

Laboulbeniales (Ascomycetes) from Latvia

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This contribution presents new and historical data on the Laboulbeniales of Latvian Coleoptera. An annotated checklist of 26 taxa is given, 13 are new for Latvia. Only six taxa (accepted names) from Briedis' historical list were found again and six more need to be confirmed as Briedis' material was lost. A neotype is indicated here for the extremely rare *Laboulbenia elaphricola* Siemaszko et Siemaszko. Its morphology is discussed and compared with *Laboulbenia elaphri* Spegazzini and *Laboulbenia vulgaris* Peyr.

Key words: *Laboulbeniales*, Latvia, *Coleoptera*, *Laboulbenia elaphricola*

INTRODUCTION

Laboulbeniales (Ascomycetes) are strictly parasitic on Arthropoda, mainly insects. Although widespread, information concerning their distribution in Europe is unequal and, as yet, a reflection of the distribution of laboulbeniologists in Europe (Weir, Rossi 1995). The most exhaustive studies were carried out in Spain and Poland, followed by France, Finland, Britain, Italy, Belgium, Germany and Hungary. From other European countries, including the Baltic countries, only very few and isolated reports or collections are available. Records from Estonia and Lithuania have been published in Siemaszko and Siemaszko (1928, 1932), Huldén (1985) and Markovskaja (2000) respectively. In Latvia 16 species of Laboulbeniales have been recorded in the literature (Briedis 1932; Huldén 1985). All species were found on ground beetles (Coleoptera, *Carabidae*) and all, but one *Misgomyces*, belong to *Laboulbenia*. A thorough study of Briedis' material and notes was not possible as it could not be located; we consider it lost.

This paper reports on newly collected material and literature records of Laboulbeniales found on Latvian Coleoptera (*Carabidae* and *Staphylinidae*).

MATERIALS AND METHODS

Carabidae and *Staphylinidae* (Coleoptera) were captured by hand or by means of pitfall traps. Sampling sites are situated in Latvia and mainly include river associated forests, riverine marshes and banks along the river Gauja and Abuls (Valmiera rajjons). Samples were also taken in the plant debris zones along the shorelines of the Baltic Sea, near Jurmala (Majori) and Pabazi (Balta Kapa). Hosts were killed and stored in 70 or 90% denaturated ethanol. Screening hosts for infections and preparing of thalli was done using a stereomicroscope at high magnification (25-50x). The thalli were mounted and stained in permanent slides using a medium based on Arabic gum with cotton blue and a trace of glycerine (De Kesel 1998). Field data (locality, GPS-coordinates, date and habitat), host data (taxon, gender and infection site) and parasite data (taxon, number of specimens and development) were recorded. Slide(s) from the Laboulbeniales and the corresponding hosts were given the same number (i.e. DKK-number); all material and notes are deposited at BR (Herbarium National Botanic Garden of Belgium). When specific identity of a host was doubtful only the generic name of the host was used, followed by sp. The generic taxonomy of *Staphylinidae* follows Lohse (1964) and Lohse et al. (1974), for *Carabidae* Lindroth (1974) or Freude (1976).

Nomenclature and identification of all Laboulbeniales found in Latvia is largely based on 'The Laboulbeniales of Poland' by T. Majewski (1994). We consider it a key reference work for the study of the Laboulbeniales from the Baltics. To avoid redundancy we refrained from giving exhaustive species descriptions and comments, unless complementary to the information given in Majewski (l.c.) or elsewhere.

RESULTS

Annotated and preliminary checklist of the Laboulbeniales from Latvia

In the following checklist we placed species in bold when they correspond with verified records, i.e. species found by us in 2004-2005 and with reference material in Herbarium BR. Species marked with an * are new for Latvia. Species in normal case have been mentioned in Briedis (1932); their presence in Latvia awaits confirmation.

Aphanandromyces audisioi W. Rossi*

• On *Brachypterus urticae* (Fabricius) (Coleoptera, *Nitidulidae*). DKK5-6: Valmiera, Gauja, tributary Misa, 11.08.2004, N57°31.66' – E025°26.47', on flowers of *Urtica*. Thalli were found on the elytra and the abdominal tergites of the hosts.

