

## Contribution to the lichen biota of Slovenia XII. Some lichens from Logarska dolina

PETER OTHMAR BILOVITZ<sup>1</sup>, ULF ARUP<sup>2</sup> & HELMUT MAYRHOFER<sup>1</sup>

<sup>1</sup>Institute of Plant Sciences, Karl-Franzens-University Graz, Holteigasse 6, 8010 Graz, AUSTRIA; e-mail: pe.bilovitz@uni-graz.at; helmut.mayrhofer@uni-graz.at

<sup>2</sup>Botanical Museum, Lund University, Östra Vallgatan 18, 22361 Lund, SWEDEN; e-mail: ulf.arup@botmus.lu.se

### Abstract

A list of 94 species is presented including *Bacidia subacerina* and *Lopadium disciforme* as new for Slovenia and *Bilimbia accedens*, *Lecanora leptyroides*, *Megalaria grossa*, *Mycobilimbia epixanthoides*, *Rinodina efflorescens*, and *Sclerophora peronella* as new for the alpine phytogeographical region of Slovenia.

**Key words:** Biodiversity, lichenized Ascomycetes, Slovenia, southern Alps

### 1. Introduction

The Kamniško-Savinjske Alps are the lichenologically least known parts of the Alps in Slovenia. Apart from the contributions of ROBIČ (1876, 1877, 1895) there are only single records mentioned in various publications (e. g. PITTONI 1877, BATIČ 1976, 1978, MAYRHOFER & al. 2006, MAYRHOFER & SHEARD 2007, OBERMAYER & MAYRHOFER 2007). Since the publication of the catalogue of lichenized fungi of Slovenia (SUPPAN & al. 2000) and its additions and corrections (MAYRHOFER 2006) several floristic papers (BILOVITZ & al. 2007, OBERMAYER 2007, BREUSS 2008, HAFELLNER 2008, KUKWA 2008) deal with or include lichenized and lichenicolous fungi from Slovenia. The present list includes a remarkable number of rare or otherwise endangered species such as *Arthonia leucopellaea*, *Coenogonium luteum*, *Heterodermia speciosa*, *Lopadium disciforme*, *Maronea constans*, *Megalaria grossa*, *Mycoblastus sanguinarius*, *Pannaria conoplea*, *Ramalina roesleri*, *Sclerophora peronella*, and *Thelotrema lepadinum*.

### 2. Materials and methods

The list is based on a half day excursion to Logarska dolina in 1998. The specimens have been identified using routine light microscopy techniques, with the aid of POELT (1969) 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 & al. (2001). The specimens are preserved in the herbarium of the Institute of Plant Sciences, Karl-Franzens-University Graz (GZU), and a smaller number in the private collection of Ulf Arup indicated as hb. Arup in the list of specimens. The nomenclature follows SANTESSON & al. (2004) and, for taxa not represented in this checklist, NIMIS & MARTELOS (2003) or other modern treatments.

### 3.1 List of sampling locations

- 9653/2** (01) Slovenia, Kamniško-Savinjske Alpe, Logarska dolina, at km 5,0 along the road from Solčava to the hut „Koča pod slapom Rinka“, 875 – 890 m, 46°22'37"N/14°37'05"E, mixed forest with beech and fir, 03. 11. 1998. Leg. H. MAYRHOFFER. Leg. J. PRÜGGER et U. SUPPAN. Leg. U. ARUP.
- 9653/2** (02) Slovenia, Kamniško-Savinjske Alpe, Logarska dolina, at km 4,0 along the road from Solčava to the hut „Koča pod slapom Rinka“, 815 m, 46°30'N/14°37'35"E, mixed forest with beech and fir, 03. 11. 1998. Leg. H. MAYRHOFFER. Leg. J. PRÜGGER et U. SUPPAN. Leg. U. ARUP.
- 9553/4** (03) Slovenia, Kamniško-Savinjske Alpe, Logarska dolina, at km 1,5 along the road from Solčava to the hut „Koča pod slapom Rinka“, 740 m, 46°24'20"N/14°38'15"E, meadow with isolated deciduous trees, 03. 11. 1998. Leg. H. MAYRHOFFER. Leg. J. PRÜGGER et U. SUPPAN. Leg. U. ARUP.

