



Lichenicolous fungi of Ukraine: an annotated checklist

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Abstract

The checklist is based on 137 references and it includes data on the distribution of 220 taxa of lichenicolous fungi in Ukraine. Four species are based on dubious records. The Crimea (80 species) and Carpathians Mts (64 species) have highest observed species diversity of the lichenicolous fungi. Among plain territories, most species-rich regions are Kherson (64 species) and Mykolaiv (37 species), and both regions were intensively surveyed for lichenicolous fungi. Most frequent host genera recorded are *Lecanora* s. lat. (23 species), *Cladonia* (17 species), *Xanthoria* s. lat. (15 species), *Aspicilia* s. lat. (14 species) and *Caloplaca* s. lat. (13 species). Most diverse taxonomical groups of lichenicolous fungi recorded are *Capnodiales* (21 species), *Arthoniales* (18 species) and *Hypocreales* (13 species). *Katherinomyces cetrariae*, *Lichenochora hypanica*, *Lichenostigma svandae*, *Norrlinia medoborensis*, *Phoma pisutii*, *Pronectria diplococca*, *P. caloplacae*, *Rosellinula frustulosae*, *Sphaerellothecium aculeatae*, *Pleospora xanthoriae*, *Trichoconis hafellneri* and *Zwackhiomyces polischukii* were described from type localities in Ukraine.

Key words – Arthoniales – Ascomycota – Basidiomycota – Capnodiales – host – lichen

Introduction

Lichenicolous fungi are a highly specialized group of organisms and are still poorly known. The first lichenicolous fungus recorded in Ukraine was *Opegrapha physciaria* (= *Celidium varium* (Tul.) Körb.) (Chernov 1895). During the next 100 years, lichenicolous fungi were sparsely recorded (Oxner 1930, Servít & Nadvornik 1932, Servít 1936, Makarevich 1955, Kopachevskaya 1986). Perhaps the most substantial record of this era is the holotype specimen of *Rosellinula frustulosae* (Vouaux) R. Sant. on *Lecanora agropholis* collected by K. Mereschowsky near Simpheropol in Crimea (Hafellner 1985). D. Hawksworth, who published nine lichenicolous fungi collected from Carpathian Mts, started the new era in discovery of these fungi in Ukraine (Hawksworth 1992). Shortly afterwards, *Norrlinia medoborensis* was described on *Peltigera* as new for science from Medobory Reserve (Ternopil region) (Kondratyuk & Galloway 1995). Upcoming first checklist of the Ukrainian lichens (Kondratyuk et al. 1996) included information about 46 species of lichenicolous fungi. Second checklist of lichens, lichenicolous and allied fungi of Ukraine (Kondratyuk et al. 1998) listed 65 lichenicolous species. Subsequent first checklist of the lichenicolous fungi in Ukraine (Kondratyuk et al. 1999) listed 88 species with an identification key. In the last A.M. Oxner's volume of the lichen flora of Ukraine (Oxner 2010), 106 species of lichenicolous fungi were listed. In the last decade, lichenicolous fungi in Ukraine are studied with increasing intensity. Following species were recently described from Ukraine: *Lichenostigma*

svadae (Vondrák & Šoun 2007), *Phoma pisutii* (Oxner 2010), *Pronectria diplococca*, *P. caloplacae* (Khodosovtsev et al. 2012), *Lichenochora hypanica* (Kondratyuk et al. 2014), *Katherinomyces cetrariae* (Khodosovtsev et al. 2016), *Sphaerellothecium aculeatae* (Khodosovtsev et al. 2016), *Pleospora xanthoriae* (Khodosovtsev & Darmostuk 2016), *Trichoconis hafellneri* (Braun et al. 2016) and *Zwackhiomyces polischukii* (Khodosovtsev & Darmostuk 2017c). Here we provide data about 220 species of lichenicolous fungi recorded from Ukraine.

Material & Methods

137 publications containing data on lichenicolous fungi in Ukraine were extracted; relevant references are attached to every single species in the list. Host lichen species reported for Ukrainian records are attached. Ukrainian records are sorted according to the seven geobotanical regions of Ukraine (Geobotanichne Rayonuvannya 1977): A, B: Carpathians (A: Transcarpathian lowlands, B: the mountainous part); C, D, E: Ukraine Plains (C: Forest zone, D: Forest–Steppe zone, E: Steppe zone), F, G: Crimea (F: lowlands, G: mountains). The geobotanical regions are further divided into smaller geographical units abbreviated as follows: *ARC* – Autonomous Republic of Crimea; *Cky* – Cherkasy region, *Cnv* – Chernihiv region, *Cvi* – Chernivtsi region, *Dn* – Dnipropetrovsk region, *Do* – Donetsk region, *I* – Ivano–Frankivsk region, *Kha* – Kharkiv region, *Khe* – Kherson region, *Khm* – Khmelnytsky region, *Ki* – Kyiv region, *Kid* – Kirovograd region, *Lk* – Luhansk region, *Lv* – Lviv region, *M* – Mykolaiv region, *O* – Odesa region, *P* – Poltava region, *R* – Rivne region, *S* – Sumy region, *T* – Ternopil region, *Vi* – Vinnytsia region, *Vo* – Volyn region, *Zak* – Zakarpatska region, *Zap* – Zaporizhzhia region, *Zh* – Zhytomyr region.

An annotated checklist

- Abrothallus bertianus* de Not. – on *Melanelixia glabratula*. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Lv* (Pirogov & Shovhan 2015); **G:** *ARC* (Khodosovtsev et al. 2013b).
- A. caerulescens* I. Kotte – on *Xanthoparmelia conspersa*. **C:** *Zh* (Fedorenko 2006, Fedorenko et al. 2006, Kapetz 2017); **E:** *M* (Mikhailyuk et al. 2011).
- A. cetrariae* I. Kotte – on *Platismatia glauca*. **B:** *I* (Khodosovtsev et al. 2016c), *Zak* (Kukwa 2000).
- A. parmeliarum* (Sommerf.) Nyl. – on *Parmelia saxatilis*. **B:** *I* (Khodosovtsev et al. 2016c), *Zak* (Coppins et al. 1998, Kondratyuk & al. 1998, 1999, 2003).
- A. suecicus* (Kirschst.) Nordin (= *Vouauxiomyces ramalinae* (Nordin) D. Hawksw.) – on *Ramalina* sp. **G:** *ARC* (Kondratyuk et al. 2014).
- A. teloschistis* Brackel, Pérez-Ortega & Suija – on *Seiropora lacunosa*. **F:** *ARC* (Khodosovtsev & Darmostuk 2016a).
- A. usneae* Rabenh. – on *Usnea* sp. **B:** *I* (Khodosovtsev et al. 2016c).
- Arthrorhaphis aeruginosa* R. Sant. & Tønsberg – on *Cladonia* sp. **B:** *I* (Vondrák et al. 2010).
- A. grisea* Th. Fr. – on *Baeomyces rufus*. **B:** *Zak* (Hawksworth 1992, Kondratyuk et al. 1996, 1998, 1999, 2003).
- Arthonia apotheciorum* (A. Massal.) Almq. (= *Arthonia clemens* in sense of Ukrainian authors; *A. galactinaria* Leight.) – on *Myriolecis albescens*, *M. crenulata*, *M. dispersa*, *M. elenkinii*, *Lecanora pruinosa*. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Lv* (Pirogov 2010b, 2012a); **D:** *Khm* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Bielczyk et al. 2005), *Cky* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999); **E:** *Khe* (Kondratyuk & Khodosovtsev 1997, Khodosovtsev 1999a, Kondratyuk et al. 1999, Khodosovtsev 2012, Khodosovtsev & Khodosovtseva 2014, Naumovich & Darmostuk 2015, Darmostuk 2016a, b), *M* (Kondratyuk & Khodosovtsev 1997, Khodosovtsev 1999a, Kondratyuk et al. 1999), *O* (Khodosovtsev 1999a, Khodosovtsev et al. 2016d); **ARC:** *G* (Khodosovtsev 1999a, b, 2003, 2006a, b, Fedorenko & Akulov 2002, Khodosovtsev & Redchenko 2002, Khodosovtsev & Bogdan 2005, Khodosovtsev et al. 2007 as *Arthonia lecanorina* (Almq.) R. Sant.).

