

Dupla Graecensia Lichenum (2004)

Walter OBERMAYER*

OBERMAYER W. 2004: Dupla Graecensia Lichenum (2004). - Fritschiana (Graz) 49: 9–27. – ISSN 1024-0306.

Abstract: Dupla Graecensia Lichenum (2004) comprises 70 collections of lichen duplicates (including the lichenicolous fungus *Plectocarpon lichenum*) from Argentina (Neuquen), Australia (Victoria), Austria (Styria; Tirol; Upper Austria), China (Tibet, prov. Xizang; prov. Sichuan), Costa Rica (Puntarenas), Germany (Bavaria), Greece (Aegean Islands), Italy (Trentino-Alto Adige), New Zealand (South Islands), Russia (Eastern Siberia), Slovenia (Notranjsko Kraška), and Uruguay (Canelones; Montevideo; Rocha; Treinta y Tres). TLC-investigations were carried out for 24 lichenized taxa. Paratypes of *Amandinea deminuta* Hafellner are distributed. *Caloplaca flavorubescens* is issued as part of the results of the 'Sino-Austrian Joint Expedition to the SE-Tibetan Fringe Mountains (=Hengduan Shan), Sichuan Province, China (July/ August 2000)'. *Allocestraria flavonigrescens* is presented as part of the results of the 'Sino-German Joint Expedition to Southeastern and Eastern Tibet 1994'.

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The dwarf-exsiccata 'Dupla Graecensia Lichenum (2004)' are issued by the herbarium of the Institute for Plant Sciences of the Karl-Franzens-University, Graz, Austria (international abbreviation: GZU). It includes lichens and lichenicolous fungi from all over the world with five to ten duplicates of each collection. Each institution receiving a duplicate is cited (at the bottom line of each individual label) with its international herbarium abbreviation (see <http://sciweb.nybg.org/science2/IndexHerbariorum.asp>): The herbaria in Canberra (CANB), Graz (GZU), Munich (M), New York (NY), and Uppsala (UPS) are receiving all distributed species continuously. To make every single specimen unique, the abbreviation of the herbarium, where the specimen should be housed, is underlined on the labels. Abbreviations of authors of plant names are taken from http://brimsa.huh.harvard.edu/cms-wb/botanist_index.html). Names of countries and states (or provinces or principal subdivisions) can be found under <http://www.ars-grin.gov/cgi-bin/npgs/html/geolist.pl>. Dupla Graecensia Lichenum is published as text version under <http://www-ang.kfunigraz.ac.at/~oberma/dupl-graec.htm>. 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 herbaria for their contributions, in particular Josef Hafellner, Michaela Lambauer, Helmut Mayrhofer, Héctor S. Osorio, and Mikhail Zhurbenko. Thanks are also due to several colleagues, who helped with determinations (P. Clerc, J.E. Elix, J. Hafellner, H. Kashiwadani, M. Kukwa, H. Mayrhofer, and T. Randlane). Peter Kosnik kindly assisted with TLC-analyses. Field works in Tibet (1994 and 2000) were supported by the 'Austrian Science Fund' (project numbers P09663-BIO and P13676-BIO).

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331. *Alectoria ochroleuca* Nyl.

AUSTRIA, Steiermark (=Styria), Seetaler Alpen, 10.5 km W of Obdach, path from Großer Winterleitensee via Ochsenboden to Kreiskogel, 47°05'05"N / 14°33'35"E, MTB 8953/1, 1970 m alt., alpine meadows with boulders, on the ground. – 16.V.2002, leg. & det. W. Obermayer (10184).

Note: TLC: Usnic acid (maj.), diffractaic acid (maj.).

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332. *Allocetraria flavonigrescens* A.Thell & Randlane

CHINA, Tibet, prov. Xizang, 120 km SSW of Quamdo (=Changtu), 10 km S of Bamda, 30°09'N / 97°17'E, 4500 - 4600 m alt., *Rhododendron* shrubs, on bark of *Rhododendron* and soil. – 5.VII.1994, leg. W. Obermayer (03870a), det. T. Randlane (1999).

Note: All specimens with fruiting bodies.

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333. *Allocetraria stracheyi* (Bab.) Kurok. & M.J. Lai

CHINA, SW Tibet, prov. Xizang, West Himalaya, Upper Karnali, Burang, 30°08'N / 81°20'E, 4680 m alt., 15 NNE, upper slope on moraine, upper limit of *Kobresia nepalensis* (Veg.Rec.No. 1004), on ground. – 31.VIII.1993, leg. G. & S. Miehe (9621/04-1), det. T. Randlane (2001).

Note: TLC (all specimens tested): Usnic acid, fatty acids (allo-protolichesterinic acid, lichesterinic acid).

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334. *Amandinea deminuta* Hafellner

- paratype - [on *Caloplaca felipponei* Zahlbr. - toptype-material]

URUGUAY, Rio de la Plata, Isla de Flores, northern shore of the island next to the pier, 34°56'S / 55°55'W, hygrohaline zone, on rocks. – 31.X.2000, leg. H.S. Osorio (9404), det. J. Hafellner.

