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New records of lichens and allied fungi from the Leningrad Region, Russia

Irina S. Stepanchikova[1, 2], Martin Kukwa[3], Ekaterina S. Kuznetsova[1, 2], Jurga Motiejūnaitė[4] & Dmitry E. Himelbrant[1, 2]

[1]Department of Botany, St. Petersburg State University, Universitetskaya emb. 7/9, 199034 St. Petersburg, Russia. E-mails: stepa_ir@mail.ru, igel_kuzn@mail.ru, d_brant@mail.ru

[2]Laboratory of Lichenology and Bryology, Komarov Botanical Institute, Professor Popov St. 2, 197376 St. Petersburg, Russia

[3]Department of Plant Taxonomy and Nature Protection, Gdansk University, Al. Legionów 9, PL-80-441 Gdansk, Poland. E-mail: dokmak@univ.gda.pl

[4]Laboratory of Mycology, Nature Research Center, Institute of Botany, Žaliųjų Ežerų 49, LT–08406 Vilnius, Lithuania. E-mail: jurga.motiejunaite@botanika.lt

Abstract: Twelve species of lichenized and two lichenicolous fungi, and one non-lichenized calicioid fungus are reported from the Leningrad Region (Eastern, Western or Saint-Petersburg). *Lecanora norvegica* and *Opegrapha lamyi* are reported for the first time for Russia. Six taxa are also new to the whole Leningrad Region; four, *Lecidella flavosorediata*, *Ochrolechia bahusiensis*, *Phaeocalicium praecedens* and *Tremella lichenicola* – to North-Western European Russia, and one, the anamorphic lichen *Dictyocatenulata alba* is new to European Russia. Brief discussions on the species are included.

Kokkuvõte: Samblike ja nendega seotud seente uued leiud Leningradi regioonist, Venemaalt

Leningradi regiooni ida- ja lääneosast ning Sankt-Peterburgist teatatakse 12 lihheniseerunud, kahe lihhenikoolse ning ühe mittelihheniseerunud, kalitsioidse seene leidudest. *Lecanora norvegica* ja *Opegrapha lamyi* on esmasleiud Venemaal; anamorfne samblik *Dictyocatenulata alba* on esmasleid Venemaa Euroopa-osas; *Lecidella flavosorediata*, *Ochrolechia bahusiensis*, *Phaeocalicium praecedens* ja *Tremella lichenicola* on uued Venemaa Euroopa-osa loodepiirkonnale ning veel kuus liiki on uued Leningradi regioonile. Lisatud on ka lühikesed arutelud liikide kohta.

INTRODUCTION

Lichen investigations in 2009 as well as study of previously collected specimens allowed us to discover some new and interesting species for the lichen flora of the Leningrad Region. Some of them are new to the Eastern, Western or the whole Leningrad Region, some are new to the North-Western European Russia or Russian Federation. More information about recent lichenological explorations in Leningrad Region is included in annotated catalogue of the lichen-forming, lichenicolous and allied fungi of the Eastern Leningrad Region (Kuznetsova et al., 2007) and some other papers (e.g. Erastova et al., 2009; Kuznetsova, 2008; Stepanchikova et al, 2008, 2009a, b, 2010).

MATERIAL AND METHODS

Main part of material was collected in September 2009 in the Eastern Leningrad Region (ELR) and in 1998–2009 in the Western Leningrad Region (WLR) and St. Petersburg (SPb). Some specimens kept in the lichen herbarium of Botanical Museum of Helsinki University (H) were examined in 2009. Cited specimens are deposited in the herbaria of St. Petersburg State University (LECB) and of H. Lichen substances were analyzed by standard technique of thin-layer chromatography using solvent systems A, B, C and G (Orange et al., 2001) by the first and second authors.

