New or interesting lichens and lichenicolous fungi from Belgium, Luxembourg and northern France. XI.

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Abstract. Studies on large and mainly recent collections of lichens and lichenicolous fungi led to the addition of 21 taxa to the flora of Belgium, Luxembourg and northern France: *Absconditella trivialis*, *Arborillus llimonae*, *Arthrorhaphis muddii*, *Athelia salicum*, *Bacidia friesiana*, *B. pycnidiata*, *Belonia nidarosiensis*, *Cliostomum corrugatum*, *Collema fragile*, *Dactylospora athallina*, *Hypotrachyna afrorevoluta, Lecania chlorotiza*, *L. sordida*, *Lecidea promixta*, *Micarea lynceola*, *Polycoccum slaptoniense*, *Ramonia luteola*, *Sclerococcum griseisporodochium*, *Thelocarpon citrum*, *Unguiculariopsis lettaui* and *Verrucula helvetica*. Another 15 additional taxa were found reported in recent publications: *Burgoa angulosa*, *Fellhanera ochracea*, *Lecania belgica*, *Lecanora sinuosa*, *Lecidea grisella*, *Lepraria alpina*, *L. bergensis*, *L. neglecta*, *L. sylvicola*, *Lichenochora weillei*, *Microcalicium disseminatum*, *Minimedusa pubescens*, *Multiclavula vernalis*, *Phaeocalicium populneum* and *Polyblastia abscondita*. *Arthonia molendoi*, *Buelliella physciicola*, *Metamelanea caesiella*, *Pyrenochaeta xanthoriae*, *Roselliniopsis groedensis* and *Zwackhiomyces martinatianus* are newly reported for Belgium, *Zwackhiomyces lithoiceae* for Luxembourg and *Buelliella physciicola* for northern France.

1. Introduction

This paper continues the series of notes on the flora of lichens and lichenicolous fungi in Belgium, Luxembourg and northern France. The former contribution appeared two years ago (Sérusiaux et al. 2006) and it is thus appropriate to publish the recent additions and changes to the checklist of species present in that area (Diederich & Sérusiaux 2000). This paper further includes the most recent updates regarding the nomenclature and taxonomy of the species present. In the enumeration of specimens, the abbreviation "h" denotes the private herbarium of the collector.

2. Survey of other publications on the lichen flora and vegetation of the study area

Since the previous paper published in this series (Sérusiaux et al. 2006), the following contributions to the lichen and lichenicolous flora and vegetation of the study area have been published:

The basidiolichen *Multiclavula vernalis* (Schwein.) R. H. Petersen has recently been collected in **B** Camp. (Anonymous 2005), and is further reported from an older specimen conserved in BR. The species is new for the area covered by the checklist (Diederich & Sérusiaux 2000).

Ertz & Duvivier (2006) have published a detailed study of the lichen flora of the Hermeton watershed (**B** Mosan) including 362 lichen species and 17 lichenicolous fungi. *Phaeocalicium populneum* (Duby) A. Schmidt and *Polyblastia abscondita* (Nyl.) Arnold are newly reported for the area of study; *Chaenothecopsis pusilla*, *Lecidea sanguineoatra* and *Nectriopsis indigens* are newly reported for Belgium. Several very rare species were discovered, including the macrolichens *Leptogium palmatum*, *Nephroma parile*, *Parmotrema crinitum* and *Pycnothelia papillaria*.

Van den Broeck & Jordaens (2006) studied the lichen flora of the area around Sint-Margriete where they noted 85 taxa.

Van den Broeck, Aptroot & Jordaens (2006) published the results of a field trip in western Belgium (**B** Mar. and Fl.). Two species are new for the area of study: *Lecanora confusa* Almb. and *L. sinuosa* van Herk & Aptroot (**B** Mar.). As we did not see any convincing specimens of *L. confusa* from this area, we prefer to postpone the acceptance of that species in our checklist until more specimens become available. Several very rare species were discovered: *Arthonia pruinata, Parmelina quercina* (a species that was recently rediscovered in Belgium: see Van den Broeck 2005), *Parmotrema stuppeum* (perhaps an overlooked species recently discovered in Belgium: see Van den Broeck 2005), *Physcia clementei* (a further species that was recently rediscovered in Belgium: see van den Boom & van den Boom 2006, and this paper) and *Ramalina lacera* (a species assumed to be extinct in the area of study: see Sérusiaux et al. 2004).

Diederich, Heylen & Van den Broeck (2007) have published *Fellhanera ochracea* Sparrius & Aptroot as new for Belgium (**B** Camp. and Fl.).

Diederich & Lawrey (2007) described new species of *Burgoa* s. l. and *Marchandiomyces* s. l. of which *Burgoa angulosa* (**B** Mosan and **L** Lorr.) and *Minimedusa pubescens* (**B** Camp. and **L** Lorr.) are new for the study area.

Hellemans & Stappaerts (2007) published a detailed survey of the "Boekenbergpark" (**B** Fl.), including only common species.

Kukwa & Diederich (2007) reported the first fertile collection of *Lecanora rouxii* (**L** Lorr.) and several species of *Lepraria* new for the area studied in this series: *L. alpina* (B. de Lesd.) Tretiach & Baruffo (**F** Ard.), *L. bergensis* Tønsberg (**F** Ard.), *L. neglecta* (Nyl.) Lettau (**L** Ard.) and *L. sylvicola* Orange (**F** Ard.).

Reese Næsborg & van den Boom (2007) described the new species *Lecania belgica* van den Boom & Reese Næsborg, on the mortar of a shaded wall in **B** Ard.

Van den Broeck (2007) published a detailed survey of the "kasteeldomein van Attre", including eight species new for the Brabant district.

van den Boom & Brand (2008) reported five lichen species, two lichenicolous fungi and one allied fungus for the first time from Belgium or the Netherlands, including *Lichenochora weillii* (**B** Fl.) and *Microcalicium disseminatum* (**B** Ard.) that are new for our study area (Belgium, Luxembourg and northern France).

Atienza & Hawksworth (2008) describe the new *Lichenothelia renobalesiana* D. Hawksw. & V. Atienza for the lichenicolous fungus previously called *Polycoccum opulentum* (Th. Fr. & Almq.) Arnold. The former species has to be added to the checklist of our study area, whilst the latter has to be deleted from that list.

3. Taxonomical and nomenclatural changes

Aptroot, A. & van Herk, C. M. (2007) showed that *Lecidea grisella* Flörke, a taxon frequently considered as a synonym of *Lecidea fuscoatra* (L.) Ach., is a distinct species. The authors have examined specimens of both species from Belgium and Luxembourg.

Argüello et al. (2007) demonstrated that four separate species exist within the concept of *Parmelina quercina*, of which two (*P. carporrhizans* and *P. quercina*) are Euroasiatic species that might occur in the study area. Therefore, the material referred to *P. quercina* in the study area has been re-examined and proved to belong to *P. quercina* s. str.

