

Fungi and slime molds of alder and willow alluvial forests of the upper part of the Muránka river (central Slovakia)

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Abstract

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Mycological and floristic research was carried out in alluvial forests (alliances *Alnion incanae* Pawłowski in Pawłowski et al. 1928 and *Salicion albae* Soó 1930) in the alluvium of the Muránka river in the north-western part of the Gemer region in central Slovakia during 2009–2012. In the studied forest stands the authors identified altogether 236 macromycetes and 13 slime molds (in total 249 taxa). As the first records for Slovakia following specimens were found out: *Diderma globosum* var. *europaeum*, *Fuligo laeviderma* (Myxomycota), *Entomophthora coleopterorum* (Zygomycota), *Acrospermum compressum*, *Belonopsis filispora*, *Echnoa infernalis*, *Xylaria digitata* (Ascomycota) and *Hohenbuehelia angustata*, *Melampsora amygdalinae* (Basidiomycota). The highest number of taxa belong among lignicolous saprotrophes (158 species) and terrestrial saprotrophes (51 species), this might be because of enough dead wood substrate and rich humus litter layer on alluvial soils in the habitats. On the other hand, the number of lignicolous parasites (13 taxa) and ectomycorrhizal symbionts (11 taxa) were rather low.

Keywords

alluvial forests, *Alnion incanae*, macromycetes, *Salicion albae*, slime molds, the Western Carpathians

Introduction

The upper and central Gemer region with the upper part of the Muránka river is a very interesting territory thanks to its botanical and mycological values. From Muráň to Jelšava southwards, the Muránka watercourse is bordered with a wide alluvial floodplain – a natural artery and biocorridor of the whole river valley of Muránka. This segment of the river, together with its tributaries, is rich in large tree stands with dominant *Alnus glutinosa* and/or *Salix fragilis*, in lower parts also with *S. alba* (alliances *Alnion incanae* Pawłowski in Pawłowski et al. 1928 and *Salicion albae* Soó 1930). However, only a few of these habitats (relatively well preserved and developed) may be considered the remnants of the original alluvial forests. In most cases, they are fragments of the successional alluvial forests which have been develop-

ing on the abandoned alluvial meadows since the first half of the 20th century. It is also necessary to note that the concerned territory has been exposed to the strong influence of various human activities, such as regulation of water streams, controlling of river beds, traffic, agriculture, illegal tree cutting, invasions of alien plant species and similar factors.

The first floristic data from the alluvium of the Muránka river were published by Gustáv Maurícius Reuss, a medical man and an important Slovak botanist and polymath (REUSS, 1853–1854). Later and recently published data can be found in URVICHAROVÁ (1967) and in BLANÁR and MIHÁL (2002). From the mycological view, the macromycetes in the alluvial forests of the Muránka river have been studied only in one locality near Revúca city (BLANÁR and MIHÁL, 2002). On the other hand, the diverse forest communities in the sur-

roundings – the Muránska planina Mts, the Stolické vrchy Mts and the Revúcka vrchovina Hills were subject to several mycological studies. For example, fragmental but comprehensive data from the Muránska planina, Stolické vrchy and Revúcka vrchovina were reported by KOTLABA et al. (1991), GLEJDURA (2013), KUČERA and KAUTMANOVÁ (2011), MIHÁL et al. (2011), MIHÁL and BLANÁR (1999, 2007, 2011) and RÍPKOVÁ and BLANÁR (2002, 2004). Across the wider neighbourhood of the investigated area, mycological research was carried out on selected localities in alluvial floodplain forests, gravel pits and marshes in the Cerová vrchovina highlands (MIHÁL, 1995, 2006), in Ostrôžky Mts (MIHÁL, 2001) and along the Ipeľ river (MIHÁL, 1997a, 1997b).

The aim of this work is to present the results of our mycological, floristic and phytocoenological research of alluvial floodplain forests in selected localities along the upper part of the Muránka river, between the village Muráň and Jelšava city.

Material and methods

The research was carried out on selected 7 localities in the alluvium of the upper part of the Muránka river and of its right-side tributary Lehotský potok creek. Field excursions were realised at irregular time intervals, from 2009 to 2012. The time schedule of the excursions is in the appendix taxa. Several additional samplings for verification and taxonomical revision were also performed in 2013. In this study, we also present the mycological data adopted from BLANÁR and MIHÁL (2002), RÍPKOVÁ and BLANÁR (2004), MIHÁL and BLANÁR (2011), MIHÁL et al. (2011).

The nomenclature and authors' abbreviations have been adopted from LIZOŇ and BACIGÁLOVÁ (1998), ŠKUBLA (2003), some also from the database by COOPER and KIRK (2013). The nomenclature of vascular plants follows the Checklist of non-vascular and vascular plants of Slovakia (MARHOLD, 1998). The phytocoenological relevés were prepared according to the methods designed by the Zürich-Montpellier school (BRAUN-BLANQUET, 1964), with an extended scale for the species cover. This abundance and dominance scale consists of nine degrees, the degree 2 diversified into 2a, 2b and 2m (BARKMAN et al., 1964). The nomenclature of syntaxa is according to the List of the syntaxa of Slovakia (JAROLÍMEK et al., 2008). Mentioned in the text for the first time, the names of syntaxa are given together with the name of their authors or also with the year of their description. The habitats are classified as in the Catalogue of habitats of Slovakia (STANOVÁ and VALACHOVIČ, 2002).

The several abbreviations are used in the text – abbreviations of the collectors and/or determinators of studied material: DB (Drahoš Blanár), IM (Ivan Mi-

hál), SJ (Soňa Jančovičová), SG (Stanislav Glejdura), VK (Viktor Kučera), VaK (Václav Kautman); abbreviations of the herbaria: BRA (h. Slovak National Museum in Bratislava), SLO (h. Comenius University in Bratislava, Faculty of Natural Sciences, Department of Botany), herb. IM (personal herbarium of I. Mihál), herb. DB (of D. Blanár), PVK (of V. Kautman), PSG (of S. Glejdura); marking of biotop is following: Ls1.1 (Natura 2000: 91E0* Mixed ash-alder alluvial forests of temperate and Boreal Europe), Ls1.3 (Natura 2000: 91E0* Ash-alder submountain alluvial forests); abbreviation of syntaxons: assoc. – association; another abbreviations/marks: agg. (aggregate taxon), juv. – juveniles (plant aged less than 1 year), ca – circa, ø – average, N – north, S – south, E – east, W – west, E_C – total vegetation cover, E₃ – cover/diversity of tree layer, E₂ – cover/diversity of shrub layer, E₁ – cover/diversity of herb layer, E₀ – cover/diversity of mosses, h_{E3} – average height of E₃ layer (height estimation), h_{E2} – average height of E₂ layer, h_{E1} – average height of E₁ layer, NP – National Park.

Not deposited material in herbaria is abbreviated as not. sensu KOTLABA (1999). The elevation marks for the mountains have been adopted from the tourist map Stolické vrchy – Revúca with a scale of 1 : 50,000 (KORDOVÁNER, 2006).

The area of research

The investigated area covers the alluvium of the upper part of the Muránka river together with its tributary Lehotský potok creek, partly also the alluvium of Zdychavka stream (its inflow into the Muránka), namely between the village of Muránska Lehota and the town of Jelšava. The individual studied localities are marked in the map (Fig. 1).

The watercourse Muránka is situated in the river basin of the Slaná river (cf. TURBEK, 1980). According to the phytogeographic classification, studied localities belong to the West-Carpathian flora (*Carpatium occidentale*), pre-Carpathian flora division (*Praecarpaticum*), district 15 – Slovenské rudohorie; one locality (Lehotský potok) is on the borderline between district 16 – Muránska planina and district 15. In terms of geomorphology (MAZÚR and LUKNIŠ, 1980), the studied alluvium is situated in the province West Carpathians, sub-province inner West Carpathians, region Slovenské rudohorie, geomorphological units Stolické vrchy and Revúcka vrchovina. The localities are situated on Pleistocene proluvial clay-silicate to gravel sediments of the Muráň (Muránka) river and Lehotský potok creek. As for the climate (TARÁBEK, 1980), the studied area belongs to the sub-type of moderately warm mountain climate (localities north of Revúca) and warm mountain climate (localities south of Revúca).

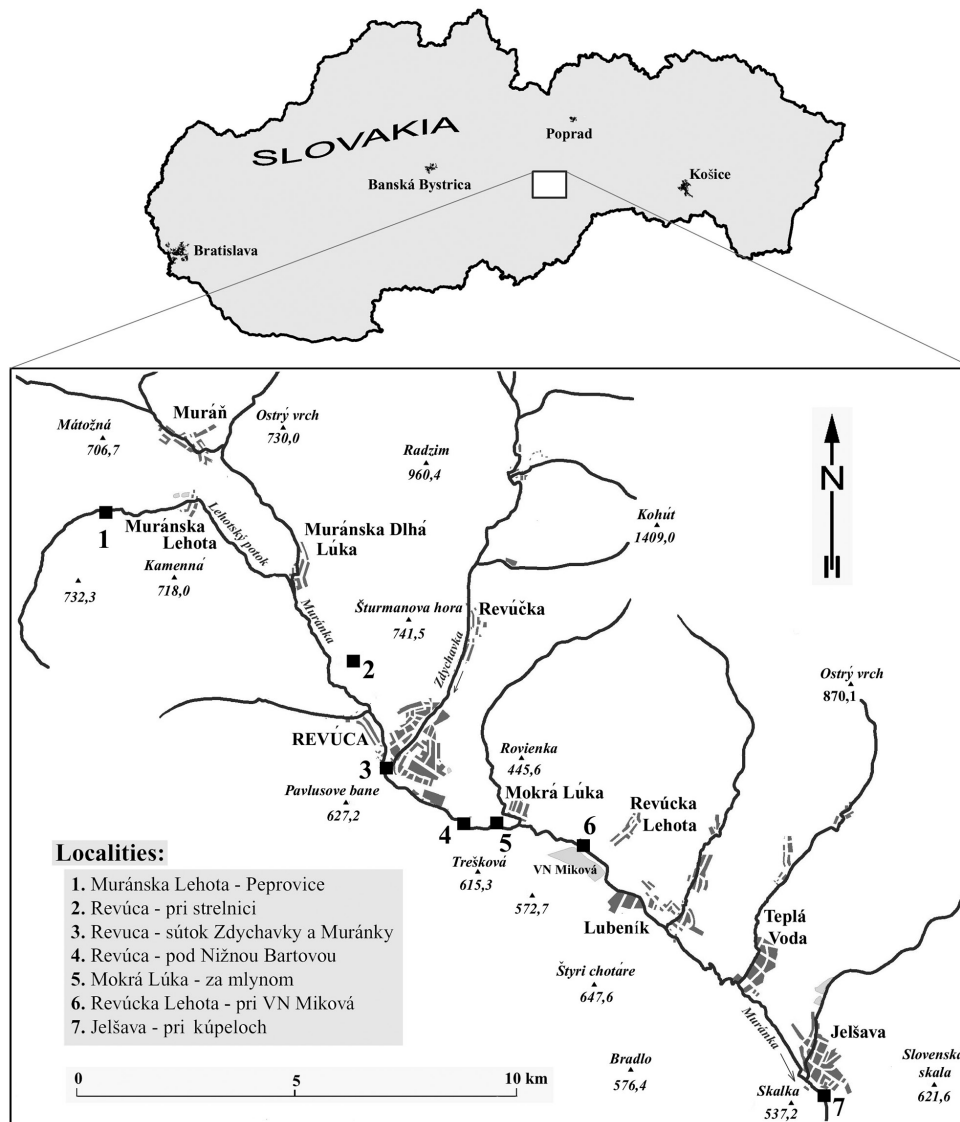


Fig. 1. The map of investigated area of alluvial forests of the Muránka river (Author D. Blanár).

We have recorded species diversity of macromycetes in 7 localities in the alluvium of the Muránka river (and also Lehotský potok creek and at the inflow of Zdychavka creek). The localities were selected to cover the wide range of types of alder and willow floodplain stands with *Salix alba* and *S. fragilis*, together with fragments and successional stages of such stands in the upper part of the Muránka river. Each locality is supplemented by the following informations: geomorphological unit; cadastral area, locality (closer description), altitude; central European mapping grid quadrant DFS (cf. JASIČOVÁ and ZAHRADNÍKOVÁ, 1976); habitat (biotope, syntaxon – alliance or association); substrate; approx. area of the habitat (in ha⁻¹). We have also provided a short description of the vegetation (list of some dominant and characteristic species of vascular plants and mosses-bryophytes).

Characteristics of localities

Locality No. 1: Muránska planina Mts/Stolické vrchy Mts; Muráň; Peprovce (W of the Muránska Lehota village), SSW of the beginning of Javorníkova dolina valley, alluvium of Lehotský potok creek; 405–400 m a.s.l.; DFS 7286c; alder stand (Ls1.3; *Alnion incanae*); sandy and sandy-loam soil; ca 1.5 ha⁻¹.

The alder stand (assoc. *Stellario-Alnetum glutinosae* Lohmeyer 1957) is described by the following phytocoenological record:

Record No. 1: Muránska Lehota, W of the village, alder stand in alluvium of Lehotský stream; 48.725900° N –20.023266° E ± 7 m; 400 m a.s.l., exp. NNE, slope 2°, area of record: 15 × 20 m, 2. 7. 2010, D. Blanár [original releve DB-9/2010].