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335. *Anzina carneonivea* (Anzi) Scheid.

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Schladminger Tauern, WSW of Schladming, footpath from Gasselhöhehütte to the lake Mittersee, 47°21'25"N / 13°35'45"E, MTB 8647/2, 1760 m alt., mixed forest with *Picea abies*, *Larix decidua* and *Pinus cembra*, on stumps. – 24.VIII.2001, leg. & det. J. Hafellner (56758).

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336. *Arthonia cinnabarina* (DC.) Wallr. agg.

COSTA RICA, Puntarenas, close to the pacific coast, Carara Biological Reservation S of the Río Táreoles, just in front of the park entrance, 84°35'W / 09°47'N, 100 m alt., abandoned trees, on bark of *Cecropia* spec. – 18.VIII.1991, leg. & det. M. Grube (s.n.2).

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337. *Arthrorhaphis citrinella* (Ach.) Poelt

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Seckauer Tauern, Rosenkogel N of Pöls, path from Sommertörl to Lorettokapelle, 47°17'25"N / 14°33'10"E, MTB 8753/1, 1680 m alt., subalpine *Picea abies* forest, on soil (slopes of a forestry road). – 14.IX.2002, leg. & det. J. Hafellner (59116).

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338. *Buellia griseovirens* (Turner & Borrer ex Sm.) Almb.

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Schladminger Tauern, Obertal S of Schladming, valley of Giglachbach, on the path to Lackneralm, 47°18'50"N / 13°41'10"E, MTB 8648/3, 1100 m alt., *Picea abies* forest with *Alnus incana* (wet bottom of a slope), on bark of *Alnus incana*. – 25.VIII.2001, leg. & det. J. Hafellner (56815).

Note: All specimens with apothecia.

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339. *Calicium viride* Pers.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Gleinalpe, Hochalpe SE of Leoben, path to the summit, S of Trasattel, 47°20'50"N / 15°12'35"E, MTB 8657/3, 1360 m alt., montane forest with *Picea abies*, on wood of a snag. – 12.VIII.2001, leg. & det. J. Hafellner (56241).

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340. *Caloplaca arnoldii* (Wedd.) Zahlbr. ex Ginzb.

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Wölzer Tauern, N-facing base of Rettlkirchspitz NW of Oberwölz, 1 km W of Neunkirchner Hütte, 47°16'15"N / 14°08'00"E, MTB 8750/2, 1720 m alt., subalpine pastures with marble outcrops, on steep faces of marble. – 24.VIII.2002, leg. J. Hafellner (60712) & J. Miadlikowska, det. J. Hafellner.

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341. *Caloplaca flavorubescens* (Huds.) Laundon

CHINA, Sichuan Province, SE-Tibetan fringe mountains (=Hengduan Shan), 60 km WSW of Ya'an, road from Tianquan to the Erlang Shan-tunnel, W of Xing Gou, 29°54'06"N / 102°22'23"E, 1530 m alt., on bark of *Paulownia*. – 26.VII.2000, leg. & det. W. Obermayer (07970).

Note: All characters agree well with those of European material: Thallus continuous, smooth, yellowish to grey-white, orange apothecia with an exciple reaching 55 µm thickness at the base, lower part of the hymenium and hypothecium filled with oil droplets, asci containing eight two-celled spores, 13-16 x 8-9 µm, septum 5-7 µm wide. The specimens are partly intermixed with another, blastidiate, orange *Caloplaca* species. The specimen in GZU additionally contains *Caloplaca triloculans*.

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342. *Cetrelia cetrarioides* (Delise ex Duby) W.L.Culb. & C.F.Culb. s.str.

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab-Gruppe, about 6.7 km E of Hieflau, Schwabeltal, close to the confluence of the brook Schwabelbach with a tributary brook, at the W-facing foot of the mountain Mitterkogel, 47°36'40"N / 14°50'20"E, MTB 8355/3, 730 m alt., mixed forest above limestone boulders, on bark of *Acer pseudoplatanus*. – 16.VIII.2004, leg. & det. W. Obermayer (10410a).

Note: TLC (all specimens tested twice on different areas): Perlatolic acid (maj.), imbricatic acid (tr.), atranorin (major to traces or even not detected), 4-O-methylolivetic acid (min.), anziaic acid (tr.); *Cetrelia monachorum* (imbricatic acid as major substance) has been separated but may still be present as admixture.

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343. *Chaenothecopsis debilis* (Turner & Borrer ex Sm.) Tibell

AUSTRIA, Tirol, Ammergauer Alpen (Ammergebirge), 8.5 km E of Reutte, path from Plansee ("Am Plansee") along the Altenbergweg to Kuhklause, WSW-facing foot of Altenbergkopf, 47°30'00"N / 010°49'15"E, MTB 8530/2, 1150 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus* and *Picea abies*, on wood of dead *Acer pseudoplatanus* (light exposed, overhanging surfaces). – 5.IX.2004, leg. & det. W. Obermayer (10478).