Names of collectors in the species list are abbreviated as follows: DH – Dmitry Himelbrant; EK – Ekaterina Kuznetsova; IS – Irina Stepanchikova; LK – Ludmila Konoreva. Districts of Leningrad Region (LR) are abbreviated in the following order: B – Boksitogorsk District; K – Kingisepp District; L – Lodeynoe Pole District; LU – Luga District; P – Podporozh'e District; PR – Priozersk District; T – Tikhvin District; V – Volkhov District, VB – Vyborg District (Fig. 1). The biogeo-

Fig. 1. Administrative division of Leningrad Region.

graphical provinces of Eastern Fennoscandia are abbreviated traditionally (Kotiranta et al., 1998): Ik – Istmus karelicus, Ka – Karelia australis, Kl – Karelia ladogensis, Kol – Karelia olonetsensis. Lichenicolous fungi are marked with (*) and non-lichenized fungus with (+).

RESULTS AND DISCUSSION

The species

ARTHONIA VINOSA Leight. – ELR, V: shore of Ladoga Lake, 1.3 km SE of Svirsky lighthouse, 60˚30'28"N, 32˚44'26"E, old black alder swampy forest, on bark of *Alnus glutinosa*, 23.09.2009, leg. IS & EK (LECB); WLR, PR, Kl: Brigadnoe (Pärnä), ca. 2 km NW of Priozersk (Käkisalmi), 61˚04'N, 30˚07'E, on bark of *Picea abies*, 30.07.1935, leg. M. Laurila (H 8004061). – New for LR, ELR and WLR. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Randlane & Saag, 1999), Lithuania (Motiejūnaitė, 1999), Latvia (Piterāns, 2001). Indicator of biologically valuable forests in the Southern Taiga of North-Western European Russia (Andersson et al., 2009). The species can be distinguished from the other *Arthonia* by combination of rounded dark red-brown apothecia (turning purple in K), thallus containing *Trentepohlia* and spores consisting of two equal-sized cells (Foucard, 2001).

BUELLIA GRISEOVIRENS (Turner & Borrer ex Sm.) Almb. – ELR, Kol, P: 2 km NNE of Schelejki, near former diabase quarry, 61˚07'N, 35˚40'E, rocky outcrops and rich deciduous forest, on bark of *Populus tremula*, 18.06.1991, leg. T. Ahti (H 8000702, in the specimen of *Pertusaria leioplaca* DC.). – New for ELR, but rather common in WLR. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Randlane & Saag, 1999), Lithuania (Motiejūnaitė, 1999), Latvia (Piterāns, 2001). The species differs from other sorediate crustose lichens by having greyish thallus with discrete rounded soralia, containing atranorin and norstictic acid (Foucard et al., 2002).

Calicium parvum Tibell – ELR, B: 4 km NNE of Chagoda, vicinity of Zabel'skoe Lake, 59°17'15"N, 34°52'13"E, mixed pine-spruce-aspen-birch forest, on bark of *Pinus sylvestris*, 16.09.2009, leg. L. Gagarina (LECB). – New for ELR, previously reported from SPb (Stepanchikova et al., 2009a). Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Randlane & Saag, 1999), Lithuania (Motiejūnaitė, 1999). It can be distinguished from other *Calicium* species by small ascomata (sometimes with white pruina), clavate asci and thin, verrucose thallus which is UV+ (dull whitish) because of diffractaic acid (Tibell, 1999).

Cyphelium karelicum (Vain.) Räsänen – ELR, P: 100 m NW of Chogozero Lake, 60°29'56"N, 35°13'26"E, aspen-spruce forest, on bark of *Picea abies*, 21.09.2009, leg. EK & IS (LECB); 200 m S of Chogozero Lake, along the Esipruchej stream, 60°28'56"N, 35°13'43"E, swampy spruce forest, on bark of *Picea abies*, 22.09.2009, leg. EK & IS (LECB). – New for LR and ELR. Habitat specialist of biologically valuable forests in the Southern Taiga of North-Western European Russia (Andersson et al., 2009). Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004). It differs from closely related *C. inquinans* (Sm.) Trevis. by smaller apothecia, coarsely ornamented spores with irregular cracks and areolae when mature, and greenish-gray to brownish thallus which has negative reactions with K and PD (Tibell, 1999).

