

New, rare and less known macromycetes in Slovakia I

SOŇA RIPKOVÁ¹ and LADISLAV HAGARA²

¹ Comenius University, Faculty of Natural Sciences, Department of Botany,
Révová 39, SK-811 02 Bratislava, Slovakia
ripkova@fns.uniba.sk

² Institute of Botany of the Slovak Academy of Science, Department of
Cryptogams, Dúbravská 14, SK-845 23 Bratislava, Slovakia
hagara@ba.telecom.sk

Ripková S. and Hagara L. (2003): New, rare and less known macromycetes in Slovakia I.
– Czech Mycol. 55: 187–200

Data on ecology, Slovak and European occurrence and endangerment of six new, rare and/or less known macromycetes collected in Slovakia are given. *Phlebia ryvardenii* was found for the first time in Slovakia, *Hyphodontia latitans* was collected for the first time after more than one hundred years and a new locality of *Spongipellis fractipes* is reported, too. In addition, new localities and ecological data on *Hypoxyylon ticinense*, *Pluteus aurantiorugosus* and *Rhodotus palmatus* are presented.

Key words: *Hyphodontia latitans*, *Hypoxyylon ticinense*, *Phlebia ryvardenii*, *Pluteus aurantiorugosus*, *Rhodotus palmatus*, *Spongipellis fractipes*, occurrence, ecology.

Ripková S. a Hagara L. (2003): Nové, zriedkavé a málo známe makromycéty na Slovensku I. – Czech Mycol. 55: 187–200

Na Slovensku sme zaznamenali šesť nových, vzácných a/alebo menej známych makromycétov. Uvádžeme nové poznatky o ich ekológii, výskyte na Slovensku a v Európe, tiež údaje o ich vzácnosti a ohrozenosti. *Phlebia ryvardenii* sme našli prvýkrát na území Slovenska, *Hyphodontia latitans* po viac ako sto rokoch a *Spongipellis fractipes* na novej (dosiaľ druhej) lokalite. Pre *Hypoxyylon ticinense*, *Pluteus aurantiorugosus* a *Rhodotus palmatus* sme doplnili nové lokality a ekologické údaje.

INTRODUCTION

From Slovakia, 2609 taxa of macromycetes are reported (Adamčík et al. 2003), and more than 300 taxa are included in the Red list of Slovak fungi (Lizoň 2001). Škubla (1989) estimated that 5300 taxa of macromycetes should occur in Slovakia. This means that more than 50 % of them need to be “discovered”. Most mycologists would like to collect and present new, rare and less known taxa, learn more about their taxonomy, biology, ecology and distribution. Our contribution is also focused on such taxa. On the other hand, we must keep in mind that there is urgent need to collect data on so-called common macromycetes as well. For complex knowledge and better understanding of the regional mycoflora both rare and common taxa have to be studied.

MATERIAL AND METHODS

The presented data on ecology are mostly based on the second author's herbarium specimens (the abbreviation of L. Hagara's herbarium is LH), specimens from SLO [the first author's (née Jančovičová) specimens], BRA, PRM and private herbaria. The abbreviations of herbaria are cited in accordance with the Index Herbariorum (Holmgren et al. 1990). Data on specimens are updated and explanatory notes are given in brackets. Names of phytogeographical units of Slovakia are according to Futák (1966). Data on endangerment in European countries are given according to the following sources: Austria (Krisai-Greilhuber 1999), Czech Republic (Antonín and Bieberová 1995), Denmark (Vesterholt 1998), Germany (Benkert 1992), Hungary (Siller and Vasas 1993), Netherlands (Arnolds 1989), Norway (Bendiksen and Høiland 1992), Poland (Wojewoda and Lawrynowicz 1986), Slovakia (Lizoň 2001), Slovenia (Anonymus 1994), Sweden (Gärdenfors 2000), Switzerland (Senn-Irlet et al. 1998).

RESULTS AND DISCUSSION

Hyphodontia latitans (Bourdot et Galzin) Ginns et Lefebvre

Descriptions and/or illustrations: Eriksson and Ryvarden (1976), Ryvarden and Gilbertson (1993), Langer (1994), Vampola and Vágner (1995).

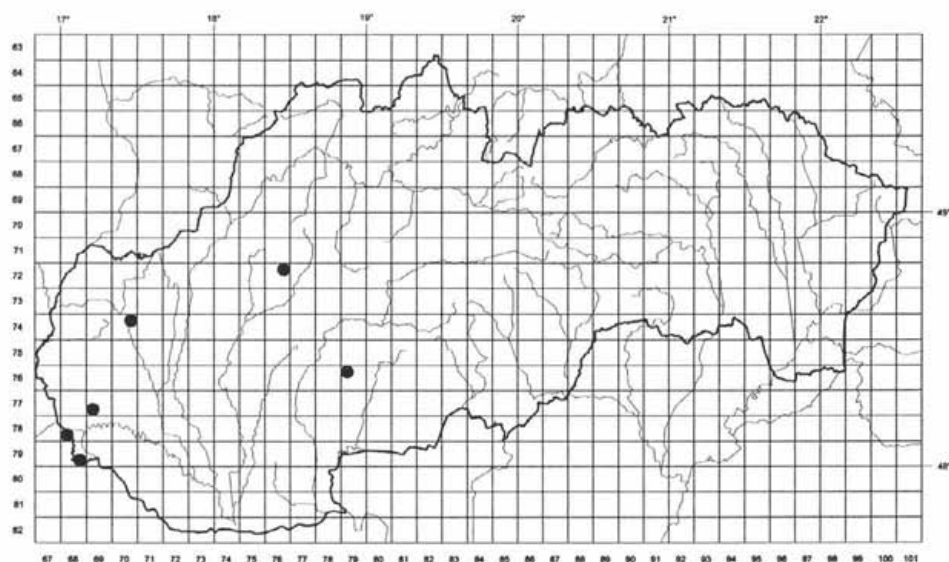
Ecology: *Hyphodontia latitans* is a saprophyte producing one-year-old fruitbodies on stumps and trunks of coniferous and deciduous trees, probably from July to November.

In Slovakia, Kmeť collected *Hyphodontia latitans* for the first time in 1889. He found the species on *Acer* sp. in July (Kotlaba 1984). After more than one hundred years Kotlaba found the species on a fallen trunk of *Fagus sylvatica* in October (specimen by Kotlaba from 1988 deposited in PRM). We have collected the species at three other localities on fallen decaying trunks of *Alnus glutinosa*, *Negundo aceroides* and *Salix fragilis* in September and November.

Other known hosts of the species in Europe are *Picea abies* and *Pinus* sp. (Kotlaba 1984, Vampola and Vágner 1995).