- A. epiphyscia* Nyl. s.lat. – on *Physconia grisea*. **B:** *I* (Kondratyuk 2012); **C:** *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999), *Zh* (Kapetz 2017); **G:** *ARC* (Coppins et al. 2001, Redchenko 2001, Khodosovtsev & Redchenko 2002).
- A. lecanorina* (Almq.) R. Sant – on *Lecanora allophana*. **B:** *I* (Khodosovtsev et al. 2016c).
- A. nideri* (J. Steiner) Clauzade, Diederich & Cl. Roux – on *Pyrenodesmia albobrunosa*, *P. variabilis*. **G:** *ARC* (Khodosovtsev et al. 2007).
- A. molendoi* (Heufl. ex Frauent.) R. Sant. – on *Caloplaca* sp. **G:** *ARC* (Kondratyuk et al. 1999).
- A. parietinaria* Hafellner & A. Fleischhacker (= *Arthonia destruens*, in sense of Ukrainian authors) – on *Xanthoria parietina*. **C:** *T* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999); **D:** *Cky* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999), *Kha* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999), *P* (Kondratyuk & Khodosovtsev 1997), *Vi* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999); **E:** *Khe* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Khodosovtsev 1998, Khodosovtsev & Khodosovtseva 2014), *Ki* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999), *M* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999); **G:** *ARC* (Kondratyuk & Khodosovtsev 1997). See notes (Fleischhacker et al. 2016).
- A. phaeophysciae* Grube & Matzer – on *Phaeophyscia endophoenicea*, *P. orbicularis*, *P. sciastra*. **C:** *Lv* (Pirogov & Khodosovtsev 2013, Pirogov & Shovhan 2015); **E:** *Khe* (Pirogov & Khodosovtsev 2013); **G:** *ARC* (Pirogov & Khodosovtsev 2013).
- A. punctella* Nyl. s. lat. – on *Circinaria calcarea*. **G:** *ARC* (Khodosovtsev et al. 2007). *Arthonia punctella* Nyl. s.str. originally described on calcicolous *Diplotomma* species.
- A. varians* (Davies) Nyl. – on *Lecanora rupicola*. **E:** *Do* (Nadyeina 2005, 2009, Khodosovtsev & al. 2013); **G:** *ARC* (Khodosovtsev 2003, 2004).
- Athelia arachnoidea* (Berk.) Julich – on *Physcia*, *Phaeophyscia* and *Xanthoria*. **B:** *Zak* (Hawksworth 1992, Coppins et al. 1998, Kondratyuk et al. 1996, 1998, 1999, 2003); **C:** *Lv* (Pirogov 2010b, 2012a), *Zh* (Kapetz 2017); **D:** *Khm* (Bielczyk et al. 2005), *Kid* (Naumovich 2009, Naumovich & Darmostuk 2015, Khodosovtsev & Darmostuk 2017b), *Vo* (Pirogov 2013); **E:** *Dn* (Naumovich & Darmostuk 2015), *Do* (Khodosovtsev et al. 2013), *M* (Boiko 2013, Darmostuk 2016d), *Khe* (Gavrylenko & Khodosovtsev 2009, Gavrylenko 2011, Khodosovtsev 2012, Khodosovtsev & Khodosovtseva 2014, 2015, Naumovich & Darmostuk 2015, Darmostuk 2016a, e, f), *Zap* (Zavyalova 2010).
- Biatoropsis usnearum* Räsänen – on *Usnea* sp. **G:** *ARC* (Khodosovtsev & Marsak 2003, Khodosovtsev et al. 2013b).
- Briancoppinsia cytospora* (Vouaux) Diederich, Ertz, Lawrey & van den Boom (= *Phoma cytospora* (Vouaux) D. Hawksw.) – on *Parmelia sulcata*. **B:** *Zak* (Kondratyuk et al. 1999, 2003); **C:** *S* (Khodosovtsev & Darmostuk 2017c); **E:** *Khe* (Khodosovtsev & Darmostuk 2017b).
- Buelliella lecanorae* Suija & Alstrup – on *Lecanora chlarotera*. **G:** *ARC* (Kondratyuk et al. 2014, Kapetz et al. 2015).
- B. poetshii* Hafellner – on *Endocarpon pusillum* and *E. psorodeum*. **G:** *ARC* (Khodosovtsev et al. 2009); **E:** *Dn* (Khodosovtsev et al. 2009, Naumovich 2009b; Naumovich & Darmostuk 2015).
- Calycina ucrainica* (S.Y. Kondr.) S.Y. Kondr. (= *Pezizella ucrainica* S.Y. Kondr.) – on *Cladonia* sp. **C:** *T* (Kondratyuk & Galloway 1995, Kondratyuk et al. 1999).
- Carbonea aggregantula* (Müll. Arg.) Diederich & Triebel – on *Lecanora polytropa*. **B:** *Zak* (Pirogov et al. 2014).
- C. assimilis* (Körber) Hafellner & Hertel – on *Diploschistes actinostomus*. **G:** *ARC* (Khodosovtsev et al. 2007; Pirogov et al. 2014).
- C. supersparsa* (Nyl.) Hertel – on *Lecanora sulphurea*. **B:** *Zak* (Pirogov et al. 2014).
- C. vitellinaria* (Nyl.) Hertel – on *Candelariella vitellina*. **B:** *Zak* (Pirogov et al. 2014); **C:** *Lv* (Pirogov 2012a, Pirogov et al. 2014); **G:** *ARC* (Khodosovtsev 2002, Pirogov et al. 2014).
- Ceratobasidium bulbillifaciens* Diederich & Lawrey – on *Circinaria calcarea*, *Lasallia pustulata* and *Xanthoria parietina*. **E:** *Khe*, *M* (Khodosovtsev & Darmostuk 2016a).

