

## Some interesting lichens and lichenicolous fungi from the Czech Republic

PIETER P. G. VAN DEN BOOM<sup>1</sup> and ZDENĚK PALICE<sup>2</sup>

<sup>1</sup>Arafura 16, NL-5691JA, Son, the Netherlands  
pvdboom@zonnet.nl

<sup>2</sup>Institute of Botany, Academy of Sciences of the Czech Republic, CZ-252 43 Průhonice, Czech Republic;  
Department of Botany, Faculty of Natural Sciences, Charles University, Benátská 2, CZ-128 01 Praha 2,  
Czech Republic  
palice@ibot.cas.cz

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Sixteen species of lichens and lichenicolous fungi are recorded for the first time from the Czech Republic. Additional data for *Micarea micrococca* and *Xylographa vitiligo* are provided. Austrian and German localities are added for *Gyalideopsis helvetica*. Notes on morphology, ecology and sometimes on chemistry, are given.

**Key words:** Biodiversity, ascomycetes, heterobasidiomycetes, new records, central Europe.

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Šestáct druhů lišejníků a lichenikolních hub bylo poprvé nalezeno v České republice. U druhů *Micarea micrococca* a *Xylographa vitiligo* jsou publikovány nové údaje. U druhu *Gyalideopsis helvetica* jsou doplněny lokality z Rakouska a Německa. U jednotlivých druhů jsou připojeny poznámky týkající se jejich morfologie, ekologie a v některých případech i jejich chemických vlastností.

### INTRODUCTION

Since the publication of the Czech catalogue of lichens (Vězda and Liška 1999) and the treatment on lichenicolous fungi from the Czech Republic (Kocourková 2000), several additional lichens and lichenicolous fungi have been reported [see Liška (2005) for amendments of lichen records until 2004]. The most extensive work done after the appearance of those summaries was published by Kocourková and van den Boom (2005). Specimens in the annotated list below were mainly found during field trips to south-western and northern Bohemia by the authors from 2003 to 2005, including a one-day joint excursion in the autumn of 2003 by both authors. Additional new records for the Czech Republic originating from other field studies by the second author are also included. Most records come from the Šumava Mts. (Bohemian Forest) and the adjacent foothills, the Novohradské hory Mts. as well as the sandstone

area of „České Švýcarsko“ (Bohemian Switzerland). Single specimens come from western Bohemia (Krušné hory Mts.), central Bohemia (Český ráj – „Czech Paradise“), Eastern Bohemia (Krkonoše Mts., Orlické hory Mts., the Labe valley) and southern Moravia (Mikulov area). For an impression of the collecting sites, see fig. 1. Data on ecology, morphology and sometimes on chemistry are given. In total, eighteen species of lichens or lichenicolous fungi are treated, of which sixteen are recorded as new to the Czech Republic.

#### MATERIALS AND METHODS

Specimens have been deposited in the private herbarium of P. van den Boom and herbarium of Z. Palice (part of PRA), unless mentioned otherwise. The number after the collector's name (in the annotated list) means that the respective specimen is kept in the herbarium of that collector or the number is missing (s.n. = sine numero). Measurements of anatomical details were performed on water mounted slides. The chemistry was analysed by TLC (thin layer chromatography) and sometimes by MCT (microcrystal tests) using the standardized methods of Orange et al. (2001) and Huneck and Yoshimura (1996). The nomenclature of the taxa corresponds in general with Coppins (2002), Santesson et al. (2004) or Hawksworth (2003). Taxa recorded as new for the Czech Republic are indicated by an asterisk.

#### RESULTS

##### ***Bacidina neosquamulosa* (Aptroot et van Herk) Ekman\***

S Bohemia, Šumava Mts., SW of Frymburk, S side of Lipno lake, SSW of Vítkův kámen, Pernek, ruin of factory, roadside trees along field, on *Acer pseudoplatanus*, 48°37.1' N, 14°04.2' E, 680 m, 28 October 2004, P. & B. v.d. Boom 33941; S Bohemia, Šumava Mts., WSW of Frymburk, S side of Lipno lake, Vítkův kámen, ruin Vítkův Hrádek with acidic stones and mortar, small field with *Vaccinium myrtillus* and mixed trees, on *Acer pseudoplatanus*, 48°38.7' N, 14°06.2' E, c. 1040 m, 28 October 2004, P. & B. v.d. Boom 33918; S Moravia, distr. Břeclav, old Jewish cemetery in Mikulov, on bark of *Juglans regia*, 300 m, 14 October 2001, Z. Palice 6202.

