

Boubínský prales virgin forest, a Central European refugium of boreal-montane and old-growth forest fungi

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Boubínský prales virgin forest is the best-preserved montane *Picea-Fagus-Abies* forest in the Czech Republic. Its core area (46.67 ha), grown with original montane forest never cut nor managed by foresters, has been protected since 1858. It represents the centre of the present-day nature reserve (685.87 ha). A detailed inventory of its fungal diversity was carried out in 2013–2014. Ten segments differing in habitat and naturalness were studied (235 ha). The total number of species was 659, with the centre of diversity in the core area (503 species) followed by the neighbouring segments grown by natural forests minimally influenced by man. When literature and herbarium data are added, the total diversity reaches a total of 792 taxa. The locality represents a unique refugium for some boreal-montane fungi (e.g. *Amylocystis lapponica*, *Laurilia sulcata*, *Pholiota subochracea*), a high number of rare species preferring old-growth forests (*Antrodia crassa*, *A. sitchensis*, *Baeospora myriado-phylla*, *Chrysomphalina chrysophylla*, *Fomitopsis rosea*, *Ionomidotis irregularis*, *Junghuhnia collabens*, *Skeletocutis odora*, *S. stellae*, *Tatraea dumbirensis*), wood-inhabiting and mycorrhizal fungi confined to *Abies* (*Panellus violaceofulvus*, *Phellinus pouzarii*, *Pseudoplectania melaena*, *Lactarius albocarneus*), and a high number of indicators of well-preserved *Fagus* forests (e.g. *Climacodon septentrionalis*, *Flammulaster limulatus*, *Pholiota squarrosoides*). Several very rare fungi are present, e.g. *Chromosera cyanophylla*, *Cystoderma subvinaceum* and *Pseudorhizina sphaerospora*. The value of the local mycobiota is further emphasised by the high number of protected and Red List species. Comparison with other Central European old-growth forests has confirmed that Boubínský prales is a mycological hotspot of European importance.

Key words: Mt. Boubín, Bohemian Forest, Czech Republic, Basidiomycota, Ascomycota, diversity, ecology, distribution.

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Boubínský prales je náš nejlépe zachovaný horský les tvořený smrkem, bukem a jedlí. Jeho jádro (46,67 ha), chráněné od roku 1858, představuje původní, lesním hospodařením nezasazený les (prales). Toto oplocené jádro je centrem současné národní přírodní rezervace o rozloze 685,87 ha. V letech 2013–2014 jsme udělali detailní mykologický průzkum rezervace. Studovali jsme 10 segmentů

o celkové rozloze 235 ha, lišících se biotopem a přirozeností porostu. Podchytili jsme výskyt 659 druhů. Druhově nejbohatší je jádro rezervace (503 druhů), následované okolními segmenty porostnými přirozeným, člověkem jen minimálně ovlivněným lesem. Spolu s publikovanými údaji a doklady v herbáriích dosahuje celková diverzita hub počtu 792 taxonů. Lokalita představuje unikátní refugium pro boreálně-montánní houby (např. *Amylocystis lapponica*, *Laurilia sulcata*, *Pholiota subochracea*), velký počet druhů preferujících přirozené lesy (*Antrodia crassa*, *A. sitchensis*, *Baeospora myriadophylla*, *Chrysomphalina chrysophylla*, *Fomitopsis rosea*, *Ionomidotis irregularis*, *Jungkuhnia collabens*, *Skeletocutis odora*, *S. stellae*, *Tatraea dumbirensis*), lignikolní a mykorrhizní houby vázané na jedli (*Panellus violaceofulvus*, *Phellinus pouzarii*, *Pseudoplectania melaena*, *Lactarius albocarneus*) a velký počet druhů indikujících dobře zachované bučiny (např. *Climacodon septentrionalis*, *Flammulaster limulatus*, *Pholiota squarrosoides*). Kromě toho je přítomno několik velmi vzácných druhů, např. *Chromosera cyanophylla*, *Cystoderma subvinaceum* a *Pseudorhizina sphaerospora*. Hodnota mykobioty je dále zvýrazněna vysokým počtem zákonem chráněných a v Červeném seznamu zařazených druhů. Srovnání s podobnými středoevropskými lokalitami potvrzuje, že Boubínský prales je evropsky významným centrem diverzity hub.

INTRODUCTION

Boubínský prales, its history and habitat conditions. Boubínský prales virgin forest (= Kubany Urwald, cited also as 'Lukenský prales' or virgin forest on 'Pažení = Basumský hřbet' mountain ridge) represents a unique remnant of original forest vegetation. It is located in the Šumava Mts. (= Bohemian Forest, Böhmerwald), south Bohemia, Czech Republic, on slopes of Mt. Boubín (= Kubany) between the towns of Vimperk and Volary. Coordinates of its centre are 48°58'37" N, 13°48'43" E. Its core area has been protected as a nature reserve since 1858 as the third oldest protected area on the territory of the present-day Czech Republic. This area is covered by the original montane forest never cut nor managed by foresters. The removal from any kind of forestry interventions was proposed for scientific and cultural purposes by Schwarzenberg's head forester Josef John (1802–1871) and officially declared as such by the land owner, Johann Adolf II, Prince (= Fürst) of Schwarzenberg (1799–1888). The core area (46.67 ha, altitude 925 to 1110 m, enclosed by a palisade since 1966) is surrounded by more or less natural forests, too. For detailed information on its history, habitat conditions and management, see Vrška et al. (2012). A unique fact is that all living and fallen trees have been mapped at four points in time (1847–1851: eight sample plots; 1972, 1996, 2010: entire core area) for scientific purposes (Vrška et al. 2012). The locality is famous for trees of extreme dimensions (especially *Picea*: height up to 55 m, diam. up to 150 cm), surmounting the averages common in Central European forests.

The present-day Boubínský prales National Nature Reserve, the centre of which is the core area, is state-owned and covers an area of 685.87 ha. The reserve was extended in 1958. Its altitude ranges from 874 to 1362 m, i.e. up to the summit of Mt. Boubín. The climate is mountainous in character, with mean

annual precipitations between 700–900 mm and a mean annual temperature of 4 °C (–5 °C in January, +13 °C in July) (Vrška et al. 2012: 123).

The main habitat is montane climax forest composed of *Picea abies*, *Fagus sylvatica*, and *Abies alba*, with admixed *Acer pseudoplatanus* and rarely *Ulmus glabra*. The forest grows on medium to strongly acidic soils (Organosols, Gleysols, Cambisols, Podzols; Vrška et al. 2012) developed on migmatite and gneiss of Palaeozoic age. Some trees are 400–500 years old. Phytosociologically, the nature reserve is a mosaic of herb-rich beech forests (*Fagion sylvaticae*, especially the *Dentario enneaphylli-Fagetum impatientetosum* subassociation), acidophilous beech forests (*Luzulo-Fagion sylvaticae*, especially the *Calamagrostio villosae-Fagetum sylvaticae* association) and montane *Calamagrostis* spruce forests (*Piceion abietis*, especially the *Calamagrostio villosae-Piceetum abietis* association) (Albrecht et al. 2003, Vrška et al. 2012; for terminology, see Chytrý et al. 2010). The core area is remarkable by the unusually high amount of dead wood. At present, the volume of dead trees amounts to 23% of the volume of living trees (Vrška et al. 2012). Currently, the core area is a *Picea*-dominated forest (55%) with an increasing population of *Fagus* (42%) and strongly decreasing *Abies* (2.5%; in the past more than 10% and up to 30% at lower altitudes, but currently living trees are rare and *Abies* is mostly present as fallen trunks).

Mycological research. Due to its unique habitat conditions, which favours wood-inhabiting fungi, Boubínský prales represents a famous and traditional mycological locality studied already since the end of the 19th century. The first published records are from Schwalb (1894; macrofungi, especially edible ones) and Höhnel & Litschauer (1908; corticioid fungi). Schwalb visited the locality in summer 1892 and named it ‘Basonwald (“Urwald”)', but also ‘Urwald, Kubany’.

After World War I and the establishment of Czechoslovakia, research was carried out primarily by Czech mycologists. Most of them repeatedly visited the locality, and their collections are mostly kept in the PRM (National Museum, Prague) and CB (South Bohemian Museum, České Budějovice) herbaria. The most important collectors have been Karel Kavina (Kavina 1920–1921, 1924, 1926a, 1926b, 1927, 1929), Albert Pilát (e.g. Pilát 1965 plus material for Pilát’s well-known monographs of *Polyporaceae*, *Pleurotus*, *Crepidotus*, *Auriculariales*, *Tremellales*, *Clavariales*; for references, see Kubička 1973), Josef Herink (e.g. Herink 1947, 1953, 1955), Mirko Svrček (e.g. Svrček 1969, 1975, 1977a, 1977b), Jiří Kubička (e.g. Kubička 1960), František Kotlaba and Zdeněk Pouzar (e.g. Kotlaba 1965, Kotlaba & Pouzar 1951, Pouzar 1958), Věra Holubová-Jechová (e.g. Holubová-Jechová 1969, 1973, 1982), Petr Vampola (collections of polypores in MJ and PRM) and Josef Vlasák (collections of polypores in private herbarium, see Vlasák 2015). Some records from Boubínský prales are also mentioned by

Velenovský (1920–1922, 1934). The records from Boubínský prales have been included in hundreds of publications on taxonomy, distribution and ecology of fungi (for overview, see Kubička 1973).

A large group of leading European mycologists (e.g. G. Bohus, R.W.G. Dennis, M.A. Donk, F.E. Eckblad, H. Haas, L. Hansen, P. Heinemann, H. Kreisel, M. Lange, M. Le Gal, R.A. Maas Geesteranus, A. Nespiak, J.T. Palmer, H. Romagnesi) visited the locality on the occasion of the Second European Mycological Congress held in Czechoslovakia in 1960 (Benedix 1960, Pilát & Svrček 1961).

In subsequent periods, large numbers of species from Boubínský prales have been listed by Kotlaba (1983, 1984, 2001; mostly polypores), Holec (1992, 1998, 2000; macrofungi), Kotlaba et al. (1995; macrofungi), Holec & Beran (2006; macrofungi) and Vlasák (2015; polypores). Data on selected species have often been published by the Museum of South Bohemia (Kluzák 1986, Kubička & Kluzák 1982, Svrček 1978, 1999, 2002, 2006). A large amount of data from Czech literature was cited by Luschka (1993) in his comprehensive work on the mycobiota of the Bayerischer Wald National Park. Some photographs of fungi from Boubínský prales were published by Beran & Tondl (1997) and Papoušek (2004). Finally, there are detailed works on the taxonomy, ecology and distribution of selected fungal species, mostly of those preferring natural forests (Antonín et al. 2009, Běťák et al. 2012, Holec 2005a, 2008a, 2012, Holec & Beran 2007, Holec & Kříž 2013, Holec & Kučera 2007, 2008, Holec et al. 2015, Vampola & Pouzar 1992, Vlasák 1990). Recent excursions of foreign mycologists were undertaken during fungal forays in South Bohemia (2003, 2004) organized by M. Beran, curator of the fungi collection in CB. Selected collections from these excursions were published e.g. by Jaklitsch (2011).

Boubínský prales is a type locality of several new fungal taxa: *Dasyscyphus silvicola* ≡ *Lachnum silvicola* (Svrček 1977b), *Deightonella alni* (Ondřej 1984), *Galerina detriticola* (Svrček 1983), *Gorgoniceps hypothallosa* (Svrček 1984), *Gymnopus herinkii* (Antonín & Noordeloos 1996), *Hymenoscyphus syringicolor* (Svrček 1975, as '*H. syringaecolor*'), *Hypocrea pachypallida* (Jaklitsch 2011), *Mollisiella fagiseda* (Svrček 1977a), *Peniophora coccinea* (Höhnelt & Litschauer 1908: 72) and *Plicaria badia* var. *montana* Velen. (lectotype designated by Svrček 1976). Except for *G. hypothallosa*, *G. herinkii*, *H. syringicolor* and *H. pachypallida*, which have recently been verified, these taxa are in need of a thorough revision.

Targets of this study. The aforementioned literature seems to be rich, however, only two publications focus on the overall mycobiota of the Boubínský prales virgin forest (Kubička 1960, 1973). Both of them are based on a summarisation of published data, not on targeted field work. The second one, which is more complete, presents only 231 species. The incompleteness of data on the

mycobiota of this interesting locality was the main reason why we decided to study it in detail. Our targets were:

1. to perform a detailed and intensive field survey focused on all groups of macrofungi during the whole vegetation season (from spring thaw to the first autumn snow),
2. to identify the present macrofungi according to the modern taxonomic literature,
3. to compare the mycobiota of various areas of the Boubínský prales National Nature Reserve, especially with regard to their naturalness,
4. to evaluate the results both mycologically and for purposes of nature conservation.

MATERIAL AND METHODS

Data recording and processing. The entire area of the Boubínský prales National Nature Reserve (685.87 ha) is too large for a detailed mycological inventory. Moreover, it includes also managed *Picea abies* forests. For these reasons we studied only the areas covered by more or less natural stands (235 ha) selected by the Šumava Protected Landscape Area Authority (Fig. 2) based on forestry maps (Fig. 1). These segments were numbered BP 1–10 (Fig. 2), with the most valuable part fenced by a wooden palisade (core area representing the original virgin forest protected since 1858) indicated as BP1. The segments were divided into sub-segments (BP1a, 1b, 1c, etc.) representing slightly different habitats within the segments (Fig. 2). The fungal species composition was recorded for each segment separately, whereas the sub-segments were used for a more accurate localisation of the records. The most interesting records were located using the touristic GPS device Garmin GPSmap 60CSx (accuracy 3–10 m depending on the quality of the satellite signal).

The field work was carried out during the entire vegetation season in 2013 (24–25 April, 25–27 May, 10–12 and 26–28 June, 17–19 July, 24–26 August, 4–5 and 9–13 September, 2–3, 8–10 and 22–24 October, 19–20 November) and in periods of the best fungal fructification in 2014 (1 April, 2 July, 11 and 23–24 September). The core area (BP1) was studied during all visits, the other segments (BP2–10) less frequently (Tab. 2) for reasons of time.

The survey was focused on all groups of macrofungi, i.e. asco- and basidiomycetes with fruitbodies or stromata visible to the naked eye. Most records were noted, collected, microscoped and identified by J. Holec and M. Kríž. M. Šandová collected ascomycetes in September 12–13, 2013. The collections of corticioid fungi were identified by Z. Pouzar. Selected polypores were revised by P. Vampola (especially of the genera *Antrodia*, *Antrodiella*, *Ceriporia*, *Ceriporiopsis*, *Junghuhnia*, *Oxyporus*, *Physisporinus*, *Rigidoporus*, *Schizopora*, *Skeletocutis*, and poroid *Trechispora*). Of hypogeous fungi, only fruitbodies visible on the soil surface were noted. We did not dig for them for nature protection reasons.

The stage of wood decay was noted for all records of wood-inhabiting fungi. We used a simplified scale based on the definitions by Heilmann-Clausen (2001), but degrees 3 and 4 were unified into one unit. In the list of fungi (Appendix 1) the decay stages are expressed by the following phrases:

- Fallen corticated trunk, log or twig (degree 1: wood without visible signs of decay)
- Fallen decorticated trunk, log or twig (degree 2: signs of decay indistinct, wood weakly decomposed)
- Decaying trunk, stump, log or twig (degrees 3 and 4: decay of wood distinct, wood soft, but still with visible structure, in major part without bark)
- Decayed trunk, stump, log or twig (degree 5: rotten to almost humified wood)

Common and easily identifiable species were mostly noted without collecting vouchers. Rare, taxonomically complicated or otherwise interesting fungi were photographed in situ, collected, described, dried, microscopied, identified and finally kept as specimens in PRM (mycological herbarium of the National Museum, Prague). The total number of identified vouchers is about 600, the number of the unidentified ones about 100 (these will be investigated in the future).

Taxonomy and nomenclature of most species follow Bernicchia & Gorjón (2010), Hansen & Knudsen (2000), Knudsen & Vesterholt (2012), Ryvarden & Gilbertson (1993, 1994) and Ryvarden & Melo (2014). Simultaneously, recent taxonomic literature on individual fungal groups or genera was always used.

All records were entered into an MS Access database administrated by J. Holec and backed up in PRM. The list of taxa in this paper (Appendix 1) represents an output from this database. The list contains the most important data only, whereas complete information on all records is available from Holec et al. (2013; except for coordinates, which are available from the database only).

Forest naturalness. Naturalness of forest stands was classified as described in Holec et al. (2015). Simplified definitions are as follows:

- Virgin forest (original forest, long continuity, never cut and managed, spontaneous development, multi-aged structure, very rich in dead wood)
- Natural forest (natural composition, multi-aged, minimal forestry interventions, dead wood present)
- Near-natural forest (natural composition, influenced by forestry interventions, simplified spatial structure, dead wood rare)
- Man-influenced forest (under permanent influence of conventional forest management, trees mostly of one age, dead wood almost absent)

The first two categories are termed old-growth forests in this paper. The category of man-made forests is not included here, as such stands are not present in the studied area.

Weather conditions in 2013 and 2014. Boubínský prales (especially segments BP1–8) is characterised by a stable, humid and cold meso- and microclimate. This is caused by its location protected from weather extremes (stream valley and adjacent slopes) and the buffering effect of the almost complete tree canopy. However, the winters of 2012/2013 and 2013/2014 were extremely poor in snow and the vegetation seasons were influenced by long period of drought combined with periods of heavy rains. Generally, the weather conditions were rather atypical and not fully ideal for the production of sporocarps.

Abbreviations. *Abi* – *Abies alba*; alt. – altitude; BP – Boubínský prales National Nature Reserve; BP1, BP2 etc. – segments in Boubínský prales National Nature Reserve; BRNM – herbarium of Moravian Museum, Brno, Czech Republic; BRNU – herbarium of Masaryk University, Brno, Czech Republic; CB – herbarium of South Bohemian Museum, České Budějovice, Czech Republic; det. – identified by; *Fag* – *Fagus sylvatica*; FH – Farlow Herbarium, Harvard University, USA; leg. – collected by; KRAM – herbarium of Polish Academy of Sciences, Kraków, Poland; LS – Lahnsattel Natural Forest Reserve, Austria; MH – Mittelsteighütte Nature Reserve, Germany; MJ – herbarium of Jihlava Museum, Czech Republic; not. – record noted in the field without collecting a voucher specimen; *Pic* – *Picea abies*; PRM – mycological herbarium of National Museum, Prague, Czech Republic; ZH – Zátoňská hora Nature Reserve, Czech Republic; ŽP – Žofínský prales National Nature Reserve, Czech Republic; I–XII (Latin numbers) – months.

Tab. 1. Basic characteristics of studied areas (segments or sub-segments) in Boubínský prales National Nature Reserve. See also Fig 2.

Abbreviations: NN – naturalness, Segm. – segment or sub-segment. For other abbreviations, see Material and methods.

+++ Virgin forest, ++ Natural forest, + Near-natural forest, ! Man-influenced forest (for definitions, see Material and methods).

* flat terrain, ** stream valley, *** mountain ridge.

Segm.	Alt. (m)	Slope	Forest characteristics	NN	Position of the centre
BP1a	920–940	*	waterlogged, <i>Pic</i> + young <i>Fag</i> , <i>Abi</i>	+++	48.97397N, 13.81807E
BP1b	940–1000	**	mixed, <i>Pic</i> + <i>Fag</i> + <i>Abi</i>	+++	48.97682N, 13.81455E
BP1c	1000–1045	S**	mixed, <i>Pic</i> + <i>Fag</i> + <i>Abi</i>	+++	48.98003N, 13.81062E
BP1d	940–1000	E, ENE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	+++	48.97445N, 13.81532E
BP1e	1000–1050	E, ENE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	+++	48.97465N, 13.81277E
BP1f	1000–1060	E	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i> , streams	+++	48.97786N, 13.81035E
BP1g	1010–1100	E	waterlogged, <i>Pic</i> ; dry sites: <i>Pic</i> + <i>Fag</i>	+++	48.98014N, 13.80872E
BP1h	1050–1100	S	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	+++	48.98303N, 13.80794E
BP1i	930–1020	NE	path in mixed forest, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97202N, 13.81603E
BP2a	1040–1100	E, ENE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97380N, 13.81024E
BP2b	1070–1100	ENE	mixed, <i>Pic</i> + <i>Fag</i> + <i>Abi</i> , streams	++	48.97741N, 13.80719E
BP2c	1080–1160	E	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97968N, 13.80532E
BP2d	1040–1070	E, ENE	path in mixed forest, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97430N, 13.81125E
BP2e	1070	ENE	path in mixed forest, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97759N, 13.80799E
BP2f	1070–1100	E	path in mixed forest, <i>Pic</i> + <i>Fag</i> + <i>Abi</i>	+	48.98010N, 13.80681E
BP2g	1100–1200	ENE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97347N, 13.80657E
BP3	1020–1100	SW	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.98124N, 13.81256E
BP4a	950–1000	S	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97699N, 13.81734E
BP4b	1000–1100	S	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97948N, 13.81835E
BP5	930–1050	SW	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.97602N, 13.82230E
BP6	880	*	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.96768N, 13.82395E
BP7	950–1000	E	mixed, <i>Fag</i> + <i>Pic</i> , trees of one age	+	48.96840N, 13.81822E
BP8a	980–1080	SE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i> , spring areas	++	48.96725N, 13.81157E
BP8b	1050–1120	SE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.96955N, 13.80962E
BP8c	1100–1120	*	mixed, <i>Fag</i> + <i>Pic</i>	+	48.96618N, 13.80612E
BP8d	980–1100	ESE	mixed, <i>Fag</i> + <i>Pic</i> + <i>Abi</i>	++	48.96520N, 13.80923E
BP9a	1220–1290	SSW	coniferous, <i>Pic</i>	!	48.98872N, 13.80080E
BP9b	1270–1290	SE	coniferous, <i>Pic</i>	!	48.98939N, 13.80651E
BP10a	1350–1362	***	coniferous, <i>Pic</i>	+	48.99196N, 13.81565E
BP10b	1250–1350	NE	coniferous, <i>Pic</i>	+ / ++	48.99367N, 13.81732E
BP10c	1280–1350	SW	coniferous, <i>Pic</i>	!	48.99053N, 13.81303E
BP10d	1300–1350	NW	coniferous, <i>Pic</i>	++	48.99384N, 13.81172E

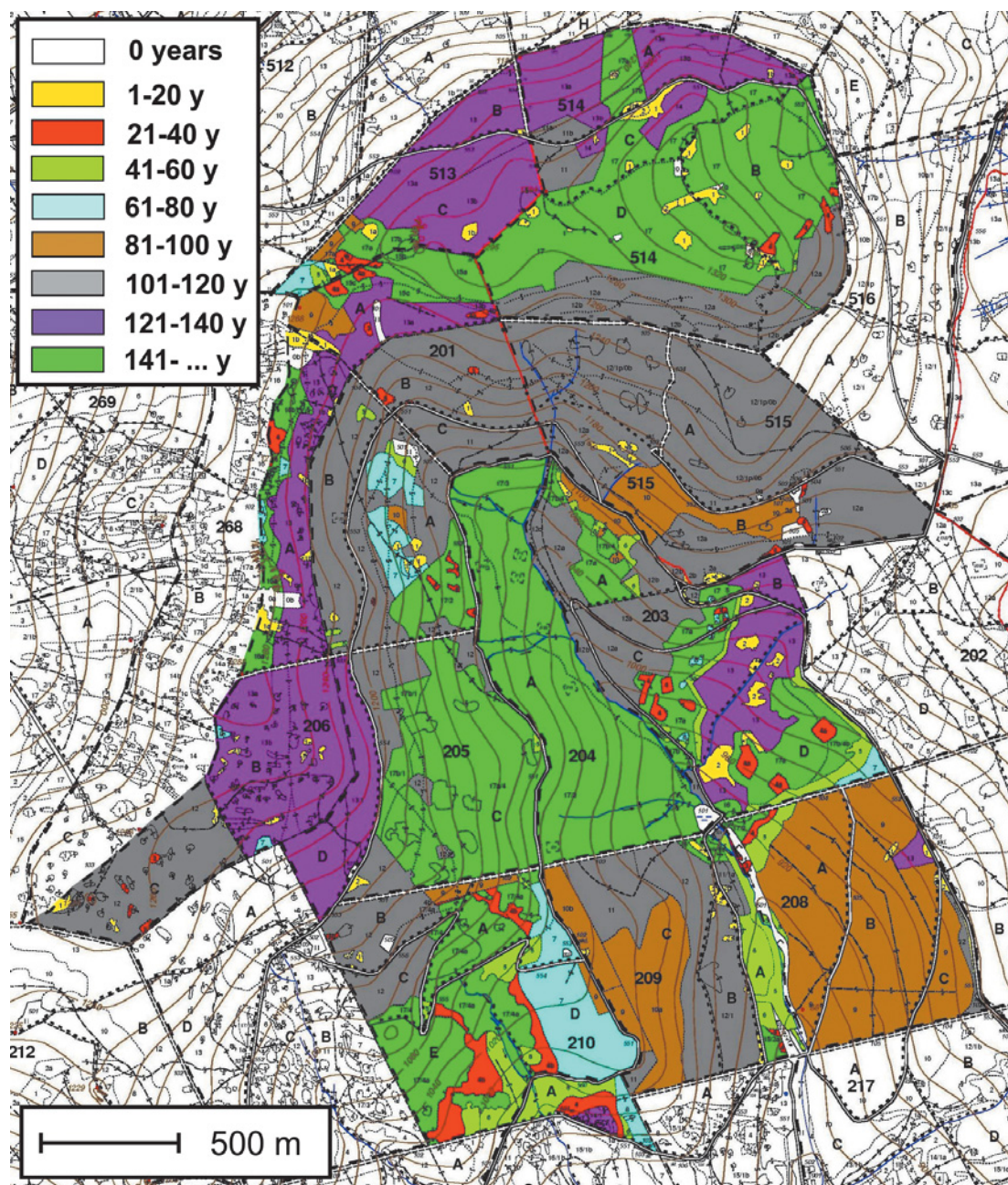


Fig. 1. Forestry map of Boubínský prales National Nature Reserve showing the age of its forest stands. Copied from the Forestry Management Plan, period 2005–2014, by permission of the Forests of the Czech Republic, State Enterprise. The core area (BP1) is represented by forest part no. 204.