### 3.2 List of substrata and their abbreviations

<i>Abies alba</i>	Abi alb
<i>Acer pseudoplatanus</i>	Ace pse
<i>Corylus avellana</i>	Cor ave
<i>Fagus sylvatica</i>	Fag syl
<i>Fraxinus excelsior</i>	Fra exc
<i>Picea abies</i>	Pic abi
<i>Salix spec.</i>	Sal
<i>Ulmus glabra</i>	Ulm gla
on branches	bra-
on bark of trunks (corticolous)	cor-
on dead wood (lignicolous)	lig(-)
on mossy bark/on mosses (muscolous)	mus-/mus
on mossy rocks	mus-sax
on mossy stump	mus-stu-
on stump	stu-
on soil	ter

### 3.3 Lichenized taxa

- Acrocordia gemmata* (Ach.) A.Massal.: 01 (cor Ace pse), 03 (cor Ace pse)
- Anisomeridium polypori* (Ellis & Everh.) M.E.Barr.: 03 (Fra exc, hb. Arup)
- Arthonia leucopellaea* (Ach.) Almq.: 01 (cor Abi alb)
- Bacidia absistens* (Nyl.) Arnold.: 02 (Ace pse, hb. Arup), 03 (Ace pse, hb. Arup)
- Bacidia laurocerasi* (Delise ex Duby) Zahlbr.: 03 (Ace pse, hb. Arup)
- Bacidia rubella* (Hoffm.) A.Massal.: 01 (cor Ace pse), 03 (cor Fra exc)
- Bacidia subacerina* Vain.: 02 (cor Ulm gla)
- Biatora helvola* Körb. ex Hellb.: 02 (Ace pse, Fag syl, hb. Arup)

*Bilimbia accedens* Arnold: 03 (Fra exc, hb. Arup)

Note: This species was previously only known from the upper slopes of Mali Snežnik (ARUP & al. 2001).

*Bryoria fuscescens* s.l.: 01 (Fag syl)

*Cetrelia cetrarioides* (Delise ex Duby) W.L.Culb. & C.F.Culb.: 03 (cor Ace pse)

*Cetrelia monachorum* (Zahlbr.) W.L.Culb. & C.F.Culb.: 01 (cor Ace pse), 03 (cor Ace pse, cor Fra exc)

*Coenogonium luteum* (Dicks.) Kalb & Lücking: 01 (Abi alb, hb. Arup; cor/mus Fag syl)

*Collema auriforme* (With.) Coppins & J.R.Laundon: 02 (mus-sax)

*Collema flaccidum* (Ach.) Ach.: 03 (cor Fra exc)

*Collema nigrescens* (Huds.) DC.: 03 (cor Ace pse; Fra exc, hb. Arup)

*Flavoparmelia caperata* (L.) Hale: 01 (mus)

*Fuscidea stiriaca* (A.Massal.) Hafellner: 03 (cor Ace pse)

*Graphis scripta* (L.) Ach.: 01 (cor Ace pse), 02 (cor Ulm gla)

*Heterodermia speciosa* (Wulfen) Trevis.: 01 (cor Ace pse, Fag syl), 03 (cor Ace pse, mus Fra exc)

*Hypogymnia farinacea* Zopf: 01 (cor Pic abi)

*Hypogymnia physodes* (L.) Nyl.: 01 (Fag syl, bra Pic abi)

*Hypogymnia tubulosa* (Schaer.) Hav.: 03 (bra Sal)

*Hypotrachyna revoluta* (Flörke) Hale: 01 (Fag syl, hb. Arup)

*Icmadophila ericetorum* (L.) Zahlbr.: 01 (stu Abi alb, hb. Arup)

*Lecanora albella* (Pers.) Ach.: 01 (cor Abi alb)

