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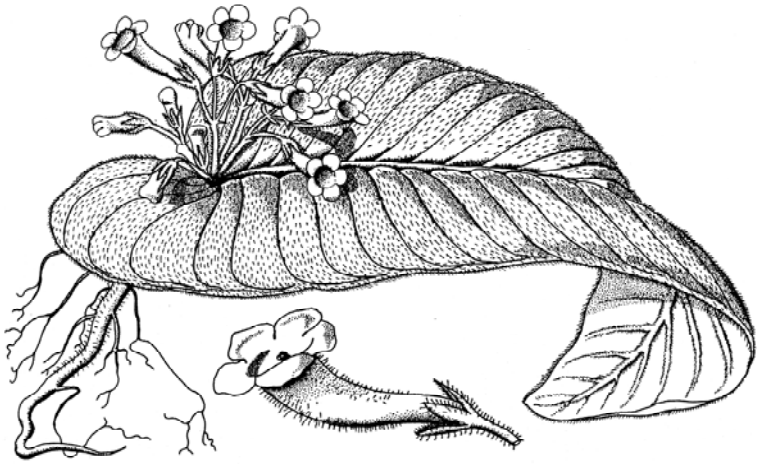

Veröffentlichungen aus dem
Institut für Pflanzenwissenschaften
der Karl-Franzens-Universität Graz

Walter OBERMAYER
Lichenotheca Graecensis, Fasc. 17 (Nos 321–340)
Dupla Graecensia Lichenum (2009, nos 581–680)

Josef HAFELLNER
Lichenicolous Biota (Nos 61–80)

Peter O. BILOVITZ, Roman TÜRK & Helmut MAYRHOFER
Lichens from the Una National Park
(Bosnia and Herzegovina)

Peter O. BILOVITZ & Helmut MAYRHOFER
A contribution to the lichenized fungi of
Bosnia and Herzegovina

Graz, 31. August 2009

Hofrat Prof. Dr. Karl FRITSCH

(∗ 24.2.1864 in Wien, † 17.1.1934 in Graz)

Karl FRITSCH studierte nach einem Jahr in Innsbruck an der Universität Wien Botanik und wurde dort 1886 zum Dr.phil. promoviert; 1890 habilitierte er sich. Nach Anstellungen in Wien wurde FRITSCH 1900 als Professor für Systematische Botanik an die Universität Graz berufen, wo er aus bescheidenen Anfängen ein Institut aufbaute. 1910 wurde er Direktor des Botanischen Gartens, 1916 wurde das neu errichtete Institutsgebäude bezogen. Aus der sehr breiten wissenschaftlichen Tätigkeit sind vor allem drei Schwerpunkte hervorzuheben: Floristisch-systematische Studien, besonders zur Flora von Österreich, monographische Arbeiten (besonders über *Gesneriaceae*) und Arbeiten zur systematischen Stellung und Gliederung der Monocotylen. An Kryptogamen interessierten ihn besonders Pilze und Myxomyceten.

Nachrufe: KNOLL F. 1934, Ber. Deutsch. Bot. Ges. 51: (157)–(184) (mit Schriftenverzeichnis). - KUBART B. 1935, Mitt. Naturwiss. Ver. Steiermark 71: 5–15 (mit Porträt). - TEPPNER H. 1997, Mitt. Geol. Paläont. Landesmus. Joanneum (Graz) 55: 133–136. - Im übrigen vgl. STAFLEU F.A. & COWAN R.S. 1976, Tax. Lit. 1: 892 und BARNHART J.H. 1965, Biogr. Notes Botanists 2: 12.

Graz, November 1997 H. TEPPNER

Die Serie FRITSCHIANA wurde als Publikationsorgan für die zahlreichen Aktivitäten im Zusammenhang mit der botanischen Sammlung des Institutes für Pflanzenwissenschaften, Bereich Systematische Botanik und Geobotanik (vormals Institut für Botanik), der Karl-Franzens-Universität Graz (GZU) gegründet. Vor allem Schedae-Hefte der von den Mitarbeitern herausgegebenen Exsiccatenwerke sollten hier erscheinen, aber auch Exkursionsberichte sowie Listen und Indices besonders wertvoller Bestände in GZU. Das Spektrum wurde mittlerweile auf floristische und kleinere taxonomische Arbeiten (zwischenzeitlich auch auf das Samentauschverzeichnis des Botanischen Gartens) ausgeweitet. Die Schedae-Hefte des von Prof. Dr. Josef POELT begründeten, inzwischen abgeschlossenen Exsiccatenwerkes Plantae Graecenses sind die Vorläufer dieser Schriftenreihe.

Gesamtredaktion:

Dr. Christian SCHEUER, Mag. Dr. Walter OBERMAYER
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FRITSCHIANA

Veröffentlichungen aus dem
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Lichenotheca Graecensis, Fasc. 17 (Nos 321–340)

Walter OBERMAYER*

OBERMAYER W. 2009: Lichenotheca Graecensis, Fasc. 17 (Nos 321–340). - Fritschiana (Graz) 65: 1–6. - ISSN 1024-0306.

Abstract: Fascicle 17 of Lichenotheca Graecensis comprises 20 collections of lichens from the following countries (and administrative subdivisions): Austria (Carinthia; Tyrol; Styria; Upper Austria), Germany (Bavaria), Kazakhstan (Akmola Province), Russia (Buryatia Republic; Tuva Republic), Spain (Canary Islands), and U.S.A. (Alaska; Minnesota). Fertile material of *Aspicilia fruticulosa* (Kazakhstan), *Cetraria islandica* (Austria), *Dactylina arctica* (Alaska), and *Phaeophyscia pusilloides* (Austria) as well as paratype specimens of *Lepraria granulata* (Austria) are included. TLC-analyses were carried out for *Lepraria granulata, Ramalina fraxinea*, and *Rinodina beccariana*.

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The exsiccata series 'Lichenotheca Graecensis' is distributed on exchange basis to the following 19 public herbaria and to one private collection (herbarium abbreviations follow http://sciweb.nybg.org/science2/IndexHerbariorum.asp): ASU, B, C, CANB, CANL, E, G, GZU, H, HAL, HMAS, LE, M, MAF, MIN, O, PRA, TNS, UPS, Dr. Klaus Kalb. A text version of Lichenotheca Graecensis can be found under http://www.uni-graz.at/walter.obermayer/li-grz1.htm, a pdf-file is stored under http://www.uni-graz.at/walter.obermayer/lichenotheca-graecensis-17.pdf. Label texts originally drafted in a local language have been translated into English by the author.

I wish to thank all lichenologists who have made their lichen material available, particularly Franz BERGER, Josef HAFELLNER, Josef HALDA (& Zdenek PALICE), Toby SPRIBILLE, Roman TÜRK, Gennadi URBANAVICHUS (& Ira URBANAVICHENE), Viktoria WAGNER, and Clifford WETMORE. Several specimens have been kindly determined by Helmut MAYRHOFER, Stepanka SLAVÍKOVÁ-BAYEROVÁ, and Mohamad SOHRABI.

OBERMAYER W. 2009: **Lichenotheca Graecensis**, Fasc. 17 (Nos 321–340). - Fritschiana 65: 1–6.
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321. **Aspicilia fruticulosa** (Eversm.) Flagey

KAZAKHSTAN, Akmolinskaya Oblast (=Akmola Province), 20 km SE of the Tengiz Lake, banks of the river Kulanotpes, 4 km NNW of the town Kulanutpes, 50°11'34"N, 69°30'11"E, 340 m alt., S-exposed hill on river bank, on sandy to loamy soil in steppe.

Note: Almost all issued specimens with (at least young) apothecia.

16.VII.2007 leg. Viktoria Wagner (L-0070), det. Mohamad Sohrabi (I.2009)

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322. **Biatora turgidula** (Fr.) Nyl.

AUSTRIA, Oberösterreich (=Upper Austria), Kalkalpen National Park, Reichraminger Hintergebirge, Langmoos, SE-facing slopes of 'Großer Größtenberg', 47°45'45''N, 014°26' 27''E, 1190 m alt., on rotten wood of *Picea abies*.

14.VIII.2007 leg. & det. Roman Türk (44788) & Wolfgang Mayer

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323. **Cetraria islandica** (L.) Ach.

[all specimens with apothecia]

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Koralpe, 17.5 km W of the centre of Deutschlandsberg, 3.7 km SW of Weinebene (parking area), 200 m SE of 'Grillitschhütte', 46°48'55''N, 014°59'10''E, GF 9155/4, 1750 m alt., alpine meadow, on ground.

Note: The richly fruiting material has been pictured in Obermayer W. 2008: Fotografische Dokumentation einer ungewöhnlich reich fruchtenden Aufsammlung von *Cetraria islandica* (L.) Ach. (mit einem historischen Abriss zur Darstellung fertiler Thalli, Anmerkungen zur Gestalt der Pycnosporen und einigen Notizen zum Gebrauch des ‚Kramperltees'). - Mitteilungen des Naturwissenschaftlichen Vereines für Steiermark 138: 113-158.

05.VII.2008 leg. Walter Obermayer (11524), Fabian & Stefanie Obermayer, det. Walter Obermayer

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324. **Cladonia bellidiflora** (Ach.) Schaerer

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Koralpe, 18 km W of Deutschlandsberg, 700 m NE below the summit 'Kleiner Speikkogel', just SW of the lake Speiksee, 46°47'10''N, 014°59'15''E, GF 9255/2, 1800 m alt., mica slate outcrops with shrubbery (*Alnus alnobetula* and *Rhododendron ferrugineum*), on inclined faces of rocks covered with duff.

25.V.2008 leg. & det. Josef Hafellner (72720)

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325. **Cyphelium inquinans** (Sm.) Trevis.

AUSTRIA, Kärnten (=Carinthia), Steirisches Randgebirge, Koralpe, 10.3 km ESE of the centre of Wolfsberg, uppermost part of the valley 'Rassingbach Graben', SW above 'Pomseben' (near Pomswasserfall), 1.5 km E of the lodge Hipfelhütte, 46°48'25''N, 014°57'55''E, GF 9155/4, 1640 m alt., subalpine primeval spruce forest (NE-exposed slopes), on bark of *Picea abies*.

8.V.2002 leg. Josef Hafellner (71857), Barbara Emmerer & Harald Komposch, det. Josef Hafellner

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326. **Dactylina arctica** (Hook. f.) Nyl.

[all specimens with apothecia !]

U.S.A., Alaska, NE of Fairbanks, Steese Highway at Twelvemile Summit, north of the road, near rock outcrops, Twelvemile Summit, 65°24'35''N, 145°58'48''W, 1109 m alt., moist alpine tundra, on ground.

2.IX.2008 leg. Toby Spribille (s.n.) [with Celia Miller, Christian Printzen, Jasmin Seifried], det. Toby Spribille

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327. **Dermatocarpon rivulorum** (Arnold) Dalla Torre & Sarnth.

RUSSIA, Southern Siberia, Tuva Republic (near Buryatia boundary), East Sayan Range, about 200 m W of Pyatiozernyi Pass, 52°31'45.8''N, 098°48'57.5''E, 2300 m alt., lichen tundra with small streams, on pebbles (abundant).

11.VIII.2007 leg. & det. Gennadi Urbanavichus (s.n.)

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328. **Elixia flexella** (Ach.) Lumbsch

AUSTRIA, Kärnten (=Carinthia), Gurktaler Alpen, Nockberge, 2 km S of the saddle 'Turracher Höhe', 46°54'15''N, 013°52'46''E, GF 9049/3, 1700 m alt., Pinus-cembra-forest, along a roadside, on wood of a *Larix decidua* stump.

29.VIII.2008 leg. Josef Halda, Stenek Palice (12407) & Jana Steinová, det. Zdenek Palice

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329. **Icmadophila ericetorum** (L.) Zahlbr.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, 7.9 km ESE of Obdach, Ameringkogel massif, S-facing slopes and ridges of Weißenstein, E of the lodge Weißensteinhütte, shortly N of Melcheben, 47°03'25''N, 014°48'00''E, GF 8954/2, 1800 m alt., subalpine forest area with *Picea abies* and *Larix decidua*, on decayed logs.

3.IX.2005 leg. & det. Josef Hafellner (65579)

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330. **Lepraria granulata** Slavíková-Bayerová

- paratype -

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, SE-facing slopes of Speikkogel, 17 km W of Köflach, 2 km SW of Salzstiegelhaus, 47°03'16"N, 14°51'16"E, GF 8955/1, 1855 m alt., siliceous outcrops in alpine pasture, on *Grimmia sessitana* [det. Heribert Köckinger] (in fissures of low rocks).

Note: TLC of *Lepraria granulata*: Atranorin (maj.), two unknown fatty acids (running close to rangiformic and norrangiformic acids); lichen spot test: C-. Each specimen consists of several single thalli (covering *Grimmia sessitana*) which are fixed with glue. At least 3 thalli of each specimen have been analyzed by TLC. - Some specimens (e.g. in GZU) show intermixed *Lepraria neglecta* (TLC : alectorialic syndrom acid (maj.), angardianic acid (min./tr.); lichen spot test: C+red). Two specimens (one in GZU) are parasitized by the lichenicolous fungus *Pyrenidium actinellum* (on *Lepraria granulata*).