In the original description (Aptroot and van Herk 1999) this species was noted from Belgium, Great Britain and the Netherlands. Subsequently, records were also published from Germany (Scholz 2000), France, Luxembourg and Switzerland (Aptroot et al. 2001). Recently it was also discovered in northern Europe (Santesson et al. 2004), Poland (Kubiak and Sparrius 2004) and the U.S.A. (Ekman 2004). *B. neosquamulosa* is a species of basic bark. It has a wide ecological amplitude, being found on moderately to strongly eutrophicated substrata. It is tolerant of urban conditions and often found in species-poor communities (Aptroot and van Herk 1999).

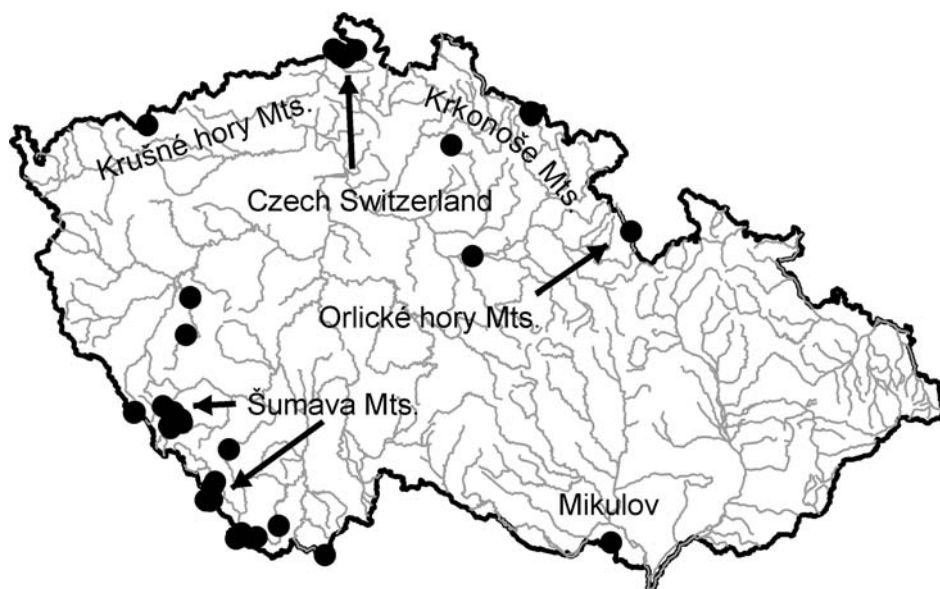


Fig. 1. Collecting sites in the Czech Republic and adjacent areas.

***Catinaria neuschildii* (Körb.) P. James\***

SW Bohemia, Šumava Mts., the Vydra valley: on the left bank of the river near abandoned chalet Hálkova chata, on bark of *Salix*, c. 845 m, 21 October 2003, Z. Palice 8184, O. Peksa & P.v.d. Boom.

*Catinaria neuschildii* is readily distinguishable from the related *C. atropurpurea* by its 12-16 ascospores per ascus. It seems to be a circumboreal species of broad-leaved boreal tree species. It is not rare in Fennoscandia (Santesson et al. 2004), present in Russian taiga-forests (e.g. Hermansson et al. 1998), and was recently discovered in North America (R.C. Harris, in litt.).

In central Europe it is more rarely recorded, being known from only a few provinces in a country or treated as extinct (e.g. Scholz 2000, Hafellner and Türk 2001, Pišút et al. 2001). In Western Europe it is missing or, as in Great Britain, is very rare (Coppins 1992).

***Cladonia borealis* S. Stenroos\***

SW Bohemia, Šumava Mts., SSE of Klatovy, E of Srní, NW of Turnerova chata, along stream Vydra, SW exposed scree, on granite boulders, somewhat shaded under a *Betula* tree, 845 m, 21 October 2003, Z. Palice, O. Peksa & P.v.d. Boom 31662.