Gueidan et al. (2007: 1150) published a phylogeny of the Verrucariaceae, in which *Bagliettoa baldensis* (A. Massal.) Vězda, *B.*

Table 1. Changes of generic position adopted in the checklist (Diederich & Sérusiaux 2000) and subsequent papers following new taxonomical studies.

Former generic position	New generic position	References
Acarospora heppii Körb.	*Myriospora heppii* (Körb.) Hue	Harris & Knudsen (2006)
Aspicilia moenium (Vain.) G. Thor & Timdal	*Acarospora moenium* (Vain.) Räsänen	Roux (2007: 11)
Endococcus parietinarius (Linds.) Clauzade & Cl. Roux	*Sphaerellothecium parietinarium* (Linds.) Hafellner & V. John	Hafellner & John (2006: 168)
Fuscopannaria leucophaea (Vahl) P. M. Jørg.	*Vahliella leucophaea* (Vahl) P. M. Jørg.	Jørgensen (2008: 224)
Leptogium byssinum (Hoffm.) Nyl.	*Epiphloea byssina* (Hoffm.) Henssen & P. M. Jørg.	Jørgensen (2007: 144)
Megalaria pulverea (Borrer) Hafellner & Schreiner	*Catillochroma pulverea* (Borrer) Kalb	Kalb (2007: 303)
Melanelia elegantula (Zahlbr.) Essl.	*Melanohalea elegantula* (Zahlbr.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch	Blanco et al. (2004a)
Melanelia exasperata (De Not.) Essl.	*Melanohalea exasperata* (De Not.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch	Blanco et al. (2004a)
Melanelia exasperatula (Nyl.) Essl.	*Melanohalea exasperatula* (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch	Blanco et al. (2004a)
Melanelia glabratula subsp. *fuliginosa* (Duby) J. R. Laundon	*Melanelixia fuliginosa* (Duby) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch subsp. *fuliginosa*	Blanco et al. (2004a)
Melanelia glabratula (Lamy) Essl. *subsp. glabratula*	*Melanelixia fuliginosa* (Duby) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch subsp. *glabratula* (Lamy) J. R. Laundon	Laundon (2006)
Melanelia laciniatula (H. Olivier) Essl.	*Melanohalea laciniatula* (H. Olivier) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch	Blanco et al. (2004a)
Melanelia olivacea (L.) Essl.	*Melanohalea olivacea* (L.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch	Blanco et al. (2004a)
Melanelia subargentifera (Nyl.) Essl.	*Melanelixia subargentifera* (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw.Lumbsch	Blanco et al. (2004a)
Melanelia subaurifera (Nyl.) Essl.	*Melanelixia subaurifera* (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch	Blanco et al. (2004a)
Neofuscelia loxodes (Nyl.) Essl.	*Xanthoparmelia loxodes* (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch	Blanco et al. (2004b)
Neofuscelia pulla (Ach.) Essl.	*Xanthoparmelia pulla* (Ach.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch	Blanco et al. (2004b)
Neofuscelia verruculifera (Nyl.) Essl.	*Xanthoparmelia verruculifera* (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch	Blanco et al. (2004b)
Verrucaria calciseda DC.	*Bagliettoa calciseda* (DC.) Gueidan & Cl. Roux	Gueidan & Roux (2007: 187)
Verrucaria canella Nyl.	*Placopyrenium canellum* (Nyl.) Gueidan & Cl. Roux	Navarro-Rosinés et al. (2007: 174)
Verrucaria compacta (A. Massal.) Jatta	*Heteroplacidium compactum* (A. Massal.) Gueidan & Cl. Roux	Roux (2008)
Verrucaria fuscella (Turner) Winch	*Placopyrenium fuscellum* (Turner) Gueidan & Cl. Roux	Navarro-Rosinés et al. (2007: 174)
Verrucaria fuscula Nyl.	*Heteroplacidium fusculum* (Nyl.) Gueidan & Cl. Roux	Gueidan et al. (2007: 1157)
Verrucaria lecideoides (A. Massal.) Trevis.	*Verruculopsis lecideoides* (A. Massal.) Gueidan & Cl. Roux	Navarro-Rosinés et al. (2007: 174)
Verrucaria marmorea (Scop.) Arnold	*Bagliettoa marmorea* (Scop.) Gueidan & Cl. Roux	Gueidan et al. (2007: 1157)

parmigera (J. Steiner) Vězda & Poelt and *B. steineri* (Kušan) Vězda are treated as distinct species, whereas the two latter were considered as synonyms of the former in Sérusiaux et al. (2006).

Hafellner & John (2006: 165) elevated *Muellerella pygmaea* var. *athallina* (Müll. Arg.) Triebel at the species rank as *Muellerella erratica* (A. Massal.) Hafellner & V. John.

Kalb (2007: 312) showed that the correct name of *Punctelia ulophylla* (Ach.) van Herk & Aptroot is *Punctelia jeckeri* (Roum.) Kalb.

Ahti & Hawksworth (2005) found that the correct name for *Xanthoparmelia somloënsis* (Gyeln.) Hale is *X. stenophylla* (Ach.) Ahti & D. Hawksw.

Śliwa (2007: 75) explained that the correct name of *Lecanora xanthostoma* Fröberg is *Lecanora semipallida* H. Magn. and that the material called *Lecanora flotoviana* auct., non Spreng. belongs to the same species.

Spier & Aptroot (2007: 60) reduced *Cladonia rei* Schaer. into synonymy with *Cladonia subulata* (L.) F. H. Wigg., but Syrek & Kukwa (2008) suggest to treat them as separate taxa.

Santesson et al. (2004) introduced the new combination *Arthonia lecanorina* (Almq.) R. Sant. for the lichenicolous species developing over apothecia of *Lecanora* gr. *dispersa*, previously called *A. vagans* var. *lecanorina* Almq. by Diederich & Sérusiaux (2000: 69).

Timdal (2008) described a new genus for *Mycobilimbia lurida* (Ach.) Hafellner & Türk, the name of which becomes *Romjularia lurida* (Ach.) Timdal. This genus is distinguished from *Mycobilimbia* s. str. by "simple ascospores, an ascus of the *Porpidia*-type, and a squamulose thallus". No molecular data are available, however, to support this decision.

Breuss (2008) presents a remarkable treatment of the *Verrucaria* species from the Sonoran region. He accepts *Verrucaria furfuracea* (B. de Lesd.) Breuss as a distinct species, distinguished from *V. macrostoma* DC. by soredioid or isidioid outgrowths of the thallus. Diederich & Sérusiaux (2000: 173) included this taxon in the species concept of *V. macrostoma* as f. *furfuracea* B. de Lesd. Breuss (2008) accepts *V. papillosa* Ach. as distinct from *V. viridula* (Schrad.) Ach., with which it was synonymised by Orange (2004). The taxonomy of *Verrucaria* is still very poorly understood, even in the most common species, but the ongoing molecular studies will hopefully give us answers to all these questions in the near future.