5.VIII.2006 leg. Walter Obermayer (11201), det. Stepanka Slavíková-Bayerová (2007)

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331. **Lobaria quercizans** Michx.

U.S.A., Minnesota, Lake County, Superior National Forest, east of Hare Lake, 14.5 km west of Tofte, 47°36'04"N, 91°02'11"W, 546 m alt., mature sugar maple stand with some old yellow birch (*Betula alleghaniensis*), on sugar maple (*Acer saccharum*).

Note: Already issued (sub no. 92) by Wetmore, C.M. 2000: Schedae Lichenes Exsiccati, distributetd by the University of Minnesota. - Department of Plant Biology and Bell Museum of Natural History.

28.VII.1999 leg. & det. Clifford M. Wetmore (83137)

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332. **Melanelixia albertana** (Ahti) O.Blanco & al.

[Syn.: *Melanelia albertana*]

RUSSIA, Southern Siberia, Buryatia Republic, Oka district, East Sayan Range, valley of the Sentsa river, 52°36'55.2"N, 099°22'16.9"E, 1410 m alt., larch forest, on bark of *Salix*.

8.VIII.2007 leg. & det. Gennadi Urbanavichus & Ira Urbanavichene (s.n.)

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333. **Micarea lignaria** (Ach.) Hedl.
var. **endoleuca** (Leight.) Coppins

GERMANY, Bayern (=Bavaria), Allgäu, Ammergauer Alpen (Ammergebirge), 11 km ENE of Füssen, 3.3 km SE of Buching, 1 km S of the confluence of the rivulets Halblech and Lobentalbach, 47°35'50"N, 10°50'30"E, 950-1000 m alt., mixed forest with *Abies alba, Acer pseudoplatanus, Picea abies,* and *Fagus sylvatica*, on bark of *Picea abies* (partly covered with bryophytes).

Note: Thallus Pd-, KC+ slowly (but persistently) orange.

6.IX.2004 leg. & det. Walter Obermayer (11795)

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334. **Nephromopsis laureri** (Kremp.) Kurokawa
[Syn.: *Cetraria laureri, Tuckneraria l.*]

RUSSIA, Southern Siberia, Buryatia Republic, Oka district, East Sayan Range, valley of the Sentsa river, 52°35'41.9"N, 099°02'26.6"E, 1530 m alt., larch forest, on bark of *Larix sibirica*.

9.VIII.2007 leg. & det. Gennadi Urbanavichus & Ira Urbanavichene (s.n.)

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335. **Phaeophyscia pusilloides** (Zahlbr.) Essl.

AUSTRIA, Tirol, Osttirol, 34 km NW of Lienz, Defereggen valley, in the village 'St.Jakob in Defereggen', near the inn 'Unterrein', 46°55'05"N, 012°19'55"E, GF 9039/4, 1400 m alt., roadside trees in meadows, on stem bark of *Acer pseudoplatanus*.

Note: All specimens with apothecia.

18.IX.2004 leg. & det. Roman Türk (35163)

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336. **Ramalina fraxinea** (L.) Ach.

AUSTRIA, Steiermark (=Styria), Dachsteingruppe, 4.4 km NNW of Schladming, Ramsau, 0.5 km N of the church of Ramsau-Ort, 47°25'40"N, 013°39'00"E, GF 8547/4, 1180 m alt., roadside trees in meadows, on bark of *Acer pseudoplatanus* (NW-exposed sides).

Note: TLC: Usnic acid (tr.; only in apothecia in higher concentration), unknown fatty acid (5-6/3-4/5), unknown terpenoid (6/7-8/6-7).

19.II.2007 leg. & det. Walter Obermayer (11321)

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337. **Rhizocarpon lecanorinum** Anders

AUSTRIA, Oberösterreich (=Upper Austria), Schärding district, 14.5 km ESE of Schärding, 1.7 km WNW of Kopfing, Beharding 3, 48°26'35''N, 013°38'10''E, GF 7547/4, 540 m alt., barn with tiled roof, on roof tiles (S-exposed).

Note: The locality does not exist anymore because the barn has already broken down.

16.VII.2007 leg. & det. Franz Berger (s.n.)

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338. **Rinodina beccariana** Bagl.

Canary Islands [SPAIN], La Gomera, Cañada Grande SW above Agulo, western ridge, 28°10'20''N, 017°12'W, 750 m alt., basaltic outcrops, on rocks near the ground (partly with a thin layer of soil).

Note: TLC (by Toby Spribille): Atranorin, zeorin, 2 unknowns (tr.).

16.II.1991 leg. Josef Hafellner (73150), det. Helmut Mayrhofer (2009)

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339. **Umbilicaria vellea** (L.) Hoffm.

AUSTRIA, Kärnten (=Carinthia), Steirisches Randgebirge, Koralpe, 13 km E of Wolfsberg, W-facing slopes of a ridge between the summits Weberkogel and Handalm, 46°50'55''N, 015°00'45''E, GF 9156/3, 1740 m alt., mica slate outcrops (at current timberline), on overhanging rock faces.

31.VIII.2008 leg. & det. Josef Hafellner (71660)

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340. **Vulpicida tilesii** (Ach.) J.-E.Mattsson & M.J.Lai

RUSSIA, Southern Siberia, Buryatia Republic (near Tuva boundary), Oka district, East Sayan Range, Pyatiozernyi Pass, 52°31'45.8''N, 098°48'57.5''E, 2400 m alt., lichen tundra, on soil.

11.VIII.2007 leg. & det. Gennadi Urbanavichus (s.n.)

Dupla Graecensia Lichenum (2009, nos 581–680)

Walter OBERMAYER*

OBERMAYER W. 2009: Dupla Graecensia Lichenum (2009, nos 581–680). - Fritschiana (Graz) 65: 7–32. – ISSN 1024-0306.

Abstract: Dupla Graecensia Lichenum (2009, nos 581–680) comprises 100 collections of lichen duplicates from Albania (Tiranë district), Argentinia (prov. Misiones; prov. Buenos Aires), Armenia (prov. Syunik), Australia (Tasmania; Western Australia), Austria (Carinthia; Salzburg; Styria; Tirol; Upper Austria), Brazil (Minas Gerais), China (Tibet, prov. Sichuan), Czech Republic, France (Corse; Réunion), Germany (North Rhine-Westphalia), Greece (Crete; Makedonia), Ireland, Italy (Piedmont; Toscana), Liechtenstein, Montenegro, North Korea, Russia (Krasnoyarsk Kray), Spain (Canary Islands), Switzerland (Bern; Graubünden), Turkey, U.S.A (Alaska; Hawaii; Montana), Ukraine (Crimean Peninsula), Uruguay, and Zimbabwe. TLC-investigations were carried out for 16 lichenized taxa: *Cetrelia cetrarioides, Cladonia furcata, Cladonia macroceras, Cladonia singularis, Dimelaena oreina, Lecanora subaurea, Lobaria retigera, Loxospora elatina, Rinodina alba, Rinodina griseosoralifera, Rinodina trachytica, Stereocaulon alpinum, Usnea cavernosa, Usnea ceratina, Usnea subfloridana, Xylographa vitiligo*. Fertile material of *Cetraria islandica, Lecanora subaurea*, and *Xylographa vitiligo* is included. Isotypes of *Caloplaca yarraensis* S.Y.Kondr. & Kärnefelt are distributed (no 596).

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The dwarf-exsiccata 'Dupla Graecensia Lichenum' is issued by the herbarium of the Institute for Plant Sciences of the Karl-Franzens-University, Graz, Austria (international abbreviation: GZU). It includes lichens from all over the world with at least five duplicates of each collection. Each institution receiving a duplicate is cited (at the bottom line of each individual label) with its international herbarium abbreviation: The herbaria in Canberra (CANB), Graz (GZU), Munich (M), New York (NY), and Uppsala (UPS) are receiving all distributed specimens continuously. 'Dupla Graecensia Lichenum' is published as text version (with online corrections) under http://www.uni-graz.ac.at/walter.obermayer/dupl-graec.htm. A downloadable PDF-file can be found under http://www.uni-graz.at/walter.obermayer/dupla-graecensia-lichenum-2009.pdf. Label texts originally drafted in a local language have been translated into English by the author.

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581. **Acarospora moenium** (Vain.) Räsänen

[Syn.: *Aspicilia moenium*]

AUSTRIA, Oberösterreich (=Upper Austria), Eferding district, municipality 'Aschach an der Donau', area of the railway station, 48°21'46"N, 014°00'49"E, GF 7560, 275 m alt., on brick debris. – 18.XI.2000, leg. & det. Franz Berger (s.n.).

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582. **Anaptychia kaspica** Gyeln.

ARMENIA, prov. Syunik, area NE of Meghri, road from Shvandzor to Kapan, between Gyumarants and the pass, 39°00'31-35"N, 046°23'10-12"E, 1800-1900 m alt., *Quercus* forest and semi dry meadow, [substrate not given]. – 19.VI.2008, leg. Kristina Kugler & Ernst Vitek (08-L03-12), det. Shahane Harutyunyan & Helmut Mayrhofer.

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583. **Arctocetraria nigricascens** (Nyl.) Kärnefelt & A.Thell

RUSSIA, Krasnoyarsk Kray (N of Central Siberia), Severnaya Zemlya Archipelago, NW extremity of Bol'shevik Island, center of the peninsula with cape Baranova between Shokal'skogo Strait and Mikoyan Bay, 79°17'N, 101°50'E, 40 m alt., gently rolling mesic to moist silt-gravelly plain with sparse graminoid-lichen-bryophyte vegetation, on soil. – 20.VII.1996, leg. & det. Mikhail Zhurbenko (96168).

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584. **Aspicilia caesiocinerea** (Nyl. ex Malbr.) Arnold

AUSTRIA, Tirol, Osttirol, Defereggental, bank of the river Schwarzach E of 'St.Jakob in Defereggen', just below the confluence with the brook 'Tiroler Almbach', 46°54'58"N, 012°20'12"E, GF 9040/3, 1380 m alt., on gneissic boulders (at the brookside). – 10.IX.2006, leg. E. Schöpflin (hb. Hafellner 67461), det. Josef Hafellner.

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585. **Bacidia subincompta** (Nyl.) Arnold

AUSTRIA, Oberösterreich (=Upper Austria), 7.8 km SE of Mondsee, near the eastern shore of the lake Mondsee, Brunnfeld between the villages Pichl-Auhof and Ort, 47° 48'33"N, 013°25'31"E, GF 8146/4, 605 m alt., on bark of *Fraxinus excelsior*. – 05.IV.2008, leg. Roman Türk (43237) & Sofie Pfleger, det. Roman Türk.

Note: Epithecium greenish-black, hypothecium brown, spores rather short (20-28 x 3-3.5 µm), with often only 3 to 5(-6) septa.

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586. **Baeomyces placophyllus** Ach.

SWITZERLAND, Kanton Graubünden, Urner Alps, Gotthardgruppe, 6 km NE of Andermatt, Oberalppass, shortly S above the pass, 46°39'20"N, 008°40'15"E, 2130 m alt., outcrops of siliceous schist in alpine vegetation, on soil. – 23.VIII.2006, leg. & det. Walter Obermayer (11542).

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587. **Bellemerea alpina** (Sommerf.) Clauzade & Cl.Roux

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Steinplan 8 km SE of Knittelfeld, summit area just N below the cross on the summit, 47°09'45"N, 014°54'20"E, GF 8855/1, 1660 m alt., clearances in subalpine *Picea abies* forest with low outcrops of mica slate, on inclined faces of rocks. – 30.VII.2005, leg. & det. Josef Hafellner (65119).

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588. **Bryophagus gloeocapsa** Nitschke ex Arnold

AUSTRIA, Kärnten (=Carinthia), Steirisches Randgebirge, Stubalpe, Höllgraben E of Reichenfels, orographically left (N-exposed) slopes NW below the 'Jaukenschlößl', 47°01'15"N, 014°47'20"E, GF 8954/4, 1280 m alt., N-exposed roadcut, on detritus. – 06.VI.2006, leg. Josef Hafellner (66276) & Lucia Muggia, det. Josef Hafellner.

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589. **Bryoria bicolor** (Ehrh.) Brodo & D.Hawksw.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Steinplan 8 km SE of Knittelfeld, summit area just N below the cross on the summit, 47°09'50"N, 014°54'15"E, GF 8855/1, 1660 m alt., clearances in subalpine *Picea abies* forest with low outcrops of mica slate, on thick cover of bryophyes on the upper edges of rocks. – 30.VII.2005, leg. & det. Josef Hafellner (64686).

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590. **Buellia lindingeri** Erichsen

Canary Islands [SPAIN], Tenerife, Macizo de Anaga, NW of Las Carboneras, road to Chinamada, 28°33'N, 016°16'W, 700 m alt., relicts of a laurel forest (vicinity of a resting place), on bark of *Ilex perado* ssp. *platyphylla*. – 27.IV.2005, leg. & det. Josef Hafellner (64202).

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591. **Caloplaca ammiospila** (Wahlenb.) H.Olivier

AUSTRIA, Kärnten (=Carinthia), Karnische Alpen, 8.2 km SW of Hermagor, 2.4 km ENE of Nassfeldpass, S-facing slopes of Gartnerkofel, 50 m below the summit, 46°34'15"N, 013°18'12"E, 2140 m alt., alpine meadow with calcareous outcrops (Triassic limestone), on plant debris. – 01.IX.2007, leg. & det. Walter Obermayer (11541).