This species has a worldwide distribution. It is circumpolar in the northern hemisphere and is known from the subantarctic islands (Stenroos 1989). It is easily mistaken for *C. coccifera*, but *C. borealis* is usually more corticate and contains barbatic acid instead of zeorin. Although *C. borealis* is not explicitly mentioned

from the Czech Republic by Stenroos (1989), she provides a distribution map where one dot seems to be referable to this country.

**Note:** usnic and barbatic acids were detected by TLC. According to preliminary observations this species seems to be not rare in the Czech Republic but a detailed chemical study is needed to confirm this.

***Cladonia metacorallifera* Asahina\***

SW Bohemia, Šumava Mts., SSE of Klatovy, E of Srní, W side of Vydra, Mnich, E exposed slope with *Betula-Picea* forest, on mossy rocks, 845 m, 21 October 2003, Z. Palice, O. Peksa & P. v.d. Boom 31705.

In the original description, this species was cited only from Japan (Asahina 1939), but Tønsberg (1975) recorded it from Norway and Austria as new to Europe. The presence of *C. metacorallifera* in the Vydra valley was anticipated by Liška et al. (1999) who discovered *Cladonia luteoalba* near the specimen cited above, on the opposite side of the river. *C. luteoalba* is known to be closely associated with three red-fruited *Cladonia* species (*C. borealis*, *C. coccifera*, *C. metacorallifera*) in the early stages of its development, and a kind of commensalism between *C. luteoalba* and these species has been suggested as the most feasible explanation (Stenroos 1990). Among the red-fruited *Cladonias* mentioned above, only *C. metacorallifera* contains squamatic acid, a substance detected in the respective Czech specimen of *C. luteoalba*.

**Note:** didymic, squamatic and usnic acids were detected by TLC.

***Gyalideopsis helvetica* van den Boom et Vězda\***

SW Bohemia, Šumava Mts., Hamerský potok valley between Antýgl and Horská Kvilda, on wood of log, 990 m, 22 October 2003, Z. Palice 8120; S Bohemia, Šumava Mts., Mt. Trojmezna hora, climax spruce forest, along border trail of Germany and Czech Republic, on bark of *Sorbus*, 48°46.34' N, 13°49.48' E, 1360 m, 30 October 2004, Z. Palice 8749 & J. Šárová; E Bohemia, Krkonoše Mts.: Obří důl valley – „U kapličky“, on bark of *Sorbus*, 50°43.35' N, 15°43.65' E, 940 m, 8 June 2005, J. Liška, Z. Palice 8992 & Š. Slavíková.

In van den Boom and Vězda (2000), this species is described from Switzerland and Germany based on fertile as well as sterile collections. It has also been recorded recently from Austria (Hafellner et al. 2005). We have observed that the fertile specimens contain only a few soralia whereas the sterile specimens are covered abundantly with excavate soralia.

**Note:** All published specimens were collected in humid places either from bases of smooth-barked trees (e.g., accompanied by *Biatora* sp. div., *Dimerella pineti*) or from slowly decaying wood on the ground. These finds indicate that it could be a species of habitats with prolonged snow-lie.

Additional specimens studied: Germany: Niederbayern, Böhmerwald, Bayer. Plöckenstein, climax spruce forest, along border trail of Germany and the Czech Republic, on bark of *Sorbus*, 48°46.30' N, 13°49.69' E, 1361 m, 30 October 2004, Z. Palice 8733 & J. Šárová (fertile). Austria: Oberösterreich, Mühlviertel, Plöckenstein – climax spruce forest, along state border trail of Austria and Czech Republic, W of the top, on bark of *Sorbus*, 48°46.28' N, 13°51.36' E, 1365–1370 m, 30 October 2004, Z. Palice 8731 & J. Šárová.