Euzodiomyces lathrobii Thaxt.*

• On *Lathrobium* sp. (Coleoptera, *Staphylinidae*). DKK17: Valmiera, Gauja, tributary Misa, 12.08.2004, N57°31.00' – E025°26.50', under litter and freshwater algae along rivulet banks. Thalli occur on the edges of the elytra.

Haplomyces texanus Thaxt.*

• On *Bledius* sp. (Coleoptera, *Staphylinidae*). DKK9: Valmiera, Gauja, 05.08.2004, N57°31.66' – E025°26.47', riverside. Thalli were found on the last abdominal tergite.

Laboulbenia argutoris Cépède, Picard*

• On *Pterostichus diligens* (Sturm) (Coleoptera, *Carabidae*). DKK48: Pabazi,

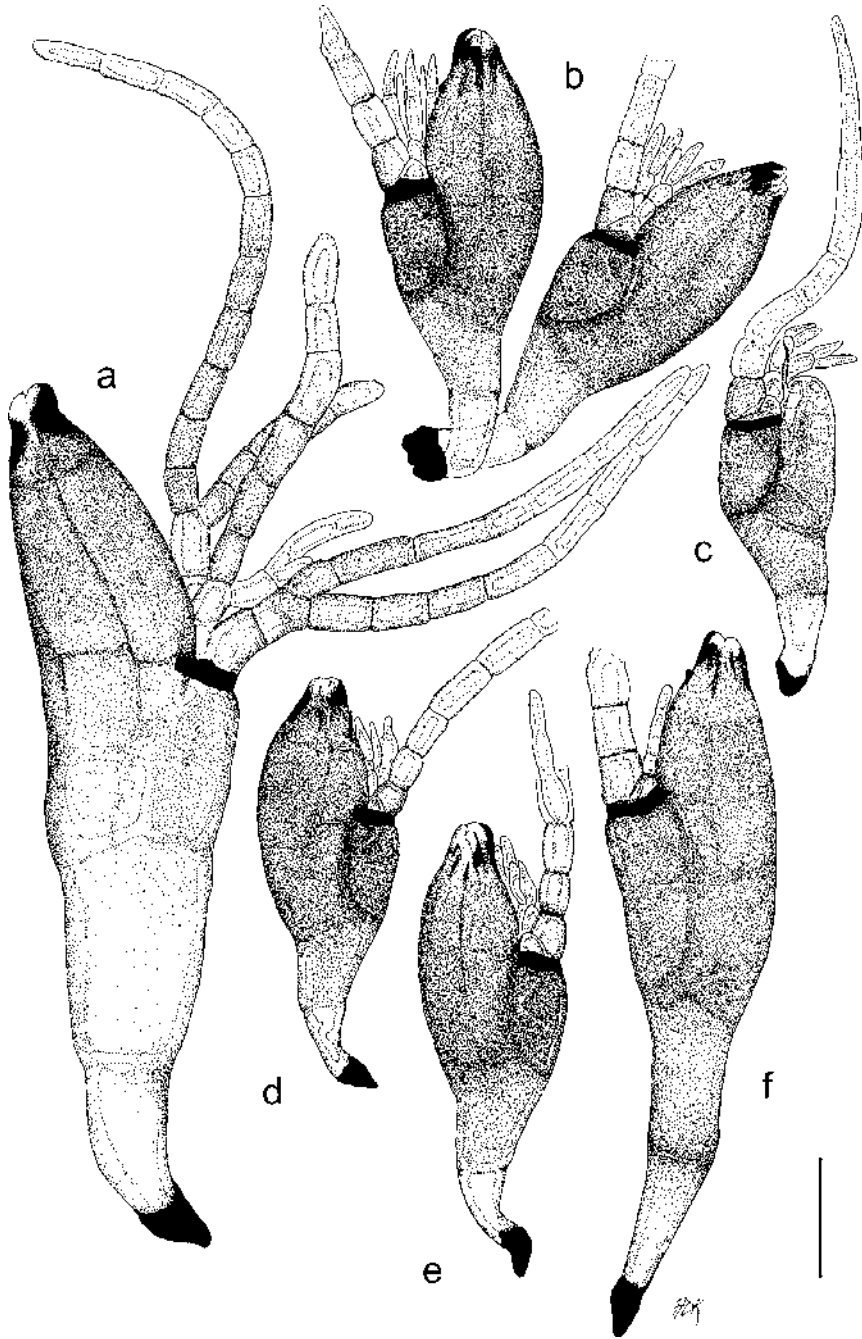


Fig. 1. a. *Laboulbenia elaphri* Spegazzini from pronotum of male *Elaphrus cupreus* (DKK43); b e. *Laboulbenia elaphricola* Siemaszko et Siemaszko, with b, d & e. from pronotum of male *Elaphrus riparius* (DKK62) and c. juvenile thallus with typical stout habit, taken from right elytron of female *Elaphrus riparius* (DKK38b); f. *Laboulbenia vulgaris* Peyr. from elytron of female *Bembidion* sp. (DKK44). Scale bar = 50 μ m.

Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along beach. Thalli were found on the elytra.

- On *Pterostichus* sp. (Coleoptera, *Carabidae*). DKK40: Brenguli, river Abuls, 31.05.2005, N57°32'56.2" – E025°32'24.3", along rivulet bank in forested area. Thalli were found on the elytra.

Laboulbenia calathi Majewski

- On *Calathus melanocephalus* L., in Zilupe (Briedis 1932)

Laboulbenia clivinalis Thaxt.

- On *Clivina fossor* L. (Coleoptera, *Carabidae*), in Valka, Latgale and Zilupe (Briedis 1932)

- On *Clivina fossor* L. DKK23: Jurmala, Majori, 02.06.2005, N56°58' – E023°45', in plant debris along the beach; DKK26: Valmiera, Gauja, 03.06.2005, N57°32'21.6" – E025°26'44.3", river bank with pioneer vegetation of willows; DKK46: Pabazi, Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along beach. Thalli are commonly found on both elytra and the metathorax.

Laboulbenia cristata Thaxt.*

- On *Paederus* cf. *riparius* (Coleoptera, *Staphylinidae*). DKK45: Pabazi, Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along beach. Thalli were found on the abdominal tergites, well protected by the elytra.