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344. *Chrysothrix candelaris* (L.) J.R.Laundon [chemical race with pinastric acid]

GERMANY, Bayern (=Bavaria), Ammergauer Alpen (Ammergebirge), 15 km ESE of Füssen, uppermost valley of the rivulet Linder, Neualmgrieß, 47°32'20"N / 010°54'00"E, 1050-1100 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus*, *Fagus sylvatica*, and *Picea abies*, on bark of *Picea abies*. – 5.IX.2004, leg. & det. W. Obermayer (10473).

Note: TLC: Pinastric acid (maj.), unknown 4-5/2/4 (min./tr.); all specimens tested twice.

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345. *Chrysothrix candelaris* (L.) J.R.Laundon

[chemical race with pinastric acid]

GERMANY, Bayern (=Bavaria), Ammergauer Alpen (Ammergebirge), 15 km ESE of Füssen, uppermost valley of the rivulet Linder, Neualmgrieß, 47°32'20"N / 010°54'00"E, 1050-1100 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus*, *Fagus sylvatica*, and *Picea abies*, on bark of a snag of *Abies alba*. – 5.IX.2004, leg. & det. W. Obermayer (10481).

Note: TLC: Pinastric acid (maj.); all specimens with intermixed Caliciales (e.g. *Chaenotheca trichialis*, *Ch. chrysocephala*).

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346. *Cladonia crispatula* (Nyl.) Ahti

URUGUAY, Rocha, 59 km NE of Rocha, 6 km N of Palmar de Castillos, Cerro de los Rochas, 34°09'S / 53°51'W, 80 m alt., N-facing slope of a hill, on soil. – 25.IV.2003, leg. H.S. Osorio (9659) & G. Geymonat, det. H.S. Osorio.

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347. *Cladonia macilenta* Hoffm. s.l.

[sorediate chemotype with barbatic acid = *Cladonia bacillaris*]

AUSTRIA, Steiermark (=Styria), Eisenerzer Alpen, S-exposed base of Zeiritzkampel, N of Kalwang, just NE of the hunting lodge Don, path to Achner Alm, 47°28'N / 14°45'E, MTB 8554/1, 1250 m alt., stands of *Alnus incana* near a brook, on decayed wood. – 11.V.1997, leg. J. Miadlikowska & J. Hafellner (40599), det. J. Hafellner.

Note: TLC: Barbatic acid (maj.), rhodocladonic acid (in apothecia).

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348. *Cladonia norvegica* Toensberg & Holien

GERMANY, Bayern (=Bavaria), Allgäu, 11 km ENE of Füssen, Ammergauer Alpen (Ammergebirge), 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 strongly decayed wood (vertical faces). – 6.IX.2004, leg. & det. W. Obermayer (10474).

Note: TLC: Barbatic acid (maj.), 4-O-demethylbarbatic acid (min.), rhodocladonic acid (min.); red pigmented areas (caused by mite? infestation) on squamules and podetia are very well developed.

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349. *Cladonia substellata* Vain.

URUGUAY, Rocha, Highway 16, Sierra la Blaqueada, Estancia La Blanqueada, 33° 59'S / 53°40'W, 100-150 m alt., on the ground among rocks in a meadow (locally abundant). – 10.VI.1989, leg. & det. H.S. Osorio (9006) conf. T. Ahti (1989).

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350. *Cladonia uncialis* (L.) Weber ex F.H.Wigg.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Stubalpe, 17.5 km W of Köflach, 2 km SW of Salzstiegelhaus (Hirscheeggssattel), near the cross on the lower peak 0.5 km SE of the mountain Speikkogel, 47°03'20-25"N / 14°51'05-10"E, MTB 8955/1, 1940-1960 m alt., alpine meadows with amphibolitic (and gneissic) boulders, on ground. – 24.X.2004, leg. & det. W. Obermayer (10502).

Note: TLC (all samples tested): Usnic acid, [no squamatic acid], fatty acid 4(-5)/5(-6)/5(-6) running heights like those of nephrosteranic acid.

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351. *Dibaeis baeomyces* (L.fil.) Rambold & Hertel

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Seckauer Tauern, Speikbichl N of Knittelfeld, S-facing slopes towards Feistrizgraben, above Schwaigerhütte, 47°20' 55"N / 14°49'05"E, MTB 8654/4, 1540 m alt., forest road in a wood with *Picea abies* and *Larix decidua*, on soil. – 22.VI.2000, leg. J. Hafellner (51743) & A. Hafellner, det. J. Hafellner.

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352. *Dimealena oreina* (Ach.) Norman [chemotype I]

AUSTRIA, Tirol, Osttirol, 32 km NW of Lienz, Defereggental, Lasörling Gruppe, 2.3 km E of St. Jakob, Äußere Tölgisch, 46°55'09"N / 12°21'39"E, 1600 m alt., S-exposed rocks in steep meadow, on gneiss. – 11.VIII.2004, leg. & det. H. Mayrhofer (15814).

