater, on rock faces exposed to the N.

Note 1: The type host of *Sphaerellothecium parietinarium* is *Xanthoria parietina*.

Note 2: The host has been named following the species concept outlined by Lindblom & Ekman (Mycological Research 109(2): 187–199, 2005).


distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS
309. *Stigmidium congestum* (Körb.) Triebel

logica: 470 (1865).

Host: *Lecanora chlarotera* (apothecia)

**Europe, Austria:** Steiermark (Styria), Eastern Alps, Niedere Tauern, Schladminger Tauern, Obertal S of the town Schladming, between Hopfriesen and the inn Tau-
erngold, 47°19’05’’N / 13°41’20’’E, c. 1060 m alt., GF 8648/3, riparian forest along
the creek, on bark of *Alnus incana*.

Note 1: *Lecanora chlarotera* (f. *rugosella*) is the type host of the species.

Note 2: Roux & Triebel (Bull. Soc. Linn. Provence 45: 483, 1994) reinvestigated the holotype (L-
Typenherbar) and designated lectotypes for the heterotypic syno nyms *Epicymatia vulgaris* Fuckel
and *Epicymatia commutata* Niessl, both also with *Lecanora chlarotera* as type hosts.

Note 3: *Vouxiella lichenicola* is present as admixture on the specimen in GZU and may also be
detected on other duplicates.

25. VIII. 2001

leg. J. Hafellner (56865), det. J. Hafellner

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

310. *Stigmidium epistigmellum* (Nyl. ex Vouaux) Kocourk. & K.Knudsen


Host: *Caloplaca bolacina* (thallus, apothecia)

**Northern America, U.S.A.:** California, Los Angeles County, San Clemente Island, between Eel Point and Seal Cove on the W shore of the island, 32°55’00”N / 118°32’15”W, c. 50 m alt., talus a few hundred meters back from the shore, on
boulders of volcanic rock.

Note 1: The size of the ascospores in the population distributed here is close to the lower end of
variability allowed by Kocourková & Knudsen (Bryologist 112: 579, 2009) and is herewith close to
that given in the protologue.

Note 2: The type host of *Stigmidium epistigmellum* was originally identified as *Caloplaca festiva* but
was corrected to *C. luteominia* by Kocourková & Knudsen (l. c.) after revision of the holotype.

16. IV. 1966

leg. R. Santesson (18037), det. R. Santesson

distributed to: BCN, BR, CANB, E, GZU, LE, M, NY, PRM, UPS
311. **Abrothallus parmeliarum** (Sommerf.) Nyl.

**Host:** *Platismatia glauca* (thallus, on galls induced by *Nesolechia oxyspora*)

**Africa, Madeira:** Pico dos Estanquinhos at NE edge of the plateau Paul da Serra, uppermost N slopes somewhat below the summit, 32°46’20”N / 17°04’35”W, c. 1600 m alt., *Vaccinium padifolium* shrub among scattered volcanic outcrops and boulders, on twigs of *Vaccinium padifolium*.

Note 1: Two species of *Parmelia* s. str. are mentioned in the protologue as host species, *Parmelia omphalodes* and *P. saxatilis*. By lectotypification the host of the type is *Parmelia saxatilis* (compare Suija et al., Taxon 67(6): 1174, 2018).

Note 2: *A. parmeliarum* must not be confused with a second species (*A. cetrariae* I.Kotte) occasionally found on *Platismatia glauca*. The ascomata of that species develop dispersed on the thallus and are regularly accompanied by the coelomycetous anamorphic state.

17. II. 1990 leg. J. Hafellner (84255) & A. Hafellner, det. J. Hafellner
distributed to: BR, CANB, GZU, NY, UPS

312. **Endococcus umbilicariae** (Linds.) Hafellner


**Host:** *Lasallia pustulata* (thallus)

**Africa, Madeira:** Pico Escalvado c. 1 km S of Pico do Arieiro, 32°43’00”N / 16°55’45”W, c. 1670 m alt., volcanic cliffs, on steep rock faces exposed to the N difficult to access.

Note 1: *Lasallia pustulata* is the type host of *Endococcus umbilicariae*.