Laboulbenia dubia Thaxt.

- On *Philonthus fuscipennis* Mannh. and *Philonthus* sp., (Coleoptera, *Staphylinidae*), in Zilupe (Briedis 1932).

Laboulbenia elaphri Spegazzini*

- On *Elaphrus cupreus* Dufts. (Coleoptera, *Carabidae*). DKK25(a,b,c,d), DKK28: Valmiera, Gauja, 03.06.2005, N57°32'21.6" – E025°26'44.3", in river bank with pioneer vegetation of willows; DKK43: Brenguli, river Abuls, 31.05.2005, N57°32'56.2" – E025°32'24.3", along rivulet bank. Thalli were found on the right elytron, the pronotum and the mandibula. Thalli from the latter spot have a smaller lower receptaculum and exhibit a more stout habitus.

Laboulbenia elaphricola Siemaszko et Siemaszko *

- On *Elaphrus riparius* (L.) (Coleoptera, *Carabidae*). DKK38(a,b): Valmiera, Gauja, tributary Misa, 04.06.2005, N57°31.08' – E025°26.52', under litter, along rivulet bank in forested zone; DKK61, DKK62, DKK66: *ibidem s.l.*, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks; DKK42: Brenguli, river Abuls, 31.05.2005, N57°32'56.2" – E025°32'24.3", along rivulet bank in forested area. Thalli are found all over the hosts' integuments, but most thalli occur on the elytra and the pronotum.

Laboulbenia elaphricola was described by Siemaszko and Siemaszko in 1928 (Pol. Pismo Entomol. 6, pg. 200, T.VII, Fig. 2). It was found in Eastern Poland, Pulawy, on *Elaphrus riparius* L. The original description is very short and the drawing of the type represents a damaged and incomplete outer appendage. The type material was unfortunately lost during WWII (Majewski 1994). Since its description only Bănhegyi (1950) reported *L. elaphricola*, but stated later that his material belongs to *L. elaphri* (Bănhegyi 1964). *L. elaphricola* seems to be a very rare species, because very intensive screening of suitable habitats in Eastern Poland, Białowieża (Majewski 2003) did not supply new material. Today it is a species with an uncertain status. In the absence of information on its full morphology and eventual posi-

tion related variations, Bãnhegyí (1964) and Majewski (1994) suggested that it could just be a growth form of the more common *Laboulbenia elaphri* Spegazzini.