- Cercidospora caudata* Kernst. s.lat. – on *Caloplaca demissa*. **G:** ARC (Khodosovtsev & Darmostuk 2017c).
- Cercidospora crozalsiana* (H. Olivier) Nav.-Ros., Cl. Roux & Casares – on *Protoparmeliopsis* sp. **C:** Zh (Kapetz 2017).
- C. epipolytropa* (Mudd) Arnold – on *Lecanora polytropa*. **B:** I (Darmostuk 2016c, Khodosovtsev et al. 2016c), *Zak* (Pirigov & Chepelevska 2013, Pirigov et al. 2015).
- C. lobothalliae* Nav.-Ros. & Calat. – on *Lobothallia radiosa*. **E:** *Khe* (Darmostuk 2016c).
- C. macrospora* (Uloth) Hafellner & Nav.-Ros. (= *Cercidospora ulothii* Körb.) – on *Protoparmeliopsis muralis*. **C:** *Ki* (Mikhailyuk et al. 2011), *Zh* (Fedorenko et al. 2006, 2007, Kapetz 2017); **D:** *Cky* (Fedorenko et al. 2007), *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Dn* (Naumovich & Darmostuk 2015), *Do* (Darmostuk 2016c, Darmostuk & Khodosovtsev 2014, Nadyeina 2009), *Kh* (Darmostuk 2017), *Lk* (Fedorenko et al. 2007), *M* (Boiko 2010, 2013), *Zap* (Darmostuk 2016c, Khodosovtsev & Zavyalova 2008a); **G:** ARC (Kondratyuk et al. 1999, Fedorenko et al. 2007).
- C. solearispora* Calat., Nav.-Ros. & Hafellner – on *Aspicilia* sp. **E:** *Zap* (Darmostuk 2016c).
- C. xanthoriae* (Wedd.) R. Sant. – on *Calogaya saxicola* s.lat., *Rufoplaca subpallida*, *Rusavskia elegans*. **E:** *M* (Khodosovtsev & Darmostuk 2017c); **F:** ARC (Kondratyuk et al. 1999, Darmostuk 2016c).
- Cladophialophora parmeliae* (Etayo & Diederich) Diederich & Untereiner – on *Xanthoparmelia conspersa*. **E:** *M* (Khodosovtsev & Darmostuk 2017c).
- Cladosporium licheniphilum* Heuchert & U. Braun – on *Xanthoria parietina*. **E:** *Khe* (Khodosovtsev & Darmostuk 2016a).
- Clypeococcum cetrariae* Hafellner – on *Cetraria aculeata*, *C. islandica*. **B:** *Zak* (Pirogov 2015); **C:** *S* (Khodosovtsev & Darmostuk 2017c); **E:** *M* (Khodosovtsev & Darmostuk 2017c).
- C. cladonema* (Weddell) D. Hawksw. – on *Cetraria islandica*. **C:** *Ki* (Prekrasna et al. 2012).
- C. hypocenomycis* D. Hawksw. – on *Carbonicola myrmecina*. **C:** *Lv* (Pirogov 2010a, 2012a), *Vo* (Pirogov 2013), *Zh* (Kapetz 2017); **E:** *Khe* (Khodosovtsev & Darmostuk 2017c).
- Codonmyces lecanorae* Calat. & Etayo – on *Protoparmeliopsis muralis*. **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Do* (Darmostuk 2015a), *Khe* (Darmostuk 2015a, 2016b), *M* (Naumovich & Darmostuk 2015).
- Cornutispora ciliata* Kalb – on *Xanthoria parietina*. **E:** *Khe* (Khodosovtsev & Darmostuk 2016).
- C. lichenicola* D. Hawks. & B. Sutt. – on *Lecanora* sp. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Zh* (Kapetz 2017).
- C. pyramidalis* Etayo – on *Parmelia sulcata*. **C:** *S* (Khodosovtsev & Darmostuk 2017a).
- Corticifraga fuckelii* (Rehm) D. Hawksw. & R. Sant. – on *Peltigera* sp. **B:** *I* (Miadlikowska 1996).
- Dacampia cladoniicola* Halıcı & A.Ö. Türk – on *Cladonia foliacea*. **E:** *Khe* (Khodosovtsev 2011; Khodosovtsev & Khodosovtseva 2015).
- Dactylospora athallina* (Müll. Arg.) Hafellner – on *Baeomyces rufus*. The record has not certain location (Kondratyuk et al. 1989, 1999).
- D. lobariella* Hafellner – on *Lobaria pulmonaria*. **B:** *Zak* (Raduka & Zelenko 1998, Kondratyuk et al. 1999, 2003).
- D. saxatilis* (Schaer.) Hafellner (= *Buellia saxatilis* (Schaer.) Körb.) – on *Pertusaria* sp. **G:** ARC (Oxner 1930, Kopachevskaya 1986, Kondratyuk et al. 1999, Kondratyuk 2010).
- D. rimulicola* (Müll. Arg.) Hafellner – on *Lecanora rupicola*. **G:** ARC (Khodosovtsev 2011).
- D. parasitica* (Flörke) Arnold – on *Pertusaria* sp. **B:** *Zak* (Coppins et al. 1998, Kondratyuk et al. 2003).
- Didymellopsis latitans* (Nyl.) Clem. & Shear – on *Thallinocarpon nigritellum*. **G:** ARC (Khodosovtsev 2011).
- D. perigena* (Nyl.) Grube & Hafellner – on *Placidium squamulosum*. **E:** *Zap* (Khodosovtsev & Klymenko 2015).
- D. pulposi* (Zopf) Grube & Hafellner – on *Enchylium tenax*. **E:** *Khe* (Khodosovtsev 2011, 2015); **G:** ARC (Khodosovtsev 2011).

- Didymocyrtis cladoniicola*** (Diederich, Kocourk. & Etayo) Ertz & Diederich (= *Phoma cladoniicola* Diederich, Kocourk. & Etayo) – on *Cladonia* spp. **E:** *Dn* (Naumovich & Darmostuk 2015), *Khe* (Khodosovtsev & Umanets 2009, Khodosovtsev 2012, Khodosovtsev & Khodosovtseva 2015), *M* (Khodosovtsev & Umanets 2009, Darmostuk 2016d).
- D. epiphyscia*** Ertz & Diederich (= *Phoma epiphyscia* Vouaux, *P. physciicola* Keissl.) – on *Physcia adscendens*. **E:** *Khe* (Khodosovtsev 2012); **G:** *ARC* (Kondratyuk et al. 1999).
- D. pseudeverniae*** (Etayo & Diederich) Ertz & Diederich – on *Pseudevernia furfuracea*. **B:** *I* (Khodosovtsev et al. 2016b, c).
- D. ramalinae*** (Roberge ex Desm.) Ertz, Diederich & Hafellner (= *Phoma ficuzzae* Brackel, *Pyrenidium ucrainicum* S.Y. Kondr., L. Lőkös & J.–S. Hur) – on *Ramalina* sp. **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **G:** *ARC* (Khodosovtsev 2013, Kondratyuk et al. 2014).
- Echinothecium reticulatum*** Zopf – on *Evernia prinastri*. **G:** *ARC* (Kondratyuk et al. 2014).
- Epicladonia sandstedei*** (Zopf) D. Hawksw. – on *Cladonia rangiformis*. **E:** *Khe* (Khodosovtsev & Darmostuk 2016a).
- E. simplex*** D. Hawksw. – on *Cladonia rangiformis*. **E:** *Khe* (Khodosovtsev & Darmostuk 2017c).
- E. stenospora*** (Harm.) D. Hawksw. – on *Cladonia foliacea*. **C:** *S* (Khodosovtsev & Darmostuk 2017a).
- Erythricium aurantiacum*** (Lasch) D. Hawksw. & A. Henrici (= *Marchandiobasidium aurantiacum* (Lasch) Diederich & Schultheis, *Marchandiomyces aurantiacus* (Lasch) Diederich & Etayo) – on *Physcia*, *Phaeophyscia* and *Xanthoria*. **C:** *Zh* (Kapetz 2016, 2017); **D:** *Kid* (Gavrylenko et al. 2009, Naumovich & Darmostuk 2015, Khodosovtsev & Darmostuk 2017b); **E:** *Khe* (Gavrylenko et al. 2009, Gavrylenko 2011, Khodosovtsev & Khodosovtseva 2014, 2015, Naumovich & Darmostuk 2015, Darmostuk 2016e, f); *M* (Darmostuk 2016d).
- Endococcus brachysporus*** (Zopf) M. Brand & Diederich – on *Porpidia tuberculosa*. **B:** *Zak* (Pirigov & Chepelevska 2015).
- E. fusiger*** Th. Fr. & Almq. – on *Rhizocarpon distinctum*. **E:** *Zap* (Khodosovtsev & Zavyalova 2008a).
- E. macrosporus*** (Arnold.) Nyl. – on *Rhizocarpon geographicum*. **G:** *ARC* (Khodosovtsev & al. 2007).
- E. propinquus*** (Körb.) D. Hawksw. – on *Circinaria caesiocinerea*. **B:** *Zak* (Servít & Nádvorník 1932, Oxner 1956, Kondratyuk et al. 1996, 2003 as *Dermatina perexigua* (Arnold) Zahlbr.); **C:** *T* (Smerechynska 2006, Fedorenko et al. 2007); **E:** *Lk* (Fedorenko et al. 2007, Nadyeina 2009, Rusina et al. 2010).
- E. ramalinarius*** (Linds.) D. Hawksw. – on *Ramalina canariensis*. **G:** *ARC* (Khodosovtsev et al. 2007).
- E. rugulosus*** Nyl. s. str. – on *Verrucaria nigrescens*. **E:** *Khe* (Gavrylenko & Khodosovtsev 2009).
- E. rugulosus*** Nyl. s. lat. – on *Aspicilia cinerea*, *Circinaria caesiocinerea*. **E:** *Dn* (Naumovich & Darmostuk 2015), *Do* (Nadyeina 2009, Darmostuk 2015b), *Lk* (Fedorenko et al. 2007, Rusina et al. 2010), *M* (Boiko 2008, 2013).
- Halospora discrepans*** (J. Lahm ex Arnold) Hafellner (= *Merismatium discrepans* (J. Lahm ex Arnold) Triebel, *Polyblastia discrepans* J. Lahm ex Arnold) – on *Aspicilia* sp. **B:** *Zak* (Makarevich 1955, Kondratyuk et al. 1999, 2003).
- Hawksworthiana peltigericola*** (D. Hawksw.) U. Braun – on *Peltigera collina*. **G:** *ARC* (Khodosovtsev et al. 2013b).
- Heterocephalacria bachmannii*** (Diederich & M.S. Christ.) Millanes & Wedin (= *Syzygospora bachmannii* Diederich & M.S. Christ.) – on *Cladonia rangiformis*. **E:** *Khe* (Khodosovtsev & Darmostuk 2017c); **G:** *ARC* (Khodosovtsev 2013).
- H. physciacearum*** (Diederich) Millanes & Wedin – on *Physcia stellaris*. **C:** *S* (Khodosovtsev & Darmostuk 2017a), *Zh* (Kapetz 2017).
- Homostegia piggotii*** (Berk. & Broome) P. Karst. – on *Parmelia saxatilis* and *P. sulcata*. **B:** *I* (Khodosovtsev et al. 2016c); **E:** *Khe* (Khodosovtsev & Khodosovtseva 2015, Darmostuk 2016f); **G:** *ARC* (Khodosovtsev 2013).