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592. **Caloplaca cinnabarina** (Ach.) Zahlbr.

URUGUAY, dept. Colonia, Cerros de San Juan, 34°12'S, 57°57'W, 100 m alt., N-exposed slope of a hill, on rocks. – 12.II.1969, leg. & det. Hector S. Osorio (6276).

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593. **Caloplaca felipponei** Zahlbr.

URUGUAY, Montevideo, Punta Gorda, 34°54'S, 056°05'W, on rocks on seashore (locally common). – 16.I.1977, leg. & det. Hector S. Osorio (7492).

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594. **Caloplaca puiggarii** (Müll.Arg.) Zahlbr.

ARGENTINA, prov. Buenos Aires, Sierra de la Ventana, Cerro Ceferino, 38°09'S, 061°48'W, foot of a hill, on rocks. – 13.-16.III.1975, leg. & det. Hector S. Osorio (7087).

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595. **Caloplaca sinapisperma** (Lam. ex DC.) Maheu & Gillet

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe W of Köflach, SW-facing ridge of Rappoldkogel, N above the saddle 'Hirschegger Sattel', 47°04'35"N, 014°52'40"E, GF 8955/1, 1660 m alt., low marble outcrops on a pasture, on bryophytes and plant remnants. – 18.VIII.2006, leg. & det. Josef Hafellner (66714).

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596. **Caloplaca yarraensis** S.Y.Kondr. & Kärnefelt

- isotype - [holotype in PERTH]

AUSTRALIA, Western Australia, Shire of Carnamah, near Carnamah, E edge of the Yarra Yarra salt lake, 29°45'36"S, 115°51'42"E, 250 m alt., on base of *Eucalyptus loxophylla* and twigs of *Halosarcia*. – 04.I.2004, leg. & det. Sergey Kondratyuk (20413), Ingvar Kärnefelt & R.J. Cranfield.

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597. **Candelariella rhodax** Poelt & Vězda

UKRAINE, Autonomous Republic of Crimea (Crimean Peninsula), Bakhchysarai (Бахчисарй), limestone cliffs above the town, 44°45'04.68"N, 033°53'06.88"E, 300 m alt., on limestone rocks. – 09.VI.2006, leg. & det. Jan Vondrák & Jaroslav Šoun (4609).

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598. **Carbonea vorticosa** (Flörke) Hertel

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe W of Köflach, 'Peterer Riegel', half way on the ridge between 'Peterer Sattel' and 'Peterer Riegel', 47°02'35"N, 014°50'30"E, GF 8955/3, 1850 m alt., serpentinite outcrops in dwarf-shrub heath, on small phyllitic rocks. – 26.V.2005, leg. & det. Josef Hafellner (65875).

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599. **Cetraria islandica** (L.) Ach.

[with apothecia, in GZU up to 1.3 cm in diam.]

AUSTRIA, Steiermark (=Styria), Gurktaler Alpen, 5 km SW of the centre of St.Lambrecht, Kuhalm ('Kuhalpe'), path from 'Stiftshütte' [probably the hunting lodge 'Kuhalm'] to the summit of Kuhalm, 47°02'25"N, 014°15'05"E, GF 8951/4, 1650 m alt., Vaccinietum myrtilli, on ground. – 24.VII.1944, leg. & det. Karl Schittengruber (770).

Note: Determined by Karl Schittengruber as *Cetraria islandica* f. *platyna* (Ach.) Schaerer.

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600. **Cetraria islandica** (L.) Ach.

[with apothecia]

AUSTRIA, Steiermark (=Styria), Gurktaler Alpen, 4.8 km SSW of Turrach, Turracher Höhe, 46°55'N, 013°52'E, GF 9049/3, 1820 m alt., on decayed stump. – 01.VIII.1941, leg. & det. Karl Schittengruber (855).

Note: Determined by Karl Schittengruber as *Cetraria islandica* f. *platyna* (Ach.) Schaerer.

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601. **Cetrelia cetrarioides** (Delise ex Duby) W.L.Culb. & C.F.Culb.

AUSTRIA, Kärnten (=Carinthia), Karnische Alpen, 7.2 km SSW of the railway station of Kötschach-Mauthen, 3 km E of the pass area of 'Plöckenpass', valley of the brook 'Angerbach', 46°36'25-30"N, 012°58'50-59"E, GF 9343/4, 1300-1350 m alt., mixed forest with predominant *Fagus sylvatica*, on *Fagus sylvatica*. – 31.VIII.2007, leg. & det. Walter Obermayer (11431).

Note: TLC (performed for every single specimen): Perlatolic acid (major) [no imbricaric acid], atranorin (minor or traces). A typical *Cetrelia cetrarioides* s.str., with white dotted (pseudocyphellate) lower side of the thallus and rather smooth soralia with fine soredia.

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602. **Chaenotheca brunneola** (Ach.) Müll.Arg.

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab area, Meßnerin massif, 25 km NW of Kapfenberg, Rabenstein S above the tavern 'Bodenbauer', 47°34'15"N, 015°06'35"E, GF 8456/2, 1480 m alt., forest with *Picea abies* and *Larix decidua* (E-exposed slope depression), on decayed stump. – 04.VII.2004, leg. & det. Josef Hafellner (63721).

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603. **Cladonia calycanthoides** (Vain.) Ahti & Marcelli

BRAZIL, Minas Gerais, Municipal de Catas Altas, Serra do Caraça, near Caraça monastery, 500 m on trail to Cascatona, 20°06'S, 043°29'W, 1300 m alt., [substrate not given]. – 17.-22.IX.1997, leg. Gerhard Follmann (06J25), det. Harrie Sipman (2006).

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604. **Cladonia candelabrum** (Bory) Nyl.

Mascarene Islands, Réunion [FRANCE], south side of 'Piton de la Fournaise', Forêt de la Crête, along the trail between Cascade de la Ravine and Piton Lardé, 21°19'S, 055°45'E, 1000-1300 m alt., on ground. – IV.1989, leg. Gerhard Follmann (s.n.) & Ingeborg Follmann-Schrag, det. Harrie Sipman (2006).

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605. **Cladonia crispata** (Ach.) Flot.

NORTH KOREA, Kumgangsan, Manmulsan, valley of Onjong-ri, on small detritus material above granite boulder. – 03.X.1988, leg. Siegfried Huneck (KDVR88-106), det. Teuvo Ahti (1989).

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606. **Cladonia digitata** (L.) Hoffm.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 9.6 km E of Obdach, E-facing slopes of Ameringkogel, 3.7 km W of Hirschegger Sattel, SE of the hunting lodge Steinmoarhütte, 47°04'10"N, 014°49'25"E, GF 8954/2, 1620 m alt., forest area with *Picea abies* and *Larix decidua*, on decayed stumps. – 10.VII.2006, leg. & det. Josef Hafellner (66411).

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607. **Cladonia fenestralis** Nuno

NORTH KOREA, Kumgangsan, Manmulsan, valley of Onjong-ri, on small detritus material above granite boulder. – 03.X.1988, leg. Siegfried Huneck (KDVR88-106a), det. Teuvo Ahti (1989).

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608. **Cladonia furcata** (Huds.) Schrader

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 13 km WNW of the centre of Köflach, path from Gaberl to 'Altes Almhaus', 47°05'45"N, 014°55'05"E, GF 8955/2, 1580 m alt., forest with *Picea abies* and *Larix decidua*, on ground. – 05.IX.2008, leg. & det. Walter Obermayer (11555).

Note: TLC: Fumarprotocetraric acid (performed once for every single specimen).

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609. **Cladonia macroceras** (Delise) Hav.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, SW of Köflach, NW of 'Packsattel', midway between 'Knödelhütte' and 'Bernsteinhütte', Lahnofen just SE below the hilltop, 46°59'40"N, 014°55'45"E, GF 9055/2, 1510 m alt., small outcrops and big boulders of mica slate (in loose forest with *Picea abies* and *Larix decidua*), on duff layer (covering boulders). – 10.VIII.2005, leg. & det. Josef Hafellner (64888).

Note: TLC: Fumarprotocetraric acid.

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610. **Cladonia rangiferina** (L.) Weber ex F.H.Wigg.

AUSTRIA, Kärnten (=Carinthia), Steirisches Randgebirge, Stubalpe, Lichtengraben N of 'St.Leonhard im Lavanttal', 1 km ENE of the spring 'Goldbründl', orographically right situated slopes just above the bottom of the valley near a bridge, 47°00'25"N, 014°48'30"E, GF 8954/4, 1140 m alt., boulder field (gneiss and mica slate) with groups of *Picea abies*, on humus layer between bryophytes. – 02.VII.2006, leg. Josef Hafellner (66348) & Lucia Muggia, det. Josef Hafellner.

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611. **Cladonia rangiferina** (L.) Weber ex F.H.Wigg.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Größenberg (=Größing) S of Zeltweg, NNW running ridge towards Eppenstein, Wetterkopf, 47°05'30"N, 014°47'15"E, GF 8954/2, 1900 m alt., gneissic boulders with single conifers, on ground (NE-exposed, amongst dwarf-shrubs). – 15.VIII.2006, leg. & det. Josef Hafellner (66524).

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612. **Cladonia rangiformis** Hoffm.

ITALY, Toscana, prov. Pisa, Monte Pisano, NW of the village Buti, along the road to Calci, 43°44'00"N, 010°34'20"E, 290 m alt., olive plantation interspersed with low stone walls, on ground. – 28.X.1978, leg. & det. Josef Hafellner (41683).

Note: With apothecia.

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613. **Cladonia scabriuscula** (Delise) Nyl.

GERMANY, North Rhine-Westphalia, Kreis Euskirchen, Mechernicher Voreifel, valley of the river Urft above Nettersheim, near a railroad embankment (near 'Römische Steinmetzwerkstatt'), 50°29'N, 006°37'E, GF 5505, on ground. – 23.X.2004, leg. Gerhard Follmann (s.n.), det. Harrie Sipman (2006).

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614. **Cladonia singularis** S.Hammer

U.S.A., Alaska, Skagway Borough, Klondike Gold Rush National Historic Park, White Pass: just S of U.S.A./Canada boundary on west side of pass corridor, east of highway, 59°37.331'N, 135°09.304'W, 1059 m alt., in alpine heath of *Harrimanella stelleriana*, on ground. – 31.VII.2008, leg. & det. Toby Spribille (26882) & Sergio Pérez-Ortega.
Note: TLC: Squamatic acid.

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615. **Cyphelium pinicola** Tibell

U.S.A., Montana, Lincoln County, northern Salish Mountains, summit (marked on topographic maps as '5447' – 'Grimm Mountain') ca. 2 km NE of Sheep Mountain (WGS84/NAD83), 48°33'01"N, 115°05'22"W, 1645 m alt., in the middle of bedrock meadows, on decorticated branches of large, gnarled, old *Pseudotsuga menziesii* var. *glauca*. – 18.VI.2004, leg. & det. Toby Spribille (14097).

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616. **Cyphelium tigillare** (Ach.) Ach.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 16 km W of Köflach, 200 m SW of Salzstiegelhaus (Hirscheggersattel), 47°04'00"N, 014°52'10"E, GF 8955/1, 1560 m alt., edge of a forest (along a logging road), on wood. – X.1996, leg. & det. Walter Obermayer (11531).

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617. **Dermatocarpon reticulatum** H.Magn.

U.S.A., Montana, Sweet Grass County, just E of Springdale, hills just W of Mendenhall Creek Road, 45°44.022'N, 110°12.955'W, 1259 m alt., ridgetop, open scrub of *Artemisia* spp. and *Juniperus scopulorum*, on calcarous rocks. – 29.X.2007, leg. Toby Spribille (25347) & Viktoria Wagner, det. Othmar Breuß (2008).

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618. **Dimelaena oreina** (Ach.) Norman

[chemotype Va]

AUSTRIA, Steiermark (=Styria), Schladminger Tauern, Seewigtal, E-exposed outcrops above the lake 'Obersee', 47°21'08"N, 013°49'00"E, GF 8648/2, 1700 m alt., on siliceous rocks. – 17.VIII.2002, leg. Helmut Mayrhofer (15295) & Patrick Mayrhofer, det. Helmut Mayrhofer.

Note: TLC (performed at least three times for every single specimen): Usnic acid, stictic acid, constictic acid.

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619. **Diploschistes actinostomus** (Pers. ex Ach.) Zahlbr.

Canary Islands [SPAIN], Tenerife, Macizo de Anaga, W-exposed slopes of 'Barranco del Rio', path from Chinamada (NW of Carboneras) to 'Punta del Hidalgo', 28°33'40"N, 016°18'00"W, 490 m alt., shrubbery of succulents, on volcanite outcrops (near the ground). – 27.IV.2005, leg. & det. Josef Hafellner (64281).

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620. **Fellhanera bouteillei** (Desm.) Vězda

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Seckauer Tauern, forested mountain ridge NW of St.Michael, N-facing slopes below the 'Antoniwand', SSE above the hamlet 'Wolfgruben', 47°22'30"N, 014°56'30"E, GF 8655/2, 860 m alt., forest with *Picea abies* and *Larix decidua*, on needles of *Picea abies*. – 01.VI.2000, leg. Josef Hafellner (51375) & Angela Hafellner, det. Josef Hafellner.

