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LICHENS, LICHENICOLOUS AND ALLIED FUNGI FOUND IN ASVEJA REGIONAL PARK (LITHUANIA)

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Abstract

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The paper reports the results of lichenological investigations in Asveja Regional Park (eastern Lithuania). A large part of the study was performed during the joint 18th Symposium of the Baltic Mycologists and Lichenologists (BMLS) and Nordic Lichen Society (Nordisk Lichenologisk Förening, NLF) meeting on 19–23

September 2011. A list of 259 species is presented. Of these, 30 species are new to Lithuania. *Arthonia helvola*, *Bacidina sulphurella*, *Candelariella lutella*, *Catillaria croatica*, *Cladonia conista*, *Gyalecta derivata*, *Lecanora quercicola, Leptosphaeria ramalinae*, *Strigula jamesii*, *Trichonectria rubefaciens*, *Verrucaria banatica*, *V. boblensis*, *V. christiansenii*, *V. illinoisensis*, *V. inornata*, *V. nigrofusca*, *V. trabicola*, *Zwackhiomyces diederichii* were recorded for the first time in the Baltic countries. New lichens to Lithuania are as follows: *Bacidia incompta*, *Caloplaca crenulatella*, *C. pyracea*, *Catinaria atropurpurea*, *Lecanora populicola*, *L. semipallida*, *Mycobilimbia epixanthoides*, *Ramalina dilacerata*, *Verrucaria inaspecta*, and new lichenicolous fungi are: *Cladosporium licheniphilum*, *Stigmidium microspilum*, *Xenonectriella leptalea*. Eighteen species included in the Lithuanian Red Data Book were recorded, which is the highest number known for any studied area in Lithuania.

Keywords: lichenized fungi, lichenicolous fungi, protected areas, Lithuania.

INTRODUCTION

During the last decade, inventories on lichen flora in the protected areas of Lithuania have gained momentum and at present the lichens are listed more or less comprehensively for quite a number of various protected areas (Motiejūnaitė, 2000, 2007b, 2009, 2011). Asveja Regional Park has so far merited only scattered notes on some records of lichens new to the country (Motiejūnaitė et al., 2005, 2007, 2011; Motiejūnaitė & Andersson, 2003) or distribution data on some Red Data Book (RDB) species (Rašomavičius, 2007). This paper is an attempt to enumerate the known lichens and allied fungi of the park, although it does not purport to be a full inventory. The basis for the species list was laid during the field trips of the 18th Symposium of the Baltic Mycologists and Lichenologists (BMLS) and Nordic Lichen Society (NLF) meeting held in Dubingiai on 19–23 September 2011. As all concerted field trips, these were very fruitful regarding new records to the country as well as in the many new records of rare and threatened species. Additional data were obtained from the collections and notes made during cursory visits to several localities in the park (listed below) made by D. Stončius and J. Motiejūnaitė in the period between 2002 and 2011.

STUDY AREA AND LOCALITIES

Asveja Regional Park was founded in 1992 with the aim to protect the landscape of the Asveja lakes as well as other natural and cultural objects. The total area of the park is 12208 ha. It occupies some parts of Molėtai, Vilnius and Švenčionys administrative districts. Forests cover approx. 56 %, water bodies approx. 16 %, mires approx. 2 %, and agricultural land and villages approx. 26 % of the park area. The largest settlement is Dubingiai with a population of 280 people, the total number of people dwelling in the territory is 1100. One strict nature reserve, four landscape, one botanical, two hydrographical, one telmological and one urbanistic sanctuaries were established for special protection of the park values. Most part of the territory is *Natura 2000* area. Lake Asveja complex is an important area for habitat and bird protection. Human influence is not very intensive; the main activities in the park and surrounding areas are agriculture and recreation (Baškytė et al., 2006; Asvejos regioninis parkas).

The core feature of the park landscape is one of the longest ravine lakes in Lithuania – Lake Asveja with its steep coastal slopes. A number of streams have preserved their natural watercourses: Žverna, Gracinė, Dubinga, Baluoša and especially Jurkiškis with numerous stones and boulders in its bed. Several valuable mire complexes are found in the park, the most valuable one being the Purviniškiai wetland complex. The forests of the park make up the southern part of one of the largest Lithuanian woodland complexes – Labanoras-Pabradė Forest. Most of the stands are medium-aged, developed in the former agricultural lands. More than half of the forested areas are pine stands, but larger fragments of old oak and other hardwood stands are found in Šakimas peninsula and in the environs of Lake Baluošas. Small old deciduous forest fragments and solitary ancient trees are found in the whole park area and the largest old-growth black alder stands are found in Purviniškiai wetland complex.

Four habitat types included into Annex I of European Union Habitat Directive are found in the park: 7110 *Active raised bogs*; 3160 *Natural dystrophic lakes and ponds*; 9020 *Fennoscandian hemiboreal natural old broadleaved deciduous forests rich in epiphytes*; 9070 *Fennoscandian wooded pastures* and 91D0 *Bog woodland*. A number of plants, animals and fungi protected in Europe or included in the Lithuanian RDB are found in the park territory (Baškytė et al., 2006; Asvejos regioninis parkas).

Collection localities

Localities 1–5 are the collection sites visited by the BMLS and NLF participants (Adamonytė & Motiejūnaitė, 2011) and the rest of the localities were visited and surveyed by D. Stončius and some also by J. Motiejūnaitė in 2002–2011 (Fig. 1).

RESULTS AND DISCUSSION

The list comprises a total of 259 lichenized, lichenicolous and allied fungi. Thirty species are new to Lithuania, of which 19 were also recorded for the first time in the Baltic countries, bringing the total number of known species up to 714 for Lithuania. The number of lichens and allied fungi found in Asveja Regional Park is very high, but it is difficult to compare it with other protected areas due to differences in size and collection effort. The highest (so far) number of species (273) was reported for Žemaitija National Park (Motiejūnaitė, 2007b), which is, however, almost two times larger in area (21720 ha) and the collecting effort was more intensive as a larger number of localities were visited. Most of the other protected areas that have undergone targeted lichenological investigations are smaller and their