- Illosporopsis christiansenii*** (B.L. Brady & D. Hawksw.) D. Hawksw. (= *Hobsonia christiansenii* B.L. Brady & D. Hawksw.) – on *Physcia adscendens*. **B:** Zak (Hawksworth 1992, Kondratyuk et al. 1999, 2003); **C:** S (Khodosovtsev & Darmostuk 2017c); **E:** Khe, M (Khodosovtsev & Darmostuk 2017c).
- Intralichen baccisporum*** P. Hawksw. & M.S. Cole – on *Acarospora cervina*, *Athallia pyracea*, *Caloplaca inconnexa*, *Candelariella aurella*, *Xanthocarpia crenulatella*, *X. marmorata*. **C:** Lv (Pirogov 2012a); **D:** Kha (Gromakova 2014); **E:** Khe (Gavrylenko & Khodosovtsev 2009, Boiko & Khodosovtsev 2011, Naumovich & Darmostuk 2015, Darmostuk 2016f), M (Boiko & Khodosovtsev 2011, Boiko 2013), O (Khodosovtsev et al. 2016d).
- I. christiansenii*** (D. Hawksw.) D. Hawksw. & M.S. Cole (= *Bispora christiansenii* D. Hawksw.) – on *Acarospora insolata*, *Athallia pyracea*, *Bellemerea cupreoatra*, *Calogaya decipiens*, *Caloplaca inconnexa*, *Candelariella aurella*, *Flavoplaca coronata*, *Lecania erysibe*, *Lecanora crenulata*, *Ramalina calicaris*, *Xanthocarpia crenulatella*, *X. marmorata*. **B:** Zak (Hawksworth 1992, Kondratyuk et al. 1999, 2003); **C:** Lv (Pirogov 2012a), Zh (Kapetz 2017); **D:** Kid (Khodosovtsev & Darmostuk 2017b); **E:** Dn (Naumovich & Darmostuk 2015), Khe (Kondratyuk & Khodosovtsev 1997, Gavrylenko & Khodosovtsev 2009, Khodosovtsev & Khodosovtseva 2014, Darmostuk 2016a), Lk (Nadyeina 2009, Rusina et al. 2010), M (Boiko 2008, 2010, 2013), O (Khodosovtsev et al. 2016d), Zap (Khodosovtsev & Zavyalova 2008a).
- I. lichenicola*** (M.S. Christ. & D. Hawksw.) D. Hawksw. & M.S. Cole – on *Candelariella coralliza* and *C. vitellina*. **E:** M (Boiko 2010, 2013), Zap (Khodosovtsev & Zavyalova 2008a, b).
- Katherinomyces cetrariae*** Khodos. – on *Cetraria aculeata*. **E:** Khe (Khodosovtsev et al. 2016e).
- Knufia peltigerae*** (Fuckel) Réblová & Unter. (= *Capronia peltigerae* (Fuckel) D. Hawksw.) – on *Peltigera rufescens*. **C:** T (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006).
- Laetisaria lichenicola*** Diederich, Lawrey & Van den Broeck – on *Physcia adscendens*. **E:** Khe (Khodosovtsev & Darmostuk 2017c).
- Libertiella malmedyensis*** Speg. & Roum. – on *Peltigera rufescens*. **B:** Cvi (Kondratyuk et al. 1999); **C:** T (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999).
- Lichenochora caloplacae*** Zhurb. – on *Athallia skii*. **E:** Khe (Khodosovtsev & Darmostuk 2017c).
- L. hypanica*** S. Y. Kondr., L. Lökös & J.–S. Hur – on *Endocarpon obscuratum*. **E:** M (Kondratyuk et al. 2014).
- L. obscuroides*** (Linds.) Triebel & Rambold – on *Phaeophyscia* spp. **B:** I (Kondratyuk 2012, Kapetz et al. 2015); **C:** Lv (Pirogov 2012a), R (Kapetz et al. 2015), Zh (Kapetz et al. 2015, Kapetz 2017); **D:** Cky (Kapetz et al. 2015).
- L. weillii*** (Werner) Hafellner & R. Sant. – on *Physconia grisea*. **E:** Khe (Khodosovtsev & Darmostuk 2017c).
- Lichenocodium erodens*** M. S. Christ. & D. Hawksw. – on *Cladonia fimbriata*, *Evernia prunastri*, *Hypogymnia physodes*, *Lecanora argentata*, *L. conizaeoides*, *Parmelia submontana*, *Pleurosticta acetabulum*, *Ramalina farinacea*, *Xanthoparmelia conspersa*, *X. pulla*. **B:** Zak (Hawksworth 1992, Motiejūnaitė et al. 1999, Kondratyuk et al. 1999, 2003); **C:** Lv (Pirogov 2012a), Vo (Pirogov 2013), Zh (Kapetz 2017); **E:** Khe (Khodosovtsev & Khodosovtseva 2015), M (Boiko 2013, Darmostuk 2016d, Khodosovtsev & Darmostuk 2017), Zap (Zavyalova 2010); **D:** Kid (Khodosovtsev & Darmostuk 2017b); **G:** ARC (Kondratyuk et al. 2014).
- L. lecanorae*** (Jaap) D. Hawksw – on *Hypogymnia physodes*, *Lecanora carpinea*, *L. conizaeoides*, *Parmeliopsis ambigua*, *Protoparmeliopsis muralis*. **B:** I (Khodosovtsev et al. 2016c), Zak (Motiejūnaitė et al. 1999, Kondratyuk et al. 1999, 2003, Fedorenko et al. 2007); **C:** Lv (Pirogov 2012a), Zh (Fedorenko et al. 2006, 2007, Kapetz 2017); **E:** Khe (Khodosovtsev 2012, Darmostuk 2016b, f), M (Naumovich & Darmostuk 2015), O (Khodosovtsev et al. 2016d); **G:** ARC (Khodosovtsev 2013).
- L. pyxidatae*** (Oudem.) Petrak et H. Sydow – on *Cladonia foliacea*. **E:** Khe (Khodosovtsev 2011).