Note: TLC (Kosnik & Mayrhofer): Fumarprotocetraric acid (maj.), protocetraric acid (tr.), usnic acid (maj.).

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354. *Dimelaena oreina* (Ach.) Norman chemotype Va

AUSTRIA, Steiermark (=Styria), Seetaler Alpen, Zirbitzkogel, SW of Moaralm above Tonnerhütte, 47°03'12"N / 14°33'E, MTB 8953/1, 1780 m alt., siliceous outcrops, on shadowed, S-exposed, steep rocks. – 13.VIII.2002, leg. & det. H. Mayrhofer (15299).

Note: TLC: Usnic acid (maj.), stictic acid (maj.), norstictic acid (tr.), menegazziaic acid (tr.), cryptostictic acid (tr.), constictic acid (tr.).

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353. *Dimelaena oreina* (Ach.) Norman [chemotype IV]

AUSTRIA, Tirol, Osttirol, 31 km WNW of Lienz, Defereggental, Deferegger Alpe, 2.3 km E of St. Jakob, Mooser Alm, NW of Ochsenlacke, 46°53'33"N / 12°22'09"E, 2360 m alt., W-exposed steep rocks, on gneiss. – 10.VIII.2004, leg. & det. H. Mayrhofer (15812).

Note: TLC (Kosnik & Mayrhofer): Usnic acid (maj.), gyrophoric acid (maj.), fumarprotocetraric acid (maj.), protocetraric acid (tr.); results confirmed for all specimens by applying the 'single-areole-method'.

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355. *Diploschistes scruposus* (Schreb.) Norm.

AUSTRALIA, Victoria, Bogong High Plains, Mt Cope, 36°56'S / 147°17'E, 1800-1837 m alt., on granite. – 25.II.1985, leg. H. Mayrhofer (15361), H. Hertel & R. Filson, det. H.T. Lumbsch (2003).

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356. *Diplotomma lutosum* A.Massal.

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Fischbacher Alpen, Ebenschlag NE of St. Jakob bei Mixnitz, ridge area SE of the cross on the summit, 47°25'00"N / 15°29'30"E, MTB 8558/4, 1520 m alt., pasture with small calcareous outcrops, on limestone (S-exposed faces and near the ground). – 29.IX.1999, leg. & det. J. Hafellner (59628).

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357. *Helocarpon pulverulum* (Th.Fr.) Türk & Hafellner

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Schladminger Tauern, Untertal SE of Schladming, lowermost N-exposed slopes of Mandlspitze, southern shore of Riesachsee, 47°19'45"N / 13°46'35"E, MTB 8648/4, 1340 m alt., mossy boulder field with *Larix decidua* and *Pinus mugo*, on bryophytes covering the boulders. – 28.VIII.2001, leg. & det. J. Hafellner (56577).

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358. *Hypocenomyce leucococca* R.Sant.

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Schladminger Tauern, Obertal S of Schladming, valley of Giglachbach, on the path to Lackneralm, 47°18'50"N / 13°41'10"E, MTB 8648/3, 1100 m alt., *Picea abies* forest with *Alnus incana* (wet bottom of a slope), on bark of *Alnus incana*. – 25.VIII.2001, leg. & det. J. Hafellner (56814).

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359. *Hypotrachyna dactylifera* (Vain.) Hale

URUGUAY, Canelones, ENE of Montevideo, Parque Nacional "F.D. Roosevelt", 34°51'S / 56°02'W, 10 m alt., plantation with *Eucalyptus* and *Pinus*, on a trunk of *Pinus*. – 3.III.2002, leg. & det. H.S. Osorio (9518).

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360. *Imshaugia aleurites* (Ach.) S.L.F.Meyer

GERMANY, Bayern (=Bavaria), Nordalpen, Ammergauer Alpen (Ammergebirge), Tegelberg, path from Tegelberghaus via Tegelbergkopf to Marienbrücke, 47°33'35"N / 10°46'05"-20"E, 1500-1600 m alt., calcareous outcrops in forest with *Picea abies*, on bark of dead *Picea abies*. – 4.IX.2004, leg. & det. W. Obermayer (10471).

Note: TLC: Thamnolic acid.

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361. *Lasallia pustulata* (L.) Mérat

AUSTRIA, Tirol, Osttirol, 32 km NW of Lienz, Defereggental, Lasörling Gruppe, 2.3 km E of St. Jakob, Äußere Tölgisch, 46°55'09"N / 12°21'39"E, 1600 m alt., S-exposed rocks in a steep meadow, on gneiss. – 11.VIII.2004, leg. & det. H. Mayrhofer (15810).

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

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Triebener Tauern, Vordertriebental SSE of Trieben, 1 km SE of the tavern Brodjäger, N-facing base of Tierkogel, 47° 26'30"N / 14°31'25"E, MTB 8553/3, 1050 m alt., waterside grove, on bark of *Alnus incana*. – 26.VIII.2002, leg. J. Hafellner (58970) & J. Miadlikowska, det. J. Hafellner.