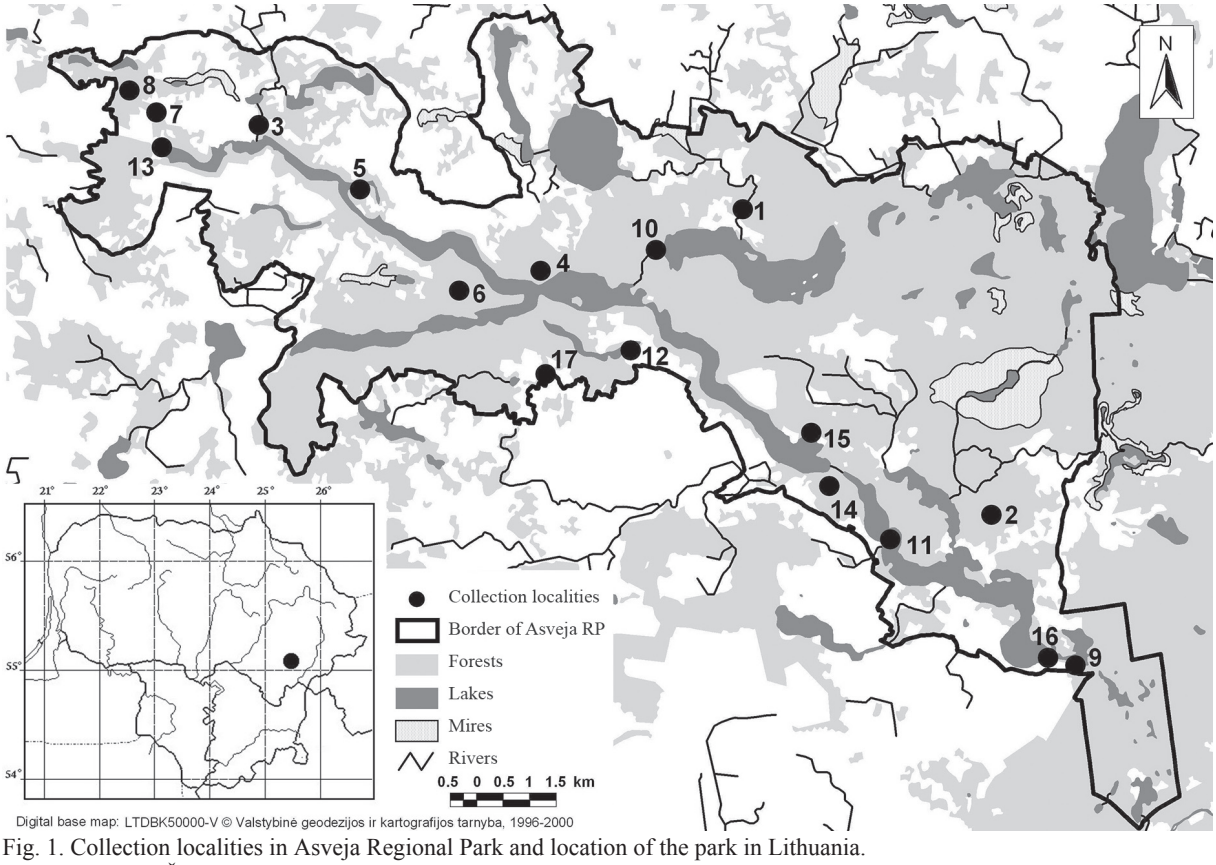

Fig. 1. Collection localities in Asveja Regional Park and location of the park in Lithuania.
1. Valley of the Žverna rivulet. 2. Blužnėnai Forest. 3. Valley of the Jurkiškis rivulet. 4. Girutiškis village, surroundings of the recreation centre 'Dubingiai'. 5. Dubingiai village, Dubingiai castle mound. 6. Šakimas Forest. 7. Adomaitiškiai village. 8. Small woodland south of Lake Delva. 9. Southern and south-eastern slopes of Lake Giliaušis. 10. Woodland south-west of the Baluoša rivulet headwater. 11. Asveja Lake island close to Danilava village. 12. Eastern coast of LakeViranglis. 13. Miežionys Forest, western slopes of Lake Asveja. 14. Woodland in Sužionys forest district, Žingiai Forest. 15. Northern slope of Lake Asveja, close to Karpakėlis village. 16. Eastern slope of Lake Asveja. 17. Woodland approx. 0.5 km east of Lake Liminėlis.

species lists are shorter: in Kamanos Strict Nature Reserve (3935 ha) – 171 species, Verkiai Regional Park (2673 ha) – 172 species and in Viešvilė Strict Nature Reserve (3216 ha) – 170 species, respectively (Motiejūnaitė, 2000, 2009, 2011).

The value of the lichen flora may be judged by the number of RDB species, which is extremely high for Asveja Regional Park – 18 species is the highest number known for any studied area in Lithuania. Besides, a number of RDB species were recorded in more than one locality and a number of them have quite viable populations such as *Chaenotheca chlorella*, *C. cinerea*, *C. gracilenta*, *Cladonia caespiticia*, *Leptogium lichenoides*, *Lobaria pulmonaria* and *Sclerophora coniophaea*. The RDB species *Chaenotheca hispidula*, which had been considered extinct until recently, was found in two localities of Asveja Regional Park.

List of species

New species to Lithuania are typed in bold face, lichenicolous fungi are marked with #, non-lichenized saprobic fungi are marked with +, RDB species are underlined. Nomenclature follows Mycobank database (http://www.mycobank.org) and the literature cited therein. Newly recorded species are supplied with the collectors name and herbarium in which the specimens are deposited and notes on morphology, chemistry and distribution (mainly in Europe). Nationally rare (10 or less localities known) species and the more frequent lichens that require thin layer chromatography for identification (methods after Orange et al. (2001)) are supplied with the collectors name and herbarium in which the specimens are deposited. Abbreviations of collectors: AS = Ave Suija, AT = Arne Thell, DH = Dmitry Himelbrant, DK = Dariusz Kubiak, DS = Darius Stončius, EK = Ekaterina Kuznetsova, EL = Ede Leppik, EVK = Eugeny Korchikov, FH = Filip Högnabba, IP = Ingrida Prigodina Lukošienė, IS = Irina Stepanchikova, JM = Jurga Motiejūnaitė, JP = Juha Pykälä, LK = Ludmila Konoreva, MK = Martin Kukwa, MW = Martin Westberg, PC = Paweł Czarnota, PL = Piret Lõhmus, TB = Toni Berglund. Abbreviations of herbaria: BILAS = Institute of Botany, Vilnius, Lithuania, GPN = Herbarium of Gorce National Park, Poland, GSU = F. Skorina Gomel State University, Belarus, H = Botanical Museum, University of Helsinki, Finland, LD = Botanical Museum of Lund University, Sweden, LE = V. L. Komarov Institute of Botany, Saint-Petersburg, Russia, LECB = Saint-Petersburg State University, Russia, OLTC = Herbarium of the Department of Mycology, Warmia and Mazury University in Olsztyn, Poland, S = Swedish Museum of Natural History, Stockholm, Sweden, SMR = Samara State University Herbarium, Russia, TU = Botanical and Mycological Museum, Natural History Museum of the University of Tartu, Estonia, UGDA = Herbarium of Gdańsk University, Poland, WI = Vilnius University, Lithuania, Herb. TB = Private herbarium of Toni Berglund.

Absconditella delutula (Nyl.) Coppins & H. Kilias – 2; on lignum of decorticated *Picea abies* logs, EK (LE).

Absconditella lignicola Vězda & Pišút – 1–3; on lignum of decorticated *Picea abies* logs, DH (LECB), DK (OLTC), IP (WI), LK (LE), PC (GPN).

Acarospora moenium (Vain.) Räsänen – 5; on concrete wall, JM (BILAS).

Acrocordia cavata (Ach.) R. C. Harris – 1; on trunk of *Acer platanoides*, IS (LECB).

Acrocordia gemmata (Ach.) A. Massal. – 1–3, 5–9; on trunks of various deciduous trees.

Agonimia allobata (Stizenb.) P. James – 1, 6; on trunks of *Quercus robur* and *Acer platanoides*, DS, JM (BILAS), PC (GPN).

Anaptychia ciliaris (L.) Körb. – 3, 4, 5, 7, 10; on trunks of various deciduous trees.

Amandinea punctata (Hoffm.) Coppins & Scheid. – 5, 11; on trunks of *Quercus robur*.

Anisomeridium polypori (M. B. Ellis & Everh.) M. E. Barr – 1, 2; on trunks of various deciduous trees.

Arthonia arthonioides (Ach.) A. L. Sm. – 1, 2, 6; on trunks of *Quercus robur*.

Arthonia byssacea (Weigel) Almq. – 1–3, 5, 6, 9, 12, 13, 14; on trunks of various deciduous trees.

Arthonia helvola (Nyl.) Nyl. – 2; on trunk of *Quercus robur*, IS (LECB). The species is characterized by having irregular maculiform orange-red apothecia up to 0.8 mm diam., turning red-violet in K, (2–)3-celled spores and *Trentepohlia* photobiont (Sundin & Tehler, 1998). It occurs in Central and Northern Europe (Switzerland, Germany, Slovakia,

Czech Republic, Sweden, Finland, NW Russia), apparently avoids Atlantic areas. Not recorded in any of the Baltic countries and NE Poland.

Arthonia radiata (Pers.) Ach. – 1, 9; on trunks of *Alnus glutinosa* and branches of *Corylus avellana*.

Arthonia ruana A. Massal. – 1–3; on trunks of various deciduous trees.