The numerous specimens we could collect on *Elaphrus riparius* from Latvia correspond with *L. elaphricola*. Our material confirms that this species is not a growth form of *L. elaphri* as its typical short and stout thalli occur invariably on different parts of the hosts' integument. *L. elaphricola* is indeed a small and dark species and no forms, even closely resembling *L. elaphri*, were seen on the studied hosts. We consider Siemaszko and Siemaszko's *L. elaphricola* a good species. It is very distinct from *L. elaphri* and actually close to *L. vulgaris*, as already stated by Siemaszko and Siemaszko (1928). The following diagnosis and figure 1 should help to separate it from *L. vulgaris*.

- All thalli of *L. elaphricola* are small and stout, invariably of their origin on the host. They are never longer than 220µm (foot-ostiolum).

- Already in an early stage of development *L. elaphricola* shows a deep pigmentation of the receptaculum. Except for the poorly and uniformly pigmented cell I, cell II and septum I-II, all adult specimens have a deeply pigmented to blackish thallus. In *L. vulgaris* the septum I-II is often darker, a feature that lacks in *L. elaphricola*.

- The perithecium is more free in *L. elaphricola* than in *L. vulgaris*, i.e. the insertion cell and cell V always being slightly below the middle of the perithecium in *L. elaphricola*.

- Cell II of *L. elaphricola* almost immediately widens upwards, forming a strikingly long septum with cell VI and a short septum with cell III. Cell VI is much broader than high. In most cases the septum II-VI is at least twice the length of septum II-III.

- The upper receptacle, i.e. the complex of cells III, IV and V, is delimited or demarcated from the rest of the thallus by a very deeply pigmented line, even in very young thalli. This darkened line starts at the anterior side of the insertion cell (close to the perithecium). It continues downwards along the adaxial septa of cell V, cell IV and cell III, makes a curves along the basal septum of the latter, to finally end at the posterior (dorsal) side of the receptacle.

- The outer appendage is not branched and relatively long. In many cases, but not always, the three basal cells of the outer appendage tend to be slightly inflated.

Specimens with a branched outer appendage occur very rarely and only as a result of damage and subsequent atypical regeneration of the appendage. The inner appendage is branched once or twice and never exceeding the ostiolum.

- The insertion cell is constricted, sometimes strongly.

The name bearing type material of *L. elaphricola* is lost and since its description *L. elaphricola* was not found again in Poland or elsewhere (Majewski pers. comm.). In this context we indicate our collection **DKK62** (kept at BR) from Latvia as **neotype** for *Laboulbenia elaphricola* Siemaszko et Siemaszko. This material was obtained from the elytra of *Elaphrus riparius* L., caught on 03.VI.2005 along the forested banks of a tributary of the river Gauja in Valmiera (Latvia, N57°31.08' – E025°26.52').

Laboulbenia fasciculata Peyr.

- On *Patrobus excavatus* Payk. (Coleoptera, *Carabidae*), in Ogre, Valka and Valmiera (Briedis 1932)

- On *Patrobus atrofufus* (Stroem), DKK3 & 4: Valmiera, Gauja, tributary Misa, 11.08.2004, N57°31.66' – E025°26.47', under debris along rivulet; DKK18, 19, 21: ibi-

dem, 12.08.2004. Thalli occur on all parts of the integument, some hosts are heavily infected, carrying over 200 thalli.

***Laboulbenia flagellata* Peyr.**

- On *Agonum albipes* Fabr. (as *Platynus ruficornis* Goeze), (Coleoptera, *Carabidae*), in Koknese and Ogre (Briedis 1932)

- On *Agonum assimile* (Paykull) (Coleoptera, *Carabidae*). DKK41: Brenguli, river Abuls, 31.05.2005, N57°32'56.2" – E025°32'24.3", along rivulet bank in forested area; DKK52(a,b), DKK63: Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks. Infections occur on the upper part of the exoskeleton, i.e. the pronotum and both elytra.

- On *Agonum viduum* (Panzer) (Coleoptera, *Carabidae*). DKK68: Valmiera, Gauja, tributary Misa, 10.08.2005, N57°32'0.5" – E025°26'49.2", in plant debris. Thalli were found on the elytra.