Notes: Eriksson and Ryvarden (1976) had no doubts about relationships between the genera *Chaetoporellus* Bondartsev et Singer and *Hyphodontia* J. Erikss. However, as the species of these genera differ in spore shape, they kept *Chaetoporellus* as a genus of its own. Other authors, e.g. Domański (1974), Kotlaba (1984) and Ryvarden and Gilbertson (1993), classified the species into the genus *Chaetoporellus* too.

We have accepted the taxonomic concept by Ginns and Lefebvre (1993) who assigned the species to the genus *Hyphodontia*. Langer (1994) transferred the



Map 1. Occurrence of *Hyphodontia latitans* in Slovakia.

species to the genus *Hyphodontia* independent of Ginns and Lefebvre (1993), but his combination is superfluous.

According to Langer (1994), *Hyphodontia latitans* was found by Kmeť in Germany ("Sachsen, Chemnitz") on 4 July 1889, but according to Kotlaba (1984), Kmeť found the species in the Štiavnické vrchy Mts. in Slovakia on the same day. The similarity of the names of the towns of Schemnitz (old name of the town of Banská Štiavnica in Slovakia) and Chemnitz (town in Saxony) probably caused this mistake. On Kmeť's herbarium labels is printed out "Fungi Schemnitzzienses". However, Langer (1994) made Chemnitz from Schemnitzzienses and also incorrectly added Sachsen (Saxony). Kmeť did not use the term of Štiavnické vrchy; only Kotlaba (1984) used it.

Occurrence in Slovakia: six localities: three in the Podunajská nížina Lowland (3 specimens), one locality in the Malé Karpaty Mts. (1 specimen), one locality in the Štiavnické vrchy Mts. (1 specimen) and one locality in the Strážovské and Súľovské vrchy Mts. (Map 1).

Occurrence in Europe: Czech Republic, England, France, Poland, Slovakia and Yugoslavia (Kotlaba 1984, Vampola and Vágner 1995).

Endangerment: *Hyphodontia latitans* is listed in the Red list of fungi in Poland and Slovakia.

Material studied: Podunajská nížina Lowland: 7868c: the city of Bratislava, the municipal part of Karlova Ves, Sihot' Island, flood plain forest, 138 m a. s. l., on wood of fallen decaying trunk

of *Negundo aceroides*, 23 Sept. 1997, leg. S. Jančovičová (SLO). – 7968d: the city of Bratislava, the municipal part of Rusovce, flood plain forest, 130 m a. s. l., on wood of fallen trunk cf. *Ulmus laevis*, 1 May 2002, leg. L. Hagara (LH). – 7769c: the National Nature Reserve of Šúr, the village of Svätý Jur, 130 m a. s. l., on wood of fallen rotten trunk of *Alnus glutinosa*, 21 Nov. 2002, leg. L. Hagara (LH). – Malé Karpaty Mts.: 7470b: the village of Buková, the isolated settlement of "Nespalovci", 240 m a. s. l., on fallen trunk of *Salix fragilis*, 8 Nov. 1997, leg. L. Hagara (LH). – Strážovské and Súľovské vrchy Mts.: 7276b: the village of Uhrovské Podhradie, Rokoš hill, in valley above the village, on fallen trunk of *Fagus sylvatica*, 18 Oct. 1988, leg. F. Kotlaba (PRM).

Literary data: Štiavnické vrchy Mts.: 7679a: the village of Prenčov, the locality of "Čierne blato", ca. 580 m a. s. l., on *Acer* sp., 4 July 1889, leg. A. Kmeť (Kotlaba 1984).

Hypoxylon ticinense L. E. Petrini

Descriptions and/or illustrations: Petrini and Müller (1986), Petrini-Klieber (1985), Cetto (1993), Ju and Rogers (1996), Leroy and Surault (1999).

Ecology: *Hypoxylon ticinense* is a saprophyte producing fruitbodies on branches and trunks of deciduous trees, often damaged by fire, usually from June to December. It seems that the species prefers flood plain forests.

We have found the species in Slovakia on wood and bark of fallen decaying branches and trunks of *Acer* sp., *Crataegus oxyacantha*, *Fraxinus* sp., *Negundo aceroides*, *Padus avium* and *Swida sanguinea* from June to October. Some of these specimens were presented by Jančovičová and Glejdura (1999).

Numerous specimens of *H. ticinense* from Slovakia, collected by Pouzar on *Fraxinus excelsior*, *Populus alba*, *Salix* sp. and *Swida sanguinea*, are deposited in PRM.

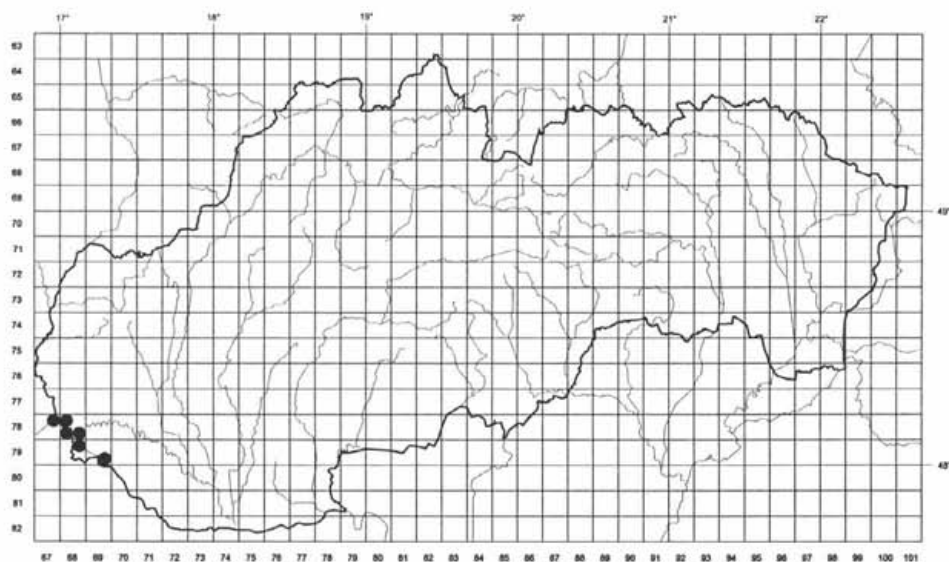
The species has been collected on fallen branches of *Fraxinus* sp. in Austria (Krisai-Greilhuber 1992), on *Crataegus* sp. in Croatia (specimen by Tortić from 1971 deposited in PRM), on bark of *Fraxinus excelsior*, on *Alnus* sp. and *Sambucus nigra* in France (Petrini-Klieber 1985, Ju and Rogers 1996, Leroy and Surault 1999), on *Crataegus* sp. in Italia (Cetto 1993), and on bark of *Crataegus oxyacantha* in Switzerland (Petrini-Klieber 1985, Ju and Rogers 1996).

Occurrence in Slovakia: six localities in the Podunajská nížina Lowland (33 specimens; Map 2).

