

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), Argentina (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.

I wish to thank all the collectors and keepers of (private and public) herbaria for their contributions, in particular Franz BERGER, Josef HAFELLNER, Josef HALDA & Zdenek PALICE, Sergey KONDRATYUK, Helmut MAYRHOFER, Héctor S. OSORIO, Harrie SIPMAN (he kindly provided material from the herbarium in Berlin, collected e.g. by Gerhard FOLLMANN or Siegfried HUNECK or Otto & Isa DEGENER), Toby SPRIBILLE, Roman TÜRK, Jan VONDRÁK, and Mikhail ZHURBENKO.

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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 Shvандzor 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 Krai (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 Defereggental', 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. *Bellemeria 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 bryophytes 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, Stupalpe 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, Stupalpe 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 imbricatic 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, Kumgangsán, Manmulsán, 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 Hirscheegger 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, Kumgangsán, Manmulsán, 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 (Hirscheeggertsattel), 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 calcareous 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* (Lyngae) 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 National 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 Hirscheegg, 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 Hirscheegg, 1 km NW of the tavern Spenglerwirt, 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 Mühl-ebner, 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: Thamnic 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 Krai (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 'Hirscheegger 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, Horažďovice, 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 Cialancia, 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 Shvanzdor 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 (*Spartocystis supranubius*), on outcrops 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 Grimselfpass 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. weigeli** 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 covered 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 Shvандzor to Kapan, between Shvандzor 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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OBERMAYER W. 2009: **Dupla Graecensia Lichenum** (2009, nos 581–680). - Fritschiana 65: 7–32.
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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 Rosenloui, 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.

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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.).

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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.

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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.

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