*Lecanora carpinea* (L.) Vain.: 01 (cor Ace pse), 03 (cor Ace pse)

*Lecanora chlarotera* Nyl.: 03 (cor Ace pse)

*Lecanora glabrata* (Ach.) Malme: 01 (Fag syl, hb. Arup)

*Lecanora horiza* (Ach.) Linds.: 01 (cor Fag syl, cor Ace pse), 03 (cor Fra exc)

*Lecanora intumescens* (Rebent.) Ragenh.: 02 (Fag syl, hb. Arup)

*Lecanora leptyroides* (Nyl.) Degel.: 03 (Ace pse, hb. Arup)

*Lecanora subcarpinea* Szatala: 02 (Ace pse, hb. Arup)

*Lecanora symmicta* (Ach.) Ach.: 03 (bra Sal)

*Lecidella achristotera* (Nyl.) Hertel & Leuckert: 01 (cor Ace pse), 03 (cor Ace pse)

*Lecidella elaeochroma* (Ach.) M.Choisy: 01 (cor Ace pse), 03 (bra Sal)

*Lepraria eburnea* J.R.Laundon: 01 (cor Ace pse, cor Fag syl), 02 (cor Ulm gla), 03 (cor Ace pse)

*Lepraria lobificans* Nyl.: 01 (Abi alb, hb. Arup; cor Fag syl, cor Ulm gla)

*Leptogium lichenoides* (L.) Zahlbr.: 03 (cor/mus Fra exc)

*Leptogium saturninum* (Dicks.) Nyl.: 03 (cor Ace pse, cor/mus Fra exc)

*Lobaria pulmonaria* (L.) Hoffm.: 01 (cor Ace pse), 03 (cor Ace pse)

*Lopadium disciforme* (Flot.) Kullh.: 01 (Fag syl, hb. Arup)

*Loxospora cismonica* (Beltr.) Hafellner: 02 (cor Abi alb)

Note: This species was previously only known from several sites on the northern slopes of Pohorje (MAYRHOFER & al. 1996, HAFELLNER 2000).

*Loxospora elatina* (Ach.) A.Massal.: 01 (cor Abi alb, cor Ace pse), 02 (Fag syl, hb. Arup)

*Maronea constans* (Nyl.) Hepp: 03 (Ace pse, hb. Arup)

*Megalaria grossa* (Pers. ex Nyl.) Hafellner: 03 (cor Ace pse, cor/mus Fra exc)