Cover E_c: 98%, E₂: 95%, E₂: 35%, E₁: 95%, E₀: 3%; h_{E3} = 18–20 m (*Alnus glutinosa*, *Fraxinus excelsior*)/8–12 m (*Acer pseudoplatanus*), h_{E2} = 3–4 m, h_{E1} = 15–20 cm (*Aegopodium podagraria*, *Galeobdolon montanum*)/50–80 cm (*Rubus caesius*)

E₃: *Alnus glutinosa* 5, *Fraxinus excelsior* 1, *Alnus incana* +, *Acer pseudoplatanus* +, *Tilia cordata* +, *Salix fragilis* +

E₂: *Corylus avellana* 2b, *Carpinus betulus* 1, *Fraxinus excelsior* 1, *Acer pseudoplatanus* +, *Alnus glutinosa* +, *Fagus sylvatica* +, *Humulus lupulus* +, *Sambucus nigra* +, *Swida sanguinea* agg. +, *Tilia cordata* +

E₁: *Crepis paludosa* 2b, *Galeobdolon montanum* 2b, *Aegopodium podagraria* 2a, *Fraxinus excelsior* 2a, *Rubus caesius* 1, *R. fruticosus* 2a, *Athyrium filix-femina* 1, *Brachypodium sylvaticum* 1, *Caltha laeta* 1, *Carex sylvatica* 1, *Deschampsia caespitosa* 1, *Rubus idaeus* 1, *Viburnum opulus* +, *Asarum europaeum* +–1, *Impatiens parviflora* +–1, *Acer pseudoplatanus* +, *Alnus incana* +, *Cerasus avium* +, *Circaea lutetiana* +, *Cirsium oleraceum* +, *Corylus avellana* +, *Crataegus monogyna* +, *Dentaria bulbifera* +, *Dryopteris carthusiana* +, *D. filix-mas* +, *Festuca gigantea* +, *Euonymus europaeus* +, *Filipendula ulmaria* +, *Geum urbanum* +, *Humulus lupulus* +, *Lycopus europaeus* +, *Myosotis scorpioides* agg. +, *Lysimachia vulgaris* 1, *Malus sylvestris* +, *Paris quadrifolia* +, *Primula elatior* +, *Ranunculus auricomus* agg. +, *Ribes uva-crispa* subsp. *grossularia* +, *Sambucus nigra* +, *Stachys sylvatica* +, *Stellaria nemorum* +, *Solanum dulcamara* +, *Tilia cordata* +, *Juglans regia* r, *Lychnis flos-cuculi* +, *Quercus petraea* agg. r

E₀: *Atrichum undulatum* +, *Brachytecium* sp. 1, *Plagiomnium* sp. +.

Locality No. 2: Stolické vrchy Mts; Revúca; near target range, SW–SWW of the Šturmanova hora Mt (741.5 m a.s.l.), along to the railway line; 325–330 m a.s.l.; DFS 7286d/7386b; willow stand (Ls1.3; *Alnion incanae*); sandy-loam soil; ca 1 ha⁻¹.

The vegetation on this locality (assoc. *Stellario-Alnetum glutinosae*) is described by the following record:

Record No. 2: Revúca; SW–SWW of Šturmanova hora Mt (741.5 m a.s.l.); alder-willow stand (30–50 years forest); 48.700944° N – 20.095527° E ± 9 m; 330 m a.s.l., exp. SW, slope 1°, area of record: 15 × 20 m, 2. 10. 2009, D. Blanár [original releve DB-2.10.2009].

Cover E_c: 98%, E₃: 97%, E₂: 45%, E₁: 40%, E₀: 3%; h_{E3} = 15–20 m, h_{E2} = 2–4 m, h_{E1} = 15–20/40 cm

E₃: *Alnus glutinosa* 3, *Salix fragilis* 3, *Padus racemosa* 1, *Carpinus betulus* +

E₂: *Swida sanguinea* agg. 3, *Sambucus nigra* 1, *Viburnum opulus* 1, *Carpinus betulus* +, *Euonymus europaeus* +, *Humulus lupulus* +, *Tilia cordata* +, *Ulmus glabra* +

E₁: *Chrysosplenium alternifolium* 2b, *Glechoma hirsuta* 2a, *Urtica dioica* 2a, *Galium aparine* (juv.) 2m, *Swida sanguinea* agg. 1, *Brachypodium sylvaticum* +, *Circaea lutetiana* +, *Deschampsia caespitosa* +, *Euonymus europaeus* +, *Filipendula ulmaria* +, *Geum urbanum* +, *Lamium maculatum* +, *Lysimachia nummularia* +, *Padus racemosa* +, *Rubus caesius* +, *Stachys sylvatica* +, *Ulmus glabra* +, *Athyrium filix-femina* r, *Fagus sylvatica* r

E₀: *Brachytecium rivulare* 1, *Eurhynchium hians* 1.

Locality No. 3: Revúcka vrchovina Hills; Revúca; conflux of the Zdychavka creek and Muránka river, alluvium; ca 310 m a.s.l.; DFS 7386b; willow and alder-willow stand (Ls1.1, Ls1.3; *Salicion albae*, *Alnion incanae*); sandy-loam soil; ca 0.8 ha⁻¹.

3a. willow-alder stand – in part near the Zdychavka river (*Alnion incanae*).

The vegetation of assoc. *Stellario-Alnetum glutinosae* is characterised by the phytocoenological record according to BLANÁR and MIHÁL (2002). The woody species *Alnus glutinosa*, *A. incana* and *Salix fragilis* are typical for this locality as well as the bushes species *Salix caprea*, *S. cinerea*, *Sambucus nigra* and *Padus racemosa* (in BLANÁR and MIHÁL, 2002 the *S. cinerea* is wrongly presented as *Salix incana*!).

3b. willow stand – in part further to the Zdychavka river (*Salicion albae*).

Vegetation-forming woody species is *Salix fragilis*. The herba layer is mainly formed by *Urtica dioica*, *Lamium maculatum* and *Chrysosplenium alternifolium*. The characteristic vernal species are *Anemone ranunculoides*, *Corydalis solida*, *Dentaria glandulosa* and *Ficaria verna*.

Locality No. 4: Revúcka vrchovina Hills; Revúca; below the Nižná Bartová, (alluvium of the Muránka river); 290–294 m a.s.l.; DFS 7386b; willow mixed forest on distributary delta of Muránka river (Ls1.1, Ls1.3; *Salicion albae*, *Alnion incanae*); sandy-loam soil; ca 1.5 ha⁻¹.

Salix fragilis, *Ulmus glabra*, *Padus racemosa*, *Alnus glutinosa*, *A. incana* species are dominant, *Salix alba* and *Populus nigra* are subdominant woody species. The liane *Parthenocissus quinquefolia* occurs on the woody species. The species *Humulus lupulus*, *Euonymus europaeus*, *Sambucus nigra*, *Salix cinerea*, *S. purpurea* have been found out in the shrub layer. The herb layer is developed by *Urtica dioica*, *Rubus caesius*, *Lamium maculatum*, *Glechoma hirsuta*, *Aegopodium podagraria*, *Galium aparine*, *Myosoton aquaticum* and *Chrysosplenium alternifolium*. The species *Parietaria officinalis*, *Lunaria rediviva* and *Virga pilosa* are rare. As the vernal species, *Anemone nemorosa*, *Dentaria glandulosa* and *Gagea lutea* have been found out. The protected *Matteuccia struthiopteris* species also occurs rarely. As the invasive species are *Fallopia japonica*, *Helianthus tuberosus* and *Impatiens glandulifera*. The stand was dominated by *Salix fragilis* (alliance *Salicion albae*) which is characterised by the following record:

Record No. 3: Revúca; fragment of willow alluvial forest; 20.133472° E – 48.669888° N ± 9 m; 290 m a.s.l.; exp. SSE, slope 1°, area of the record: 15 × 20 m, 15. 8. 2009, D. Blanár [original releve DB-15.8.2009].

Cover E_c: 100%, E₃: 75%, E₂: 45%, E₁: 96%, E₀: do 1%; h_{E3} = 25 m, h_{E2} = 4–6 m, h_{E1} = 190/70/25 cm

E₃: *Salix fragilis* 4, *Alnus glutinosa* 2a, *Ulmus glabra* + 1, *Parthenocissus quinquefolia* 1, *Alnus incana* (+)

E₂: *Sambucus nigra* 3, *Parthenocissus quinquefolia* 2a, *Corylus avellana* 1, *Aesculus hippocastanum* +, *Alnus incana* +, *Euonymus europaeus* +, *Padus racemosa* +, *Humulus lupulus* +, *Swida hungarica* +, *Ulmus laevis* +

E₁: *Lamium maculatum* 3, *Matteuccia struthiopteris* 3, *Urtica dioica* 3, *Chrysosplenium alternifolium* 2a, *Aegopodium podagraria* 1, *Impatiens noli-tangere* 1, *Lunaria rediviva* 1, *Parthenocissus quinquefolia* 1, *Stellaria nemorum* 1, *Anthriscus nitida* +, *Asarum europaeum* +, *Brachypodium sylvaticum* +, *Chaerophyllum hirsutum* +, *Circaea intermedia* +, *Cirsium oleraceum* +, *Cucubalus baccifer* +, *Euonymus europaeus* +, *Festuca gigantea* +, *Galium aparine* +, *Geum urbanum* +, *Glechoma hederacea* +, *Impatiens glandulifera* +, *I. parviflora* +, *Lapsana communis* +, *Padus racemosa* +, *Poa* sp. +, *Roegneria canina* +, *Rubus caesius* +, *Sambucus nigra* +, *Swida hungarica* +, *Ulmus glabra* +, *Aesculus hippocastanum* r, *Echinocystis lobata* r, *Persicaria dubia* r, *Stachys sylvatica* r

E₀: *Brachytecium rivulare* +, *B. salebrosum* +, *Eurhynchium hians* +, *Plagiomnium cuspidatum*, *Leskea polycarpa* +.

Locality No. 5: Revúcka vrchovina Hills; Mokrá Lúka; beyond the mill (alluvium on the right bank of the Muránka river); ca 288 m a.s.l.; DFS 7386b; willow stand (Ls1.1; *Salicion albae*); sandy-loam soil; ca 0.8 ha⁻¹.

Salix alba and *S. fragilis* are dominant woody species, with admixed *Alnus glutinosa*. *Sambucus nigra* species dominates in the shrub layer. *Urtica dioica*, *Aegopodium podagraria*, *Chrysosplenium alternifolium*, *Lamium maculatum* are predominant species in the herba layer. The invasive species *Fallopia japonica* and *Helianthus tuberosus* are expressively represented. The protected *Matteuccia struthiopteris* species occurs rarely. The species *Eurynchium hians*, *Brachythecium oedipodium* and *B. rivulare* were dominant in layer of bryophytes. The willow stand is negatively influenced by invasive plants and by the illegal cutting interventions.

Locality No. 6: Revúčka vrchovina Hills; Revúčka Lehota; near water reservoir Miková, (between state road and railway dam); ca 282 m a.s.l.; DFS 7387a; alluvial willow stand (Ls1.1, Ls1.3; *Salicion albae*, *Alnion incanae*); sandy-loam soil; ca 1 ha⁻¹.

The *Salix fragilis* is dominant woody species, *Padus racemosa* and *Alnus glutinosa* are admixed. The species *Humulus lupulus*, *Sambucus nigra*, *Salix cinerea* and *Viburnum opulus* are characteristic for bush layer. The herb layer is primarily occupied by *Urtica dioica*, *Rubus caesius*, *Galium palustre*, *Impatiens noli-tangere*, *Aegopodium podagraria*, *Lamium maculatum*, *Phalaroides arundinacea* var. *arundinacea* and others. The sedge species *Carex paniculata* and *C. pseudocyperus* are sporadic, *C. vesicaria* is more frequent. The species *Brachythecium rivulare* occurs in the bryophytes layer. The stand with dominant species *Padus racemosa* (association on locality No. 6 is more similar to the assoc. *Pruno-Fraxinetum* Oberd. 1953 of the alliance *Alnion incanae*) is described by the following phytocoenological record:

Record No. 4: Revúčka Lehota, SWW of the village, stand of *Padus racemosa*, *Salix fragilis*, *Alnus glutinosa* between state road and railway dam; 48.66799° N – 20.16687° E ± 9 m; 282 m a.s.l., slope 0°, area of the record: 15 × 20 m, 3. 9. 2009, D. Blanár [original releve DB-3/3.9.2009].

Cover E_c: 98%, E₃: 95%, E₂: 15%, E₁: 60%, E₀: 20%; h_{E3} = 20–25 m, h_{E2} = 2–5 m, h_{E1} = 30 cm

E₃: *Padus racemosa* 5, *Salix fragilis* 2b, *Alnus glutinosa* 2a

E₂: *Padus racemosa* 2a, *Sambucus nigra* 1, *Viburnum opulus* 1, *Humulus lupulus* +

E₁: *Aegopodium podagraria* 3, *Urtica dioica* 2a, *Euonymus europaeus* 1, *Brachypodium sylvaticum* +, *Circaea lutetiana* +, *Fraxinus excelsior* +, *Geum urbanum* +, *Geranium phaeum* +, *Impatiens parviflora* +, *Padus racemosa* +, *Rubus caesius* +, *Sambucus nigra* +, *Viburnum opulus* +, *Anthriscus nitida* r

E₀: *Brachythecium rivulare* 2b.