Two corrections in author citations must be done: *Lecanora albescens* (Hoffm.) Branth & Rostr. should be *L. albescens* (Hoffm.) Flörke (Śliwa 2006) and *Verrucaria fuscella* (Turner) Winch should be *V. fuscella* (Turner) Winch & Thornhill (Laundon & Waterfield 2007).

Hawksworth et al. (2008) presented an updated checklist of European parmelioid lichens. We will consequently adopt their taxonomical concepts, especially regarding species previously included in *Melanelia* and *Neofuscelia* (see Table 1).

4. New or interesting reports

Absconditella delutula (Nyl.) Coppins & Kilias

Belgium, Ard.: St-Hubert, valley of the Masblette, near Pont Mauricy (J6.47), 320 m, ancient mixed woodland of *Fagus sylvatica* and *Quercus*, on schistose and siliceous rocks by a stream, 2007, *D. Ertz* 10409 (BR). Mosan: Malonne, Bois de la Vèquée (G5.35), 115 m, petit rocher siliceux sur un chemin forestier, 2008, *D. Ertz* 12125 (BR).

This species was only known from one recent locality in the study area, in southern Belgium (Sérusiaux et al. 2006). Two additional localities are reported here from two different phytogeographical districts. This very inconspicuous lichen is most probably overlooked.

Absconditella trivialis (Will. & Tuck.) Vězda

Belgium, Mosan: Liège, University Campus, "Lande de Streupas" (F7.43), 140 m, formerly air-polluted (acid and heavy metals) heathland and now managed within a nature reserve scheme, open ground with small pebbles in low heathland with *Calluna vulgaris*, 2007, *A. M. Brand*, *E. Sérusiaux* & *P. van den Boom* (LG, hb Brand, hb van den Boom).

A new species for our study area, previously known from France, Germany, Great Britain, Norway, Sweden and the U.S.A. (Coppins

1992, Santesson et al. 2004, Vezda 1965). Accompanying species include *Baeomyces rufus*, *Dibaeis baeomyces*, *Micarea lithinella*, *M. lynceola*, *Thelocarpon citrum* and *Trapelia coarctata*.

Arborillus llimonae Munt.-Cvet. & Gómez-Bolea

Belgium, Ard.: Vielsalm, carrière de Cahay (H8.31), disused quarry, on slate, on *Diploschistes scruposus*, 2007, *A. Aptroot* 67014 (hb Aptroot, hb Diederich).

This lichenicolous synnematous hyphomycete confined to *Diploschistes* species (Muntañola-Cvetkovic & Gómez-Bolea 1998) is widespread, but obviously rare in Europe and Macaronesia. It is new for our study area.

Arthonia molendoi (Frauenf.) R. Sant.

Belgium, Mar: De Panne, De Westhoek, NE border of nature reserve (C0.56), on *Sambucus* in a dune, on *Xanthoria parietina*, 2008, *P. Diederich* 16731 (BR, h).

Fig. 1. *Bacidia friesiana* (*E. Sérusiaux*). Scale 1 mm.

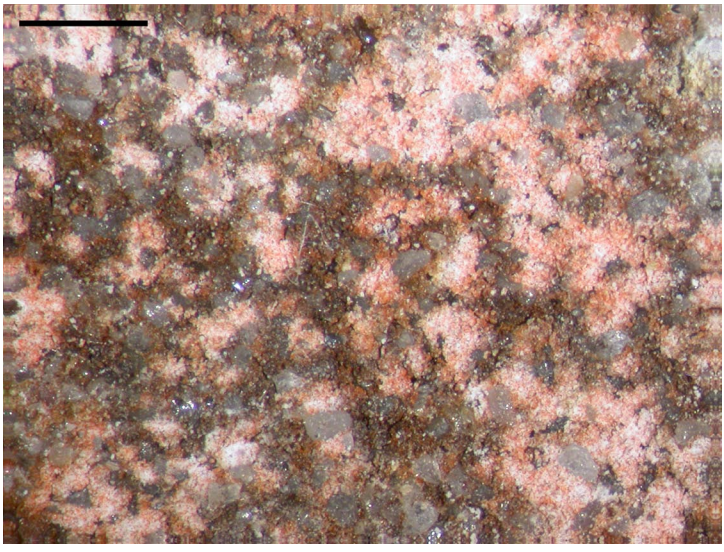

Fig. 2. *Belonia nidarosiensis* (*P. Diederich* 16565). Scale 1 mm.

In the study area, this lichenicolous fungus was known from the maritime district in northern France and also from Luxembourg, always on saxicolous *Caloplaca* species (Sérusiaux et al. 1999). The species is new for Belgium and is reported here on a different host genus.

Arthrorhaphis muddii Obermayer

Belgium, Ard.: Vielsalm, Naturschutzgebiet "Thier des Carrières", S der Ortschaft Cahay, ehemaliger Schieferbruch (H8.31), pleistozäne Sande und Lehme, auf *Dibaeis baeomyces*, 2006, *U. Schiefelbein* 1968 (h, hb Diederich).

This lichenicolous fungus confined to *Dibaeis baeomyces* is new for the study area.

Athelia salicum Pers.

Luxembourg, Lorr.: NW of Dalheim, Kinnecksbierg (M8.37), on *Fagus*, on *Lepraria incana* and *Scoliciosporum chlorococcum*, 1987, *P. Diederich* 8640 (h).

This is a non-specialized, facultative lichenicolous basidiomycete that is here reported for the first time as lichenicolous from the study area. It generally grows over bark of trees or on decorticated wood, and occasionally overgrows and kills lichens. The lichenicolous habitat is more rarely observed than in *Athelia arachnoidea* (Berk.) Jülich, another facultative lichenicolous fungus frequently overgrowing and killing corticolous lichens.

Bacidia circumspecta (Vain.) Malme

Belgium, Ard.: Anlier, vallée de la Rulle, immédiatement au nord de la route Vlessart-Heinstert (L7.25), sur *Quercus*, futaie claire de *Fagus* et de *Quercus*, 10.1999, *E. Sérusiaux* (LG).

Third locality for the area of study (Diederich & Sérusiaux 2000).

Bacidia friesiana (Hepp) Körber (Fig. 1)

Belgium, Mosan: Blégny, upper valley of the Julienne (F7.15), on *Sambucus* in bushes by a track, 1990, *E. Sérusiaux* (LG).

This lichen was reported from Belgium (Weillen near Dinant) on *Sambucus* by Bouly de Lesdain (1910b: 40), but the relevant material was not seen (Diederich & Sérusiaux 2000). It has also been doubtfully reported from northern France (Sparrius et al. 2002: 60). The species is confirmed for the study area.