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621. **Fluctua megapotamica** (Malme in J.Steiner) Marbach

[Syn.: *Buellia megapotamica*]

URUGUAY, Maldonado, Rio de la Plata, Isla Gorriti, 34°58'S, 054°58'W, aerohaline zone, on branches of *Tamarix* sp. – 18.III.1984, leg. & det. Hector S. Osorio (8351).

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622. **Hypogymnia bitteri** (Lynge) Ahti

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 7.9 km ESE of Obdach, Ameringkogel massif, S-facing ridge of Weißenstein, 0.6 km E of the lodge Weißensteinhütte, N of Melcheben, 47°03'25"N, 014°48'00"E, GF 8954/2, 1800 m alt., on bark of *Larix decidua*. – leg. & det. Josef Hafellner (65542).

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623. **Hypogymnia lugubris** (Pers.) Krog

AUSTRALIA, Tasmania, Mount Field Natinal Park, Tarn Shelf, 42°41'S, 146°35'E, 1000 m alt., on shrubs (in bog/meadow). – 17.XI.1978, leg. J.O. Juvik (TAS1), det. Harrie Sipman (2006).

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624. **Hypotrachyna revoluta** (Flörke) Hale (s.l.)

AUSTRIA, Oberösterreich (=Upper Austria), Totes Gebirge, 10.7 km S of 'Grünau im Almtal', E-shore of the lake 'Almsee', 47°45'25"N, 013°57'44"E, GF 8249/2, 615 m alt., on *Picea abies*. – 12.III.2007, leg. & det. Roman Türk (41428).

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625. **Lecania naegelii** (Hepp) Diederich & P.Boom

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Teigitschgraben NW of Hirschegg, 1 km NW of the tavern Spengerwirt, 47°02'40"N, 014°55'20"E, GF 8955/4, 990 m alt., row of trees along the brookside, on branches of *Alnus incana* in the lower part of the crown. – 29.X.2006, leg. & det. Josef Hafellner (66924).

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626. **Lecanora cavicola** Creveld

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe W of Köflach, W-facing area of the summit 'Rappoldkogel', NE above the anticline 'Hirschegger Sattel', 47°05'00"N, 014°53'00"E, GF 8955/1, 1920 m alt., low boulders and outcrops of mica slate, on overhanging rock faces. – 10.VIII.2003, leg. & det. Josef Hafellner (65489).

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627. **Lecanora intumescens** (Rebent.) Rabenh.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Teigitschgraben NW of Hirschegg, 1 km NW of the tavern Spengerwirt, 47°02'40"N, 014°55'20"E, GF 8955/4, 990 m alt., row of trees along the brookside, on stem bark of *Alnus incana*. – 29.X.2006, leg. & det. Josef Hafellner (66897).

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628. **Lecanora pruinosa** Chaub.

GREECE, Makedonia, Kavala, Zygos N of Kavala, E of Philippi, 41°01'06"N, 026° 23'40"E, 327 m alt., on overhanging faces of limestone rocks. – 20.X.2006, leg. & det. Roman Türk (40164).

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629. **Lecanora subaurea** Zahlbr.

[all issued specimens with apothecia]

SWITZERLAND, Kanton Bern, Urner Alps, 20 km NE of Meiringen, area of Steigletscher (below Sustenpass), just SW of the lake Steisee, 46°43'24"N, 008°25' 45"E, 1990 m alt., boulder field in alpine vegetation, on siliceous, Fe-rich rock (NNW-exposed faces). – 26.VIII.2006, leg. & det. Walter Obermayer (11560).

Note: TLC (mixture of thallus and apothecia): rhizocarpic acid (maj.), pannarin (maj.), zeorin (maj.), rangiformic acid (min.), [probably epanorin (tr.)].

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630. **Lepraria coriensis** (Hue) Sipman

ZIMBABWE, Inselberg Domboshava National Park ('ZW17/31c3=ZW43'), Domboshava, 17°36.5'S, 031°10.5'E, 1640 m alt., Glockenberg-type, 110 m high, granite, surrounded by farmland, on rock. – 23.II.1994, leg. Uwe Becker (243228), det. Harrie Sipman (2006).

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631. **Leptogium marginellum** (Sw.) Gray

Hawaii [U.S.A.], Oahu, Haleiwa, Helemano Gulch, 21°33'N, 158°04'W, 245 m alt., shrubby slope, on stems of *Dodonaea*. – 22.V.1970, leg. Otto & Isa Degener (32387), det. Harrie Sipman (2006).

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632. **Leptogium phyllocarpum** (Pers.) Mont.

URUGUAY, Canelones, Bañado del Negro, 34°48'S, 055°57'W, 50 m alt., on bark of *Salix*. – 27.I.1980, leg. & det. Hector S. Osorio (5139).

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633. **Letharia vulpina** (L.) Hue

TURKEY, Bolu Province, Ala Dağ, road from Bolu to Kibriscik, 29 km S of Bolu, 40° 34.064'N, 031°39.172'E, 1467 m alt., open woodland, on bark of *Pinus sylvestris*. – 07.VI.2007, leg. Toby Spribille (22978) & Petra Lembcke, det. Toby Spribille (dupl. [DNA-sequenced] det. Susanne Altermann, Univ. California Santa Cruz, 2007).

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634. **Lobaria comorensis** (Kremp.) Müll.Arg.

Mascarene Islands, Réunion [FRANCE], [no further detailed locality given], 21°10'S, 055° 40'E, [substrate not given]. – IV.1989, leg. Gerhard Follmann (s.n.) & Ingeborg Follmann-Schrag, det. Harrie Sipman (2006).

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635. **Lobaria pulmonaria** (L.) Hoffm.

ALBANIA, Central Albania, Tiranë district, on the mountain Dajt, E above the town Tiranë (=Tirana), between the restaurant 'Panorama' and the saddle 'Qafa e Qershisë', 41°22'15"N, 019°55'20"E, 1100 m alt., deciduous forest over limestone, on a W-exposed slope, on bark of *Acer opalus*. – 20.VIII.2007, leg. & det. Josef Hafellner (71107) (field trip together with Mauro Tretiach, Lucia Muggia, Massimo Piccotto and Jani Marka).

Note: Specimen in GZU with apothecia. Specimens infested with *Plectocarpon lichenum* will be distributed in the exsiccata 'Lichenicolous Biota'.

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636. **Lobaria retigera** (Bory) Trevis.

CHINA, Tibet, prov. Sichuan, Tibetan fringe mountains (=Hengduan Shan), 150 km E of Litang, Daxue Shan, slopes SE of the pass (Zhedou Shankou), between Xinduqiao and Kangding, 30°00'55"N, 101°51'32"E, 3570 m alt., SSE-exposed slope with scrub (*Quercus* cf. *aquifolioides, Rosa* cf. *sericea, Potentilla, Juniperus, Salix*, and bamboo), on siliceous rock (N-exposed, 60 cm above ground). – 14.VIII.2000, leg. & det. Walter Obermayer (09980).

Note: TLC: Retigeric acid A (maj.), retigeric acid B (maj.), unknown terpenoids (tr.); for differences to *Lobaria pseudoretigera* see Sipman H. 2004: The species of *Lobaria* (lichenized Ascomycota) in New Guinea. - Bibliotheca Lichenologica 88: 573-606.

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637. **Loxospora elatina** (Ach.) A.Massal.

AUSTRIA, Steiermark (=Styria), Dachsteingruppe, 9.7 km NW of the centre of Schladming, road from Ramsau to Filzmoos, WSW-facing slopes of Durchat, 500 m N of Mühlebner, forestry road to 'Stierwald', 47°26'07"N, 013°34'46"E, GF 8547/4, 1170 m alt., S-exposed edge of a *Picea-Abies*-forest, on bark of *Abies alba*. – 16.II.2008, leg. & det. Walter Obermayer (11474).

Note: TLC: Thamnolic acid (maj.), elatinic acid (min.), squamatic acid (tr.), terpenoid 7/6-7/6 (maj.), terpenoid 6-7/5/5-6(min.), atranorin (tr.).

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638. **Melanelia stygia** (L.) Essl.

RUSSIA, Krasnoyarsk Kray (N of Central Siberia), center of Taimyr Peninsula, Byrranga Mountains, southern extremity of Levinson-Lessing Lake, 74°25'N, 098°48'E, 50 m alt., pebbles with scattered boulders (along the lake shore), on pebbles (locally rather common). – 31.VII.1995, leg. & det. Mikhail Zhurbenko (95171).

Note: The material partly shows terete thalli, a morphological form, which was described by Oxner under the name *Parmelia teretiuscula* Oxner (Nom. illegit., Art. 53.1).

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639. **Melanohalea elegantula** (Zahlbr.) O.Blanco & al.

AUSTRIA, Oberösterreich (=Upper Austria), urban area of Linz, Pöstlingberg, E of the church, 48°19'26"N, 013°15'32"E, GF 7651/4, 541 m alt., on *Aesculus hippocastanum*. – 06.VI.2006, leg. Roman Türk (39990) & Barbara Than, det. Roman Türk (2006).

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640. **Miriquidica leucophaea** (Flörke ex Rabenh.) Hertel & Rambold

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, SW of Köflach, NW of 'Packsattel', midway between 'Knödelhütte' and 'Bernsteinhütte', Lahnofen just SE below the hilltop, 46°59'40"N, 014°55'45"E, GF 9055/2, 1510 m alt., small outcrops and big boulders of mica slate (in open forest with *Picea abies* and *Larix decidua*), on inclined faces of boulders. – 10.VIII.2005, leg. & det. Josef Hafellner (64857).

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641. **Mycobilimbia hypnorum** (Lib.) Kalb & Hafellner

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, ruin of the fortress 'Klingenstein' W above the village Salla, ridge just W of the ruin, 47°06'25"N, 014°57'35"E, GF 8855/4, 1040 m alt., marble outcrops (clearing of a mixed forest with conifers), on bryophytes and plant remnants. – 19.VIII.2006, leg. & det. Josef Hafellner (66560).

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642. **Mycocalicium subtile** (Pers.) Szatala

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab area, Meßnerin massif, 25 km NW of Kapfenberg, Rabenstein S above the tavern 'Bodenbauer', 47°34'15"N, 015°06'35"E, GF 8456/2, 1480 m alt., forest with *Picea abies* and *Larix decidua* (E-exposed slope depression), on snags. – 04.VII.2004, leg. & det. Josef Hafellner (63120).

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643. **Myriotrema wightii** (Taylor) Hale

[Syn*.: Leptotrema wightii* (Taylor) Müll.Arg.]

ARGENTINA, prov. Misiones, San Ignacio, Pastoreo Chico, 27°19'S, 055°22'W, 275 m alt., on old trunk and branches of indigenous trees. – 20.II.1956, leg. J.E. Montes (10092A; ex hb. Osorio 5350), det. Mason Hale (1971).

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644. **Opegrapha viridis** (Pers. ex Ach.) Behlen & Desberger

AUSTRIA, Steiermark (=Styria), Sausal, 5 km W of Leibnitz, SE-facing base of Demmerkogel, anterior part of Stumpfgraben NW of Heimschuh, 46°46'15"N, 015°28'45"E, GF 9258/2, 300 m alt., mixed forest, on stem bark of *Carpinus betulus*. – 25.III.2000, leg. & det. Josef Hafellner (51081).

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645. **Peltigera aphthosa** (L.) Willd.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Ameringkogel massif E of Obdach, E-facing slopes W of the saddle 'Hirschegger Sattel', upper part of 'Steinmoarriegel' N below the summit of Hochalmkogel, 47°03'50"N, 014°49'25"E, GF 8954/2, 1960 m alt., border zone between the belt of *Alnus alnobetula* and the belt of dwarf-shrubs, on ground. – 10.VII.2006, leg. & det. Josef Hafellner (66063).

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646. **Peltigera canina** (L.) Willd.

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Triebener Tauern, Triebental S of Trieben, 0.5 km S of the confluence of the brooks Sunkbach and Triebenbach, path along the former logging railroad, at the brookside of the Triebenbach, 47°27'25"N, 014°29'20"E, GF 8552/2, 1000 m alt., on small outcrops of quartz mica slate. – 26.VIII.2002, leg. & det. Josef Hafellner (58964) & Jolanta Miadlikowska.

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647. **Peltigera elisabethae** Gyeln.

LIECHTENSTEIN, Eastern Alps, Rätikon, 8.5 km SE of the centre of Vaduz, Malbun, at the southern edge of the village, 47°05'55"N, 009°36'45"E, 1640 m alt., wall of loose stones in a subalpine pasture, in rock crevices close to the ground. – 27.VIII.2008, leg. & det. Josef Hafellner (72826).

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648. **Phaeocalicium populneum** (Brond. ex Duby) A.F.W.Schmidt

AUSTRIA, Steiermark (=Styria), Sausal, surrounding area of Waldschach, eastern shore of a fishpond, S below the castle 'Schloß Waldschach', 46°49'10"N, 15°25'05"E, GF 9158/4, 305 m alt., grove strip between the pond and the road, on branches of *Populus* cult. in the lower part of the crown. – 20.VII.2003, leg. & det. Josef Hafellner (60798).