Arthonia spadicea Leight. – 1–3; on trunks of various deciduous trees.

Arthonia vinosa Leight. – 2, 6; on trunks of *Quercus robur*.

Arthopyrenia punctiformis A. Massal. – 3; on trunk of *Populus tremula*, DH (LECB).

Arthrorhaphis aeruginosa R. Sant. & Tønsberg – 2; on thalli of *Cladonia* spp. and on galls probably formed by *Tremella cladoniae*, JM (BILAS).

Arthrosporum populorum A. Massal. – 3; on trunk of *Populus tremula*, IS (LECB).

Athelia arachnoidea (Berk.) Jülich – 3; on thalli of corticolous *Bacidia* spp.

Bacidia arceutina (Ach.) Arnold – 2; on trunks of various deciduous trees.

Bacidia bagliettoana (A. Massal. & De Not.) Jatta – 3; on mosses on loamy soil on a road scarp.

Bacidia incompta (Borrer ex Hook.) Anzi – 1; on trunk of *Ulmus* sp., MW (S). This is a rare, but widespread species in Europe growing on the trunks of trees with basic bark (e.g. *Ulmus*). It is not surprising that it now has been recorded from Lithuania. See Smith et al. (2009) for a description of the species. *B. incompta* is known in Estonia and in NE Poland, in both countries not common. Not recorded in Latvia.

Bacidia naegelii (Hepp) Zahlbr. – 2; on twigs of *Malus domestica*.

Bacidia polychroa (Th. Fr.) Körb. – 2, 3, 5, 6, 8; on trunks of *Fraxinus excelsior*, *Acer platanoides*, *Populus tremula*.

Bacidia pycnidiata Czarnota & Coppins – 2, 14; on epiphytic bryophytes, DS (BILAS).

Bacidia rubella (Hoffm.) A. Massal. – 1–3, 5–10; on trunks of various deciduous trees.

Bacidia subincompta (Nyl.) Arnold – 1, 2, 3, 5; on trunks of various deciduous trees.

Bacidina chloroticula (Nyl.) Vězda & Poelt – 2; on old iron.

Bacidina inundata (Fr.) Vězda – 3; on siliceous boulders in a stream bed.

Bacidina sulphurella (Samp.) M. Hauck & V. Wirth – 1–3; on trunks of *Alnus glutinosa*, *Corylus avellana*, *Ulmus* sp., on lignum, DK (OLTC), PC (GPN). This recently resurrected species belongs to the group of *B. arnoldiana* and is distinguished mainly by the shape of conidia, which are curved or more or less straight, but always with at least one extremity strongly hooked (like a walking stick) and slightly enlarged at one end (Brand et al., 2009). Probably, a large part of *B. arnoldiana* s. l. records (epiphytic and lignicolous) in the Baltic region will prove to be *B. sulphurella*, which is apparently a widespread species. Recent epiphytic and epixylic records of *B. arnoldiana* agg. from Estonia were tentatively assigned to *B. sulphurella* (Suija et al., 2010a).

Bactrospora dryina (Ach.) A. Massal. – 1, 2; on *Quercus robur*, on bark of a deciduous tree stump, EL (TU), IP (WI).

Biatora chrysantha (Zahlbr.) Printzen – 1, 2; on epiphytic mosses on *Quercus robur*, DS (BILAS).

Biatora efflorescens (Hedl.) Räsänen – 1, 6; on trunks of *Corylus avellana* and *Ulmus* sp., DH (LECB), DK (OLTC), JM (BILAS).

Biatoridium monasteriense J. Lahm ex Körb. – 1, 5, 6; on trunks of *Ulmus* sp. and *Acer platanoides*.

Bilimbia sabuletorum (Schreb.) Arnold – 1–3, 6; on epiphytic mosses on deciduous trees and on mosses on stones in a stream bed.

Bryoria implexa (Hoffm.) Brodo & D. Hawksw. – 6; on branches of *Quercus robur*.

Bryoria subcana (Nyl. ex Stizenb.) Brodo & D. Hawksw. – 6; on branches of *Quercus robur*.

Buellia griseovirens (Turner & Borrer ex Sm.) Almb. – 1–3; on trunks of various deciduous trees.

Buellia schaereri De Not. – 6; on trunk of *Quercus robur*. ANT (GSU), DH, IS (LECB), DK (OLS), LK (LE), MW (S), PC (GPN).

Caeruleum heppii (Nägeli ex Körb.) K. Knudsen & L. Arcadia – 2, on small stones on a gravel road, MW (S).

Calicium adspersum Pers. – 1, 9; on *Quercus robur*.

Calicium glaucellum Ach. – 2, 6, 9, 16; on lignum.

Calicium salicinum Pers. – 2, 5, 6, 9; on lignum, on trunk of *Quercus robur*.

Calicium viride Pers. – 1, 5, 6; on trunks of *Quercus robur* and *Acer platanoides*.

Caloplaca cerina (Ehrh. ex Hedw.) Th. Fr. var. *cerina* – 3; on trunk of *Populus tremula*, MK (UGDA), PC (GPN).

Caloplaca crenulatella (Nyl.) H. Olivier – 5; on concrete wall, JP (H). This species is distinguished from other saxicolous *Caloplaca* spp. that are found on anthropogenic substrata by yellow thallus and long ascospores with thin septum and pointed apices. Known from Estonia and from NE Poland, but is rarely recorded in both countries. Not known from Latvia.

Caloplaca pyracea (Ach.) Zwackh – 3; on trunk of *Populus tremula*, MK (UGDA). The species belongs to the *Caloplaca holocarpa* group and is characterized by thallus consisting of greyish to pale orange low or slightly convex areoles, yellow-orange to orange apothecia, 0.5–1 mm in diam., often with thin thalline margin, 8-spored asci and spores measuring 10.0–15.0 × 5.5–8.0 µm with 3.8–5.5 µm wide septum (Arup, 2009). *Caloplaca pyracea* was once synonymised with *C. holocarpa* (Hoffm.) A. E. Wade, but the recent phylogenetic analysis has proved it to be a distinct species (Arup, 2009). It is probably common, but needs more investigations. *C. pyracea* has been previously recorded from Estonia (Trass, 1970), but in recent checklist (Randlane & Saag, 1999) it was included into *C. holocarpa*.

Candelariella efflorescens R. C. Harris & W. R. Buck – 3; on trunk of *Fraxinus excelsior*.

Candelariella lutella (Vain.) Räsänen – 2; on twigs of *Malus domestica*, MK (UGDA). This is a widely distributed, but overlooked lichen, probably with a circumpolar, mainly boreal distribution. It is known from northern Europe, North America and Asia and is usually found on branches of deciduous trees and shrubs typically on rough parts of the bark, e.g. at the base of small branches. The minute size and typical habit separates it from *C. vitellina* (Hoffm.) Müll. Arg. See Westberg (2007) for a description of the species. New to the Baltic countries.

Candelariella xanthostigma (Ach.) Lettau – 3; on trunks of *Fraxinus excelsior* and *Populus tremula*.

Catillaria chalybeia (Borrer) A. Massal. – 3, 16; on water-splashed siliceous stones, DS (BILAS).

Catillaria croatica Zahlbr. – 2, 3; on trunks of *Fraxinus excelsior*, *Alnus glutinosa*, *Corylus avellana*, PC (GPN). All specimens were sterile. This mostly sterile species is characterized by corticolous grayish to greenish, well-developed or almost immersed thallus with discrete rounded soralia, which may become crowded and appearing patchily leprose, pale green to slightly yellowish soredia and absence of secondary metabolites. Commonly sterile habit and absence of secondary substances makes the species difficult to distinguish from other greenish-sorediate sterile corticolous species without secondary chemistry, like *Mycobilimbia epixanthoides* and *Normandina acroglypta*. Differences from the first species are described by Hafellner et al. (2005), the second species is characterized by predominantly muscicolous habit and convex soralia that practically never coalesce or form larger sorediate patches. *C. croatica* is known from several countries, mainly in Central Europe, but most probably is more widespread, being overlooked or not distinguished from similar species, e. g. '*Biatora*' sp. referred in Motiejūnaitė (2007a) and Motiejūnaitė & Jucevičienė (2003, 2005) apparently is *C. croatica*. This is the first record of the species for Baltic countries.