Bacidia pycnidiata Czarnota & Coppins

Belgium, Mosan: Eprave, SW of Bois de Noulaiti, left side of the river Lomme (J6.24), 160 m, disturbed woodland along the river, with *Ulmus laevis* and incl. *Populus* plantations, 1997, *E. Sérusiaux* (LG).

A species recently described from three localities on trees in Central Europe (Czech Republic and Poland; Czarnota & Coppins 2006). It is new for the area of study. Our collection comes from the base and roots of *Alnus* trees at the water level, by a small river, and is most probably regularly flooded; *Bacidia trachona* and *B. carneoglauca* were also present nearby in the same ecological niche. The locality is one of the very few natural (albeit very much disturbed) stands of *Ulmus laevis* in the area of study.

Belonia nidarosiensis (Kindt) P. M. Jørg. & Vězda (Fig. 2)

Belgium, Mosan: Durbuy, Verlaine-sur-Ourthe, rive gauche de l'Ourthe, à hauteur de Sy (G7.52), 140 m, paroi calcaire ombragée, 2001 & 2004, *P. Diederich* 16064, *D. Ertz*, *E. Sérusiaux* & *P. van den Boom* (BR, LG, hb Diederich, hb van den Boom).

Luxembourg, Lorr.: SW of Nommern, Nommerlayen (L8.26), on a sandstone rock in forest, 2007, *P. Diederich* 16565 (h). Beaufort, Vogelsmühle, vallon du Halerbaach, rive gauche (L9.11), sur une paroi verticale ombragée en grès, 2007, *P. Diederich* 16721 (h). Hesperange, rive droite de l'Alzette (M8.26), sur une paroi verticale en grès, dans une forêt de feuillus, 1997, P. Diederich 12911 p. p. (h).

France, Lorr.: Meuse, au SE de Montmédy, Marville, cimetière de St Hilaire (N7.11), sur un mur, 2004, P. Diederich 15955 (h).

Probably overlooked and more widespread. New for the area of study.

Buelliella physciicola Poelt & Hafellner

Belgium, Mosan: Biesmerée, verger à hautes tiges à 400 m au NW du centre du village (H5.33), 250 m, sur un arbre fruitier, sur *Phaeophyscia orbicularis*, 2008, *D. Ertz* 12148 (BR).

Luxembourg, Lorr.: Ansembourg, garden of castle along main road (L8.44), on wall of castle, on *P. orbicularis*, 2005, *P. Diederich* 16184 & *D. Ertz* 8979 (BR, hb Diederich).

France, Pic.: Somme, à 6 km au NW d'Abbeville, Port-le-Grand, grande ferme fortifiée au centre du village (J22.17), sur un mur, sur *P. orbicularis*, 2001, *P. Diederich* 15393 (h).

In the study area, this lichenicolous fungus was reported only from one locality in Luxembourg (Diederich et al. 1992). It is reported here as new for Belgium and northern France.

Cetraria islandica (Ach.) Fr.

Belgium, Mosan: Wellin, 2006, *D. Ertz* 10151 & *J.-P. Duvivier* (BR).

This macrolichen was widespread in Belgium, especially in the Ardenne (mainly in the 'Hautes Fagnes') and the Campine districts where many specimens were collected between 1960 and 1986, especially on soil in heathlands. These populations almost all disappeared, and only one recent locality was known in the Campine district (Sérusiaux et al. 2004), but Marc Paquay discovered a small but healthy population in a calcareous grassland (*Mesobromion* communities) near Wellin in the Mosan district (locality revisited by D. Ertz and J.-P. Duvivier the same year). *Cetraria islandica* is still present in such habitats in the Lorraine district in France. The species might disappear from the study area in the near future as the remaining populations are very scanty.

Cliostomum corrugatum (Ach.) Fr.

Luxembourg, Ard.: Oesling: 2.3 km NNE of Weiswampach, 0.8 km S of Beiler, S side of wood Empich (J8.15), schist quarry with *Sambucus* and *Salix*, on *Salix*, 1999, *P. van den Boom* 12591 (h) (conf. by S. Ekman).

This very rare European lichen is reported from Austria, Sweden, Germany (Ekman 1997), the British Isles (Fox 1992) and Turkey (Yildiz et al. 2002). The specimen collected in Luxembourg is sterile, but it has the characteristic large irregularly pycnidia with the K+ purplish pigment. In the British Isles, all modern collections lack apothecia too (Fox 1992). The species is new for the area of study.

Collema fragile Tayl.

Belgium, Mosan: Olloy, au-dessus du vieux chemin de Dourbes (J5.42), rochers calcaires à exp. S, 1962, *J. Lambinon* 62/2138 (LG).

An interesting addition to the lichen flora of the study area, as *Collema fragile* is a macrolichen that has a southern distribution in Europe, and thus belongs to the so-called submediterranean flora of the natural calcareous outcrops of the Meuse district.

Dactylospora athallina (Müll. Arg.) Hafellner

Luxembourg, Lorr.: Mamer, à 500 m à l'ouest de la Thillsmillen, rocher en grès sur le versant gauche de la Kielbaach (M8.14), sur *Baeomyces rufus*, 2007, *P. Diederich* 16434 (h).

This lichenicolous ascomycete, confined to thalli of *Baeomyces rufus*, is widespread in Europe and also known from North America. It is new for the study area.

Hypotrachyna afrorevoluta (Krog & Swinscow) Krog & Swinscow (Fig. 3)

Selected specimens examined: Belgium, Mar.: Knokke, Zwin (B2.34), on *Salix*, 1997, *P. Diederich* 12515 (h). Fl.: Maldegem, en bordure d'une route à l'W du village, près de la grand-route de Knokke (C2.25), sur *Populus*, 1961, *J. Lambinon* 61/2343 (LG). Brab.: Goeferdinge, Duitsebroek (E3.54), sur *Populus*, 1962, *J. De Sloover* 222 (LG). Mosan: Virelles, rive occidentale du lac, en bordure de la roselière (J4.45), à la base d'un tronc de *Salix*, 1984, *E. Sérusiaux* 6362 (LG). Ard.: Ternell, hêtraie à droite du chemin forestier vers la Helle à quelques centaines de mètres du poste-frontière belge (F8.55), sur *Fagus*, 1960, *J. Lambinon* 60/2382 (LG). Lorr.: Clairefontaine, gardens, around convent (L8.51), on *Rhus typhina*, 2002, *P. Diederich* 15543 (h).

Luxembourg, Lorr.: N Medernach, Schmuelschenterkopp (L8.17), on *Fagus*, 1986, *P. Diederich* 7565 (h).