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649. **Piccolia ochrophora** (Nyl.) Hafellner

[Syn.: *Strangospora ochrophora*; *Biatorella ochrophora*]

CZECH REPUBLIC, České Budějovice (=Budweis), park 'Stromovka', within the urban area, 48°58'24.15"N, 014°27'26.45"E, 390 m alt., on bark of *Sambucus nigra*. – 31.I.2007, leg. & det. Jan Vondrák & Jaroslav Šoun (s.n.).

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650. **Porocyphus kenmorensis** (H.B.Holl ex Nyl.) Henssen

IRELAND, County Kerry, Killarney National Park, Tomies Wood, shore of Lough Leane (Loch Léin), 5 km WSW from Killarney, 52°02'19"N, 009°34'51"W, 17 m alt., shore of the lake near the mouth of a brook, on inundated stones. – 10.IX.2003, leg. Josef Halda & Zdenek Palice (7781), det. Zdenek Palice.

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651. **Pseudosagedia aenea** (Wallr.) Hafellner & Kalb

AUSTRIA, Steiermark (=Styria), Sausal, 5 km W of Leibnitz, SE-facing foot of Demmerkogel, lower part of the valley 'Stumpfgraben', NW of Heimschuh, 46°46'15"N, 015°28'45"E, GF 9258/2, 300 m alt., mixed forest, on stem bark of *Carpinus betulus*. – 25.III.2000, leg. & det. Josef Hafellner (51083).

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652. **Psoroglaena abscondita** (Coppins & Vězda) Hafellner & Türk

CZECH REPUBLIC, Šumava Mountains foothills, Horažd'ovice, Žichovice, rural road to the quarry 'Koči Bře', 49°15'52.26"N, 013°36'49.91"E, 500 m alt., on horizontal faces of a concrete wall. – 17.III.2007, leg. & det. Jan Vondrák (4993).

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653. **Psorotichia taurica** (Nyl.) Vain.

CZECH REPUBLIC, Central Bohemia, Praha, Hlubočepy, at the end of the Prokopské údolí valley, 50°02'30.9"N, 014°23'07.6"E, 240 m alt., abandoned, partly flooded quarry ('jezírko'), on steep seepage limestone rocks (above the small lakelet). – 26.V.2002, leg. Anna Guttová & Zdenek Palice (12423), det. Helene Czeika.

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654. **Pycnothelia papillaria** (Ehrh.) Dufour

ITALY, Piemonte (=Piedmont), provincia di Torino, Alpi Cozie, mountains W of Pinerolo, northeastern slopes and ridges of Punta Cialáncia, S above the village Perero, 44°53' 00"N, 007°07'20"E, 2350 m alt., boulders and cliffs of siliceous rocks, on plant remnants and soil. – 26.VII.2001, leg. & det. Josef Hafellner (69435).

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655. **Ramalina fastigiata** (PERS.) ACH.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Östliches Grazer Bergland, Schöckl, 2.2 km NW of 'St. Radegund', path from the road 'Römerweg' along the track of the cable car to the summit station of the cable car, 47°11'45"N, 015°28'25"E, GF 8858/2, 1240 m alt., S-exposed slope above limestone, on stem and main branches of *Fagus sylvatica*. – 21.IV.2007, leg. & det. Walter Obermayer (11449).

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656. **Ramalina fraxinea** Gyeln.

ARMENIA, prov. Syunik, area NE of Meghri, road from Shvandzor to Kapan, between Gyumarants and the pass, 39°00'31-35"N, 046°23'10-12"E, 1800-1900 m alt., *Quercus* forest and semi dry meadow, [substrate not given]. – 19.VI.2008, leg. Kristina Kugler & Ernst Vitek (08-L03-8), det. Shahane Harutyunyan & Helmut Mayrhofer.

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657. **Ramalina laevigata** Fr.

URUGUAY, Rocha, Santa Teresa fortress, 33°59'S, 053°32'W, 10-20 m alt., on rocks (very common). – 20.II.1967, leg. Hector S. Osorio (5695), det. Hiroyuki Kashiwadani (1989).

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658. **Ramalina sprengelii** Krog & Swinscow

URUGUAY, Treinta y Tres, Quebrada de los Cuervos, 32°54'S, 054°25'W, on trunk of *Eucalyptus*. – 22./28.III.1970, leg. Hector S. Osorio (6043), det. Hiroyuki Kashiwadani (1993).

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659. **Rhizoplaca melanophthalma** (DC.) Leuckert & Poelt

Canary Islands [SPAIN], Tenerife, Las Cañadas, lower parts of the slopes of Guajara, SE of Parador, 28°13'00"N, 016°37'25"W, 2200 m alt., NW-exposed slopes with open shrubs (*Spartocystisus supranubius)*, on outrops of vulcanite (NE-exposed). – 25.IV.2005, leg. & det. Josef Hafellner (64173).

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660. **Rinodina alba** Arnold

GREECE, Kríti (=Isle of Crete), Namós Chaníon, 1 km E of Argoules, between Hora Sfakion and Sellia, 35°12'N, 024°17'E, 100-120 m alt., SE-exposes siliceous rock outcrops, on rocks. – 15.V.1997, leg. Helmut Mayrhofer (16642) & Roland Ertl, det. Helmut Mayrhofer.

Note: TLC (by Walter Obermayer): Atranorin (maj.), gyrophoric acid (maj.), lecanoric acid (min.), unknown (3 in B).

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661. **Rinodina griseosoralifera** Coppins

AUSTRIA, Salzburg, Osterhorngruppe, 22 km SE of the centre of Salzburg, path from the village Hintersee to Bergalm, 47°41'07"N, 013°16'38"E, GF 8345/2, 1250 m alt., on old *Acer pseudoplatanus*. – 19.X.2003, leg. & det. Roman Türk (33851), conf. Helmut Mayrhofer (2008).

Note: TLC (by Walter Obermayer): Atranorin, zeorin; one apothecium (juvenile stage) is present in the specimen of the herbarium GZU.

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662. **Rinodina milvina** (Wahlenb.) Th.Fr.

MONTENEGRO, Bjelasica, National Park Biogradska Gora, Jokovača along the road to Dolovi, E above Biogradsko jezero, 42°53'59"N, 019°37'02"E, 1600 m alt., pastures with low siliceous rock outcrops and *Acer heldreichii* stands, on siliceous rocks. – 20.VII.2005, leg. Helmut Mayrhofer (17821) & Branka Knežević, det. Helmut Mayrhofer.

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663. **Rinodina trachytica** (A.Massal.) Bagl. & Carestia

Canary Islands [SPAIN], La Gomera, Cañada Grande SW above Agulo, western ridge, 28°10'20"N, 017°12'E, 750 m alt., basaltic outcrops, on rocks near the ground (partly with a thin earth layer). – 16.II.1991, leg. Josef Hafellner (73151), det. Helmut Mayrhofer (2009).

Note: TLC (by Toby Spribille): Atranorin, confluentinic acid, 2-O-methylperlatolic acid.

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664. **Rinodina trevisanii** (Hepp) Körb.

FRANCE, Corse (=Corsica), Haut-Corse, S of Col de Prato, E of Morosaglia, slopes of Monte San Petrone, 1150-1200 m alt., on base of a trunk of *Castanea sativa*. – 10.V.1990, leg. Helmut Mayrhofer (16637) & Klaus Ropin, det. Helmut Mayrhofer (2006).

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665**. Rusavskia elegans** (Link) S.Kondr. & Kärnefelt f. **subfruticulosa** (Elenkin) Zhurb.

RUSSIA, Krasnoyarsk Kray (N of Central Siberia), Severnaya Zemlya Archipelago, NW extremity of Bol'shevik Island, peninsula with Cape Baranova, eastern coast of Shokal'skogo Strait, 1 km SE of "Mys Baranova" polar station, 79°16'N, 101°40'E, 20 m alt., moist gravelly coastal terrace, on soil (in a dried pool; abundant). – 11.VII.1996, leg. & det. Mikhail Zhurbenko (96376).

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666. **Sarcosagium campestre** (Fr.) Poetsch & Schied.

CZECH REPUBLIC, České Budějovice, Mydlovary, settling pit "MAPE", Českobudějovická pánev basin, 49°05'58.15", 014°20'07.96", 400 m alt., on microbial crust over metal-rich soil. – 19.X.2007, leg. & det. Jan Vondrak (CBFS JV6056).

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667. **Schaereria fuscocinerea** (Nyl.) Clauzade & Cl.Roux

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 8.4 km E of Obdach, summit area of Ameringkogel, W-facing slope just NW below the cross on the summit, 47°04'25"N, 014°48'25"E, GF 8954/2, 2160 m alt., boulder field, on inclined faces of gneissic rocks. – 16.IX.2005, leg. & det. Josef Hafellner (65227).

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668. **Sclerophora amabilis** (Tibell) Tibell

U.S.A., Montana, Lincoln County, 35 km NW of Libby, confluence of Yaak and Kootenai Rivers, 48°33'51"N, 115°58'31"W, 575 m alt., riparian forest, on bark of *Populus balsamifera*. – 15.IV.2001, leg. Toby Spribille (10476), Trevor Goward & Michael Arvidsson, det. Toby Spribille.

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669. **Stereocaulon alpinum** Laurer

SWITZERLAND, Kanton Bern, Berner Alps, 21 km SSE of Meiringen, path from Grimselpass to Sidelhorn, W of Husegghütte, 46°33'35"N, 008°19'12"E, 2500 m alt., outcrops of schistose limestone (or calcareous slate) in open alpine vegetation, on soil (windblown edge). – 24.VIII.2006, leg. & det. Walter Obermayer (11559).

Note: TLC: Atranorin (maj.), lobaric acid (min.); every single specimen with intermixed *Thamnolia subuliformis*.

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670. **Stereocaulon pileatum** Ach.

AUSTRIA, Salzburg, Pongau region, SSE of the centre of Bischofshofen, Buchberg, 47° 23'54"N, 013°13'59"E, GF 8645/2, 895 m alt., on soil and schistose pebbles (along a batter). – 30.X.2006, leg. & det. Roman Türk (40145).

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671. **Sticta** cf. **weigelii** Isert

Hawaii [U.S.A.], Oahu, Haleiwa, Helemano Gulch, 21°33'N, 158°04'W, 245 m alt., shrubby slope, on stems of *Dodonaea*. – 22.V.1970, leg. Otto & Isa Degener (32387f), det. Harrie Sipman (2006).

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672. **Strigula stigmatella** (Ach.) R.C.Harris

AUSTRIA, Steiermark (=Styria), Ennstaler Alpen, 14 km ENE of Admont, 'Gesäuse' National Park, 2.8 km N of Gstatterboden, Hinterwinkel, 47°36'59"N, 014°38'00-21", GF 8353/4, 950-980 m alt., mixed forest with *Fagus sylvatica* and *Abies alba*, on dead *Fagus sylvatica* (partly convered with bryophytes). – 19.VI.2006, leg. Helmut Mayrhofer (17094) Cornelia Hammer & Christian Scheuer, det. Peter Bilovitz.

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673. **Tornabea scutellifera** (With.) J.R.Laundon

ARMENIA, prov. Syunik, NE of Meghri, road from Shvandzor to Kapan, between Shvandzor and Gyumarants, 35°58'00"N, 046°22'13"E, 1205 m alt., dry slopes, [substrate not given]. – 19.VI.2008, leg. Kristina Kugler & Ernst Vitek (08-L02-1a), det. Shahane Harutyunyan & Helmut Mayrhofer.

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674. **Trapeliopsis glaucolepida** (Nyl.) Gotth.Schneid.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 7.9 km ESE of Obdach, Ameringkogel massif, S-facing slopes and ridges of Weißenstein, E of the lodge 'Weißensteinhütte', just N of Melcheben, 47°03'25"N, 014°48'00"E, GF 8954/2, 1800 m alt., subalpine forest area with *Picea abies* and *Larix decidua*, on decayed logs. – 3.IX.2005, leg. & det. Josef Hafellner (65582).

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675. **Umbilicaria vellea** (L.) Hoffm.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, SW of Köflach, NW of 'Packsattel', halfway between 'Knödelhütte' and 'Bernsteinhütte', Lahnofen just SE below the hilltop, 46°59'40"N, 014°55'45"E, GF 9055/2, 1510 m alt., small outcrops and big boulders of mica slate (in loose forest with *Picea abies* and *Larix decidua*), on overhanging faces of boulders. – 10.VIII.2005, leg. & det. Josef Hafellner (64867).

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676. **Usnea baileyi** (Stirton) Zahlbr.

Mascarene Islands, Réunion [FRANCE], [no further detailed locality given], 21°10'S, 055° 40'E, [substrate not given]. – IV.1989, leg. Gerhard Follmann (s.n.) & Ingeborg Follmann-Schrag, det. Harrie Sipman (2006).

Note: Partly intermixed with other species of *Usnea*.

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677. **Usnea cavernosa** Tuck.

SWITZERLAND, Kanton Bern, Berner Alps, 9 km SW of Meiringen, 3.6 km WSW of Rosenlaui, between Schwarzwaldalp and the saddle 'Grosse Scheidegg', 46°39'50"N, 008°06'45"E, 1750 m alt., small gorge in a forest with *Picea abies*, on twigs of *Picea abies*. – 25.VIII.2006, leg. & det. Walter Obermayer (11558).