Locality No. 7. Revúčka vrchovina Hills; Jelšava; near bathhouse, (between Muránka river and railway station); ca 245 m a.s.l.; DFS 7387c; alluvial willow stand (Ls1.1; *Salicion albae*); sandy-loam soil; ca 2 ha⁻¹.

Salix alba and *S. fragilis* are dominant woody species, *Alnus glutinosa* and *Ulmus laevis* are admixed. The occurrence of lianes *Parthenocissus quinquefolia* and *Humulus lupulus* is characteristic for this locality. *Sambucus nigra* dominates the shrub layer. The herb layer is primarily formed by *Aegopodium podagraria*, *Lamium maculatum*, *Rubus caesius*, *Urtica dioica*,

Impatiens noli-tangere. The invasive species *Aster lanceolatus*, *Fallopia japonica*, *Echinocystis lobata*, *Helianthus tuberosus* have been recorded sporadically. On the other hand the invasive species occur massively on the stand edges. Invasive woody species *Negundo aceroides* has been found out sporadically. The species *Brachythecium rivulare* is characteristic bryophyte species. This forest stand is described by the following phytocoenological record:

Record No. 5: Jelšava, S of the town, alluvial forest; 48.622694° N – 20.242138° E ± 8 m; 240 m a.s.l., slope 0°, area of the record: 20 × 20 m, 3. 9. 2009, D. Blanár [original releve DB-2/10.8.2009].

Cover E_c: 98%, E₃: 80%, E₂: 45%, E₁: 90%, E₀: do 1%; h_{E3} = 25 m, h_{E2} = 5 m, h_{E1} = 150/30–40/15 cm

E₃: *Salix alba* 4, *Salix fragilis* 2b

E₂: *Sambucus nigra* 3, *Humulus lupulus* 2a, *Salix fragilis* 1, *Acer campestre* +, *Euonymus europaeus* +, *Fraxinus excelsior* +, *Swida hungarica* +

E₁: *Urtica dioica* 4, *Lamium maculatum* 3, *Aegopodium podagraria* 2b, *Euonymus europaeus* 2a, *Chelidonium majus* 1, *Hedera helix* 1, *Humulus lupulus* 1, *Sambucus nigra* 1, *Angelica sylvestris* +, *Chaerophyllum aromaticum* +, *Carduus personata* +, *Juglans regia* +, *Parthenocissus quinquefolia* r

E₀: *Amblystegium serpens* +, *Brachythecium rivulare* +.

Notes to the localities: The locality No.1 and localities No. 3–6 are listed to the European Signification Area SK-UEV0285 Alluvium of Muránka river (proposed Protected Area Alúvium Murána – cf. BLANÁR et al., in prep.), hereby the locality No.1 is a component part of Protected zone of the Muránska planina National Park.

Results and discussion

Based on our research in the willow and alder floodplain stands and their fragments in the alluvium of the waterstreams Muránka river and Lehotský potok creek in 2009–2013 (together with the data published in 2000 and 2001 – see BLANÁR and MIHÁL, 2002), we report 236 macromycetes species and 13 slime molds (249 taxa) in this paper. All the identified taxa are presented in the Appendix. The species have been arranged alphabetically, classified into Myxomycota, Zygomycota, Ascomycota and Basidiomycota. Table 1 shows the numbers of recorded taxa according to the localities, ecotrophical groups and individual divisions. Table 1 shows that the highest species diversity was found out in the locality No. 4 with 84 taxa, the poorest one was the locality No. 5 with 29 taxa, most of the species (185) are of Basidiomycota, 50 of Ascomycota, relatively high number Myxomycota (13) and only one of Zygomycota. The higher number of taxa belongs among lignicolous saprotrophes (158 species) and terrestrial saprotrophes (51) – they are profiting from abundant dead wood substrate and rich humus layer on alluvial soils in the investigated habitats. On the other hand, the relatively low number of lignicolous parasites (13 species) and ectomycorrhizal symbionts (11 ones) were found out.

Table 1. The number of recorded taxa of the individual localities, ecotrophic groups and divisions

Locality No.	LP	HP	MP	IP	LS	TS	HS	MS	Total	Myxo	Zygo	Asco	Basi
1	2	2			47	13	3	7	74	4		8	62
2	1	2			29	6	2	1	41	2		4	35
3	2	3	2		61	9	1		78	4		17	57
4	6	1	2	1	57	13	2	2	84	3	1	22	58
5	2		1		25	1			29	2		4	23
6	5	1			22	13	2	1	44	2		4	38
7	5		1		37	9	1		53	6		6	41

LP, lignoparasites; HP, herboparasites; MP, mycoparasites; IP, insectoparasites; LS, lignicolous saprotroph; TS, terrestrial saprotroph; HS, herbosaprotroph; MS, ectomycorrhizal symbionts; Myxo, Myxomycota; Zygo, Zygomycota; Asco, Ascomycota; Basi, Basidiomycota.

From the rare or otherwise attractive findings we present:

Myxomycota

Diderma globosum var. *europaicum* Buyck

ŠKUBLA (2003) reports probably the oldest finding of a relative species *Diderma floriforme* (Bull.) Pers. for Slovakia; it was recorded as early as in 1900 by the eminent botanist and polymath Andrej Kmet' on Sitno in the Štiavnické vrchy Mts. Records of other relative *Diderma* species from Slovakia, such as *D. alpinum* Meyl., *D. effusum* (Schwein.) Morgan, *D. floriforme*, *D. niveum* (Rostaf.) T. Macbr., *D. spumarioides* (Fr.) Fr., *D. subdictyospermum* (Rostaf.) G. Lister and *D. testaceum* (Schrud.) Pers. were summarised by MEREĎA (2002).

We have observed *D. globosum* var. *europaicum* in the alder stand in the alluvium of Lehotský potok creek. Sporocarps grew in litterfall on leaves of *Alnus glutinosa* and *Corylus avellana* and on grass leaves (Poaceae). This finding may be considered the first for this species in Slovakia.

Fuligo laeviderma H. Neubert, Nowotny & K. Baumann
An interesting slime mold species, similar to the well-known and common relative species *Fuligo septica* (L.) F. H. Wigg. from which it differs in peridium structure. Besides *F. septica*, also *Fuligo rufa* Pers. occurs in Slovakia, recorded by the Ružínska water dam on 24th July 2006 by KEŠEĎÁK (2013a). Moreover, there have been reported also findings of *Fuligo cinerea* (Schwein.) Morgan and *F. gyrosa* (Rostaf.) E. Jahn (ŠKUBLA, 2003).

We have found this rare slime mold growing in locality No. 4 on decomposed wood of *Salix* spp. and its occurrence in Slovakia is very rare, our finding may be considered the first in Slovakia. *Fuligo laeviderma* reported as relatively rare, is known e.g. in East Ukraine (DUDKA et al., 2009; LEONTIEV, 2006).

Other rare and interesting slime molds that we have recorded are: *Arcyria ferruginea* and *Metatrichia vesparium* – 3rd finding for Slovakia (cf. ŠKUBLA, 2003), *Badhamia macrocarpa* – 4th finding (cf. BLANÁR and MIHÁL, 2002; ŠKUBLA, 2003) and morphologically notable species *Lycogala flavofuscum* (Fig. 2).



Fig. 2. *Lycogala flavofuscum* – interesting decorative slime molds, locality Jelšava, near bathhouse (Photo D. Blanár).

Zygomycota

Entomophthora coleopterorum Petch.

An entomopathogenic species belonging to Entomophthorales, Zygomycota. It parasitizes on adult beetles (Coleoptera). The conidia of this fungus germinate in the affected beetles, later conidiophores branch over the body surface, and finely they envelope the whole body of the attacked individuals. In our case, we have observed this parasitic fungus on an adult of *Polydrusus* sp. (Curculionidae) in leaf litter.

In Slovakia also occurs the species *Entomophthora muscae* (Cohn) Fresen, attacking flies (Diptera), reported as the first published finding for Slovakia by MIHÁL et al. (2012). In the same way, *E. coleopterorum* may be classified as the first finding for Slovakia.

Ascomycota

Acrospermum compressum Tode

An interesting species that prefers dead stalks of *Urtica dioica*. This substrate and tiny ascomata are probably the reasons why the species is not commonly recorded during ordinary mycological researches. It is obviously the most frequent in floodplain forests and also in degraded ruderal stands overgrown with *Urtica dioica*. SCHMID-HECKEL (1988) reported *A. compressum* as a fairly rare saprotrophic fungus occurring on stalks of plants of genera *Adenostyles* sp. and *Aruncus* sp. In our case, we have observed this fungus growing on dead stalks of *U. dioica* in locality No. 2. Another finding of *A. compressum* on the same substrate was reported by J. Kuriplach. This author observed it in Limbach in the Malé Karpaty Mts on 25th May 2013 (KURIPLACH, 2013). Our finding of *A. compressum* is the first published and the second documented one of this species in Slovakia.

Belonopsis filispora (Cooke) Nannf.

A rare fungus, forming tiny light-grey apothecia on dead plant stalks. As such, it probably escapes attention during ordinary mycological observations. In floodplain forests, it can reach high local abundance on decomposing litter and plant stalks. The relative species *Belonopsis obscura* (Rehm) Aebi was presented by SCHMID-HECKEL (1988) as a lignicolous saprotrophic species on *Calluna vulgaris* in mountain forests. MOSER (1963) reported several relative species growing on other substrates: *Belonopsis excelsior* (Karts.) Rehm on *Phragmites* sp., and *B. pallens* (Sacc.) Kreissl. on *Brachypodium* sp. Our finding about dry stalks of *Phragmites australis* is the first finding of this species in Slovakia.

Echnoa infernalis (Kunze) Fuckel

A very interesting and rare species growing saprotrophically on broadleaved woody plants. Its tiny dark-brown hairy perithecia break through out the bark in massive amounts. We have observed this rare ascomycetous species on decomposing branches of *Salix fragilis*. ČERVENKA et al. (1972) reported oak (*Quercus* spp.) branches as other substrate for this fungus. We have considered our finding of this species the first for Slovakia.

Ophiostoma ulmi (Buisman) Nannf.

A very interesting tiny fungus originating an asexual structure (anamorpha) as a part of their life cycle. We have found out *O. ulmi* growing on dead wood of *Alnus*

incana. It formed tiny standing sporocarps (coremia) with widened heads consisting of branched conidiophores. In general the species of the genus *Ophiostoma* are well-known as the causal organisms of tracheomycotic diseases of various woody plants, especially the species *O. ulmi* provokes the tracheomycotic disease of elm. In Slovakia (except our finding) only one published record for *Ophiostoma ulmi* is known (ADAMČÍK et al., 1998 in ŠKUBLA, 2003).

Xylaria digitata (L. ex Fr.) Grev. (Fig. 3)



Fig. 3. *Xylaria digitata* – rare ascomycetous species, locality Revúca, below the Nižná Bartová (Photo D. Blanár).

The occurrence of *Xylaria digitata* in Slovakia has not been reported yet. During our research we have recorded this species in a floodplain mixed forest stand near Revúca city in locality No. 4, as rarely growing on bark of a fallen rotting stem of *Tilia cordata*. Besides this locality, we have observed it also in one locality in the Revúcka vrchovina Hills near Revúca city (NW from Revúca, locality Keslo, in the depression under a garden, ca 360 m a.s.l, on fallen rotting stem of *Populus tremula*, 6. 12. 2009, leg. DB, det. IM, herb DB).

Other rare or in another way attractive ascomycetous species we have recorded and represented their second to fourth record in Slovakia by today. These species are: *Anthostoma turgidum* – 3rd finding for Slovakia (cf. MIHÁL and BLANÁR, 2011), *Cyathicula coronata* (Fig. 4) – 4th finding for Slovakia (cf. ŠKUBLA, 2003), *Heyderia sclerotiorus* – 2nd published finding (cf. GLEJDURA, 1997), *Pezizella gemmarum* – 3rd finding for Slovakia (cf. GLEJDURA, 1997; VERKIN, 2013) and *Pezizella alniella* – 3rd finding (cf. GLEJDURA, 1997; ŠKUBLA, 2003). *Pezizella alniella* was relatively frequent in alder stands or in mixed floodplain forest stands with alder. In these localities, the ascomata of this fungus were growing on wet leaf litter and on old last year's cones of *Alnus glutinosa*.



Fig. 4. *Cyathicula coronata* – infrequent ascomycetous species, locality Jelšava, near bathhouse (Original drawing V. Blanár).

Basidiomycota

Clitocybe truncicola (Peck) Sacc.

An interesting basidiomycetous fungus, belonging to the wide-ranged and taxonomically instable *Clitocybe* genus. This genus comprises only a few species growing saprotrophically on wood substrate, such as *C. truncicola* that we have observed on decomposed wood of *Salix* cf. *fragilis* in locality No. 7. This species is related to *Ossicaulis lignatilis* (Pers.) Redhead & Ginns, growing on similar wood substrates. The differing trait for *C. truncicola* is a distinct earthy scent.