Note 2: *Lasallia* has been reduced to subgeneric rank within *Umbilicaria* (compare Davydov et al., Taxon 66(6): 1282–1303, 2017), but this is not generally accepted.

20. II. 1990 leg. J. Hafellner (27351) & A. Hafellner, det. J. Hafellner
distributed to: BR, CANB, GZU, NY, UPS
313. **Nectriopsis lecanodes** (Ces.) Diederich & Schroers


**Host:** *Lobaria macaronesica* (thallus)

**Africa, Canary Islands:** Tenerife, Macizo de Anaga, surroundings of Mirador Pico de Ingles NE above the village Las Mercedes, 28°31’55”N / 16°15’50”W, c. 960 m alt., laurel forest, on bark of *Laurus azorica* agg.

Note 1: The type host of *Nectriopsis lecanodes* is *Peltigera canina*.

Note 2: The original spelling of the name is “*Sph. Nectria lecanodes* Ces. mss.” From the previous page (p. 406) it is evident that “*Sph.*” is an abbreviation of the generic name *Sphaeria*. Therefore, the basionym is *Sphaeria lecanodes* and not *Nectria lecanodes* as often cited. The text of the protologue was reprinted together with the exsiccatum label, and there the entire text is signed by “Cesati”, indicating that both name and validating description were contributed by Cesati. Therefore, the correct citation of the author of the taxon is “Ces.” (ICN 46.2).

Note 3: *Tremella lobariacearum* and *Plectocarpon macaronesiae* have been observed as admixture on the specimen in GZU and may also be present on other duplicates.

8. II. 1989 leg. J. Hafellner (84233), det. J. Hafellner distributed to: BR, CANB, GZU, NY, UPS


314. **Nesolechia oxyspora** (Tul.) A.Massal.


**Host:** *Platismatia glauca* (thallus)

**Africa, Madeira:** NW of Montaña de las Negrinas, near the turnoff to Alajeró, 28°06’00”N / 17°13’50”W, c. 1380 m alt., pine-reforestation, on bark of *Pinus* spec.

Note 1: Two hosts are listed in the protologue: *Platismatia glauca* (sub *Cetraria* g.) and *Parmelia saxatilis*. The host of the lectotype is *Parmelia saxatilis* (Triebel et al., Bryologist 98: 78, 1995).

Note 2: Following the taxon concept outlined by Triebel et al. (Bryologist 98: 73, 1995), three infraspecific taxa can be distinguished in *Nesolechia oxyspora*. Of these, *N. oxyspora* var. *oxyspora* is able to infect species of *Everniastrum*, *Melanohalea*, *Parmelia*, *Platismatia*, and *Punctelia*.

315. *Polycoccum microcarpum* Diederich & Etayo


Host: *Cladonia digitata* (thallus)

**Europe, Austria:** Steiermark (Styria), Eastern Alps, Nördliche Kalkalpen, Ennstaler Alpen, Gesäuse, in the secondary valley Hartelsgraben ca. 3 km W of the village Hieflau, just N of the 2nd bridge, 47°35’15’’N / 14°42’25’’E, c. 660 m alt., GF 8454/1, mixed forest with codominant *Picea abies, Abies alba* and *Fagus sylvatica*, on decaying stumps.

Note 1: The type host of *Polycoccum microcarpum* is an undetermined *Cladonia* species. On the listed paratypes the following host species are mentioned: *Cladonia bellidiflora, Cladonia digitata, Cladonia cervicornis*.

Note 2: A coelomycetous anamorphic state supposed to belong to *Polycoccum microcarpum* has been additionally noticed on the specimen held at GZU and it may also be present on the other duplicates.


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

316. *Sphaerellothecium contextum* Triebel


Host: *Protoparmelia badia* (thallus, apothecia)

**Europe, Austria:** Steiermark (Styria), Eastern Alps, Gurktaler Alpen, on the mountain Kirbschca ca. 11 km SW of the town Murau, SW above of the village St. Lorenzen, a short distance below the summit on slope exposed to NE, 47°03’05’’N / 14°03’05’’E, c. 2100 m alt., GF 8950/1, outcrops and boulder fields of Palaeozoic siliceous schist in dwarf shrub belt, on inclined rock faces.