Note: TLC: Usnic acid, salazinic acid.

distributed to: **CANB, G, GZU, M, NY, UPS**

OBERMAYER W. 2009: **Dupla Graecensia Lichenum** (2009, nos 581–680). - Fritschiana 65: 7–32.
Distributed by the *Institut für Pflanzenwissenschaften, Karl-Franzens-Universität,* Graz [GZU]

678. **Usnea ceratina** Ach.

AUSTRIA, Oberösterreich (=Upper Austria), Totes Gebirge, 10.7 km S of 'Grünau im Almtal', eastern shore of the lake 'Almsee', 47°45'25"N, 013°57'44"E, GF 8249/2, 615 m alt., on *Picea abies*. – 12.III.2007, leg. & det. Roman Türk (41427).

Note: TLC (by Walter Obermayer): Usnic acid (min.) diffractaic acid (maj.).

distributed to: **CANB, G, GZU, M, NY, UPS**

OBERMAYER W. 2009: **Dupla Graecensia Lichenum** (2009, nos 581–680). - Fritschiana 65: 7–32.
Distributed by the *Institut für Pflanzenwissenschaften, Karl-Franzens-Universität,* Graz [GZU]

679. **Usnea subfloridana** Stirton

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Östliches Grazer Bergland, Schöckl, 2 km N of Sankt Radegund, path from Römerweg (0.3 km S of Schöcklkreuz) to Schöcklkopf, 47°12'10"N, 15°29'00"E, GF 8758/4, 1160 m alt., mixed forest (*Abies alba, Fagus sylvatica, Picea abies*), on bark of *Fagus sylvatica* (1-3 m stem height; NNW-exposed). – 23.IV.2006, leg. Walter Obermayer (11240), det. Philippe Clerc (2009).

Note: TLC (by Walter Obermayer; on three thalli at every specimen): Usnic acid, thamnolic acid.

distributed to: **CANB, G, GZU, M, NY, UPS**

OBERMAYER W. 2009: **Dupla Graecensia Lichenum** (2009, nos 581–680). - Fritschiana 65: 7–32.
Distributed by the *Institut für Pflanzenwissenschaften, Karl-Franzens-Universität,* Graz [GZU]

680. **Xylographa vitiligo** (Ach.) J.R.Laundon

[all specimens with apothecia]

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, Größenberg (=Größing) S of Zeltweg, NW-ridge towards Eppenstein, Pichlmoarkogel, summit area, 47°06' 10"N, 014°46'10"E, GF 8854/4, 1660 m alt., loose coniferous forest (with *Picea abies* and *Larix decidua*) with big mica schist boulders, on lying decayed deadwood. – 18.VIII.2005, leg. & det. Josef Hafellner (65767).

Note: TLC of the sorediate parts (by Toby Spribille and Celia Miller): Stictic acid.

distributed to: **CANB, GZU, M, NY, UPS**

Lichenicolous Biota (Nos 61–80)

Josef HAFELLNER*

HAFELLNER J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana (Graz) 65: 33–46. - ISSN 1024-0306.

Abstract: The third fascicle (20 numbers) of the exsiccata 'Lichenicolous Biota' is published. The issue contains material of 20 non-lichenized fungal taxa (14 ascomycetes, 4 basidiomycetes, 2 anamorphic fungi).

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Introduction

For the present fascicle two decades have been prepared. Each number of the first decade comprises ten duplicates, material of the second decade is issued with five to ten duplicates.

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], Leningrad [LE], Munich [M], and Prague [PRM] (herbarium acronyms sec. HOLMGREN & HOLMGREN 1998, onwards: Index Herbariorum. New York Botanical Garden. http://sciweb.nybg.org/science2/ IndexHerbariorum. asp). It is planned to continue the exsiccata with at least one fascicle per year, consisting of a variable number of decades.

I would be very grateful to receive material of lichenicolous biota from my colleagues. 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.

For the third issue, I gratefully acknowledge the contribution of 6 collections by Paul DIEDERICH (partly together with Guy MARSON or Damien ERTZ), 3 numbers by Damien ERTZ (together with Paul DIEDERICH), and one each by Walter OBERMAYER and Roman TÜRK (together with Heidelinde Sofie PFLEGER). Paul DIEDERICH and Damien ERTZ 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.

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

61. ***Arthonia peltigerea*** Th.Fr.

in Bot. Notiser 1866: 15 (1866). – Syn.: *Conida fuscopurpurea* f. *peltigerea* (Th.Fr.) Keissl. in Ark. Bot. 18(16): 8 (1923).

Host: *Peltigera* spec. (thallus)

North America, **Canada**: British Columbia, Wells Gray Provincial Park, Norman's Eddy, along Clearwater River on the right river bank, 52°06'N / 120° 11'W, *c*. 750 m alt.; on a large mossy siliceous boulder.

Note: The type host of *Arthonia peltigerea* is *Peltigera canina*. However, in the past this name was applied in a very broad sense.

23. VII. 2008 leg. D. Ertz (12563) & P. Diederich, det. D. Ertz

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

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

in Biblioth. Lichenol. 38: 125 (1990). – Bas.: *Phragmonaevia fuckelii* Rehm in Rabenh. Krypt.-Fl. 2. Aufl., 1(3): 166 (1888).

Host: *Peltigera rufescens* (thallus)

Europe, **Luxembourg**: distr. Gutland, Lamadelaine, Fusboesch, 49°32'33''N / 05°52'34''E, *c*. 360 m alt., IFBL: M8.31.33, UTN: GQ.09; disused quarry, on soil.

Note: *Corticifraga fuckelii* is based on the same type as *Cryptomyces peltigerae* Fuckel (Fuckel, Fungi Rhen. 2069). The type host in both cases is given as *Peltigera canina* but the host of two isotype specimens was not determined to species level by Hawksworth & Santesson (l. c.).

20. IV. 2008 leg. P. Diederich (16744) & G. Marson, det. P. Diederich

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

63. ***Dactylospora lobariella*** (Nyl.) Hafellner

in Nova Hedwigia Beih. 62: 118 (1979). – Bas.: *Lecidea lobariella* Nyl. in Flora 52: 296 (1869). – Syn.: *Buellia lobariella* (Nyl.) Arnold in Flora 53: 478 (1870). *Karschia lobariella* (Nyl.) Arnold in Flora 57: 103 (1874). *Abrothallus lobariellus* (Nyl.) Zopf in Hedwigia 35: 363 (1896).

Host: *Lobaria pulmonaria* (thallus)

North America, **Canada**: British Columbia, Wells Gray Provincial Park, Norman's Eddy, along Clearwater River, 52°06'N / 120°11'W, *c*. 750m alt.; coniferous forest, on twigs of unnamed conifer.

Note: *Lobaria pulmonaria* is the type host of the species.

23. VII. 2008 leg. D. Ertz (12561) & P. Diederich, det. D. Ertz

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

64. ***Echinothecium reticulatum*** Zopf

Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 70(4): 243 (1898!). – Syn.: *Sphaerellothecium reticulatum* (Zopf) Etayo in Cryptogamie, Mycol. 29: 87 (2008).

Host: *Parmelia sulcata* (thallus)

Europe, **Switzerland**: Valais, Western Alps, Evolène, Les Haudères, Forêt de Tauge, 46°04'48''N / 07°30'58''E, *c*. 1500 m alt., CH: 605,102; coniferous forest with some scattered deciduous trees, on bark of *Acer pseudoplatanus*

Note: The type host of *Echinothecium reticulatum* is *Parmelia saxatilis*.

16. V. 2008 leg. P. Diederich (16754), det. P. Diederich

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

65. ***Marchandiobasidium aurantiacum*** Diederich & Schultheis

in Diederich et al., Mycol. Res. 107: 524 (2003).

Host: *Physcia tenella* (thallus)

Europe, **Luxembourg**: distr. Gutland, Sandweiler S of Luxembourg airport, near the cemetery, 49°37’12’’N / 06°13’09’’E, *c*. 360 m alt., IFBL: M8.17.32, UTM: KA.90; roadside trees, on bark of *Platanus* cult.

Note: *Physcia tenella* is the type host of the species.

27. IX. 2008 leg. P. Diederich (16778), det. P. Diederich

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

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

in Miscellanea lichenologica: 43 (1856). – Bas.: *Abrothallus oxysporus* Tul. in Ann. Sci. Nat., Bot., sér. 3, 17: 116 (1852). – Syn.: *Phacopsis oxyspora* (Tul.) Triebel & Rambold in Nova Hedwigia 47: 300 (1988).

Host: *Parmelia sulcata* (thallus)

Europe, **Austria**: Styria, Eastern Alps, Gurktaler Alpen, Grebenzen massif, near the village Zeutschach *c*. 5 km W above Neumarkt, Oberholz, SE above the farmhouse Wegscheider, 47°03’20’’N / 14°21’55’’E, *c*. 1100 m alt., GF 8952/1; on top of a large solitary boulder (palaeozoic phyllite) in a meadow, on bark of *Sorbus aucuparia*.

Note: The host of the lectotype chosen by Triebel et al. (Bryologist 98: 78, 1995) is *Parmelia saxatilis*.

18. VI. 2003 leg. J. Hafellner (61400), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

67. ***Phacopsis vulpina*** Tul.

in Ann. Sci. Nat., Bot., sér. 3, 17: 126 (1852).

Host: *Letharia vulpina* (thallus)

Europe, **Switzerland**: Valais, Western Alps, Saas Fee, 46°06'25''N / 07°55' 14''E, *c*. 1850 m alt.; subalpine larch forest, on bark of *Larix decidua*.

Note: *Letharia vulpina* is the type host of the species.

12. V. 2008 leg. P. Diederich (16764), det. P. Diederich

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

68. ***Phaeopyxis punctum*** (A.Massal.) Rambold, Triebel & Coppins

in Rambold & Triebel, Notes Roy. Bot. Garden Edinburgh 46: 384 (1990). – Bas.: *Nesolechia punctum* A.Massal. in Sched. Crit. Lich. Exs. Italiae 5: 96 (1856). – Syn.: *Lecidea punctum* (A.Massal.) Jatta in Sylloge Lichenum Italicorum: 353 (1900).

Host: *Cladonia coniocraea* and *Cladonia digitata* (thallus)

Europe, **Austria**: Salzburg, Eastern Alps, Zillertaler Alpen, Wildgerlostal, by the road from Finkau to Trisslalm, 47°11'58''N / 12°06'37''E, *c*. 1445 m alt.; coniferous forest, on rotten stump of *Picea abies*.

Note 1: In the protologue the host is only determined to genus level (*Cladonia*).

Note 2: The coelomycete *Lichenosticta alcicornaria* (Linds.) D.Hawksw. is developed on several squamules of the primary thallus on the specimen in GZU and may also be present on the duplicates.

25. VII. 2008 leg. R. Türk (43805a) & H.S. Pfleger, det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

69. ***Plectocarpon peltigerae*** Zhurb., Ertz, Diederich & Miadl.

in Ertz et al., Bryologist 106: 465 (2003).

Host: *Peltigera leucophlebia* (thallus)

North America, **Canada**: British Columbia, Wells Gray Provincial Park, Spahats Falls, 51°44'N / 120°01'W, *c*. 700 m alt.; coniferous forest, on the ground.

Note: *Peltigera leucophlebia* is the type host of the species.

24. VII. 2008 leg. D. Ertz (12573) & P. Diederich, det. D. Ertz

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

70. ***Stigmidium congestum*** (Körb.) Triebel

in Triebel et al., Mycotaxon 42: 290 (1991). – Bas.: *Pharcidia congesta* Körb. in Parerga Lichenologica: 470 (1865).

Host: *Lecanora chlarotera* (hymenia)

Europe, **Switzerland**: Valais, Evolène, Les Haudères, Forêt de Tauge, 46°04' 48''N / 07°30'58''E, *c*. 1500 m alt., CH: 605,102; coniferous forest with some scattered deciduous trees, on bark of *Acer pseudoplatanus*.

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

16. V. 2008 leg. P. Diederich (16751), det. P. Diederich

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

71. ***Carbonea vitellinaria*** (Nyl.) Hertel

in Mitt. Bot. Staatssamml. München 19: 442 (1983). – Bas.: *Lecidea vitellinaria* Nyl. in Bot. Notiser 1852: 177 (1852). – Syn.: *Nesolechia vitellinaria* (Nyl.) Rehm in Rabenh. Krypt.-Fl., 2. Aufl. 1(3): 319 (1890).

Host: *Candelariella vitellina* (thallus)

Europe, **Switzerland**: Kanton Graubünden, Western Alps, Urner Alps, Gotthard group, 6 km NE of Andermatt, Oberalppass, slightly S above the pass, 46° 39’20’’N / 08°40’15’’E, *c*. 2130 m alt.; outcrops of siliceous schist in alpine vegetation, on horizontal and inclined rock faces.

Note: *Candelariella vitellina* is the type host of the species.

23. VIII. 2006 leg. W. Obermayer (11543), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

72. ***Karschia talcophila*** (Ach.) Körb.

in Parerga Lichenologica: 460 (1865). – Bas.: *Lecidea talcophila* Acharius in Lichenographia Universalis: 183 (1810). – Syn.: *Buellia talcophila* (Ach.) Körb. in Systema Lichenum Germaniae: 230 (1855). – *Abrothallus talcophilus* (Ach.) A.Massal. in Miscellanea Lichenologica: 42 (1856).