- L. usneae* (Anzi) D. Hawksw. – on *Physcia stellaris*. **B:** *Zak* (Hawksworth 1992, Kondratyuk et al. 1999, 2003); **C:** *Zh* (Kapetz 2017).
- L. xanthoriae* M.S. Christ – on *Xanthoria parietina*. **C:** *Lv* (Pirogov 2012a), *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006); **E:** *Khe* (Gavrylenko 2011, Darmostuk 2016f), *M* (Boiko 2013).
- Lichenodiplis lecanorae* (Vouaux) Dyko & D. Hawksw – on *Lecanora saligna*. **C:** *Vo* (Pirogov 2013), *Zh* (Kapetz 2016, 2017); **E:** *Khe* (Khodosovtsev & Khodosovtseva 2014, 2015, Naumovich & Darmostuk 2015, Darmostuk 2016b, e), *Lk* (Nadyeina 2009), *Zap* (Kondratyuk et al. 1999).
- Lichenohendersonia varians* Calatayud & Etayo – on *Candelariella vitellina*. **E:** *Zap* (Khodosovtsev & Darmostuk 2016a).
- Lichenopeltella peltigericola* (D. Hawksw.) R. Sant. – on *Peltigera* sp. **B:** *I* (Miadlikowska 1996, Kondratyuk et al. 1999, 2003).
- Lichenostigma cosmopolites* Hafellner & Calatayud – on *Xanthoparmelia conspersa*. **B:** *I* (Khodosovtsev et al. 2016c), *Zak* (Kondratyuk et al. 2003, Kondratyuk 2005, Fedorenko & al. 2007); **C:** *Zh* (Fedorenko et al. 2006, 2007, Kapetz 2017); **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Dn* (Naumovich 2009b, Naumovich & Darmostuk 2015), *Do* (Khodosovtsev et al. 2013), *Lk* (Fedorenko et al. 2007, Nadyeina 2009, Rusina et al. 2010), *M* (Boiko 2013), *Zap* (Khodosovtsev & Zavyalova 2008a); **G:** *ARC* (Kondratyuk 2005, Fedorenko et al. 2007).
- L. elongatum* Nav.-Ros. & Hafellner – on *Aspicilia* spp., *Lobothallia radiosa* and *Prothoparmeliopsis muralis*. **B:** *Zak* (Coppins et al. 1998, Kondratyuk et al. 1999, 2003, Kondratyuk 2005); **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Dn* (Naumovich & Darmostuk 2015), *Do* (Nadyeina 2009, Khodosovtsev et al. 2013, Darmostuk & Khodosovtsev 2014), *Khe* (Gavrylenko & Khodosovtsev 2009, Naumovich & Darmostuk 2015, Darmostuk 2016a, b), *M* (Boiko 2008, 2013, Naumovich & Darmostuk 2015), *O* (Khodosovtsev & al. 2016d); **G:** *ARC* (Kondratyuk 2005, Vondrák & Šoun 2007).
- L. epipolina* Nav.-Ros., Calat. & Hafellner – on *Diplotomma epipolium*. **C:** *Zh* (Kapetz 2017).
- L. gracilis* Calat., Nav.-Ros. & Hafellner – on *Acarospora fuscata*. **B:** *I* (Khodosovtsev et al. 2016c); **E:** *Do* (Khodosovtsev et al. 2013); **G:** *ARC* (Kondratyuk 2005).
- L. maureri* Hafellner – on *Pseudoevernina furfuracea*. **B:** *I* (Khodosovtsev et al. 2016c), *Zak* (Hawksworth 1992, Kondratyuk et al. 1999, 2003); **C:** *S* (Khodosovtsev & Darmostuk 2017c); **E:** *Khe*, *M* (Khodosovtsev & Darmostuk 2017c); **G:** *ARC* (Khodosovtsev et al. 2013b).
- L. rouxii* Nav.-Ros., Calat. & Hafellner – on *Squamarina cartilaginea*. **G:** *ARC* (Kondratyuk 2005, Vondrák & Šoun 2007).
- L. rugosa* G. Thor – on *Diploschistes candidissimus*. **E:** *Khe* (Gavrylenko 2010, 2012).
- L. svandae* Vondrák & Šoun – on *Acarospora cervina*. **E:** *Khe* (Gavrylenko & Khodosovtsev 2009), *M* (Boiko 2013, Naumovich & Darmostuk 2015); **G:** *ARC* (Vondrák & Šoun 2007).
- Lichenothelia convexa* Henssen – on *Acarospora* sp., *Circinaria caesiocinerea*, *Rhizocarpon geographicum*. **B:** *Zak* (Fedorenko et al. 2007); **C:** *Zh* (Kapetz 2017); **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Lk* (Fedorenko et al. 2007, Nadyeina 2009); **G:** *ARC* (Khodosovtsev 2004, Fedorenko et al. 2007).
- L. scopularia* (Nyl.) D. Hawksw. – on *Aspicilia* sp. and siliceous rocks. **C:** *Zh* (Fedorenko et al. 2007; Kapetz 2017); **G:** *ARC* (Khodosovtsev et al. 2007).
- L. renobalesiana* D. Hawksw. & V. Atienza – on *Bagliettoa* sp. **G:** *ARC* (Khodosovtsev & Darmostuk 2016a).
- L. tenuissima* Henssen – on *Lecidea fuscoatra*, *Prothoparmelia* sp., *Scoliciosporum* sp. **C:** *Zh* (Kapetz 2016, 2017).
- Llimoniella groenlandiae* (Alstrup & D. Hawksw.) Triebel & Hafellner (= *Llimoniella caloplacae* S. Kondr. & Khodos.) – on *Xanthocarpia borysthenica*. **E:** *Khe* (Kondratyuk et al. 2006, Khodosovtsev 2015).

- Marchandiomyces corallinus* (Roberge) Diederich & D. Hawksw – on *Physconia grisea*. **C:** *Zh* (Kapetz 2017); **E:** *Khe* (Khodosovtsev & Khodosovtseva 2014).
- Microsphaeropsis caloplacae* Etayo & Yazıcı – on *Calogaya lobulata*. **E:** *Khe* (Khodosovtsev & Darmostuk 2017c).
- Milospium graphideorum* (Nyl.) D. Hawksw. – on *Dirina stenhammari*. **B:** *Zak* (Vondrák et al. 2010); **G:** *ARC* (Khodosovtsev et al. 2007).
- M. lacoizquetae* Etayo & Diederich – on *Cladonia* sp. **B:** *I* (Khodosovtsev et al. 2016b, c).
- Monodictys epilepraria* Kukwa & Diederich – on *Lepraria* sp. **B:** *Zak* (Vondrák et al. 2010); **C:** *Zh* (Kapetz 2016, 2017).
- Muellerella lichenicola* (Sommerf.) D. Hawksw. – on *Acarospora cervina*, *Candelariella oleifera*, *Circinaria calcarea*, *Lecanora albescens*, *L. crenulata*, *L. dispersa*, *Rinodina bischoffii*, *Protoblastenia rupestris*, *Variospora dolomitica*, *Verrucaria* sp. **C:** *Lv* (Pirogov 2010a, 2012a), *T* (Smerechynska 2006, Fedorenko et al. 2007); **D:** *Khm* (Bielczyk et al. 2005); **E:** *Khe* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Naumovich & Darmostuk 2015, Darmostuk 2016f), *Lk* (Fedorenko et al. 2007, Nadyeina 2009), *M* (Boiko 2008, 2013, Naumovich & Darmostuk 2015), *O* (Khodosovtsev et al. 2016b); **G:** *ARC* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Khodosovtsev 1999, Khodosovtsev & Redchenko 2002, Fedorenko et al. 2007).
- M. hospitans* Stizenb – on *Bacidia fraxinea*. **B:** *Zak* (Kukwa 2000, Kondratyuk et al. 2003); **G:** *ARC* (Khodosovtsev 2000).
- M. pygmaea* (Körb.) D. Hawksw. – on *Acarospora cervina*, *Arthonia lapidicola*, *Bellemeria cupreoatra*, *Candelariella* sp., *Lobothallia alphoplaca*, *Rufoplaca arenaria*. **B:** *I* (Kondratyuk 2012); **C:** *T* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Smerechynska 2006, Fedorenko et al. 2007), *Zh* (Kapetz 2017); **D:** *Khm* (Bielczyk et al. 2005), *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Dn* (Naumovich & Darmostuk 2015), *Khe* (Kondratyuk & Khodosovtsev 1997), *Lk* (Fedorenko et al. 2007, Nadyeina 2009, Rusina et al. 2010), *M* (Boiko 2013), *Zap* (Khodosovtsev & Zavyalova 2008a); **G:** *ARC* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Khodosovtsev 1999, Fedorenko et al. 2007).
- M. ventosicola* (Mudd) D. Hawksw. – on *Rhizocarpon geographicum*. **B:** *I* (Khodosovtsev et al. 2016c), *Zak* (Nadyeina & Halıcı 2011); **E:** *Zap* (Nadyeina & Halıcı 2011).
- Nectriopsis lecanodes* (Ces.) Diederich & Schroers (= *Nectria lecanodes* (Ces.) Fr.) – on *Peltigera canina* and *P. horizontalis*. **C:** *Lv* (Pirogov 2012a), unspecified location (Morochkovskiy et al. 1969, Kondratyuk et al. 1999).
- N. rubefaciens* (Ellis & Everh.) M.S. Cole & D. Hawksw. – on *Parmelia sulcata*. **C:** *Lv* (Pirogov 2011, 2012a); **E:** *Khe* (Khodosovtsev & Darmostuk 2017c).
- Norrlinia medoborensis* S. Kondr. – on *Peltigera rufescens* and *P. praetextata*. **C:** *T* (Kondratyuk & Galloway 1995, Kondratyuk et al. 1999, Smerechynska 2006).
- Opegrapha centrifuga* A. Massal. – on *Verrucaria nigrescens*. **E:** *Khe* (Gavrylenko 2012), *O* (Khodosovtsev et al. 2016b).
- O. parasitica* (A. Massal.) H. Olivier – on *Leproplaca cirrochroa*. **G:** *ARC* (Khodosovtsev 2006c).
- O. physciaria* (Nyl.) D. Hawksw. & Coppins (= *Celidium varium* (Tul.) Körb.) – on *Physcia adscendens*, *Xanthoria parietina*. **C:** *Lv* (Kondratyuk & Khodosovtsev 1997, Kondratyuk & al. 1999, Pirogov 2012a); **D:** *Kha* (Chernov 1895, Kondratyuk et al. 1999 as *Arthonia molendoi*); **E:** *Khe* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Khodosovtsev & Khodosovtseva 2014) **G:** *ARC* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999).
- O. pulvinata* Rehm ap Lojka – on *Dermatocarpon miniatum*. **B:** *Zak* (Kondratyuk et al. 1999, 2003).
- O. rupestris* Pers. – on *Pyrenodesmia variabilis*, *Verrucaria* sp. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Zh* (Fedorenko et al. 2006); **D:** *Khm* (Bielczyk et al. 2005); **E:** *O* (Khodosovtsev et al. 2016b); **G:** *ARC* (Khodosovtsev & Bogdan 2005, Khodosovtsev 2006d).