Occurrence in Europe: Austria (Krisai-Greilhuber 1992), Croatia (specimen by Tortić from 1971 deposited in PRM), France (Petrini-Klieber 1985, Ju and Rogers 1996), Italia (Cetto 1993), Slovakia and Switzerland (Petrini-Klieber 1985, Ju and Rogers 1996).

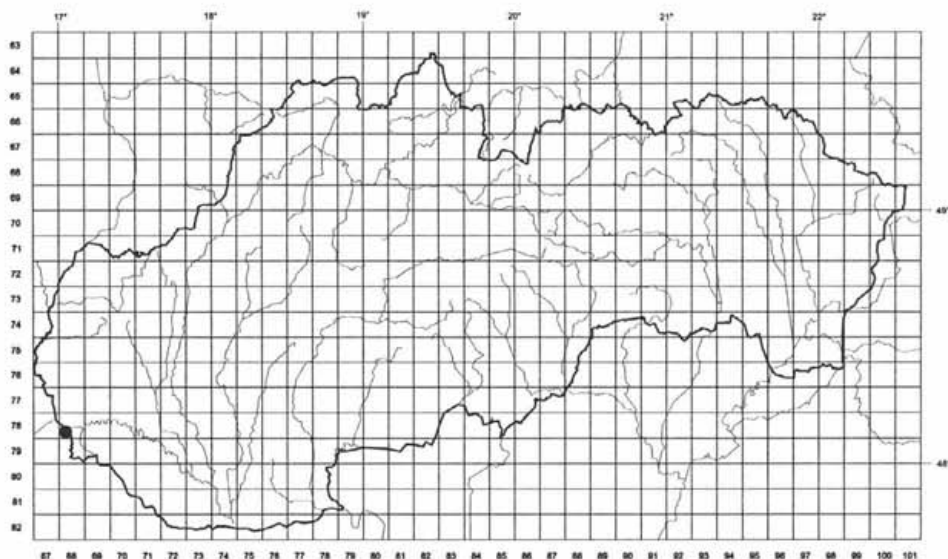
Endangerment: *Hypoxylon ticinense* is listed in the Red list of fungi in Austria and Slovakia.

Material studied: Podunajská nížina Lowland: 7867b: the city of Bratislava, the municipal part of Devín, Sedláčkov ostrov Island, flood plain forest, ca. 135 m a. s. l., on wood of fallen decaying trunk of *Swida sanguinea*, 26 June 1997, leg. S. Jančovičová (SLO). – Ibidem, on wood of fallen decaying trunk of *Crataegus oxyacantha*, 2 July 1997 (SLO). – Ibidem, on bark of fallen



Map 2. Occurrence of *Hypoxylon ticinense* in Slovakia.

decaying branch of *Fraxinus* sp., 8 Jan. 1998 (SLO). – Ibidem, on wood of fallen decaying trunk of deciduous tree, 20 July 1998 (SLO). – Ibidem, on wood and bark of fallen decaying branch of *Fraxinus* sp., 16 July 1999 (SLO). – Ibidem, on bark of fallen trunk of *Crataegus oxyacantha*, 4 July 1999, leg. L. Hagara (LH). – 7868a: the city of Bratislava, the municipal part of Karlova Ves, Sihoľ Island, flood plain forest, ca. 135 m a. s. l., on wood of fallen decaying branch of *Padus avium*, 29 July 1998, leg. S. Jančovičová (SLO). – Ibidem, on wood of fallen decaying branch of *Fraxinus* sp., 16 Oct. 1998 (SLO). – 7868c: the city of Bratislava, the municipal part of Karlova Ves, Sihoľ Island, flood plain forest, ca. 135 m a. s. l., on wood of fallen decaying trunk of *Negundo aceroides*, 23 June 1998, leg. S. Jančovičová (SLO). – Ibidem, on bark of branch of standing tree of *Padus avium*, 24 Sept. 1998 (SLO). – Ibidem, on wood of fallen decaying branch of *Fraxinus* sp., 24 Aug. 1999 (SLO). – Ibidem, on wood of fallen decaying branch of deciduous tree, 24 Aug. 1999 (SLO). – 7868c (7868a, lack of detailed information does not allow an accurate localisation): the city of Bratislava, the municipal part of Karlova Ves, Veľký ostrov Island (Sihoľ Island), on fallen trunk of *Swida sanguinea*, 22 Oct. 1979, leg. Z. Pouzar (PRM). – Ibidem, on fallen branch of *Swida sanguinea* (PRM). – Ibidem, on fallen trunk of *Fraxinus excelsior* (PRM). – Ibidem, on fallen branch of deciduous tree cf. *Fraxinus* sp. (PRM). – 7968b: the city of Bratislava, the municipal part of Rusovce, the island near the port, on fallen trunk of *Swida sanguinea*, 21 Oct. 1979, leg. Z. Pouzar (PRM, 5 specimens). – Ibidem, on fallen trunk of *Salix* sp. (PRM). – 7968b: the city of Bratislava, the municipal part of Rusovce, flood plain forest near gamekeeper's cottage, 130 m a. s. l., on fallen branch of *Acer* sp., 16 July 1995, leg. L. Hagara (LH). – 7968b (7969a, lack of detailed information does not allow an accurate localization): the city of Bratislava, the municipal part of Podunajské Biskupice, the Nature Reserve of Ostrov Kopáč, on fallen trunk of *Swida sanguinea*, 12 Oct. 1979, leg. P. Lizoň (PRM). – Ibidem, 27 Aug. 1974, leg. Z. Pouzar (PRM). – Ibidem, on dry trunk of *Swida sanguinea*, 27 Aug. 1974, leg. Z. Pouzar (PRM). – 7868d: the city of Bratislava, the municipal part of Petržalka, the island near the racecourse, on fallen trunks and branches of *Swida sanguinea*, 20 Oct. 1979, leg. Z. Pouzar (PRM). – Ibidem, on half-fallen trunk of *Swida sanguinea* (PRM, 4 specimens). – 7969d: the village of Šamorín, the



Map 3. Occurrence of *Phlebia ryvardenii* in Slovakia.

Kalinkovské rameno branch, in the forest by the riverside, on fallen trunk of deciduous tree cf. *Populus alba*, 12 Oct. 1979, leg. Z. Pouzar (PRM). – Switzerland: Kt. Tessin, Locarno, Boscone di Moleno, on *Crataegus oxyacantha*, Dec. 1983, leg. Zenone (Isotypus, PRM). – Croatia, Čička Poljana, S of Zagreb, on *Crataegus* sp., 10 Oct. 1971, leg. M. Tortić (PRM).

Phlebia ryvardenii Hallenb. et Hjortstam

Description and illustration: Hallenberg and Hjortstam (1988).

Ecology: We have found the species on wood of a fallen rotten trunk of *Salix* cf. *alba* in May.

Hallenberg and Hjortstam (1988) described the species on the basis of a specimen from Sweden producing fruitbodies on *Picea abies* in September. The second known specimen of *Phlebia ryvardenii* is from Spain, found on *Pinus* sp. in November (Hallenberg and Hjortstam 1988).