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363. *Lecanora subrugosa* Nyl.

AUSTRIA, Steiermark (=Styria), Sausal, 5 km W of Leibnitz, SE-facing base of Demmerkogel, NW of Heimschuh, lower part of Stumpfgraben, 46°46'15"N / 15°28' 45"E, MTB 9258/2, 300 m alt., mixed forest, on bark of *Fraxinus excelsior*. – 25.III.2000, leg. & det. J. Hafellner (51103).

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364. *Lecanora thysanophora* R.C.Harris

AUSTRIA, Tirol, Ammergau Alpen (Ammergebirge), 8.5 km E of Reutte, path from Plansee ("Am Plansee") along the Altenbergweg to Kuhklause, 47°29'35"-50"N / 10°49'35"-55"E, MTB 8530/2, 1050-1130 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus* and *Picea abies*, on bark of *Fagus sylvatica* (1.5-2 m stem height). – 5.IX.2004, leg. & det. W. Obermayer (10469).

Note: TLC: Atranorin, usnic acid, zeorin.

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365. *Lepraria lobificans* Nyl.

AUSTRIA, Steiermark (=Styria), Oststeirisches Riedelland, 8.7 km E of the centre of Graz, 2.2 km WNW of Laßnitzhöhe, Äußere Ragnitz, 47°04'42"N / 15°32'21"E, MTB 8959/1, 440 m alt., mixed forest (*Fagus-Acer-Pinus-Picea*) near a brook, on *Fagus sylvatica*. – 19.X.2003, leg. W. Obermayer (10188), det. Martin Kukwa (2002).

Note: TLC (each bark-fragment tested): Atranorin, zeorin, stictic acid, constictic acid.

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366. *Lepraria nivalis* J.R.Laundon [chemotype 6 with atranorin and psoromic acid]

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab-Gruppe, about 5 km ENE of Hieflau, Schwabental, shortly NE of the confluence of the brooks Schwalbelbach and Seebach, surrounding area of the waterfall, 47°37'20"N / 14°48'25"E, MTB 8354/4, 660 m alt., mixed forest with calcareous outcrops as well as deciduous trees along the brook, on limestone rock. – 16.VIII.2004, leg. & det. W. Obermayer (10446).

Note: TLC: Atranorin, psoromic acid, 2'-O-demethylpsoromic acid (tr.).

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367. *Lepraria nivalis* J.R.Laundon [chemotype III with atranorin and fumarprotocetraric acid]

GREECE, East Aegean Islands, Nomos Dodekanisou, Kos Island, Kefalos peninsula, 6 km S of Kefalos, Agios Mammas chapel near S-tip, 36°40.7'N / 26°58.0'E, 200 m alt., *Phrygana* dwarfshrub vegetation with siliceous rock outcrops on hilltop near the coast, on soil of a steep bank. – 23./24.IX.2000, leg. H. Sipman (47127) & Th. Raus, det. H. Sipman.

Note: TLC: Atranorin, fumarprotocetraric acid.

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368. *Leprocaulon microscopicum* (Vill.) Gams

ITALY, Trentino-Alto Adige, prov. Bolzano (=Südtirol), Val Venosta (=Vinschgau), slopes just W above Laudes (=Laatsch), 46°40'40"N / 10°31'45"E, 1000-1050 m alt., steppe-like vegetation in E-exposed slopes with outcrops and steep rugged rocks of siliceous schist, on soil and bryophytes. – 3.IX.2002, leg. & det. W. Obermayer (10483).

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369. *Leproloma vouauxii* (Hue) J.R.Laundon

GERMANY, Bayern (=Bavaria), Nordalpen, Ammergauer Alpen (Ammergebirge), eastern outskirts of Hohenschwangau, N-facing foot of the hill of the castle Neuschwanstein, 47°33'30"N / 010°45'00"E, 820 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus* and *Picea abies*, on bark of *Acer pseudoplatanus*. – 4.IX.2004, leg. & det. W. Obermayer (10480).

Note: TLC: Pannaric-acid-6-methylester (maj.), 4-oxypannaric-acid-2-methylester (min., tr.); further detected substances are obviously from different intermixed Leprarias, e.g. *L. lobificans* (atranorin, stictic acid, zeorin) and *L. eburnea/frigida* (alectorialic acid).

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370. *Lobarina scrobiculata* (Vain.) Nyl. ex Cromb.

SLOVENIA, Notranjsko-Kraška, Snežnik-Javorniki, SW Kozarišče, 2.5 km W of Babno Polje, SW of Maslovec, 45°39'00"N / 14°30'55"E, MTB 0353/3, 720 m alt., mixed deciduous forest, on bark of *Acer pseudoplatanus*. – 3.X.1997, leg. J. Prügger (SN061.84/1), U. Suppan, H. Mayrhofer & F. Batič, det. J. Prügger.