Dictyocatenulata alba Finley & E. F. Morris – SPb: Primorsky District, S from Lisy Nos railway station, Severo-Primorsky Park protected area, near the horseshoe-like ponds, 60°00'N, 30°01'E, group of lindens in a spruce forest, on bark of *Tilia* sp., 20.07.2007, leg. IS & LK (LECB). – New for Fennoscandia, European Russia, LR and SPb. Lichenized hyphomycete, recently superfluously described as *Cheiromycina ananas* Aptroot & Schiefelbein from USA (Aptroot & Schiefelbein, 2003; Diederich et al., 2008). Characterized by pale grayish green thallus and white single synnematous conidiomata of very variable height, (0–)100–1500 µm tall, bearing ellipsoidal muriform hyaline conidia 7–14(–18) × 7–11 µm (Diederich et al., 2008). Our material has extremely short (50–100 µm tall) synnemata (Fig. 2) with reduced stipe looking like hemispherical sporodochia (as in description of *Cheiromycina ananas*) and conidia measuring 8–16(–20) × 7–11 µm. *D. alba* is rather widespread in tropical, subtropical, broad-leaved zones and known from Northern and Central America, Asia, Central and Eastern Europe. The species was recently reported from Russian Far East (Primorsky Kraj, see Diederich et al., 2008). Our record is the northernmost in the world and extends the distribution of *D. alba* to boreal zone.

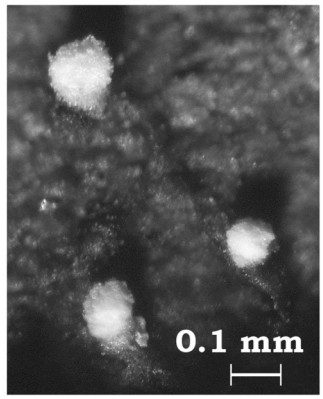

Fig. 2. *Dictyocatenulata alba*, synnemata.

Fuscidea arboricola Coppins & Tønsberg – ELR, Kol, P: 6 km NE of Moshnich'e, 2 km E of the Vazhinka River, 61°11'33"N, 33°55'01"E, spruce forest, on lignum of *Picea abies*, 04.10.2008, leg. DH & IS (H 8005680); ELR, T: Logozerka River valley, 300 m SE of Ekshozero Lake, 60°14'05"N, 35°08'46"E, spruce forest, on bark of *Picea abies*, 29.09.2005, leg. DH & EK (LECB); SPb, Ik: vicinity of Zelenogorsk (Terijoki), SW part of Schuch'e Ozero protected territory, SW from Zelenogorsk cemetery, 60°12'42"N, 29°44'06"E, tree plantation, on bark of *Fraxinus excelsior*, 12.10.2008, leg. DH, IS & EK (LECB); SPb: Primorsky District, E part of Yuntolovsky protected territory, left bank of the Kamenka River, 60°00'52"N, 30°11'16"E, spruce forest, on bark of *Betula* sp., 25.10.2008, leg. DH & LK (LECB); Petrodvorets District, Stary Petergof, N part of Sergievka Park protected territory close to seashore, 59°53'51"N, 29°50'24"E), group of old maples, on bark of *Acer platanoides*, 03.10.2004, leg. DH, IS & LK (LECB); all specimens contain fumarprotocetraric acid. Totally 12 specimens

were investigated. – New for LR, ELR and SPb. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Randlane & Saag, 1999), Lithuania (Motiejūnaitė, 1999). Crustose sorediate lichen, somewhat resembling *Fuscidea pusilla* Tønsberg, but it is characterized by more convex verrucae, often brownish external soredia, more discrete soralia, presence of fumarprotocetraric acid (positive reaction with PD) and absence of divaricatic acid in thallus (Tønsberg, 1992).