Occurrence in Slovakia: *Phlebia ryvardenii* is new for Slovakia, known only from one locality in the Podunajská nížina Lowland (1 specimen; Map 3).

Occurrence in Europe: Slovakia, Spain and Sweden (Hallenberg and Hjortstam 1988).

Endangerment: *Phlebia ryvardenii* is listed in the Red list of fungi in Slovakia.

Material studied: Podunajská nížina Lowland: 7868c: the city of Bratislava, the municipal part of Karlova Ves, Sihoľ Island, flood plain forest, 136 m a. s. l., on wood of fallen rotten trunk of *Salix* cf. *alba*, 21 May 1998, leg. S. Jančovičová (SLO).

Pluteus aurantiorugosus (Trog) Sacc.

Descriptions and/or illustrations: Antonín et al. (1995), Wilhelm (1992), Vellinga (1990), Hagara et al. (1999).

Ecology: in Slovakia, *Pluteus aurantiorugosus* is known as a saprophyte producing fruitbodies on wood of fallen decaying to rotten trunks, branches and stumps of *Aesculus hippocastanum*, *Fagus sylvatica*, *Fraxinus* sp., *Quercus cerris*, *Quercus* sp. and *Ulmus* sp. from June to October.

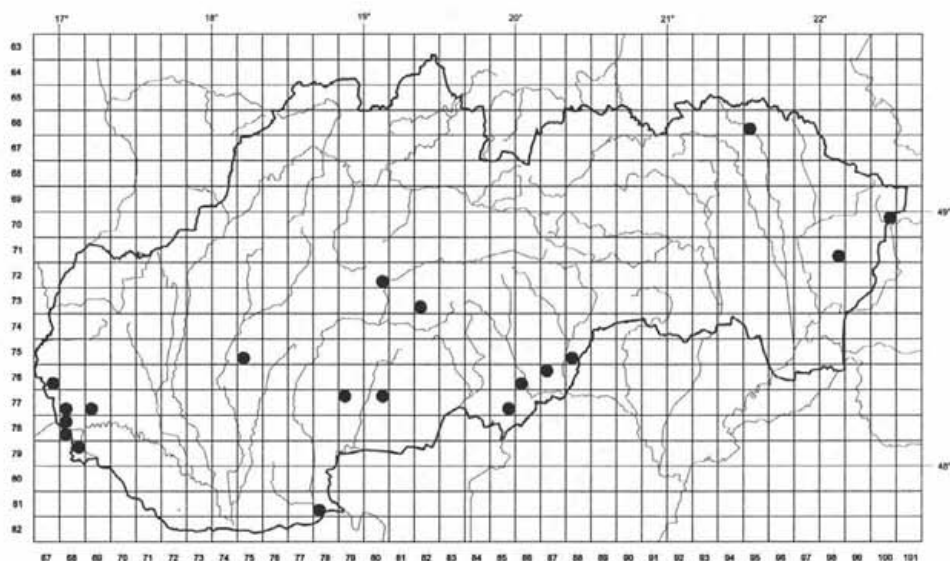
Other known hosts of the species in Europe are *Acer pseudoplatanus*, *Alnus* sp., *Carpinus betulus*, *Populus* sp., *Quercus petraea*, *Salix* sp., *Tilia cordata* and *Ulmus minor* (Antonín et al. 1995, Wilhelm 1992).

Occurrence in Slovakia: twenty-two localities: four in the Ipel'sko-rimavská brázda Furrow (4 specimens), one locality in the Záhorská nížina Lowland (1 specimen), six localities in the Podunajská nížina Lowland (8 specimens), one locality in the Malé Karpaty Mts. (1 specimen), one locality in the Tribeč Mts. (1 specimen), one locality in the Kremnické vrchy Mts. (1 specimen), one locality in the Poľana Mts. (1 specimen), two localities in the Štiavnické vrchy Mts. (3 specimens), one locality in the Vihorlatské vrchy Mts. (1 specimen), one locality in the Nízke Beskydy Mts. (1 specimen) and one locality in the Bukovské vrchy Mts. (1 specimen; Map 4).

Occurrence in Europe: Austria, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, Netherlands, Poland, Russia, Slovakia, Sweden and Switzerland (Antonín et al. 1995, Senn-Irlet et al. 1998).

Endangerment: *Pluteus aurantiorugosus* is classified as an endangered fungus in Austria, the Czech Republic, Denmark, Germany, the Netherlands, Poland, Slovakia, Sweden and Switzerland.

Material studied: Ipel'sko-rimavská brázda Furrow: 7687a: ca. 2.7 km NNE of the village of Figa, the locality of Farská studňa, in the pheasantry of "Stránska", 230 m a. s. l., on decaying stump of *Quercus cerris*, 27 June 1982, leg. L. Hagara (BRA). – 7588c: the town of Tornaľa, ca. 3.6 km E of the part of Starňa, in the management-plan area of "Hubovo", 280 m a. s. l., on decaying stump of *Quercus cerris*, 1 July 1982, leg. L. Hagara (BRA). – 7686c: the Bučenská vrchovina Mts., the Nature Reserve of Kurinecká dubina, ca. 0.5 km S of the village of Kurinec, ca. 220 m a. s. l., on wood of fallen rotten trunk of *Quercus* sp., 24 Oct. 2002, leg. K. Skokanová (SLO). – 7785d: the Cerová vrchovina Mts., the SE hillslope of the Steblová skala hill, ca. 1 km E of the village of Gortva, ca. 400 m a. s. l., on wood of fallen rotten trunk of *Quercus* sp., 25 Oct. 2002, leg. M. Vašutová (SLO). – Podunajská nížina Lowland: 7868a: the city of Bratislava, the municipal part of Karlova Ves, Sihoľ Island, flood plain forest, 137 m a. s. l., on wood of fallen decaying trunk of *Fraxinus* sp., 22 Oct. 1997, leg. S. Jančovičová (SLO). – 7868c: the city of Bratislava, the municipal part of Petržalka, Pečňa Island, 136 m a. s. l., 1 Oct. 1994, leg. V. Kabát (BRA). – 7968b: the city of Bratislava, the municipal part of Rusovce, grove near main road, 135 m a. s. l., 29 Sept. 1994, leg. V. Kabát (BRA). – 7968b: the city of Bratislava, the municipal part of Rusovce, flood plain forest near the Rusovské rameno branch, 128 m a. s. l., on fallen trunk of *Aesculus hippocastanum*, 8 Oct. 1996, leg. L. Hagara (LH). – 7968b: the city of Bratislava, the municipal part of Rusovce, park near a manor, 132 m a. s. l., on stump of *Aesculus hippocastanum*, 27 Sept. 1997, leg. D. Krajný and M. Hagarová (LH). – 7968b (7969a,