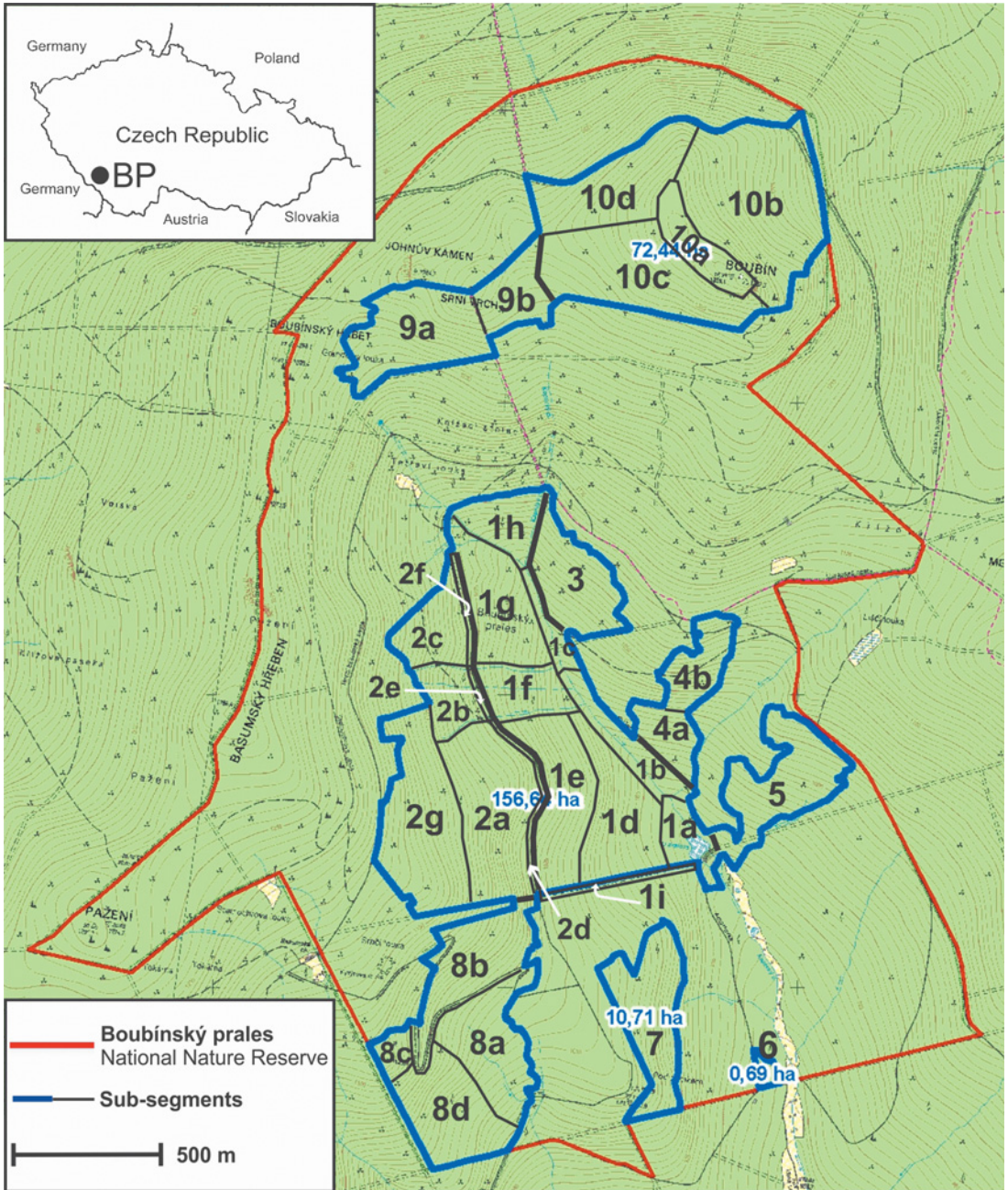


Fig. 2. Boubínský prales National Nature Reserve: position in the Czech Republic, studied segments and sub-segments.



Fig. 3. Virgin forest in core area (BP1d) composed of *Picea abies*, *Fagus sylvatica* and *Abies alba*. Photo J. Holec.



Fig. 4. Natural montane *Calamagrostis* spruce forest in summit area (BP10d) of Mt. Boubín. Photo J. Holec.

RESULTS AND DISCUSSION

Fungal diversity in the period 2013–2014 and its relation to the degree of forest naturalness

The total number of species (including several specified to the rank of variety or form) found in the studied segments of the Boubínský prales National Nature Reserve is 659 (Appendix 1, Tab. 2). The species-richest part is the fenced core area covered by the original virgin forest (BP1: 503 species) followed by segments hosting natural forests minimally influenced by man (BP2, BP8, BP5, BP4). These virgin and natural forest segments accommodate altogether 617 species, which represent 94% of the total mycodiversity. This means that other segments, which are more influenced by man (BP7, 9 and 10), only host a small percentage of taxa (6%) which are not known from the aforementioned segments. Nevertheless, the Mt. Boubín summit area (BP9 and BP10: supramontane *Picea abies* forests) is important, too, even if the stands are more or less degraded by forestry interventions (cutting, clearings, removal of most fallen trunks, measures against bark beetles) and air pollution. They host 136 species, some of them not known from the other segments.

The number of species in each of the segments BP2–8 (the summit segments are not included due to their different habitat conditions) is hardly comparable with BP1, as they have a smaller size and the number of visits is considerably lower (Tab. 2). However, a comparison of the virgin forest with the surrounding man-influenced stands is desirable for evaluation of the influence of forestry interventions on fungal diversity. Segments around the core area have been used for logging of large trees for a long time, e.g. for resonance wood (musical instruments), and a small percentage of dead or fallen trees has been removed to keep the forest and roads open. The forest structure has not much been disturbed visually, however, the total diversity and presence of threatened species in each of the segments BP2, 3, 4, 5 and 8 is much lower (Tab. 2) in comparison with the core area (BP1). This observation is correlated with the fact that we found some of the rarest BP1 species only on 1–2 fallen trunks or pieces of wood (e.g. *Baeospora myriado-phylla*, *Chromosera cyanophylla*, *Ionomidotis irregularis*). This implies that the removal of any trunk (both living and dead) is undesirable, as it decreases the availability and variety of potential substrates for the rarest fungal species.

For a more balanced comparison, BP1 diversity (47 ha, 29 visits) was compared with the total diversity of the surrounding segments BP2–5 (71 ha, 33 visits). Even in this case BP1 is considerably species-richer in all parameters (Tab. 2) and the same counts (less pronouncedly but yet) for the comparison with segments covered by natural forests (BP2–5 + BP8), which, moreover, cover an area twice as large as BP1. Generally, the virgin forest in the core area is undoubtedly the

species-richest part of the Boubínský prales National Nature Reserve. This is mainly caused by the accumulation of species preferring old-growth forests which are less frequent or lacking in the surrounding segments. Other causes are discussed in subsequent chapters.

Tab. 2. Number of macrofungal species recorded in studied segments of Boubínský prales National Nature Reserve in 2013–2014. Numbers of protected and Red List species relate to the Czech Republic (Antonín & Bieberová 1995, Holec & Beran 2006).

Abbreviations: CR – critically endangered, EN – endangered, VU – vulnerable.

Segment	Area (ha)	No. of visits (days)	No. of species (total)	Protected	Red List	CR	EN	VU
BP1	47	29	503	6	73	11	30	12
BP2	42	14	267	3	45	10	17	5
BP3	9	4	35	0	2	0	2	0
BP4	9	7	121	0	12	2	5	1
BP5	11	7	170	0	17	1	11	2
BP6	0.7	6	39	0	2	0	0	0
BP7	11	3	78	0	1	1	0	0
BP8	33	5	232	3	37	7	17	3
BP9	17	5	54	1	3	0	1	0
BP10	55	5	122	0	5	0	1	0
Total (BP1–BP10)	235	38	659	8	99	15	38	12
Segments surrounding the core area (BP2, 3, 4, 5)	71	32	360	3	51	10	20	5
Segments covered by natural forest (BP2, 3, 4, 5, 8)	104	37	425	5	64	12	27	6
Mt. Boubín summit area (BP9, 10)	72	5	136	1	6	0	2	0

Ecological and biogeographical groups of fungi

Wood-inhabiting fungi. The species-richest group (Tab. 3) are wood-inhabiting fungi (334 species: 51%), above all in segments covered by virgin or natural forest (BP1, 2, 3, 4, 5, 8). It is especially caused by the richness of dying and dead wood of several tree species (*Picea abies*, *Fagus sylvatica*, *Abies alba*, rarely also *Acer pseudoplatanus*, *Sorbus aucuparia*, and *Ulmus glabra*) in various stages of decay (for exact data, see Vrška et al. 2012). The importance of substrate quality (above all its variety) was recently stressed by Abrego & Salcedo (2013). A remarkable fact is that many species usually reported as living either on conifer or broadleaved wood were often found on both substrates (see Appendix 1 for details).

The most valuable species are those preferring old-growth forests. For publications on their habitat preferences, see references in Appendix 1 and data published by Holec (2003b), Holec & Beran (2006) and Kotlaba (1984). They are represented (those marked with an asterisk exceptionally occur at man-influenced localities) e.g. by *Amylocystis lapponica*, *Antrodia crassa*, *A. sitchensis*, *Ascotremella faginea**, *Baeospora myriadophylla*, *Callistosporium pinicola**, *Camarops tubulina**, *Chromosera cyanophylla*, *Chrysomphalina chrysophylla*, *C. grossula*, *Flammulaster limulatus*, *Fomitopsis rosea*, *Hypoxyylon vogesiacum*, *Inomidotis irregularis*, *Junghuhnia collabens*, *J. fimbriatella*, *Laurilia sulcata*, *Multiclavula mucida*, *Ossicaulis lachnopus*, *Phellinus pouzarii*, *Phellinus nigrolimitatus*, *Pholiota squarrosoides**, *Phlebia centrifuga**, *Pseudoplectania melaena*, *Skeletocutis odora*, *S. stellae*, *Tatraea dumbirensis*, and *Tricholomopsis flammula**. Based on our field experience (unpublished data documented by herbarium specimens in PRM and other Czech herbaria) from the Czech Republic, Slovakia and the Ukrainian East Carpathians (see e.g. Holec 2008b), species such as *Bulgariella pulla*, *Clavulicium macounii*, *Clitocybula lacerata*, *Cystoderma subvinaceum*, *Entoloma tjallingiorum*, *Galerina pruinatipes*, *Gymnopilus bellulus*, *Laetiporus montanus*, *Mycena laevigata*, *M. romagnesiana*, *Mycoacia nothofagi*, *Panellus violaceofulvus*, *Rigidoporus crocatus*, and *Trichocybe puberula* also prefer old-growth forests. The following fungi living in BP are classified as species of *Picea*-dominated virgin forests in Finland (Kotiranta & Niemelä 1996): *Amylocystis lapponica*, *Antrodia crassa*, *Antrodiella citrinella*, *Cystostereum murrayi*, *Junghuhnia collabens*, *Laurilia sulcata*, *Phlebia centrifuga*, *Sidera lenis* and *Skeletocutis stellae*. In southern Norway, Bredesen et al. (1997) also observed that *Laurilia sulcata*, *Amylocystis lapponica*, *Phlebia centrifuga*, *Phellinus nigrolimitatus* and *Fomitopsis rosea* occur in forests with few or no traces of management and long ecological continuity. *Hyphodontia curvispora* (Appendix 2) is considered a rare species preferring natural forests by Dämon (2000).

From the distributional viewpoint, the presence of some boreal-montane species is remarkable, above all *Amylocystis lapponica*, *Antrodia sitchensis*, *Laurilia sulcata*, and *Pholiota subochracea*. For these species BP represents a rare refugium located between the boreal habitats of North Europe and montane habitats of the Alps, Carpathians and Balkan mountains. *Phellinus ferrugineofuscus* (Appendix 2) also belongs to this group; unfortunately, the species was not found in 2013–2014 in spite of a targeted search. *Skeletocutis odora* is also considered a boreal-montane, old-growth forests species (Piątek 2005b). It certainly prefers old-growth forests but it is not exclusively montane. In the Czech Republic there are numerous records from localities in the colline belt (Moravian Karst, Podyjí National Park; vouchers in BRNU). *Perenniporia subacida* (Appendix 2) is also a typical species of the boreal zone. However, some localities in Eastern Eu-

rope and Italy (Ryvarden & Gilbertson 1994, Bernicchia 2005) are, unfortunately, not specified if they originate from montane areas. For the moment, we are careful to consider this species a typical boreal-montane element.

Mycorrhizal fungi. A high number of mycorrhizal species was found (203 species: 30%), especially of the genera *Russula* (43 species), *Cortinarius* (42), *Lactarius* (26), *Inocybe* (19) and *Amanita* (13). Mycorrhizal fungi were often found on bare soil, especially on sand and gravel sediments along streams or on soil elevations under roots of uprooted trunks. The most remarkable ones are those forming mycorrhiza with *Abies* (*Lactarius albocarneus*, *L. salmonicolor*, *Russula cavipes*), species confined to (moist to waterlogged) montane *Picea* forests (e.g. *Amanita submembranacea*, *Cortinarius rubellus*, *C. scaurus*, *Hygrophorus piceae*, *Inocybe calamistrata*, *Lactarius badiusanguineus*, *L. zonarioides*, *Russula helodes*, *Tricholoma viridilutescens*), herb-rich beech forests on soils with nutrient-rich humus (*Lactarius fluens*, *L. romagnesii*, *L. ruginosus*) or even species preferring calcareous soils (*Hygrophorus discoideus*, *Inocybe nitidiuscula*, *Lactarius salmonicolor*, *Russula cavipes*). The occurrence of calciphilic species on non-calcareous bedrock and medium to strongly acidic soils is surprising. However, soil analyses repeatedly performed by Vrška et al. (2012: 127–134) showed that in some soil profiles (horizon 0–20 cm) the pH is higher (4.5, 5.9) than in other ones (3.5–4.1) and that the values of available Ca are abnormally high (4000–6700 mg/kg). The authors were unable to give an explanation of this fact. However, this anomaly exists and probably enables the occurrence of calciphilic species on acidic bedrock.

Saprotrophic fungi. This group (102 species: 16%) is represented by saprotrophs on soil, non-woody litter, fungal sporocarps or stromata, excrements, etc. The species-richest groups are the genera *Mycena*, *Gymnopus*, clitocyboid fungi, discomycetes, etc. The seasons 2013–2014 were not ideal for the production of their sporocarps owing to periods of drought. Future and more favourable seasons are necessary to reveal the diversity of this group more completely, also by detailed search on specific substrata like decaying plants.

Species of lower and warmer localities. Surprisingly, some species preferring lower and warmer areas were found: *Cortinarius orellanus*, *Lactarius rostratus*, *Xerocomus porosporus*. They are very unusual for a typically montane forest. None of them are included in older works on the mycobiota of BP (Kubička 1973). Their presence could be caused by the contemporary global warming. However, more data are necessary to confirm this hypothesis.

Tab. 3. Ecological groups of fungi.

Abbreviations: broadl. – broadleaved trees, conif. – conifers, detr. – species observed both on wood and litter, lich. – lichenised basidiomycetes, lign. – lignicolous (= wood-inhabiting) fungi including lignicolous parasites, mycorrhiz. – mycorrhizal fungi, paras. – parasites on fungal sporocarps, sapr. – non-lignicolous saprotrophs.

Numbers in italics – proportion of the total number of lignicolous fungi.

	lign.						detr.	sapr.	lich.	myco- rrhiz.	paras.
	total	<i>Fagus</i> only	<i>Picea</i> only	<i>Abies</i> only	conif. only	conif. + broadl.					
species	334	<i>133</i>	<i>74</i>	<i>23</i>	<i>56</i>	<i>48</i>	16	102	2	203	2
%	51	<i>40</i>	<i>22</i>	<i>7</i>	<i>17</i>	<i>14</i>	2	16	0.5	30	0.5

Notes on the most significant species

Boubínský prales virgin forest is the only Czech locality for the following three species:

Amylocystis lapponica – a rare boreal-montane polypore confined to old-growth forests (Dahlberg & Croneborg 2003, Holec & Kučera 2007), recently known in BP from 5 parts of segments BP1 and BP2. Its sporocarps occur on fallen trunks of *Picea*, both thin and thick (diameter 30–120 cm), from decay stage 2 to 3. The species seems to be well established in BP.

Antrodia sitchensis – a rare polypore of old-growth forests, where it lives on fallen trunks of conifers, especially *Picea* (Vampola & Pouzar 1992). During our study it was found in 3 parts of segments BP1 and BP2, on fallen trunks of *Picea* in decay stages 2 and 3. The species seems to be well established in BP. According to Ryvarden & Melo (2014), the fungus is a boreal conifer forest species known in Europe from Estonia and Finland only. However, it is also documented from the Czech Republic (BP), Slovakia (Dobročský prales virgin forest), Poland (Białowieża virgin forest), Ukraine (Eastern Carpathians) and Croatia (Plitvice lakes National Park) (Vampola & Pouzar 1992).

Laurilia sulcata – a very rare stereoid fungus (Pouzar 1958, Kotlaba et al. 1995, Bernicchia & Gorjón 2010). We recorded it about ten times in 3 segments (BP1, 2, 8) on fallen trunks of *Abies* and *Picea* in decay stages 2–4 (once on the base of a standing dead *Picea*). The species is well established in BP. Although properly published, its presence in the Czech Republic is omitted by Bernicchia & Gorjón (2010). In northern Europe the species is restricted to areas with a pronounced continental climate (Hansen & Knudsen 1997) and virgin forest habitats (Kotiranta & Niemelä 1996).

The following species are very rare, too, having 2–3 localities in the Czech Republic:

Pseudorhizina sphaerospora – rare ascomycete, known from BP for a long time (e.g. Kavina 1924: described as a new species under the name *Gyromitra*



Fig. 5. *Amylocystis lapponica*, BP1e, 24 October 2013, not documented by voucher. Photo M. Kříž.



Fig. 6. *Laurilia sulcata*, BP8d, 24 August 2013, PRM 922868. Photo J. Holec.



Fig. 7. *Antrodia sitchensis*, BP2c, 12 September 2013, PRM 923234. Photo M. Kríž.



Fig. 8. *Antrodia crassa*, BP1d, 9 October 2013, PRM 923105. Photo J. Holec.



Fig. 9. *Skeletocutis stellae*, BP2a, 9 October 2013, PRM 923239. Photo M. Kříž.



Fig. 10. *Laetiporus montanus*, BP8b, 2 July 2014, PRM 932964. Photo J. Holec.



Fig. 11. *Bulgariella pulla*, BP1d, 19 November 2013, PRM 922869. Photo J. Holec.



Fig. 12. *Pseudorhizina sphaerospora*, BP8b, 11 June 2013, not documented by voucher. Photo M. Kríž.



Fig. 13. *Junghuhnia collabens*, BP2a, 19 July 2013, PRM 922608. Photo M. Kříž.



Fig. 14. *Junghuhnia fimbriatella*, BP2c, 9 October 2013, PRM 923240. Photo M. Kříž.



Fig. 15. *Galerina pruinatipes*, BP1d, 5 September 2013, PRM 922948. Photo J. Holec.



Fig. 16. *Resupinatus striatulus*, BP4b, 11 September 2013, PRM 922981. Photo M. Kříž.



Fig. 17. *Chrysomphalina chrysophylla*, BP1a, 18 July 2013, PRM 922457. Photo M. Kříž.



Fig. 18. *Chrysomphalina grossula*, BP1d, 11 September 2014, PRM 924973. Photo J. Holec.



Fig. 19. *Chromosera cyanophylla*, BP1d, 26 August 2013, not documented by voucher. Photo M. Kríž.



Fig. 20. *Panellus violaceofulvus*, BP2a, 20 November 2013, PRM 923372. Photo J. Holec.



Fig. 21. *Pseudoplectania melaena*, BP2a, 25 April 2013, not documented by voucher. Photo M. Kříž.



Fig. 22. *Phellinus pouzarii*, BP4a, 3 October 2013, PRM 923087. Photo J. Holec.



Fig. 23. *Lactarius albocarneus*, BP1c, 3 October 2013, PRM 923072. Photo J. Holec.



Fig. 24. *Russula cavipes*, BP1b, 23 October 2013, PRM 923180. Photo J. Holec.



Fig. 25. *Mycena romagnesiana*, BP8d, 24 August 2013, PRM 922866. Photo J. Holec.



Fig. 26. *Inocybe calamistrata*, BP10b, 12 September 2013, PRM 922987. Photo M. Kříž.

gabretae; Herink 1955, etc.). Until 2004 BP was its only recent locality in the Czech Republic. The fungus was found in Žofínský prales virgin forest in 2005 (Holec & Beran 2007). A detailed analysis of its ecology (Holec & Beran 2007) showed that it cannot be considered a species confined to old-growth forests only, as it also grows in man-made and man-influenced habitats.

Ionomidotis irregularis – very rare ascomycete, having 3 localities in the Czech Republic (Běťák et al. 2012). It was first recorded in BP in 2004 on a decaying trunk of *Fagus*, then in 2009 and two more times by us on wood of a conifer tree and on a decaying trunk of *Picea*. Records from BP are the first European ones on conifer wood. Běťák et al. (2012) showed that the species has strong preferences for unmanaged, old-growth forests, both in the European beech distribution area and North-eastern Europe.

Chromosera cyanophylla – a very rare gilled fungus, having 3 localities in the Czech Republic (Holec et al. 2015). In BP, numerous sporocarps were found on the only fallen decaying trunk of *Abies*. In the core part of Central Europe, *C. cyanophylla* clearly prefers submontane and montane old-growth forests composed of *Fagus*, *Abies* and *Picea*. However, its habitat preferences are different in other parts of Europe (Holec et al. 2015).

Species of high conservation value

We found 8 species legally protected in the Czech Republic (Antonín & Bieberová 1995): *Amylocystis lapponica*, *Ascotremella faginea*, *Camarops tubulina*, *Hygrophorus piceae*, *Microglossum viride* s. l. (which includes the recently described *M. griseoviride* found by us), *Pseudoplectania melaena*, *Pseudorhizina sphaerospora* and *Russula helodes*. The highest number (6) was recorded in the core area (Tab. 2).

Concerning endangered species listed in the Red List of Czech macrofungi (Holec & Beran 2006), the highest number was found in BP1 again (73, i.e. 74% of the Red List species known from all segments). Generally, the total number of Red List species found in BP (99) is extremely high. It represents 11% of fungal species included in the Red List. Localities of a similar size (dozens to hundreds of hectares) and similar forest vegetation usually host about 10–50 Red List species (e.g. Holec 2005b, Holec & Kríž 2014), depending on the degree of their naturalness. Based on these data, Boubínský prales is the most valuable nature reserve protecting montane *Picea-Fagus-Abies* forest in the Czech Republic.

Indicator species

The concept of indicator species (see e.g. Parmasto 2001), although based on scientific data, includes a practical aspect mostly connected with purposes of nature conservation. In macrofungi, the system is mostly used to evaluate forest

quality, e.g. their ‘nature value’, ‘naturalness’, ‘structural quality’ or ‘long-time continuity’. The crucial question is what the selected indicator species indicate. Wide knowledge of their taxonomy, distribution and ecology is necessary (see e.g. Runnel et al. 2014), otherwise lists of indicator species are not based on solid ground and represent mere working hypotheses. The knowledge should not be local but large-scale (at least within one continent like Europe). However, most of the proposed lists are local only (e.g. Kotiranta & Niemelä 1996: Finland, Tortić 1998: former Yugoslavia, Parmasto 2001: Estonia, Holec 2003b: Czech part of the Bohemian Forest, Blaschke et al. 2009: Germany).

Christensen et al. proposed 21 species as ‘indicators of nature value in European beech forests’ (Christensen et al. 2004). However, some of the selected species are not confined to old-growth forests only (e.g. *Ganoderma pfeifferi*, *Inonotus cuticularis*, *Climacodon septentrionalis* – species occurring even in parks; or *Dentipellis fragilis*, common in all kinds of beech forest, see also Adamčík et al. 2007). Although being rather weak scientifically, the system proved to be useful for evaluation and comparison of various beech localities throughout Europe. Boubínský prales, although primarily a *Picea*-dominated forest, is very valuable also for fungi confined to *Fagus*. It hosts 12 of the 21 indicator species which places it among 10 most valuable beech localities in Europe (out of the 106 localities evaluated by Christensen et al. 2004).

From the Estonian list by Parmasto (2001: 44 species), covering all kinds of Estonian forests (mostly hemiboreal and boreal ones), 18 species (41%) are present in BP, which documents its value as a refugium of boreal species in Central Europe. This is further supported by the fact that of the list of 33 indicator species of Finnish *Picea*-dominated old and virgin forests, i.e. mostly the boreal ones (Kotiranta & Niemelä 1996), 18 species (55%) are known from BP. In the group of virgin forest species, the agreement reaches 69%. Of the German list of 68 indicator species of forest naturalness (Blaschke et al. 2009), covering several kinds of temperate forest, 29 (43%) are known from BP. This is also a high proportion if we consider the fact that almost half of the German species prefer hosts absent from BP (*Quercus*, *Pinus*, etc.).