Catillaria nigroclavata (Nyl.) Schuler – 3, 15; on trunks and branches of various deciduous trees.

Catinaria atropurpurea (Schaer.) Vězda & Poelt – 3; on lignum of decaying log, PC (GPN). This widespread in Europe species grows on bark of various trees, epiphytic mosses or lignum. *C. atropurpurea* is known in all Baltic countries as well as in NE Poland, NW Russia and Belarus, everywhere is confined to old-growth forests. For description of the species see Smith et al. (2009).

Cetraria sepincola (Ehrh.) Ach. – 3; on twigs of *Betula* sp.

Cetrelia olivetorum s. l. – 2, 6; on snag of *Alnus* sp., on branches of *Quercus robur*, *Acer platanoides*, AT (LD), JM (BILAS) (the specimens were not checked by TLC and, therefore, may include *Cetrelia olivetorum* (Nyl.) W. L. Culb. & C. F. Culb. and *Cetrelia monachorum* (Zahlbr.) W. L. Culb. & C. F. Culb. (Kukwa & Motiejūnaitė, 2012).

Chaenotheca brachypoda (Ach.) Tibell – 1–3, 5, 6, 12; on trunks of *Quercus robur* and *Acer platanoides*, on lignum.

Chaenotheca brunneola (Ach.) Müll. Arg. – 2; on trunk of *Quercus robur*, DK (OLTC).

Chaenotheca chlorella (Ach.) Müll. Arg. – 1–3, 5, 6; on trunks of *Quercus robur*, *Fraxinus excelsior*, *Betula* sp., *Alnus glutinosa*.

Chaenotheca chrysocephala (Turner ex Ach.) Th. Fr. – 1, 2, 15; on trunks of *Quercus robur*, *Pinus sylvestris*.

Chaenotheca cinerea (Pers.) Tibell – 3, 5; on trunk of *Fraxinus excelsior*, DS (BILAS), TB (not collected).

Chaenotheca ferruginea (Turner ex Sm.) Mig. – 1, 2, 6; on trunks of *Quercus robur* and *Picea abies*.

Chaenotheca furfuracea (L.) Tibell – 1, 2, 6; on roots of windthrows, on trunk of *Quercus robur*.

Chaenotheca gracilenta (Ach.) Mattsson & Middelb. – 1, 2; in hollows of *Alnus* spp. on the bank of the rivulet, *Ulmus* sp. and *Quercus robur* trunks, and *Alnus* sp. snags, on roots of fallen *Picea abies*, AT (LD), DH, IP (WI), JM (BILAS), LK (LE), PC (GPN), PL (TU), TB (not collected).

Chaenotheca hispidula (Ach.) Zahlbr. – 2, 3; on trunk of *Fraxinus excelsior*, on lignum, PC (GPN), TB (not collected).

Chaenotheca phaeocephala (Turner) Th. Fr. – 3, 5, 6; on trunks of *Acer platanoides* and *Quercus robur*.

Chaenotheca stemonea (Ach.) Müll. Arg. – 1, 2; on lignum, on trunks of *Quercus robur*, *Betula* sp., *Picea abies*.

Chaenotheca trichialis (Ach.) Th. Fr. – 1–3, 6, 9, 12; on trunks of various deciduous trees, on lignum, on old fruitbodies of polypores.

Chaenotheca xyloxena Nádv. – 2; on lignum.

\+ *Chaenothecopsis debilis* (Sm.) Tibell – 5; on lignum, JM (BILAS).

\+ *Chaenothecopsis pusilla* (Ach.) A. F. W. Schmidt – 1, 3, 6, 17; on lignum.

\+ *Chaenothecopsis pusiola* (Ach.) Vain. – 2; on lignum of living *Quercus robur*.

\+ *Chaenothecopsis rubescens* Vain. – 2, 6; on trunk of *Quercus robur*.

\+ *Chaenothecopsis savonica* (Räsänen) Tibell – 1, 2; on trunks of *Quercus robur* and *Alnus glutinosa*, on lignum.

Chrysothrix candelaris (L.) J. R. Laundon – 1, 2, 5, 6, 9; on trunks of *Quercus robur* and *Acer platanoides*.

Cladonia arbuscula subsp. *mitis* (Sandst.) Ruoss – 2, 3; on sandy soil in an old sand pit and in dry meadow, on lignum in young, planted stand.

Cladonia caespiticia (Pers.) Flörke – 2, 3; on a fallen decaying tree trunk, on soil and on base of *Betula pendula*, JM (BILAS), JP (H).

Cladonia cariosa (Ach.) Spreng. – 3; on sandy soil in a dry meadow.

Cladonia cenotea (Ach.) Schaer. – 2; on lignum and various tree trunk bases.

Cladonia coniocraea (Flörke) Spreng. – 1–3, 6, 7; on lignum, on trunks of various trees.

Cladonia conista (Nyl.) Robbins – 3; on sandy soil in a dry meadow, FH (H). This species was treated as bourgeanic acid chemotype of *Cladonia humilis* (With.) J. R. Laundon, though recent molecular data show it to be a distinct species (Pino-Bodas et al., 2012). Due to this, its distribution is poorly known. *C. conista* has been found growing in dry, sandy habitats in the Netherlands, Germany and Kaliningrad region of Russia (Dolnik, 2005 and the literature cited therein). Formally, this is the first record in the Baltic countries, though recent record of *C. humilis* in Estonia is thought to be *C. conista* (Suija et al., 2010b). In Lithuania, *C. humilis* is also known from two localities, but, like in Estonia it has not been checked by thin layer chromatography, therefore, it is not really known, which chemospecies it is. According to the known distribution area of *C. humilis* s. str. and *C. conista* (Dolnik et al., 2010), the Lithuanian records most probably belong to *C. conista*.

Cladonia digitata (L.) Hoffm. – 2; on lignum.

Cladonia fimbriata (L.) Fr. – 2, 3; on lignum, on sandy soil in a dry meadow.

Cladonia gracilis (L.) Willd. subsp. *gracilis* – 3; on soil in an old sand pit.

Cladonia gracilis (L.) Willd. subsp. *turbinata* (Ach.) Ahti – 2; on soil and on lignum in young, planted stand.

Cladonia macilenta Hoffm. – 2; on lignum in young, planted stand.

Cladonia norvegica Tønsberg & Holien – 2; on trunks of *Betula* sp., *Alnus glutinosa*, *Fraxinus excelsior*, on lignum. The specimen on *A. glutinosa* was abundantly fertile, pale pinkish brown apothecia reaching 2–3 mm in diam.

Cladonia rei Schaer. – 3; on sandy soil in a dry meadow, FH (H).

Cladonia subulata (L.) Weber ex F. H. Wigg. – 1; on soil along road.

\# ***Cladosporium licheniphilum*** Heuchert & U. Braun – 5; on thalli of *Ramalina fraxinea*, MK

(UGDA, dupl. BILAS). The species is readily distinguished from other members of the genus by having conidiophores with numerous characteristic terminal branches. Conidia are pale brown, catenate, subglobose, lemon-shaped or ellipsoid-subcylindrical, usually forming branched acropetal chains, 0–1-septate, aseptate conidia 3.5–8.0 × 3.0–5.0 µm, septate 7.0–13.0 × 5.0–7.0 µm. For more detailed description and illustrations see Heuchert & Braun (2006). The species was recently recorded in Estonia, also on *R. fraxinea* (Suija et al., 2011).

Cliostomum corrugatum (Ach.) Fr. – 1; on trunk of *Quercus robur*, DS (BILAS).