Map 4. Occurrence of *Pluteus aurantiorugosus* in Slovakia.

lack of detailed information does not allow an accurate localization): the city of Bratislava, the municipal part of Podunajské Biskupice, the Nature Reserve of Ostrov Kopáč, on decaying trunk, 21 Oct. 1995, leg. I. Kautmanová (BRA). – 7769c: the city of Bratislava, the municipal part of Vajnory, the Panónsky háj grove, 5 Oct. 1995, leg. V. Kautman (BRA). – 8178c: near the town of Štúrovo, 220 m a. s. l., on stump of deciduous tree cf. *Fraxinus* sp., 15 Aug. 1970, leg. J. Kuthan (BRA). – Malé Karpaty Mts.: 7768c: the city of Bratislava, the municipal part of Lamač, mixed forest, on decaying stump, 7 July 1996, leg. M. Pokorná (BRA). – Trábeč Mts.: 7575c: the village of Jelenec, Dúň hill, 260 m a. s. l., on fallen branch of *Quercus* sp., 18 July 1998, leg. L. Hagara (LH). – Poľana Mts.: 7382c: the Nature Monument of Kalamárka, Kalamárka hill, 800 m a. s. l., on wood of standing trunk of *Fagus sylvatica*, 9 June 1996, leg. S. Glejdura (LDM, the herbarium of the Forestry and Wood-Technology Museum in the town of Zvolen in Slovakia). – Štiavnické vrchy Mts.: 7779a: near the village of Ladzany, ca. 400 m a. s. l., on decaying stump of *Ulmus* sp., 14 June 1984, leg. J. Kuthan (BRA). – 7779a: ca. 4 km NW of the village of Ladzany, 450 m a. s. l., on decaying stump of *Quercus* sp., 9 Aug. 1988, leg. P. Škubla (BRA). – 7780b: ca. 1 km SE of the village of Čabradský Vrbovok, 280 m a. s. l., on decaying stump of *Quercus* sp., 17 June 1988, leg. P. Škubla (BRA). – Vihorlatské vrchy Mts.: 7198d: the National Nature Reserve of Jovsianska hrabina, ca. 1 km NE of the church in the village of Jovsa, deciduous forest (*Carpinus betulus*, *Quercus* sp.), 170 m a. s. l., on wood of fallen rotten stump of *Quercus* sp., 10 June 2002, leg. Z. Argalášová (SLO). – Bukovské vrchy Mts.: 7000b: the National Nature Reserve of Rožok, on stump of *Fagus sylvatica*, 5 Oct. 1992, leg. S. Adamčík (BRA).

Literary data: Záhorská nížina Lowland: 7667d: the village of Vysoká pri Morave (Antonín et al. 1995). – Kremnické vrchy Mts.: 7280d: the locality of Suchý vrch (Antonín et al. 1995). – Nízke Beskydy Mts.: 6695c: the town of Svidník (Antonín et al. 1995).

Rhodotus palmatus (Bull.) Maire

Descriptions and/or illustrations: Dermek (1985), Antonín and Vágner (1993), Antonín et al. (1995), Noordeloos (1995), Krieglsteiner (2001).

Ecology: *Rhodotus palmatus* is known in Slovakia as a saprophyte producing fruitbodies on wood of fallen decaying trunks and branches of *Alnus* sp., *Acer campestre*, *Fraxinus* sp., *Negundo aceroides* and *Ulmus* sp. from August to November.

Other known hosts of this species in Europe are species of the genera *Acer* (Dermek 1985), *Aesculus*, *Malus*, *Quercus* (Lizoň 1985) and *Populus* (Antonín et al. 1995).

Notes: The first known find of *Rhodotus palmatus* in Slovakia, published by Fábry (1977) and Dermek (1985), is from the National Nature Reserve of Šúr (specimen by Fábry from 10 Sept. 1969 deposited in BRA). Záhorovská (1984, 1997) and Lizoň (1985) incorrectly located the first find of this species on Sihot' Island and Sedláčkov ostrov Island.

The second find of the species is from Sedláčkov ostrov Island (specimen by Feráková and Schwarzová from 29 Sept. 1982). This find was published by Záhorovská (1984), Lizoň (1985) and Záhorovská et al. (1996). Because the herbarium specimen of this find does not exist, some authors, such as Dermek (1985), Záhorovská (1997) and Antonín et al. (1995), incorrectly located the second find of *Rhodotus palmatus* on Sihot' Island.

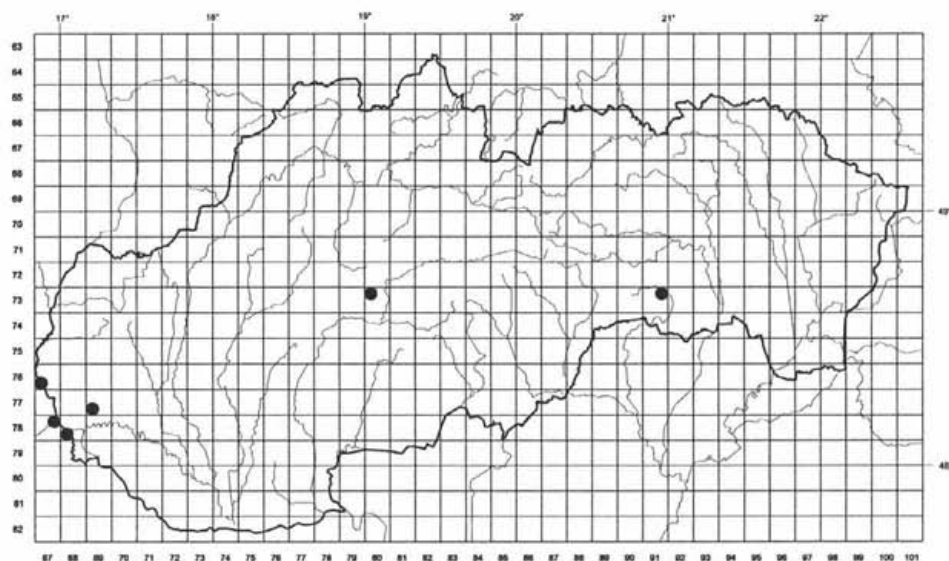
Occurrence in Slovakia: six localities: one in the Slovenský kras Karst (1 specimen), one locality in the Záhorská nížina Lowland (1 specimen), three localities in the Podunajská nížina Lowland (8 specimens) and one locality in the Kremnické vrchy Mts. (1 specimen; Map 5).

Occurrence in Europe: Austria, Czech Republic, France, Germany, Great Britain, Hungary, Italy, Lithuania, Netherlands, Norway, Romania, Slovakia, Spain, Sweden and Switzerland (Antonín et al. 1995, Krieglsteiner 2001).

Endangerment: *Rhodotus palmatus* is classified as an endangered fungus in Austria, the Czech Republic, Germany, Hungary, the Netherlands, Norway, Slovakia, Slovenia and Sweden.