In Slovakia, this rare species was observed growing on beech wood in the National Park Poloniny in the Bukovské vrchy Mts (ADAMČÍK et al., 2007). Our finding of *C. truncicola* is the second one for Slovakia.

Gloeocystidiellum porosum (Berk. et M. A. Curtis) Donk

A rare species belonging to Aphyllophorales s.l. This fungus forms thin to membranous, white to creamy basidiomata on wood of broadleaved trees and shrubs (HAGARA et al., 1999). In our case, we have observed it on branches of *Salix fragilis* in localities No. 2 and 3. From Slovakia, only one and relatively older-dated finding from the Poľana Mts was reported (PILÁT, 1954 in ŠKUBLA, 2003). The most recent findings reports KEŠEĽÁK (2013b) from the Slovenský raj Mts recorded in 2006 and from the Šarišská vrchovina Mts in 2008. Our finding is probably the fourth finding of this species in Slovakia.

Hohenbuehelia angustata (Berk.) Singer

A rare species, taxonomically relative to the fungi of the genus *Pleurotus*. This fungus forms yellowish to ochroid, spatulate petales on woody substrate. It is very rare, growing solitary or in groups on dead wood of broadleaved species, primarily poplars, elms and ashes.

In Europe, *H. angustata* has been observed in floodplain forests in Southern Moravia and in Lower Austria (HAGARA et al., 1999). Our finding of this species in the floodplain forest in locality No. 4 was recorded on a decomposed stem of *Padus racemosa*. It represents the first finding of *H. angustata* in Slovakia.

Melampsora amygdalinae Kleb.

An interesting species from the order Uredinales. It grows parasitically on leaves of woody plants from the family Salicaceae. We have found *M. amygdalinae* growing on fallen leaves of *Alnus glutinosa* in three of our study localities and the collection from the alluvium of the Muránka river we consider the first published one for Slovakia. However, due to the large area of broadleaved floodplain forests in Slovakia, we suppose that its occurrence should be much higher.

Mycoacia nothofagi (G. Cunn.) Ryvarden

A rare species belonging to Aphyllophorales s.l. It forms wooly basidiomata spreading onto surface of broadleaved woody plants, which are characteristic by yellow-creamy to brown spines, and their scent is strongly sugary. In the locality No. 3, this species grew on the dead stem of *Salix fragilis*. In Slovakia, the first collection of *M. nothofagi* was reported from the Bukovské vrchy Mts (KUTHAN et al., 1999 in ŠKUBLA, 2003). Some recent findings of this fungus were reported by P. Kešelák from the Šarišská vrchovina Mts recorded in 2007, and V. Kunca from the Kremnické vrchy Mts recorded in 2013 (KUNCA, 2013). Our collection is probably the fourth finding for Slovakia.

Omphalina discorosea (Pilát) Herink et Kotl.

A very interesting, protected and rare species, which according to ANTONÍN and BIEBEROVÁ (1995), HAGARA et al. (1999) and KOTLABA et al. (1995) belongs to the category of highly endangered macromycetes in both Czech Republic and Slovak Republic. This decorative-

ly coloured species is forming violet to violet-brownish basidiomata on decomposed wood in floodplain forests. The occurrence *O. discorosea* is associated with floodplain forests, and as such, its occurrence is endangered due to the decline of suitable habitats. In the earliest 1990s, the central European area of this fungus was only limited to the floodplain forests of Southern Moravia (PROCHÁZKA, 1994). Recently, there have been reported several collection sites of *O. discorosea* restricted to the Podunajská nížina lowland, Western Slovakia (ŠKUBLA, 2003). In the alluvium of the Muránka river, we have observed this species growing on decomposed wood in two localities. Our findings extend the occurrence range of this species to central Slovakia, too.

Steccherinum dichroum Pers.

A rare species belonging to Aphyllophorales s.l., forming woolly, onto surface spreading basidiomata with small, protruding hairy caps. The hymenium of this species is formed by short salmon-coloured spikes. The hymenium of relative species *S. ochraceum* (Pers.) Gray, which is relatively abundant and frequent, is formed by yellow-ochraceous spikes. Both species prefer broad-leaved woody plants in warmer regions. We have found *S. dichroum* growing on the dead branch of *Salix cinerea* in the locality No. 3. By now, *S. dichroum* (reported as *Gloeoporus dichrous*) has only been found in the Sedláčkov ostrov island in the Danube river, growing on *Salix alba* (JANČOVIČOVÁ, 1999, 2000a) and in the Bukovské vrchy Mts in the locality Chotinka, growing on a branch of *Quercus* sp. (KUTHAN et al, 1999). Our finding in the alluvium of Muránka river is probably the third finding for Slovakia.

We have also recorded several other rare or in another way attractive basidiomycetous species: *Athelia salicum*, *Femsjonia peziziformis*, *Peniophora aurantia* and *Subulicystidium longisporum* – 2nd finding for Slovakia (cf. MIHÁL et al., 2012; ŠKUBLA, 2003), or *Hypoderma medioburiense* and *Laeticorticium roseum* – 3rd finding for Slovakia (cf. ŠKUBLA, 2003).

Comparing our data on occurrence of slime molds and macromycetes in floodplain alluvial forests with the data reported by other authors we can see that the Slovak mycological literature comprises relatively a low number of works dealing with mycological research in floodplain forests. Moreover, most of these works concern the floodplain forest mycoflora only in the West Slovakia and in the Podunajsko region (South-Western Slovakia). By now, the mycoflora of the alluvium of the Muránka river has been investigated by BLANÁR and MIHÁL (2002). These authors recorded 36 macromycetes species and 3 slime mold species in the assoc. *Stellario-Alnetum glutinosae* surrounding the confluence of the watercourses Zdychavka and Muránka river. Among these species, there were several species characteristic for floodplain forests, such as *Ascocoryne cylichnium*, *Microstoma protracta*, *Sarcoscypha austriaca*, *Flammulina velutipes*, *Hirneola auricula-judae*,

Phanerochaete laevis, *Pseudoclitocybe cyathiformis*, *Trametes suaveolens*, *Typhula erythropus* and other which we have also detected in other localities in the alluvium of Muránka. In broader surroundings of our research locality, in the Muránska planina Mts and in selected localities in the Stolické vrchy Mts and in the Revúcka vrchovina Hills, RÍPKOVÁ and BLANÁR (2002) studied the occurrence of species of the genus *Sarcoscypha*: they found out *Sarcoscypha austriaca* occurring also in alluvial floodplain forests in the watersheds of Zdychavka and Muránka. RÍPKOVÁ and BLANÁR (2004) recorded in the same territory and in various localities in the alluvium of the Muránka river and its tributaries also the species of the genus *Crepidotus*, with more species as *Crepidotus appianatus*, *C. calolepis*, *C. cesatii*, *C. lundellii*, *C. mollis*.

In Slovakia, the mycoflora of floodplain forests – alliances *Salicion albae*, *Salicion triandrae* Th. Müller et Görs 1958 and sub-alliance *Ulmenion* Oberd. 1953 – has been investigated also in two localities: Sedláčkov ostrov river island and Sihot' river island, both in the Danube river near Bratislava (JANČOVIČOVÁ, 1999, 2000a, 2000b; JANČOVIČOVÁ and GLEJDURA, 1999). In the Sedláčkov ostrov, JANČOVIČOVÁ (1999) studied the biodiversity of (Polyporales s.l.) and reported the occurrence of 32 species. Several of them correspond to our collections. In addition, JANČOVIČOVÁ (1999) presented several interesting species such as *Abortiporus biennnis*, *Coriolopsis gallica*, *Polyporus alveolaris*, *Skeletocutis nivea* and *Trametes trogii*. JANČOVIČOVÁ (2000b) carrying her research also on *Pluteus* genus in Sedláčkov ostrov island and in Sihot' island, where she found out altogether 12 species. As rare, she classified *Pluteus cinereofuscus* and *P. leoninus*. Singular finding was *P. aurantiorugosus*, belonging to endangered and rare species of fungi of Slovakia (KOTLABA, 1995).

Localities in the Danube islands Sihot' and Slovanský ostrov near Bratislava city were also studied by ZÁHOROVSKÁ et al. (1996). In conditions of Danubian floodplain forests dominated by *Salix* spp., *Alnus* spp., *Populus nigra*, *P. alba*, *Fraxinus excelsior*, *Ulmus laevis* and *Acer negundo*, this author detected altogether 97 fungal species (Sihot' island 58 and Slovanský ostrov island 39 species). Also in this case, the major part of the species was the same as ours: *Auriculariopsis ampla*, *Daedaleopsis confragosa*, *Entoloma rhodopolium*, *Laetiporus sulphureus*, *Mycena galericulata*, *Phellinus igniarius*, *Polyporus squamosus* and similar.

Ascomycetous fungi (Ascomycota) in these Danube islands were studied by JANČOVIČOVÁ and GLEJDURA (1999) who found out there altogether 26 ascomycetous macromycetes species: 9 of them we have also collected in our studied area: *Ascocoryne sarcoides*, *Bisporella citrina*, *Daldinia concentrica*, *Hypoxylon fuscum*, *Morchella esculenta*, *Sarcoscypha austriaca*, *Verpa bohemica*, *Xylaria hypoxylon* and *X. polymorpha*.

In hardwood floodplain forests of the sub-alliance *Ulmenion* Oberd. 1953 (in the work reported as *Ulmenion minoris*) in Podunajské Biskupice, macrofungi were investigated by JANČOVIČOVÁ and ZALIBEROVÁ (2011). From the total number of 68 macromycetes, only 9 ascomycetous species were found by these authors. Among them, there were also the species recorded in our localities: *Clitopilus hobsonii*, *Coprinus domesticus*, *Crepidotus cesatii*, *Pluteus romellii*, *Radulomyces molaris*, *Xylaria longipes* and similar.

In conditions of alluvial alder forests in the locality Fenek in the Cerová vrchovina Hills, MIHÁL (1995, 2006) recorded a total of 94 species of macromycetes. As interesting species may be reported the following ones: *Clavariadelphus ligula*, *Cyathus striatus*, *Hirneola auricula-judae*, *Laetiporus sulphureus*, *Lactarius seriffuus*, *Morchella esculenta*, *Pachyella violaceonigra*, *Pluteus salicinus* and other. Similarly, MIHÁL (1997a, 1997b) investigated alder and willow stands on gravels in the alluvium of the Ipeľ river, where he recorded altogether 30 species in the locality Veľká nad Ipľom and 22 species of macromycetes in the locality Ipeľské Predmostie. Among these species, there were primarily species typical for floodplain forests, such as *Agrocybe dura*, *Auriculariopsis ampla*, *Cyathus olla*, *Macrocyttidia cucumis*, *Paxillus involutus*, *Phellinus populicola*, *Sarcoscypha coccinea*, *Tremella mesenterica*, *Xerocomus rubellus* and other.

The knowledge on occurrence and ecology of some new or rare macromycetes such as *Chaetoporellus latitans*, *Hypoxylon ticinense*, *Phlebia ryvardenii*, *Pluteus aurantiorugosus*, *Rhodotus palmatus*, *Scutellina legaliae*, *Spongipellis fractipes* and others, found in floodplain forests in surroundings of Bratislava can be found in JANČOVIČOVÁ (2000b) and RIPKOVÁ and HAGARA (2003).

It follows that the mycoflora of floodplain forests as the azonal forest communities in Slovakia exhibit a high species diversity, comprising both the species regularly occurring and typical for floodplain forest conditions and rare or in another way interesting macrofungi. The reciprocal ecotrophic and ecotopic connections among fungi, herbs and woody plants in floodplain forests are very specific, and, comparing with forest communities situated in the higher altitudinal zone, much more vulnerable due to anthropic influence.

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Appendix

List of macromycetes species recorded in the alluvial forests in the area of Muránka river and Lehotský potok creek

Explanations:

Data on individual species (according to divisions) are given in the following order: taxa, abbreviation of ecotrophical group of species, locality from 1. to 7.; data on records on locality: habitat, date of collection, collector, determinator, herbarium, (references). [Abbreviations of ecotrophical groups are given in the chapter Results and discussions – in Table 1, abbreviations of collectors/determinators are given in the chapter Methods and material].

ZYGOMYCOTA

- Entomophthora coleopterorum* Petch. – IP: **4.** in litter, on imago of the *Polydrusus* sp. (Curculionidae), 17. 11. 2010, leg. DB, det. IM, herb. IM.