Coenogonium pineti (Ach.) Lücking & Lumbsch – 1, 2; on trunks of various trees, on roots of a windthrow.

Collema tenax (Sw.) Ach. – 3, 7; on soil layer on siliceous stone in a stream bed, on loamy and gravely soils in open areas.

Cornutispora lichenicola D. Hawksw. & B. Sutton – 3; on thallus of *Pertusaria albescens*, DH (LECB).

Diplotomma alboatrum (Hoffm.) Flot. – 5; on *Fraxinus excelsior*, JM (BILAS).

Diplotomma pharcidium (Ach.) M. Choisy – 5; on *Fraxinus excelsior*, JM (BILAS).

Evernia prunastri (L.) Ach. – 1–3, 5; on trunks of various deciduous trees.

Fellhanera bouteillei (Desm.) Vězda – 6; on twigs of *Picea abies*.

Fellhanera gyrophorica Sérus., Coppins, Diederich & Scheid. – 6; on epiphytic mosses on trunk base of *Tilia cordata*.

Fellhanera subtilis (Vězda) Diederich & Sérus. – 6; on twigs of *Picea abies* and *Vaccinium myrtillus*.

Fuscidea arboricola Coppins & Tønsberg – 1, 2; on trunks of *Alnus glutinosa*, *Ulmus* sp., *Betula* spp., DK (OLTC), MK (UGDA), PC (GPN).

Fuscidea pusilla Tønsberg – 2; on trunk of *Populus tremula*, on lignum, PC (GPN).

Graphis scripta (L.) Ach. – 1–3; on trunks of various deciduous trees.

Gyalecta derivata (Nyl.) H. Olivier – 1; on *Alnus glutinosa*, PC (GPN). The species is characterized by oblong-fusiform spores that are transversely septate with only occasional longitudinal septa. It is widespread in Europe, though rare and scattered everywhere. Not recorded in the Baltic countries, but known in NE Poland (Cieśliński & Tobolewski, 1989) and south-western part of Leningrad Region (Gagarina & Himelbrant, 2010).

Hypocenomyce scalaris (Ach.) M. Choisy – 1, on trunks of *Picea abies*.

Hypogymnia physodes (L.) Nyl. – 1–17; on trunks and branches of various trees, on lignum.

Hypogymnia tubulosa (Schaer.) Hav. – 2, 3; on trunks and branches of *Populus tremula* and *Fraxinus excelsior*, on lignum.

Hypotrachyna revoluta (Flörke) Hale – 2; on trunks of *Alnus glutinosa* and *Fraxinus excelsior*.

Illosporiopsis christiansenii (B. L. Brady & D. Hawksw.) D. Hawksw. – 2, 3; on thalli of *Parmelia sulcata*, *Physcia* spp., *Melanohalea exasperatula*, unidentified crustose epiphytic lichens.

Lecania cyrtella (Ach.) Th. Fr. – 1, 3; on branches of *Acer platanoides* and *Populus tremula*.

Lecania prasinoides Elenkin – 1, 3; on roots of *Alnus* spp. and *Fraxinus excelsior* along water line.

Lecanora allophana (Ach.) Nyl. – 3, 8, 10; on trunks of *Fraxinus excelsior* and *Ulmus* sp.

Lecanora argentata (Ach.) Malme – 3, 14; on trunks of *Alnus* spp. and *Fraxinus excelsior*.

Lecanora carpinea (L.) Vain. – 1–3; on trunks and branches of deciduous trees.

Lecanora chlarotera Nyl. – 3; on trunks of *Alnus* spp., *Populus tremula* and *Fraxinus excelsior*.

Lecanora compallens Herk & Aptroot – 2; on trunk of *Alnus* sp., DK (OLTC).

Lecanora expallens Ach. – 1, 2; on trunk of *Quercus robur*, on lignum, PC (GPN).

Lecanora intumescens (Rebent.) Rabenh. – 2; on lignum, LK (LE).

Lecanora populicola (DC.) Duby – 3; on trunk of *Populus tremula*, DH (LECB). The species is characterized by having large white-pruinose apothecia, negative spot reactions on thallus or apothecia and corticolous habitat on *Populus tremula*. *L. populicola* is known in all Baltic countries as well as in NE Poland, NW Russia and Belarus. For more detailed description of the species see Smith et al. (2009).

Lecanora pulicaris (Pers.) Ach. – 6; on timber wall.

Lecanora quercicola Coppins & P. James – 2; on lignum, MK (UGDA). This is a species of *Lecanora saligna* complex. It is characterized by apothecia with a pale yellowish thalline margin, pale to greyish brown or reddish brown and ± slightly pruinose

to epruinose disc, ellipsoid ascospores, 8.6–10 × 4.3–4.8 µm, weakly curved macroconidia measuring 8.5–9.5 × 2.7–3.0 µm and the production of isousnic acid, occasionally also neousnic acid (not detected in our specimen). It is very similar to *L. saligna* (Schrad.) Zahlbr. s. str., but the latter can be readily distinguished by smaller, 6.0–8.1 × 2.0–2.4 µm macroconidia (VAN DEN BOOM & BRAND, 2008). The species is new to Baltic countries. It is probably more widely distributed, than previously thought, but apparently not frequent regionally, e.g., in Poland it was searched in the collections of *L. saligna* from northern part of the country, but only one specimen was found (FLAKUS & KUKWA, 2009).

Lecanora sambuci (Pers.) Nyl. – 3, on trunk of *Populus tremula*, MK (UGDA).

Lecanora sarcopidoides (A. Massal.) A. L. Sm. – 2; on lignum, PC (GPN).

Lecanora semipallida H. Magn. – 5; on concrete wall, JP (H). This is a distinctive species of *Lecanora dispersa* group, characterized by presence of vinetorin, giving positive C, KC, K and UV reactions as well as K-soluble epithecial granules (ŚLIWA, 2007). It is a widespread and apparently common species of *L. dispersa* complex, which remains, however, very much understudied. In Estonia it has been reported under the name *Lecanora xanthostoma* Cl. Roux ex Fröberg (JÜRIADO et al., 2002).

Lecanora symmicta (Ach.) Ach. – 2; on lignum, PC (GPN).

Lecanora thysanophora R. C. Harris – 6; on trunk of *Quercus robur*, JM (BILAS).

Lecidea nylanderi (Anzi) Th. Fr. – 2; on trunk of *Picea abies*, ANT (GSU).

Lecidea turgidula Fr. – 2; on lignum, PC (GPN).

Lecidella elaeochroma (Ach.) M. Choisy – 1–3, 9; on trunks and branches of deciduous trees.

Lecidella euphorea (Flörke) Hertel – 1, 13; on trunks of *Acer platanoides*, DS (BILAS), MK (UGDA).

Lecidella stigmatea (Körb.) Vain. – 16; on siliceous stone at water edge.

Lecidella subviridis Tønsberg – 2; on trunk of *Alnus* sp., DK (OLTC).

Lepraria elobata Tønsberg – 2; on trunk of *Betula* sp., ANT (GSU), EVK (SMR).

Lepraria incana (L.) Ach. – 2; on trunk of *Betula* sp., ANT (GSU), EVK (SMR).

Lepraria jackii Tønsberg – 2; on trunk of *Betula* sp., ANT (GSU).

Lepraria lobificans Nyl. – 1, 2, 6; on trunks of deciduous trees, on bark of old stump, on roots of windthrows, DH (LECB), JM (BILAS), MK (UGDA) ANT (GSU).

Leptogium biatorinum (Nyl.) Leight. – 3; on loamy soil on a road scarp.

Leptogium lichenoides (L.) Zahlbr. – 3; on moss-covered siliceous stones and logs in a stream bed.

Leptogium teretiusculum (Flörke) Arnold – 6; on trunk of *Acer platanoides,* JM (BILAS).