France, Mar.: Pas-de-Calais, marais à l'ouest de Guisy (G21.43), sur *Populus*, 1960, *J. Lambinon* 60/946 (LG); Somme, à 6 km au NNW de Le Crotoy, à 1 km au SW du Bout des Crocs, près de l'entrée du parc ornithologique du Marquenterre (H22.34), sur *Frangula alnus*, dans une dune plantée principalement de pins, 2001, *P. Diederich* 15309 (h). Boul.: Pas-de-Calais, forêt Domaniale de Boulogne (E22.57), sur *Fraxinus*, 2000, *P. Diederich* 14249 (h). Pic.: Pas-de-

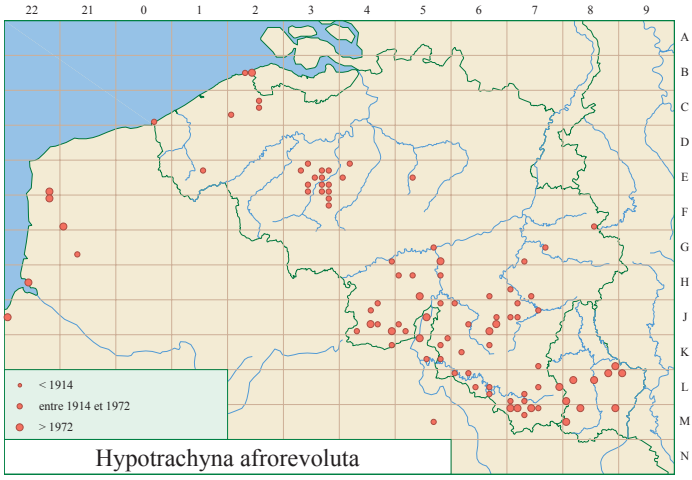

Fig. 3. *Hypotrachyna afrorevoluta*, known distribution in Belgium, Luxembourg and northern France.

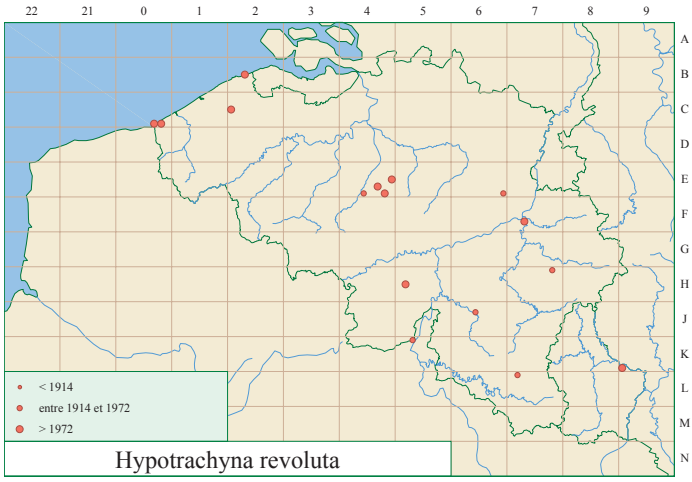

Fig. 4. *Hypotrachyna revoluta*, known distribution in Belgium, Luxembourg and northern France.

Calais, au N de Montcavrel, forêt de Montcavrel (F21.51), sur *Populus*, futaie sur taillis, à dominance de *Quercus* et *Fraxinus*, 1983, *E. Sérusiaux* 4751 (LG, hb Diederich); Somme, bois du Ronval, situé au N de la ferme de la Blenques et à l'W du bois de Cise (J22.31), tronc de *Populus tremula*, 2005, *D. Ertz* 8919 (BR). Mosan: Ardennes, Chooz, rochers de Petit-Chooz sur la rive droite de la Meuse, immédiatement en amont de la ferme d'Aviette (J5.35), sur *Quercus*, 1999, *P. Diederich* 16128 (h). Ard.: Ardennes, Haybes, vallon du ruisseau de Mohron, roche de Madame de Cormont (K5.14), rocher siliceux ombragé en sous-bois de feuillus, 2007, *D. Ertz* 10660 (BR).

Clerc (2006), Masson (2005) and Spier et al. (2007) recently demonstrated that the European material traditionally called *Hypotrachyna revoluta* consists of two distinct species, *H. afrorevoluta* and *H. revoluta*. *Hypotrachyna afrorevoluta* is distinguished from *H. revoluta* by the often smaller lobes with granular or pustulate, usually laminal or marginal soredia (they are more farinose and develop apically on the upper surface of relatively large and often elongate lobes in *H. revoluta*), and by a shiny, brown to dark brown or blackish lower surface of young lobes (the lower surface of young lobes of *H. revoluta* is usually pale brown and mat). Some specimens are difficult to identify, especially when they are reduced and devoid of soredia, but an examination of the lower surface allows identifying most specimens.

A revision of the material kept in BR, LG and the private herbarium of P. Diederich proved that *H. afrorevoluta* is by far the most common species in our study area, whilst *H. revoluta* s.str. is a relatively rare species. Figs 3-4 show the known distribution of both species in that area, based on the specimens examined. Both species are usually epiphytic, but have occasionally been found on rocks or on the ground. Of the more than 100 specimens of *H. afrorevoluta* examined only a selection is enumerated here in detail. The species is new for our study area.

Hypotrachyna revoluta (Flörke) Hale (Fig. 4)

Belgium, Mar.: Knokke, dans une forêt à 1 km à l'ouest du Zwin (B2.33), sur *Salix*, 1997, *P. Diederich* 12498 (h). De Panne, Westhoek, sentier le long de la frontière française (C0.56), sur *Alnus*, 2001, *P. Diederich* 14662 (h). Koksijde, Sint Idesbald, chemin au bord est de la réserve naturelle Houtsaegerduinen, de la route N34 vers le sud (C0.57), sur *Alnus*, au bord d'une dune, 2002, *P.*

Fig. 5. *Lecania chlorotiza* (*P. Diederich* 14028). Scale 0.5 mm.

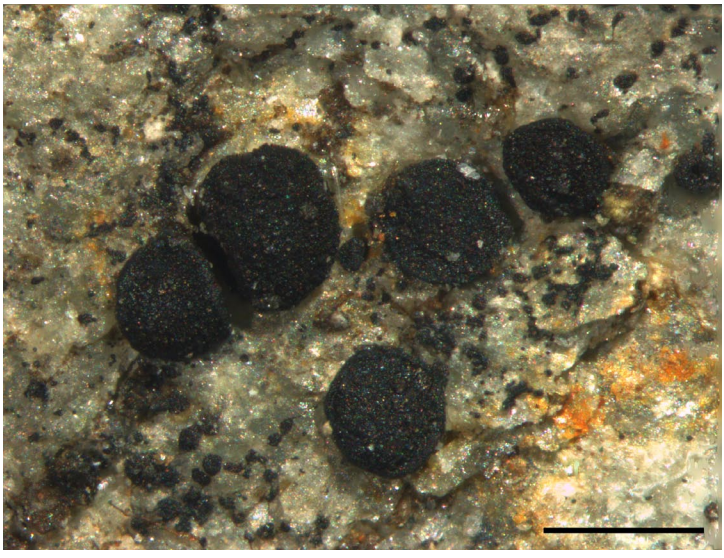

Fig. 6. *Lecidea promixta* (*A. M. Brand* 15598). Scale 0.5 mm.