***Halecania viridescens*** Coppins et P. James\*

W Bohemia, Šumava Mts., Železná Ruda, a small valley of one of tributaries (the fourth – last but one in the Czech territory) of the Debrník valley, on bark of *Fagus*, 49°07'08-09" N, 13°14'45" E, c. 760 m, 11 July 1998, Z. Palice 1352 & C. Printzen (argopsin detected by TLC); SW Bohemia, Šumava Mts., W of Kašperské Hory, 1 km N of Rejštejn, S of Radešov, left side of stream Otava, mixed trees and E exposed outcrops, on *Acer pseudoplatanus*, 49°08.9' N, 13°30.8' E, 750 m, 29 October 2004, P. & B. v.d. Boom 33965; SW Bohemia, Šumava Mts., W of Kašperské Hory, near Karlina Pila, NNW of Losenice, N of entrance of path to Bílý Potok, open field with *Alnus* along stream, on *Alnus*, 49°07.2' N, 13°34.4' E, 800 m, 23 October 2003, P. & B. v.d. Boom 31773; S Bohemia, S of Český Krumlov, N of Rožmberk nad Vltavou, 1 km S of crossing Náhořany, Branná, grassy place with *Salix* between road and river Vltava, on *Salix*, 48°42.2' N, 14°20.9' E, 520 m, 27 October 2004, P. & B. v.d. Boom 33907, 33899; S Bohemia, Novohradské hory Mts., Pohoří na Šumavě: margin of spring-area Pohořské prameniště, c. 0.5 km N of the village, 48°35.94' N, 14°41.43' E, on branch of *Salix* near a stream, 900 m, 6 July 2005, Z. Palice 9144.

In his original description, Coppins (1989) mentioned the species only from Great Britain. Now it is known from many countries and seems to be widely distributed in Europe. It was also reported from the Canary Islands (Tønsberg 2002) and the Pacific Northwest in North America (Tønsberg 1994). It apparently prefers climatically mild, subatlantic conditions. In some localities in the Czech Republic, it is very abundant but rarely fertile. All specimens listed above were sterile.

***Lecania coeruleorubella*** (Mudd) M. Mayrhofer\*

W Bohemia, Krušné hory Mts., Kovářská: Vápenka (abandoned part of the settlement Háj), c. 1 km WSW to SW of Kovářská, on mortar in the wall of the house-ruin, 50°25.53' N, 13°01.48' E, c. 835 m, 27 July 2004, J. Liška, Z. Palice 9272 & P. Uhlík; S Bohemia, Šumava Mts., WSW of Frymburk, S side of Lipno lake, Vítkův kámen, ruin Vítkův Hrádek with acidic stones and mortar, small field with *Vaccinium myrtillus* and mixed trees, on a shady wall, 48°38.7' N, 14°6.2' E, c. 1040 m, 28 October 2004, P. & B. v.d. Boom 33924.

Mayrhofer (1988) recorded this species from Germany, Slovakia, France, Norway, Sweden and Austria mostly based on specimens from the 19th century. In van den Boom (1992), this species is shown to be not rare in Luxembourg, growing exclusively on mortar on old walls. It was recently reported also from North America (van den Boom and Ryan 2004). In Great Britain it has not been recorded since 1900 and is treated as an extinct species there (Coppins 2002).

***Lecania cyrtellina*** (Nyl.) Sandst.\*

SW Bohemia, Šumava Mts., Zhůří: valley of Pěnivý potok brook, nearby the settlement Bílý Potok, on weathered bark of *Ulmus laevis*, 49°06.3' N, 13°34.1' E, 770 m, 22 June 1995, Z. Palice 5232; S Bohemia, Šumava Mts., Volary, Černý Kříž: Mt. Jelení vrch (c. 3 km SSW of Černý Kříž), remnants of beech forest on E slope, on *Fagus*, 48°50'05" N, 13°51'20" E, c. 880 m, 21 April 1998, Š. Bayerová & Z. Palice 208.

This is a rather inconspicuous lichen, easily mistaken in the field for a species of *Micarea* or *Scoliciosporum*. *L. cyrtellina* is widely distributed in Europe, but rarely collected. It was reported from Scandinavia (Santesson et al. 2004) to Spain (Fiol 1991) in western Europe, but also from northeastern to southeastern Europe, e.g., Poland (Alstrup and Olech 1992), Slovenia (Mrak et al. 2004) and Lithuania (Motiejūnaite 2003). The record from Slovakia (Guttová and Palice 1999) is a mis-

identification of a poorly developed *Lecania cyrtella*. The species seems to be confined to humid sites avoiding open landscape. Taxonomically, it needs further study.