Leptosphaeria ramalinae (Desm.) Sacc. – 3; on thalli of *Ramalina fastigiata*, JM (BILAS), MK (UGDA). The species is characterized by dark brown, subsphaerical perithecia up 200 µm in diam., perithecial wall composed of irregular angular cells (4–8 µm in diam.), persistent pseudoparaphyses, 8-spored asci, brown, fusiform, 3-septate, ascospores with verruculose walls, 13–16 × 4.5–5.5 µm (DIEDERICH, 1990). New to the Baltic countries.

Lichenoconium usneae (Anzi) D. Hawksw. – 3; on thallus of *Ramalina fastigiata*, JM (BILAS).

Lichenomphalia umbellifera (L.: Fr.) Redhead, Lutzoni, Moncalvo & Vilgalys – 2; on rotten, moist lignum.

Lobaria pulmonaria (L.) Hoffm. – 1, 2, 6; also on southern coast of Lake Asveja, slope, in several forest compartments in Dubingiai Forest; on trunks of *Quercus robur*, *Alnus incana*, *Fraxinus excelsior*, *Ulmus* sp.

Loxospora elatina (Ach.) A. Massal. – 2; on trunk of *Alnus* sp., JM (BILAS).

Marchandiobasidium aurantiacum Diederich & Schultheis – 2; on thalli of *Physcia aipolia*, *Melanohalea exasperatula* and *Xanthoria parietina*. Anamorph, teleomorphic stage is not known in Lithuania so far.

Melanelixia glabratula (Lamy) Sandler & Arup – 1–3; on twigs of deciduous trees.

Melanelixia subargentifera (Nyl.) O. Blanco et al. – 3, 5; on trunks and branches of *Fraxinus excelsior* and *Quercus robur*.

Melanelixia subaurifera (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch – 3; on branches of deciduous trees in open situation.

Melanohalea exasperata (De Not.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch – 3, 5; on branches of *Alnus incana* and *Quercus robur*.

Melanohalea exasperatula (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch – 2, 3; on trunks and branches of deciduous trees, on twigs of *Picea abies*.

Menegazzia terebrata (Hoffm.) A. Massal. – 2; on trunks of *Alnus glutinosa* and *Betula* spp., DH, EVK, IP, JM (not collected).

Micarea byssacea (Th. Fr.) Czarnota, Guzow-Krzemińska & Coppins – 1, 2; on lignum, on trunk of *Alnus glutinosa*, DH (LECB), PC (GPN).

Micarea micrococca (Körb.) Gams ex Coppins – 1, 2; on lignum, on trunks of *Alnus glutinosa* and *Quercus robur*, DK (OLTC), PC (GPN).

Micarea misella (Nyl.) Hedl. – 3; on lignum of *Alnus incana*.

Micarea peliocarpa (Anzi) Coppins & R. Sant. – 2; on lignum, on trunks of *Populus tremula*, *Picea abies*, *Alnus glutinosa*, DH (LECB), DK (OLTC), PC (GPN).

Micarea prasina Fr. – 1; on trunk of *Quercus robur*.

+ *Microcalicium ahlneri* Tibell – 4; on lignum of *Pinus sylvestris* stump, TB (not collected).

Microcalicium disseminatum (Ach.) Vain. – 1, 2, 6, 9, 12; on trunks of deciduous trees, on thalli of *Chaenotheca* spp.

Muellerella hospitans Stizenb. – 1, 5, 6; on apothecia of *Bacidia rubella*, JM (BILAS), MK (UGDA), PC (GPN).

Mycobilimbia epixanthoides (Nyl.) Vitik., Ahti, Kuusinen, Lommi & T. Ulvinen – 1–3; on epiphytic mosses growing on trunks of *Alnus* spp., *Corylus avellana*, *Fraxinus excelsior*, DK (OLTC), DS (BILAS), MK (UGDA), PC (GPN). This commonly sterile species is characterized by primarily muscicolous, greyish or yellowish green, granular verrucose thallus with effuse soralia that are often confluent and, therefore, thallus appearing leprose, pale green to yellowish soredia and absence of secondary metabolites (Tønsberg, 1992). See also the note at *Catillaria croatica*. It is known in Estonia and Latvia, but not reported previously in Lithuania. All our specimens were sterile; however, basing on their morphology and muscicolous habitus we ascribed them to *M. epixanthoides*.

+ *Mycocalicium subtile* (Pers.) Szatala – 2, 3, 6; on lignum.

Nephroma parile (Ach.) Ach. – 6; on trunk of *Acer platanoides*, JM (BILAS).

Normandina acroglypta (Norman) Aptroot – 2, 3; on epiphytic bryophytes growing on trunks of *Populus tremula*, *Alnus* spp., *Ulmus* sp., DK (OLTC), EL (TU), JM (BILAS), MK (UGDA), MW (S).

Ochrolechia bahusiensis H. Magn. – 2; on trunk of *Quercus robur*, MK (GSU).

Opegrapha rufescens Pers. – 3, 14; on trunks of *Fraxinus excelsior*, *Ulmus* sp.

Opegrapha varia Pers. – 2, 6, 8, 10, 17; on trunks of deciduous trees with rough bark.

Opegrapha viridis (Ach.) Behlen & Desberger – 3; on trunk of *Fraxinus excelsior*, DK (OLTC).

Ovicuculispora parmeliae (Berk. & M. A. Curtis) Etayo – 2; on squamules of *Cladonia* sp., AS (TU).

Parmelia submontana Nádv. ex Hale – 3; on trunk of *Populus tremula*.

Parmelia sulcata Taylor – 1–3; on trunks and branches of deciduous trees.

Parmelina tiliacea (Hoffm.) Hale – 3; on trunk of *Fraxinus excelsior*.

Peltigera polydactylon (Neck.) Hoffm. – 3; on base of *Fraxinus excelsior* trunk, on moss-covered siliceous stone, on trunk of a fallen deciduous tree.

Peltigera ponojensis Gyeln. – 3; on sandy soil in a dry meadow.

Peltigera praetextata (Flörke ex Sommerf.) Zopf – 1–3, 6; on bases of *Quercus robur*, *Fraxinus excelsior*, on fallen deciduous trees, on soil at the road scarp, on roots of windthrows.

Peltigera rufescens (Weiss) Humb. – 3; on sandy soil in a dry meadow.

Pertusaria albescens (Huds.) M. Choisy & Werner – 1–3; on trunks and branches of deciduous trees.

Pertusaria amara (Ach.) Nyl. – 3; on trunk of *Populus tremula*.

Pertusaria coccodes (Ach.) Nyl. – 3, 6; on fallen trunk of a deciduous tree, on trunk of *Quercus robur*.

Pertusaria flavida (DC.) J. R. Laundon – 1, 2, 6; on trunks of *Quercus robur*.

Pertusaria leioplaca DC. – 1, 3; on trunks of *Fraxinus excelsior* and *Tilia cordata*.

Phaeophyscia orbicularis (Neck.) Moberg – 3, 5; on trunks of deciduous trees.

Phaeopyxis punctum (A. Massal.) Rambold, Triebel & Coppins – 2; on squamules of *Cladonia* spp., JM (BILAS).

Phlyctis agelaea (Ach.) Flot. – 3, 6, 8; on trunks of *Fraxinus excelsior*.

Phlyctis argena (Ach.) Flot. – 1–17; on trunks of various deciduous trees.

Physcia adscendens (Fr.) H. Olivier – 1–3; on trunks and branches of deciduous trees.

Physcia aipolia (Ehrh. ex Humb.) Fürnr. – 2, 3; on trunks of *Populus tremula* and *Fraxinus excelsior*, on twigs of *Malus domestica.*

Physcia tenella (Scop.) DC. – 2, 3; on trunks and branches of deciduous trees.

Physconia enteroxantha (Nyl.) Poelt – 1–3, 5; on trunks of *Acer platanoides, Corylus avellana, Fraxinus excelsior*.