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371. *Micarea lignaria* (Ach.) Hedl.

AUSTRIA, Tirol, Ammergauer Alpen (Ammergebirge), 8.5 km E of Reutte, path from Plansee ("Am Plansee") along the Altenbergweg to Kuhklause, WSW-facing foot of Altenbergkopf, 47°30'00"N / 010°49'15"E, MTB 8530/2, 1150 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus*, *Fagus sylvatica*, and *Picea abies*, on bark of *Fagus sylvatica*. – 5.IX.2004, leg. & det. W. Obermayer (10467).

Note: The hymenium (but not the epithecium) partly shows small violaceous granules along the paraphyses, which turn to bright blue with KOH; TLC: Argopsin (tr.), no further substances.

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372. *Multiclavula mucida* (Pers.) R.H.Petersen

GERMANY, Bayern (=Bavaria), Ammergauer Alpen (Ammergebirge), 15 km ESE of Füssen, uppermost valley of the rivulet Linder, Neualmgrieß, 47°32'20"N / 010°54'00"E, 1050-1100 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus*, *Fagus sylvatica*, and *Picea abies*, on strongly decayed wood (on ground). – 5.IX.2004, leg. & det. W. Obermayer (10475).

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373. *Normandina pulchella* (Borrer) Nyl.

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab-Gruppe, about 7.5 km E of Hieflau, lowermost NW-facing slopes of the mountain Kaltmauer, north of the valley Wurmgraben, 47°36'30"N / 14°51'00"E, MTB 8355/3, 850 m alt., mixed forest above limestone boulders, on bark of *Fagus sylvatica*. – 16.VIII.2004, leg. & det. W. Obermayer (10409).

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374. *Parmotrema xanthinum* (Müll.Arg.) Hale

URUGUAY, Rocha, 63 km NE of Rocha City, 14 km N of Palmar de Castillos, route 16, road kilometer 18, 34°05'41"S / 53°51'04"W, 50 m alt., on trunk of *Butia capitata*. – 24.IV.2003, leg. H.S. Osorio (9651) & G. Geymonat, det. J.A. Elix (2004).

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375. *Peltigera collina* (Ach.) Schrad

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab-Gruppe, about 7.5 km E of Hieflau, lowermost NW-facing slopes of the mountain Kaltmauer, north of the valley Wurmgraben, 47°36'30"N / 14°51'00"E, MTB 8355/3, 850 m alt., mixed forest above limestone boulders, on bark of *Acer pseudoplatanus*. – 16.VIII.2004, leg. & det. W. Obermayer (10407).

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376. *Peltigera leucophlebia* (Nyl.) Gyeln.

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab-Gruppe, about 7.5 km E of Hieflau, lowermost NW-facing slopes of the mountain Kaltmauer, north of the valley Wurmgraben, 47°36'30"N / 14°51'00"E, MTB 8355/3, 850 m alt., mixed forest above limestone boulders, on bryophytes above limestone rock. – 16.VIII.2004, leg. & det. W. Obermayer (10408).

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377. *Peltigera praetextata* (Flörke ex Sommerf.) Zopf

AUSTRIA, Steiermark (=Styria), Steirisches Randgebirge, Gleinalpe, Niklasdorfgraben N of the mountain Mugel, at the hunting lodge Karner, 47°22'25"N / 15°11'35"E, MTB 8657/1, 1000 m alt., grove area along the brook, on bryophytes covering a siliceous rock. – 6.X.2001, leg. & det. J. Hafellner (57221).

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378. *Peltula euploca* (Ach.) Poelt

ITALY, Trentino-Alto Adige, prov. Bolzano (=Südtirol), Val Venosta (=Vinschgau), slopes just W above Laudes (=Laatsch), 46°40'40"N / 10°31'45"E, 1000-1050 m alt., steppe-like vegetation in E-exposed slopes with outcrops and steep rugged rocks of siliceous schist, on wet, vertical rock faces. – 3.IX.2002, leg. & det. W. Obermayer (10484).

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379. *Pertusaria glomerata* (Ach.) Schaer.

GERMANY, Bayern (=Bavaria), Ammergebirge, 6.5 km SE of Füssen, SE of Hohen Schwangau, near Bleckenau, 47°32'20"N / 10°46'30"E, 1370 m alt., above the artificial timber line, on bryophytes covering a solitary *Acer pseudoplatanus*. – 28.VIII.1968, leg. A. Schröppel (s.n.2), det. Obermayer (2004).

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380. *Placynthiella uliginosa* (Schrad.) Coppins & P.James

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Schladminger Tauern, WSW of Schladming, footpath from Gasselhöhehütte to the lake Mittersee, 47°21'25"N / 13°35'45"E, MTB 8647/2, 1760 m alt., mixed forest with *Picea abies*, *Larix decidua* and *Pinus cembra*, on wood of a bole. – 24.VIII.2001, leg. & det. J. Hafellner (56762).