Concerning southern European regions, the list of indicator species for old *Fagus-Abies* (+ *Picea*) forests of former Yugoslavia by Tortić (1998) can be used for comparison. Of the 42 species listed by her, 25 (60%) are present in BP. It further supports its uniqueness as a refugium for species preferring old-growth forests untouched or minimally influenced by man.

Importance of uninterrupted forest continuity

The most important virgin forest characters are: 1) uninterrupted forest continuity (never cut and managed, no removal of living and fallen trees), 2) spontane-

ous development, 3) multi-aged structure, 4) richness in and variety of dead wood. The importance of the first factor can be discussed comparing the virgin forest in BP1 with the nearby Zátoňská hora Nature Reserve (ZH). It was studied mycologically by the same authors using the same method in 2014 (Holec & Kříž 2014). This reserve, located 4 km SSE of BP in the same Boubín mountain complex, has many features in common with BP1: virgin forest characters mentioned in points 2, 3, 4; similar tree species composition (mixed stands of *Fagus*, *Picea*, *Abies* + ravine forests with dominance of *Acer*, *Fraxinus* and rarely *Ulmus*); similar area and altitude (Tab. 4). The only differences are the slope orientation and geomorphology of ZH (mountain ridge with prevailing W and SW slopes exposed to sunlight and wind; BP1 is more humid due to its position on an E slope in a stream valley) and above all its history. Although looking like a virgin forest at present, ZH was deforested about 300 years ago (Albrecht et al. 2003). The current ZH forest is a spontaneously developed stand representing a natural forest, not a virgin one.

The difference between the BP1 and ZH fungal communities is conspicuous. Of the most valuable BP species discussed above only *Camarops tubulina*, *Clitocybula lacerata*, *Flammulaster limulatus*, *Multiclavula mucida*, *Chrysomphalina grossula*, *Phellinus nigrolimitatus*, *Phlebia centrifuga* and *Pholiota squarrosoides* (i.e. not extremely rare species) are present in ZH. The rarest species of BP1 are completely absent from ZH and the overall mycodiversity of ZH is lower in all respects (Tab. 4), although the populations of rare BP1 species (sources of spores) are only 4 km from ZH. This difference can be attributed mainly to the different geomorphology and resulting meso- and microclimatic conditions (ZH is drier than BP); however, we are convinced that the negative influence of disrupted forest continuity has played its role, too. It seems that the rarest old-growth forest and boreal-montane fungi are unable to spread via spore dispersal from very close and rich refugia in BP although the current ZH forest structure and dead wood supply is comparable with that of BP1.

Comparison with other old-growth forest reserves

The comparison (Tab. 4) is only made for localities with available data on their overall mycobiota. Consequently, important localities like the Balkan old-growth forests Peručica and Biogradska Gora are not included.

Mittelsteighütte, Germany. In the Bohemian Forest, the mountains where BP is located in, there is a comparable locality on the German side – the Mittelsteighütte Nature Reserve (MH) near Bayerisch-Eisenstein in the Bayerischer Wald National Park. It is not a true virgin forest but a well-preserved natural forest minimally influenced by man (*Fagus* 40%, *Abies* 30%, *Picea* 30%) including huge trees up to 500 years old (Nuss 1999). Its area (formerly 37.8 ha, currently 45.75 ha) is almost the same as the BP core area. The only difference is the lower altitude of MH (Tab. 4) and higher percentage of *Abies* (even 60% in 1856). Nuss (1999) reports 365 fungal species from MH. Almost all of the most valuable MH species listed by him (Nuss 1999: 56, 93–94, 97–119) are present in the BP core

area, too. However, BP is richer in boreal-montane and/or old-growth forests species (*Amylocystis lapponica*, *Antrodia sitchensis*, *Laurilia sulcata*, *Phellinus ferrugineofuscus*), which is understandable by its higher altitude, dominance of *Picea* and higher degree of naturalness. Rarities like *Ionomidotis irregularis* and *Chromosera cyanophylla* are also absent in MH.

Žofínský prales, Czech Republic. In the Czech Republic, the most important locality to be compared is Žofínský prales (ŽP) National Nature Reserve (Novohradské hory Mts., south Bohemia), the oldest protected area in the Czech Republic (since 1838). It is a submontane *Fagus-Abies* dominated natural forest with waterlogged *Picea* stands (Albrecht et al. 2003). ŽP is mycologically well-known (e.g. Svrček & Kubička 1964, 1971, Beran 2004, 2005, Hofmeister et al. 2014). The number of macrofungal species known to date is about 800 (Beran, pers. comm. 2015). The forest belongs to the mycologically most valuable *Fagus*-dominated forests in Europe, judging from the number of indicator species proposed by Christensen et al. (2004) and number of protected and Red List species (Tab. 4). Its mycobiota is richer, but, generally, very similar to that of BP. More species associated with *Fagus* and slightly more thermophilic ones are present. Similarly to Mittelsteighütte, most of the boreal-montane species known from BP are absent from ŽP except for *Phellinus ferrugineofuscus* and *Pholiota subochracea*.

Lahnsattel, Austria. In Austria, Lahnsattel Forest Reserve (LS; = Naturwaldreservat Lahnsattel near Donaudörfel, so-called “Urwald Neuwald”, Niederösterreich: E part of the Northern Alps; for habitat conditions, see e.g. Mayer et al. 1972, 1989, Zukrigl 1995, Steiner & Frank 2013) is comparable, especially by its altitude and tree species composition. An unpublished list of fungi was kindly provided to us by I. Greilhuber (pers. comm. 2015). It contains 759 species of macrofungi (Greilhuber 2015), most of them being the same in LS and BP. The higher species richness of LS is caused by the presence of many calciphilic species which are almost absent from BP. However, BP is richer in species preferring old-growth forests. The following BP species are not reported from LS: *Antrodia crassa*, *Ascotremella faginea*, *Callistosporium pinicola*, *Camarosporium tubulina*, *Flammulaster limulatus*, *Fomitopsis rosea*, *Hypoxylon vogesiacum*, *Junghuhnia collabens*, *J. fimbriatella*, *Ossicaulis lachnopus*, *Phellinus pouzarii*, *Skeletocutis odora*, *S. stellae*. Moreover, many of the most valuable BP species (the boreal-montane and extremely rare ones) like *Amylocystis lapponica*, *Antrodia sitchensis*, *Ionomidotis irregularis*, *Skeletocutis odora* and *Perenniporia subacida* are also absent from LS. This correlates with the lower degree of naturalness of LS (Tab. 4).

Carpathian forests in the Czech Republic, Slovakia, Ukraine, and Poland. The Carpathians are a region with numerous remnants of well preserved *Fagus-Abies-Picea* old-growth forests. Some are famous mycological localities (nature reserves), such as Mionší (Kuthan 1990), Salajka and Razula in the Czech Republic; Dobročský prales (Kotlaba & Pouzar 1962), Stučica, Rožok, Havešová and Udava (Poloniny National Park: Kuthan et al. 1999, Adamčík et al. 2007) in Slovakia and the forests of Eastern Carpathians in Ukraine (e.g. Pilát 1940, Küffer et al. 2004, Holec 2008b) and Poland (Gierczyk et al. 2009). Unfortunately, no published mycobiota lists of the individual localities are available. The cited literature shows that their most remarkable species are the same as in BP. However, some examples exist: *Pycnoporellus alboluteus*, which is known from e.g. Dobročský prales (Kotlaba & Pouzar 1963), was never collected in BP, similarly to *Perenniporia narymica* (Kuthan et al. 1999: several localities in Slovakia + ŽP) and *Spongipellis delectans* (Kuthan et al. 1999: Stučica). *Pycnoporellus alboluteus*, primarily a circumpolar boreal species, has a remarkable distribution pattern in Europe (Ryvarden & Gilbertson 1994, Piątek 2002): Northern Europe, eastern part of Central Europe and Eastern Europe. This is probably why it lacks in BP. Its richest locality is the Białowieża virgin forest in Poland/Belarus. BP seems to be too cold for *P. narymica*, as it is a species of warmer areas, lacking from northern conifer forests (Ryvarden & Gilbertson 1994). *Spongipellis delectans* s. str. (Tomšovský 2012) is a rare species almost exclusively restricted to *Fagus* and distributed especially in warmer areas of Southern and Central Europe (Ryvarden & Melo 2014). Thus, the reason for its absence from BP could be the same as in the previous species.

Białowieża, Poland. The famous Białowieża virgin forest in Poland/Belarus is less comparable, as it is a lowland forest with a different tree species composition (*Picea*, *Pinus*, *Alnus*, *Quercus*, *Carpinus*, *Betula*, etc.) and many times larger size. However, it is also a refugium of some rare boreal species like *Amylocystis lapponica*, *Skeletocutis odora* (e.g. Piątek 2005a, b) and *Antrodia albobrunnea* (lacking from BP) and a large number of old-growth forest species (see e.g. Karasiński et al. 2009, 2010). Both Białowieża virgin forest and Boubínský prales represent classical model localities for ecological and biogeographical studies.

Tab. 4. Number of fungal species recorded in Boubínský prales National Nature Reserve (BP), Zátोňská hora Nature Reserve (ZH), Žořínský prales National Nature Reserve (ŽP), Mittelsteighütte Nature Reserve (MH) and Lahnsattel Forest Reserve (LS). Numbers of protected and Red List species relate to the Czech Republic (Antonín & Bieberová 1995, Holec & Beran 2006). Abbreviations: CR – critically endangered, EN – endangered, VU – vulnerable.

Locality	Forest naturalness	Species numbers (total)	Protected	Red List	CR	EN	VU
BP1 , Czech Republic, 47 ha, alt. 925–1110 m	Virgin (never cut, never managed, almost no human impact)	503 (ca. 600 when adding literature data from Appendix 2)	6	73	11	30	12
ZH , Czech Republic, 49 ha, alt. 869–1033 m	Natural (cut 300 years ago, then spontaneous development)	382 (Holec & Kríž 2014)	2	49	4	20	8
ŽP , Czech Republic, 98 ha, alt. 735–830 m	Natural (selective cutting in the past)	± 800 (Beran, pers. comm. 2015)	7	109	17	36	14
MH , Germany, 38 ha, alt. 700–800 m	Natural (selective cutting in the past)	365 (Nuss 1999)	n.c.	n.c.	n.c.	n.c.	n.c.
LS , Austria, 20 ha, alt. 900–1000 m	Natural (permanent disturbance of natural stand development)*	759 (Greilhuber 2015)	n.c.	n.c.	n.c.	n.c.	n.c.

* Strictly speaking, the absence of tree regeneration caused by high deer densities classifies this stand as a near-natural forest, i.e. the lowest level of old-growth forests. For lignicolous fungi, the value is higher (natural forest) due to the uninterrupted continuity of dead wood supply.
n.c. – not compared due to position outside the Czech Republic and resulting differences.

Fungal diversity based on recent and historical data

Besides the recent data from the period 2013–2014, older herbarium and/or published data on 133 more species are available, mostly found in the core area (Appendix 2). Doubtful records are discussed in Appendix 3.

It is clear that two seasons (which were not fully ideal for fructification, see Material and methods) of survey are not enough for revealing ± complete macrofungal diversity of BP. We tried to decrease this lack by a high intensity of field work. However, it is rather surprising that some remarkable species (generally rare or preferring old-growth forests or threatened) known from the past

were not found recently, especially *Cyphella digitalis*, *Gomphus clavatus*, *Gymnopus fuscopurpureus*, *Hydropus atramentosus*, *Neolecta vitellina*, *Perenniporia subacida*, *Phellinus ferrugineofuscus*, *Squamanita odorata*, *Stropharia hornemannii* and *Tubaria confragosa*. We believe that some of them will be found during future research, but the absence of *P. ferrugineofuscus*, one of the most valuable species in BP, is alarming. We searched for it intensely using exact site data from its last collector (pers. comm. Vlasák 2013, Vlasák 2015), but without success. Its possible disappearance from BP could be connected with the recent global warming.

The absence of species confined to wood of *Abies* (*Cyphella digitalis*, a species on bark of standing or freshly fallen trunks and logs; *Hydropus atramentosus*, saprotroph on decaying wood) could be connected with the decrease of *Abies* in BP (only 258 living trees in 1996; Vrška et al. 2012: 169). Although dead *Abies* wood is present, it is mostly represented by old decaying or decayed trunks, which are too far decomposed for *C. digitalis*. The absence of *H. atramentosus* is hard to explain.

Some groups of macrofungi are still insufficiently documented from BP, particularly corticioid fungi, ascomycetes with tiny sporocarps or stromata and hypogeous fungi. We estimate that about 100–200 more species (but most probably even more) could be found in the case of a detailed search for these groups.

In total 792 taxa of macrofungi are known from Boubínský prales National Nature Reserve, 659 of them found recently and 133 known from the past. A number of about 1000 taxa (but maybe more) is estimated for the entire locality when undiscovered species from less intensely studied groups are taken into consideration. All these numbers are very high, making BP a mycological hot-spot of the Bohemian Forest, a Central European mountain area covering thousands of square kilometres. For comparison, Bässler et al. (2011) mention 1743 species of Asco- and Basidiomycota from the entire Bayerischer Wald National Park (German side of the Bohemian Forest) and Holec (2007) lists 990 species from Šumava National Park (Czech side of the Bohemian Forest), mostly the same ones as on the German side. This means that BP, a locality of several hundreds hectares, hosts 46% of the fungal species known from the two national parks to date.

CONCLUSIONS

Boubínský prales National Nature Reserve, the best preserved virgin forest in the Czech Republic, is an important centre of macrofungal biodiversity. This fact is valid not only locally but also from the pan-European perspective. The locality represents a refugium for rare boreal-montane fungi confined to wood of *Picea*, a high number of species preferring old-growth forests minimally influenced by

man, wood-inhabiting and mycorrhizal fungi confined to *Abies*, and a high number of indicators of well-preserved *Fagus* forests. No locality in the core area of Central Europe (southeastern parts of Germany plus the Czech Republic, Slovakia and Austria) has such a character. Boubínský prales virgin forest, especially its core area, combines the highest degree of naturalness and a unique fungal species composition. The data on its fungal diversity published here can serve as a model case for comparison with mycobiota of other montane *Picea-Fagus-Abies* localities in Europe.

APPENDICES

Appendix 1: List of species found in period 2013–2014

Any substrate or host phrase separated by commas (e.g. '*Abi*: log of fallen trunk, *Abi*: fallen twig' for lignicolous fungus or 'under *Fag + Pic*, under *Pic*, under *Pic + Fag + Abi*' for mycorrhizal fungi) represents one type of substrate or a specific combination of neighbouring trees (potential mycorrhizal partners) on which or under which the species was found (often several times for each type). These phrases are outputs from the database of records and serve here as basic data on substrate and host preferences of the species in BP. If there are more neighbouring tree species at one site, they are arranged from the most abundant to the least abundant. If there are substrate phrases without the Latin name of the substrate, the substrate identity was unclear in the field ('*Abi*: fallen log' means log of *Abies alba*, 'fallen conifer log' means unidentifiable conifer log, 'fallen log' means a completely unidentifiable log).

Species with perennial sporocarps or stromata were recorded only once in a season and the month of such a record is cited as a mere output from the database. In species with short-lived sporocarps the given months show the real time of sporocarp production observed during the study period.

Imp. data: important data; e.g. first record for a locality or well documented, mostly commented data on a species or publication of several records or important collections in herbaria.

Taxonomic concept: literature according to which the species was identified.

For other details on the compilation of the Appendix, see Material and methods.

Albatrellus ovinus: BP1a; under *Pic + Fag*; VIII–IX.

Aleurodiscus amorphus: BP1d, 1f, 2c; *Abi*: log of fallen trunk, *Abi*: fallen twig; IV–VI; PRM 922372, 922686.

Amanita battarrae: BP2a, 9a, 10b; under *Pic*, under *Pic + Fag*; IX–X; PRM 922951.

Amanita citrina: BP1e, 6; under *Fag + Pic*, under *Pic + Fag + Abi*; IX–X.

Amanita fulva: BP1a, 1d, 1f, 9a; under *Fag + Pic*, under *Pic*, under *Pic + Fag*, in moss; IX–X.

Amanita gemmata: BP1d, 9a; under *Fag + Pic*, under *Pic*; VII, IX; PRM 924967.

Amanita magnivolvata: BP5, 8a; under *Fag + Pic*; VIII, X; PRM 922881.

Amanita muscaria: BP1a, 1f, 2a, 2c, 3, 5, 6, 7, 8a, 10b, 10d; under *Fag + Pic*, under *Pic*, under *Pic + Fag*, under *Pic + Fag + Abi*, close to forest road; VI, VIII–X.

Amanita regalis: BP1c, 5, 6, 10c; under *Fag + Pic*, under *Pic*, under *Pic + Fag*, under *Pic + Fag + Abi*; VIII–IX.

Amanita rubescens: BP1a, 1d, 1f, 2a, 5, 7, 8a, 9a, 9b, 10b, 10d; under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic*, under *Pic + Fag*; VII–X.

Amanita spadicca: BP1e, 2c, 7; under *Fag*, under *Fag + Pic*, under *Fag + Pic + Abi*; IX; PRM 922913, 922955.

- Amanita spissa***: BP1d, 6; under *Fag* + *Pic*, close to forest road; VIII–IX.
- Amanita submembranacea***: BP2a, 9b, 10a, 10b; under *Pic*, under *Pic* + *Fag*; VII, IX–X.
- Amanita umbrinolutes***: BP9a; under *Pic*; IX.
- Amanita vaginata***: BP2d; under *Fag* + *Pic*; IX; PRM 922924.
- Amphinema byssoides***: BP2a; decaying conifer trunk: lower part of bark chip; X; PRM 923572.
- Ampulloclitocybe clavipes***: BP1f, 1g, 4b; in detritus; X.
- Amylocystis lapponica***: BP1a, 1b, 1d, 1e, 2a; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; VIII–XI; PRM 923051. – Imp. data: first record in 1946 by J. Herink (Pilát 1965), numerous records documented in PRM (Holec & Kučera 2007).
- Amylostereum areolatum***: BP1d, 9a, 10c; *Pic*: fallen decorticated trunk, *Pic*: decayed stump; IV–V, IX.
- Amylostereum chailletii***: BP1b, 1d, 1f, 2a, 4b, 8a; *Abi*: fallen log, *Abi*: log of fallen trunk, *Abi*: corticated log of fallen trunk; VI, X–XI; PRM 923135, 923505.
- Annulismagnus triseptatus***: BP1b; *Fag*: log in stream; IX; PRM 923358.
- Antrodia albida***: BP2b; *Fag*: fallen log; VI.
- Antrodia crassa***: BP1d; *Pic*: decaying trunk; X; PRM 923105, as *Amyloporia c.*
- Antrodia heteromorpha***: BP9a, 9b, 10a, 10c, 10d; *Pic*: scar on trunk of living tree, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: stump; V–VII, IX–X; PRM 923235.
- Antrodia serialis***: BP1c, 1d, 1h, 2a, 2c, 4a, 4b, 5, 8a, 8b, 9a, 10a, 10b, 10c; *Pic*: fallen trunk, *Pic*: cutting surface of fallen trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk; IV–VII, IX–XI; PRM 922815, 923034, 923191, 923369.
- Antrodia sinuosa***: BP1b; *Pic*: decaying trunk; X; PRM 923233.
- Antrodia sitchensis***: BP1e, 1g, 2c; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk; IX–X; PRM 923234, 923587, 923588, 924932, as *Amyloporia s.* – Imp. data: first record on fallen trunk of *Pic*, 28. X. 1967 leg. Z. Pouzar, PRM 869249, 869373 (Vampola & Pouzar 1992: 216, as *Amyloporia s.*).
- Antrodiella citrinella***: BP1a, 1b, 1d, 2a; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, VII, X–XI; PRM 923179, 923582. – Imp. data: first records on *Pic* and *Abi*, 1987–1989 leg. J. Vlasák (Vlasák 1990).
- Antrodiella faginea***: BP2a; *Fag*: fallen decaying log; VIII; PRM 922878.
- Antrodiella onychoides***: BP1d; *Fag*: fallen log; VII; PRM 923242.
- Antrodiella serpula***: BP1b, 1d, 2a, 4a, 4b, 5, 7, 8a; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: fallen log; VI–IX.
- Aphanobasidium pseudotsugae***: BP1c, 2c, 10b, 10c; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk; VII, IX–X; PRM 922604, 922995, 923168, 923522, as *Phlebiella p.*
- Armillaria cepistipes***: BP1c, 1d, 1f, 2a, 8a; *Abi*: fallen decorticated trunk, *Fag*: roots of fallen trunk, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: stump, on bare soil, decaying conifer trunk, mossy decaying conifer trunk, *Pic*: fallen corticated trunk; X; PRM 923040, 923065.
- Armillaria ostoyae***: BP1a, 1c, 1d, 8a; *Fag*: roots of fallen trunk, *Pic*: base of standing dead tree, *Pic*: base of living tree; IX–X; PRM 923039.
- Arrhenia epichysium***: BP1a, 1b, 1d, 1e, 1f, 1h, 2a, 2c, 4a, 4b; *Abi*: decaying trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: decayed wood, decaying trunk, decaying conifer trunk, *Pic*: decaying trunk, *Pic*: decayed trunk, *Pic*: decayed stump; V, VII–X; PRM 922894, 922895, 923509, as *Omphalina e.*
- Ascocoryne cylichnium***: BP1c, 1f, 2a, 2b, 2c, 4a, 8a; *Abi*: fallen decorticated trunk, *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Pic*: fallen decorticated trunk; IX–XI; PRM 922911, 922978, 923375, 923752.
- Ascocoryne sarcoides***: BP1a, 2b, 4a, 5; *Fag*: fallen decorticated trunk, *Fag*: mossy decaying trunk, *Pic*: decaying trunk; X–XI.
- Ascotremella faginea***: BP1d; *Fag*: fallen log; VIII–IX; PRM 924966. – Imp. data: first record 30. VIII. 1960 (Benedix 1960).