Lecanora norvegica Tønsberg – ELR, Kol, P: 1.4 km SE of Rotmozero Lake and 7 km E of Posad, 61°04'N, 34°38'E, swamp with pines, on bark of *Pinus sylvestris*, 18.09.2009, leg. IS & DH (LECB); 50–100 m S of Chogozero Lake, left bank of the Esipruchej stream, 60°29'02"N, 35°13'46"E, swampy pine forest, on bark of *Pinus sylvestris*, 22.09.2009, leg. IS & EK (LECB); T: Linzboloto protected territory, southern shore of Zelenoe Lake, 60°15'34"N, 34°50'49"E, pine forest, on bark of *Pinus sylvestris*, 25.08.2006, leg. EK (LECB); WLR, LU: Luga River Basin, 500 m S of Jaschera, left bank of the Jaschera River, 58°53'N, 29°49'E, pine forest, on bark of *Pinus sylvestris*, 09.05.1998, leg. DH & EK (LECB); SPb, Ik: Kurortny District, Komarovo (Kellomäki), Schuch'e Ozero protected territory, S from Schuch'e Lake (Haukijärvi), 60°12'15"N, 29°47'06"E, birch-pine forest, on bark of *Pinus sylvestris*, 08.09.2008, leg. IS, EK & DH (LECB); all specimens contain atranorin and protocetraric acid. Totally 8 specimens were investigated. – New for Russia, Eastern Fennoscandia, LR, ELR, WLR and SPb. Distribution in Fennoscandia and Baltic countries: Norway, Sweden (Santesson et al., 2004), Estonia (Jüriado, 2000), Lithuania (Motiejūnaitė et al., 2007). The species can be distinguished from other crustose sorediate lichens by whitish-gray cottony, usually sterile thallus with discrete, slightly yellowish soralia, the production of atranorin and protocetraric acid (positive reaction with PD) (Tønsberg 1992). The lichen inhabits *Pinus sylvestris* bark in pine forests. At least two older epithets exist for the lichen, but the nomenclature remains to be solved (Palice & Tønsberg, in prep.: personal communication by Zdeněk Palice).

Lecidella flavosorediata (Vězda) Hertel & Leuckert – SPb: Krasnoe Selo District, vicinity of Mozhajsky (Dudergof), Dudergofskie Vysoty protected territory, S slope of Voron'ja Hill, 59°42'09"N, 30°07'21"E, linden-maple forest with *Convallaria majalis* and *Aegopodium podagraria*, on bark of *Sorbus aucuparia* and *Tilia* sp., 07.10.2007, leg. DH & IS (H 8005666); same place, N slope of Orekhovaya Hill, 59°41'59"N, 30°07'46"E, linden forest with *Corylus avellana*, on bark of *Acer platanoides*, 05.10.2007, leg. DH & IS (LECB); E slope of Orekhovaya Hill, 59°41'39"N, 30°07'40"E, broad-leaved forest with aspens and nemoral herbs, on bark of *Populus tremula*, 23.09.2007, leg. DH & IS (LECB); SW slope of Orekhovaya Hill, 59°41'37"N, 30°07'28"E, ash forest with willows and *Aegopodium podagraria*, on bark of *Salix* sp., 05.10.2007, leg. DH & IS (H 8005665); WLR, K: Vel'kota village, 59°35'59"N, 28°53'23"E, old manor park, on bark of deciduous tree, 01.05.2007, leg. DH (LECB): all specimens contain arthothelin and granulosin, often associated with unknown xanthones. Totally 6 specimens were investigated. – New for Eastern Fennoscandia, North-Western European Russia, LR, WLR and SPb. Distribution in Fennoscandia and Baltic countries: Norway, Sweden (Santesson et al., 2004), Finland (Pykälä, 2006), Estonia (Aptroot et al., 2005), Lithuania (Motiejūnaitė, 1999), Latvia (Czarnota & Kukwa, in press). Crustose sorediate lichen, very similar to *Lecanora expallens* Ach., but it differs in the presence of granulosin and absence of zeorin, usnic and thiophanic acids, and expallens-unknown (Tønsberg 1992). All our records are connected with nemoral communities.