Host: *Diploschistes scruposus* (thallus, apothecial margins)

Europe, **Switzerland**: Valais, Western Alps, Evolène, Les Haudères, Forêt de Tauge, 46°04’50’’N / 07°30’44’’E, *c*. 1480 m alt., CH: 605,102; on siliceous rock in a coniferous forest.

Note: *Diploschistes scruposus* is the type host of the species.

16. V. 2008 leg. P. Diederich (16749), det. P. Diederich

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

73. ***Lichenoconium lecanorae*** (Jaap) D.Hawksw.

in Bull. Brit. Mus. (Nat. Hist.), Bot. 6(3): 270 (1979). – Bas.: *Coniosporium lecanorae* Jaap in Lindau, Verh. Bot. Ver. Prov. Brandenburg 47: 71 (1906).

Host: *Lecanora mughicola* (apothecia)

Europe, **Austria**: Styria, Eastern Alps, Steirisches Randgebirge, Stubalpe, massif of Ameringkogel E above the village Obdach, Weißenstein mountain, on the ridge exposed to the S above Melcheben, E of the refuge Weißensteinhütte, 47°03’35’’N / 14°48’05’’E, *c*. 1900 m alt., GF 8954/2; fence slightly above the treeline, on wood.

Note: The type host of *Lichenoconium lecanorae* was originally given as “*Lecanora subfusca*”. Hawksworth (l. c.: 269) has studied the holotype of *Coniosporium lecanorae* and has identified its host as *Lecanora chlarotera*.

3. IX. 2005 leg. J. Hafellner (65160) & A. Hafellner, det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

74. ***Reconditella physconiarum*** Hafellner & Matzer

in Matzer & Hafellner, Biblioth. Lichenol. 37: 47 (1990).

Host: *Physconia distorta* (thallus)

Europe, **Austria**: Styria, Eastern Alps, Niedere Tauern, Schladminger Tauern, Untertal S of the town Schladming, slightly W of the inn Tetter, 47°21’25’’N / 13°42’35’’E, *c*. 1020 m alt., GF 8648/1; row of trees at the edge of a pasture, on crown branches of *Fraxinus excelsior*.

Note: *Physconia distorta* is the type host of *Reconditella physconiarum*.

28. VIII. 2001 leg. J. Hafellner (56511), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

75. ***Sphaerellothecium cladoniae*** (Alstrup & Zhurb.) Hafellner

in Hafellner et al., Mitt. Naturwiss. Ver. Steiermark 134: 96 (2005). – Bas.: *Sphaerellothecium araneosum* var. *cladoniae* Alstrup & Zhurb. in Symb. Bot. Upsal. 34(1): 486 (2004).

Host: *Cladonia pyxidata* (thallus)

Europe, **Austria**: Styria, Eastern Alps, Ennstaler Alpen, Gesäuseberge E of the town Admont, Hochtor mountain, on the crest to the W slightly below the summit, 47°33’40’’N / 14°37’55’’E, *c*. 2330 m alt., GF 8453/2; limestone cliffs and fragments of alpine vegetation, in fissures filled with soil exposed to the N, 24. IX. 2005, leg. J. Hafellner

Note: The type host of *Sphaerellothecium cladoniae* is *Cladonia pocillum*.

24. IX. 2005 leg. J. Hafellner (64370), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

76. ***Sphaerellothecium parmeliae*** Diederich & Etayo

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

Host: *Parmelia saxatilis* (thallus)

Europe, **Austria**: Styria, Eastern Alps, Steirisches Randgebirge, Stubalpe, Größenberg S of the town Zeltweg, ridge to NW towards the village Eppenstein, Pichlmoarkogel, summit area, 47°06’10’’N / 14°46’10’’E, *c*. 1660 m alt., GF 8854/4; large boulders of mica schist in open *Larix-Picea*-forest, on steep rock faces exposed to the N.

Note: *Parmelia saxatilis* is the type host of the species.

18. VIII. 2005 leg. J. Hafellner (65800), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

77. ***Syzygospora physciacearum*** Diederich

in Biblioth. Lichenol. 61: 38 (1996).

Host: *Physcia stellaris* (thallus, apothecial margins)

Europe, **Austria**: Styria, Eastern Alps, Steirisches Randgebirge, Fischbacher Alpen, Feistritztal *c*. 2.5 km S of the town Birkfeld, on the orographically right bank of the river Feistritz, slightly above the confluence with the creek Gasenbach, 47°19'55''N / 15°41'45''E, *c*. 530 m alt., GF 8660/3; stripe of riparian forest, on twigs of *Fraxinus excelsior*.

Note: The type host of *Syzygospora physciacearum* is *Physcia dubia*.

25. XII. 2000 leg. J. Hafellner (53737), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

78. ***Tremella lichenicola*** Diederich

in Lejeunia 119: 2 (1986).

Host: *Mycoblastus fucatus* (thallus)

Europe, **Austria**: Styria, Eastern Alps, Steirisches Randgebirge, Gleinalpe S of the town St. Michael, in the Weitentalgraben SE of the village Hinterlobming, 47°16'20''N / 15°04'25''E, *c*. 1200 m alt., GF 8756/3; managed spruce forest with scattered deciduous trees close to a creek, on bark of *Fagus sylvatica*.

Note: The type host of *Tremella lichenicola* is *Mycoblastus sterilis,* which is regarded as a heterotypic synonym of *Mycoblastus fucatus*.

27. X. 2001 leg. J. Hafellner (57247), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

79. ***Tremella phaeophysciae*** Diederich & M.S.Christ.

in Diederich, Biblioth. Lichenol. 61: 142 (1996).

Host: *Phaeophyscia orbicularis* (thallus)

Europe, **Austria**: Carinthia, Eastern Alps, Steirisches Randgebirge, Koralpe, *c*. 15.5 km NE of the town Wolfsberg, along the road from the village Preitenegg to the pass Packsattel, near the farm Maxlhoisl, 46°56’55’’N / 14°58’10’’E, *c*. 1200 m alt., GF 9055/4; solitary trees and bushes at the edge of a meadow, on bark of *Sambucus nigra*.

Note: *Phaeophyscia orbicularis* is the type host of the species.

19. X. 2008 leg. J. Hafellner (72302), det. J. Hafellner

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

Hafellner J. 2009: Lichenicolous Biota (Nos 61–80). - Fritschiana 65: 33–46.

80. ***Vouauxiomyces santessonii*** D.Hawksw.

in Bull. Brit. Mus. (Nat. Hist.) Bot. 9(1): 69 (1981).

Host: *Platismatia glauca* (thallus)

Europe, **Austria**: Styria, Eastern Alps, Koralpe, ridge *c*. 6.5 km NW of the village St. Oswald ob Eibiswald, NW above the village St. Katharina in der Wiel, about halfway between the inns Jägerwirt and Wirtbartl, 46°44’35’’N / 15°04’ 30’’E, *c*. 1280 m alt., GF 9256/3; mixed forest rich in conifers on gentle slope exposed to the SW, on bark of *Picea abies*.

Note: *Platismatia glauca* is the type host of *Vouauxiomyces santessonii* which sometimes occurs together with *Abrothallus cetrariae* I.Kotte and therefore is likely to represent the anamorphic state of the latter fungus.

14. VIII. 2005 leg. J. Hafellner (70993), det. J. Hafellner

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

Taxon Synopsis:

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Host taxon	Lichenicolous taxon	Exs. no.
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Cladonia coniocraea	*Phaeopyxis punctum*	68
Cladonia digitata	*Phaeopyxis punctum*	68
Cladonia pyxidata	*Sphaerellothecium cladoniae*	75
Diploschistes scruposus	*Karschia talcophila*	72
Lecanora chlarotera	*Stigmidium congestum*	70
Lecanora mughicola	*Lichenoconium lecanorae*	73
Letharia vulpina	*Phacopsis vulpina*	67
Lobaria pulmonaria	*Dactylospora lobariella*	63
Mycoblastus fucatus	*Tremella lichenicola*	78
Parmelia saxatilis	*Sphaerellothecium parmeliae*	76
Parmelia sulcata	*Echinothecium reticulatum*	64
Parmelia sulcata	*Nesolechia oxyspora*	66
Peltigera leucophlebia	*Plectocarpon peltigerae*	69
Peltigera rufescens	*Corticifraga fuckelii*	62
Peltigera spec.	*Arthonia peltigerea*	61
Phaeophyscia orbicularis	*Tremella phaeophysciae*	79
Physcia stellaris	*Syzygospora physciacearum*	77
Physcia tenella	*Marchandiobasidium aurantiacum*	65
Physconia distorta	*Reconditella physconiarum*	74
Platismatia glauca	*Vouauxiomyces santessonii*	80

Geographic Index:

BIOGEOGRAPHIC UNITS*

Country
(or Archipelago) **Lichenicolous taxon ..... Exs. no.**

1. EUROPE
Austria
Carbonea vitellinaria 71
Lichenoconium lecanorae 73
Nesolechia oxyspora 66
Phaeopyxis punctum 68
Reconditella physconiarum 74
Sphaerellothecium cladoniae 75
Sphaerellothecium parmeliae 76
Syzygospora physciacearum 77
Tremella lichenicola 78
Tremella phaeophysciae 79
Vouauxiomyces santessonii 80
Luxembourg
Corticifraga fuckelii 62
Marchandiobasidium aurantiacum 65
Switzerland
Echinothecium reticulatum 64
Karschia talcophila 72
Phacopsis vulpina 67
Stigmidium congestum 70

2. AFRICA

3. ASIA TEMPERATE

4. ASIA TROPICAL

5. AUSTRALASIA

6. PACIFIC

7. NORTHERN AMERICA
Canada
Arthonia peltigerea 61
Dactylospora lobariella 63
Plectocarpon peltigerae 69

8. SOUTHERN AMERICA

9. ANTARCTIC

* The nomenclature of the biogeographic units follows BRUMMITT, R.K. 2001: World Geographical Scheme for Recording Plant Distributions. Edition 2. - Pittsburg: Hunt Institute for Botanical Documentation Carnegie Mellon University.

Lichens from the Una National Park (Bosnia and Herzegovina)

Peter O. BILOVITZ[1], Roman TÜRK[2] & Helmut MAYRHOFER[1]*

BILOVITZ P.O., Türk R. & MAYRHOFER H. 2009: Lichens from the Una National Park (Bosnia and Herzegovina). - Fritschiana (Graz) 65: 47–51. – ISSN 1024-0306

Abstract: A list of 57 taxa of lichens (56 species) from the Una National Park in the north-western part of Bosnia and Herzegovina is presented. *Bacidia subincompta*, *Buellia griseovirens*, *Candelariella reflexa*, *Cetrelia monachorum*, *Fulgensia subbracteata*, *Lecanora subcarpinea*, *L. subrugosa,* and *Trapeliopsis viridescens* are new for Bosnia and Herzegovina.

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Introduction

Of the three National Parks in Bosnia and Herzegovina (i.e. Sutjeska, Kozara, Una) the Una National Park, founded in 2008, is the most recent one. It covers 19,800 ha and is located in the Una-Sana Canton close to the city Bihać in the north-western part of Bosnia and Herzegovina near the border with Croatia.

At the moment there is no comprehensive treatment of the lichen flora of Bosnia and Herzegovina, apart from the synopsis of ZAHLBRUCKNER (1890) and the records mentioned in KUŠAN (1953) and MURATI (1992, 1993). More recent floristic papers dealing with Bosnia and Herzegovina include CHRISTENSEN (1994), WECKESSER & VISNJIĆ (2005), and BILOVITZ & MAYRHOFER (2009, this issue).

Material and methods

The lichenized fungi presented in this paper are based on a lichen collection made by Mathias SCHWAHN, who visited the Una National Park in 2009.

The specimens have been identified (using routine light microscopy techniques) with the aid of the following literature: POELT (1969), POELT & VĚZDA (1977, 1981), CLAUZADE & ROUX (1985) and WIRTH (1995). Some of the identifications required verification by using standardized thin-layer chromatography (TLC) following the protocols of WHITE & JAMES (1985) and ORANGE et al. (2001).

The specimens are preserved in the herbarium of the Institute of Plant Sciences, Karl-Franzens-University Graz (GZU), a smaller number of duplicates at the University of Bihać.

The nomenclature follows SANTESSON et al. (2004) and, for taxa not represented in this checklist, NIMIS & MARTELLOS (2003) or other modern treatments. New records for Bosnia and Herzegovina are marked with an asterisk (*).

Fig. 1. Location of the Una National Park

List of sampling locations

Bosnia and Herzegovina, NW-Bosnia, Una-Sana, Una National Park, ...

01 = Veliki Ljutoc, S of Bihać, c. 830 m, N 44°41,942' / E 16°01,400', 27.III.2009, leg. Mathias Schwahn.

02 = Veliki Ljutoc, S of Bihac, c. 900 m, N 44°41,375' / E 16°02,161', 27.III.2009, leg. Mathias Schwahn.

03 = W of Cvjetnic and S of Kulen Vakuf, Una gorge, c. 540 m, N 44°25,466' / E 16°08,879', 27.III.2009, leg. Mathias Schwahn.