- Asterophora parasitica***: BP1a; decayed *Russula* sporocarp, old fungal sporocarp; IX.
- Athelia decipiens***: BP5, 10c; decaying conifer trunk, *Pic*: decaying trunk; V, IX; PRM 922612, 922613, 922999.
- Athelia epihylla***: BP1a, 5; *Pic*: decaying trunk, *Pic*: mossy decaying trunk; X; PRM 923157, 923571.
- Auricularia auricula-judae***: BP1d; *Fag*: fallen corticated trunk; XI.
- Baeospora myosura***: BP1a, 8a; *Pic*: fallen cone, *Pic*: cone in soil; X.
- Baeospora myriadophylla***: BP1d; *Pic*: decaying trunk; X; PRM 923110.
- Bankera violascens***: BP1a; under *Pic*, under *Pic*: in needles; IX.
- Bertia latispora***: BP1a, 1b; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk; IX; PRM 923344.
- Bertia moriformis***: BP8b; *Fag*: fallen log; VI; PRM 922816.
- Bisporella citrina***: BP1d, 1g, 1h, 2a, 2c, 2f, 5, 7, 8a; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: fallen log, *Fag*: fallen twig, decaying wood close to stream; VI, VIII–XI; PRM 922811.
- Bisporella subpallida***: BP1g; *Fag*: fallen log; X; PRM 923754.
- Bjerkandera adusta***: BP1c, 1d, 1e, 1g, 2a, 2b, 2c, 4b, 5, 7, 8a, 8b; *Abi*: fallen decorticated trunk, *Fag*: roots of fallen trunk, *Fag*: fallen trunk, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: thin decaying trunk, *Fag*: stump, *Fag*: fallen log; IV–XI.
- Bolbitius aleuriatus***: BP1d, 1e, 2b; *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: decayed wood; VIII–X.
- Boletus badius***: BP1a, 1d, 1e, 1f, 2b, 8a, 9a, 9b, 10b; under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*; VIII–XI.
- Boletus calopus***: BP1a, 1d, 2b, 7; under *Fag* + *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*; IX.
- Boletus edulis***: BP1a, 1b, 1c, 2b, 3, 4a, 5, 6, 7, 8d, 10b; under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*, close to forest road, on fallen needles; VII–X.
- Boletus luridiformis***: BP1a, 1c, 1d, 1f, 1h, 2a, 2e, 3, 6, 7, 8a, 9a, 10b; on bare soil close to stream, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*, under *Pic*, under *Pic* + *Fag*, under *Pic*: close to forest road, under *Pic* + *Fag* + *Abi*, under *Pic* + *Fag* + *Abi*: close to stream; VI–X.
- Boletus subappendiculatus***: BP8a; under *Pic* + *Fag* + *Abi*; VIII.
- Bondarzewia mesenterica***: BP1b, 1d, 2a, 2d, 6, 8a; *Abi*: base of living tree, *Abi*: stump, *Abi*: stump base, *Abi*: base of decayed stump, conifer stump; VIII–XI.
- Botryobasidium aureum***: BP1h; *Fag*: decaying trunk; IX; PRM 923503.
- Botryobasidium botryosum***: BP7, 10c; *Fag*: fallen decorticated trunk, *Pic*: fallen decorticated trunk; VI, IX; PRM 922843, 922958.
- Botryobasidium intertextum***: BP1d; *Pic*: decaying trunk; VI; PRM 922460.
- Botryobasidium isabellinum***: BP1d, 5; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Abi*: bark of fallen trunk, *Pic*: fallen decorticated trunk; VIII–IX; PRM 922882, 923015, 923024, 923515, as *Botryohypochnus isabellinus*.
- Bulgariella pulla***: BP1a, 1d; *Pic*: fallen decorticated trunk; IX, XI; PRM 922869, 923354.
- Cacumisporium capitulatum***: BP1e; *Fag*: fallen decorticated trunk; VIII.
- Callistosporium pinicola***: BP1d, 2a, 2c, 4b, 8a; *Abi*: decaying trunk, decaying trunk, decaying conifer trunk, *Pic*: decaying trunk; VIII–X; PRM 922971. – Imp. data: first record on decaying fallen trunk of *Abi*, 19. IX. 2008 leg. J. Holec, PRM 899105 (Antonín et al. 2009: 5).
- Calocera cornea***: BP1d, 2a, 2b, 2c, 3, 4b, 5; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: fallen log, *Fag*: fallen twig; VI, VIII–XI.
- Calocera furcata***: BP8a; *Abi*: fallen log; X; PRM 923132.
- Calocera viscosa***: BP1a, 1b, 1c, 1d, 2a, 5, 8a, 10b; *Abi*: stump base, wood in soil, decaying conifer stump, *Pic*: root of fallen trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: decaying stump, in detritus, in detritus with wood remnants, fallen decorticated log; VIII–XI.
- Camarops pugillus***: BP1d; *Pic*: decaying trunk; IV; PRM 922799.
- Camarops tubulina***: BP1a, 1b, 1c, 1d, 1e, 1h, 2e, 2f, 8b; decayed conifer trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, VI,

- VIII–X. – Imp. data: numerous records on dead wood of *Pic* and *Abi* documented in PRM (Hilber & Hilber 1980: 137; Pouzar 1986: 218, 219; Holec 2005a: 103).
- Cantharellus amethysteus***: BP5; under *Fag* + *Pic*; VIII.
- Cantharellus cibarius***: BP1a, 1f, 5, 6, 8a; on bare soil, on bare soil close to stream, under *Fag* + *Pic*, under *Pic*, close to forest road; VIII–XI.
- Cantharellus friesii***: BP1d, 1e, 2c, 2d, 2f, 2g, 8a, 8d; on bare soil, on bare soil close to stream, on soil close to forest road, under *Fag*, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*; VIII–X; PRM 922873, 924935.
- Cantharellus tubaeformis***: BP1a, 1c, 1d, 2a, 2c, 4a, 5, 6, 8a, 9b, 10b; *Abi*: mossy decaying trunk, *Pic*: decayed wood, under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*, close to forest road, in detritus, in moss; VIII–XI.
- Capitotricha rubi***: BP1a, 4b, 9c; *Rubus idaeus*: dead stem; VI–VII, IX.
- Ceraceomyces eludens***: BP9b; *Pic*: fallen decorticated trunk; X; PRM 923172.
- Ceriporia excelsa***: BP1d; *Fag*: fallen decorticated trunk; X; PRM 923184.
- Ceriporiopsis gilvescens***: BP4b; *Fag*: decaying trunk; X; PRM 923585.
- Ceriporiopsis mucida***: BP1b, 4a; *Fag*: decaying trunk, *Pic*: decaying trunk; VI, VIII; PRM 923230, 923580.
- Cerrena unicolor***: BP1d; *Fag*: decaying trunk; IX.
- Chaetosphaeria cupulifera***: BP1a, 2b; *Fag*: fallen twig; VI, IX; PRM 923340.
- Chalciporus piperatus***: BP1c, 3, 5, 6, 7, 9a, 10b, 10d; under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag* + *Abi*; VIII–X.
- Chlorociboria aeruginascens***: BP8d; *Fag*: decaying trunk; VIII; PRM 922865.
- Chromosera cyanophylla***: BP1d; *Abi*: decaying trunk; VI, IX–X; PRM 922848, as *Omphalina c.* – Imp. data: the given record (first one for BP) is thoroughly discussed by Holec et al. (2015).
- Chrysomphalina chrysophylla***: BP1a, 1c, 1d, 1g, 1h, 2a; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed trunk; VI–VII, IX–X; PRM 922457, 922660, 922847, as *Gerronema chrysophyllum*.
- Chrysomphalina grossula***: BP1d, 8a; *Abi*: decayed trunk, woody debris and bark around decaying *Abi* stump, woody debris and bark around decaying *Pic* stump, *Pic*: mossy decaying trunk; IX–X; PRM 923026, 923108, 924973, as *Omphalina g.*
- Cinereomyces lindbladii***: BP1a, 10b; *Pic*: decaying trunk; VI, IX–X; PRM 922994, 923178, as *Diplomitoporus l.*
- Clavulicium macounii***: BP1d, 8a; *Abi*: decaying trunk, decaying conifer trunk; VIII–IX; PRM 922861, 923019.
- Clavulina coralloides***: BP1a, 1c, 2b, 5, 8a, 8b, 10b; on bare soil, on bare soil close to stream, under *Fag* + *Pic*, in detritus, on fallen needles, in moss, in sand and moss close to stream; VIII–XI.
- Clavulina rugosa***: BP1e, 8a; under *Fag* + *Pic*, under *Fag*; in grass and moss; IX–X.
- Climacocystis borealis***: BP1d, 1f, 2a, 2b, 9b, 10b, 10d; *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: stump, *Pic*: base of standing dead tree, *Pic*: decaying stump; IX–X.
- Climacodon septentrionalis***: BP1d; *Fag*: fallen decorticated trunk; IX; PRM 922969.
- Clitocybe candicans***: BP4a; among fallen decaying leaves; X.
- Clitocybe fragrans***: BP8a; in detritus; X.
- Clitocybe gibba***: BP1d, 5, 8d; *Fag*: in moss on bark of decaying trunk, in detritus; VIII–X.
- Clitocybe metachroa***: BP1d; in detritus, among fallen decaying leaves; X; PRM 923064.
- Clitocybe nebularis***: BP1f; *Pic*: decaying stump; X.
- Clitocybe truncicola***: BP8a; *Fag*: mossy decaying trunk; IX; PRM 924978.
- Clitocybe vibecina***: BP1h, 8d, 10c; *Abi*: decayed wood, *Pic*: decayed wood, in detritus; X; PRM 923148, 923170, 923190.
- Clitocybula lacerata***: BP1a, 1d, 1e, 1f, 1h, 2c, 5, 8a; *Abi*: decaying trunk, *Abi*: mossy decaying trunk, decayed trunk, decaying trunk, decaying conifer trunk, mossy decaying conifer trunk, *Pic*:

- decaying trunk, *Pic*: mossy decaying trunk, decayed conifer wood; IX–X; PRM 922901, 922903, 923057, 933893.
- Clitocybula platyphylla***: BP1b, 1d, 1e, 1h, 4b, 5, 7, 8a, 8d; *Abi*: stump base, *Fag*: decayed wood, *Fag*: fallen log, *Pic*: decaying trunk, *Pic*: decayed trunk, under *Pic* + *Fag*, in detritus, in detritus with wood remnants; VI–X.
- Clitopilus cystidiatus***: BP9e; on fallen needles; IX; PRM 923002.
- Clitopilus prunulus***: BP1c; under *Pic*; IX.
- Collybia cookei***: BP1a, 2c, 8a; under *Fag* + *Pic*, in detritus, among fallen decaying leaves; IX–X.
- Collybia tuberosa***: BP1d, 1h, 6, 10b; in detritus, on fallen needles; IX–X.
- Coltricia perennis***: BP6; close to forest road; IX.
- Conferticium ochraceum***: BP1d; *Abi*: fallen log, decaying conifer trunk; X–XI; PRM 923574, 923364 as *Gloeocystidiellum o.*
- Coniophora arida***: BP1e; *Pic*: fallen decorticated trunk; X; PRM 923198.
- Coniophora oliuacea***: BP1a; *Pic*: fallen decorticated trunk; VIII.
- Coniophora puteana***: BP1d, 2c, 4b, 5; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Fag*: fallen decorticated trunk, decaying trunk; IX–X; PRM 922947, 923164, 924926.
- Conocybe subpubescens***: BP1c, 1d; *Fag*: decayed wood, in detritus under *Fag* + *Pic* + *Rubus idaeus*; IX; PRM 923018, 933896.
- Coprinellus domesticus***: BP5; *Fag*: in detritus with wood remnants; V; PRM 923507, as *Coprinus d.*
- Coprinellus micaceus***: BP1d, 1e, 1h, 2b, 2d, 5, 7, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: decayed wood, *Fag*: fallen log, on bare soil, in detritus, in detritus with wood remnants; V–XI; PRM 922860, 923152, 923508, as *Coprinus m.*
- Coprinopsis atramentaria***: BP4a; on forest road; IX.
- Cordyceps militaris***: BP1b; among fallen decaying leaves; IX; PRM 923346.
- Cortinarius acutus***: BP1a; in detritus and moss; IX; PRM 923013.
- Cortinarius albovariegatus***: BP1a; in moss close to stream; VIII.
- Cortinarius alboviolaceus***: BP7, 8a; under *Fag* + *Pic*; IX–X; PRM 922957, 923792.
- Cortinarius anomalus***: BP1f, 4a, 8a; under *Fag* + *Pic*, under *Fag* + *Abi*; IX–X; PRM 923789, 923790, 924929.
- Cortinarius bataillei***: BP1a, 1c, 9b, 10b, 10c, 10d; under *Fag* + *Pic* + *Abi*, under *Pic*, under *Pic*: in *Sphagnum*; IX–X.
- Cortinarius betulinus***: BP9b, 10b, 10d; under *Pic*, in grass; IX; PRM 922992, 923007.
- Cortinarius bolaris***: BP1b, 4a, 6, 8a; under *Fag*, under *Fag* + *Pic*, under *Fag* + *Abi*: spring area, under *Pic* + *Fag* + *Abi*; VIII–IX.
- Cortinarius brunneus***: BP1a, 1c, 10d; under *Pic* + *Fag* + *Abi*, under *Pic*: in *Sphagnum*, in grass; IX–X; PRM 922928, 923011.
- Cortinarius camphoratus***: BP1b, 1d; under *Fag*, under *Fag* + *Pic*; X; PRM 923091.
- Cortinarius caperatus***: BP1a; under *Pic*; VIII.
- Cortinarius casimiri***: BP9d; in moss in spring area; X; PRM 923166.
- Cortinarius cinnamomeus***: BP1a, 1f, 2a, 9b; under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*, under *Pic*, in moss; IX–X.
- Cortinarius croceoonus***: BP9e; under *Pic*; X.
- Cortinarius decipiens* var. *atrocaeruleus***: BP8a; under *Fag*: on bare soil close to stream; X; PRM 923141.
- Cortinarius decipiens* var. *decipiens***: BP1c; under *Fag* + *Pic*; X; PRM 923036.
- Cortinarius delibutus***: BP1c, 1d, 1e, 1f, 2a, 8a; under *Fag*, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*; VII, IX–X; PRM 923028.
- Cortinarius flexipes* var. *flabellus***: BP1a; under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*, under *Pic*: in moss; IX–X.
- Cortinarius flexipes* var. *flexipes***: BP1d, 8a, 10b; under *Fag* + *Pic*, under *Pic*; IX–X.
- Cortinarius gentilis***: BP1d; under *Pic* + *Fag*; X; PRM 923791.

- Cortinarius glaucopus***: BP8a; under *Fag* + *Pic* + *Abi*; X; PRM 923129.
Cortinarius herpeticus: BP1f; under *Fag* + *Pic*; X; PRM 923063.
Cortinarius largus: BP1d, 1e, 4a, 8a; under *Fag*, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*; IX; PRM 922977, 923025, 923027, 924972, 924975.
Cortinarius lebretonii: BP1c, 10b; under *Pic* + *Fag*, under *Pic*: in moss and needles on sand along a stream, in detritus; X; PRM 923033, 923071, 923165.
Cortinarius lignicola: BP8a; decayed conifer stump; X.
Cortinarius limonius: BP1a, 1c; under *Pic*; IX.
Cortinarius orellanus: BP1d; under *Fag* + *Abi*; IX; PRM 922972.
Cortinarius purpurascens: BP3; under *Pic*: forest road margin; IX; PRM 922985.
Cortinarius riederi: BP1b; under *Pic*: in needles; X; PRM 923125.
Cortinarius rubellus: BP1a, 1c; under *Pic* + *Fag*, under *Pic*: in moss, in moss; VIII–X.
Cortinarius safranopes: BP1c; under *Fag* + *Pic*: close to stream; X; PRM 923077.
Cortinarius sanguineus: BP1a, 1c, 2b; under *Pic*, under *Pic* + *Fag*, under *Pic*: on decayed trunk, under *Pic*: close to stream, in moss; IX–XI.
Cortinarius scaurus: BP1c; under *Pic*: spring area; X.
Cortinarius semisanguineus: BP1b; under *Pic* + *Fag*; X.
Cortinarius sommerfeltii: BP9f; in grass; IX; PRM 923010.
Cortinarius spilomeus: BP1d, 1e; under *Fag* + *Pic*: on mossy decayed trunk, under *Pic* + *Fag*; IX; PRM 923793, 924939.
Cortinarius stillatitius: BP1a; under *Pic*; VIII.
Cortinarius subporphyropus: BP1d, 8a; under *Fag*, under *Fag* + *Pic* + *Abi*, under *Pic* + *Fag* + *Abi*; IX–X; PRM 923014, 923139, 923146, 923767, 923768, some of them as *C. porphyropus*. – Taxonomic concept: Saar et al. (2014).
Cortinarius subpurpurascens: BP1c, 1d; under *Fag*, under *Fag* + *Pic*; IX–X; PRM 923042. – Taxonomic concept: Saar et al. (2014).
Cortinarius tabularis: BP1d; under *Fag* + *Pic*; IX; PRM 924971.
Cortinarius varius: BP1a; under *Fag* + *Pic*: on bare soil; IX.
Cortinarius venetus var. ***montanus***: BP1a; under *Pic* + *Fag*, in moss; IX; PRM 922983, 924924.
Cortinarius violaceus: BP1d, 4a; under *Fag* + *Pic* + *Abi*; IX; PRM 922976, 924970.
Craterellus cornucopioides: BP1f, 8a; on bare soil, under *Fag* + *Pic*, under *Pic* + *Fag* + *Abi*, in detritus; VIII, X.
Crepidotus applanatus: BP1b, 1d, 1e, 1h, 2a, 2c, 3, 5, 7, 8a, 8b; *Abi*: decaying trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: decaying wood; VIII–X; PRM 922890.
Crepidotus kubickae: BP1a, 1c, 1d, 1e, 1h, 2a, 2b, 8d, 10a; *Abi*: log of fallen trunk, *Pic*: bark of fallen corticated trunk, *Pic*: standing dead tree, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk; V–VI, IX–XI; PRM 923114, 923187, 923211, 923212.
Crepidotus mollis: BP1f; *Fag*: decaying trunk; X.
Crepidotus stenocystis: BP1b; *Pic*: mossy decaying trunk; X; PRM 923124.
Cudoniella acicularis: BP1b; *Fag*: decayed wood; IX; PRM 922937.
Cudoniella clavus var. ***grandis***: BP1d, 8a; fallen cupulae of *Fag* and detritus in spring area, *Fag*: twigs lying close to stream; VI.
Cyathicula cyathoidea: BP10b; *Rubus idaeus*: dead stem; VI; PRM 933873. – Imp. data: on stems of *Senecio nemorensis* (Kubička 1960, 1973; as *Phialea c.*).
Cystoderma carcharias: BP1f, 10b; in detritus; X.
Cystoderma jasonis: BP1a, 1d, 1f, 2a, 10b, 10d; *Fag*: fallen decaying log, in moss on decaying trunk, *Pic*: mossy decaying trunk, mossy decaying conifer stump, in detritus, on fallen needles + moss, in moss on decaying trunk, in grass; IX–XI; PRM 922996, 923173, 923176.
Cystoderma subvinaceum: BP1d; decayed conifer trunk; X; PRM 923088.
Cystostereum murrayi: BP1c, 1d, 1e, 1f, 1g, 2a, 2c, 2g, 8b, 8d; *Abi*: fallen decorticated trunk, *Abi*: fallen corticated trunk, *Abi*: decaying trunk, *Abi*: mossy decaying trunk, *Abi*: log of fallen trunk,

- decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: mossy decaying trunk; IV, VI–VII, IX–XI; PRM 922834, 923023, 923252. – Imp. data: several records documented in CB, FH, PRM (Kotlaba 1987a: 133, 135).
- Dacrymyces chrysospermus***: BP1b, 9a, 9b, 10a, 10b, 10c; *Pic*: standing dead tree, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk; VI, IX–X; PRM 922845, 922988, 922998.
- Dacrymyces corticioides***: BP1d; *Pic*: mossy decaying trunk; XI; PRM 922888.
- Dacrymyces minor***: BP2g; *Pic*: fallen decorticated trunk; VI; PRM 922820.
- Dacrymyces stillatus***: BP1c, 1d, 2a, 2c, 4b, 5, 7, 8a, 9a, 10a, 10b, 10c, 10d; *Abi*: fallen log, *Fag*: decaying trunk, *Fag*: cutting surface of decaying trunk, *Fag*: fallen log, *Pic*: fallen decorticated trunk, *Pic*: cutted decorticated wood, *Pic*: decaying trunk, *Pic*: stump, *Pic*: decaying wood, *Pic*: decaying stump; V–VI, VIII–X; PRM 923133.
- Daedaleopsis confragosa***: BP1e, 1g; *Fag*: stump, *Fag*: fallen log; V, X; PRM 923586.
- Datronia mollis***: BP1e, 2a, 2b, 5, 8a; *Abi*: base of living tree, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: thin fallen trunk, *Fag*: fallen log; VI–VIII, X–XI.
- Dentipellis fragilis***: BP1d, 1e, 1g, 1h, 2a, 2c, 3, 4b, 5, 8a; *Abi*: fallen decorticated trunk, *Abi*: mossy decaying trunk, *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: cutting surface of fallen trunk; IV, VIII–XI; PRM 923573.
- Diatrype disciformis***: BP2a, 2b, 7; *Fag*: fallen log, *Fag*: fallen twig; IV, VII, IX. – Imp. data: numerous records documented in PRM (Chlebicki 2005: 125).
- Diatrype stigma***: BP2b; *Fag*: fallen log; VI.
- Diatrypella verruciformis***: BP1b, 1e; *Fag*: fallen log, *Fag*: fallen twig; IV, IX; PRM 923338.
- Discina perlata***: BP2b; *Pic*: decaying trunk; VI.
- Elaphomyces asperulus***: BP2b; under *Pic*: site disturbed by wild boars; XI; PRM 923376.
- Elaphomyces granulatus***: BP1a, 9a, 10a, 10b; on bare soil, under *Pic*: site disturbed by wild boars, dry site; IV, VI–VII.
- Entoloma cetratum***: BP1b, 1d, 1e, 1g, 1h, 2b, 5, 10b; *Pic*: decaying trunk, under *Fag* + *Pic*, in detritus, in moss, in moss close to stream, in *Sphagnum*; VI–VII, IX.
- Entoloma hirtipes***: BP1d, 5; in detritus, in detritus close to fallen trunk; V–VI.
- Entoloma nitidum***: BP2b; on fallen needles; IX.
- Entoloma pluteisimilis***: BP8b; *Fag*: decayed trunk; X; PRM 923759.
- Entoloma rhodopolium* var. *nidorosum***: BP1c, 1d, 1e, 4a; under *Fag*, under *Fag* + *Pic*; IX–X; PRM 922966, 923760, as *E. sericatum*.
- Entoloma tjallingiorum***: BP8d; in detritus close to fallen conifer trunk; VIII; PRM 922871.
- Entoloma turbidum***: BP9d; on fallen needles + moss; IX; PRM 922989.
- Entoloma venosum***: BP1h; under *Pic*; IX; PRM 923758.
- Eutypa spinosa***: BP1c, 1d, 2b, 2d, 5; *Fag*: fallen corticated trunk, *Sorbus aucuparia*: fallen trunk; IV, IX–X; PRM 922919, 923035, 923357.
- Eutypella quaternata***: BP1a; *Fag*: fallen twig; IX; PRM 923320.
- Exidia nigricans***: BP1b, 1d, 1e, 2a, 4b, 5, 7, 8a, 8d; *Fag*: fallen trunk, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: fallen log, *Fag*: fallen twig; IV, VI, VIII, XI.
- Exidia pithya***: BP1d, 1g, 2a, 2b, 2g, 10b; *Abi*: twig of fallen corticated trunk, *Abi*: log of fallen trunk, *Pic*: fallen trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: fallen log; IV, VI, IX, XI.
- Exidia truncata***: BP1d, 1e; *Fag*: fallen log, *Fag*: fallen twig; VI, XI; PRM 922826.
- Exidiopsis calcea***: BP2d; *Pic*: fallen log; VIII.
- Fayodia bisphaerigera***: BP8a; on bare soil close to stream; X; PRM 923128.
- Flammula alnicola***: BP2a; *Fag*: stump base; X; PRM 923691, as *Pholiota a.*
- Flammulaster carpophilus***: BP5; in detritus under *Fag*; V; PRM 923748.
- Flammulaster ferrugineus***: BP8a; *Pic*: decayed wood; VIII; PRM 922862, 923749.
- Flammulaster limulatus***: BP2a, 2c, 5, 8a; *Fag*: decaying trunk; VIII–IX; PRM 922885.
- Flammulina velutipes***: BP1e; *Fag*: fallen corticated trunk; XI.

- Fomes fomentarius:** BP1h, 2a, 2c, 3, 4b, 5, 7, 8a, 8b; *Fag:* fallen decorticated trunk, *Fag:* fallen corticated trunk, *Fag:* decaying trunk, *Fag:* stump, *Fag:* trunk of living tree; V–X.
- Fomitopsis pinicola:** BP1a, 1d, 1g, 2a, 2c, 2g, 3, 4a, 4b, 5, 7, 8a, 9a, 10a, 10b; *Abi:* fallen decorticated trunk, *Abi:* decaying trunk, *Abi:* fallen decaying log, *Fag:* fallen decorticated trunk, decaying conifer trunk, *Pic:* fallen trunk, *Pic:* fallen decorticated trunk, *Pic:* fallen corticated trunk, *Pic:* decaying trunk, *Pic:* stump; IV–X; PRM 923241.
- Fomitopsis rosea:** BP1a, 1b, 1d, 1e, 1h, 2a, 2g, 4a; *Pic:* fallen decorticated trunk, *Pic:* fallen corticated trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk; IV, VI–XI; PRM 922659, 922949.
- Galerina atkinsoniana:** BP1a; *Pic:* in moss on bark of decaying trunk; IX; PRM 922929.
- Galerina calyptata:** BP1d; *Pic:* decayed wood; VI; PRM 922836.
- Galerina clavata:** BP2b; in moss on decaying *Fag* trunk; IX; PRM 922916.
- Galerina hypnorum:** BP1a, 1f, 2b, 8b, 9b, 10a; *Abi:* mossy decaying trunk, *Pic:* decayed wood, *Pic:* in moss on bark of decaying trunk, in moss, in moss on decaying trunk, in moss on decayed wood; VI–VIII; PRM 923764, 923765.
- Galerina marginata:** BP1a, 1b, 1c, 1d, 1g, 1h, 2a, 2c, 4a, 5, 8b, 10b; *Abi:* fallen corticated trunk, *Abi:* mossy decaying trunk, *Abi:* decayed trunk, *Abi:* fallen log, *Fag:* decayed trunk, *Fag:* decaying trunk, *Fag:* mossy decaying trunk, decayed conifer trunk, decaying conifer trunk, decaying conifer stump, *Pic:* fallen decorticated trunk, *Pic:* fallen corticated trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk, *Pic:* decaying stump, in detritus; VI, IX–X; PRM 923078.
- Galerina paludosa:** BP1a, 10b; in *Sphagnum*; VI–VII, IX; PRM 922842.
- Galerina pruinatipes:** BP1c, 1d; *Abi:* decaying trunk, decayed conifer trunk, decayed conifer wood; IX–X; PRM 922948, 923041, 923094.
- Galerina stordalii:** BP1d, 2a; decaying trunk, mossy decaying conifer trunk, in moss on decaying trunk, in moss on decaying *Pic* trunk; VI; PRM 922823, 923762, 923763.
- Galerina styliifera:** BP1d; *Pic:* mossy decaying trunk; X; PRM 923103.
- Galerina triscopa:** BP1d, 1e, 1g, 2a, 2b, 2c, 4a, 8d; *Abi:* decaying trunk, *Abi:* decayed stump, decaying trunk, decaying conifer trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk; VI–XI; PRM 922867, 922914.
- Galerina vittiformis** f. *bispora:* BP1a, 2c; *Abi:* mossy decaying trunk, *Pic:* decayed wood; VI, VIII; PRM 923766.
- Ganoderma applanatum:** BP1d, 1h, 2a, 3, 4a, 4b, 5, 7, 8a, 8b; *Abi:* fallen decorticated trunk, *Abi:* fallen corticated trunk, *Abi:* decaying trunk, *Fag:* fallen decorticated trunk, *Fag:* fallen corticated trunk, *Fag:* decaying trunk, *Fag:* mossy decaying trunk, *Fag:* stump, *Pic:* decaying trunk; VI–XI.
- Gloeocystidiellum porosum:** BP1g; *Fag:* fallen log; X; PRM 923085.
- Gloeophyllum odoratum:** BP1a, 1e, 1g, 2a, 2g, 5, 8a, 9a, 10a, 10c; decaying conifer trunk, *Pic:* fallen trunk, *Pic:* cutting surface of fallen trunk, *Pic:* fallen decorticated trunk, *Pic:* decaying trunk, *Pic:* stump, *Pic:* decaying stump; IV, VI–X.
- Gloeophyllum sepiarium:** BP1h, 2a, 8a, 10a, 10c, 10d; *Pic:* fallen decorticated trunk, *Pic:* fallen corticated trunk, *Pic:* stump, *Pic:* fallen log; V–VII, IX–X.
- Gloeoporus pannocinctus:** BP1d, 1e, 2a, 5, 7; *Fag:* fallen decorticated trunk, *Fag:* decaying trunk; VII–X; PRM 923243.
- Graddonia coracina:** BP1b; *Fag:* wood in stream; IX; PRM 923345.
- Gymnopilus bellulus:** BP1a, 1b, 1c, 1d, 1e, 1h, 2a, 2c, 2f, 5; *Abi:* decaying trunk, *Abi:* mossy decaying trunk, *Abi:* decayed trunk, decayed conifer trunk, decaying trunk, decaying conifer trunk, mossy decaying conifer trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk; VI, VIII–X; PRM 922877.
- Gymnopilus josserandii:** BP8a; decayed conifer stump; X.
- Gymnopilus penetrans:** BP1a, 1d, 1f, 1h, 2a, 2c, 4a, 5, 7, 8a, 8b, 10c; *Abi:* fallen decorticated trunk, *Abi:* decaying trunk, *Abi:* mossy decaying trunk, *Fag:* fallen decorticated trunk, *Fag:* decaying trunk, *Fag:* mossy decaying trunk, decayed conifer trunk, decaying trunk, decaying conifer

- trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: decayed wood; IX–XI.
- Gymnopilus picreus***: BP1a, 1b, 1c, 1d, 1e, 1f, 1g, 2a, 2b, 2c, 4a, 8a, 9b, 10d; *Abi*: mossy decaying trunk, *Abi*: decayed trunk, *Fag*: decaying trunk, decayed conifer trunk, decaying trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IX–X.
- Gymnopilus sapineus***: BP9a; *Pic*: decaying stump; VII.
- Gymnopus acervatus***: BP1a, 1d, 1h, 9a, 10b; wood in soil, *Pic*: mossy decaying trunk, *Pic*: decayed trunk, *Pic*: decaying wood in soil; IX–X; PRM 922658.
- Gymnopus androsaceus***: BP1a, 2a, 2g, 9a, 10a, 10b, 10d; *Pic*: fallen needles, *Pic*: bark of decaying trunk, under *Pic*: in needles, on fallen needles, on fallen needles + moss; VI–VII, IX.
- Gymnopus aquosus***: BP1d, 4b, 5, 7, 8d; in detritus; VI, IX.
- Gymnopus confluens***: BP2f, 4b; in detritus; VIII–IX.
- Gymnopus hariolorum***: BP1d; among fallen decaying leaves; IX.
- Gymnopus ocior***: BP9c, 10d; in detritus, on fallen needles + moss; VI–VII; PRM 922846, as *Collybia o.*
- Gyromitra infula***: BP1d, 8a, 8b; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: stump base; X.
- Gyroporus cyanescens***: BP5; on bare soil; VIII; PRM 922887.
- Hapalopilus nidulans***: BP4b; *Fag*: fallen log; VIII.
- Hebeloma radicosum***: BP1a, 1d; under *Fag* + *Pic*, under *Pic* + *Fag*; IX; PRM 924928.
- Hebeloma sordescens***: BP1a, 1c; under *Fag* + *Pic*: close to stream, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*: close to stream; IX–X; PRM 922930, 923080, 923185.
- Helvella elastica***: BP1a, 1d, 2a; under *Fag*: on bare soil close to stream, under *Fag* + *Abi*, decayed conifer wood, in detritus with wood remnants, in detritus close to fallen trunk; IX–XI; PRM 922982, 923107, 933882.
- Helvella lacunosa***: BP1e, 5; *Fag*: decayed wood, *Fag*: in moss on bark of decaying trunk, decayed trunk; IX–X; PRM 923118.
- Helvella macropus***: BP1d, 2a, 2c; *Fag*: decaying trunk, *Fag*: mossy decaying trunk, in detritus; IX–X; PRM 922910, 933883.
- Hemimycena gracilis***: BP1a; under *Pic*: in needles; VII; PRM 933895.
- Henningsomyces candidus***: BP1d, 8a; *Abi*: fallen log, *Pic*: mossy decaying trunk; IX–X; PRM 923131.
- Henningsomyces puber***: BP1d, 2c; decaying conifer trunk, *Abi*: decaying trunk; IX–X; PRM 923269, 923270.
- Hericium coralloides***: BP1e, 2b, 4b, 5; *Fag*: fallen decorticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk; VI, IX–X; PRM 923119.
- Hericium flagellum***: BP1a, 1c, 1d, 1e, 1f, 1g, 1h, 2a, 4b, 8a, 8b, 8d; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Abi*: decayed trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: stump; VIII–XI.
- Heterobasidion annosum*** agg.: BP1a, 1b, 1f, 2a, 4b, 5, 8b, 10c; *Abi*: fallen corticated trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: base of standing dead tree; IV–VI, IX–XI; PRM 922794, 922936, 923049, 923371, 923581.
- Heyderia abietis***: BP1a, 10b; under *Pic*: in needles, on fallen needles; X; PRM 923254.
- Humaria hemisphaerica***: BP1h; under *Fag* + *Abi*; IX.
- Hydnum repandum***: BP1d, 1e, 1f, 4a, 5; on bare soil close to stream, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*; VIII–X.
- Hydnum rufescens*** agg.: BP1a, 2f, 5, 6, 8a; on bare soil, under *Fag* + *Pic*, under *Pic* + *Fag*; IX–XI.
- Hydropus marginellus***: BP1d, 2a, 2b, 2f, 6, 8a; *Abi*: decaying trunk, *Abi*: mossy decaying trunk, *Abi*: decaying stump, decaying conifer trunk, decayed conifer stump, decaying conifer stump; VI–X; PRM 923511.
- Hydropus subalpinus***: BP5, 8a; in detritus with logs under *Fag*; V–VI.

- Hygrophoropsis aurantiaca***: BP1a, 3, 4b, 10b; *Pic*: base of living tree, *Pic*: decaying stump, in detritus, in detritus with wood remnants; IX–XI.
- Hygrophoropsis rufa***: BP4b, 9a; *Fag*: fallen decayed log, in detritus; IX–X; PRM 923004.
- Hygrophorus discoideus***: BP1d, 1e, 5; under *Fag* + *Abi*: on soil close to stream, under *Fag* + *Pic*, under *Pic* + *Fag*: close to stream; IX–X; PRM 923093.
- Hygrophorus eburneus***: BP1d, 1e, 1f, 1g, 5, 8a; under *Fag*, under *Fag* + *Pic*; X; PRM 923047.
- Hygrophorus olivaceoalbus***: BP1a, 1d, 2a, 10b; under *Fag* + *Pic*, under *Pic*, under *Pic*: spring area, in moss; VIII–IX; PRM 922934.
- Hygrophorus penarius***: BP1d, 1e, 1f, 2a, 2f, 4a, 6, 7; under *Fag*, under *Fag* + *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*; IX–X; PRM 922953.
- Hygrophorus piceae***: BP1a, 1g; under *Pic*; VIII–IX; PRM 933891.
- Hygrophorus pustulatus***: BP1a, 1b, 1c, 1d, 2b, 5, 8a, 9b, 10b; under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*, under *Pic*: in moss; X.
- Hymenochaete carpatica***: BP1h, 2f; *Acer pseudoplatanus*: lower side of bark chips of living tree; VI, XI; PRM 923378. – Imp. data: first record 10. VII. 1998 leg. J. Holec, PRM 896998 (Tomšovský 2001: 145).
- Hymenochaete cruenta***: BP1c, 2a, 2b; *Abi*: fallen log, *Abi*: log of fallen trunk, *Abi*: log of fallen corticated trunk; VI, X–XI.
- Hymenochaete fuliginosa***: BP1e, 2f, 5, 8a; *Abi*: decaying trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk; X–XI; PRM 923142, 923156, 923575.
- Hymenopellis radicata***: BP1e, 2b, 7, 8a; *Fag*: stump, *Fag*: decayed wood, close to *Fag* stump, in detritus with wood remnants; VII–X.
- Hymenoscyphus lutescens***: BP1d; *Abi*: bark in stream; X; PRM 923109.
- Hymenoscyphus serotinus***: BP1d; *Fag*: fallen twig; X; PRM 923113.
- Hyphodontia alutacea***: BP8d; *Abi*: decaying trunk; X; PRM 923147.
- Hyphodontia aspera***: BP1a, 1d, 1h, 5; *Abi*: decaying trunk, *Fag*: decaying trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, X; PRM 922792, 922795, 923104, 923151, 923189.
- Hyphodontia hastata***: BP9e; *Pic*: fallen decorticated trunk; X; PRM 923169.
- Hyphodontia nespori***: BP1d, 5; *Abi*: fallen decorticated trunk, *Fag*: fallen decaying log; VI, VIII; PRM 922824, 922883.
- Hyphodontia spathulata***: BP1a, 1d, 4b; *Abi*: decaying trunk, decayed conifer trunk; VI, IX; PRM 922461, 922963, 923012, 923570, 924925.
- Hypholoma capnoides***: BP1a, 1d, 1e, 1f, 1h, 2a, 4a, 5, 8a, 8b, 10a, 10b; *Abi*: fallen corticated trunk, *Fag*: fallen decorticated trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: decaying wood in soil, *Pic*: decaying stump; V, IX–XI; PRM 933885.
- Hypholoma dispersum***: BP1a, 1c, 1h, 2a, 10b, 10d; *Fag*: fallen decorticated trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decayed wood, *Pic*: decayed trunk, *Pic*: decaying stump, in detritus with wood remnants; IX–XI.
- Hypholoma fasciculare***: BP1d, 1e, 1f, 2a, 2c, 4a, 5, 7, 8a; wood in soil, *Fag*: decaying trunk, *Fag*: stump, *Fag*: stump base, *Fag*: decayed wood, *Fag*: decayed stump, decaying trunk, *Pic*: decaying trunk, decayed stump; V–VII, IX–X.
- Hypholoma fasciculare* var. *subviride***: BP2a, 8a; *Fag*: mossy decaying trunk, *Pic*: fallen decorticated trunk; VI, VIII; PRM 933881, as *H. subviride*.
- Hypholoma lateritium***: BP1d, 1e, 2a, 7, 8b; *Fag*: fallen decorticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: fallen log, *Pic*: decaying trunk; VII, IX–XI.
- Hypholoma radicosum***: BP2a, 8a; conifer stump, *Pic*: dead roots; VIII.
- Hypochnicium geogenium***: BP1d; *Abi*: fallen log; XI; PRM 923365.
- Hypochnicium polonense***: BP2c; decaying conifer trunk; IX; PRM 923520.
- Hypochnicium wakefieldiae***: BP1f, 8a; *Abi*: decaying trunk, *Pic*: decaying trunk; VIII, X; PRM 922857, 923048.
- Hypocrea rufa* s. l.**: BP4a, 7; *Fag*: fallen log; VI.

- Hypoxylon cohaerens***: BP1a, 1b, 1d, 1e, 5; *Fag*: fallen trunk, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: fallen decaying log, *Fag*: fallen twig; IX–XI; PRM 923161, 923319, 923328, 923349, 923368.
- Hypoxylon fragiforme***: BP1a, 2a, 2g, 4a, 4b, 5, 7, 8a; *Fag*: fallen decorticated trunk, *Fag*: thin fallen trunk, *Fag*: fallen log, *Fag*: fallen twig; V–VI, VIII–IX; PRM 923321.
- Hypoxylon fuscum***: BP1d; *Fag*: fallen log; IV; PRM 922800.
- Hypoxylon multiforme***: BP1d, 8a; *Fag*: fallen log; VI.
- Hypoxylon rubiginosum***: BP5; *Fag*: fallen log; X.
- Hypoxylon vogesiacum***: BP5; *Fag*: fallen log; X; PRM 923153.
- Hypsizygus tessulatus***: BP1e, 4b; *Fag*: base of living tree, *Fag*: trunk of living tree; X; PRM 923115, 933894.
- Inocybe assimilata***: BP1d, 1f, 6, 10c; on soil close to forest road, under *Fag* + *Pic*, close to forest road; VIII–X; PRM 923003, 923692, 923693.
- Inocybe calamistrata***: BP1c, 1d, 8a, 10b; on bare soil: among moss, under *Fag* + *Pic*, under *Fag* + *Pic*: close to stream, under *Fag* + *Pic* + *Abi*: on soil close to stream; IX–X; PRM 922987, 923111, 923127.
- Inocybe cincinnata* var. *cincinnata***: BP1f, 1h; under *Fag* + *Abi*, in detritus; IX–X; PRM 923056, 923217.
- Inocybe cincinnata* var. *major***: BP1b, 1c, 5; under *Fag*: among detritus in spring area, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*: close to stream; IX–X; PRM 922940, 923073, 923154.
- Inocybe fuscescentipes***: BP1c, 8a; under *Fag* + *Pic*: close to stream, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*: close to stream; X; PRM 923074, as *I. leioccephala*. – Taxonomic concept: Larsson et al. (2014).
- Inocybe geophylla* var. *geophylla***: BP1a, 1c, 1d, 1e, 1f, 8a, 8b; under *Fag*, under *Fag* + *Pic*, under *Fag* + *Abi*: spring area, under *Fag* + *Pic*: close to stream, under *Pic* + *Fag*; IX–X; PRM 923017, 923096, 923175, 923213, 923214, 923215.
- Inocybe grammata***: BP2f, 8a; on bare soil close to stream, under *Fag* + *Pic*; VIII–IX.
- Inocybe hystrix***: BP1d, 2d, 4a, 7, 8a, 8b; on bare soil close to stream, on forest road, on soil close to forest road, under *Abi* + *Fag*: close to stream, under *Fag* + *Pic*, under *Fag* + *Pic*: close to stream; VIII–X; PRM 922855.
- Inocybe lanuginosa* var. *ovatocystis***: BP1d; decayed conifer trunk, decayed conifer wood; VII, IX; PRM 922961, 923216, as *I. ovatocystis*.
- Inocybe napipes***: BP1a, 1d, 1f, 2a, 6, 8a; on bare soil close to stream, under *Fag* + *Pic*, under *Fag* + *Pic*: in moss, under *Pic* + *Fag*, close to forest road; VIII–X; PRM 922856, 922931.
- Inocybe nitidiuscula***: BP1b, 1d, 1h, 8a; in spring area, under *Fag* + *Pic*: close to stream, under *Fag* + *Pic* + *Abi*: on soil close to stream, under *Pic* + *Fag*; X; PRM 923112.
- Inocybe paludinella***: BP5; under *Fag* + *Pic*; IX; PRM 922899.
- Inocybe petiginosa***: BP1a, 1c, 1d, 2c, 2f, 4a, 5, 8a; under *Fag*, under *Fag* + *Pic*, under *Pic* + *Fag*, in moss; VIII–X.
- Inocybe pusio***: BP8a; on bare soil close to stream; X; PRM 923136.
- Inocybe sindonia***: BP1d, 6; under *Fag* + *Pic*, under *Pic* + *Fag* + *Abi*; IX; PRM 922959, 924927.
- Inocybe striata***: BP8a; clayey slope along forest road; VIII.
- Inocybe subcarpta***: BP3; under *Pic*: close to forest road; IX; PRM 922909.
- Inocybe umbratica***: BP1c; under *Pic* + *Fag* + *Abi*: close to stream; X; PRM 923075.
- Inocybe whitei***: BP1b, 8a; under *Fag* + *Pic*, under *Pic* + *Fag*; IX–X; PRM 923183, 924770.
- Inonotus hastifer***: BP1e, 2b, 8a; *Fag*: fallen log, *Fag*: log of decaying trunk; VI, X–XI; PRM 922812, 923373.
- Inonotus nodulosus***: BP1d, 2a; *Fag*: fallen corticated trunk, *Fag*: fallen log; IX, XI; PRM 923016.
- Inomidotis irregularis***: BP1b, 1d; decaying conifer trunk, *Pic*: mossy decaying trunk; IX; PRM 922942, 922946. – Imp. data: first record in X 2004, leg. N. Matočec (Croatian National Fungarium

- CNF-2/7103, see Běfák et al. 2012: 85); fallen decaying trunk of *Fag*, 10. IX. 2009 leg. Z. Egertová & M. Kříž, PRM 899989 (Běfák et al. 2012: 81, 84, 85).
- Irpex lacteus***: BP4b, 5; *Fag*: fallen decorticated trunk, *Fag*: fallen log; VIII, X; PRM 922879, 922893.
- Ischnoderma benzoinum***: BP1d, 1h, 2a, 4b, 5, 8a, 8b; *Abi*: fallen decorticated trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: stump; VIII–X.
- Ischnoderma resinolum***: BP1d, 1g, 2a; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, mossy decaying conifer trunk; VIII, X; PRM 923082.
- Junghuhnia collabens***: BP1f, 2a; *Abi*: decaying trunk, decaying conifer trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, VII, IX–X; PRM 922607, 922608, 922804, 923050, 923054, 924938. – Imp. data: first record on *Abi*, 29. VIII. 1979 leg. J. Vlasák, PRM 826068 (Kotlaba 1984: 79, 2001: 237).
- Junghuhnia fimbriatella***: BP2c; *Fag*: decayed trunk; X; PRM 923240. – Imp. data: first record on *Fag*, 4. IX. 1970 leg. Z. Pouzar, PRM 870821 (Kotlaba 1984: 78, 2001: 236).
- Kuehneromyces mutabilis***: BP1b, 1c, 1d, 1e, 1h, 2a, 2c, 5, 7, 8d; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: stump, *Fag*: fallen log, *Fag*: fallen twig; V–XI.
- Laccaria amethystea***: BP1a, 1c, 1d, 2a, 2c, 2f, 5, 6, 8a, 8b, 10b; under *Fag*, under *Fag* + *Pic*, under *Fag* + *Pic*: close to stream, under *Pic*, under *Pic* + *Fag*, in moss; VI, VIII–XI.
- Laccaria bicolor***: BP9b, 10b; on forest road, under *Pic*; IX–X.
- Laccaria laccata***: BP1a, 1c, 1d, 1f, 2a, 2f, 3, 5, 7, 8a, 10b; on bare soil close to stream, under *Fag* + *Pic*, under *Fag* + *Pic*: close to stream, under *Fag* + *Pic* + *Abi*, under *Fag*: on bare soil close to stream, under *Pic*, under *Pic* + *Fag*, in moss; VIII–XI; PRM 922908, 923053.
- Laccaria proxima***: BP9b; in grass under young *Pic*; IX.
- Lachnellula abietis***: BP1b; *Pic*: fallen twig; IX.
- Lachnellula gallica***: BP1f; *Abi*: fallen twig; V; PRM 923753.
- Lachnellula subtilissima***: BP1f; *Abi*: log of fallen trunk; VI.
- Lachnum virgineum***: BP2c; fallen cupulae of *Fag*; IV. – Imp. data: on cupulae of *Fag*, 19. V. 1965 leg. M. Svrček, PRM 604108 (revised by Suková 2005b: 215); several more specimens in PRM recorded by M. Svrček and identified by M. Šandová, e.g. PRM 929503, PRM 929737, PRM 929444.
- Lactarius albocarneus***: BP1c, 1d, 2a, 8a; under *Abi* + *Fag*, under *Abi* + *Fag*: close to stream, under *Fag* + *Abi*: close to stream, under *Fag* + *Pic* + *Abi*, under *Pic* + *Fag* + *Abi*: close to stream; IX–X; PRM 923072, 923512, 923757.
- Lactarius aurantiacus***: BP1a, 1c, 1d, 1e, 1f, 1g, 1h, 2a, 8a, 8b; on bare soil close to stream, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*, under *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*, under *Pic*: spring area, in moss in spring area; IX–X; PRM 923068, 923081, 923137, 923186.
- Lactarius badiosanguineus***: BP1a, 1b, 1c, 1e; under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*, under *Pic* + *Fag* + *Abi*: close to stream, under *Pic*: in moss and needles on sand along a stream, under *Pic*: spring area, under *Pic*: in moss, in moss close to stream, in sand and moss close to stream; IX–XI; PRM 923044, 923076.
- Lactarius blennius***: BP1d, 1f, 1g, 2e, 2f, 6, 8a; under *Fag*, under *Fag* + *Pic*, under *Pic* + *Fag* + *Abi*; IX–X.
- Lactarius camphoratus***: BP1a, 1c, 1d, 8a; under *Fag* + *Pic*, under *Pic* + *Fag*, under *Pic*: in moss, in moss; VIII–X.
- Lactarius deterrimus***: BP2e; under *Pic* + *Fag*; IX.
- Lactarius fluens***: BP5; on bare soil close to stream, under *Fag* + *Pic*; VIII, X; PRM 923155.
- Lactarius fuscus***: BP1a; under *Pic*, in moss; IX–X.
- Lactarius helvus***: BP1a, 1c, 9a, 10b, 10c; under *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*, under *Pic*: in moss, in moss; IX–X.
- Lactarius lignyotus***: BP1a, 1b, 1d, 1g, 1h, 9b, 10b; under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*, under *Pic*, under *Pic* + *Fag*, in moss, in *Sphagnum*; VII, IX–X.

- Lactarius pallidus:** BP1c, 1d, 1h, 7, 8a; under *Fag*, under *Fag + Pic*, under *Fag + Pic*: close to stream; VIII–X.
- Lactarius picinus:** BP1a, 1b, 1c, 1d, 1f, 1h, 2a, 5; under *Fag + Abi*, under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic + Fag*, in moss; VIII–X; PRM 922875, 922973.
- Lactarius repaesentaneus:** BP1a; under *Pic*, under *Pic + young Fag + Sorbus aucuparia*: in *Sphagnum*, under *Pic + young Sorbus aucuparia + young Abi*: in *Sphagnum*; IX–X.
- Lactarius romagnesii:** BP2a; under *Fag*; IX; PRM 922922.
- Lactarius rostratus:** BP8a; under *Fag*: on bare soil close to stream; VIII; PRM 922874.
- Lactarius rufus:** BP1a, 1b, 10c; under *Pic*, under *Pic + Fag*; VII, IX–X.
- Lactarius ruginosus:** BP1f, 1g, 1h; under *Fag*, under *Fag + Pic*, under *Pic + Fag + Abi*; IX–X; PRM 923046, 933892.
- Lactarius salmonicolor:** BP1e, 1g, 8a; under *Abi + Fag*: close to stream, under *Pic + Fag + Abi*, under *Pic + Fag + Abi*: close to stream; IX; PRM 924930, 924977.
- Lactarius scrobiculatus:** BP8a; under *Pic*, under *Pic + Fag*; VIII–IX.
- Lactarius sphagneti:** BP2a, 5, 6, 8a; on bare soil close to stream, under *Fag + Pic + Abi*, on fallen needles close to stream; VIII, X; PRM 923150.
- Lactarius subdulcis:** BP1b, 1c, 1d, 1e, 1g, 1h, 2c, 3, 4b, 5, 7, 8a; under *Fag*, under *Fag + Pic*, under *Fag + Pic*: close to stream, under *Pic + Fag*; VIII–X.
- Lactarius tabidus:** BP1a, 1c, 2c, 4a; *Abi*: decayed trunk, under *Fag + Pic*, under *Pic*, under *Pic + Fag*, in moss, in *Sphagnum*; VIII–X.
- Lactarius trivialis:** BP1a; in moss; IX.
- Lactarius turpis:** BP9b, 10b; under *Pic*; IX.
- Lactarius vellereus:** BP1d, 1f, 1h, 2a, 5, 7, 8b; under *Fag*, under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic + Fag*; IX–X.
- Lactarius zonarioides:** BP3; under *Pic*: forest road margin; IX; PRM 922986. – One more record outside the study area: in grass before lodge on dam of Boubínské jezírko water reservoir, alt. 925 m, under *Pic*, 11. X. 2014, PRM 933235.
- Laetiporus montanus:** BP2a, 8b; mossy decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk; VI–VII; PRM 922614, 932964.
- Lasiobolus intermedius:** BP2b; wild boar excrement; IV; PRM 922807.
- Lasiosphaeria porifera:** BP1d; *Pic*: fallen decorticated trunk; IX; PRM 923353.
- Laurilia sulcata:** BP1e, 2a, 8d; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: base of standing dead tree; VI, VIII–X; PRM 922828, 922831, 922851, 922868, 923121, 924937, 924979. – Imp. data: first record on fallen trunk of *Pic*, 9 VII. 1956 leg. Z. Pouzar (Pouzar 1958, as *Stereum sulcatum*).
- Laxitextum bicolor:** BP1d, 2c, 4b, 5; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: fallen log; IV, VI, VIII; PRM 923504. – Imp. data: on log of *Fag*, 8. VIII. 1956 leg. Z. Pouzar, PRM 797854 (Kotlaba 1989: 144).
- Lentinellus castoreus:** BP1b, 1c, 1d, 1f, 1g, 2a, 2c, 4a, 8b; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Fag*: decaying trunk, fallen decorticated conifer trunk, decaying conifer trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; VII–X.
- Lentinellus cochleatus:** BP1d, 1f, 4a; *Fag*: base of decaying stump, *Fag*: decaying stump; IX–X; PRM 922980, 923062.
- Leotia lubrica:** BP1a, 1c, 2f, 8a; on bare soil close to stream, under *Fag + Pic*, under *Fag + Pic*: in moss, under *Pic + Fag*, in detritus, in detritus and moss, in moss; VIII–X.
- Lepiota felina:** BP1d, 1e, 1f; *Fag*: decaying trunk, *Fag*: decayed wood, in detritus with wood remnants close to fallen *Fag* trunk; IX–X; PRM 923061, 923117.
- Lepista densifolia:** BP8d; in detritus under *Abi*; IX; PRM 924980.
- Lepista nuda:** BP1d; in detritus; IX.
- Leptoporus mollis:** BP9f; *Pic*: fallen decorticated trunk; IX; PRM 923008.