MYXOMYCOTA

- Arcyria cinerea* (Bull.) Pers. – LS: **2.** on decaying wood *Salix fragilis*, 2. 7. 2010, leg. DB, det. IM, herb. DB.
- A. denudata* (L.) Wettst. – LS: **1.** on decaying wood *Salix* sp., 28. 5. 2010, 2. 7. 2010, leg. et det. IM, herb. IM. — **3a.** BLANÁR and MIHÁL (2002). — **6.** on decaying wood *Salix* sp., 3. 9. 2009, 28. 5. 2010, leg. et det. IM, herb. IM. — **7.** on decaying wood *Salix* sp., 28. 5. 2010, leg. et det. IM, herb. IM.
- A. ferruginea* Sauter – LS: **7.** on wood *Salix* sp., 7. 4. 2010, 28. 5. 2010, leg. et det. IM, herb. IM.
- Badhamia macrocarpa* (Ces.) Rostaf. – LS: **3a.** BLANÁR and MIHÁL (2002).
- Diderma globosum* var. *europaeum* Buyck – HS: **1.** in litter, on leaf *Alnus glutinosa* and *Corylus avellana*, on dry grass, 5. 8. 2010, leg. DB, det. IM, herb. DB.
- Enteridium lycoperdon* (Bull.) M. L. Farr – LS: **7.** on decaying wood *Salix fragilis*, 15. 10. 2010, leg et det. IM, not.

- Fuligo leviderma* H. Neubert, Nowotny & K. Baumann – LS: **4.** on decaying wood *Salix* sp., 10. 8. 2011, leg. DB, det. IM, herb. DB, IM.

- Hemitrichia clavata* (Pers.) Rostaf. – LS: **4.** on decaying bark of stem *Tilia cordata*, 17. 11. 2010, leg. DB, det. IM, herb. DB.

- H. serpula* (Scop.) Rostaf. – LS: **7.** on twig *Salix fragilis*, 6. 6. 2012, leg. DB, det. IM, herb. DB, IM.

- Lycogala epidendrum* (J. C. Buxb. ex L.) Fr. – LS: **1.** on decaying wood *Salix* sp., 2. 7. 2010, 30. 3. 2011, 16. 3. 2011, 26. 3. 2011, leg. DB, IM, det. IM, not. — **2.** on decaying wood *Salix* sp., 28. 5. 2010, 2. 7. 2010, 23. 9. 2010, leg. et det. IM, not. **3b.** on decaying wood *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **4.** on twig *Populus nigra*, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **5.** on decaying wood *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB. — **6.** on decaying wood *Salix* sp., 2. 7. 2010, 23. 9. 2010, leg. et det. IM, not. — **7.** on decaying wood *Salix* sp., 1. 4. 2011, 6. 7. 2012, leg. IM, det. IM, not.

- L. flavofuscum* (Ehrenb.) Rostaf. – LS: **7.** on decaying wood *Salix fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. IM, SG.

- Metatrichia vesparium* (Batsch) Nann. – Brenek ex G. W. Martin & Alexop. – LS: **1.** on soil, on decaying broadleaves wood, 15. 10. 2010, leg. DB, det. IM, herb. DB, IM.

- Trichia varia* (Pers.) Pers. – LS: **3a.** BLANÁR and MIHÁL (2002). — **5.** on decaying wood *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB.

ASCOMYCOTA

- Acrospermum compressum* Tode – HS: **2.** on dead stalks *Urtica dioica*, 28. 5. 2010, leg. DB, det. IM, herb. DB, herb. IM.

- Anthostoma turgidum* (Pers.) Nitschke – LS: **2.** on twigs *Salix* sp., 2. 7. 2010, leg. DB, IM, det. IM, herb. IM.

- Ascocoryne cylichnium* (Tul.) Korf. – LS: **3a.** on decaying stump *Salix fragilis*, 13. 10. 2001, leg. DB, det. VK, SAV 6709. — **4.** on broadleaves wood and on stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB; on decaying wood *Salix fragilis*, 12. 10. 2012, leg. DB, det. VK, SAV 10746.

- A. sarcoides* (Jacq.) J. W. Growes et D. E. Wilson – LS: **4.** on decaying wood *Fraxinus excelsior* leg. DB, det. VK, SAV 10280; on decaying wood *Salix fragilis*, 12. 10. 2012, leg. DB, det. VK, SAV 10736.

- Belonopsis filispora* (Cooke) Nannf. – HS: **6.** on dry stalks *Phragmites australis*, 10. 1. 2009, leg. DB, det. IM, herb. IM.

- Bisporella citrina* (Batsch) Korf. & S. E. Carp. – LS: **4.** on roots in water of *Padus racemosa*, 12. 5. 2011, leg. DB, det. IM, herb. DB; on wet roots cf. *Alnus glutinosa*, 10. 8. 2011, leg. DB, det. IM, herb. DB.

- Catinella olivacea* (Batsch) Boud. – LS: **7.** on stem *Salix alba*, 6. 6. 2012, leg. DB, det. et herb. SG, PSG 5007.
- Chlorociboria aeruginascens* (Nyl.) Kanouse ex Ramamurthi et al. – LS: **3a.** BLANÁR and MIHÁL (2002).
- Ciboria amentacea* (Balb.) Fuckel – LS: **1.** in litter, on catkin *Corylus avellana*, 30. 3. 2011, leg. DB, det. IM, herb. DB. — **5.** in litter, on catkin *Alnus glutinosa*, 1. 9. 2009, leg. DB, det. IM, herb. DB. — **7.** in litter, on catkin *Alnus glutinosa*, 20. 3. 2012, leg. DB, det. IM, herb. DB.
- Cudoniella clavus* (Alb. et Schwein.) Dennis – LS: **2.** on decaying wood *Salix fragilis*, 28. 5. 2010, leg. DB, det. IM, herb. DB.
- Cyathicula coronata* (Bull.) De Not. ex P. Karst. – LS: **7.** on decaying wood *Salix fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. DB.
- Daldinia concentrica* (Bolton) Ces. et De Not. – LS: **4.** on twig (Ø 4 cm) *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Diatrype bullata* (Hoffm.) Fr. – LS: **4.** on *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- Dumontinia tuberosa* (Hedw.) L. M. Kohn – HP: **3a.** on roots *Anemone nemorosa*, 30. 3. 2012, leg. DB, det. IM, herb. DB.
- Echnoa infernalis* (Kunze) Fuckel – LS: **5.** on twig *Salix fragilis*, 1. 9. 2009, leg. DB, det. IM, herb. DB.
- Encoelia furfuracea* (Roth ex Pers.) P. Karst. – LS: **1.** on twig *Corylus avellana*, 15. 10. 2010, leg. DB et IM, det. IM, herb. DB. — **4.** on twig (Ø 1.5 cm) *Alnus glutinosa*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Heyderia sclerotiorus* (Rostr.) D. Benkert – LS: **3a.** in litter, on seed *Alnus glutinosa*, 13. 10. 2001, leg. DB, det. VaK, PVK 617.
- Holwaya mucida* (Schulzer) Korf et Abawi – LS: **4.** on *Tilia cordata*, 17. 11. 2010, leg. DB, det. et herb. SG, PSG 5006.
- Hymenoscyphus fructigenus* (Bull.) Gray – LS: **1.** in litter, inside nutshell of *Corylus avellana*, 5. 9. 2010, leg. DB, det. IM, herb. DB.
- Hypomyces aurantius* (Pers.) Tul. – MP: **4.** on fruitbodies of *Lenzites betulina* – on twig *Padus racemosa*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- H. chrysospermus* Tul. et C. Tul. – MP: **7.** on hymenium *Polyporus melanopus* – on stem *Salix fragilis*, 16. 10. 2010, MIHÁL and BLANÁR (2011).
- H. lateritius* (Fr.) Tul. – MP: **3b.** on hymenium *Hapalopilus nidulans* – on stem *Salix fragilis*, 20. 11. 2010, MIHÁL and BLANÁR (2011). — **5.** on fruitbodies *Flammulina velutipes* – on stem *Salix alba*, 24. 11. 2010, MIHÁL and BLANÁR (2011).
- Hypoxylon fragiforme* (Pers.) J. Kickx f. – LS: **4.** on twig *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- H. fuscum* (Pers.) Fr. – LS: **3b.** on stem *Carpinus betulus*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- **4.** on stem *Acer platanoides*, 10. 8. 2011, leg. DB, det. IM, herb. DB. — **5.** on twig (Ø 2 cm) of broadleaves wood species, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- H. multifforme* (Fr.) Fr. – LS: **3b.** on twig (Ø 3 cm) *Salix fragilis*, 8. 7. 2010, leg. DB, det. IM, herb. DB. — **4.** on stem *Acer pseudoplatanus*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Humaria hemisphaerica* (F. H. Wigg.) Fuckel – TS: **3a.** on soil, BLANÁR and MIHÁL (2002).
- Lachnum virgineum* (Batsch) P. Karst. – LS: **3a.** in litter, on catkin *Alnus glutinosa*, 12. 5. 2011, leg. DB et IM, det. IM, herb. DB.
- Lasiosphaeria spermoides* (Hoffm. Fr.) Ces. et De Not. – LS: **1.** on twig *Populus tremula*, 2. 7. 2010, leg. IM et det. IM, herb. IM.
- Melanopsamma pomiformis* (Pers.) Sacc. – LS: **1.** on bark of stem *Fraxinus excelsior*, 28. 5. 2010, leg. DB, IM, det. IM, herb. DB. — **3b.** on bark of stem *Salix caprea*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Microstoma protracta* (Fr.) Kanouse – LS: **3a.** BLANÁR and MIHÁL (2002). — **4.** on decaying twig (Ø 1.5 cm) *Aesculus hippocastanum*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Mollisia cinerea* (Batsch) P. Karst. – LS: **5.** on twig (Ø 1 cm) *Padus racemosa*, 2. 7. 2010, leg. DB, det. IM, herb. DB. — **7.** on decaying wood *Salix* cf. *fragilis*, 28. 5. 2010, 15. 10. 2010, leg. DB, det. IM, herb. DB.
- Morchella esculenta* (L.) Pers. – LS: **3a.** on wood in soil, BLANÁR and MIHÁL (2002).
- Nectria cinnabarina* (Tode) Fr. – LS: **6.** on twig *Salix fragilis*, 3. 9. 2009, leg. DB, det. IM, herb. DB, MIHÁL and BLANÁR (2011).
- Neonectria coccinea* (Pers. : Fr.) Rossman et Samuels – LS: **4.** on decaying wood *Tilia cordata* (Ø 20 cm), twig *Alnus glutinosa* (ø 2,5 cm), 17. 11. 2010, leg. DB, det. IM, herb. DB, MIHÁL and BLANÁR (2011).
- Ophiostoma ulmi* (Buisman) Nannf. – LP: **4.** on decaying wood *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Orbilina xanthostigma* (Fr.) Fr. – LS: **4.** on decaying wood, 17. 11. 2010, leg. et det. IM, herb. IM.
- Pezizella alniella* (Nyl.) Dennis – LS: **1.** in litter, on catkin *Alnus glutinosa*, 15. 10. 2010, leg. DB, det. IM, herb. DB, herb. IM. — **2.** in litter, on catkin *Alnus glutinosa*, 15. 10. 2010, leg. DB, det. IM, herb. DB, herb. IM. — **6.** in litter, on catkin *Alnus glutinosa*, 15. 10. 2010, leg. DB, det. IM, herb. DB.
- Pezizella gemmarum* (Boud.) Dennis – HP: **4.** in litter, on decaying buds *Populus nigra*, 30. 3. 2012, leg. DB, det. SG, herb. DB, SG.
- Rhytisma acerinum* (Pers.) Fr. – HP: **1.** on leaves *Acer* sp., 5. 9. 2010, leg. et det. IM, not.
- Sarcoscypha austriaca* (Beck) Boud. – LS: **1.** on twig *Alnus glutinosa*, 30. 3. 2011, leg. DB, det. SJ, SLO 978. — **3a.** (BLANÁR & MIHÁL 2002, RÍPKOVÁ & BLANÁR 2004).

Sepultaria arenosa (Fuckel) Rehm – TS: **4.** on sandy soil, 12. 10. 2012, leg. DB, det. IM, herb. IM.

Scutellinia crinita (Bull.) Lambotte – LS: **3a.** on decaying wood, 13. 10. 2001, leg. DB, det. et herb. SG.

S. umbrorum (Fr.) Lambotte – LS: **4.** on sandy soil, 15. 8. 2009, leg. DB, det. SG, herb. SG.

Tarzetta cupularis (L.) Lambotte – TS: **3a.** on soil, 13. 10. 2001, leg. DB, det. IM, herb. IM.

Trichophaea woolhopeia (Cooke et W. Phillips) L. Arnould – LS: **6.** on decaying wood *Salix fragilis*, 2. 7. 2011, leg. DB, det. IM, herb. DB, herb. IM.

Verpa bohemica (Krombh.) J. Schröt. – TS: **7.** on soil, 7. 4. 2010, leg. DB, det. IM, herb. DB.

Xylaria digitata (L. ex Fr.) Grev. – LS: **4.** on bark of stem *Tilia cordata*, 17. 11. 2010, leg. DB, det. IM, herb. DB.

X. hypoxylon (L.) Grev. – LS: **3b.** on decaying wood *Salix caprea*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **4.** on decaying wood *Acer platanoides*, 17. 11. 2010, leg. DB, det. IM, herb. DB.