***Lecania hutchinsiae* (Nyl.) A. L. Smith\***

E Bohemia, Orlické hory Mts., S part, Podlesí, a ruin of a house at roadside, on shaded, overhanging side of a weakly lime-enriched stone, c. 50°14' N, 16°32.5' E, 530 m, 19 April 1996, Z. Palice 191.

In Mayrhofer (1988), *L. hutchinsiae* was noted from the British Isles to Romania. Since then the knowledge on its distribution has considerably increased. It is widely distributed in Europe, from southern Scandinavia to several areas in southern Europe and the Canary Islands (unpublished specimens in herbarium of van den Boom). The Czech specimen is rather poorly developed, but it has the typical areolate thallus and rather small ascospores. Its habitus is comparable with specimens from brick occurring in northwestern Europe.

***Micarea micrococca* (Körb.) Gams ex Coppins**

W Bohemia, Šumava Mts., S of Klatovy, S of Železná Ruda, Debrník, path in *Picea* forest with *Fraxinus* trees, 49°07.4' N, 13°14.9' E, 710 m, 24 October 2003, P. & B. v.d. Boom 31826; SW Bohemia, Šumava Mts., S of Kašperské Hory, 1 km W of Hartmanice, near Peklo, *Picea* forest with acidic outcrops, on shady slope, on stump, 49°10.1' N, 13°26.2' E, 660 m, 30 October 2004, P. & B. v.d. Boom 34007; SW Bohemia, Šumava Mts., S of Kašperské Hory, SE of Karlina Pila, E of Losenice, S slope of Šáfářův vršek, S exposed scree along *Picea* forest, on rotting trunk of fallen *Picea*, 49°06.4' N, 13°35.1' E, 850 m, 29 October 2004, P. & B. v.d. Boom 33978; N Bohemia, NE of Děčín, National Park České Švýcarsko, S of Mezní Louka, path in *Picea* woodlands with sandstone outcrops, on *Acer pseudoplatanus*, 50°52.4' N, 14°19.0' E, 250 m, 2 May 2005, P. & B. v.d. Boom 34772; N Bohemia, NE of Děčín, National Park České Švýcarsko, E of Hřensko, N of Vysoká Lípa, unpaved road along field and open places in woodland, with sandstone outcrops, on stump, 50°51.8' N, 14°21.3' E, 350 m, 2 May 2005, P. & B. v.d. Boom 34743; N Bohemia, Krásná Lípa, National Park České Švýcarsko, the Hřebcový důl valley, along asphalt road, still above the spring of Červený potok brook, c. 2.5 km WSW of Kyjov, on decaying wood, 50°54'10" N, 14°25'40" E, 325 m, 14 August 2001, Z. Palice 5846, O. Peksa & B. Wagner; E Bohemia, protected landscape area Český ráj, Hrubá Skála, Čertoryje valley, on rotting wood, 330 m, 26 February 1995, Z. Palice (s.n.) & P. Šprýňar; E Bohemia, the Labe valley, Chvaletice, sedimentation basin NNW of the power station, on decaying wood of a broken dead tree, 50°02'20" N, 15°26'40" E, 220 m, 21 April 1999, Z. Palice 1968.

This species, previously misinterpreted, was treated as a synonym of *Micarea prasina* in Coppins (1983) and this concept was also followed in the Catalogue of the lichens of the Czech Republic (Vězda and Liška 1999), in which records published as *Catillaria micrococca* (Körb.) Th. Fr. are referred to *M. prasina*. The last above mentioned record from Chvaletice sedimentation basin (Palice no. 1968) was published by Palice and Soldán (2004) as „*Micarea prasina* agg.“. Apparently many other records published as *Micarea prasina* will belong here.

**Note:** *M. micrococca* is characterized by the small whitish apothecia [(0.05-) 0.1–0.25(–0.3) mm] which are often abundantly present, the very thin greenish, effuse and uneven thallus, which sometimes becomes thinly coated by gelatinous algae and appears slightly glossy when dry. It contains methoxymicareic acid, which does not form crystals in acetone extract.