- Leptosporomyces fuscostratus***: BP1d; decaying conifer trunk; VII; PRM 922609.
- Lichenomphalia umbellifera***: BP2a, 5; *Abi*: mossy decaying trunk, decaying conifer trunk; VII, IX.
- Lophodermium abietis***: BP1a, 1d; *Pic*: fallen needles; IV–V.
- Lycoperdon foetidum***: BP3; on bare soil; IX.
- Lycoperdon perlatum***: BP1c, 1d, 1h, 2c, 2d, 5, 8a; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: stump base, *Fag*: decaying stump, *Fag*: fallen decaying log, under *Pic* + *Fag*; IX–X.
- Lycoperdon pyriforme***: BP1c, 1d, 1e, 2c, 2f, 8b, 8d; *Abi*: decayed stump, base of dying conifer, *Fag*: decaying trunk, *Fag*: decayed wood, *Fag*: fallen log, *Pic*: decaying trunk, *Pic*: base of living tree; VII, IX–X.
- Marasmiellus perforans***: BP1a, 2b, 2c, 7, 9a, 10a, 10b; *Pic*: fallen needles, under *Pic*: in needles, on fallen needles, on fallen needles + moss, in moss + on fallen needles; V–VII, IX–XI.
- Marasmius epiphyllus***: BP1d; on petiole of decaying *Fag* leaf; X.
- Marasmius wettsteinii***: BP4b; on fallen needles; VI.
- Microglossum griseoviride***: BP8a; under *Fag* + *Pic*: close to stream; X; PRM 923761, as *M. viride*.
- Mitrulea paludosa***: BP2b, 8a, 10a, 10b; *Pic*: cone lying in spring area, in moss in spring area, in stream, in *Sphagnum*; VI–VII.
- Mollisia cinerea***: BP8a; *Fag*: log in stream; X; PRM 923126.
- Mollisia fusca***: BP1e; *Fag*: fallen decorticated trunk; VIII; PRM 923751.
- Mollisia pyrenopezizoides*** nom. prov.: BP1a; *Sorbus aucuparia*: fallen twig; IX; PRM 923350. – Taxonomic concept: Baral (on-line).
- Mollisia uda***: BP1b, 8a; *Fag*: wood in stream, log of broadleaved tree lying in stream; VIII–IX; PRM 922872, 923348.
- Mucidula mucida***: BP1d, 1e, 1g, 1i, 2a, 2b, 5, 7, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: fallen log; V, VII–X.
- Mucronella calva***: BP1f, 5, 8a; *Abi*: decaying trunk, *Fag*: fallen decorticated trunk, *Pic*: decaying trunk; X; PRM 923144, 923158, 923196.
- Multiclavula mucida***: BP1a, 1c, 1d, 1e, 1f, 2a, 2b, 2c, 2g, 4a, 5, 8d; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: decayed wood, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, fallen decaying log; VI, VIII–XI; PRM 922822, 924936.
- Mycena acicula***: BP5, 8d; *Fag*: in moss on bark of decaying trunk, in detritus under *Fag*; VI, IX; PRM 922821.
- Mycena aciculata***: BP1c; decaying fern base; X; PRM 923037, as *M. longiseta*. – Imp. data: first record on decayed leaf of *Fag*, 1. VI. 1974 leg. M. Svrček (Svrček 2002, as *M. longiseta*).
- Mycena algeriensis***: BP1e, 8a; *Pic*: decayed stump, in detritus close to decayed *Fag* trunk; X; PRM 923130.
- Mycena amicta***: BP1a, 1d, 1e, 2b, 2c, 4a, 8a, 10b; *Pic*: root of fallen trunk, *Pic*: on decayed wood under decaying trunk, *Pic*: decayed wood, *Pic*: decayed stump, *Pic*: decaying stump, in detritus, in detritus under pile of *Pic* logs, in detritus with wood remnants, in detritus with wood remnants close to fallen *Fag* trunk, in detritus close to fallen trunk; V–VIII, X; PRM 922389, 922829.
- Mycena arcangeliana***: BP1d, 1e, 5; *Abi*: mossy decaying trunk, *Fag*: decaying trunk, *Fag*: decayed wood; VII, IX–X.
- Mycena capillaris***: BP1a, 1e, 1h; on fallen decaying *Fag* leaves; X; PRM 923177, 923255.
- Mycena cinerella***: BP1a, 1d, 1e, 4a, 5, 9b, 10b; among *Luzula sylvatica*, in detritus, in detritus with wood remnants, on fallen needles, in grass; X–XI.
- Mycena crocata***: BP1d, 1e, 2g, 5; *Fag*: fallen log, in detritus, in detritus under *Fag*, in detritus with wood remnants; V–VI, IX–X.
- Mycena diosma***: BP1d, 1f, 2a, 2c, 5, 8a; *Fag*: decayed wood, decayed stump, in detritus; IX–X; PRM 923123.
- Mycena epipterygia***: BP10b; in detritus; IX–X.

- Mycena epipterygia*** var. ***lignicola***: BP1c, 1d, 1h, 2a, 2g, 4b, 5, 8a; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Abi*: decaying wood, decaying conifer trunk, decayed conifer stump, *Pic*: bark of decaying trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: decayed trunk; V–VI, IX–X.
- Mycena erubescens***: BP1d, 4a; *Fag*: mossy decaying trunk; IX–X.
- Mycena fageturnum***: BP1d, 1h, 2a; under *Fag*, among fallen decaying leaves; IX–X; PRM 923090, 933888. – Imp. data: three records by J. Kubička published in Svrček (1999).
- Mycena filopes***: BP1d; decaying conifer trunk; VIII.
- Mycena flos-nivium***: BP1e; *Pic*: twig in soil; IV; PRM 924988.
- Mycena galericulata***: BP1d, 1e, 1f, 1h, 2a, 2c, 7, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: thin fallen trunk, *Fag*: decaying trunk, *Fag*: decayed wood, *Fag*: decaying stump, *Fag*: fallen log; VI, IX–X.
- Mycena galopus***: BP1a, 1b, 1d, 2a, 2c, 8b, 10b, 10d; *Fag*: fallen decaying log, under *Pic*: in *Sphagnum*, in detritus, in moss, in *Sphagnum*; V–X.
- Mycena haematopus***: BP1d, 1e, 1h, 2a, 2c, 2g, 3, 4b, 5, 7, 8a, 8b, 8d; *Abi*: decaying trunk, *Fag*: fallen decorticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: stump, *Fag*: decayed wood, *Fag*: fallen log, decaying conifer trunk; V–VI, VIII–X.
- Mycena hiemalis***: BP2a; *Fag*: in moss on bark of decaying trunk; IX; PRM 922923.
- Mycena laevigata***: BP1a, 1d, 1e, 1h, 2a, 2c, 2g, 5; *Abi*: decaying trunk, decaying conifer trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; V–IX, XI; PRM 922390.
- Mycena leptcephala***: BP1e, 2b; *Pic*: decaying wood in soil, in detritus; IV; PRM 922805, 924987.
- Mycena maculata***: BP1a, 1b, 1d, 1e, 1f, 1h, 2a, 2g, 4b, 8a, 10b, 10c, 10d; decaying conifer trunk, decaying conifer stump, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed wood, *Pic*: decayed stump, *Pic*: decaying wood in soil, *Pic*: decaying wood in soil in spring area, *Pic*: decaying stump; IV–VI, IX–XI.
- Mycena metata***: BP9d; on bare soil, in detritus; VI, IX; PRM 922841, 922991.
- Mycena olida***: BP2b; in moss on decaying *Fag* trunk; IX; PRM 922917.
- Mycena pearsoniana***: BP4b; detritus in cavity of fallen trunk; X. – Imp. data: several records cited by Kubička (1960, 1973).
- Mycena pelianthina***: BP1d, 5; in detritus; IX–X.
- Mycena picta***: BP1d; in detritus on decaying *Fag* trunk; IX; PRM 922964.
- Mycena pterigena***: BP1a, 1c; decaying fern stems; X.
- Mycena pura***: BP1c, 1d, 3, 4a, 5; in detritus; IX–X.
- Mycena purpureofusca***: BP1a, 1d, 1g, 2a, 2b, 2c, 2g, 4a, 4b, 5, 8a, 8b; *Abi*: decaying trunk, *Abi*: mossy decaying trunk, *Abi*: decayed trunk, mossy decaying conifer trunk, *Pic*: mossy base of living tree, *Pic*: mossy bark of fallen trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: base of living tree, *Pic*: decayed trunk, *Pic*: in moss on bark of decaying trunk, in detritus close to fallen *Abi* trunk; V–VI, VIII–X; PRM 922392.
- Mycena renati***: BP1d, 1e, 2a, 2e, 2g, 5, 6, 7, 8b, 8c; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: stump, *Fag*: fallen log; V–VI, VIII–IX.
- Mycena romagnesiana***: BP1c, 1d, 1e, 1h, 2a, 2c, 3, 4a, 5, 7, 8a, 8b, 8d; *Abi*: decayed stump, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: decayed wood, decayed trunk, decaying trunk; VIII–X; PRM 922866, 933887.
- Mycena rosella***: BP1a, 1b, 1c, 2b, 5; under *Pic*: in moss, on fallen needles, on fallen needles + moss, in moss close to stream; IX–X.
- Mycena rubromarginata***: BP1a, 1d, 2a, 2g, 5, 6, 7, 8b; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: thin decaying trunk, *Pic*: base of living tree, *Pic*: decayed wood, *Pic*: fallen twig; V–VI, VIII–IX, XI; PRM 922391.
- Mycena sanguinolenta***: BP1d, 2a, 2g, 4a, 8a, 8b, 10b; in detritus, in detritus on decaying *Fag* trunk, in detritus with wood remnants close to fallen *Fag* trunk; VI–IX.

- Mycena speirea***: BP1b, 1d, 1h, 2b, 5, 8a; *Fag*: fallen trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: decaying wood, *Fag*: in moss on bark of decaying trunk, *Fag*: fallen log; VI, VIII–IX.
- Mycena stipata***: BP1d, 1e, 2a, 2c, 2g, 5, 8b; *Abi*: decaying trunk, *Abi*: mossy decaying trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed stump; IV, VI, IX; PRM 922808, 922818, 922819, 922827, 922830, 922900, 922920.
- Mycena strobilicola***: BP1b, 1d, 2b; *Pic*: fallen cone lying in spring area, *Pic*: cone in soil; IV; PRM 922806, 924986.
- Mycena stylobates***: BP1d; among fallen decaying leaves; VI.
- Mycena viridimarginata***: BP1a, 1c, 1d, 2a, 2c, 2g, 4a, 5, 7, 8a, 9a, 10a, 10b; *Abi*: decaying stump, decaying conifer trunk, mossy decaying conifer trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed wood, *Pic*: decayed trunk, *Pic*: decaying stump, *Pic*: fallen log; V–X.
- Mycena viscosa***: BP1d, 1h, 4a, 10b; *Abi*: decayed trunk, *Pic*: mossy decaying trunk, in detritus under *Fag*; IX–X.
- Mycena vitilis***: BP1a, 1d, 1e, 2g, 4b, 7, 8a, 8d; in detritus; VI, VIII–X.
- Mycena vulgaris***: BP1a; in detritus; X.
- Mycena zephrus***: BP1b, 1c, 1d, 1h, 5, 8a; in detritus; IX–X.
- Mycetinis alliaceus***: BP1c, 1d, 2a, 2c, 2d, 2g, 3, 4a, 4b, 5, 7, 8a, 8b; *Fag*: decaying trunk, *Fag*: decayed wood, *Fag*: fallen log, *Fag*: fallen twig, in detritus, in detritus under *Fag*, in detritus with wood remnants; V–VI, VIII–X.
- Mycetinis querceus***: BP1b; in detritus under *Fag* + *Pic*; X; PRM 923181, as *Marasmius q.*
- Mycetinis scorodonius***: BP1d; conifer wood in soil; VI.
- Mycoacia fuscoatra***: BP1e; *Fag*: decaying trunk; VII; PRM 922610.
- Mycoacia nothofagi***: BP2a, 4b, 5, 7, 8a, 8d; *Fag*: fallen decorticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: fallen log; V, VIII–X; PRM 922690, 922859, 923145.
- Naucoria bohémica***: BP1i, under *Fag* + *Pic* close to forest road; IX; PRM 923513, as *Alnicola b.*
- Nectria coccinea***: BP1e; *Fag*: fallen log; VI; PRM 922850.
- Nectria purtonii***: BP1a; *Pic*: stump base; IX; PRM 923351.
- Nemania chestersii***: BP1b; *Fag*: decaying wood; IX; 923347.
- Neobulgaria pura***: BP6; *Fag*: fallen log; IX.
- Neodasyscypha cerina***: BP2b; *Fag*: fallen twig; VI; PRM 923750.
- Neolentinus adhaerens***: BP1d, 1e, 1g, 5, 8a; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk; VI, VIII, X–XI.
- Octaviania asterosperma***: BP5; on bare soil; VIII; PRM 922886.
- Oligoporus alni***: BP1d, 1f, 1g, 1h, 4a, 5, 8b; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: fallen log; VI, VIII, X; PRM 923066, 923162, 923195, 923246, as *Postia alni*.
- Oligoporus caesius***: BP1a, 1c, 1d, 1e, 2a, 7, 8a, 10a, 10b; *Abi*: fallen decorticated trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk; IX–X; PRM 923197, 923341.
- Oligoporus fragilis***: BP1e, 2a, 8a; decaying conifer trunk, *Pic*: fallen decorticated trunk; IX–XI.
- Oligoporus stipticus***: BP1g; *Pic*: fallen decorticated trunk; X.
- Oligoporus tephroleucus***: BP7; *Fag*: fallen corticated trunk; IX; PRM 922956.
- Oligoporus undosus***: BP1a; *Pic*: fallen decorticated trunk, *Pic*: mossy decaying trunk; IX, XI; PRM 922661, as *Postia undosa*.
- Ombrophila violacea***: BP2a; *Fag*: decaying trunk; X; PRM 923524.
- Orbilia delicatula***: BP1a, 2b, 8a; *Abi*: decaying trunk, *Fag*: decaying trunk, *Pic*: fallen twig; VIII–IX; PRM 922854, 923339, 933870.
- Ossicaulis lachnopus***: BP1c, 1d, 4b, 5; *Fag*: decayed trunk, *Fag*: decaying wood, *Pic*: fallen corticated trunk; IX–X; PRM 922458, 922975, 923067. – Imp. data: records discussed taxonomically by Holec & Kolařík (2013).
- Oxyporus corticola***: BP1d, 8b; *Abi*: stump, *Pic*: mossy decaying trunk; VII; PRM 923244, 932963.
- Oxyporus pearsonii***: BP1d; *Abi*: decaying trunk; X; PRM 923245.

- Oxyporus populinus***: BP1d, 1e, 2b, 7; *Fag*: scar on trunk of living tree, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: fallen log; IX–XI; PRM 922809, 922918, 923099, 923374, 923589.
- Panellus mitis***: BP1d, 2a, 5, 8a; *Abi*: twig of fallen corticated trunk, *Abi*: fallen log, *Fag*: decaying trunk, *Pic*: fallen log; VIII, X–XI; PRM 923370.
- Panellus stipticus***: BP1d, 1h, 2a; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: fallen decaying log, *Fag*: fallen log; VI, X–XI.
- Panellus violaceofulvus***: BP1b, 2a; *Abi*: twig of fallen corticated trunk; IV, XI; PRM 923372, 923984.
- Paxillus involutus*** agg.: BP1a, 1b, 1c, 1d, 1f, 2c, 10b; *Pic*: decaying trunk, under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*; IX–X.
- Peniophora pithya***: BP1b; *Pic*: fallen log; IX; PRM 922938.
- Peniophorella praetermissa***: BP1c; decaying conifer trunk; IX; PRM 923523, as *Hyphoderma praetermissum*.
- Peniophorella pubera***: BP1a; *Pic*: decaying trunk; IX; PRM 922925, as *Hyphoderma puberum*.
- Peziza arvernensis***: BP1e, 1f, 1h, 8d; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: mossy decaying trunk, *Fag*: decayed wood; VI, X; PRM 922833, 923045, 923120.
- Peziza micropus***: BP1d, 1h, 4b, 5; *Abi*: decayed trunk, *Fag*: decayed trunk, *Fag*: fallen decorticated trunk, *Pic*: decaying trunk; VIII–X; PRM 933871, 933872.
- Phaeocollybia jennyae***: BP2g; under *Fag* + *Pic*; IX; PRM 924934.
- Phaeodothis winteri***: BP1d; stroma of *Hypoxylon cohaerens* on fallen *Fag* trunk; IX; PRM 923355.
- Phaeohelotium subcarneum***: BP1b; *Pic*: log lying over stream; IX; PRM 923343.
- Phellinus chrysoloma***: BP1a, 1e, 1f, 1g, 1h, 2a, 8b, 10c; *Abi*: base of living tree, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: log of fallen trunk; IV, VI, IX–XI; PRM 922793, 922849, 923591.
- Phellinus hartigii***: BP1e, 1g, 1h, 2a, 2b, 2f, 4b; *Abi*: fallen decorticated trunk, *Abi*: fallen corticated trunk, *Abi*: decaying trunk, *Abi*: cutting surface of mossy decaying trunk, decaying conifer trunk; VI–VII, IX–X.
- Phellinus nigrolimitatus***: BP1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h, 2a, 2b, 2c, 2g, 8b, 9a, 10b, 10c; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed trunk, *Pic*: decaying wood; IV, VI–X; PRM 922687, 922993. – Imp. data: numerous records in PRM, published e.g. by Kotlaba (1984), Tomšovský (2002: 65).
- Phellinus pouzarii***: BP2d, 2f, 4a, 8a; *Abi*: cutting surface of fallen trunk, *Abi*: cutting surface of fallen decorticated trunk, *Abi*: cutting surface of mossy decaying trunk, cutting surface of fallen trunk; IV–VI, VIII, X; PRM 922691, 922802, 922810, 922897, 923087. – Imp. data: *Abi*, leg. J. Holec 23. VII. 1995, PRM 885015; 17. X. 1995, PRM 890751 (Holec 1997, Tomšovský 2002: 65).
- Phellinus viticola***: BP1a, 1c, 1d, 1f, 1g, 1h, 2a, 2c, 8a, 9a, 10b, 10d; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: log of fallen trunk; IV–VII, IX–X; PRM 922926, 923083, 923192.
- Phellodon connatus***: BP1a; under *Fag* + *Pic*: on bare soil; IX; PRM 924944.
- Phellodon tomentosus***: BP1a; under *Fag* + *Pic*: on bare soil; IX; PRM 924964.
- Phlebia centrifuga***: BP1a, 1b, 1d, 1e, 1f, 1g, 1h, 2a, 4a, 5, 8a, 8b, 8c; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Fag*: fallen decorticated trunk, *Fag*: mossy decaying trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, VI, VIII–XI; PRM 923084.
- Phlebia cremeoalutacea***: BP1f; decaying conifer trunk; X; PRM 923060.
- Phlebia lilascens***: BP1a; *Abi*: decaying trunk; VIII; PRM 923516.
- Phlebia radiata***: BP1c, 1d, 1g, 2a, 4b, 5, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk; X–XI.
- Phlebia tremellosa***: BP1d, 1h, 2a; *Abi*: mossy decaying trunk, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk; IV, X–XI.
- Phlebiella vaga***: BP8a; *Pic*: fallen log; VI; PRM 922814, as *P. sulphurea*.

- Phlebiopsis gigantea***: BP1d; *Abi*: bark of fallen corticated trunk; VI; PRM 922838.
- Pholiota adiposa***: BP1c, 1e, 1f, 1g, 1h, 2a, 4b, 5, 8a, 8b; *Fag*: scar on trunk of living tree, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: trunk of living tree; X.
- Pholiota astragalina***: BP1c, 1d; decaying conifer trunk, *Pic*: fallen decorticated trunk; IX–X.
- Pholiota flammans***: BP1c, 1d, 1e, 1h, 2a, 4a, 5, 8a, 10b; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, *Abi*: mossy decaying trunk, decayed conifer trunk, decaying conifer trunk, mossy decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: decaying wood in soil; VIII–X.
- Pholiota lenta***: BP1b, 1d, 1e, 1f, 1g, 1h, 2a, 2c, 2f, 4b, 5, 7, 8a, 8b, 10a; *Fag*: fallen corticated trunk, *Fag*: fallen decaying log, *Fag*: fallen log, *Pic*: decaying trunk, in detritus, in detritus with logs under *Fag*; VI, IX–XI.
- Pholiota lubrica***: BP1f, 2d; *Pic*: fallen decorticated trunk, *Pic*: mossy decaying trunk; IX–X; PRM 923032.
- Pholiota mixta***: BP3, 6, 9a, 10c; on forest road, on soil close to forest road, on fallen needles + moss; VI, IX.
- Pholiota scamba***: BP1a, 1b, 1c, 1d, 1f, 6, 10c; *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed trunk, *Pic*: mossy decayed stump, *Pic*: decaying stump, *Pic*: in moss on bark of decaying trunk, mossy decaying conifer stump; IX–XI.
- Pholiota squarrosa***: BP1b, 1d, 2a, 3, 8a; *Fag*: base of living tree, *Pic*: base of living tree; IX–X.
- Pholiota squarrosoides***: BP1b, 1c, 1d, 1e, 2b, 3, 4b, 5, 8b, 8d; *Abi*: base of living tree, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk; VIII–XI; PRM 922864, 922892.
- Pholiota subochracea***: BP1d; *Pic*: mossy decaying trunk, *Pic*: mossy decayed stump; IX; PRM 922950.
- Phyllotopsis nidulans***: BP4b, 5; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Pic*: stump; VIII–X; PRM 923251.
- Physisporinus expallescentis***: BP1f; *Abi*: decaying trunk; X; PRM 923059. – Taxonomic concept: recent unpublished studies by Vampola et al., a species belonging in fact to *Rigidoporus* (combination not published yet).
- Physisporinus sanguinolentus***: BP1d, 1f, 1h, 2a, 4b, 5, 8b, 8d, 10b; *Abi*: stump base, *Abi*: fallen corticated trunk, *Abi*: decaying trunk, *Abi*: stump, *Abi*: decayed stump, decaying conifer trunk, decaying conifer stump, *Pic*: stump base, *Pic*: decaying stump; VIII–X; PRM 922990, 923022, 923055.
- Physisporinus vitreus***: BP1h; *Fag*: decaying trunk; IX; PRM 923238.
- Piceomphale bulgarioides***: BP1d, 2b; *Pic*: fallen cone; IV.
- Piobasidium sarcoides***: BP1b; *Fag*: log in stream; IX.
- Pirottaea senecionis***: BP10b; *Rubus idaeus*: dead stem; VI; PRM 933873.
- Pleurocybella porrigens***: BP1b, 1c, 1h; *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decaying wood in soil, *Pic*: decaying stump; IX–X; PRM 923210.
- Pleurotus ostreatus***: BP1d, 1g, 2a, 2b, 5, 6; *Fag*: scar on trunk of living tree, *Fag*: fallen corticated trunk, *Fag*: stump; IX–XI.
- Pleurotus pulmonarius***: BP1d, 1e, 1f, 1g, 2a, 2b, 4a, 4b, 5, 8d; *Abi*: base of living tree, *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: stump, *Fag*: trunk of living tree; IV, VI–XI.
- Plicaturopsis crispa***: BP1c, 1e, 1f, 1h, 2a, 2c, 4b, 5, 6, 7, 8a; *Fag*: fallen corticated trunk, *Fag*: fallen log, *Fag*: fallen twig; V, VIII–XI. – Imp. data: several records published by Kotlaba (2009).
- Pluteus atromarginatus***: BP1a, 1d, 2a, 4a, 7; *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: decaying stump; VIII–IX; PRM 922896, 923510.
- Pluteus cervinus***: BP1d, 1e, 1g, 1h, 2a, 2b, 2c, 2g, 3, 4b, 5, 7, 8a, 8d; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: stump, *Fag*: decayed wood, *Fag*: decaying wood, *Fag*: fallen log, decaying conifer trunk, decaying wood; V–X; PRM 933889.