- O. verrucariae* Coppins, S. Y. Kondr. & Etayo – on *Verrucaria* sp. **G:** ARC (Kondratyuk et al. 2014).
- Paranectria oropensis* (Cesati in Rabenh.) D. Hawksw. & Piroz. – on *Lecanora carpinea*. **B:** *I* (Khodosovtsev et al. 2016c), *Zak* (Coppins et al. 1998, Kondratyuk et al. 1999, 2003).
- Phacographa zwackhii* (A. Massal. Ex Zwackh.) Hafellner – on *Phlyctis argena*. **G:** ARC (Khodosovtsev et al. 2013b).
- Phaeospora lecanorae* Eitner – on *Lecanora dispersa*. **G:** ARC (Khodosovtsev et al. 2007).
- P. rimosicola* (Leight. ex Mudd) Hepp ex Stein – on *Rhizocarpon petraeum*. **B:** *Zak* (Pirogov & Sharavara 2012).
- Phoma lobariae* Etayo & Diederich – on *Lobaria pulmonaria*. **B:** *Zak* (Kondratyuk et al. 2003).
- P. pisutii* S.Y. Kondr., Lackovičová, Lisická & Guttová – on *Xanthoria parietina*. **B:** *I* (Kondratyuk 2012).
- Plectocarpon lichenum* (Sommerf.) D. Hawksw. – on *Lobaria pulmonaria*. **G:** ARC (Khodosovtsev et al. 2013b).
- Pleospora xanthoriae* Khodos. & Darmostuk – on *Xanthoria parietina*. **E:** *Khe* (Khodosovtsev & Darmostuk 2016b).
- Polycoccum aksoyi* Halıcı & V. Atienza – on *Aspicilia* sp. **E:** *Dn* (Darmostuk & Golovenko 2016).
- P. marmoratum* (Krempelh.) D. Hawksw. (= *Microthelia marmorata* (Kremp.) Hepp) – on *Bagliettoa* sp. **E:** *Khe* (Gavrylenko & Khodosovtsev 2009); **G:** ARC (Kopachevskaya 1986, Kondratyuk et al. 1999).
- P. microcarpum* Diederich & Etayo – on *Cladonia* sp. **B:** *Zak* (Flakus et al. 2008).
- P. microsticticum* (Leight. ex Mudd) Arnold – on *Acarospora fuscata*. **C:** *Zh* (Fedorenko et al. 2006, 2007).
- P. pulvinatum* (Eitner) R. Sant. (= *Polycoccum galligeum* Vezda) – on *Physcia caesia*. **C:** *T* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Fedorenko 2006); *Zh* (Fedorenko 2006, Fedorenko et al. 2007); **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *M* (Boiko 2013).
- P. teresum* Halıcı & K. Knudsen – on *Xanthoria calcicola*. **G:** ARC (Khodosovtsev 2011).
- Polysporina subfuscescens* (Nyl.) K. Knudsen & Kocourk. (= *Polysporina lapponica* auct.) – on *Acarospora*, *Buellia*, *Caloplaca* and *Candelariella*. **C:** *Zh* (Kapetz et al. 2015, Kapetz 2017); **C:** *Zap* (Khodosovtsev & Zavyalova 2008b).
- Pronectria caloplacae* Khodos., J. Vondrák & A. Naumovich – on *Flavoplaca austrocitrina*. **E:** *Khe* (Khodosovtsev et al. 2012).
- P. casaresii* Etayo – on *Evernia prunastri*. **E:** *Khe* (Khodosovtsev & Darmostuk 2017c).
- P. cf. dillmaniae* Zhurb. – on *Placidium squamulosum*. **E:** *Khe* (Khodosovtsev & Darmostuk 2017c).
- P. diplococca* Kocourk., Khodos., Naumovich, Vondrák & Motiej. – on *Blennothallia crispa*. **D:** *P* (Khodosovtsev & Darmostuk 2017c); **E:** *Khe* (Khodosovtsev et al. 2012, Khodosovtsev 2015).
- P. robergei* (Mont. & Desmaz.) Lowen (= *Nectria lichenicola* (Ces.) Sacc.) – on *Peltigera canina*, *P. didactyla*, *Cladonia* sp. **C:** *Lv* (Pirogov 2012a), unspecified location (Morochkovskiy et al. 1969, Kondratyuk et al. 1999).
- P. fissuriproidens* Etayo – on *Lobaria pulmonaria*. **B:** *Zak* (Kondratyuk et al. 2003).
- P. oligospora* Etayo – on *Punctelia* sp. **B:** *Zak* (Kondratyuk et al. 2003).
- Psammia stipitata* D. Hawksw. – on algae crust on wood. **B:** *I* (Khodosovtsev et al. 2016b, c).
- Pyrenidium actinellum* Nyl. – on *Aspicilia cinerea*, *Cladonia chlorophaea*. **B:** *Zak* (Pirogov 2014); **C:** *T* (Kondratyuk et al. 1999); **E:** *Dn* (Naumovich 2009a, b, Naumovich & Darmostuk 2015).
- Pyrenochaeta xanthoriae* Diederich – on *Xanthoria parietina*. **C:** *Zh* (Kapetz 2017); **E:** *Khe* (Khodosovtsev 2010, 2012), *M* (Darmostuk 2016d).
- Refractohilum intermedium* Cl. Roux & Etayo – on *Pachyphiale arbuti* and *P. carneola*. **C:** *S* (Khodosovtsev & Darmostuk 2017a); **E:** *Khe* (Khodosovtsev & Darmostuk 2017a); **G:** ARC (Khodosovtsev & Darmostuk 2017a).