***Micarea subviridescens* (Nyl.) Hedl.\***

SW Bohemia, Šumava Mts., the Vydra valley: between Antýgl and Čeňkova Pila near Turnerova chata chalet, on humus in ditch, 49°05' N, 13°30' E, 845 m, 21 October 2003, P. v.d. Boom & Z. Palice 8145; S Bohemia, Prachatice, the Blanice valley, nature reserve Zábřdská skála (c. 4.5 km W of Prachatice), on humus among bryophytes in crevices of gneiss rock above the river, 570 m, 14 September 2002, Z. Palice 7038 & J.Vondrák.

*M. subviridescens* is a member of the *M. prasina* group. This taxon was treated as a synonym of *M. prasina* in Coppins (1983). Recently it was treated as a separate species by several authors (Coppins 2002, Hitch 2002, van den Boom 2003). This species grows mainly on sandy and mineral/humus-rich soil and is easily mistaken for a *Lepraria* species, but it contains small 'micareoid' algae and has a unique chemistry – prasinic acid. The identity was confirmed by MCT following the methods of Huneck and Yoshimura (1996). It is rarely fertile, unlike *Micarea prasina* Fr. s. str. and *M. micrococca*, which are known from a broader range of substrata (bark, wood, rarely peaty soil, silicate stones and plant debris) and are often abundantly fertile. Both cited specimens of *M. subviridescens* are sterile. They were compared with fertile material in herbarium of v. d. Boom that had been identified by B. J. Coppins.

Note: *M. subviridescens* can easily be distinguished from *M. prasina* s. str. and *M. micrococca* by the presence of prasinic acid. This lichen substance forms clusters of crystals in acetone extract, varying from (straight) needle-like to broadened, up to 5 µm wide and up to c. 50 µm long, hyaline to slightly yellowish. These crystals are always abundantly present in the extract. *M. prasina* s. str. contains micareic acid and does not produce any crystals in acetone extract. Interestingly, thalli of both cited specimens also produced hyaline needle-like crystals in KOH (observed under the microscope by the second author).

***Micarea viridileprosa* Coppins et van den Boom\***

W Bohemia, Šumava Mts., S of Kašperské Hory, SE of Karlina Pila, E of Losenice, S slope of Šafářův vršek, S exposed scree along *Picea* forest, on rotting trunk of fallen *Picea*, 49°06.4' N, 13°35.1' E, 850 m, 29 October 2004, P. & B. v.d. Boom 33979; S Bohemia, Šumava Mts., Volary, dam of Plešné jezero lake, on *Salix* by brook issuing from the lake, 1090 m, 29 May 1998, Z. Palice 1517; S Bohemia, Šumava Mts., W of Vyšší Brod, Čertova stěna, right side of Vltava, W exposed scree, surrounded by a *Pinus* forest, 650 m, 25 October 2004, P. & B. v.d. Boom 33841; N Bohemia, Hřensko, National Park České Švýcarsko, remnants of beech forest in the valley of Suchá Bělá brook, 2.5 km NE of Hřensko, on exposed root of *Picea* below sandstone overhang, 50°53'35-40" N, 14°16'00-10" E, c. 365 m, 1 May 2002, Z. Palice 6606 & L.Voříšková; N Bohemia, NE of Děčín, National Park České Švýcarsko, E of Hřensko, S of Mezní Louka, path in *Picea* woodlands with sandstone outcrops, 50°52.4' N, 14°19.0' E, on base of *Picea*, 250 m, 2 May 2005, P. & B. v.d. Boom 34756; *ibid.*, on vertical facing sand at bank of path, 50°52.8' N, 14°18.7' E, 300 m, 2 May 2005, P. & B. v.d. Boom 34764; N Bohemia, Krásná Lípa, National Park České Švýcarsko, the Hřebcový důl valley, along asphalt road, still above the spring of Červený potok brook, c. 2.5 km WSW of Kyjov, on decaying wood, 50°54'10" N, 14°25'35-40" E, c. 325 m, 14 August 2001, Z. Palice 5826, O. Peksa & B. Wagner.