Physconia perisidiosa (Erichsen) Moberg – 5, 10; on trunks of *Fraxinus excelsior*.

Placynthiella dasaea (Stirt.) Tønsberg – 1; on lignum and bark of *Alnus glutinosa*.

Placynthiella icmalea (Ach.) Coppins & P. James – 2; on rotten bark and lignum, on trunks of *Corylus avellana* and *Alnus glutinosa*.

Platismatia glauca (L.) W. L. Culb. & C. F. Culb. – 1, 2, 6; on trunks and branches of various trees.

Pronectria erythrinella (Nyl.) Lowen – 3; on thallus of *Peltigera* sp., AS (TU).

Pronectria robergei (Mont. & Desm.) Lowen – 3; on thalli of *Peltigera* spp., JM (BILAS), MK (UGDA).

Pseudevernia furfuracea (L.) Zopf – 2, on trunks of *Betula* spp.

Psilolechia clavulifera (Nyl.) Coppins – 2; on roots of a spruce windthrow, JM (BILAS).

Pyrenula laevigata (Pers.) Arnold – 3; on trunk of fallen *Fraxinus excelsior*, AS, PL (TU).

Pyrenula nitida (Weigel) Ach. – 3; on trunk of *Fraxinus excelsior*, TB (not collected).

Pyrenula nitidella (Flörke ex Schaer.) Müll. Arg. – 3; on trunks of *Fraxinus excelsior*, JM, DH (BILAS), PL (TU), MW (S), TB (Herb. TB).

Ramalina baltica Lettau – 15; on trunk of *Quercus robur*.

Ramalina dilacerata (Hoffm.) Hoffm. – 3; on fallen trunk of a deciduous tree, AT (LD). The species is characterized by short, densely shrubby thallus with rather thin cortex and lax medulla, hollow branches with numerous perforations, lack of pseudocyphellae or soredia, marginal and terminal apothecia and presence of divaricatic acid. The distribution of the species in Europe is boreal (with disjunction in Central European mountains) with continental tendencies (Ahlner, 1948; Krog & James, 1977). *R. dilacerata* is known in Estonia, NW Russia and in Belarus, not recorded in Latvia.

Ramalina farinacea (L.) Ach. – 1, 3, 5; on trunks and branches of deciduous trees.

Ramalina fastigiata (Pers.) Ach. – 1–3, 5; on trunks and branches of deciduous trees.

Ramalina fraxinea (L.) Ach. – 3, 4, 5, 14; on trunks of deciduous trees.

Reichlingia leopoldii Diederich & Scheid. – 1, 2, 6; on trunks of *Quercus robur*, *Fraxinus excelsior*, *Alnus* spp.

Rinodina efflorescens Malme – 1; on trunks of *Quercus robur* and *Ulmus* sp., DK (OLTC).

Ropalospora viridis (Tønsberg) Tønsberg – 1, 2; on trunks of *Quercus robur*, *Betula* spp., *Corylus avellana*, DK (OLS), MK (UGDA).

Roseliniella cladoniae (Anzi) Matzer & Hafellner – 2; on squamules of *Cladonia* spp., JM (BILAS).

+ *Sarea difformis* (Fr.) Fr. – 1; on resin of *Picea abies*, DH (LECB).

+ *Sarea resinae* (Fr.: Fr.) Kuntze – 1, 2; on resin of *Picea abies*, DH, EK (LECB), LK (LE).

Sarcogyne regularis Körb. – 5; on cement, on calcareous pebbles.

Sarcosagium campestre (Fr.) Poetsch & Schied. – 2; on lignum.

Schismatomma pericleum (Ach.) Branth & Rostr. – 9; on *Quercus robur*, DS (BILAS).

Sclerophora coniophaea (Norman) Mattsson & Middelb. – 1, 2, 6, 9; on trunks of *Quercus robur*, DS, JM (BILAS), IS (LECB), MW (S).

Sclerophora farinacea (Chevall.) Chevall. – 3, 5; on trunks of *Fraxinus excelsior*, DS (BILAS).

Sclerophora pallida (Pers.) Y. J. Yao & Spooner – 3, 5, 6, 8, 17; on trunks of *Fraxinus excelsior*, *Acer platanoides*, *Populus tremula*.

Sclerophora peronella (Ach.) Tibell – 17; on *Acer platanoides*, DS (BILAS).

Scoliciosporum chlorococcum (Graewe ex Stenh.) Vězda – 2; on trunk of *Betula* sp.

Scoliciosporum sarothamni (Vain.) Vězda – 3; on trunk of *Alnus incana*, DH (LECB).

Sphaerellothecium propinquellum (Nyl.)

Cl. Roux & Triebel – 3; on apothecia of *Lecanora carpinea*, PC (GPN).

+ *Stenocybe pullatula* (Ach.) Stein – 3; on twigs of *Alnus incana*.

Stigmidium microspilum (Körb.) D. Hawksw. – 3, on thallus of *Graphis scripta*, AS (TU). This host-specific species is easily recognizable due to the dark patches with clusters of perithecia on host thallus. The ascopores of *S. microspilum* are 2-celled, colourless, asymmetric, c. 14–16 × 4 µm (Keissler, 1930). The fungus is widely distributed in Europe, probably appears everywhere, where its host is found. Known in Estonia, not reported in Latvia.

Strangospora pinicola (A. Massal.) Körb. – 6, on trunk of *Quercus robur*, JM (BILAS).

Strigula jamesii (Swinscow) R. C. Harris – 3; on trunk and roots of an upended deciduous tree, EK, IS (LECB, dupl. BILAS). The species differs from closely related *S. stigmatella* by having 3-septate, slightly constricted at the septa spores, with two upper cells wider than the lower two, presence of a perispore and slightly smaller ascomata (for more detailed description see Smith et al., 2009). *S. jamesii* is reported from a number of countries in Europe, however, it is rare everywhere. First record for the Baltic countries.

Strigula stigmatella (Ach.) R. C. Harris – 2, 3; on epiphytic bryophytes and bark of *Fraxinus excelsior*, JP (H), PC (GPN).

Syzygospora physciacearum Diederich – 2, 3; on thalli of *Physcia* spp.

Thelidium minutulum Körb. – 5; on bricks, JP (H).

Thelidium zwackhii (Hepp) A. Massal. – 3; on siliceous pebbles at a roadside.

Thelocarpon epibolum Nyl. var. *epibolum* – 1–3; on lignum, DH, IS (LECB), EL (TU), JP (H).

Trapeliopsis flexuosa (Fr.) Coppins & P. James – 2; on lignum.

Tremella cladoniae Diederich & M. S. Christ. – 2; on podetia of *Cladonia fimbriata*.

Tremella lichenicola Diederich – 3; on thallus of *Mycoblastus fucatus*, DH (LECB).

Trichonectria rubefaciens (Ellis & Everh.) Diederich & Schroers – 1–3; on thalli of *Parmelia sulcata*, *Pleurosticta acetabulum*, *Ramalina fastigiata*, AS (TU), JM (BILAS), MK (UGDA), PC (GPN) (with anamorphic state *Acremonium rhabdosporum* on *P. acetabulum*). This is a strongly pathogenic lichenicolous fungus occurring on a wide range of the lichen-forming family *Parmeliaceae* and occasionally on *Ramalina* (Etayo, 1998). It differs from *T. anisospora* (Lowen) van den Boom & Diederich by consistently sessile ascomata and host range (*T. anisospora* is obligately parasitic on *Hypogymnia physodes*). *T. rubefaciens* is found in several European countries, but the reports were rather sparse until recently. However, present finds as well as abundant manifestation of the fungus in southern Lithuania in late fall of 2011 (Motiejūnaitė, unpublished data) and recent finds in NW Russia (Kuznetsova et al., 2012) allow to presume that *T. rubefaciens* is spreading rapidly, similarily to *T. anisospora* (Brackel, 2006; Motiejūnaitė et al., 2011).