Diederich 15216 (h). Fl.: Brugge, Steenbrugge, brugs kerkhof, gravestones, trees, etc. (C2.31), on *Fagus*, 1999, *P. Diederich* 13962 (h). Brab.: Hamal (Rutten: au S de Tongres), à la sortie N du hameau (E6.58), tronc d'un très vieux saule en bordure des champs, 1963, *J. Lambinon* 63/71 (LG). Huizingen, domaine provincial, au bord de l'étang du château (E4.54), sur *Fraxinus*, 1963, *J. Lambinon* 63/531 (LG). Hoeilaart, Forêt de Soignes, Arboretum Groenendaal (E4.57), alt. 90 m, tronc de *Cornus contraversa* dans un parc, 2007, *D. Ertz* 10680 (BR). Watermael-Boitsfort, Parc Tournay-Solvay (E4.46), alt. 90 m, tronc dans un parc, 2007, *D. Ertz* 10687 (BR). Tervuren, Parc de Tervuren (E4.38), alt. 90 m, tronc de *Quercus* dans un parc, 2007, *D. Ertz* 10675 (BR). Mosan: Mettet, sablières à 1-1,5 km au sud-est du centre d'Oret (H5.32), alt. 250 m, sablières (sable kaolinique) avec différents stades de recolonisation végétale, tronc de *Salix caprea*, 2004, *D. Ertz* 5738 (BR). Liège, University Campus, Lande de Streupas, left side of the river Ourthe (F7.43), open ground with small pebbles in low heathland with *Calluna vulgaris*, 2007, *E. Sérusiaux*, *A. M. Brand* & *P. van den Boom* (LG). Mariembourg, fond humide à l'ouest de la route de Philippeville, vers la limite nord de la commune, sur *Alnus*, 1960, *J. Lambinon* 60/324 (LG). Han-sur-Lesse, Belvaux (J6.24), sur *Alnus*, 1960, *J. Lambinon* 60/224 (LG). Ard.: Basse-Bodeux, route de Werbomont (H7.17), sur *Fagus*, 1960, *J. Lambinon* 60/48 (LG). Marbay, route Neufchâteau-Arlon, près du carrefour de la route Marbay-Bernimont (L7.12), sur *Fagus*, 1960, *J. Ramaut* s. n. (LG). Marbay, route Neufchâteau-Arlon, près du carrefour de la route Marbay-Bernimont (L7.12), sur *Picea* en bord de route, 1960, *J. Ramaut* s. n. (LG). Oignies, route de Fumay, escarpement rocheux cambrien au niveau de la frontière (K5.13), escarpement rocheux cambrien (quartzophyllade) au bord de la route, 1962, *J. Lambinon* 62/264 (LG).

Luxembourg, Lorr.: Berdorf, N Zickzackschloeff (K9.51), sur rochers, 1984, *E. Sérusiaux* 6592 & *P. Diederich* (LG).

France, Lorr.: Meuse, Chauvency-le-Château, crête calcaire dominant le village, sur *Prunus*, 1962, *J. Lambinon* 62/1706 (LG).

See comments under *Hypotrachyna afrorevoluta*.

Lecania chlorotiza (Nyl.) P. James (Fig. 5)

Luxembourg, Lorr.: Vogelmühle, left side of the Hallerbach (L9.11), on *Fagus* in a mixed wood with *Fagus* and *Quercus*, 2000, *P. Diederich* 14028 & *J. M. Cepeda* (LG, hb Diederich).

New for the area of study.

Lecania sordida Reese Næsborg

Belgium, Mosan: Liège, University Campus "Bois de Colonster", left side of the river Ourthe (F7.53), disturbed mixed woodland on steep, E-facing slope, on vertical shaded wall of house, 2007, *A. M. Brand*, *E. Sérusiaux* & *B. & P. van den Boom* 37544 (LG, hb Brand, hb van den Boom).

A recently described species (Reese Naesborg 2008). New for the area of study.

Lecidea promixta Nyl. (Fig. 6)

Belgium, Ard.: 5.8 km ENE of Houffalize in the valley of Ourthe orientale (J7.28), 400 m, sunny, schistose W-exposed rock outcrop, 1986, *A. M. Brand* 15598 (LG, hb Brand).

New for the area of study.

Lepraria eburnea J.R. Laundon

Belgium, Ard.: W of Bouillon, 1 km WNW of Corbion, path along Ru du Moulin and Ru des Sursais (L6.11), 250 m, vertical W-exposed schist cuttings along path, 1999, *P. van den Boom* 21891 (LG, hb van den Boom) (TLC: alectorialic and barbatolic acids).

Third locality for this rare species in the study area (Diederich & Sérusiaux 2000: 116, Leuckert et al. 2002: 22).

Lepraria umbricola Tønsberg

Belgium, Ard.: SE of Eupen, S side along road to Monschau, path from Ternell along stream (F9.45), 440 m, old trees in valley, on *Fagus*, 2001, *P. van den Boom* 28026 (LG, hb van den Boom).

Luxembourg, Lorr.: W of Larochette, S of Nommern, Nommerlayen (L8.26), 290 m, forest with sandstone outcrops and mixed trees, base of *Pinus*, 2003, *P. van den Boom* 30793 (LG, hb van den Boom).

France, Ard.: SE of Revin, S of Anchamps, Rocher des Dames (K5.33), 300 m, mixed forest on E-exposed slope, vertical shaded schist, 2000, *P. van den Boom* 24434 (LG, hb. van den Boom).

All specimens checked by TLC: thamnolic acid. A rare species, previously reported from only two localities in Belgium (Diederich & Sérusiaux 2000: 116).

Lichenochora weillii (Werner) Hafellner & R. Sant.

Belgium, Mosan: Falaën, verger à hautes tiges à 550 m au NW du centre du village (H5.35), 210 m, sur tronc de *Malus*, sur *Physconia grisea*, 2007, *D. Ertz* 12081 & *C. Gerstmans* (BR).

This rare lichenicolous fungus described from Spain in 1937 has also been reported from Germany, Sweden, Macaronesia (Canary Islands) and Canada (Hafellner 1989, 2002; Kocourková & von Brackel 2005) and this year also from Belgium (**B** Fl), Italy and The Netherlands (van den Boom & Brand 2008), always on the host genus *Physconia*. We report here a second locality for Belgium. The species is new for Wallony and the Mosan district.

Lichenoconium lichenicola (P. Karst.) Petr. & Syd.

Belgium, Mar.: De Panne, De Westhoek, NE border of nature reserve (C0.56), on *Sambucus* in a dune, on *Physcia adscendens*, 2008, *P. Diederich* 16728 (h).

A very rare lichenicolous coelomycete confined to *Physcia* species, previously known from Luxembourg on *Physcia tenella* (Diederich et al. 1991), reported here as new to Belgium.