X. longipes Nitschke – LS: **4.** on twig *Alnus glutinosa*, 17. 11. 2010, leg. DB, det. IM, herb. DB.

X. polymorpha (Pers. ex Mérat) Grev. – LS: **3a.** on decaying stump, BLANÁR and MIHÁL (2002).

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- Annicola melinoides* (Bull.) Kühner – LS: **1.** on bark of stem *Alnus glutinosa*, 5. 8. 2010, leg. DB, det. IM, herb. DB. — **2.** on decaying wood *Salix fragilis*, 2. 10. 2009, leg. DB, det. IM, herb. DB.
- Antrodia macra* (Sommerf.) Niemelä – LS: **1.** on decaying wood cf. *Salix fragilis*, 2. 7. 2010, leg. DB, det. IM, herb. DB.
- Antrodiella fragrans* (A. David et Tortić) A. David et Tortić – LS: **4.** on decaying twig *Salix fragilis*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on decaying stem *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- Armillaria lutea* Gillet – LS: **4.** on decaying wood *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- A. mellea* agg. – LS: **3a.** BLANÁR and MIHÁL (2002).
- A. socialis* (DC.) Herink – LS: **4.** on decaying stem *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- Athelia epiphylla* Pers. – LS: **1.** on decaying twig *Corylus avellana*, 16. 3. 2011, leg. DB, det. IM, herb. DB; bark of broadleaves tree, 2. 7. 2010, leg. IM et DB, det. IM, herb. DB.
- A. salicum* Pers. – LS: **4.** on decaying stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB, herb. IM.
- Auricularia mesenterica* (Dicks.) Pers. – LS: **1.** on decaying stem *Alnus glutinosa*, 30. 3. 2011, leg. DB, det. IM, herb. DB. — **3b.** on decaying stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on decaying stem *Salix alba*, 1. 9. 2009, leg. DB, det. IM, herb. DB.
- Auriculariopsis ampla* (Lév.) Maire – LS: **4.** on decaying twig *Salix fragilis*, 22. 8. 2009, leg. DB, det. IM, herb. DB; decaying stem *Acer platanoides*, 10. 8. 2011, leg. DB, det. IM, herb. DB. — **7.** on decaying twig (Ø 0.5–1 cm) *Salix alba*, 25. 11. 2003, leg. DB, det. IM, herb. DB; decaying twig (Ø 1 cm) *Salix alba* and *S. fragilis*, 10. 8. 2009, leg. DB, det. IM, herb. DB.
- Basidioradulum radula* (Fr.) Nobles – LS: **5.** on decaying twig (Ø 2 cm) *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- Bjerkandera adusta* (Willd.) P. Karst. – LS: **3b.** on decaying stem *Carpinus betulus*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **4.** on decaying stem *Alnus incana* and *Tilia cordata*, 17. 11. 2010, leg. DB, det. IM, herb. DB; on stem *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **5.** on decaying stem *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB. — **7.** on decaying stem *Salix fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. DB.
- B. fumosa* (Pers.) P. Karst. – LS: **5.** on twig *Salix* sp., 24. 11. 2010, leg. et det. IM, not. — **7.** on decaying stem *Salix fragilis*, 15. 10. 2010, leg. et det. IM, not.
- Botryobasidium conspersum* J. Erikss. – LS: **7.** on twig *Sambucus nigra*, 6. 6. 2012, leg. DB, det. IM, herb. DB.
- Cerrena unicolor* (Bull.) Murrill – LS: **3a.** BLANÁR and MIHÁL (2002). — **4.** on decaying stem (Ø 15 cm), bark *Salix alba*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on decaying stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Chondrostereum purpureum* (Pers.) Pouzar – LS: **1.** on twig *Acer* sp., 30. 3. 2011, leg. et det. IM, not.; on twig *Salix* sp., 5. 8. 2010, leg. et det. IM, not. — **3a.** BLANÁR and MIHÁL (2002) — **7.** on twig *Salix alba*, 25. 11. 2003, leg. DB, det. IM, herb. DB.
- Clavaria fragilis* Holmsk. – TS: **1.** on soil, 15. 10. 2010, leg. et det. IM, herb. IM.
- Clavicornia pyxidata* (Pers.) Donk – LS: **2.** on decaying wood *Salix fragilis*, 2. 10. 2009, leg. DB, det. IM, herb. DB. — **4.** in litter, on decaying wood, 10. 8. 2011, leg. DB, det. IM, herb. DB.
- Clavulina cinerea* (Bull.) J. Schröt. – TS: **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Clitocybe brumalis* (Fr.) P. Kumm. – TS: **1.** on soil, 15. 10. 2010, leg. et det. IM, not. — **2.** on soil, 6. 8. 2010, leg. et det. IM, not. — **6.** on soil, 23. 9. 2010, leg. et det. IM, not. — **7.** on soil, 15. 10. 2010, leg. et det. IM, not.
- C. candicans* (Pers.) P. Kumm. – TS: **1.** on soil, 5. 9. 2010, leg. et det. IM, not.
- C. clavipes* (Pers.) P. Kumm. – TS: **4.** on decaying wood *Salix fragilis*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- C. nebularis* (Batsch.) P. Kumm. – TS: **1.** on soil, 23. 9. 2010, leg. et det. IM, not. — **6.** on soil, 23. 9. 2010, leg. et det. IM, not.

- C. phyllophila* (Pers.) P. Kumm. – TS: **4.** on soil, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- C. truncicola* (Peck) Sacc. – LS: **6.** on decaying wood *Salix fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. IM — **7.** on decaying wood *Salix fragilis*, 19. 8. 2010, leg. DB, det. IM, herb. DB.
- Clitopilus hobsonii* (Berk. et Broome) P. D. Orton – LS: **2.** on decaying wood *Salix* sp., 2. 7. 2010, leg. et det. IM, herb. IM. — **6.** on twig *Salix* sp., 2. 7. 2010, leg. et det. IM, herb. IM.
- C. prunulus* (Scop.) P. Kumm. – TS: **1.** on soil, 15. 10. 2010, leg. et det. IM, not.
- Conocybe digitalina* (Velen.) Svrček – TS: **7.** on soil, 7. 4. 2010, 19. 8. 2010, leg. DB, det. IM, herb. DB, herb. IM.
- C. rickeniana* P. D. Orton – TS: **4.** on decaying wood *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- Coprinus atramentarius* (Bull.) Fr. – TS: **3a.** on soil, BLANÁR and MIHÁL (2002).
- C. comatus* (O. F. Müll.) Gray – TS: **2.** on soil, 28. 5. 2010, leg. et det. IM, not. — **7.** on soil, 18. 8. 2010, leg. et det. IM, not.
- C. disseminatus* (Pers.) Gray – LS: **1.** on decaying wood *Alnus glutinosa*, 16. 3. 2011, leg. et det. IM, not. — **6.** on decaying stem *Salix* sp., 23. 9. 2010, leg. et det. IM, not. — **7.** on twig *Salix* sp., 6. 7. 2012, leg. et det. IM, not.
- C. domesticus* (Bolton) Gray – TS: **7.** on soil, leg. et det. IM, not.
- C. micaceus* (Bull.) Fr. – TS: **3a.** BLANÁR and MIHÁL (2002). — **4.** on decaying wood of broadleaves tree, 10. 8. 2011, leg. DB, det. IM, herb. DB.
- C. plicatilis* (M. A. Curtis) Fr. – TS: **3a.** BLANÁR and MIHÁL (2002). — **6.** on soil, 3. 9. 2009, leg. et det. IM, not. — **7.** soil, 19. 8. 2010, leg. et det. IM, not.
- Crepidotus applanatus* (Pers.) P. Kumm – LS: **1.** on decaying stem *Salix fragilis*, 5. 9. 2010, leg. DB, det. SJ, SLO.
- C. caspari* Velen. – LS: **1.** on decaying stem *Salix fragilis*, 5. 9. 2010, leg. DB, det. SJ, SLO 977; on decaying twig *Swida sanguinea* agg., 5. 8. 2010, leg. DB, det. SJ, SLO 991. — **2.** on decaying twig (Ø 2–6 cm) *Salix fragilis*, 16. 10. 2010, leg. DB, det. SJ, SLO 981, SLO 992. — **4.** on decaying twig *Salix fragilis*, on dry stalk *Lunaria rediviva*, 15. 8. 2009, leg. DB, det. SJ, SLO. — **5.** on decaying twig (Ø 2 cm) *Salix alba*, 24. 11. 2010, leg. DB, det. SJ, SLO 972.
- C. cesatii* Rabenh. – LS: **2.** on twig (Ø 2.5 cm) *Salix fragilis*, 15. 10. 2010, leg. DB, det. SJ, SLO 990. — **4.** on decaying twig *Populus nigra*, 10. 8. 2011, leg. DB, det. SJ, SLO 990.
- C. lundellii* Pilát – LS: **3a.** BLANÁR and MIHÁL (002).
- C. luteolus* (Lamotte) Sacc. – LS: **3b.** on decaying twig (Ø 0.1–0.3 cm) *Salix fragilis* and dry stalk *Urtica dioica*, 20. 11. 2010, leg. DB, det. SJ, SLO 980, SLO 989.
- C. mollis* (Schaeff.) Staude – LS: **1.** on decaying stem *Salix caprea*, 5. 9. 2009, leg. DB, det. SJ, SLO 979. — **4.** on decaying wood *Populus nigra*, 10. 8. 2011, leg. DB, det. SJ, SLO 985.
- Cystolepiota seminuda* (Lasch) Bon – TS: **6.** on soil, 23. 9. 2010, leg. et det. IM, herb. IM.
- Dacrymyces minor* Peck – LS: **1.** on twig *Salix* sp., 14. 7. 2010, leg. et det. IM, not.
- Daedaleopsis confragosa* (Bolton) J. Schröt. – LS: **1.** on stem *Salix fragilis*, 5. 8. 2010, leg. DB, det. IM, herb. DB. — **2.** on decaying wood *Salix fragilis*, 2. 10. 2009, leg. DB, det. IM, herb. DB. — **4.** on decaying stem *Salix fragilis*, 15. 8. 2009, leg. DB, det. IM, herb. DB. — **5.** on decaying stem *Salix fragilis*, 1. 9. 2009, 12. 10. 2012, leg. DB, det. IM, herb. DB; on bark *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB. — **6.** on twig *Salix fragilis*, 1. 9. 2009, leg. DB, det. IM, herb. DB; on stem *Salix fragilis*, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Entoloma rhodopolium* (Fr.) P. Kumm. – TS: **4.** on soil, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- E. sericeum* (Bull. ex Mérat) Quéll. – TS: **2.** on soil, 6. 8. 2010, leg. DB, det. IM, herb. DB.
- Exidia glandulosa* (Bull.) Fr. – LS: **1.** on bark of twig *Corylus avellana*, 16. 3. 2011, leg. DB, det. IM, herb. DB. — **2.** on twigs *Salix* sp., 15. 10. 2010, leg. et det. IM, not. — **3b.** on twigs *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **4.** on stem *Salix* sp., 20. 11. 2011, leg. et det. IM, not.
- E. recisa* (Ditmar) Fr. – LS: **1.** on decaying twigs *Salix fragilis*, 5. 8. 2010, leg. et det. IM, herb. IM. — **7.** on decaying stem *Salix fragilis*, 15. 10. 2010, leg. et det. IM, not.
- E. truncata* Fr. – LS: **1.** on twigs *Salix fragilis*, 30. 3. 2011, leg. et det. IM, not. — **3b.** on decaying twig *Salix cinerea* and *S. fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Femsjonina pezizaeformis* (Léveille) P. Karst. – LS: **3b.** on decaying twig (Ø 1 cm) *Salix fragilis*, 12. 5. 2011, leg. DB, IM, det. IM, herb. DB, herb. IM.
- Flammulina velutipes* complex – LS: **3a.** BLANÁR and MIHÁL (2002) — **3b.** on decaying stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. SJ, SLO 993. — **4.** on stem *Ulmus laevis*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Fomes fomentarius* (L.) J. Kickx – LP: **7.** on stem *Salix fragilis*, 6. 6. 2012, leg. DB, det. IM, herb. DB.
- Fomitopsis pinicola* (Sw.) P. Karst. – LP: **4.** on decaying stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on stem *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- Ganoderma australe* (Fr.) Pat. – LP: **4.** on stem *Salix* sp., 12. 5. 2011, leg. et det. IM, not. — **7.** on stem *Salix fragilis*, 6. 7. 2012, leg. et det. IM, not.
- G. lipsiense* (Batsch) G. F. Atk. – LP: **3a.** BLANÁR and MIHÁL (2002). — **7.** on stem *Salix fragilis*, 10. 8. 2009, 6. 6. 2012, leg. DB, det. IM, herb. DB.