This is a sorediate species in the *Micarea prasina* complex recognizable due to the presence of gyrophoric acid (a fleeting rose-red C+ reaction) in the thallus and apothecia. All collections from the Czech Republic originate from relatively

humid and cold localities. It seems to have a suboceanic bias in distribution, but further study is needed to confirm this. In van den Boom and Coppins (2001), *M. viridileprosa* was noted for western and central Europe. Sparrius (2003) has recorded the species for Poland.

***Ramonia interjecta* Coppins\***

S Bohemia, Šumava Mts., W of Frymburk, S side of Lipno lake, SSW of Vítkův kámen, Pernek, ruin of factory, roadside trees along field, on *Sambucus*, 48°37.1' N, 14°04.2' E, 680 m, 28 October 2004, P. & B. v.d. Boom 33946.

This species is easily overlooked, and in the original description, it was recorded only from the United Kingdom, Ireland and Sweden (Coppins et al. 1994). In the Netherlands it is known from a few localities (e.g. van den Boom 2004), and Sérusiaux et al. (2003) recorded it from Belgium. These latter records are from the soft bark of *Sambucus* and *Populus*. So far, this species seems to be distributed in temperate Europe, including southern Norway (Santesson et al. 2004).

***Stigmatidium bellemerei* Cl. Roux et Nav.-Ros.\***

S Bohemia, Šumava Mts., WSW of Frymburk, S side of Lipno lake, Vítkův kámen, ruin 'Vítkův Hrádek' with acidic stones and mortar, small field with *Vaccinium myrtillus* and mixed trees, on a shady wall, on thallus and apothecia of *Lecania coeruleorubella*, 48°38.7' N, 14°06.2' E, c.1040 m, 28 October 2004, P. & B. v.d. Boom 33923, 34015.

Roux et al. (1998) described the species, growing on thallus and apothecia of *Lecania nylanderiana*, from a single locality in France. Subsequently, the species was recorded in Luxembourg on *L. coeruleorubella* (Sérusiaux et al. 1999) and in Germany on *Lecania suavis* (Triebel and Scholz 2001). This latter record was collected by Arnold in 1879 and distributed as *Arthopyrenia lichenum* (Lich. Exs., 820).

***Syzygospora physciacearum* Diederich\***

S Bohemia, Šumava Mts., SW of Frymburk, S side of Lipno lake, Vítkův kámen, ruin 'Vítkův Hrádek' with acidic stones and mortar, small field with *Vaccinium myrtillus* and mixed trees, on *Acer platanoides*, on *Physcia tenella*, 48°38.7' N, 14°06.2' E, c.1040 m, 28 October 2004, P. & B. v.d. Boom 33922; *ibid.*, on *Salix*, on *Physcia tenella*, P. & B. v.d. Boom 33958.

The genus *Syzygospora* belongs among lichenicolous and fungicolous heterobasidiomycetes with aseptate basidia. *S. physciacearum* was recently described by Diederich (1996) and, in this work, the species is shown to be almost cosmopolitan. The species is not confined to *Physcia* as a host and may also occur on related taxa of the *Physciaceae* such as *Physconia* and *Heterodermia* (Diederich 2003).

***Tremella phaeophysciae* Diederich et M. S. Christ.\***

SW Bohemia, Šumava Mts., W of Kašperské Hory, 1 km N of Rejštejn, S of Radešov, left side of stream 'Otava', mixed trees and E exposed outcrops, on *Fraxinus*, on *Phaeophyscia orbicularis*, 49°08.9' N, 13°30.8' E, 750 m, 29 October 2004, P. & B. v.d. Boom 33970.



The genus *Tremella* belongs among heterobasidiomycetes with septate basidia.

This lichenicolous species is apparently confined to the genus *Phaeophyscia*. According to Diederich (1996) it is widely distributed all over Europe and seems to be very common. It was also recently recorded from North America by Diederich (2003).

***Tubeufia heterodermiae* Etayo\***

S Bohemia, Šumava Mts., SW of Frymburk, S side of Lipno lake, SSW of Vítkův kámen, Pernek, ruin of factory, roadside trees along field, on *Fraxinus*, on *Physcia tenella*, 48°37.1' N, 14°04.2' E, 680 m, 28 October 2004, P. & B. v.d. Boom 33950.