- Melanelixia subaurifera* (Nyl.) O.Blanco et al.: 01 (cor Ace pse), 03 (cor Ace pse, bra Sal)  
*Menegazzia terebrata* (Hoffm.) A.Massal.: 01 (cor Abi alb, cor Ace pse, cor Ulm gla)  
*Micarea cinerea* (Schaer.) Hedl.: 01 (cor/mus Abi alb)  
*Micarea lignaria* (Ach.) Hedl. 01 (lig, cor Abi alb, cor Fag syl)  
*Micarea peliocarpa* (Anzi) Coppins & R.Sant.: 01 (mus-stu Abi alb, hb. Arup)  
*Micarea prasina* Fr.: 01 (lig Abi alb, hb. Arup)  
*Mycobilimbia epixanthoides* (Nyl.) Vitik. et al.: 03 (cor Ace pse)  
*Mycoblastus sanguinarius* (L.) Norman: 01 (cor/mus Abi alb, cor Pic abi)  
*Nephroma parile* (Ach.) Ach.: 02 (cor Fag syl)  
*Normandina pulchella* (Borrer) Nyl.: 01 (mus, cor Ace pse, mus Fag syl)  
*Ochrolechia androgyna* (Hoffm.) Arnold: 01 (cor Fag syl, cor Ulm gla)  
*Ochrolechia arborea* (Kreyer) Almb.: 03 (Ace pse, hb. Arup)  
*Ochrolechia pallascens* (L.) A.Massal.: 01 (Fag syl, hb. Arup), 03 (Ace pse, hb. Arup)  
*Opegrapha varia* Pers.: 01 (cor Ace pse), 03 (cor Fra exc)  
*Pachyphiale fagicola* (Hepp) Zwackh: 02 (cor Ulm gla)  
*Pannaria conoplea* (Ach.) Bory: 01 (cor Ace pse, cor Fag syl), 03 (cor Ace pse)  
*Parmelia saxatilis* (L.) Ach.: 01 (cor Ace pse)  
*Parmelia sulcata* Taylor: 03 (cor Ace pse)  
*Parmeliella triptophylla* (Ach.) Müll.Arg.: 01 (cor Ace pse, cor/mus Fag syl)  
*Parmelina pastillifera* (Harm.) Hale: 03 (Ace pse, hb. Arup)  
*Parmotrema crinitum* (Ach.) M.Choisy: 01 (cor Abi alb, cor Ace pse; Fag syl, hb. Arup; cor Sal)  
*Peltigera collina* (Ach.) Schrad.: 01 (cor Ace pse, cor Fag syl)  
*Peltigera horizontalis* (Huds.) Baumg.: 02 (ter)  
*Peltigera leucophlebia* (Nyl.) Gyeln.: 01 (mus)  
*Peltigera praetextata* (Flörke ex Sommerf.) Zopf: 01 (mus), 02 (ter)  
*Pertusaria albescens* (Huds.) M.Choisy & Werner 02 (cor Fag syl), 03 (cor Fra exc)  
*Pertusaria amara* (Ach.) Nyl.: 03 (cor Ace pse)  
*Pertusaria constricta* Erichsen: 01 (cor Ace pse)  
*Pertusaria coronata* (Ach.) Th.Fr.: 01 (Fag syl, hb. Arup)  
*Phaeophyscia endophoenicea* (Harm.) Moberg: 03 (Ace pse, hb. Arup)  
*Phlyctis argena* (Spreng.) Flot.: 01 (cor Ace pse), 02 (cor Ulm gla), 03 (cor Fra exc)  
*Physconia distorta* (With.) J.R.Laundon: 03 (cor Ace pse)  
*Platismatia glauca* (L.) W.L.Culb. & C.F.Culb.: 02  
*Pseudevernia furfuracea* (L.) Zopf 01 (Fag syl)  
*Pyrenula nitida* (Weigel) Ach.: 01 (cor Fag syl)  
*Ramalina farinacea* (L.) Ach.: 01 (Pica abi), 03 (cor Ace pse, bra Pic abi)  
*Ramalina fastigiata* (Pers.) Ach.: 03 (cor Ace pse)  
*Ramalina* cf. *pollinaria* (Westr.) Ach.: 01 (cor Ace pse), 03 (bra Pic abi)  
*Ramalina roesleri* (Hochst. ex Schaer.) Hue: 03 (Ace pse)  
*Rinodina efflorescens* Malme: 03 (Ace pse, hb. Arup)  
 Note: This species was previously only known from Trnovski gozd (MAYRHOFFER & al. 2006).  
*Sclerophora peronella* (Ach.) Tibell: 03 (lig Fra exc)  
 Note: This species was previously only recorded from Lepi dol below Veliki Snežnik (PRÜGGER 2005).

*Strigula stigmatella* (Ach.) R.C.Harris: 01 (cor/mus Fag syl)  
*Thelotrema lepadinum* (Ach.) Ach.: 01 (cor Abi alb, cor Sal)  
*Tuckermanopsis chlorophylla* (Willd.) Hale: 01 (bra Pic abi)  
*Usnea filipendula* s.l.: 01 (Fag syl)  
*Usnea subfloridana* Stirt.: 01 (Fag syl)

### 3.4 Non-lichenized taxa traditionally included in lichenological literature

*Chaenothecopsis pusilla* (Ach.) A.F.W.Schmidt: 05 (lig)  
*Stenocybe major* Nyl. ex Körb.: 01 (cor Abi alb)

Note: This species was previously only known from Pohorje (MAYRHOFER & al. 1996).

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