Mycoblastus fucatus (Stirt.) Zahlbr. – ELR, T: Vepssky Les Regional Nature Reserve, Linzboloto Strictly Protected Zone, S shore of Zelenoe Lake, 60°15'34"N, 34°50'49"E, pine forest, on lignum of *Picea abies*, 25.08.2006, leg. EK (LECB); S shore of Kharaginskoe Lake, 300 m E of Khartruchej stream, 60°11'18"N, 34°40'28"E, birch forest, on bark of *Alnus incana*, 10.07.2006, leg. EK (LECB); WLR, LU: Luga River Basin, 500 m W of Jaschera, left bank of the Jaschera River, 58°53'38"N, 29°48'42"E, floodplain grey alder forest, on bark of *Alnus incana*, 01.05.2008, leg. EK & Daria Erastova (LECB); SPb, Ik: Komarovo (Kellomäki), W part of Schuch'e Ozero protected territory, NW of Schuch'e Lake (Haukijärvi), 60°13'10"N, 29°45'12"E, young birch-spruce-pine forest, on lignum of *Pinus sylvestris*, 08.10.2008, leg. DH & IS (LECB); Primorsky District, central part of Yuntolovsky protected territory, 60°01'25"N, 30°10'19"E, birch and pine forest with spruce, on bark of

Pinus sylvestris, 25.05.2004, leg. DH & IS (H 8005672); all specimens contain atranorin and fumarprotocetraric acid. Totally 46 specimens were investigated. – New for LR, ELR, WLR and SPb. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Randlane & Saag, 1999), Lithuania (Motiejūnaitė, 1999). It appears to be very common crustose sorediate lichen in the region, with rather variable morphology and the presence of atranorin and fumarprotocetraric acid in thallus (Tønsberg 1992). Often inhabited by a lichenicolous fungus *Tremella lichenicola*.

Ochrolechia alboflavescens (Wulfen) Zahlbr. – ELR, T: Vepssky Les Regional Nature Reserve, Linzboloto Strictly Protected Zone, S shore of Zelenoe Lake, 60˚15'34"N, 34˚50'49"E, pine forest with *Vaccinium myrtillus*, *Ledum palustre*, lichens and green mosses, on lignum of *Picea abies*, 25.08.2006, leg. EK (LECB); WLR, Ik, PR: Gromovo (Sakkola), NW from Ol'khovka (Lapinlahti), Kurkisuo on S shore of Sukhodol'skoe Lake (Suvantojärvi), 60˚39'N, 30˚16'E, bark of *Pinus sylvestris*, 23.06.1917, leg. V. Räsänen (H 8000402), fertile; specimens contain gyrophoric (in apothecia only), variolaric, lichesterinic, protolichesterinic acids and unknown substances called microstictoides unknowns (see Kukwa, 2008). – New for LR, ELR and WLR. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Kukwa, 2009a). The species differs from other sorediate crustose lichens by often yellow colour of cortex, white, usually well-delimited soralia and the production of variolaric, lichesterinic and protolichesterinic acids (Kukwa 2008). This is a common lichen in boreal zone, preferring acidic bark of coniferous trees and birches (Kukwa, in prep.).

Ochrolechia bahusiensis H. Magn. (syn. *O. androgyna* C sensu Tønsberg 1992) – SPb, Ik: Kurortny District, Komarovo (Kellomäki), Komarovsky Bereg protected territory, 60˚11'11"N, 29˚45'49"E, mixed spruce forest, on bark of *Alnus glutinosa*, 24.09.2006, leg. DH, IS & EK (LECB), contains gyrophoric, lecanoric acids and murolic acid complex. – New for North-Western European Russia, LR and WLR. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Tønsberg, 1992; Kukwa, 2009b), Estonia, Lithuania (Kukwa, 2009a). Recently reported from Kaliningrad Region (Kukwa, 2009b). It is a taxon of *O. androgyna* complex characterized mainly by the production of murolic acid complex (Kukwa, 2009b). It is common in Central Europe and southern Fennoscandia, but rare northward (Kukwa, in prep.).