- Gymnopilus junonius* (Fr.) P. D. Orton – LS: **1.** on twigs *Corylus avellana*, 23. 9. 2010, leg. et det. IM, not. — **4.** on decaying stem *Salix* sp., 17. 11. 2011, leg. et det. IM, not.
- G. penetrans* (Fr.) Murrill – LS: **6.** on twigs *Salix* sp., 3. 9. 2009, leg. et det. IM, not.
- Gymnopus peronatus* (Bolton) Antonín et al. – TS: **1.** on soil, 5. 8. 2010, leg. DB, det. IM, herb. DB.
- Gloeocystidiellum porosum* (Berk. et M. A. Curtis) Donk – LS: **2.** on decaying twig (Ø 1 cm) *Salix fragilis*, 2. 10. 2009, leg. DB, det. IM, herb. DB. — **3b.** on decaying twig *Salix* sp., 12. 5. 2011, leg. DB, IM, det. IM, herb. DB, herb. IM.
- Gloeoporus dichrous* (Fr.) Bres. – LS: **3b.** on bark of stem *Salix caprea*, 20. 11. 2010, leg. DB, det. IM, herb. DB, herb. IM.
- Hapalopilus nidulans* (Fr.) P. Karst. – LS: **3b.** on stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Haplotrichum rubiginosum* (Fr.) Hol.-Jech. – LS: **4.** on decaying stem *Tilia cordata*, 17. 11. 2010, leg. DB, det. IM, herb. DB, herb. IM. — **7.** on decaying wood *Salix alba*, 6. 6. 2012, leg. DB, det. IM, herb. DB.
- Hirneola auricula-judae* (Bull.) Berk. – LS: **3a.** BLANÁR and MIHÁL (2002). — **3b.** on decaying wood *Euonymus europaeus*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **7.** on dry twigs (Ø 1.5 cm) *Sambucus nigra*, 25. 11. 2003, 10. 8. 2009, leg. DB, det. IM, herb. DB.
- Hohenbuehelia angustata* (Berk.) Singer – LS: **4.** on stem *Padus racemosa*, 30. 12. 2011, leg. DB, det. IM, herb. DB, herb. IM.
- Hydropus subalpinus* (Höhn.) Singer – LS: **7.** on decaying stem *Salix alba* and *S. fragilis*, 19. 8. 2010, leg. DB, det. IM, herb. DB.
- Hymenochaete tabacina* (Sowerby) Lév. – LS: **4.** on stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **6.** on stem *Alnus glutinosa*, 15. 1. 2010, leg. DB, IM, det. IM, herb. DB.
- Hyphoderma medioburiense* (Burt) Donk – LS: **7.** on twig *Salix fragilis* and *Salix alba*, 6. 6. 2012, leg. DB, det. IM, herb. DB, herb. IM.
- Hypholoma capnoides* (Fr.) P. Kumm. – LS: **2.** on twig *Salix* sp., 23. 9. 2010, leg. et det. IM, not.
- H. fasciculare* (Huds.) P. Kumm. – LS: **1.** on twigs *Corylus avellana*, 15. 10. 2010, leg. et det. IM, not. — **2.** on decaying wood *Salix fragilis*, 2. 10. 2009, leg. DB, det. IM, herb. DB. — **3a.** BLANÁR and MIHÁL (2002). — **4.** on decaying wood *Salix fragilis*, 15. 8. 2009, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **6.** on decaying wood *Salix* sp., 23. 9. 2010, leg. et det. IM, not.
- H. subviride* (Berk. et M. A. Curtis) Dennis – LS: **4.** on stem *Alnus glutinosa*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- H. sublateritium* (Schaeff.) Quéf. – LS: **3a.** on decaying wood *Salix* sp., BLANÁR and MIHÁL (2002).
- Inocybe geophylla* (Fr.) P. Kumm. – MS: **4.** in litter, on soil, 10. 8. 2011, leg. DB, det. IM, herb. DB.
- I. nitidiuscula* (Britzelm.) Sacc. – MS: **4.** in litter, on soil, 10. 8. 2011, leg. DB, det. IM, herb. DB.
- Kuehneromyces mutabilis* (Schaeff.) Singer et A. H. Sm. – LS: **2.** on decaying stem *Salix* sp., 6. 8. 2010, leg. et det. IM, not.
- Laccaria laccata* agg. – MS: **1.** on soil, 14. 7. 2010, 23. 9. 2010, leg. et det. IM, not.
- Lacrymaria lacrymabunda* (Bull.) Pat. – LS: **1.** on soil, 5. 8. 2010, leg. DB, det. IM, herb. DB.
- Lactarius chrysorrheus* Fr. – MS: **1.** on soil, 14. 7. 2010, leg. et det. IM, not.
- L. lilacinus* (Lasch) Fr. – MS: **1.** on soil, 14. 7. 2010, leg. et det. IM, not.
- L. seriffuus* (DC.) Fr. – MS: **1.** on soil, 23. 9. 2010, leg. et det. IM, not.
- Laeticorticium roseum* (Pers.) Donk – LS: **1.** on decaying stem *Salix caprea*, 5. 8. 2010, 15. 10. 2010, leg. DB, det. IM, herb. DB, herb. IM. — **3b.** on decaying stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB, herb. IM.
- Laetiporus sulphureus* (Bull.) Bondartsev et Singer – LP: **7.** on stem *Salix* sp., 7. 4. 2010, leg. et det. IM, not.
- Lenzites betulina* (L.) Fr. – LS: **4.** on decaying twig *Padus racemosa*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Lepiota clypeolaria* (Bull.) P. Kumm. – TS: **5.** on soil, 1. 9. 2009, leg. DB, det. IM, herb. DB.
- L. cristata* (Alb. et Schwein.) P. Kumm. – TS: **4.** on soil, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- L. felina* (Pers.) P. Karst. – TS: **6.** on soil, 23. 9. 2010, leg. et det. IM, herb. IM.
- L. pseudohelveola* Kühner ex Hora – TS: **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Lepista nuda* (Bull.) Cooke – TS: **3a.** BLANÁR and MIHÁL (2002).
- Lycoperdon lividum* Pers. – TS: **2.** on soil, 15. 10. 2010, leg. IM et DB, det. IM, herb. DB.
- L. pyriforme* Schaeff. – LS: **2.** on decaying wood, 6. 8. 2010, leg. et det. IM, not. — **3a.** BLANÁR and MIHÁL (2002).
- Macrocystidia cucumis* (Pers.) Joss. – TS: **1.** on soil, 5. 8. 2010, leg. DB, det. IM, herb. DB.
- Macrotypophula juncea* (Fr.) Berthier – TS: **4.** in litter, on leaves *Alnus glutinosa*, *Salix fragilis*, *Ulmus laevis*, 17. 11. 2010, leg. DB, det. IM, herb. DB.
- Marasmiellus foetidus* (Sowerby) Antonín et al. – LS: **3a.** on twigs, BLANÁR and MIHÁL (2002). — **6.** on twigs *Salix* sp., 2. 7. 2010, leg. et det. IM, not.
- M. ramealis* (Bull.) Singer – LS: **1.** on decaying wood in soil, 2. 7. 2010, leg. IM, det. IM, herb. DB. — **2.** on decaying wood *Salix* sp., leg. et det. IM, not.

- Marasmius bulliardii* Quél. – LS: **4.** on decaying twig *Ribes uva-crispa*, 10. 8. 2010, leg. DB, det. IM, herb DB. — **5.** on stem *Salix* cf. *alba*, 1. 9. 2009, leg. DB, det. IM, herb. DB.
- M. rotula* (Scop.) Fr. – LS: **1.** on decaying wood, 15. 10. 2010, leg. et det. IM, not.
- M. wynnei* Berk. et Broome – TS: **3b.** in litter, on leaves *Salix cinerea*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Megacollybia platyphylla* (Pers.) Kotl. et Pouz. – LS: **1.** on decaying wood, 15. 10. 2010, leg. et det. IM, not. — **5.** on decaying wood *Salix alba*, 1. 9. 2009, leg. DB, det. IM, herb. DB. — **6.** on decaying wood *Salix* sp., 2. 7. 2010, leg. et det. IM, not.
- Melampsora amygdalinae* Kleb. – HP: **2.** in litter, on leaves *Alnus glutinosa*, 15. 10. 2010, leg. DB, det. IM, herb. DB. — **3a.** in litter, on leaves *Alnus glutinosa*, 20. 11. 2010, leg. et det. IM, herb. IM. — **6.** in litter, on leaves *Alnus glutinosa*, 15. 10. 2010, leg. IM et DB, det. IM, herb. DB.
- Melampsorium carpini* (Nees) Dietel – HP: **3a.** BLANÁR and MIHÁL (2002).
- Melanophyllum haematospermum* (Bull.) Kreisel – TS: **4.** on soil, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **7.** on soil, 19. 8. 2010, leg. DB, det. IM, herb. DB.
- Mycena acicula* (Schaeff.) P. Kumm. – TS: **7.** on decaying stem *Salix fragilis*, 28. 5. 2010, leg. DB, det. IM, herb. DB.
- M. capillaris* (Schumach.) P. Kumm. – HS: **1.** on decaying leaves *Salix* sp., 5. 8. 2010, leg. et det. IM, not. — **2.** on decaying leaves *Salix* sp., 23. 9. 2010, leg. et det. IM, not. — **4.** on decaying leaves *Salix* sp., 25. 8. 2009, leg. et det. IM, not.
- M. cinerella* (P. Karst.) P. Karst. – TS: **6.** on soil, 15. 10. 2010, leg. et det. IM, not. — **7.** on soil, 2. 7. 2010, leg. et det. IM, not.
- M. crocata* (Schrad.) P. Kumm. – TS: **6.** on soil, 15. 10. 2010, leg. et det. IM, not.
- M. filopes* (Bull.) P. Kumm. – LS: **3a.** BLANÁR and MIHÁL (2002). — **7.** on decaying stem *Salix fragilis*, 28. 5. 2010, leg. DB, det. IM, herb. DB.
- M. galericulata* (Scop.) Gray – LS: **1.** on decaying wood *Alnus glutinosa*, 5. 9. 2010, leg. et det. IM, not. — **2.** on decaying wood *Salix* sp., 23. 9. 2010, leg. et det. IM, not. — **6.** on decaying wood, 23. 9. 2010, leg. et det. IM, not.
- M. haematopus* (Pers.) P. Kumm. – TS: **1.** on decaying wood in soil, 15. 10. 2010, leg. et det. IM, not.
- M. polygramma* (Bull.) Gray – TS: **1.** on decaying wood in soil, 15. 10. 2010, leg. et det. IM, not.
- M. pura* (Pers.) P. Kumm. – TS: **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- M. renati* Quél. – LS: **6.** on decaying wood, 3. 9. 2009, 15. 10. 2010, leg. et det. IM, not.
- M. sanguinolenta* (Alb. et Schwein.) P. Kumm. – TS: **4.** on soil, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- M. tintinnabulum* (Batsch) Quél. – LS: **7.** on decaying stem *Salix alba* or *S. fragilis*, 19. 8. 2010, leg. DB, det. IM, herb. DB.
- Mycocacia nothofagi* (G. Cunn.) Ryvarden – LS: **3b.** on decaying stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB, herb. IM.
- Oligoporus stipticus* (Pers.) Gilb. et Ryvarden – LS: **6.** on decaying stem *Salix* sp., 2. 9. 2009, leg. et det. IM, not.
- O. subcaesius* (A. David) Ryvarden et Gilb. – LS: **3b.** on decaying stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **6.** on decaying stem *Salix fragilis*, 15. 10. 2010, leg. DB et IM, det. IM, herb. DB.
- Omphalina discorosea* (Pilát) Herink et Kotl. – LS: **1.** on decaying wood in soil, 23. 9. 2010, leg. et det. IM, herb. IM. — **2.** on decaying wood in soil, 23. 9. 2010, leg. et det. IM, herb. IM.
- O. oniscus* (Fr.) Quél. – LS: **3b.** on decaying stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Ossicaulis lignatilis* (Pers.) Redhead et Ginns – LS: **7.** on decaying wood *Salix* sp., 15. 10. 2010, leg. et det. IM, herb. IM.
- Panaeolina foenicicii* (Pers.) Maire – TS: **1.** on soil, 2. 7. 2010, leg. DB, det. IM, herb. DB. — **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Panaeolus fimicola* (Fr.) Quél – TS: **4.** on soil, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- P. retirugis* (Fr.) Quél. – TS: **2.** on soil, 28. 5. 2010, leg. et det. IM, herb. IM.
- Panellus serotinus* (Pers.) Kühner – LS: **4.** on decaying stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on decaying wood *Salix* sp., 24. 11. 2010, leg. et det. IM, herb. IM.
- P. stipticus* (Bull.) P. Karst. – LS: **1.** on decaying wood *Betula pendula*, 5. 8. 2001, leg. et det. DB, not. — **3a.** on decaying stem *Salix fragilis*, 27. 3. 1999, leg. et det. DB, herb. DB. — **3b.** on decaying twig (Ø 0.5 cm), 27. 8. 1999, leg. et det. DB, herb. DB. — **4.** on decaying stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on decaying stump *Alnus glutinosa*, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- P. cf. ringens* (Fr.) Romagn. – LS: **3b.** on decaying stem *Salix cinerea*, 20. 11. 2010, leg. DB, det. SJ, SLO 984.
- Paxillus filamentosus* (Scop.) Fr. – MS: **1.** on soil, 5. 8. 2010, 23. 9. 2010, leg. et det. IM, not.
- Peniophora aurantiaca* (Bres.) Höhn. et Litsch. – LS: **3b.** on decaying twig (Ø 1 cm) *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB, herb. IM.
- Perenniporia tenuis* (Sacc.) Ryvarden – LS: **2.** on decaying twig *Alnus glutinosa*, 2. 7. 2010, leg. DB, det. IM, herb. DB. — **3b.** on decaying twig (Ø 2 cm) *Salix fragilis*, 8. 8. 2010, leg. DB, det. IM, herb. DB.
- Phanerochaete laevis* (Pers.) J. Erikss. et Ryvarden – LS: **1.** on twig *Salix fragilis*, 15. 10. 2010, leg. et det. IM, not. — **3a.** BLANÁR and MIHÁL (2002). —