Usnea dasypoga (Ach.) Röhl. – 3, 6; on branches of *Populus tremula* and *Quercus robur*.

Usnea subfloridana Stirt. – 1, 6; on fallen branches of deciduous trees.

Verrucaria banatica Servít – 5; on concrete wall, JP (H). This is one of neglected species of *V. muralis* complex differing from *V. muralis* Ach. s. str. by an involucrellum that reaches base of the excipulum. For a more detailed description and differences from *V. muralis* see Breuss (2004). Terrestrial *Verrucaria* species remain very much understudied, their distribution is largely unknown. This is the first record of *V. banatica* in the Baltic countries.

Verrucaria boblensis Servít – 2, 5; on calcareous pebbles, on concrete wall, JP (H). This is another species of *V. muralis* complex, but with smaller ascospores than *V. muralis* s. str. The species is known from Central Europe and has recently been reported from Finland (Pykälä, 2011) and NW Russia (Stepanchikova et al., 2011). New to the Baltic countries.

Verrucaria christiansenii Servít – 5; on calcareous pebbles, JP (H). The species was originally described from Denmark and recently reported from Finland (Pykälä, 2011). New to the Baltic countries.

Verrucaria dolosa Hepp – 1; on calcareous pebbles at the roadside.

Verrucaria hydrela Ach. – 1, 3; on roots of *Alnus glutinosa* at a water line, on siliceous stones in a stream bed.

Verrucaria illinoisensis Servít – 5; on calcareous pebbles, JP (H). The species differs from *V. muralis* by shorter and thicker periphyses (Pykälä & Breuss, 2008). New to the Baltic countries.

Verrucaria inaspecta Servít (syn. *V. olivacella* Servít) – 2, 5; on calcareous and siliceous pebbles, JP (H). The species is widely distributed, but usually is not separated from *V. dolosa* (Breuss, 2007, Pykälä & Breuss, 2008).

Verrucaria inornata Servít – 5; on calcareous pebbles, JP (H). The species is apparently widely distributed in Europe and North America, though very much underrecorded. Only recently it has been reported in Finland (Pykälä, 2010). New to the Baltic countries. For a detailed description see Breuss (2007).

Verrucaria muralis Ach. – 5; on calcareous pebbles, on concrete wall.

Verrucaria nigrescens Pers. – 5; on concrete wall.

Verrucaria nigrofusca Servít – 5; on concrete wall, JP (H). Like *V. inornata*, this is a widely distributed, though underrecorded species, in northern Europe it is known in Finland (Pykälä, 2010). New to the Baltic countries. For a detailed description see Breuss (2007).

Verrucaria praetermissa (Trevis.) Anzi – 3; on siliceous stones and roots of trees in a stream bed.

Verrucaria trabicola Arnold ex Servít – 1, 3; on roots of *Alnus glutinosa* at water line, on *Fraxinus* log fallen above the rivulet, FH (H), JP (H). Until recently, this species had been extremely rare in Europe, known only from the type locality in Switzerland, but some years ago it was recorded in Finland (Pykälä, 2010). As the habitus of *V. trabicola* may resemble *V. hydrela*, which also often grows on exposed tree roots, especially close to water, part of the records of the latter species may belong to *V. trabicola*. For a detailed description and comparison to *V. hydrela* see Breuss (2007) and Pykälä (2010). New to the Baltic countries.

Vezdaea aestivalis (Ohlert) Tscherm.-Woess & Poelt – 1, 2, 14; on epiphytic bryophytes on tree trunks and lignum, DS (BILAS), EK (LECB), LK (LE), PC (GPN).

*Violella fucata (*Stirt.) T. Sprib. – 2, 3; on trunks of *Betula* spp., *Fraxinus excelsior*, on lignum, DH (LECB), PC (GPN).

Vouauxiella lichenicola (Linds.) Petr. & Sydow – 3; on apothecia of *Lecanora* cf. *chlarotera*.

Xanthoparmelia loxodes (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch – 2; on siliceous stone in a meadow.

Xanthoparmelia stenophylla (Ach.) Ahti & D. Hawksw. – 2; on siliceous stone in a meadow.

Xanthoria parietina (L.) Th. Fr. – 2, 3, 5; on trunks and branches of deciduous trees, on siliceous stones.

Xanthoria polycarpa (Hoffm.) Th. Fr. ex Rieber – 3; on branches of *Populus tremula*.

Xanthoriicola physciae (Kalchbr.) D. Hawksw. – 2, 3; on thalli and apothecia of *Xanthoria parietina*.

Xenonectriella leptaleae (J. Steiner) Rossman & Lowen – 2; on apothecia of *Physcia aipolia*, MK (UGDA). Ascomata of this fungus are grouped and immersed in the host thallus, up to 150 µm in diam., red-brown when protruding, with KOH+ pale brown to black walls, asci 8-spored with hyaline to pale golden brown, 1-septate ascospores composed of semiglobose cells, 7–11 × 5–7 µm, smooth-walled (Etayo, 1998). The species is widely distributed in Europe, though infrequently recorded. Known from Estonia, not reported from Latvia.

Zwackhiomyces diederichii D. Hawksw. & Iturr. – 2; on podetia of *Cladonia fimbriata* and *Cladonia coniocraea* (in one case growing together with *Tremella cladoniae*), JM (BILAS). This is a very much misunderstood cladoniicolous fungus, until recently not distinguished from *Z. cladoniae* (C. W. Dodge) Diederich, which is characterized by considerably larger ascospores and ascomata (Hawksworth & Iturriaga, 2006). Our specimen had ascomata measuring 100–130 µm and spores measuring 10–12 × 4–4.5 µm, though slightly wider that in the protologue, but still in accordance with the species description. Distribution of *Z. diederichii* is little known. Recently it has been recorded in Poland (Kukwa & Flakus, 2009). New to the Baltic countries.

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KERPĖS, LICHENOFILINIAI IR KERPĖMS ARTIMI SAPROTROFINIAI GRYBAI ASVEJOS REGIONINIAME PARKE

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Santrauka

Straipsnyje pateikiami lichenologinių tyrimų Asvejos regioniniame parke rezultatai. Didelė dalis duomenų gauta lauko išvykose, organizuotose jungtinio XVIII Baltijos šalių mikologų ir lichenologų simpoziumo ir Šiaurės šalių lichenologų draugijos susitikimo metu, 2011 m. rugsėjo 19–23 d. Pateiktas 259 rūšių sąrašas, 30 iš jų rastos pirmą kartą Lietuvoje. *Arthonia helvola*, *Bacidina sulphurella*, *Caloplaca pyracea*, *Candelariella lutella*, *Catillaria croatica*, *Cladonia conista*, *Gyalecta derivata*, *Lecanora quercicola, L. semipallida*, *Leptosphaeria ramalinae*, *Strigula jamesii*, *Trichonectria rubefaciens*, *Verrucaria banatica*, *V. boblensis*, *V. christiansenii*, *V. illinoisensis*, *V. inornata*, *V. nigrofusca*, *V. trabicola*, *Zwackhiomyces diederichii* aptiktos pirmą kartą Baltijos šalyse. Naujos Lietuvai kerpių rūšys yra *Bacidia incompta*, *Caloplaca crenulatella*, *Catinaria atropurpurea*, *Lecanora populicola*, *Mycobilimbia epixanthoides*, *Ramalina dilacerata*, *Verrucaria inaspecta*, naujos lichenofilinių grybų rūšys yra *Cladosporium licheniphilum*, *Stigmidium microspilum*, *Xenonectriella leptalea*. Aptikta 18 kerpių rūšių, įrašytų į Lietuvos raudonąją knygą. Tai pats didžiausias Lietuvoje vienoje teritorijoje aptiktas saugomų kerpių rūšių skaičius.