- Pluteus hispidulus***: BP1b, 5; *Fag*: decaying trunk, *Fag*: in moss on bark of decaying trunk; IX.
- Pluteus phlebophorus***: BP1h, 5, 8d; *Fag*: decaying trunk, *Fag*: decayed wood; VI, IX.
- Pluteus plautus***: BP1a, 1d, 2b, 5, 8d; *Abi*: fallen decorticated trunk, *Abi*: decaying trunk, decaying conifer trunk, *Pic*: decayed trunk, *Pic*: in moss on bark of decaying trunk; VII–IX; PRM 922863, 922904.
- Pluteus podospileus***: BP1b, 1d, 2a, 5, 8b; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: in moss on bark of decaying trunk, decayed conifer wood; V, VII–X; PRM 932966.
- Pluteus pouzarianus***: BP1c, 1d, 1h, 2a, 4b, 8a, 8d; decayed conifer trunk, decaying conifer trunk, conifer stump, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; VIII–X; PRM 923021.
- Pluteus salicinus***: BP2d; *Fag*: decaying trunk; VII.
- Polycephalomyces tomentosus***: BP1e; *Fag*: fallen corticated trunk; XI; PRM 923366.
- Polydesmia pruinosa***: BP4a, 7; on stroma of *Xylaria* sp., *Xylaria hypoxylon*: old stroma; VI.
- Polyporus brumalis***: BP1e, 1f, 1h, 2a, 5; *Fag*: fallen decorticated trunk, *Fag*: fallen log, *Fag*: fallen twig; IV–VI, X.
- Polyporus ciliatus***: BP1b, 2a, 5, 8d; wood in soil, *Fag*: decaying trunk, *Fag*: fallen decaying log; V–VI, IX; PRM 922939.
- Polyporus squamosus***: BP1d, 2a, 4a, 5; *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, *Fag*: stump, *Fag*: decaying stump; V–VI, VIII–IX.
- Polyporus varius***: BP1a, 1d, 1e, 1f, 1h, 2a, 2b, 2c, 2g, 3, 4a, 4b, 7, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: thin fallen trunk, *Fag*: decaying trunk, *Fag*: fallen log, *Fag*: fallen twig; V–XI; PRM 922835, 932965.
- Porphyrellus porphyrosporus***: BP1d, 2a, 2f, 5, 8b, 10c; under *Abi* + *Fag*, under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*; VIII–X.
- Psathyrella fibrillosa***: BP1d, 1e; among fallen decaying leaves; X; PRM 923089, 923116, 923688, 923689, 923690.
- Psathyrella papyracea***: BP1c, 1g, 2b; *Fag*: scar on trunk of living tree; IX–X; PRM 923038, 924933. – Imp. data: fallen trunk of *Fag*, 17. X. 1979 leg. J. Kubička, PRM 822049 (Vašutová 2008: 149).
- Psathyrella pertinax***: BP9f; on fallen needles close to base of *Pic* stump; IX; PRM 923009, as *P. chondroderma*.
- Psathyrella piluliformis***: BP1b, 1c, 1d, 1e, 2a, 2c, 7, 8a; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decayed trunk, *Fag*: decaying trunk, *Fag*: decayed wood, *Fag*: stump, *Fag*: fallen log, decaying conifer trunk; VI, IX–XI; PRM 922943, 923363. – Imp. data: 17. X. 1979 leg. J. Kubička, BRA (Vašutová 2006: 17).
- Psathyrella spadicea***: BP1d; *Fag*: base of living tree; X; PRM 923687.
- Psathyrella tenuicula***: BP1a; animal poops; V; PRM 923686. – Imp. data: Mt. Boubín, 5. X. 2004 leg. D. Dvořák, herb. M. Vašutová MV 04/389 (Vašutová 2006: 13, as *P. berolinensis*).
- Pseudoclitocybe cyathiformis***: BP1d, 1e, 1f, 5, 6; *Abi*: log of fallen trunk, *Fag*: fallen decorticated trunk, *Fag*: decaying trunk, mossy decaying conifer trunk, *Pic*: decaying trunk, in detritus, in detritus with wood remnants; X–XI; PRM 923160, 923253, 923360.
- Pseudocraterellus undulatus***: BP1d, 7, 8a; on bare soil close to stream, under *Fag* + *Pic* + *Abi*; VIII–IX.
- Pseudohydnum gelatinosum***: BP1a, 1b, 1c, 1d, 2a, 2c, 2f, 4b, 5, 8a, 9b; *Abi*: decaying trunk, *Abi*: mossy decaying trunk, decaying conifer trunk, mossy decaying conifer trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk, *Pic*: decayed trunk; VIII–XI.
- Pseudoomphalina kalchbrenneri***: BP1e; *Pic*: on decayed wood under decaying trunk; X; PRM 923098. – Imp. data: 2. X. 1952 leg. J. Herink, herb. Herink (Kotlaba & Pouzar 1995: 201, 204).
- Pseudoplectania melaena***: BP1d, 1g, 2a, 2b; *Abi*: decaying trunk, *Abi*: mossy decaying trunk, *Abi*: fallen decaying log; IV, X; PRM 922798, 922803, 923756, 923983. – Imp. data: first record on *Pic*

trunks, 8. IV. 1926 leg. R. Maximovič (Kavina 1926b); numerous records documented in PRM (Holec & Kříž 2013).

Pseudoplectania nigrella: BP1e; in moss + on fallen needles; IV; PRM 922801.

Pseudorhizina sphaerospora: BP1a, 1d, 1e, 1i, 8b; decaying conifer trunk, *Pic*: dead root of living tree, *Pic*: decaying trunk, *Pic*: stump base, *Pic*: decayed trunk; V–VII; PRM 922388. – Imp. data: on dead wood of *Pic*, *Abi*, *Fag*, numerous records documented mainly in PRM, older ones as *Gyromitra gabretae* (e.g. Kavina 1924, 1926a: 84; Herink 1955; Holec 1999; Holec & Beran 2007; Holec & Kučera 2008; Holec 2012).

Pycnoporellus fulgens: BP2a, 8d; *Abi*: fallen decorticated trunk, *Pic*: fallen decorticated trunk, *Pic*: mossy decaying trunk; VIII–IX.

Pycnoporus cinnabarinus: BP1e, 1h, 2a, 4b, 5, 8a; *Fag*: thin fallen trunk, *Fag*: decaying trunk, *Fag*: fallen log; V–VIII, X.

Pyrenophora pellita: BP10b; *Rubus idaeus*: dead stem; VI.

Ramaria apiculata: BP2a; decayed conifer trunk; X.

Ramaria bataillei: BP8a; clayey slope along forest road; IX; PRM 924976.

Ramaria rubella: BP1c; decaying conifer trunk; IX; PRM 933884.

Ramaria stricta: BP1d; *Pic*: decayed stump; IX; PRM 922968.

Resinicium bicolor: BP1a, 1c, 2a, 10c; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, VII, IX; PRM 922605, 922791, 923001, 923518, 923521.

Resinicium furfuraceum: BP1a, 2c, 2g; decaying conifer trunk, *Pic*: decaying trunk; VI–VIII; PRM 922438, 922439, 922606, 923514.

Resupinatus striatulus: BP4b; *Abi*: decaying trunk; IX; PRM 922981.

Rhodocollybia butyracea* f. *asema: BP1c, 1d, 1h, 2a, 2c, 4a, 5, 8a, 9a, 10b; under *Fag* + *Pic*, in detritus, among fallen decaying leaves; VII, IX–XI.

Rhodocollybia maculata: BP1a; under *Pic* + *Fag*, in moss; IX.

Rhytisma acerinum: BP1c; *Acer pseudoplatanus*: leaves of living tree; IX.

Rickenella fibula: BP1b, 1d, 1h, 5, 10b; *Fag*: mossy decaying trunk, in moss, in moss on stone, in moss on decaying trunk; IV, VIII–X.

Rickenella swartzii: BP1a, 1b, 2g; in moss, in moss on decayed wood, in sand and moss close to stream; VI–VIII, X.

Rigidoporus crocatus: BP1a, 1d, 2g, 5; *Abi*: fallen decorticated trunk, *Fag*: fallen decorticated trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; IV, VI, IX–XI; PRM 923102, 923106.

Roridomyces roridus: BP3; *Fag*: fallen twig; VIII.

Russula adusta: BP1e; under *Pic* + *Fag* + *Abi*; IX.

Russula aeruginea: BP9d; under *Pic*; IX.

Russula albonigra: BP1d, 1h, 2c; under *Fag*, under *Fag* + *Pic*; IX; PRM 922965.

Russula amethystina: BP1c, 1d; under *Fag* + *Pic* + *Abi*, under *Pic* + *Fag* + *Abi*; IX–X; PRM 922962, 923043.

Russula aquosa: BP1a; under *Pic*: in *Sphagnum*, in *Sphagnum*; VIII–IX.

Russula badia: BP1c, 1d; under *Fag* + *Pic*, under *Pic*: in moss and needles on sand along a stream; X; PRM 923069.

Russula brunneoviolacea: BP2a, 8b; under *Fag* + *Pic*, under *Pic* + *Fag*; VIII–IX; PRM 922921.

Russula cavipes: BP1b, 1g; under *Abi* + *Fag*: close to stream, under *Pic* + *Fag* + *Abi*; IX–X; PRM 923180, 924931.

Russula chloroides: BP2a, 5, 8a, 10b; under *Fag*, under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*; VIII–IX.

Russula curtipes: BP1d, 1e; under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*; VIII–IX; PRM 924969.

Russula cyanoxantha: BP1b, 1d, 1f, 1g, 1h, 2a, 2f, 3, 5, 6; under *Fag*, under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*, under *Pic* + *Fag*, close to forest road; VII–X.

- Russula cyanoxantha* f. *peltereaui***: BP1d, 1e, 7, 8a; under *Fag*, under *Fag + Pic*; VII–IX.
- Russula decolorans***: BP1a, 10b; under *Pic*, under *Pic + Fag*; IX.
- Russula densifolia***: BP1b, 1c, 1d, 2a, 8a; under *Fag*, under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic + Fag*; VIII–X; PRM 923079.
- Russula emetica***: BP1a, 1c, 1d, 2b, 9a, 10b, 10d; under *Pic*, under *Pic + Fag*, under *Pic*: in *Sphagnum*, in *Sphagnum*; VII, IX–X.
- Russula faginea***: BP1d; under *Fag + Pic*; IX.
- Russula favrei***: BP1a, 8a; under *Fag + Pic*, under *Pic + Fag + Abi*; IX–X; PRM 922927, 923138.
- Russula fellea***: BP1a, 1c, 1d, 1h, 2a, 4a, 5, 7, 8a; under *Fag*, under *Fag + Pic*, under *Pic + Fag*, under *Pic + Fag + Abi*; IX–X.
- Russula fragilis***: BP1a; in moss; IX.
- Russula griseascens***: BP1a; under *Pic*: in *Sphagnum*, in moss; IX.
- Russula helodes***: BP9a; on forest road: among *Polytrichum*; IX; PRM 923005.
- Russula integra***: BP2f, 5, 10c; under *Pic*, under *Pic + Fag*, under *Pic*: close to forest road; IX.
- Russula ionochlora***: BP1d, 1e, 2c, 7; *Abi*: decayed trunk, under *Fag*, under *Fag + Pic*; VII–IX; PRM 922954, 924974.
- Russula laurocerasi***: BP1d, 2a, 2c, 2f, 4b, 5, 7; under *Fag*, under *Fag + Pic*; VIII–IX.
- Russula lepida***: BP1d, 1e; under *Fag*, under *Fag + Pic + Abi*; IX–X; PRM 922945.
- Russula mustelina***: BP3, 6, 9a, 9b, 10a, 10b; under *Pic*, under *Pic*: forest road margin, close to forest road; IX–X; PRM 922997.
- Russula nauseosa***: BP1e, 5; under *Fag + Pic*, under *Pic + Fag*; VIII–IX.
- Russula nigricans***: BP1a, 1b, 1c, 1d, 1h, 10b, 10d; under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic*, under *Pic + Fag*; IX–X.
- Russula nobilis***: BP1a, 1b, 1c, 1d, 1e, 2a, 2c, 3, 4a, 5, 6, 7, 8a; on bare soil close to stream, under *Fag*, under *Fag + Pic*, under *Pic + Fag*, under *Pic + Fag + Abi*, under *Pic + Fag + Abi*: close to stream; VIII–X.
- Russula ochroleuca***: BP1a, 1c, 1d, 1e, 1h, 2a, 2b, 4a, 5, 7, 8a, 10b, 10c; under *Fag + Pic*, under *Pic*, under *Pic + Fag*; IX–XI.
- Russula olivacea***: BP5; under *Fag + Pic*; VIII.
- Russula paludosa***: BP1a, 9b; under *Pic + Fag*, in grass; VIII–IX.
- Russula puellaris***: BP1d, 10c; under *Fag + Pic*, under *Pic*; VIII–X.
- Russula raoultii***: BP1f, 2b; under *Fag + Pic*; IX–X; PRM 922915.
- Russula risigallina***: BP5; under *Fag + Pic*; IX; PRM 922906.
- Russula romellii***: BP5; under *Fag*; VIII; PRM 922884.
- Russula turci***: BP1d, 1e, 6, 7; under *Fag + Pic*, under *Pic + Fag + Abi*, close to forest road; IX–X.
- Russula velutipes***: BP1d, 2a, 4b, 5, 8a; under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic + Fag + Abi*; VIII–IX.
- Russula vesca***: BP1a, 1d, 2a, 2b, 3, 5, 7, 8a, 10b; under *Fag + Pic*, under *Fag + Pic + Abi*, under *Pic*, under *Pic + Fag*, under *Pic + Fag + Abi*; VIII–IX.
- Russula vinosa***: BP1a, 6; under *Pic*, close to forest road, in moss; VIII–IX.
- Russula violeipes* f. *citrina***: BP1d, 2d, 4a, 5, 6, 7; on soil close to forest road, under *Fag + Pic*, close to forest road; VIII–IX.
- Russula vitellina***: BP1e; under *Fag*; IX; PRM 923029.
- Russula xerampelina***: BP8d; *Abi*: decaying trunk; X.
- Sarcodon imbricatus***: BP1a, 8a; under *Fag + Pic*: on bare soil, under *Pic*; IX.
- Sarcomyxa serotina***: BP1b, 1d, 1e, 1f, 1g, 1h, 2a, 5, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: mossy decaying trunk, *Fag*: stump, *Fag*: fallen log; X–XI; PRM 923506, as *Panellus serotinus*.
- Schizopora paradoxa***: BP8a; *Fag*: log of decaying trunk; VI; PRM 922813.
- Schizopora radula***: BP1e, 2a, 7; *Fag*: fallen corticated trunk, *Fag*: thin fallen trunk, *Fag*: fallen log; VI, X–XI; PRM 923236, 923237, 923367.

- Scutellinia scutellata**: BP1e; *Fag*: fallen corticated trunk; VII.
Scutellinia umbrorum: BP2c; *Fag*: decayed wood; IX; PRM 922912.
Sebacina dimitica: BP1g; decaying fern stem; X; PRM 923576.
Serpula himantoides: BP1a, 1b, 2b, 4a; decaying conifer trunk, *Pic*: decaying trunk; IX–XI; PRM 923377.
Sidera lenis: BP1d; *Pic*: decayed trunk; VI; PRM 922825, as *Skeletocutis l.*
Simocybe centunculus: BP8d; *Fag*: decaying trunk; VIII; PRM 922870.
Simocybe sumptuosa: BP2a, 4b; *Fag*: fallen decorticated trunk, *Fag*: mossy decaying trunk; VIII; PRM 922876.
Skeletocutis amorpha: BP1d, 2f, 5, 10c; *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: stump; VI, VIII–X; PRM 922844.
Skeletocutis carneogrisea: BP1h, 2f; *Pic*: fallen trunk, *Pic*: fallen corticated trunk; V, X; PRM 923188, 923248.
Skeletocutis odora: BP1a, 1d, 1e, 1g, 8a; *Abi*: decaying trunk, fallen decorticated conifer trunk, decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; VIII–X; PRM 922960, 923030, 923095, 923100, 923101, 923143, 923249, 923250.
Skeletocutis stellae: BP1a, 1b, 1d, 1e, 1f, 1h, 2a, 2g, 5, 8b; decaying conifer trunk, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: mossy decaying trunk; V–XI; PRM 922889, 922932, 922933, 922935, 922944, 922974, 923052, 923058, 923159, 923193, 923194, 923231, 923232, 923239, 923361, 923579, 923584.
Sparassis brevipes: BP1d; *Abi*: base of living tree; IX; PRM 924968, as *S. nemecii*. – Imp. data: at base of living *Abi*, alt. 1000 m, 16. IX. 1982 leg. F. Míka, det. F. Kotlaba (Kotlaba 1983, as *S. nemecii*). – Taxonomic concept: Petersen et al. (2015).
Steccherinum ochraceum: BP1d, 2a, 5, 8a; *Fag*: fallen decorticated trunk, *Fag*: mossy decaying trunk, *Fag*: decaying wood, *Fag*: fallen log; IV–VIII.
Stereum hirsutum: BP1d, 1e, 4a, 5, 7, 8a, 8b; *Fag*: thin decaying trunk, *Fag*: fallen log; VI, VIII–IX.
Stereum rugosum: BP1b, 1d, 1h, 2b, 3, 4a, 5, 7, 8a, 8b; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: decaying trunk, *Fag*: cutting surface of fallen trunk; IV–VI, VIII–X.
Stereum sanguinolentum: BP2a, 2b, 8a, 9a, 10b; *Abi*: corticated log of fallen trunk, *Pic*: standing dead tree, *Pic*: fallen decorticated trunk, *Pic*: fallen corticated trunk, *Pic*: decaying trunk, *Pic*: fallen log; V–VI, IX, XI; PRM 922839. – Imp. data: first record 2. VI. 1903 leg. F. von Höhnelt, as *S. ochroleucum*, herb. FH, rev. F. Kotlaba & Z. Pouzar (Kotlaba 1988: 211).
Stereum subtomentosum: BP1e, 2b, 5, 7; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk, *Fag*: fallen log; V–VI, IX. – Imp. data: 2. VI. 1903 leg. F. von Höhnelt, as *S. insignitum*, herb. FH, rev. F. Kotlaba & Z. Pouzar (Kotlaba 1985, 1987b: 212).
Strobilurus esculentus: BP1a, 1d; *Pic*: fallen cone, *Pic*: cone in soil; IV, XI.
Stropharia aeruginosa: BP2a, 2c, 8b; *Abi*: decaying trunk, *Fag*: decayed wood, decaying conifer trunk; IX–X.
Stropharia cyanea: BP1d; in detritus; X.
Stropharia semiglobata: BP9e, 10d; red deer excrement, in detritus; IX–X.
Taeniolina scripta: BP1a; *Pic*: fallen decorticated trunk; IX; PRM 923352.
Tatraea dumbirensis: BP1b, 1d, 2c, 5; *Fag*: decaying trunk, *Fag*: fallen log; VIII–IX; PRM 922880, 922902. – Imp. data: fallen trunks of *Fag*, IX. 1948 leg. M. Svrček, PRM (Svrček 1992: 161); Kubička (1960, 1973; as *Rutstroemia macrospora*).
Thelephora penicillata: BP1b, 1d, 2b, 8a; on bare soil close to stream, *Pic*: cutting surface of fallen trunk, under *Fag* + *Pic*, under *Pic* + *Fag*, among fallen decaying leaves; VIII–X.
Thelephora terrestris: BP1a, 5; on bare soil close to stream, *Pic*: base of standing dead tree; IX–X.
Tomentella sublilacina: BP2c, 4b; decaying conifer trunk, *Pic*: decaying trunk; IX–X; PRM 933879, 933880.
Trametes gibbosa: BP1f, 4b; *Fag*: fallen decorticated trunk, *Fag*: fallen corticated trunk; VI, X.
Trametes hirsuta: BP1e, 4b, 6, 8a; *Fag*: fallen log; V–IX.

- Trametes ochracea:** BP8d; *Fag:* fallen decorticated trunk; VI.
- Trametes pubescens:** BP5; *Fag:* fallen decorticated trunk, *Fag:* decaying trunk; V, VIII; PRM 922891.
- Trametes versicolor:** BP1c, 1e, 1f, 1h, 2a, 5, 7, 8a; *Fag:* fallen trunk, *Fag:* fallen decorticated trunk, *Fag:* fallen corticated trunk, *Fag:* decaying trunk, *Fag:* fallen log; V–VII, IX–X.
- Trechispora candidissima:** BP1d; *Pic:* decaying trunk; X; PRM 923590.
- Trechispora hymenocystis:** BP8a, 8b, 9a, 10c; *Acer pseudoplatanus:* fallen log, *Fag:* decayed trunk, *Fag:* decayed wood, *Pic:* fallen decorticated trunk; VII–X; PRM 922853, 923000, 923167, 923583, 922611, as *T. candidissima*.
- Tremella encephala:** BP2b, 9b, 10a; *Pic:* fallen trunk, *Pic:* fallen decorticated trunk, *Pic:* log of fallen trunk, *Pic:* fallen log; V–VI, IX, XI. – Imp. data: first record in 1924 (Kavina 1927: 119).
- Tremella foliacea:** BP8b; *Fag:* fallen decorticated trunk; VI.
- Tremella polyporina:** BP1d; *Oligoporus abni:* fruitbodies; X.
- Trichaptum abietinum:** BP1a, 1b, 1c, 1d, 1f, 1g, 2a, 2b, 2c, 2g, 5, 7, 8a, 9a, 10a, 10b; *Abi:* fallen decorticated trunk, *Abi:* decaying trunk, *Abi:* mossy decaying trunk, *Abi:* fallen log, *Pic:* fallen decorticated trunk, *Pic:* fallen corticated trunk, *Pic:* decaying trunk, *Pic:* log of fallen trunk, *Pic:* fallen log; V–XI.
- Trichaptum fuscoviolaceum:** BP3; *Pic:* fallen decorticated trunk; IX.
- Trichocybe puberula:** BP1b, 1e, 1f, 2a; *Fag:* decayed trunk, *Fag:* decaying trunk; VI, VIII; PRM 922852, 923787, 923788.
- Tricholoma columbetta:** BP4a; under *Fag + Pic*; X.
- Tricholoma lascivum:** BP1d, 1g; under *Fag + Pic*, under *Pic + Fag + Abi*; IX–X; PRM 923092.
- Tricholoma pseudonictitans:** BP1a, 1b, 1c, 1d, 1h, 2a, 5; under *Fag + Pic:* on bare soil, under *Fag + Pic + Abi*, under *Pic*, under *Pic + Fag*, under *Pic + Fag + Abi*, under *Pic:* in moss and needles on sand along a stream; VII, IX–XI; PRM 923070.
- Tricholoma saponaceum:** BP5, 8d; under *Fag + Pic*, under *Pic + Fag*; X.
- Tricholoma sciodes:** BP1e, 8a; under *Fag*, under *Fag + Pic*; IX–X.
- Tricholoma ustale:** BP1d, 1e, 1g, 1h; under *Fag + Pic*, under *Pic + Fag*; X; PRM 923086.
- Tricholoma virgatum:** BP1a; under *Pic + Fag*; IX; PRM 924965.
- Tricholoma viridilutescens:** BP1a; under *Pic*; VIII.
- Tricholomopsis decora:** BP1a, 1c, 1e, 1g, 1h, 2a, 2c, 2f, 4b, 5, 8a, 8b, 10b, 10c, 10d; *Abi:* decaying trunk, decaying conifer trunk, *Pic:* fallen decorticated trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk, *Pic:* decaying stump; VII–X; PRM 923097.
- Tricholomopsis flammula:** BP1b, 1d, 1e, 2d; *Abi:* decaying trunk, decaying conifer trunk, mossy decaying conifer trunk, *Pic:* fallen decorticated trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk, decayed conifer wood; IX–X; PRM 922941, 922970, 922984, 923031, 933886. – Imp. data: first record on decaying mossy trunk of *Abi*, 19. IX. 2008, leg. J. Holec, PRM 899108 (Holec 2009, Holec & Kolařík 2011).
- Tricholomopsis rutilans:** BP1d, 6, 10c; decaying conifer trunk, decaying conifer stump, in detritus with wood remnants; IX; PRM 923020.
- Tubaria praestans:** BP6; *Fag:* fallen twig; X; PRM 923174.
- Tubulicrinis borealis:** BP1e; *Pic:* fallen decorticated trunk; X; PRM 923182.
- Tubulicrinis subulatus:** BP9d; *Pic:* decaying trunk; VI; PRM 922840.
- Tylopilus felleus:** BP1b, 1d; under *Fag + Pic*, under *Pic + Fag*; VIII–IX.
- Tylospora fibrillosa:** BP1a, 9b; *Pic:* fallen decorticated trunk, *Pic:* decaying trunk; IX–X; PRM 923171, 923517.
- Tyromyces chioneus:** BP7; *Fag:* fallen decorticated trunk; IX; PRM 922952.
- Ustulina deusta:** BP1d, 1e, 2a, 5, 7; *Fag:* fallen trunk, *Fag:* fallen decorticated trunk, *Fag:* fallen corticated trunk, *Fag:* decaying trunk, *Fag:* decaying stump; IV–VII.
- Veluticeps abietina:** BP1b, 1d, 5, 9d, 10b; *Pic:* fallen decorticated trunk, *Pic:* fallen corticated trunk, *Pic:* cutting surface of fallen trunk; IV, VI, VIII; PRM 923569, as *Columnocystis a.* – Imp. data: first

record 2. VI. 1903 leg. F. von Höhnelt, as *Stereum strictum*, herb. FH, rev. F. Kotlaba & Z. Pouzar (Kotlaba 1991: 21).

Vesiculomyces citrinus: BP1a, 1e, 1g, 4a, 8d; *Abi:* decaying trunk, *Abi:* fallen log, decaying conifer trunk, *Pic:* decaying trunk; IX–X; PRM 923122, 923149, 923519, as *Gloeocystidiellum citrinum*, 923577.

Vibrissea decolorans: BP1b, 1d, 1h, 7; *Fag:* wood in stream, *Fag:* log in stream, *Fag:* twig in stream, *Sorbus aucuparia:* fallen log close to stream; IV, IX; PRM 922796, 924985.

Vibrissea flavovirens: BP2g; *Fag:* twig in stream; VII; PRM 933874.

Vibrissea truncorum: BP1f; *Fag:* twig in stream; VI; PRM 922832. – Imp. data: Kotlaba et al. (1995: 34).

Vuilleminia comedens: BP1d, 1e, 2a; *Fag:* fallen log; IV, VII, XI; PRM 923359.

Xerocomus chrysenteron: BP1c, 1d, 1h, 2a, 2c, 3, 5, 7, 8a, 10b; under *Fag*, under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*; VIII–IX.

Xerocomus ferrugineus: BP1a, 1b, 1e, 1f, 4b, 10b; under *Fag*, under *Fag* + *Pic*, under *Pic*, under *Pic* + *Fag*; VII, IX–X.

Xerocomus porosporus: BP5, 8a; on bare soil close to stream, under *Fag* + *Pic*; VIII–IX; PRM 922837.

Xerocomus pruinaus: BP1a, 1b, 1c, 1d, 1e, 2a, 2c, 4a, 5, 8a, 10c; under *Fag* + *Pic*, under *Fag* + *Pic* + *Abi*, under *Pic*, under *Pic* + *Fag*, under *Pic* + *Fag* + *Abi*; IX–X.