- On *Agonum* sp. (Coleoptera, *Carabidae*). DKK22: Valmiera, Gauja, tributary Misa, 10.08.2004, N57°31.00' – E025°26.50', under litter along rivulet banks. Thalli occur on all parts of the integument.

- On *Bembidion adustum* Schaum., *B. ustulatum* L. and *Bembidion* sp., in Valka (Briedis 1932)

- On *Bembidion fluviatile* L., in Valmiera (Briedis 1932)

Remark: Briedis (1932) reports mixed infection with *L. luxurians*, *L. pedicellata* and *L. vulgaris*. The presence of *Laboulbenia flagellata* on *Bembidion* is however doubtful and hitherto not mentioned on any species of *Bembidion* in Europe (Santamaría et al. 1991; Majewski 1994).

***Laboulbenia filifera* Thaxt.**

- On *Harpalus aeneus* Fabr. (Coleoptera, *Carabidae*), in Valka (Briedis 1932)

***Laboulbenia hyalopoda* De Kesel ***

- On *Dromius linearis* (Olivier) (Coleoptera, *Carabidae*). DKK69: Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49", riverine marsh, in dead stem of *Heracleum* cf. *sphondylium* L. (Hogweed). Despite their length, thalli are very easily overlooked. They were found on the caudal extremity (soft parts) of the last abdominal segment.

Thallus very slender, hyaline to yellowish, up to 390 µm long. Receptaculum slender, 210 µm high. Cell I and II three to four times higher than broad, without pigmentation. Base of cell I not pigmented; foot hyaline, with one or two small brownish spots. Cell III and IV about the same height (20-25 µm), two times higher than broad. Adaxial side of cell V free from the perithecium. Cell V triangular, slightly rounded, half as high as cell IV. Insertion cell amber to dark brown, moderately constricted. Abaxial (outer) appendage straight, not branched, up to 80 µm long, probably longer in undamaged specimens, not pigmented and without dark septa; parafysopodium (basal cell of outer appendage) similar to other cells, up to 20 µm high. Adaxial (inner) appendage hardly pigmented, up to 80 µm long; andropodium up to 8 µm long, bearing two simple appendages. Antheridia not seen. Cell VI smaller than cell III, easily distinguished as is the rest of the perithecial basal cells. Perithecium long, slender and slightly asymmetrically curved, 180 × 32 µm, widest below the middle, hyaline, without or almost without pigmentation at the abaxial side; perithecial apex is differentiated in a 70 µm long and slender abaxially bent

neck. Ostiolum hyaline, consisting of 4 strongly inflated cells (lips), the most adaxial cell (lip) up to 20µm shorter than the others.

***Laboulbenia luxurians* Thaxt.**

- On *Bembidion adustum* Schaum, (Coleoptera, *Carabidae*), in Sigulda (Briedis 1932)

- On *Bembidion dentellum* (Thunb.) (Coleoptera, *Carabidae*). DKK53 (mixed with *L. vulgaris*): Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks. Thalli occur on the abdomen.

- On *Bembidion littorale* Oliv. (Coleoptera, *Carabidae*), in Ogre (Briedis 1932)

- On *Bembidion tetracolum* Say. (Coleoptera, *Carabidae*). DKK54, DKK55(a,b), DKK58(a), DKK59, DKK65 (mixed with *L. vulgaris*): Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks. Thalli were found on all body parts, often on the pronotum, the elytra, the prothorax and the legs.

- On *Bembidion ustulatum* Duft., *B. andreae* Er., in Sigulda (Briedis 1932)

Remarks: Briedis (1932) reports mixed infection with *L. flagellata*, *L. pedicellata* and *L. vulgaris*. In our material mixed infections were only observed on *Bembidion dentellum* and *Bembidion tetracolum*, i.e. mixed with *L. vulgaris* (see DKK53 and DKK58(a,b) & DKK65 respectively).

***Laboulbenia pedicellata* Thaxt.**

- On *Dyschirius globosus* Herbst (Coleoptera, *Carabidae*), in Zilupe (Briedis 1932)

- On *Dyschirius thoracicus* (Rossi) (Coleoptera, *Carabidae*), in Riga and Sigulda (Huldén 1985)

- On *Dyschirius sp.* (Coleoptera, *Carabidae*). DKK10, DKK13: Valmiera, Gauja, 05.08.2004, N57°31.66' – E025°26.47', along de riverside; DKK30(b), DKK31, DKK36, DKK37(a,b): Valmiera, Gauja, 03.06.2005, N57°32'22.1" – E025°26'41.3", riverside, on sand ; DKK50 : Pabazi, Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along beach. Thalli occur on the elytra, the pro- and metathorax and tibia.