Material studied: Záhorská nížina Lowland: 7667c: the village of Vysoká pri Morave, inundation area of the Morava river, ca. 4.3 km SSE of the church (in the village), remnants of flood plain forest (*Fraxinus* sp., *Acer campestre* etc.), ca. 140 m a. s. l., on wood of fallen decaying branch of *Fraxinus* sp., 10 Oct. 2001, leg. S. Ripková (SLO). – Podunajská nížina Lowland: 7867b: the city of Bratislava, the municipal part of Devín, Sedláčkov ostrov Island, flood plain forest, 138 m a. s. l., on wood of fallen decaying trunk of *Negundo aceroides*, 21 Oct. 1998, leg. S. Jančovičová (SLO). – Ibidem, on wood of fallen decaying branch of *Fraxinus* sp., 25 Aug. 1999, leg. S. Jančovičová and J. Ripka (SLO). – 7868c: the city of Bratislava, the municipal part of Karlova Ves, Sihot' Island, flood plain forest, 137 m a. s. l., on wood of fallen decaying trunk of *Fraxinus* sp., 7 Aug. 1997, leg. S. Jančovičová (SLO). – 7769c: the National Nature Reserve of Šúr, 10 Sept. 1969, leg. I. Fábry (BRA). – Ibidem, ca. 1.5 km S of the village of Jur pri Bratislave (the village of Svätý Jur), 130 m a. s. l., on fallen branch of *Alnus* sp., 2 Oct. 1988, leg. L. Hagara (BRA). – Kremnické vrchy Mts.: 7380a: the village of Badín, the Badínsky prales virgin forest, 720 m a. s. l., on fallen trunk of deciduous tree, 30 Sept. 1994, leg. L. Varjú and L. Hagara (LH).

Literary data: Podunajská nížina Lowland: 7867b: the city of Bratislava, Slovenský ostrov Island (Sedláčkov ostrov Island), on stump of *Ulmus* sp.?, 29 Sept. 1982, leg. V. Feráková and



Map 5. Occurrence of *Rhodotus palmatus* in Slovakia.

T. Schwarzová (cf. Dermek 1985, Lizoň 1985, Záhorovská 1984). – 7868c: the city of Bratislava, Sihoľ Island, under deciduous trees, 26 Oct. 1994, leg. V. Kabát (Škubla 1995). – 7868c: the city of Bratislava, Sihoľ Island, 17 Nov. 1994 (Kabát 1995). – Slovenský kras Karst: 7391b (7391c, lack of detailed information does not allow an accurate localization): the village of Zádiel, the Zádielska dolina valley (Antonín et al. 1995).

Spongipellis fractipes (Berk. et M. A. Curtis) Kotl. et Pouzar

Descriptions and/or illustrations: Kotlaba and Pouzar (1976), Antonín et al. (1995), Krieglsteiner (2000), Ryvarden and Gilbertson (1993).

Ecology: *Spongipellis fractipes* is a saprophyte producing fruitbodies on wood of deciduous trees from June to October.

The National Nature Reserve of Šúr (flood plain forest with dominance of *Alnus glutinosa*) was the only locality of *Spongipellis fractipes* in Slovakia so far. Fruitbodies were produced only on wood of fallen trunks and branches of *Alnus glutinosa* (Kotlaba and Pouzar 1976).

We have confirmed the occurrence of the species in the National Nature Reserve of Šúr, where we collected fruitbodies on a fallen branch and stump of *Alnus glutinosa*. In addition, we have found a second locality in Slovakia, too. It is Sedláčkov ostrov Island (flood plain forest with dominance of *Populus × canescens*, *P. nigra* and *Salix alba*), where we have found the fruitbodies on wood and bark of fallen trunks of *Fraxinus* sp., *Negundo aceroides*, *Populus nigra* and *Populus* sp. and on wood and bark of a stump of *Salix alba*.

Other known hosts of the species are *Carpinus betulus* and *Fraxinus excelsior* in Europe, *Acer saccharophorum*, *Acer* sp., *Betula pendula*, *Betula* sp., *Fagus sylvatica* and *Padus avium* in the USA (Kotlaba and Pouzar 1976, Krieglsteiner 2000).

Notes: Kotlaba and Pouzar (1976) discussed the systematic position of this species. They stated that according to the main characters (duplex context, thick-walled spores and presence of pseudoskeletal hyphae) it should belong to the genus *Spongipellis* Pat. Because of its having cystidia, pseudoskeletal hyphae only in stipitate fruitbodies, the plasticity of the fruitbodies and the distinct shape of the spores they placed it in a new subgenus *Spongipellis* subg. *Loweomyces* Kotl. et Pouzar.

Later, Jülich (1984) accepted *Spongipellis* subg. *Loweomyces* as an autonomous genus and presented the species as *Loweomyces fractipes* (Berk. et M. A. Curtis) Jülich.

Ryvarden and Gilbertson (1993) had no doubts about the relationship of the species to *Spongipellis*, but the plasticity of the fruitbodies, duplex context and slightly thick-walled spores place it, in their opinion, closer to *Abortiporus biennis* (Bull.) Singer (the type of *Abortiporus*) than to *Spongipellis spumeus* (Sowerby) Pat. (the type of *Spongipellis*). They therefore placed it in the genus *Abortiporus* Murrill.

The main argument of Kotlaba and Pouzar (1976) for treating the species as *Spongipellis fractipes* was that it differs from *Abortiporus biennis* in its presence of cystidia and the lack of gloeocystidia and chlamydo-spores. They pointed out that the delimitation of *Abortiporus* is vague and that it should be transferred to *Spongipellis* subg. *Abortiporus*.

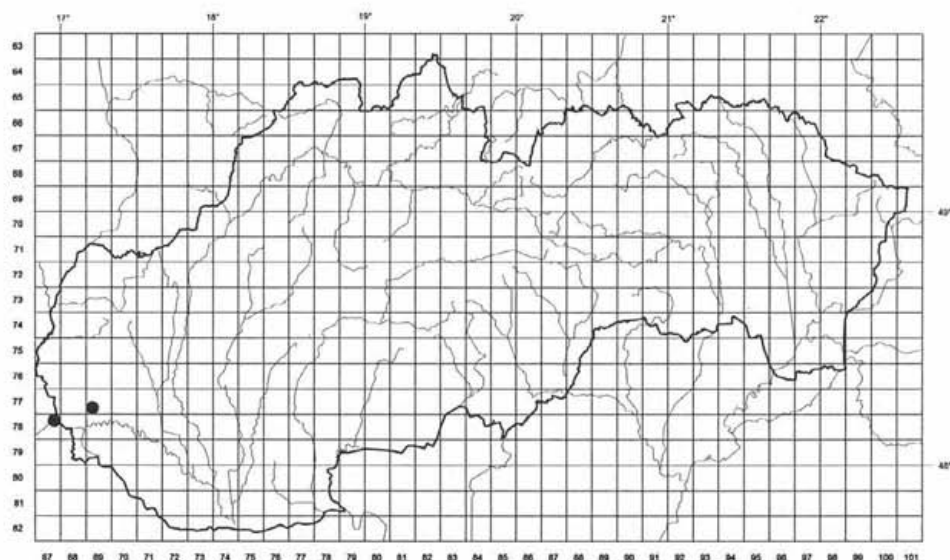
Occurrence in Slovakia: two localities in the Podunajská nížina Lowland (19 specimens; Map 6).