- Reichlingia leopoldii* Diederich & Scheidegger – on *Lobaria pulmonaria*. **B:** *Zak* (Coppins et al. 1998; Kondratyuk et al. 1999, 2003).
- Roselliniella cladoniae* (Anzi) Matzer & Hafellner – on *Cladonia* sp. **D:** *Khm* (Bielczyk et al. 2005).
- R. frustulosae* (Vouaux) R. Sant. – on *Lecanora agropholis*. **G:** *ARC* (Hafellner 1985).
- Sagediopsis barbata* (Th. Fr.) R. Sant. & Triebel – on *Porpidia* sp. **B:** *Zak* (Servít 1936, Coppins et al. 1998, Kondratyuk et al. 1999, 2003).
- Sarcopyrenia cylindrospora* (P. Crouan & H. Crouan) M.B. Aguirre – on *Aspicilia* sp. **E:** *Zap* (Khodosovtsev & Zavyalova 2008b).
- Sarocladium strictum* (W. Gams) Summ. (= *Acremonium strictum* W. Gams) – on *Physcia stellaris*. **B:** *Zak* (Hawksworth 1992, Kondratyuk et al. 1999, 2003).
- Sclerococcum griseisporodochium* Etayo – on unknown lichen. **B:** *Zak* (Vondrák et al. 2010).
- S. sphaerale* (Ach.) Fr. – on *Pertusaria* sp. **C:** *Zh* (Kapetz 2016); **E:** *Zap* (Kondratyuk et al. 1999).
- Scutula epiblastematica* (Wallr.) Rehm – on *Peltigera rufescens*. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Khm* (Kondratyuk & Kolomiyets 1997), *Lv* (Pirogov 2012a), *T* (Kondratyuk et al. 1999, Smerechynska 2006).
- S. tuberculosa* (Th. Fr.) Rehm – on *Peltigera rufescens*. **C:** *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006).
- Skyttea acrocordiae* Diederich – on *Acrocordia* sp. **B:** *Zak* (Kondratyuk et al. 2003).
- Sphaerellothecium aculeatae* Khodos., Gavrylenko & Klymenko – on *Cetraria aculeata*. **E:** *Khe* (Khodosovtsev et al. 2016e).
- S. parmeliae* Diederich & Etayo – on *Parmelia saxatilis*. **B:** *I* (Khodosovtsev et al. 2016c); **G:** *ARC* (Khodosovtsev 2013).
- S. parietinarium* (Linds.) Hafellner & V. John (= *Endococcus parietinarius* (Linds.) D. Hawksw.) – on *Xanthoria parietina*. **C:** *Lv* (Pirogov 2012a), *Vo* (Pirogov 2013); **G:** *ARC* (Kondratyuk & al. 1999).
- S. propinquellum* (Nyl.) Cl. Roux & Triebel – on *Lecanora* sp. (Subfusca group). **C:** *Zh* (Kapetz 2017); **G:** *ARC* (Khodosovtsev 2013).
- Sphinctrina anglica* Nyl. – on *Prototarmelia* sp. **B:** *Cvi* (Makarevich et al. 1982, Kondratyuk et al. 1999), *Zak* (Makarevich 1955, Kondratyuk et al. 2003).
- S. tubiformis* A. Massal. – on *Pertusaria* sp. **G:** *ARC* (Coppins et al. 2001, Khodosovtsev 2003).
- S. turbinata* (Pers.) de Not. – on *Pertusaria* sp. **B:** *Cvi* (Kondratyuk et al. 1999), *Zak* (Kondratyuk et al. 1999, 2003, Pirogov et al. 2015); **C:** *Ki* (Kondratyuk et al. 1999); *Zh* (Kondratyuk et al. 1999, Fedorenko et al. 2006); **D:** *Chy* (Kondratyuk et al. 1999); **G:** *ARC* (Kopachevskaya 1986, Kondratyuk et al. 1999, Khodosovtsev & Bogdan 2005, Khodosovtsev et al. 2013b).
- Stigidium clauzadei* Cl. Roux & Nav.–Ros. – on *Verrucaria viridula*. **E:** *Khe* (Khodosovtsev & Darmostuk 2016a).
- S. congestum* (Körb.) Triebel – on *Lecanora chlarothera*. **E:** *M* (Naumovich & Darmostuk 2015); **G:** *ARC* (Khodosovtsev et al. 2013b).
- S. conspurcans* (Th. Fr.) Triebel & R. Sant. – on *Psora testacea*. **G:** *ARC* (Kondratyuk et al. 1999).
- S. glebarum* (Arnold) Hafellner – on *Toninia physaroides*. **E:** *M* (Boiko 2008, 2013, Boiko & Khodosovtsev 2011); *O* (Khodosovtsev et al. 2016b).
- S. gyrophorarum* (Arnold) D. Hawksw. – on *Umbilicaria cylindrica*. **B:** *I* (Darmostuk & Gavrylenko 2016), *Zak* (Darmostuk & Gavrylenko 2016).
- S. fuscatae* (Arnold) R. Sant. – on *Acarospora fuscata*. **B:** *I* (Khodosovtsev et al. 2016c); **C:** *Zh* (Fedorenko 2006, Fedorenko et al. 2006, Kapetz 2017); **E:** *M* (Mikhailyuk et al. 2011).
- S. lichenum* (Arnold) Triebel & P. Scholz (= *Pharcidia lichenum* Arnold) – on *Verrucaria* sp. **C:** unspecified location (Morochkovskiy et al. 1969, Kondratyuk et al. 1999 as *Stigidium dispersum* (Lahm ex Korb.) D. Hawksw.).
- S. microspilum* (Körb.) D. Hawksw. (= *Arthopyrenia microspila* Körb.) – on *Graphis scripta*. **B:** *Zak* (Hawksworth 1992, Coppins et al. 1998, Kondratyuk et al. 1999, 2003); **C:** *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006).