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381. **Plectocarpion lichenum** (Sommerf.) D.Hawksw. [lichenicolous fungus on *Lobaria pulmonaria*]

AUSTRIA, Steiermark (=Styria), Ennstaler alpen, Tamischbachgraben SW of Groß-reifling, 47°38'07"N / 14°41'45"E, MTB 8354/3, 710 m alt., mixed forest with *Fagus sylvatica*, *Acer pseudoplatanus* and *Picea abies*, on bark of *Acer pseudoplatanus*. – 30.VI.2004, leg. & det. H. Mayrhofer (15784) & C. Scheuer.

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382. **Porpidia contraaponenda** (Arnold) Knoph & Hertel

GERMANY, Bayern (=Bavaria), Allgäuer Alpen, NE of Sonthofen, Grünten, SW-running ridge shortly S of Grüntenhaus, 47°33'00"N / 10°18'55"E, 1600 m alt., sun-exposed sandstone outcrops in a subalpine forest with *Picea abies*, on sandstone (horizontal faces, 15 cm above the ground). – 7.IX.2004, leg. & det. W. Obermayer (10468).

Note: TLC: Methyl-2'-O-methylmicrophyllinate (maj.), 2'-O-methylmicrophyllinic acid (tr.).

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383. **Protousnea fibrillatae** Calvelo, Stocker-Wörgötter, Liberatore & Elix

ARGENTINIA, Neuquen, Lago Nahuel Huapi, Isla Victoria, Puerto Piedras Blancas, 40°56'S / 71°33'W, on *Austrocedrus chilensis*. – VII.1970, leg. & det. J.R. Contreras (s.n.; ex herb. Osorio no 9673).

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384. **Pseudocyphellaria aurata** (Ach.) Vain.

URUGUAY, Treinta y Tres, Quebrada de los Cuervos, 32°54'S / 54°25'W, Eucalyptus plantation (1 km E of the ravine), on a trunk of *Eucalyptus*. – 10.II.2003, leg. F. Scarabino (s.n.; ex herb. Osorio no 9619), det. H.S. Osorio (2003).

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385. *Pycnora praestabilis* (Nyl.) Hafellner

AUSTRIA, Steiermark (=Styria), Nördliche Kalkalpen, Hochschwab-Gruppe, along the road from Thörl to Bodenbauer, 2 km NW of Innerzwain, Festlau SW of Karlschütt, 47°34'20"N / 15°08'33"E, MTB 8456/2, 870 m alt., conifer forest with *Picea abies* and *Pinus sylvestris*, on wood of snags. – 9.VI.2004, leg. & det. J. Hafellner (63091).

Note: Richly fruiting material.

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386. *Ramalina celastri* (Spreng.) Krog & Swinscow

URUGUAY, Montevideo, near Santiago Vásquez, Melilla, 4 km ENE of the bridge of 'Highway Number One' across the Río Santa Lucía, 34°48'S / 56°22'W, 0-10 m alt., marginal forest, on bark of *Acacia caven*. – 5.XII.1982, leg. & det. H.S. Osorio (8132).

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387. *Ramalina farinacea* (L.) Ach.

[chemical strain with protocetraric acid; all specimens with apothecia]

AUSTRIA, Tirol, Ammergauer Alpen (Ammergebirge), 8.5 km E of Reutte, path from Plansee ("Am Plansee") along the Altenbergweg to Kuhklause, WSW-facing foot of Altenbergkopf, 47°30'00"N / 010°49'15"E, MTB 8530/2, 1150 m alt., mixed forest with *Abies alba*, *Acer pseudoplatanus* and *Picea abies*, on bark of *Acer pseudoplatanus*. – 5.IX.2004, leg. & det. W. Obermayer (10476).

Note: TLC: Protocetraric acid (all specimens tested twice).

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388. *Ramalina laevigata* Fr.

URUGUAY, Treinta y Tres, Quebrada de los Cuervos, along the Yerbal Chico brook, 32°54'S / 54°25'W, on rocks (occasionally inundated). – 22./28.III.1970, leg. H.S. Osorio (5960), det. H. Kashiwadani (1989).

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389. *Ramalina laevigata* Fr.

URUGUAY, Rocha, Cabo Polonio, Cerro Buena Vista, 34°24'S / 53°46'W, oceanic coast, hygrohaline zone, on rocks. – 16.II.1980, leg. M. Meneghel & F. Achaval (s.n.; ex herb. Osorio no 9617), det. H.S. Osorio (1992).

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390. *Ramalina sprengelii* Krog & Swinscow

URUGUAY, Treinta y Tres, Quebrada de los Cuervos, 32°54'S / 54°25'W, *Eucalyptus* plantation (1 km E of the ravine), on a trunk of *Eucalyptus*. – 10.II.2003, leg. F. Scarabino (s.n.; ex herb. Osorio no 9618), det. H.S. Osorio (2003).

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391. *Rinodina bischoffii* (Hepp) A.Massal.