- On *Bembidion adustum* Schaum (Coleoptera, *Carabidae*), in Valka (Briedis 1932)

- On *Bembidion sp.* (Coleoptera, *Carabidae*), DKK11,12: Valmiera, Gauja, 05.08.2004, N57°31.66' – E025°26.47', along de riverside ; DKK24: Jurmala, Majori, 02.06.2005, N56°58' – E023°45', in plant debris along the beach; DKK51: Pabazi, Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along beach. Thalli occur on the legs (femur) and the elytra.

Laboulbenia philonthi* Thaxt.

- On *Philonthus sp.* (Coleoptera, *Staphylinidae*). DKK8: Valmiera, Gauja, 05.08.2004, N57°31.6' – E025°26.5', along the shoreline; DKK27: Valmiera, Gauja, 03.06.2005, N57°32'21.6" – E025°26'44.3", in river bank with pioneer vegetation of willows.; DKK29: Valmiera, Gauja, 03.06.2005, N57°32'22.1" – E025°26'41.3", river-side, on sand. Thalli were found on the abdominal tergites and the cephalon.

Laboulbenia pseudomasei* Thaxt.

- On *Pterostichus nigrita* (Payk.) (Coleoptera, *Carabidae*). DKK47 : Pabazi, Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along beach; DKK60,

DKK64: Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks. Thalli were found on the elytra, the pro- and metathorax. Proliferation of appendages is very common in adult thalli.

- On *Pterostichus* sp., DKK1-2: Valmiera, Gauja, tributary Misa, 11.08.2004, N57°31.66' – E025°26.47', under debris along rivulet; DKK20: ibidem, 12.08.2004. Thalli were found on various parts of the integument, i.e. legs, pronotum and both elytra.

Laboulbenia rigida Thaxt.

- On *Pterostichus nigrata* (Payk.) (Coleoptera, *Carabidae*), in Valka (Briedis 1932)

Laboulbenia rougetii Montagne, Robin

- On *Chlaenius vestitus* Payk. (Coleoptera, *Carabidae*), near Ogre (Briedis 1932)

Laboulbenia thaxteri Cépède, Picard

- On *Asaphidion flavipes* (L.) (Coleoptera, *Carabidae*), in Sigulda (Huldén 1985)

Laboulbenia vulgaris Peyr.

- On *Bembidion andreae* Er. (Coleoptera, *Carabidae*), in Valmiera (Briedis 1932)

- On *Bembidion dentellum* (Thunb.). DKK53 (mixed with *L. luxurians*): Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks. Thalli occurred on the abdomen.

- On *Bembidion lunatum* Duft. (Coleoptera, *Carabidae*), in Sigulda (Briedis 1932)

- On *Bembidion saxatile* Gyll. (Coleoptera, *Carabidae*), in Valka (Briedis 1932)

- On *Bembidion tetracolum* Say. (Coleoptera, *Carabidae*), DKK56, DKK57, DKK58(b), DKK65 (mixed with *L. luxurians*): Valmiera, Gauja, tributary Misa, 03.06.2005, N57°32'0.5" – E025°26'49.2", along rivulet banks. Thalli were observed on the pronotum, the elytra and to a lesser degree also on the legs.

- On *Bembidion* sp. (Coleoptera, *Carabidae*). DKK39: Valmiera, Gauja, tributary Misa, 04.06.2005, N57°31.08' – E025°26.52', under litter, along rivulet bank in forested zone; DKK44: Brenguli, river Abuls, 31.05.2005, N57°32'56.2" – E025°32'24.3", along rivulet bank in forested area. Hosts are infected on the elytra.

Remark: mixed infections with *Laboulbenia luxurians* are often observed on *Bembidion tetracolum* (cf. DKK65).

Misgomyces dyschirii Thaxt.