Occurrence in Europe: Austria, Belarus, Croatia, France, Georgia and Germany (Antonín et al. 1995, Krieglsteiner 2000).

Endangerment: *Spongipellis fractipes* is listed in the Red list of fungi in Slovakia.

Material studied: Podunajská nížina Lowland: 7769c: the National Nature Reserve of Šúr, the village of Svätý Jur, on stump of *Alnus* sp., 2 Oct. 1993, leg. L. Hagara (LH). – Ibidem, on fallen branch of *Alnus* sp., 12 Oct. 1995, leg. L. Hagara (LH). – 7867b: the city of Bratislava, the municipal part of Devín, Sedláčkov ostrov Island, flood plain forest, ca. 135 m a. s. l., on wood of fallen decaying trunk of *Negundo aceroides*, 13 Aug. 1997, leg. S. Jančovičová (SLO). – Ibidem, 20 July 1998 (SLO). – Ibidem, on wood of fallen decaying trunk of *Populus nigra*, 27 July 1998 (SLO). – Ibidem, on wood of fallen decaying trunk of *Populus* sp., 6 Aug. 1998 (SLO). – Ibidem, on wood and bark of decaying stump of deciduous tree, 16 July 1999 (SLO). – Ibidem, on wood and bark of fallen decaying trunk of deciduous tree, 16 July 1999 (SLO). – Ibidem, on wood of fallen decaying trunk of *Fraxinus* sp., 5 Aug. 1999 (SLO). – Ibidem, on wood and bark of decaying stump of *Salix* sp., 5 Aug. 1999 (SLO).

Literary data: Podunajská nížina Lowland: 7769c: the National Nature Reserve of Šúr, near the village of Jur pri Bratislave (Svätojurský Šúr) (the village of Svätý Jur), in *Alnetea*



Map 6. Occurrence of *Spongipellis fractipes* in Slovakia.

glutinosae, on wood in cavity of dead trunk of cf. *Quercus* sp., 24 June 1972, leg. I. Fábry (PRM) (Kotlaba and Pouzar 1976). – Ibidem, on rotten wood of *Alnus glutinosa*, 25 Oct. 1972 (PRM). – Ibidem, on fallen trunk of *Alnus glutinosa*, 25 Oct. 1972, leg. Z. Pouzar (PRM). – Ibidem, on fallen branch and trunk of *Alnus glutinosa*, 24 Aug. 1974, leg. Z. Pouzar, V. Holubová and Z. Heinrich (PRM). – Ibidem, on fallen trunk of *Alnus glutinosa*, 9. Sept. 1974, leg. F. Kotlaba (PRM). – Ibidem, on fallen branch of *Alnus glutinosa*, 9 Sept. 1974, leg. F. Kotlaba (PRM). – Ibidem, on fallen branch of *Alnus glutinosa*, 10 Sept. 1974, leg. F. Kotlaba (PRM). – Ibidem, on fallen branch of *Alnus glutinosa*, 15 Sept. 1975, leg. F. Kotlaba (PRM). – Ibidem, on fallen trunk of *Alnus glutinosa*, 15 Sept. 1975, leg. F. Kotlaba (PRM).

ACKNOWLEDGEMENTS

A review of the draft manuscript by Pavel Lizoň is acknowledged. We are very grateful to Nils Hallenberg for re-examination of the specimen of *Phlebia ryvardenii*, and to Zdeněk Pouzar for advisory note on the specimen of *Hyphodontia latitans*. We thank Tatiana Miháliková (Institute of Botany of the Slovak Academy of Sciences, Department of Taxonomy of Higher Plants, Bratislava) and Ján Ripka (Institute of Botany SAS, Department of Geobotany, Bratislava) for technical assistance with the maps. The Slovak Grant Agencies VEGA (grant no. 2/1069/21) and APVT (grant no. 51-023902) supported this study.