- S. mycobilimbiae* Cl. Roux, Triebel & Etayo – on *Mycobilimbia sabuletorum*. **E:** *O* (Khodosovtsev et al. 2016b).
- S. peltideae* (Vainio) R. Sant. – on *Peltigera* sp. **B:** *Zak* (Miadlikowska 1996, Kondratyuk et al. 1999, 2003).
- S. pumilum* (Lettau) Matzer & Hafellner – on *Physcia caesia*. **C:** *Zh* (Fedorenko et al. 2006, 2007).
- S. rouxianum* Calatayud & Triebel – on *Acarospora cervina*. **C:** *Khm* (Bielczyk et al. 2005); **E:** *Khe* (Naumovich 2009a); **G:** *ARC* (Khodosovtsev et al. 2007).
- S. tabacinae* (Arnold) Triebel – on *Toninia sedifolia*. **C:** *Khm* (Bielczyk et al. 2005).
- S. squamariae* (B. de Lesd.) Cl. Roux & Triebel – on *Prothoparmeliopsis muralis*. **B:** *Zak* (Pirogov et al. 2015); **C:** *Lv* (Pirogov 2012a); **E:** *M* (Khodosovtsev & Darmostuk 2017c).
- S. xanthoparmeliarum* Hafellner – on *Xanthoparmelia conspersa*. **C:** *Zh* (Kapetz 2017); **D:** *Kid* (Khodosovtsev & Darmostuk 2017b); **E:** *Dn* (Naumovich & Darmostuk 2015).
- Taeniolella beschiana* Diederich – on *Cladonia* sp. **C:** *Zh* (Kapetz 2017).
- T. delicata* M.S. Christ. & D. Hawksw. – on *Myriolecis crenulata*. **C:** *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006).
- T. friesii* (Hepp) Hafellner – on *Strigula stigmatella*. **B:** *Zak* (Kondratyuk et al. 2003).
- T. phaeophysciae* D. Hawksw. – on *Phaeophyscia orbicularis*. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Lv* (Pirogov & Khodosovtsev 2013), *R* (Pirogov & Khodosovtsev 2013), *Zh* (Kapetz 2017); **E:** *Khe* (Pirogov & Khodosovtsev 2013, Khodosovtsev & Khodosovtseva 2014, 2015); **G:** *ARC* (Pirogov & Khodosovtsev 2013).
- T. punctata* M. S. Christ. & D. Hawksw. – on *Graphis scripta*. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Khm* (Bielczyk et al. 2005), *Zh* (Kapetz et al. 2015, Kapetz 2017).
- Telogalla olivieri* (Vouaux) Nik. Hoffm. & Hafellner (= *Guignardia olivieri* (Vouaux) Olivier) – on *Xanthoria parietina*. **B:** *I* (Navrotskaya et al. 1996, Kondratyuk 2012), *Zak* (Kondratyuk et al. 2003); **E:** *Khe* (Navrotskaya et al. 1996).
- Toninia talparum* Timdal – on *Lecania erysibe* and *L. inundata*. **D:** *Khm* (Zelenko 2005).
- T. subfuscae* (Arnold) Timdal – on *Verrucaria nigrescens*. **E:** *O* (Khodosovtsev et al. 2016b).
- Tremella cladoniae* Diederich & M.S. Christ. – on *Cladonia* sp. **B:** *Zak* (Motiejūnaitė et al. 1999, Kondratyuk et al. 1999, 2003).
- T. hypogymniae* Diederich & M.S. Christ. – on *Hypogymnia physodes*. **B:** *Zak* (Motiejūnaitė et al. 1999, Kondratyuk et al. 2003); **G:** *ARC* (Khodosovtsev et al. 2013b).
- T. lichenicola* Diederich – on *Mycoblastus fucatus*. **B:** *Zak* (Coppins et al. 1998, Kondratyuk et al. 1999, 2003, Vondrák et al. 2010).
- T. phaeophysciae* Diederich & M.S. Christ. – on *Phaeophyscia orbicularis*. **B:** *I* (Kondratyuk 2012); **E:** *M* (Khodosovtsev & Darmostuk 2017c).
- Trichoconis hafellneri* U. Braun, Khodos., Darmostuk & Diederich – on *Athallia pyracea* and *Xanthoria parietina*. **D:** *P* (Braun et al. 2016); **E:** *Khe* (Braun et al. 2016).
- Trichonectria anisospora* (Lowen) van der Boom & Diederich – on *Hypogymnia physodes*. **C:** *Lv* (Pirogov 2012b).
- T. hirta* (A. Bloxam) Petch. – on *Scoliciosporum chlorococcum*. **B:** *Zak* (Kondratyuk et al. 2003); **C:** *Lv* (Pirogov 2010b, 2012a), *Zh* (Kondratyuk et al. 1999, Fedorenko & al. 2007, Kapetz 2017).
- Unguiculariopsis thallophila* (P. Karst.) W.Y. Zhuang – on *Prothoparmeliopsis muralis*. **E:** *Dn* (Darmostuk & Naumovich 2016).
- Vouauxiella lichenicola* (Linds.) Petr. & Syd. – on *Lecanora chlorotera*. **B:** *Zak* (Kukwa 2000, Pirogov & Sharavara 2013); **C:** *Vo* (Pirogov & Sharavara 2013).
- V. verrucosa* (Vouaux) Petr. & Syd. – on *Lecanora argentata*. **G:** *ARC* (Khodosovtsev & Darmostuk 2016a).
- Weddellomyces heterochrous* Nav.-Ros. & Cl. Roux – on *Aspicilia* sp. **E:** *Lk* (Nadyeina & Halıcı 2012).
- Xanthoriicola physciae* (Kalchbr.) D. Hawksw. – on *Xanthoria parietina*. **B:** *I* (Kondratyuk 2012), *Zak* (Coppins et al. 1998, Kondratyuk et al. 2003); **C:** *Khm* (Bielczyk et al. 2005), *Lv*

(Pirogov 2012a, Pirogov & Shovhan 2015), *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006), *Vo* (Pirogov 2013), *Zh* (Fedorenko et al. 2006, Kapetz 2017); **D:** *Kha* (Gromakova 2014); **E:** *Khe* (Khodosovtsev 2012, Khodosovtsev & Khodosovtseva 2014, 2015, Naumovich & Darmostuk 2015, Darmostuk 2016a, e, f), *M* (Boiko 2013, Darmostuk 2016d), *Zap* (Zavyalova 2010).

Xenonectriella leptaleae (J. Steiner) Rossmann & Lowen – on *Phaeophyscia orbicularis* and *Physcia stellaris*. **C:** *Lv* (Pirogov 2012b), *Zh* (Kapetz 2017); *S* (Khodosovtsev & Darmostuk 2017c); **E:** *M* (Khodosovtsev & Darmostuk 2017c).

Zwackhiomyces berengerianus (Arnold) Grube & Triebel – on *Mycobilimbia sabuletorum*. **B:** *Zak* (Khodosovtsev & Darmostuk 2016a); **E:** *O* (Khodosovtsev & Darmostuk 2016a).

Z. calcariae (Flagey) Hafellner & Nik. Hoffm. – on *Circinaria calcarea*. **E:** *M* (Boiko 2008, 2013, Boiko & Khodosovtsev 2011).

Z. cervinae Calat., Triebel & Pérez-Ortega – on *Acarospora cervina*. **G:** *ARC* (Khodosovtsev & Klymenko 2015).

Z. coepulonus (Norman) Grube & R. Sant. – on *Xanthocarpia crenulatella*. **C:** *Khm* (Kondratyuk & Kolomiyets 1997), *T* (Kondratyuk & Kolomiyets 1997, Kondratyuk et al. 1999, Smerechynska 2006), *Zh* (Kondratyuk & Kolomiyets 1997); **E:** *Do* (Nadyeina 2009), *Khe* (Gavrylenko & Khodosovtsev 2009), *Lk* (Nadyeina 2009), *M* (Khodosovtsev et al. 2007, Boiko 2013); **G:** *ARC* (Khodosovtsev et al. 2007).

Z. diderichii D. Hawksw. & Ittur. – on *Cladonia rangiformis*. **E:** *Khe* (Khodosovtsev 2011).

Z. dispersus (J. Lahm et Körb.) Triebel et Grube – on *Protoblastenia rupestris*. **G:** *ARC* (Kondratyuk et al. 1999, Khodosovtsev 2011).

Z. lecanorae (Stein) Nik. Hoffman & Hafellner – on *Myriolecis semipallida*, *Prothoparmeliopsis muralis*. **C:** *Khm* (Bielczyk et al. 2005); **E:** *Khe* (Gavrylenko 2014, Naumovich & Darmostuk 2015, Darmostuk 2016b), *M* (Naumovich & Darmostuk 2015), *O* (Khodosovtsev et al. 2016b).

Z. polischukii Darmostuk & Khodos. – on *Bacidia fraxinea* and *B. rubella*. **C:** *Khm* (Khodosovtsev & Darmostuk 2017c); **G:** *ARC* (Khodosovtsev & Darmostuk 2017c).

Z. sphinctrinoides (Zwackh) Grube & Hafellner – on *Lecanora campestris*. **G:** *ARC* (Kondratyuk et al. 1999).

Dubious records

Lichenocodium lichenicola (P. Karsten) Petrak & H. Sydow – on *Hypogymnia physodes* and *Flavoparmelia caperata*. **C:** *Ki* (Gizhytska 1929 as *Coniothyrium lichenicola* P. Karst., Kondratyuk et al. 1999). The record probably belongs to a different species because *L. lichenicola* only occurs on *Physcia* species (Lawrey et al. 2011).

Phoma denigricans Hafellner – on *Protoparmelia* sp. **E:** *Zap* (Kondratyuk et al. 1999). Respective specimen (KHER 890) is characterized by immersed black subspherical pycnidia, 80–100 µm diam, ampulliform conidiogenous cells, 4–5.5 × 2.5–4 µm, and ellipsoid conidia (4.5–)5.0–6.25–7.5(–9.5) × (2.25–)2.75–3.25–3.75(–4.25) µm [n=30], l/b ratio (1.5–)2.0–2.4–2.8(–3.1). The specimen is morphologically similar to *Didymocyrtis foliaceiphila* (Diederich, Kocourk. & Etayo) Ertz & Diederich (Ertz et al. 2015).

Polycoccum bryonthae (Arnold) Vězda – on *Lecanora epibryon*. **G:** *ARC* (Kondratyuk et al. 1999). This specimen needs future confirmation, because the host, *Lecanora epibryon*, is not known from Ukraine (Oxner 2010).

Stigmatidium schaeferi (A. Massal.) Trevis. – on *Lecanora* sp. **E:** *M* (Kondratyuk & Khodosovtsev 1997, Kondratyuk et al. 1999, Boiko 2013); **G:** *ARC* (Redchenko 2001, Khodosovtsev & Redchenko 2002). Records from Ukraine need revision, because *S. schaeferi* is lichenicolous only on *Solorina* spp. (Roux & Triebel 1994).

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