Lobaria pulmonaria (L.) Hoffm.

Luxembourg, Lorr.: Berdorf, Aesbaach (L9.12), on *Quercus*, 2008, obs. *T. Niemeyer*, *P. Diederich* & *C. Ries* (no specimen).

This rare macrolichen was considered as extinct in the Luxembourg sandstone area since 1948. It was collected near Beaufort in the Haupeschbaach valley in 1948 by *J. J. Barkman* (Barkman 1949), near Berdorf in the Aesbaach valley on *Quercus* in 1885 by *J. Feltgen* (specimen in LUX), and near Berdorf on sandstone rocks colonized by *Hymenophyllum tunbrigense* in 1940 by *A. Busch* (specimen in HBG). In the recent locality, discovered by T. Niemeyer, three thalli are present on an old oak tree.

Metamelanea caesiella (Th. Fr.) Henssen

Belgium, Mosan: Dinant, Fonds de Leffe (H5.38), on a calcareous rock, 1984, *H. Sipman* 17378 (B).

This species was recently published by Schultz et al. (2007: 331) as new for the checklist of Belgium, Luxembourg and northern France (Diederich & Sérusiaux 2000), based on collections made by P. Diederich near Givet (France, Mosan district). The Belgian collection reported here was tentatively published as *Psorotichia* cf. *diffracta* (Nyl.) Forssell by van den Boom (1996: 17). *P. diffracta* has to be deleted from the checklist, whilst *M. caesiella* is new for Belgium.

Micarea lynceola (Th. Fr.) Palice

Belgium, Mosan: Liège, University Campus, "Lande de Streupas" (F7.43), 140 m, formerly air-polluted (acid and heavy metals) heathland and now managed within a nature reserve scheme, open ground with small pebbles in low heathland with *Calluna vulgaris*, 2007, *A. M. Brand*, *E. Sérusiaux* & *P. van den Boom* (LG, hb Brand, hb van den Boom) (conf. by B. J. Coppins).

A further *Micarea* species new for the area of study; widespread in Europe (Palice 1999). It was found on small pebbles in a heathland within the Campus of the University of Liège, together with *Absconditella trivialis*, *Baeomyces rufus*, *Dibaeis baeomyces*, *Micarea lithinella*, *Thelocarpon citrum* (see below) and *Trapelia coarctata*.

Physcia clementei (Turner) Maas Geest.

Belgium, Mosan: Sautour, alignement d'arbres bordant la route au nord de la ferme au lieu-dit "Vieux Sautour" (J5.11), 200 m, sur *Fraxinus*, 2004, *D. Ertz* 7368 (BR).

This macrolichen was considered as extinct in Belgium since 1954, but was rediscovered recently in the Campine district (van den Boom & van den Boom 2006) and in the Maritime district (Van den Broeck et al. 2006). We report here a third recent locality from Belgium in the Mosan district.

Polycoccum slaptoniense D. Hawksw. (Fig. 7)

Belgium, Mosan: Hermeton-sur-Meuse, section de 1,5 km de la vallée de l'Hermeton en amont de la confluence avec la Meuse (H5.55), 100 m, branche de *Populus* ×*canadensis* tombée dans une pâture, sur *Xanthoria parietina*, 2005, *D. Ertz* 9057 & *J.-P. Duvivier* (BR).

This lichenicolous fungus was recently described from England (Hawksworth 1994). Since then, it was reported only from one locality in Germany (Kocourková & von Brackel 2005). The species is new for the area of study.

Pyrenochaeta xanthoriae Diederich

Belgium, Mar.: De Panne, De Westhoek, NE border of nature reserve (C0.56), on *Sambucus* in a dune, on *Xanthoria parietina*, 2008, *P. Diederich* 16727 (h).

A very rare lichenicolous coelomycete confined to *Xanthoria parietina*, originally described from Luxembourg (Diederich 1990), reported here as new to Belgium.

Ramonia luteola Vězda

Belgium, Mosan: Viroinval/Treignes, rive gauche du ruisseau des Fonds de Ri, à l'ouest du bois de Matignolles (J5.33), alt. 170 m, sur *Sambucus*, 1999, *P. Diederich* 16448 (h).

This rare species is new for the study area.

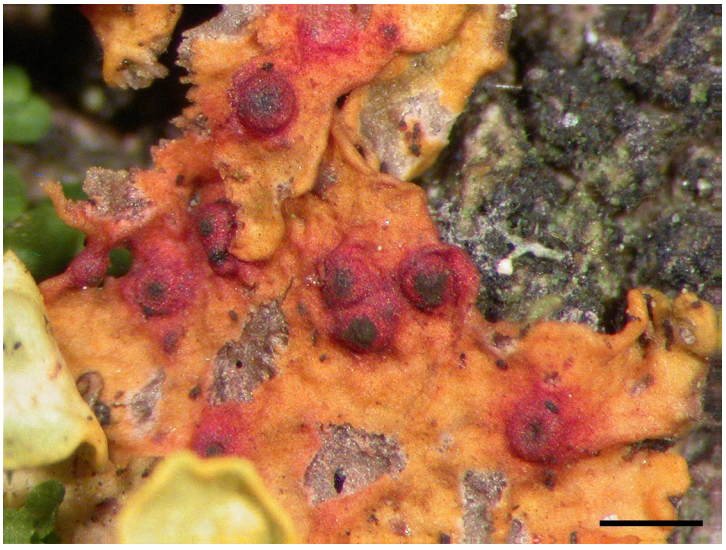

Fig. 7. *Polycoccum slaptoniense*, lichenicolous on *Xanthoria parietina* (*D. Ertz* 9057). Scale 0.5 mm.

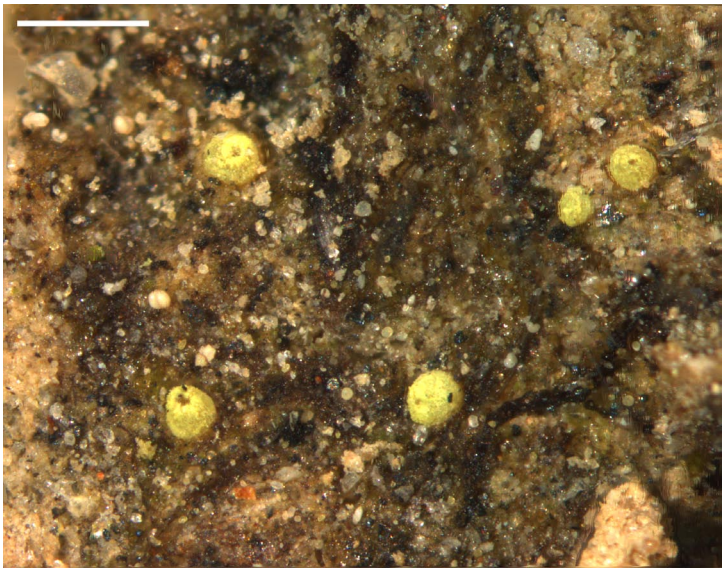

Fig. 8. *Thelocarpon citrum* (*E. Sérusiaux*). Scale 0.5 mm.