- 5.** on decaying twig *Sambucus nigra*, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- P. sordida* (P. Karst.) J. Erikss. et Ryvarden – LS: **4.** on decaying twig *Sambucus nigra*, 17. 11. 2010, leg. DB, det. IM, herb. DB. – **5.** on twig *Salix* sp., 24. 11. 2010, leg. et det. IM, herb. IM.
- Phellinus conchatus* (Pers.) Quél. – LP: **6.** on stem *Salix* sp., 3. 9. 2009, leg. et det. IM, herb. IM.
- P. igniarius* (L.) Quél. – LP: **6.** on stem *Salix fragilis*, 3. 9. 2009, leg. DB, det. IM, herb. DB. — **7.** on stem *Salix fragilis*, 10. 8. 2009, leg. DB, det. IM, herb. DB.
- P. populicola* Niemelä – LS: **4.** on decaying stem *Populus nigra*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- P. punctatus* (Fr.) Pilát – LP: **1.** on stem *Salix fragilis*, 14. 7. 2010, leg. et det. IM, not. — **4.** on stem *Salix caprea*, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **5.** on twig *Salix fragilis*, 1. 9. 2009, leg. DB, det. IM, herb. DB. — **6.** on stem *Salix fragilis*, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Phlebia tremellosa* (Schrad.) Nakasone et Burds. – LS: **3a.** BLANÁR and MIHÁL (2002).
- Phleogena faginea* (Fr.) Link – LS: **1.** on decaying stem *Salix caprea*, 5. 9. 2010, leg. DB, det. IM, herb. DB.
- Pholiota adiposa* (Batsch) P. Kumm. – LP: **1.** on stem *Alnus glutinosa*, 23. 9. 2010, leg. et det. IM, not. — **2.** on stem *Salix fragilis*, 15. 10. 2010, leg. et det. IM, not.
- P. alnicola* (Fr.) Singer – LP: **4.** on stem *Populus nigra*, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **6.** on stem *Alnus glutinosa*, 23. 9. 2010, leg. et det. IM, not.
- P. squarrosa* (Weigel) P. Kumm. – LS: **6.** on decaying wood *Salix* sp., 23. 9. 2010, leg. et det. IM, not.
- Pleurotus dryinus* (Pers.) P. Kumm. – LS: **4.** on decaying wood *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- P. ostreatus* (Jacq.) P. Kumm. – LS: **1.** on decaying stem *Corylus avellana*, 5. 9. 2010, leg. et det. IM, not. — **7.** on stem *Ulmus laevis*, 15. 10. 2010, leg. et det. IM, not.
- Plicaturopsis crispa* (Pers.) D. A. Reid – LS: **1.** on dry twig *Corylus avellana*, 16. 3. 2011, leg. DB, det. IM, herb. DB. — **3b.** on stem *Salix caprea*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Pluteus cervinus* (Schaeff.) P. Kumm. – LS: **2.** on decaying wood, 2. 7. 2010, leg. et det. IM, not. — **4.** on stem *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- P. ephebeus* (Fr.) Gillet – LS: **7.** on decaying stem *Salix fragilis*, 15. 10. 2010, leg. IM et DB, det. IM, herb. DB.
- P. podospileus* Sacc. et Cub. – LS: **7.** on decaying twig *Salix fragilis*, 6. 7. 2012, leg. et det. IM, herb. IM.
- P. romellii* (Britzelm.) Sacc. – LS: **4.** on decaying wood *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **7.** on decaying twig *Salix* cf. *fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. DB.
- P. salicinus* (Pers.) P. Kumm. – LS: **2.** on decaying wood *Salix fragilis*, 2. 10. 2009, leg. DB, det. IM, herb. DB. — **3b.** on decaying twig *Salix* sp., 12. 5. 2011, leg. et det. IM, not. — **7.** on decaying wood *Salix alba*, 10. 8. 2009, leg. DB, det. IM, herb. DB.
- Polyporus badius* (Pers.) Schwein. – LS: **4.** on decaying stem *Salix fragilis*, 15. 8. 2009, leg. DB, det. IM, herb. DB.
- P. brumalis* (Pers.) Fr. – LS: **1.** on decaying twig *Salix fragilis*, 23. 9. 2010, leg. et det. IM, not. — **3a.** BLANÁR and MIHÁL (2002). — **4.** on stem *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- P. ciliatus* Fr. – LS: **4.** on stem *Populus nigra*, 12. 5. 2012, leg. DB, det. IM, herb. DB.
- P. melanopus* (Sw.) Fr. – LS: **2.** on decaying twig *Salix fragilis*, 6. 8. 2010, leg. et det. IM, not. — **6.** on stem *Alnus glutinosa*, 23. 9. 2010, leg. et det. IM, not. — **7.** on decaying stem *Salix alba*, 15. 10. 2010, leg. et det. IM, not.
- P. squamosus* (Huds.) Fr. – LP: **7.** on stem *Salix fragilis*, 10. 8. 2009, leg. DB, det. IM, herb. DB.
- Protomerulius caryae* (Schwein.) Ryvarden – MP: **4.** on old fruitbodies *Ganoderma australe* (stem *Salix fragilis*), 30. 12. 2011, leg. DB, det. IM, herb. DB, herb. IM.
- Psathyrella candolleana* (Fr.) Maire – LS: **1.** on decaying stem *Alnus glutinosa*, 5. 9. 2010, leg. DB, det. IM, herb. DB. — **7.** on decaying wood *Salix fragilis* or *S. alba*, 15. 10. 2010, leg. DB, det. IM, herb. DB.
- P. piluliformis* (Bull.) P. D. Orton – TS: **1.** on soil, 5. 8. 2010, leg. et det. IM, not. — **4.** on soil, 12. 5. 2011, leg. et det. IM, not.
- Pseudoclitocybe cyathiformis* (Bull.) Singer – LS: **3a.** BLANÁR and MIHÁL (2002). — **5.** on decaying wood in soil, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- Psilocybe inquilina* var. *crobula* (Fr.) Høil. – TS: **1.** on soil, 23. 9. 2010, leg. et det. IM, not.
- P. cyanescens* (Maire) Wakef – TS: **2.** on soil, 28. 5. 2010, leg. et det. IM, not.
- Puccinia* sp. – HP: **1.** on leaves *Alnus glutinosa*, 15. 10. 2010, leg. et det. IM, herb. IM. — **2.** on leaves *Alnus glutinosa*, 15. 10. 2010, leg. et det. IM, herb. IM.
- Radulomyces molaris* (Chaillat ex Fr.) M. P. Christ. – LS: **3b.** on decaying twig *Salix cinerea*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Rhodocollybia butyracea* (Bull.) Lennox – TS: **3a.** BLANÁR and MIHÁL (2002).
- Rhodocybe gemina* (Fr.) Kuyper et Noordel. – TS: **4.** on soil, 10. 8. 2011, leg. DB, det. IM, herb. DB.
- Rickenella fibula* (Bull.) Raitelh. – LS: **1.** on decaying wood *Alnus glutinosa*, 14. 7. 2010, leg. DB, det. IM, herb. DB. — **2.** on decaying stump *Alnus glutinosa* and *Salix fragilis*, 6. 8. 2010, leg. DB, det. IM, herb. DB. — **7.** on decaying stem *Salix* cf. *fragilis*, 19. 8.

- Schizophyllum commune** Fr. – LS: **1.** on twigs *Salix fragilis*, 14. 7. 2010, leg. et det. IM, not. — **5.** on decaying stem *Salix alba*, 24. 11. 2010, leg. DB, det. IM, herb. DB. — **6.** on decaying stem *Salix sp.*, 2. 7. 2010, leg. et det. IM, not. — **7.** on decaying twig *Salix fragilis*, 19. 8. 2010, leg. DB, det. IM, herb. DB.
- Schizopora flavipora** (Berk et M. A. Curtis ex Cooke) Ryvarden – LS: **3b.** on decaying twig *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Scleroderma verrucosum** (Bull.) Pers. – MS: **4.** on sandy soil, 10. 8. 2011, leg. DB, det. IM, herb. DB.
- Scytinostroma portentosum** (Berk. et M. A. Curtis) Donk – LS: **3b.** on decaying twig *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Setulipes androsaceus** (L.) Antonín – LS: **2.** on decaying twig *Salix fragilis*, 2. 7. 2010, leg. DB, det. IM, herb. DB. — **3b.** on decaying twig *Salix fragilis*, 8. 7. 2010, leg. DB, det. IM, herb. DB.
- Steccherinum dichroum** Pers. – LS: **3b.** on twig *Salix cinerea*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Stereum gausapatum** (Fr.) Fr. – LP: **3a.** BLANÁR and MIHÁL (2002). — **4.** on stem *Populus nigra*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- S. hirsutum* (Willd.) Gray – LS: **2.** on decaying twig *Salix sp.*, 6. 8. 2010, leg. et det. IM, not. — **5.** on decaying stem *Salix alba*, 1. 9. 2009, 24. 11. 2010, leg. DB, det. IM, herb. DB.
- S. rugosum* (Pers.) Fr. – LS: **2.** on decaying stem *Alnus glutinosa*, 6. 8. 2010, leg. et det. IM, not.
- S. subtomentosum* Pouzar – LS: **4.** on twig *Salix fragilis*, 12. 10. 2012, leg. DB, det. IM, herb. DB.
- Stropharia caerulea** Kreisel – TS: **3a.** BLANÁR and MIHÁL (2002).
- Subulicystidium longisporum** (Pat.) Parmasto – LS: **4.** on dry twigs *Sambucus nigra*, 15. 8. 2009, leg. DB, det. IM, herb. DB. — **5.** on twig *Salix fragilis*, 1. 9. 2009, leg. DB, det. IM, herb. DB.
- Thelephora penicillata** Pers. – MS: **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Trametes gibbosa** (Pers.) Fr. – LS: **7.** on stem *Salix fragilis*, 10. 8. 2009, leg. DB, det. IM, herb. DB.
- T. suaveolens* (L.) Fr. – LS: **1.** on stem *Salix fragilis*, 14. 7. 2010, leg. et det. IM, not. — **3a.** BLANÁR and MIHÁL (2002). — **3b.** on stem *Salix fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on decaying stem *Salix alba* and twig *Alnus glutinosa*, 24. 11. 2010, leg. DB, det. IM, herb. DB. — **7.** on stem *Salix alba*, 1. 4. 2011, leg. DB, det. IM, herb. DB; on decaying stem *Salix fragilis*, 19. 8. 2010, leg. DB, det. IM, herb. DB.
- T. velutina* (Planer) G. Cunn. – LS: **1.** twig *Salix fragilis*, 15. 10. 2011, leg. et det. IM, not. — **4.** on decaying stem *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **7.** on stem *Alnus glutinosa*, 19. 8. 2010, leg. et det. IM, not.
- T. versicolor* (L.) Pilát – LS: **1.** on twig *Alnus glutinosa*, 15. 10. 2011, leg. et det. IM, not. — **3a.** BLANÁR and MIHÁL (2002). — **4.** on decaying stem *Salix fragilis* and *Padus racemosa*, 15. 8. 2009, 12. 10. 2012, leg. DB, det. IM, herb. DB; on decaying wood *Alnus incana*, 17. 11. 2010, leg. DB, det. IM, herb. DB. — **5.** on stem *Salix fragilis*, 1. 9. 2009, leg. DB, det. IM, herb. DB. — **6.** on decaying stem *Salix fragilis*, 28. 5. 2010, leg. et det. IM, not.
- Tremella mesenterica** Retz. – LS: **1.** on dry twig *Corylus avellana*, 16. 3. 2011, leg. DB, det. IM, herb. DB. — **2.** on twig *Sambucus nigra*, 2. 7. 2010, leg. et det. IM, not. — **3b.** on twigs *Salix cinerea* and *S. fragilis*, 20. 11. 2010, leg. DB, det. IM, herb. DB.
- Tricholoma saponaceum** (Fr.) P. Kumm. – MS: **2.** on soil, 15. 10. 2010, leg. et det. IM, not.
- Tubaria conspersa** (Pers.) Fayod. – TS: **1.** on soil, 23. 9. 2010, leg. et det. IM, not.
- T. romagnesianana* Arnolds – TS: **6.** on soil, 3. 9. 2009, leg. DB, det. IM, herb. DB.
- Typhula erythropus** (Pers.) Fr. – HS: **1.** in litter, on leaves *Alnus glutinosa*, 15. 10. 2010, leg. DB, det. IM, herb. DB. — **3a.** BLANÁR and MIHÁL (2002); in litter, on twig *Populus canescens*, 12. 10. 2012, leg. DB, det. IM, herb. DB. — **4.** in litter, on leaves *A. glutinosa* and *Salix fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. DB. — **6.** in litter, on leaves *A. glutinosa* and *Salix fragilis*, 15. 10. 2010, leg. DB, det. IM, herb. DB. — **7.** in litter, on leaves *Salix alba*, 25. 11. 2011, leg. DB, det. IM, herb. DB.
- Xerocomus rubellus** (Krombh.) Quél. – MS: **4.** on soil, 10. 8. 2011, leg. DB, det. IM, herb. DB.