Xeromphalina campanella: BP1a, 1b, 1d, 1e, 2a, 2c, 8d, 9a; decaying conifer trunk, *Pic:* fallen trunk, *Pic:* decaying trunk, *Pic:* mossy decaying trunk, *Pic:* decayed trunk, *Pic:* decaying stump; IV, VI–IX, XI.

Xylaria carpophila: BP1d, 1h, 8b; fallen cupulae of *Fag*; VI.

Xylaria hypoxylon: BP1d, 1g, 2a, 2e, 3, 4b, 7, 8a; *Fag:* fallen trunk, *Fag:* fallen decorticated trunk, *Fag:* thin fallen trunk, *Fag:* decaying trunk, *Fag:* stump, *Fag:* fallen log; IV–VII, IX–X; PRM 923356.

Xylaria longipes: BP4a, 9a; *Acer pseudoplatanus:* fallen log, *Fag:* fallen decorticated trunk; VI, VII; PRM 933890.

Appendix 2: Species known from past research, not recorded in 2013–2014

The list is based on published data and unpublished records by J. Holec and Z. Pouzar (mostly from the period 1995–2012) documented by vouchers in PRM. Species given as doubtfully identified („determ. incerta“) by Kubička (1973) are not included in the list similarly to insufficiently documented records (e.g. mere citations of names without any additional data). The data are given in a shortened way, depending on the information available in the cited publications.

If no BP segment is given, an unspecified site within Boubínský prales National Nature Reserve (BP) is meant (probably the core area, most often visited by mycologists). Whenever possible, the exact segments are added. Records published as „Boubín“ in literature are cited as Mt. Boubín in this paper. This term mostly means BP, but not in all cases, as it is slightly unclear if such records originate from the present-day BP reserve or from the entire massif of Mt. Boubín.

We know that some more species from BP are documented by herbarium specimens, especially in PRM. A more complete search in PRM (a collection containing more than 600,000 specimens, few of them databased) was not possible for reasons of time.

Acrogenospora sphaerocephala: dead trunk of *Fag*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).

Actinocladium rhodosporum: dead trunk of *Fag*, alt. 1000 m, leg. & det. V. Holubová, 16. IX. 1982 (Kotlaba 1983).

Adelphella babingtonii: wood in a stream, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Psilopezia b.*).

Albatrellus confluens: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).

Alloclavaria purpurea: 2 records cited by Kubička (1973, as *Clavaria p.*).

- Amanita pantherina* var. *abietum*: ca. 2.5 km S od Mt. Boubín summit, man-made *Pic* forest along Lukenská forest road, alt. 1020 m, 2. VII. 2014 leg. J. Holec (PRM 932967). Included here as found outside the segments BP1–10 selected for the recent study (Appendix 1).
- Amanita porphyria*: several records published by Kubička & Kluzák (1982).
- Ascobolus furfuraceus*: on red deer excrement, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Asterophora lycoperdoides*: BP2c (Holec 1992: 175, as *Nyctalis asterophora*).
- Athelopsis glaucina*: BP1, *Fag*: on fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906362).
- Bactrodesmium submoniliforme*: dead trunk of *Fag*, alt. 1000 m, leg. & det. V. Holubová, 16. IX. 1982 (Kotlaba 1983).
- Basidiodendron caesiocinereum*: BP1, *Abi*: on fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905984).
- Basidiodendron eyrei*: BP1, *Fag*: on fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906215).
- Bispora antennata*: decorticated trunk of *Fag*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Botryobasidium candicans*: BP1, *Pic*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906366).
- Botryobasidium ellipsosporum*: on wood of *Abi*, 26. X. 1968 leg. V. Holubová-Jechová (Holubová-Jechová 1969).
- Botryobasidium obtusisporum*: BP1, *Pic*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905324).
- Brunnipila fuscescens*: on leaves and cupulae of *Fag* (Kubička 1960, 1973; as *Lachnum f.*); cupulae of *Fag*, 1. VI. 1974 leg. M. Svrček, PRM 902331 (Suková 2005a: 150).
- Bulgaria inquinans*: on fallen trunks of *Fag* (Kubička 1960, 1973); BP1d, alt. 990 m, 2. X. 2001 not. J. Holec; BP1d, alt. 940 m, *Fag*: fallen corticated trunk, 19. VII. 2006 not. J. Holec.
- Byssocorticium atrovirens*: BP (cited as „Boubin Urskov“), 30. VIII. 1960 leg. K. Hauerslev, herb. C (Jülich 1972); several records mentioned by Kubička (1960, 1973; as *Corticium a*).
- Byssocorticium efibulatum*: BP1, *Pic*: on decaying wood, 8. VIII. 1956 leg. & det. Z. Pouzar (PRM 902482).
- Byssonectria fusispora*: on decaying leaves of *Fag*, 8. IV. 1926 leg. R. Maximovič (Kavina 1929, as *Pyronema thuenenii* var. *gabretae*; Kubička 1973, as *Inermisia f.*).
- Calycina subtilis*: needles of *Pic*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Pezizella s.*).
- Calyptrella capula*: dead petioles of *Petasites albus* leaves, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Capitotricha fagiseda*: on twigs and cupulae of *Fag*, 11. IV. 1961 leg. J. Kubička, PRM 615927; 19. V. 1965 leg. M. Svrček, PRM 604113 (Suková 2005a: 155).
- Chaetosphaeria montana*: *Dictyochaeta* anamorph, rotten wood of a *Fag* trunk, 16. IX. 1982 leg. V. Holubová-Jechová, PRM 828868 (Réblová 1998: 155).
- Chaetosphaeria pulviscula*: *Menispora caesia* anamorph, on fallen decaying trunk of *Fag*, 26. IX. 1968 leg. V. Holubová-Jechová (Holubová-Jechová 1973: 331).
- Cheilymenia dennisii*: on deer excrements, 19. V. 1965 leg. G. Gulden (Moravec 2005: 191).
- Claussenomyces prasinulus*: Mt. Boubín, *Fag*, VIII. 1928 leg. K. Cejp (Svrček 1978: 75).
- Clavariadelphus ligula*: 2 records cited by Kubička (1973).
- Clavulina amethystina*: Mt. Boubín, 26. VIII. 1936 leg. J. Herink, PRM 28351 (Pilát 1958: 209).
- Coccomyces coronatus*: *Fag*, 7. X. 1933 leg. A. Hilitzer (Svrček 1978: 75).
- Cortinarius collinitus*: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Creolophus cirratus*: BP1d, alt. 1000 m, *Fag*: fallen corticated trunk, 12. VII. 2001 leg. P. Balda, det. J. Holec, PRM: JH 124/2001 (Holec 2003a).
- Cyphellopsis anomala*: Kubička (1960, 1973; as *Solenia anomala*).
- Cystoderma granulosa*: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Cystoderma granulosum*).
- Dacrymyces tortus*: BP1d, alt. 990 m, strongly decayed conifer trunk, 29. X. 2002 leg. & det. J. Holec (PRM: JH 549/2002).
- Dasyyscyphus silvicola* ≡ *Lachnum silvicola*: rachis of dead leaf of *Dryopteris austriaca* subsp. *dilatata*, 22. V. 1976 leg. J. Kubička & M. Svrček, PRM 802658: holotype (Svrček 1977b, 2006); revision needed as it is a small species growing in fact on a pyrenomycete occurring on the rachis.

- Deconica inquilina***: dead leaves of *Luzula sylvatica*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Psilocybe i.*). The records of *Psilocybe crobula* (Holec 1992: 174; BP2c, 8b) most probably represent *D. inquilina*.
- Deightoniellaalni***: on living leaves of *Alnus incana*, Mt. Boubín, 16. IX. 1982 leg. M. Ondřej, PRM 830038: holotype (Ondřej 1984: 44).
- Elaphocordyceps ophioglossoides***: on *Elaphomyces* (Kubička 1960, 1973).
- Endophragiella biseptata***: alt. 1000 m, *Pic*: fallen decaying trunk (Holubová-Jechová 1986: 178).
- Entoloma byssisedum***: wood of *Pic*, X. 1950 leg. J. Kubička (Svrček 1950, as *Claudopus byssisedus*).
- Entoloma conferendum***: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Nolanea staurospora*).
- Exidia saccharina***: wood of *Pic* (Pilát 1957: 192).
- Fimaria leporum***: on red deer excrement (Kubička 1960, 1973).
- Fuscolachnum inopinatum***: on *Lycopodium annotinum*, 1. VI. 1974 leg. M. Svrček, det. M. Šandová (PRM 929616, 929671, 929712).
- Galerina detriticola***: in moss *Paraleucobryum longifolium* on fallen trunk of *Abi*, 1. VI. 1974 leg. M. Svrček, paratype probably kept in PRM (Svrček 1983).
- Gomphus clavatus***: under *Pic* and *Fag*, alt. 950 m, 18. X. 1948 leg. M. Svrček, J. Herink & J. Kubička, PRM 608779; 17. VII. 1953 leg. K. Kříž, herb. Herink 634/53 (Kluzák 1986).
- Gorgoniceps hypothallosa***: on bottom side and resinous exudations of the bark of fallen *Pic*, 7. VI. 1979 leg. M. Svrček, holotype in PRM (Svrček 1984: 197).
- Gymnopus fuscopurpureus***: BP1d, alt. 990 m, among fallen *Fag* leaves, 29. X. 2002 leg. & det. J. Holec (PRM 900979, as *Collybia fuscopurpurea*).
- Gymnopus herinkii***: in raw humus and on leaves, Mt. Boubín, 4. X. 1952 leg. J. Kubička & J. Herink, PRM 707189: holotype (Antonín & Noordeloos 1996); 4. X. 1956 leg. J. Kubička & J. Herink (Kubička 1973, as *Collybia porrea*).
- Heliscus lugdunensis***: moist wood close a stream, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Humaria hemisphaerica***: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Mycolachnea h.*).
- Hyaloscypha aureliella***: wood of *Abi* (Kubička 1960, 1973; as *H. stevensonii*); stump of *Pic*, alt. 1000 m, 16. IX. 1982 leg. & det. M. Svrček (Kotlaba 1983, as *H. stevensonii*).
- Hyaloscypha leuconica***: fallen cone of *Pic*, alt. 1000 m, 16. IX. 1982 leg. & det. M. Svrček (Kotlaba 1983).
- Hydnellum aurantiacum*** = *H. floriforme*: Mt. Boubín, *Pic* forest, VIII. 1928 (Cejp 1928: 116, as *Calodon aurantiacus*).
- Hydnellum peckii***: BP1a, alt. 940 m, under *Pic* and *Abi*, 2. X. 2001 leg. J. Holec, det. Z. Pouzar (PRM: JH 568/2001).
- Hydropus atramentosus***: fallen trunks of *Abi*, numerous records documented in PRM, BRNM (Holec 2008a: 128).
- Hydropus scabripes***: BP1e, alt. 1020 m, *Fag*: mossy decaying trunk, 19. IX. 2008 leg. & det. J. Holec (PRM: JH 144/2008).
- Hygrophorus capreolarius***: BP, Mt. Červený vrch near Mt. Boubín, based on data by F. Kotlaba collected during preparation of the Czech Red Book (Kotlaba et al. 1995: 58; Holec 1998: 37, 38); BP1a, alt. 940 m, *Pic* forest with admixed *Abi* and *Fag*, 2. X. 2001 leg. Z. Pouzar, det. J. Holec (PRM: JH 569/2001).
- Hymenoscyphus imberbis***: fallen cone of *Pic*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Hymenoscyphus syringicolor***: fallen leaf of *Fag*, 7. X. 1973 leg. J. Kubička, holotype in PRM (Svrček 1975: 132; as „*H. syringaeicolor*“).
- Hyphoderma argillaceum***: BP1, *Abi*: on fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906367).
- Hyphoderma capitatum***: BP1, *Abi*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906386, 906387); *Abi*: on bark, 2. X. 2001 leg. & det. Z. Pouzar (PRM 843846).
- Hyphoderma setigerum***: BP1, *Abi*: fallen log, 30. VI. 1971 leg. V. Holubová, det. Z. Pouzar (PRM 845315).

- Hyphodontia alutaria***: BP1, *Abi*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906203, 906204); *Pic*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905332, 906399).
- Hyphodontia breviseta***: BP1, *Abi*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906207).
- Hyphodontia curvispora***: BP1, conifer: fallen decaying trunk, 9. VIII. 1956 leg. & det. Z. Pouzar (PRM 847477); *Pic*: fallen trunk, 4. IX. 1970 leg. & det. Z. Pouzar (PRM 845358); there is also one record by J. Běťák from VIII. 2013 (herb. Běťák).
- Hyphodontia pallidula***: BP1, *Abi*: fallen trunk, 19. VIII. 1956 leg. & det. Z. Pouzar (PRM 902399); *Abi*: on fallen trunks, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906354, 906378).
- Hyphodontia subalutacea***: BP1, *Abi*: fallen trunk, 8. VIII. 1956 leg. & det. Z. Pouzar (PRM 906154).
- Hyphonicium allostamineum***: BP1, *Abi*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906334).
- Hypocrea minutispora***: BP5, 6; 4. X. 2004 (Jaklitsch 2011).
- Hypocrea pachypallida***: BP4a, 23. IX. 2003, holotype (Jaklitsch 2011).
- Hypocrea parapilulifera***: BP4a, 4. X. 2004 (Jaklitsch 2011).
- Hypocrea pulvinata***: on *Fomes* (Moravec 1960, Kubička 1973; as *H. fungicola*).
- Inocybe acuta***: several records mentioned by Kubička (1960, 1973).
- Lachnellula calycina***: on twigs of *Pic* (Kubička 1960, 1973; as *Trichoscyphella c.*).
- Lachnum brevipes***: decaying wood of *Fag*, 7. VI. 1979 leg. J. Kubička & M. Svrček, rev. M. Šandová (PRM 929437); it is likely that the specimen was published under name *L. pubescens* (Svrček 1989: 223, 225).
- Lachnum impudicum***: *Fag*: decaying wood, 18. IX. 1948 leg. M. Svrček, det. M. Šandová (PRM); *Fag*: decaying wood, 17. VIII. 1959 leg. J. Kubička, det. M. Šandová (PRM 777541).
- Lachnum virgineum***: cupules of *Fag*, 19. V. 1965, leg. M. Svrček (Suková 2005b: 215); cupules of *Fag*, 11. IV. 1961 leg. J. Kubička, det. M. Šandová (PRM 615949); cupules of *Fag*, 1. VI. 1974 leg. & det. M. Svrček (PRM 929503); twig of *Pic*, 1. VI. 1974 leg. M. Svrček & J. Kubička, det. M. Šandová (PRM 929737); decorticated twig of *Fag*, 7. VI. 1979 leg. M. Svrček & J. Kubička, det. M. Svrček (PRM 929444).
- Laetinaevia fagicola***: fallen leaves of *Fag*, 22. V. 1976 leg. J. Kubička & M. Svrček (Svrček 1978: 83).
- Lamprospora crec'hqueraultii***: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Lasiobolus papillatus***: on red deer excrements (Kubička 1960, 1973; as *L. equinus* and *L. ciliatus*).
- Leccinum versipelle***: under *Betula* near Boubínské jezírko water reservoir, 11. X. 1949 leg. J. Herink & J. Kubička (Kubička 1973).
- Leptodontium elatius* var. *elatius***: dead trunk of *Fag*, alt. 1000 m, leg. & det. V. Holubová, 16. IX. 1982 (Kotlaba 1983).
- Limacella guttata***: Mt. Boubín: Lukenská silnice forest road (it can be outside the BP), based on data by J. Herink collected during preparation of the Czech Red Book (Kotlaba et al. 1995; Holec 1998: 37, 38).
- Macrotyphula juncea***: BP1d, alt. 990 m, mixed montane forest (*Fag*, *Abi*, *Pic*): in fallen leaves, 2. X. 2001 leg. P. Balda, det. J. Holec (PRM: JH 578/2001).
- Mollisiella fagiseda***: fallen cupulae of *Fag*, 17. X. 1958 leg. J. Kubička, paratype in PRM (Svrček 1977a: 13); it could be a species of *Calycellina* (Baral in Baral & Kriegelsteiner 1985).
- Mycena niveipes***: BP8b (Holec 1992: 178).
- Mycena silvae-nigrae***: BP2c (Holec 1992: 178, 1993: 10).
- Mycena xantholeuca***: *Fag* stumps, several records cited by Kubička (1960, 1973).
- Neolecta vitellina***: Mt. Boubín, alt. 1250 m, on soil near forest road in coniferous forest (*Abi*, *Pic*), 10. VII. 1946 leg. J. Herink, det. M. Svrček as *Spragueola vitellina*, PRM 521895 (Svrček 1978: 91).
- Orbilia inflatula***: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *O. auricolor*).
- Peniophora piceae***: wood of *Abi* (Kubička 1960, 1973).
- Perenniporia subacida***: BP1b, alt. 970 m, *Pic* forest with admixed *Fag* and *Abi*, with spring areas and waterlogged sites, *Pic*: decaying mossy trunk, 29. X. 2002 leg. J. Holec, det. Z. Pouzar (PRM: JH 536/2002); last record in 2004 (Kotlaba, Pouzar & Vampola 2006: 178).
- Phaeohelotium epiphyllum***: on moist leaves of *Fag* (Kubička 1960, 1973; as *Helotium epiphyllum*).
- Phanerochaete sanguinea***: several records listed by Kubička (1973).

- Phanerochaete velutina***: BP1, *Pic*: on dead leaves, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906405).
- Phellinus ferrugineofuscus***: first record on dead wood of *Pic*, 12. V. 1964 leg. F. Kotlaba & Z. Pouzar (Kotlaba 1965, 1984; Tomšovský 2002: 55); several collections in PRM; last record in BP1g (Vlasák, pers. comm. 2015), alt. ca. 1070 m, on *Pic*, XI. 1996 leg. & det. J. Vlasák, herb. Vlasák 9611/2 (Vlasák 2015).
- Phlebia livida***: BP1, *Fag*: fallen trunk, 8. VIII. 1956 leg. & det. Z. Pouzar (PRM 905345); *Fag*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905966).
- Phlebiella tulasnelloidea***: BP1, *Pic*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 906406).
- Phloeogena faginea***: BP1, *Fag*: dead standing trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 904871).
- Piloderma byssinum***: BP1, *Pic*: on fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905084).
- Piloderma sphaerosporum***: BP1, *Pic*: fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905310).
- Plicaria badia* var. *montana***: on sandy loamy soil, VIII. 1928 leg. K. Cejp, new variety described by Velenovský (1934: 346, date and collector according to Svrček 1976: 135), lectotype designated by Svrček (1976), according to him the taxon does not differ from the common *Peziza badia*.
- Pluteus chrysophaeus***: several records mentioned by Kubička (1960, 1973).
- Pluteus roseipes***: BP2c (Holec 1992: 178).
- Pseudospiropes obclavatus***: dead trunk of *Fag*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Pyrenochaeta luzulae***: Mt. Boubín, on *Luzula sylvatica* (as *L. maxima*), leg. K. Kavina (Baudyš 1925: 18).
- Ramaria bourdotiana***: *Fag*: decayed stump, 17. VIII. 1959 leg. J. Kubička, det. A. Pilát (Pilát 1960, Kubička 1973).
- Ramaria eumorpha***: VIII. 1936, leg. J. Herink, PRM 28404 (Pilát 1958: 157, as *R. invalidi*).
- Ramaria mairei***: Pilát (1958: 173), 2 records mentioned by Kubička (1973).
- Scutellinia cervorum***: several records mentioned by Kubička (1973), Kotlaba (1983).
- Scutellinia subhirtella***: old needles of *Pic*, alt. 1000 m, 16. IX. 1982 leg. & det. J. Moravec (Kotlaba 1983).
- Septonema fasciculare***: alt. 1000 m, on dead lying trunk of *Pic*, 3 specimens (Holubová-Jechová 1978: 422).
- Simocybe haustellaris***: BP2g, alt. 1150 m, *Ulmus glabra*: fallen decorticated trunk, 10. VII. 1998 leg. & det. J. Holec (PRM: JH 237/1998, as *Crepidotus h.*)
- Sistotrema brinkmannii***: BP1, *Pic*: on fallen trunk, 2. X. 2001 leg. & det. Z. Pouzar (PRM 905088).
- Spadicoides atra***: alt. 1000 m, *Pic*: decaying trunk, 30. VIII. 1960 leg. M.B. Ellis (Holubová-Jechová 1982: 297).
- Spadicoides bina***: alt. 1000 m, *Fag*: fallen decaying trunk (Holubová-Jechová 1982: 299).
- Spadicoides grovei***: fallen decaying trunk of *Fag*, alt. 1000 m, 30. VI. 1971 (Holubová-Jechová 1982: 309); dead wood of *Fag*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Squamanita odorata***: under *Abi*, noted by J. Herink (vidi vivo), cited by Kubička (1960, 1973) without any details.
- Stropharia hornemannii***: strongly decayed trunk of *Fag*, 17. X. 1954 leg. J. Herink & J. Kubička (Kubička 1973).
- Tapesia fusca***: on twigs and wood of *Fag* (Kubička 1960, 1973).
- Tectella patellaris***: 3 collections on wood (logs) of *Fag*, IX. 1948, 1949, leg. J. Herink or J. Herink & J. Kubička, vouchers in PRM (Jančovičová et al. 2012). According to Pavel Brůžek (pers. comm. 2015) the species was observed by him in BP1i in 2014.
- Tomentella fuscella***: dead trunk of *Pic*, alt. 1000 m, 16. IX. 1982 leg. & det. M. Svrček (Kotlaba 1983).
- Tremella mesenterica***: several records mentioned by Kubička (1960, 1973; as *Tremella lutescens*).
- Trichophaea gregaria***: alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Trimmatostroma betulinum***: bark of *Pic*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983).
- Trosporella olivaceum***: dead trunk of *Fag*, alt. 1000 m, 16. IX. 1982 (Kotlaba 1983, as *Helicoma o.*).
- Tubaria confragosa***: several references and records mentioned by Kubička (1973, as *Phaeo-marasmius confragosus*).

Tulasnella violea: decayed conifer wood (Höhnel et Litschauer 1908: 59, as *T. tulasnei*).

Zalerion arboricola: bark and resin of *Pic*, alt. 1000 m, 16. IX. 1982 leg. & det. V. Holubová (Kotlaba 1983).

Appendix 3: Doubtful records

Records of some species mentioned in literature are doubtful for several reasons (poorly documented, misidentified, of unclear identity due to changing taxonomic concepts, etc.). Such records are listed below with short comments. The data often originate from the first author's diploma thesis (Holec 1992) which, unfortunately, contains some beginner's errors.

Amanita subalpina: Holec (1992: 171), poorly documented, possibly misidentified.

Cheilymenia stercorea: Kubička (1960, 1973); taxonomically difficult, revision needed as the collection is not included in the monograph by Moravec (2005).

Chlorosplenium aeruginosum: Kubička (1960, 1973); it could be also *Chlorociboria aeruginascens*.

Clavulina cinerea: Holec (1992: 174), possibly *C. coralloides*.

Clitocybe langei: Holec (1992: 175), poorly documented, possibly misidentified.

Clitocybe menthiodora: Holec (1992: 175), poorly documented, possibly misidentified.

Collybia obscura: Holec (1992: 175), poorly documented, possibly misidentified.

Cortinarius azureus: Kubička (1973), it is not clear which concept of the species was used.

Delicatula cuspidata: Kubička (1973), hardly interpretable species, see Antonín & Noordeloos (2004: 229).

Entoloma placidum: Kubička (1960, 1973; as *Leptonia placida*), it could be also *E. tjallingiorum* which was not distinguished from *E. placidum* in the past.

Galerina pseudocamerina: Holec (1992: 177), poorly documented, possibly misidentified.

Hohenbuehelia petaloides: Kubička (1960, 1973), most probably *H. auriscalpium*.

Hygrophorus hyacinthinus: Holec (1992: 171), poorly documented, possibly misidentified.

Inocybe fuscidula: Holec (1992: 171), poorly documented, possibly misidentified.

Lactarius fuliginosus: Herink (1947: 140), taxonomically difficult, often misidentified.

Lactarius pyrogalus: Kubička (1960, 1973), the given occurrence under *Fag* is hardly possible; there is no *Corylus* in BP.

Lactarius rugosus: Kubička (1960, 1973), species of unclear identity.

Lactarius retisporus: Kubička (1973), species of unclear identity.

Mycena abramsii: Holec (1992: 176), most probably *M. stipata* as described e.g. by Robich (2003).

Mycena mucor: Holec (1992: 175), poorly documented, possibly misidentified.

Mycena simia: Holec (1992: 178), poorly documented, possibly misidentified.

Panus conchatus: Kotlaba (1983, as *Pleurotus c.*), dead trunk of *Pic*, alt. 1000 m: highly unlikely as the species is known from wood of broadleaved trees at lower altitude.

Peniophora coccinea: Höhnel & Litschauer (1908: 72), identity unclear, the species is omitted in contemporary literature. BP is its type locality, revision of type material (if exists) is highly desirable.

Pholiota gummosa: Holec (1992: 174), poorly documented, possibly misidentified.

Psathyrella friesii: Holec (1992: 174), probably *P. fibrillosa*.

Psathyrella impexa: Holec (1992: 174), probably *P. fibrillosa*.

Psathyrella sarcocephala: Holec (1992: 178), probably *P. spadicea* (see Vašutová 2006: 16).

Russula delica: Kubička (1960, 1973), occurrence unlikely as it is a calciphilic species growing mostly under *Quercus* and *Pinus*.

Russula rigida: Holec (1992: 170), poorly documented, possibly misidentified.

Russula salmoneotutea: Holec (1992: 171), poorly documented, possibly misidentified.

Tricholoma terreum: Kubička (1960, 1973), allegedly under *Pic*, identity unclear due to the complicated taxonomic situation in the *T. terreum* group (see e.g. Christensen et Heilmann-Clausen 2013: 162–165).

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