*Opegrapha lamyi (O.J. Rich. ex Nyl.) Triebel – ELR, P: W from Juksovskoe Lake, bank of the Shimaksa River, 5.3 km NW of Konets, 60˚55'N, 34˚51-52'E, mixed pine-spruce-aspen forest with rowans, on thallus and apothecia of *Lecanora allophana* Nyl. on bark of *Populus tremula*, leg. DH & IS (LECB). – New for RUS, LR and ELR. The specimen (Fig. 3) matches

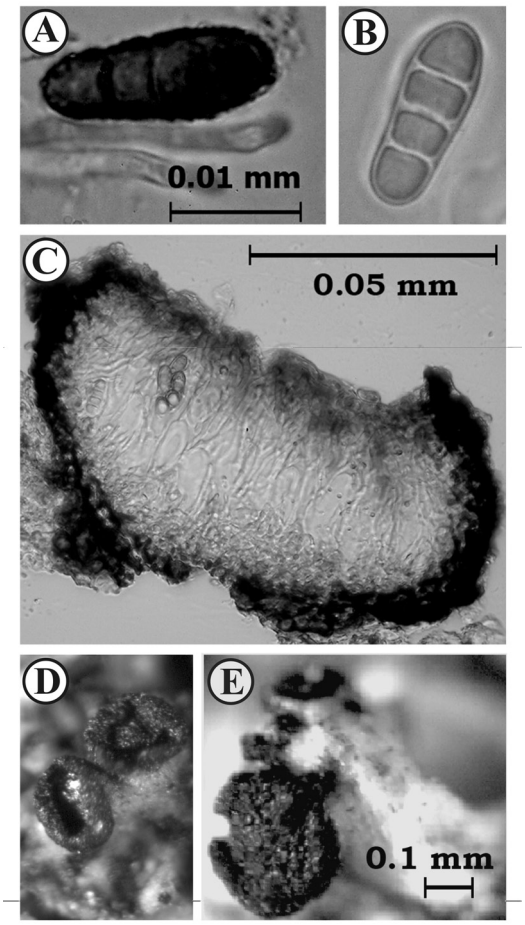

Fig. 3. *Opegrapha lamyi*: A – mature spore; B – immature spore; C – section of the apothecium; D, E – apothecia on thallus and apothecium of *Lecanora allophana*.

the description of the species, though the ascospores are slightly smaller (15–16 × 5–6 µm) than previously reported by Keissler (1930; 18–22 × 6–9 µm), Clauzade et al. (1989; 16–23 × 6–9 µm) and Hafellner (1994; 18–22 × 8–9 µm). Berger & Aptroot (2002) reported that spores of the specimen from Azores were shorter, however they provided no measurements. *O. lamyi* is the only lichenicolous *Opegrapha* inhabiting corticolous species of *Lecanora subfusca* group. The fungus is known from several European countries, Azores and North America (Keissler, 1930, Hafellner, 1994, Esslinger & Egan, 1995, Berger & Aptroot, 2002).

+ Phaeocalicium praecedens (Nyl.) A.F.W. Schmidt – ELR, Kol, P: 1.6 km SW of Rotmozero Lake and 7 km E of Posad, 61°04'35"N, 34°38'11"E, spruce forest with aspens, *Vaccinium myrtillus* and green mosses, on bark of decaying thin twigs of fallen *Populus tremula*, 18.09.2009, leg. DH & IS (LECB). – New for North-Western European Russia, LR and ELR. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Estonia (Randlane & Saag, 1999). Previously published record (Titov, 1983) of *P. praecedens* from WLR (Ik, VB, Roschino, Lindulovskaya Roscha protected territory, on thin twigs of *Alnus* sp. in the floodplain forest) belongs to *Stenocybe pullatula* (Ach.) Stein. *P. praecedens* differs from *S. pullatula* by non-septate smooth mature spores and occurrence on thin twigs of *Populus tremula* (Tibell, 1999; Titov, 2006).