List of substrates and their abbreviations

Ace pse = *Acer pseudoplatanus*
Fag syl = *Fagus sylvatica*
Ost car = *Ostrya carpinifolia*
ter-cal = on calcareous soil

List of lichenized fungi

Acrocordia gemmata (Ach.) A.Massal.: 01 (Ace pse), 02 (Ace pse)
Anaptychia ciliaris (L.) Körb.: 03 (Ost car)

**Bacidia subincompta* (Nyl.) Arnold: 02 (Ace pse)
**Buellia griseovirens* (Turner & Borrer ex Sm.) Almb.: 02 (Ace pse)

**Candelariella reflexa* (Nyl.) Lettau: 03 (Ost car)
**Cetrelia monachorum* (Zahlbr.) W.L.Culb. & C.F.Culb.: 01 (Ace pse), 02 (Ace pse)
Chrysothrix candelaris (L.) J.R.Laundon: 01 (Ace pse)
Cladonia convoluta (Lam.) Anders: 03 (ter-cal)
Cladonia furcata (Huds.) Schrad. subsp. *furcata*: 03 (ter-cal)
Cladonia pyxidata (L.) Hoffm.: 03 (ter-cal)
Cladonia rangiformis Hoffm.: 03 (ter-cal)
Cladonia symphycarpa (Flörke) Fr.: 03 (ter-cal)

Evernia prunastri (L.) Ach.: 03 (Ost car)

**Fulgensia subbracteata* (Nyl.) Poelt: 03 (ter-cal)
Fuscidea stiriaca (A.Massal.) Hafellner: 02 (Fag syl)

Lecanora argentata (Ach.) Malme: 01 (Ace pse)
Lecanora chlarotera Nyl.: 01 (Ace pse), 02 (Fag syl)
**Lecanora subcarpinea* Szatala: 03 (Ost car)
**Lecanora subrugosa* Nyl.: 02 (Fag syl)
Lecidella achristotera (Nyl.) Hertel & Leuckert: 01 (Ace pse), 03 (Ost car)
Lecidella elaeochroma (Ach.) M.Choisy: 03 (Ost car)
Lepraria rigidula (de Lesd.) Tønsberg: 01 (Ace pse)
Lobaria amplissima (Scop.) Forssell: 02 (Ace pse)
Lobaria pulmonaria (L.) Hoffm.: 01 (Ace pse), 02 (Ace pse)

Melanelixia fuliginosa (Duby) O.Blanco et al. subsp. *fuliginosa*: 01 (Ace pse), 02 (Ace pse)
Melanelixia fuliginosa subsp. *glabratula* (Lamy) J.R.Laundon: 01 (Ace pse)
Melanelixia subaurifera (Nyl.) O.Blanco et al.: 01 (Ace pse), 02 (Ace pse), 03 (Ost car)
Melanohalea exasperata (De Not.) O.Blanco et al.: 03 (Ost car)

Parmelia saxatilis (L.) Ach.: 01 (Ace pse), 02 (Ace pse, Fag syl)
Parmelia submontana Nádv. ex Hale: 02 (Fag syl)
Parmelia sulcata Taylor: 01 (Ace pse), 02 (Ace pse), 03 (Ost car)
Parmelina pastillifera (Harm.) Hale: 03 (Ost car)
Parmelina quercina (Willd.) Hale var. *quercina*: 03 (Ost car)
Peltigera horizontalis (Huds.) Baumg.: 02 (Ace pse)
Peltigera rufescens (Weiss) Humb.: 02 (Ace pse)

Pertusaria albescens (Huds.) M.Choisy & Werner var. *albescens*: 01 (Ace pse), 02 (Ace pse)
Pertusaria amara (Ach.) Nyl.: 01 (Ace pse), 02 (Ace pse, Fag syl)
Pertusaria coccodes (Ach.) Nyl.: 01 (Ace pse), 02 (Ace pse)
Pertusaria flavida (DC.) J.R.Laundon: 02 (Ace pse, Fag syl)
Pertusaria leioplaca DC.: 01 (Ace pse)
Phaeophyscia orbicularis (Neck.) Moberg: 03 (Ost car)
Phlyctis agelaea (Ach.) Flot.: 02 (Fag syl)
Phlyctis argena (Spreng.) Flot.: 01 (Ace pse), 02 (Ace pse)
Physcia adscendens (Fr.) H.Olivier: 03 (Ost car)
Physcia leptalea (Ach.) DC.: 03 (Ost car)
Physcia stellaris (L.) Nyl.: 03 (Ost car)
Physconia distorta (With.) J.R.Laundon: 02 (Ace pse)
Pleurosticta acetabulum (Neck.) Elix & Lumbsch: 03 (Ost car)
Psora decipiens (Hedw.) Hoffm.: 03 (ter-cal)

Ramalina farinacea (L.) Ach.: 01 (Ace pse), 02 (Fag syl), 03 (Ost car)
Ramalina fastigiata (Pers.) Ach.: 03 (Ost car)
Ramalina fraxinea (L.) Ach. var. *calicariformis* (Nyl.) Hue: 03 (Ost car)
Rinodina sophodes (Ach.) A.Massal.: 03 (Ost car)

Scoliciosporum umbrinum (Ach.) Arnold: 02 (Fag syl)
Squamarina lentigera (Weber) Poelt: 03 (ter-cal)

**Trapeliopsis viridescens* (Schrad.) Coppins & P.James: 01 (Ace pse)

Xanthoria parietina (L.) Th.Fr.: 03 (Ost car)

Acknowledgements

We would like to thank Mathias SCHWAHN for collecting the lichen material and Peter KOSNIK for his technical support with TLC. Financial support from the Austrian Science Foundation (project P20842-B16) is gratefully acknowledged.

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A contribution to the lichenized fungi of Bosnia and Herzegovina

Peter O. BILOVITZ[1] & Helmut MAYRHOFER[1]*

BILOVITZ P.O. & MAYRHOFER H. 2009: A contribution to the lichenized fungi of Bosnia and Herzegovina. - Fritschiana (Graz) 65: 53–56. – ISSN 1024-0306

Abstract: A list of 27 species of lichenized fungi from Bosnia and Herzegovina is presented, based on herbarium specimens kept in GZU. Six species are new to Bosnia and Herzegovina: *Fuscopannaria sampaiana*, *Lecidea tessellata*, *Micarea melaena*, *Rinodina polysporoides*, *Usnea barbata*, and *Xanthoparmelia verruculifera*.

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Introduction

Within the framework of a catalogue of the lichenized fungi of Bulgaria (MAYRHOFER et al. 2005), the lichen collection of the herbarium GZU has been evaluated for material from the Balkan Peninsula. The few specimens from Bosnia and Herzegovina were mainly collected by Josef Poelt in the Drina valley N of Visegrad on serpentine, by Antonín Vězda in a narrow valley between Boračko jezero and the mountain Prenj, and by Helmut Mayrhofer during a short trip to the Sutjeska National Park.

Material and methods

The nomenclature follows SANTESSON et al. (2004) and, for taxa not represented in this checklist, NIMIS & MARTELLOS (2003) or other modern treatments. New records for Bosnia and Herzegovina are marked with an asterisk (*).

List of species

Anaptychia ciliaris (L.) Körb.

Pale bei Sarajevo, [date of sampling and collector unknown]. – Sutjeska National Park, Tjentište, Umgebung von Hotel Mladost, 43°21'N/18°42'E, ca. 450 m, auf *Juglans regia*, 21.V.2003, leg. H. Mayrhofer 14575. – Sutjeska National Park, Prijevor unter dem Berg Maglić, ca. 1550 m, auf *Fagus sylvatica*, 21.V.2003, leg. H. Mayrhofer 14581.

Aspicilia crusii Klem.
Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt.

Calicium salicinum Pers.
Montes Prenj, in valle angusta inter Boračko jezero et montem summum Prenj, 1250 m, ad lignum Abietis, 21.VII.1979, leg. et det. A. Vězda.

Caloplaca crenularia (With.) J.R.Laundon
Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt.

Candelariella vitellina (Hoffm.) Müll.Arg.
Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt.

Collema cristatum (L.) Weber ex F.H.Wigg.
Sutjeska National Park, Schlucht entlang des Flusses Sutjeska, 21.V.2003, leg. H. Mayrhofer 14582.

Degelia plumbea (Lightf.) P.M.Jørg. & P.James
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, 500 m, 25.VII.1979, leg. et det. A. Vězda. – Sutjeska National Park, Dragoš sedlo über dem Urwald Perućica, ca. 1150 m, auf *Fagus sylvatica*, 21.V.2003, leg. H. Mayrhofer 14579.

Dermatocarpon miniatum (L.) W.Mann
Debelo Brdo “bei Sarajevo“, Kalkfelsen, 04.XI.1899, [collector unknown].

Evernia prunasti (L.) Ach.
Semeč-planina, 1896, [collector unknown]. – Pale bei Sarajevo, 1897, [collector unknown].

Flavoparmelia caperata (L.) Hale
Sutjeska National Park, Tjentište, Umgebung von Hotel Mladost, 43°21’N/18°42’E, ca. 450 m, auf *Quercus petraea*, 21.V.2003, leg. H. Mayrhofer 14577.

****Fuscopannaria sampaiana*** (C.Tav.) P.M.Jørg.
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, 1400 m, 25.VII.1979, leg. et det. A. Vězda.

****Lecidea tessellata*** Flörke
Drina Tal, 3 km nördlich von Visegrad, ca. 300 m, Steilhänge mit *Pinus nigra*-Wäldern, Serpentin, 12.VII.1974, leg. J. Poelt, det. M. Pietschmann.

Lobaria amplissima (Scop.) Forssell
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, 500–1200 m, 25.VII.1979, leg. et det. A. Vězda. – Sutjeska National Park, Prijevor unter dem Berg Maglić, ca. 1550 m, auf *Fagus sylvatica*, 21.V.2003, leg. H. Mayrhofer 14580.

Micarea lignaria (Ach.) Hedl.
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, 1400 m, ad corticem Pinorum, 25.VII.1979, leg. et det. A. Vězda, conf. B.J. Coppins.

****Micarea melaena*** (Nyl.) Hedl.
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, 1400 m, ad lignum Pinorum, 25.VII.1979, leg. et det. A. Vězda, conf. B.J. Coppins.

Micarea peliocarpa (Anzi) Coppins & R.Sant.
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, 1200 m, ad lignum Abietis, 25.VII.1979, leg. et det. A. Vězda, conf. B.J. Coppins.

Normandina pulchella (Borrer) Nyl.
Montes Prenj, supra lacum Boračko jezero, 350–450 m, ad corticem arborum 25.VII.1979, leg. et det. A. Vězda.

Opegrapha niveoatra (Borrer) J.R.Laundon
Montes Prenj, supra lacum Boročko jezero, 600 m, ad corticem Aceris pseudoplatani, 17.VII.1966, leg. et det. A. Vězda.

Physcia stellaris (L.) Nyl.
Sutjeska National Park, Tjentište, Umgebung von Hotel Mladost, 43°21'N/18°42'E, ca. 450 m, auf *Juglans regia*, 21.V.2003, leg. H. Mayrhofer 14576.

Physconia venusta (Ach.) Poelt
Montes Prenj, in valle angusta inter Boračko jezero et montem Prenj, ad corticem Fagi, 25.VII.1979, leg. et det. A. Vězda (herb. Kalb 8667).

Ramalina farinacea (L.) Ach.
Sutjeska National Park, Tjentište, Umgebung von Hotel Mladost, 43°21'N/18°42'E, ca. 450 m, auf *Quercus petraea*, 21.V.2003, leg. H. Mayrhofer 14578.

****Rinodina polysporoides*** Giralt & H.Mayrhofer
Sutjeska National Park, Tjentište, Umgebung von Hotel Mladost, 43°21'N/18°42'E, ca. 450 m, auf *Juglans regia*, 21.V.2003, leg. H. Mayrhofer 14574.

Squamarina cartilaginea (With.) P.James
Debelo Brdo, "bei Sarajevo", auf Felsen, 16.IX.1899, [collector unknown; two specimens], rev. P. Navarro-Rosinés (already published as a host species of *Lichenostigma rouxii* by CALATAYUD et al. 2002: 1238). – Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt.

Toninia diffracta (A.Massal.) Zahlbr.
Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt, det. E. Timdal (already cited by TIMDAL 1991: 62, but without exact collecting data).

****Usnea barbata*** (L.) Weber ex F.H.Wigg.
Wald zwischen Bugojno und Lupreš, [date of sampling and collector unknown]. – Pale bei Sarajevo, 16.VIII.1897, [collector unknown]. – Berg Igman, 03.VIII.1898, [collector unknown].

Xanthoparmelia pulla (Ach.) O.Blanco et al.
Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt, rev. J. Hafellner.

****Xanthoparmelia verruculifera*** (Nyl.) O.Blanco et al.
Drina-Tal 3 km nördlich von Visegrad, ca. 300 m, Serpentin, 12.VII.1974, leg. J. Poelt.

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We would like to thank Georg HARB, Tanja NICHT, and Wilfried WINKLER for their kind assistance during the evaluation of the lichen collection of GZU and Klaus KALB for providing one specimen from his private herbarium. Financial support from the Austrian Science Foundation (project P20842-B16) is gratefully acknowledged.

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