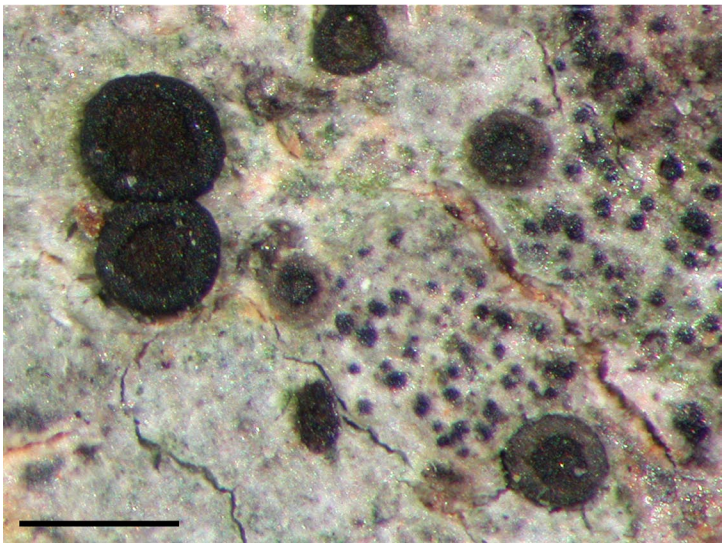

Fig. 9. *Zwackhiomyces martinatianus*, lichenicolous on *Porpidia crustulata* (*D. Ertz* 10405). Scale 0.5 mm.

Roselliniopsis groedensis (Zopf) Matzer & Hafellner

Belgium, Ard.: La Roche (J7.13), rochers siliceux, sur *Pertusaria lactea*, 1890, *G. Dens* (BR).

New to Belgium. In the area of study, this lichenicolous fungus was known only from two localities in Luxembourg (Sérusiaux et al. 1999).

Schismatomma umbrinum **(Coppins & P. James) P. M. Jørg. & Tønsberg**

Belgium, Ard.: 6 km NE of Malmedy, NE of Xhoffrais, along road to Robertville (G8.34), 450 m, schistose rock, 1990, *P. van den Boom* 9407 (LG, hb van den Boom) (TLC: schizopeltic acid and unknown UV+ blue substances).

Second locality for this rare species in Belgium, previously known from the western part of Ard. and from the Berdorf area (L Lorr.). The collection reported here was collected in the NE part of Ard.

Sclerococcum griseisporodochium Etayo

Belgium, Mosan: Virelles, Bois de Blaimont, affleurement calcaire sur la rive gauche de l'Eau Blanche (J4.45), rocher calcaire abrité, en sous-bois de feuillus, 2008, *D. Ertz* 12281 (BR).

This peculiar lichen producing violet sporodochia was known from France (Jura and Pyrénées-Atlantiques), Italy (Julian pre-Alps), Spain (Navarra) and Great Britain (Western Scotland) (Sérusiaux & Coppins 2007). It grows on calcareous underhangs of natural outcrops in sheltered habitats, usually under forest cover, and obviously well-protected from direct rain. The species is new for the study area.

Thelocarpon citrum (Wallr.) Rossmann (Fig. 8)

Belgium, Mosan: Liège, University Campus, "Lande de Streupas" (F7.43), 140 m, formerly air-polluted (acid and heavy metals) heathland and now managed within a nature reserve scheme, open ground with small pebbles in low heathland with *Calluna vulgaris*, 2007, *A. M. Brand*, *E. Sérusiaux* & *P. van den Boom* (LG, hb Brand, hb van den Boom).

A further species of the rarely collected genus *Thelocarpon*: the material perfectly matches the description of Salisbury (1966). It was found in a similar habitat as described by Aptroot & Sparrius (2000): an area that has been recently stripped off its top soil. New for the area of study. Accompanying species include *Absconditella trivialis*, *Baeomyces rufus*, *Dibaeis baeomyces*, *Micarea lithinella, M. lynceola* (see above) and *Trapelia coarctata*.

Unguiculariopsis lettaui (Grummann) Coppins

Belgium, Ard.: Bastogne (K7.16), on *Evernia prunastri*, 1852, E. *Coemans* (BR).

This lichenicolous ascomycete induces the formation of conspicuous galls on the thallus of *Evernia prunastri*, over which it develop superficial apothecia. It was previously known from several European countries and from Macaronesia, and it is new for the checklist area of Belgium, Luxembourg and northern France. Although the host is very common in this area, the species has never been found recently and it might be extinct.

Verrucula helvetica **(B. de Lesd.) Nav.-Ros. & Cl. Roux**

France, Mosan: Rocher de Chooz, rive droite de la Meuse (J5.35), on calcareous rock, on *Caloplaca cirrochroa*, 1978, *S. Remy*, *R. Iserentant* & *J. de Sloover* (LG) (identified by C. Roux).

This lichen, starting as a parasite on *C. cirrochroa* belongs to the recently resurrected genus *Verrucula* J. Steiner (Navarro-Rosinés et al. 2007), and is new for the area of study. The specimen had previously been reported as *Verrucaria latericola* Erichsen, together with a further specimen from Luxembourg (van den Boom et al. 1996). This latter specimen might belong to an undescribed species of *Verrucula* starting as a parasite either on *Caloplaca arnoldii* or *C.* cf. *flavocitrina*, both species accompanying the *Verrucula* (pers. comm. C. Roux).

Zwackhiomyces lithoiceae (B. de Lesd.) Hafellner & V. John

Luxembourg, Lorr.: Lorentzweiler, in the village (L8.46), on a concrete wall, on *Verrucaria*, 1998, *P. Diederich* 13478 (h).

This species was described from northern France (dépt. Nord, maritime district) on *Verrucaria* by Bouly de Lesdain (1910a: 274). Although the type is lost, Grube & Hafellner (1990) were able to find and describe a German specimen on *Verrucaria nigrescens* corresponding well to the original description. In the mean time the species has been recorded from France, Germany, The Netherlands, Spain and Turkey (Hafellner & John 2006). It is new for Luxembourg.

Zwackhiomyces martinatianus (Arnold) Triebel & Grube (Fig. 9)

Belgium, Ard.: St-Hubert, valley of the Masblette, near the Pont Mauricy (J6.47), 320 m, ancient mixed woodland, on siliceous rock, on *Porpidia crustulata*, 2007, *D. Ertz* 10405 (BR, hb Diederich).

This obviously rare lichenicolous pyrenomycete, confined to *Porpidia* species, was known from Austria, France, Germany, Italy, Luxembourg and Spain (Grube & Hafellner 1990, Sérusiaux et al. 1999). It is here reported as new for Belgium.

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