Piccolia ochrophora (Nyl.) Hafellner (syn. *Strangospora ochrophora* (Nyl.) R.A. Anderson) – WLR, PR, Ik: ca. 6 km SEE of Gromovo (Sakkola), Kekkilä, 60°40'N, 30°18'E, on bark of *Populus tremula*, 28.05.1917, leg. V. Räsänen, (H 8003870); WLR, VB, Ka: Saviniemi, ca 4 km SE of Antrea, 60°54'N, 29°12'E, on bark of *Acer platanoides*, 28.06.1923, leg. I. Hiitonen (H 8000722, in the specimen of *Phaeophyscia orbicularis* (Neck.) Moberg); SPb, Ik: Kurortny District, SE part of Gladyshevsky protected territory, 60°11'40"N; 29°33'29"E, shore of Gulf of Finland, on bark of *Acer platanoides*, 25.09.2005, leg. DH, IS & LK (LECB); SPb, Kronstadt District: NW part of Kotlin island, at the fort Shantz, 60°01'39"N; 29°40'15"E, seashore, bark of old *Salix* sp. and *Sambucus racemosa*, 5.07.2007, leg. EK & IS (LECB). – New for North-Western European Russia, LR and WLR. Distribution in Fennoscandia and Baltic countries: Norway, Sweden, Finland (Santesson et al., 2004), Latvia (Czarnota & Kukwa, in press). The lichen is characterized by thin to almost invisible thallus and small brick-brown pruinose apothecia turning purple-red in K and multispored asci (Foucard, 2001).

*Tremella lichenicola Diederich – WLR, LU: Luga River Basin, 500 m W of Jaschera, left bank of the Jaschera River, 58°53'38"N, 29°48'42"E, floodplain grey alder forest, bark of *Alnus incana*, 01.05.2008, leg. EK & D. Erastova (LECB); SPb, Ik: Kurortny District, S part of Gladyshevsky protected territory, right bank of the Chernaya River, 1.5 km N of Primorskoe road, 60°13'N, 29°32'E, grey alder forest, bark of *Alnus incana*, 11.09.2009, leg. IS (LECB); SE part of Gladyshevsky protected territory, 2 km E of Sosnovaya Poljana (Vanhasaha), 60°13'30"N, 29°33'20"E, small green moss swamp with dwarf pines and birches, trunk and twigs of *Betula* sp., 07.05.2006, leg. IS, DH & LK (H 8005648, LECB); Komarovo (Kellomäki), W part of Schuch'e Ozero protected territory, NW of Schuch'e Lake (Haukijärvi), 60°13'10"N, 29°45'12"E, young birch-spruce-pine forest, lignum of *Pinus sylvestris*, 08.10.2008, leg. DH & IS (LECB). All specimens are on thalli of *Mycoblastus fucatus*. – New for Eastern Fennoscandia, North-Western European Russia, LR, WLR and SPb. Distribution in Fennoscandia and Baltic countries: Norway, Sweden (Santesson et al., 2004), Estonia (Suija, 2005), Lithuania (Motiejūnaitė, 2007). Host-specific lichenicolous heterobasidiomycete with dark brown to black, strongly gelatinized basidiomata (Diederich, 1996).

Taxa excluded from the lichen list of Eastern Leningrad Region

Byssoloma marginatum (Arnold) Serus. – reported by Himelbrant & Kuznetsova (2004; also cited in Kuznetsova & Himelbrant, 2004, 2006 and Kuznetsova et al., 2007); the specimen represents crustose, still unidentified lichen with apothecia strongly infected by a lichenicolous fungus.

Ochrolechia tartarea (L.) A. Massal. – reported by Ahti et al. (1991; also cited in Kuznetsova et al., 2007 and Kuznetsova, 2008); the specimen produces soredia and contains gyrophoric acid,

androgyna B unknowns; unknown pigments and belongs to *O. androgyna* (Hoffm.) Arnold s. str. (= *O. androgyna* B sensu Tønsberg, 1992).

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