NEW ZEALAND, South Island, Canterbury, close to Motunau Beach Road near Coringa, 43°01'58"S / 173°01'55"E, 83 m alt., pasture across the river, on low lime-stone rocks. – 3.XI.2003, leg. M. Lambauer (0137) & C. Meurk, det. M. Lambauer.

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392. *Rinodina oleae* Bagl.

NEW ZEALAND, South Island, Nelson, N End of Boulder Bank, 41°12'13"S / 173°18'23"E, 1-5 m alt., close to the sea, on pebbles. – 19.XI.2003, leg. M. Lambauer (0194) & B. Malcolm, det. M. Lambauer.

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393. *Rinodina oleae* Bagl.

NEW ZEALAND, South Island, Canterbury, Banks Peninsula, Tumbledown Bay, 43°51'16"S / 172°46'17"E, 0-2 m alt., spray zone at the beach, on basaltic rocks (W-exposed). – 4.XI.2003, leg. & det. M. Lambauer (0153).

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394. *Rinodina turfacea* (Wahlenb.) Körb.

RUSSIA, Eastern Siberia, Yakutiya, Lena River delta, right bank of Olenek channel, 18 km WNW of Krest-Tumsa Cape at the north-western extremity of Primorskii Range, Kurungnaakh-Sise Island, Buor-Khaya urochishche, 72°20'N / 126°18'E, 40 m alt., moist lichen-moss tundra, on bryophytes in continuous lichen-moss mat (locally common). – 1.VIII.1998, leg. M. Zhurbenko (98215b), det. H. Mayrhofer (2004).

Note: TLC (Mayrhofer, Kosnik, Bilovic): Sphaerophorin, variolaric acid.

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395. *Sphaerophorus fragilis* (L.) Pers.

AUSTRIA, Steiermark (=Styria), Niedere Tauern, Schladminger Tauern, Kleinsölktal, Sacherseealm, lowermost slopes of Kesselspitze, 47°19'42"N / 13°53'47"E, MTB 8649, 1090 m alt., on N-exposed, strongly shadowed steep faces of a gneissic rock. – 27.IX.2003, leg. & det. H. Mayrhofer (14588).

Note: TLC: Sphaerophorin (maj.), hypothamnolic acid (maj.), squamatic acid (tr.); the thalli are very well developed, richly branched and show an unusual grey colour.

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396. *Teloschistes flavicans* (Sw.) Norman

URUGUAY, Treinta y Tres, Quebrada de los Cuervos, 32°54'S / 54°25'W, *Eucalyptus* plantation (1 km E of the ravine), on a trunk of *Eucalyptus*. – 10.II.2003, leg. F. Scarabino (s.n.; ex herb. Osorio no 9620), det. H.S. Osorio (2003).

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397. *Teloschistes flavicans* (Sw.) Norman

URUGUAY, Rocha, 63 km NE of Rocha City, 14 km N of Palmar de Castillos, route 16, road kilometer 18, 34°05'41"S / 53°51'04"W, 50 m alt., on shrubs (in a palm grove of *Butia capitata*, locally very abundant). – 24.IV.2003, leg. H.S. Osorio (9641) & G. Geymonat, det. H.S. Osorio.

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398. *Trapelia coarctata* (Sm.) M.Choisy

ITALY, Trentino-Alto Adige, prov. Trento, Passo di Rolle N of San Martino di Castrozza, gentle slopes S of the pass, 46°17'40"N / 11°47'10"E, 2010 m alt., low outcrops of siliceous rocks in subalpine pastures, on stones (near the ground) along a road. – 1.IX.2002, leg. & det. W. Obermayer (10485).

Note: TLC (apothecia): Gyrophoric acid (asci with spores show a C+ red reaction); TLC (thallus): Gyrophoric acid.

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399. *Usnea ceratina* Ach.

AUSTRIA, Oberösterreich (=Upper Austria), Totes Gebirge, 23 km SSE of Gmunden, at the south shore of the lake Almsee, E of the hut Seehaus, 47°44'36"N / 013°57'32"E, MTB 8249/4, 600 m alt., on *Salix* spec. – 27.IV.2004, leg. & det. R. Türk (34598).

Note: TLC: Diffractaic acid (maj.), usnic acid (min./tr.), barbatolic acid (tr./-).

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400. *Usnea intermedia* (A.Massal.) Jatta s.lat.

AUSTRIA, Steiermark (=Styria), Zentralalpen, Gurktaler Alpen, Grebenzen, 2.6 km ESE of St. Lambrecht, Maria Schönanger, 47°03'58"N / 14°20'03"E, MTB 8952/3, 1330 m alt., forest with *Picea abies* and *Larix decidua*, on *Larix decidua*. – 2.VIII.2004, leg. W. Obermayer (10229), det. Ph. Clerc (2004).

Note: TLC: Salacinic acid (maj.), usnic acid (maj./min.). All specimens tested once (including apothecia) and some of them tested twice (with and without apothecia). Samples with apothecia show a higher concentration of usnic acid.

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