Etayo (2002) described this lichenicolous fungus from a single locality in the western Pyrenees. It is a very inconspicuous species, having pale apothecia up to 0.2 mm diam., with the colour somewhat similar to the host species. In van den Boom (2004), this species is recorded from several localities in southern Netherlands where it is common, and in van den Boom and van den Boom (2006), the species is mentioned from northern Belgium. The currently known host species are *Heterodermia obscurata*, *Physcia adscendens*, *P. caesia* and *P. tenella* (van den Boom 2004).

***Xylographa vitiligo* (Ach.) J. R. Laundon**

SW Bohemia, Šumava Mts., the Vydra valley: a light coniferous stand with some *Betula* on boulder slope above Hálkova chata chalet, on dry wood of stump, 850-900 m, 17 October 1998, Z. Palice 1954, det. T. Tønsgaard (stictic acid with satellites detected by TLC); SW Bohemia, Šumava Mts., 8 SSE of Klatovy, E of Srní, NW of Turnerova chata, E side of Vydra, SW exposed scree, with stumps and *Betula* at the edge and vertical W exposed outcrops along path, on stump, 49°05.1' N, 13°30.7' E, 855 m, 21 October 2003, P. v.d. Boom 31707, 31729 & Z. Palice 8152; S Bohemia, Šumava Mts., Volary, Černý Kříž: Mt. Jelení vrch (c. 3 km SSW of Černý Kříž), remnants of beech forest on E slope, 48°50'05" N, 13°51'20" E, 850-900 m, 26 June 1996, Š. Bayerová & Z. Palice 7041; S Bohemia, Šumava Mts., Nová Pec, Mt. Plechý, climax spruce forest, on wood of *Picea abies*, c. 1340 m, 7 August 1996, Z. Palice s.n. (fertile!); S Bohemia, Šumava Mts., Mt. Plechý, E slope, S part of the glacial cirque of Plešné jezero lake, on hard wood of *Picea* stump, 48°46'30" N, 13°51'30" E, c.1325 m, 29 May 1998, Z. Palice 1530, det. Š. Bayerová & Z. Palice (stictic acid chemosyndrome detected by TLC); S Bohemia, Šumava Mts., the Hučina brook valley, ca 100 m up the stream of the confluence with the Studená Vltava, on hard wood of a pillar near the water, 48°51'40" N, 13°52'15" E, 17 May 2003, Z. Palice 6325; E Bohemia, Krkonoše Mts., Mt. Sněžka: Růžohorské sedlo saddle, a light *Picea* forest at timber line, 50°43'20" N, 15°44'30" E, c. 1300-1350 m, 25 July 2000, Z. Palice 4204; E Bohemia, Krkonoše Mts., Růžový důl valley, a clearing-line below the cable car, on dry wood of stump, 960 m, 50°42.64' N, 15°44.32' E, 28 August 2000, Š. Bayerová, J. Liška & Z. Palice 5076.

This is a widespread species in Northern Hemisphere where it typically grows in humid localities on slowly decaying wood near the ground, especially the wood of conifers and also drift wood (Orange 1992, Ryan 2004). Wirth (1995) states it is confined to humid habitats with relatively prolonged snow cover. Our records come mostly from montane old-growth forests (both coniferous and broad-leaved) but one specimen was collected on a kind of secondary substrate – a wooden pole near a stream. It is apparently undercollected in the Czech Republic because it is often sterile. *Xylographa vitiligo* can be distinguished from other

sterile lignicolous species with an immersed thallus and discrete soralia by the presence of the stictic acid chemosyndrome (K +dilute yellow in a squash preparation). It is missing in the Czech catalogue of lichens (Vězda and Liška 1999), but the amendments and corrections of this book (Liška 2005) include two overlooked records. In the past, this species was recorded from the Sudetes: by Flotow (1839) as “*Lecanactis lyncea* var. *spilomatica*” (perhaps already outside the Czech territory) and Anders (1925) as “*?Xylographa spilomatica*”.

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