REFERENCES

- ADAMČÍK S., KUČERA V., LIZOŇ P., RIPKA J. and RIPKOVÁ S. (2003): State of diversity research on macrofungi in Slovakia. – *Czech Mycol.* 55: 201–231.
- Anonymus (1994): Triglavski narodni park. Zavarovane glive. – http://193.2.236.10/tnp/s/jus/zk_gliv.htm.
- ANTONÍN V. and BIEBEROVÁ Z. (1995): Chráněné houby ČR. – 88 p. Brno.
- ANTONÍN V. and VÁGNER A. (1993): New, rare and less known macromycetes in Moravia (Czech Republic) – II. – *Acta Mus. Moraviae, Sci. Nat. (Brno)* 78: 69–78.
- ARNOLDS E. (1989): A preliminary red data list of macrofungi in the Netherlands. – *Persoonia* 14: 77–125.
- ANTONÍN V., FELLNER R., HERINK J., KOTLABA F., LAZEBNÍČEK J., LIZOŇ P., ŠEBEK S. and VÁGNER A. (1995): Červená kniha ohrozených a vzácných druhů rostlin a živočichů SR a ČR 4. Houby (makromycety). – In: Kotlaba F. (ed.), Červená kniha ohrozených a vzácných druhů rostlin a živočichů SR a ČR 4. Sinice a riasy. Houby. Lišajníky. Machorasty, p. 30–119, Bratislava.
- BENDIKSEN E. and HØILAND K. (1992): Red list of threatened macromycetes in Norway. – Directorate for Nature Management – Report 6: 31–42.
- BENKERT D. (ed.) (1992): Rote Liste der gefährdeten Grosspilzen in Deutschland. – 144 p. Eching.
- CETTO B. (1993): *I funghi dal vero*, Vol. 7. – 760 p. Trento.
- DERMEK A. (1985): *Fungorum Rariorum Icones Coloratae* 14. – 19 p. Vaduz.
- DOMAŃSKI S. (1974): Mała flora grzybów. Tom 1. Basidiomycetes (Podstawczaki), Aphyllophorales (Bezblaszkowe). Część 1. Bondarzewiaceae (Bondarcewcowate), Fistulinaceae (Ozorkowate), Ganodermataceae (Lakownicowate), Polyporaceae (Żagwiowate). – 316 p. Warszawa, Kraków.
- ERIKSSON J. and RYVARDEN L. (1976): The Corticiaceae of North Europe, Vol. 4. *Hyphodermella* – Mycoacia. – p. 547–886, Oslo.
- FÁBRY I. (1977): Niekoľko zriedkavých druhov zo skupiny Agaricales na Slovensku. – *Čes. Mykol.* 31: 31–37.
- FUTÁK J. (1966): Fytogeografické členenie Slovenska. – In: Futák J. (ed.), *Flóra Slovenska* 1, p. 533–538, Bratislava.
- GÄRDENFORS V. (ed.) (2000): *Rödlistade arter i Sverige 2000*. – 393 p. Uppsala.
- GINNS J. and LEFEBVRE M. N. L. (1993): Lignicolous corticioid fungi (Basidiomycota) of North America. Systematics, distribution and ecology. – 247 p. St. Paul, Minnesota.
- HAGARA L., ANTONÍN V. and BAIER J. (1999): Houby. – 416 p. Praha.
- HALLENBERG N. and HJORTSTAM K. (1988): Studies in Corticiaceae (Basidiomycetes): new species and new combinations. – *Mycotaxon* 31: 439–443.
- HOLMGREN P. K., HOLMGREN N. H. and BARNETT L. C. (eds.) (1990): *Index Herbariorum 1: The herbaria of the world*. – 693 p. Bronx, New York.
- JANČOVIČOVÁ S. and GLEJDURA S. (1999): Ascomycetes from Danube islands in Bratislava (Slovakia). – *Thaiszia-J. Bot.*, Košice 9: 1–10.
- JU Y.-M. and ROGERS J. D. (1996): A revision of the genus *Hypoxylon*. – 365 p. St. Paul, Minnesota.
- KOTLABA F. (1984): Zeměpisné rozšíření a ekologie chorošů (Polyporales s. l.) v Československu. – 240 p. Praha.
- KABÁT V. (1995): Červenáček obyčejný *Rhodotus palmatus* (Bull.: Fr.) R. Mre. pri Bratislave. – *Sprav. Slov. Mykol.* 7: 4–5.
- KOTLABA F. and POUZAR Z. (1976): Chorošovitá houba plstnatec různotvarý – *Spongipellis fractipes* v Československu. – *Čes. Mykol.* 30: 181–192.
- KRIEGLSTEINER G. J. (ed.) (2000): *Die Grosspilze Baden-Württembergs. Band 1*. – 632 p. Stuttgart.
- KRIEGLSTEINER G. J. (ed.) (2001): *Die Grosspilze Baden-Württembergs. Band 3*. – 640 p. Stuttgart.

- KRISAI-GREILHUBER I. (1992): Die Makromyceten im Raum von Wien. Ökologie und Floristik. – 170 p. Eching.
- KRISAI-GREILHUBER I. (1999): Rote Liste gefährdeter Großpilze Österreichs. – In: Niklfeld H. (ed.), Rote Listen gefährdeter Pflanzen Österreichs, p. 229-266, Graz.
- LANGER E. (1994): Die Gattung *Hyphodontia* John Eriksson. – *Biblioth. Mycol.* 154: 1-298.
- LEROY P. and SURAULT J.-L. (1999): *Cordyceps tuberculata* et *Hypoxyylon ticinense*. Deux pyrénomycetes rarement décrits. – *Doc. Mycol.* 113: 1-7.
- LIZOŇ P. (1985): Rozšírenie a ekológia vybraných druhov húb na Slovensku. – ms., research report (depon. in Prirodovedné múzeum SNM, Bratislava).
- LIZOŇ P. (2001): Červený zoznam húb Slovenska, 3. verzia (december 2001). – In: Baláž D., Marhold K. and Urban P. (eds.), Červený zoznam rastlín a živočíchov Slovenska, Ochr. Prír. 20 (Suppl.): 6-13.
- NOORDELOOS M. E. (1995): Tribus Rhodoteae. – In: Bas C., Kuyper T. W., Noordeloos M. E. and Vellinga E. C. (eds.), *Flora Agaricina Neerlandica*, Vol. 3., p. 175-176, Rotterdam, Brookfield.
- PETRINI L. E. and MÜLLER E. (1986): Haupt- und Nebenfruchtformen europäischer *Hypoxyylon*-Arten (*Xylariaceae*, *Sphaeriales*) und verwandter Pilze. – *Mycol. Helvetica* 7: 501-627.
- PETRINI-KLIEBER L. E. (1985): Untersuchungen über die Gattung *Hypoxyylon* (*Ascomycetes*) und verwandte Pilze. – ms., PhD. thesis (depon. in Eidgenössische Technische Hochschule, Zürich).
- RYVARDEN L. and GILBERSTON R. L. (1993): European polypores. Vol 1. *Abortiporus* – *Lindtneria*. – p. 1-387, Oslo.
- SENN-IRLET B. (1998): Rote Liste. Liste mit 229 seltenen, eventuell vom Aussterben bedrohten Pilzarten der Schweiz. – <http://www.pilze.ch/Roteliste/Roteliste2.html>.
- SILLER I. and VASAS G. (1993): Védelemre javasolt magyarországi nagygombák. – *Mikológiai Közlemények* 32: 75-79.
- ŠKUBLA P. (1995): Vzácnější nálezy roku 1994. – *Sprav. Slov. Mykol.* 7: 25-27.
- ŠKUBLA P. (1989): Tajomné huby. – 359 p. Bratislava.
- VAMPOLA P. and VÁGNER A. (1995): Vzácná pórnatka široká – *Hyphodontia latitans* – nalezena na Moravě. – *Mykol. Listy* 55: 16-18.
- VELLINGA E. C. (1990): Family *Pluteaceae*. – In: Bas C., Kuyper T. W., Noordeloos M. E. and Vellinga E. C. (eds.), *Flora Agaricina Neerlandica*, Vol. 2., p. 31-64, Rotterdam, Brookfield.
- VESTERHOLT J. (ed.) (1998): Danish Red List of Fungi. Conservation Committee, Danish Mycological Society. – <http://www.mzcosoc.dk>.
- WOJEWODA W. and LAWRYNOWICZ M. (1986): Czerwona lista grzybów wielkoowocnikowych zagrożonych w Polsce. – In: Zarzycki K. and Wojewoda W. (eds.), *Lista roślin wymierających i zagrożonych w Polsce*, p. 45-82, Warszawa.
- WILHELM M. (1992): Ökologie und Verbreitung des Orangeroten Dachpilzes, *Pluteus aurantiorugosus* (Trog) Sacc. – *Schweiz. Z. Pilzk.* 92-4: 93.
- ZÁHOROVSKÁ E. (1984): Príspevok k poznaniu mykoflóry Devínskej Kobyly. – *Mykol. Listy* 16: 14-16.
- ZÁHOROVSKÁ E. (1997): Huby. – In: Feráková V. and Kocianová E. (eds.), *Flóra, geológia a paleontológia Devínskej Kobyly*, p. 58-68, Bratislava.