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

Note 2: The species was first noticed and thoroughly investigated but misidentified by Zopf (Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum 70: 178–185, 1897, sub *Sphaerellothecium araneosum*).

24. VIII. 2003 leg. J. Hafellner (62324), det. J. Hafellner

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


**Host:** *Caloplaca bolacina* (thallus, apothecia)

**Northern America, U.S.A.:** California, Los Angeles County, Santa Catalina Island, E side of Isthmus Cove, 33°26′35″N / 118°29′25″W, c. 20 m alt., rock outcrops not far from the seashore, on volcanic rocks.

**Note 1:** The size of the ascospores in the population distributed here is close to the lower end of variability allowed by Kocourková & Knudsen (Bryologist 112: 579, 2009) and is herewith close to the size given in the protologue.

**Note 2:** The type host of *Stigmidium epistigmellum* was originally identified as *Caloplaca festiva* but was corrected to *C. luteominia* by Kocourková & Knudsen (l. c.) after revision of the holotype.

**Note 3:** Interestingly, *Caloplaca luteominia*, also present on the duplicates sent to UPS and NY, is not infested.

4. IV. 1966

leg. R. Santesson (17221b), det. R. Santesson

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

318. *Stigmidium heterodermae* Etayo


**Host:** *Heterodermia leucomelos* s.l. (thallus)

**Africa, Canary Islands:** El Hierro, Mirador de Bascos W above the village Sabinosa, 27°45′15″N / 18°07′05″W, c. 660 m alt., at the upper edge of the cliffs exposed to the NW, on low outcrops of volcanic rocks.

**Note 1:** The type host of *Stigmidium heterodermae* is *Heterodermia boryi*, in the past often treated as infraspecific taxon of *Heterodermia leucomelos*. For the *Heterodermia leucomelos* group the genus *Leucodermia* has been proposed (see Mongkolsuk et al., Phytotaxa 235(1): 1–66, 2015).

**Note 2:** The original spelling of the epithet of the host lichen will be protected by conservation (see May, Taxon 66: 487, 2017) and the change to the female gender as occasionally proposed (“leucomelaena”) is therefore obsolete.

5. II. 1995

leg. J. Hafellner (83976) & A. Hafellner, det. J. Hafellner

distributed to: BR, CANB, GZU, NY, UPS
319. *Stigmidium tabacinae* (Arnold) Triebel


Host: *Toninia toepfferi* (thallus)

**Africa, Canary Islands**: La Gomera, SE above of the village Chipude, saddle NE of the mountain La Fortaleza, 28°06’08”N / 17°16’25”W, c. 1130 m alt., open vegetation on the ridge, on volcanic soil.

Note 1: The type host of *Stigmidium tabacinae* is *Psora tabacina* auct., a species now usually treated under the name *Toninia tristis*.

Note 2: Triebel (l. c.) designated a lectotype originating from northern Italy and preserved in M.

20. II. 1991 leg. J. Hafellner (83951) & A. Hafellner, det. J. Hafellner
distributed to: BR, CANB, GZU, NY, UPS

320. *Tremella cladoniae* Diederich & M.S.Christ.


Host: *Cladonia coniocraea* (thallus)

**Europe, Austria**: Steiermark (Styria), Eastern Alps, Northern Limestone Alps, Ennstaler Alpen, Tamischbachturm massif SW of the village Großreifling, SE-slopes of Bärenstein, by the trail from Tamischbachgraben to Bärensattel, 47°37’35”N / 14°41’35”E, c. 1000 m alt., GF 8354/3, mixed forest, on mossy bark at the base of trunks of *Fagus sylvatica*.

Note 1: The type host of *Tremella cladoniae* is an unnamed *Cladonia*.

Note 2: The basidiomata of the macroscopically similar *Heterocephalacria bachmannii* (Diederich & M.S.Christ.) Millanes & Wedin are usually found on the upper parts of podetia of various *Cladonia* species. For distinguishing microscopical characters between the two species compare Diederich (Biblioth. Lichenol. 60: 32 Fig. 10 and 67 Fig. 30, 1996).

24. VII. 2005 leg. J. Hafellner (67396), det. J. Hafellner
distributed to: BR, CANB, GZU, NY, UPS
## Taxon Synopsis:

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References


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