- On *Dyschirius globosus* (Herbst.) (Coleoptera, *Carabidae*): in Sigulda and Jugla (Huldén 1985)

- On *Dyschirius* sp. DKK30(a): Valmiera, Gauja, 03.06.2005, N57°32'22.1" – E025°26'41.3", riverside, on sand; DKK35: ibidem s.l., N57°32'21.6" – E025°26'44.3", sandy shores of Gauja. Thalli were found in the side edges from the elytra.

Monoicomyces britannicus Thaxt. *

- On *Atheta* sp. (Coleoptera, *Staphylinidae*, *Aleocharinae*). DKK49(a,b,c): Pabazi, Balta Kapa, 04.06.2005, N57°14'07.8" – E024°23'28.7", in debris along the beach. An easily overlooked species. Thalli were growing on the cephalon, between the antennae.

Peyritschiella protea Thaxt.*

• On *Anotylus* sp. (Coleoptera, *Staphylinidae*). DKK32(a,b), DKK33: Valmiera, Gauja, 03.06.2005, N57°32'21.6" – E025°26'44.3", river bank with pioneer vegetation of *Salix* sp. Thalli occur on the antennae, the legs and metasternum.

Rhadinomyces cristatus Thaxt.*

• On *Lathrobium* sp. (Coleoptera, *Staphylinidae*). DKK15, 16: Valmiera, Gauja, tributary Misa, 12.08.2004, N57°31.00' – E025°26.50', under litter and freshwater algae along rivulet banks. Thalli occur on the metasternum, abdominal tergites and some of the coxae.

SYNONYMS AND DOUBTFUL OR EXCLUDED RECORDS MENTIONED IN BRIEDIS (1932)

The species listed below represent historical records from Briedis (1932). All these taxa were either reduced into synonymy (Santamaría et al. 1991 or Majewski 1994) or should be considered as doubtful records in the studied area.

1. *Laboulbenia brachiata* Thaxt. *L. fasciculata* Peyr.
2. *Laboulbenia elongata* Thaxt. *L. flagellata* Peyr.
3. *Laboulbenia europaea* Thaxt. *L. rougetii* Montagne, Robin
4. *Laboulbenia fumosa* Thaxt.
 - On *Agonum piceum* L., in Valka
5. *Laboulbenia harpali* Thaxt.
 - On *Harpalus pubescens* Müll., in Zilupe
 - On *Harpalus tardus* Panz., *H. hirtipes* Panz., *H. aeneus* Fabr., in Valka
6. *Laboulbenia parvula* Thaxt. doubtful in Europe (Santamaría et al. 1991)
 - On *Agonum assimile* (as *Platynus assimilis* Payk.), near Valka
7. *Laboulbenia polyphaga* Thaxt., i.e. var. *calathicola* probably to be considered a record of *L. calathi*

CONCLUSIONS

- Twenty six species are reported for Latvia, 13 are new for the studied territory.
- Six species reported by Briedis (1932) were confirmed.
- The presence of six more species, reported by Briedis (1932) and Huldén (1985), needs to be confirmed with new material as Briedis' original material from Latvia is untraceable.
- *Laboulbenia elaphricola* Siemaszko et Siemaszko is reported for Latvia. This taxon is extremely rare and not reported, with certainty, since its discovery. It has an uncertain status because of a very short original diagnosis. The name bearing type was unfortunately lost and *L. elaphricola* is currently considered a growth form of *L. elaphri*. The Latvian material, however, provides enough evidence that *L. elaphricola* is a good species.

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Gatunki *Laboulbeniales* (*Ascomycetes*) z terenu Łotwy

Streszczenie

W artykule przedstawiono zarówno nowe jak i historyczne dane o gatunkach *Laboulbeniales* występujących na łotewskich *Coleoptera*, przede wszystkim na *Carabidae* i *Staphylinidae*. Odnotowano 26 gatunków, z których 13 jest nowych dla Łotwy. Pierwsza lista gatunków *Laboulbeniales* z Łotwy została opublikowana w roku 1932 przez Briedisa w Acta Horti Botanici Universitatis Latviensis. Kolekcja Briedisa najprawdopodobniej zaginęła. Sześć potwierdzonych taksonów z listy Briedisa zostało na nowo odnalezionych, a dalsze sześć należy odszukać. Krytyczna lista 26 gatunków zawiera również uwagi taksonomiczne dotyczące m. in. *Laboulbenia elaphricola* Siemaszko et Siemaszko.