

## New and noteworthy records of lichens in the Czech Republic

Nové a pozoruhodné lišejníky v České republice

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A commented overview of selected new and noteworthy lichens collected especially at the territory of the Czech Republic is given. A few remarkable collections from other European countries (Austria, France, Germany, Rumania, Russia, Slovakia, Sweden) are also included. Apart from lichens, several lichenicolous and non-lichenized fungi traditionally treated by lichenologists (e. g. some species of the polyphyletic order *Caliciales* s. l.) are also included in the list. The vast majority of the mentioned species was collected in the Šumava Mts – a highly forested area ranging along the border with Austria and Germany – at present one of the most preserved regions in the Czech Republic. Several findings are interesting from the lichenogeographical point of view (e. g. *Agonimia allobata*, *Anzina carneonivea*, *Bacidia carneoglaucia*, *B. viridifarinsa*, *Chaenotheca sphaerocephala*, *Fellhaneropsis myrtillicola*, *Japewia subaurifera*, *Melaspilea granitophila*, *Micarea anterior*, *M. contexta*, *M. deminuta*, *M. lapillicola*, *M. marginata*, *M. vulpinaris*, *Polyblastia gothica*, *Porina hibernica*, *Porpidia ochrolemma*, *Rinodina interpolata*, *Scoliosporum curvatum*, *S. schadeanum*, *Trapeliopsis glaucolepidea* etc.). Some of the treated lichens are probably undercollected to a great degree (e. g. *Anisomeridium nyssaegenum*, *Arthonia muscigena*, *Caloplaca obscurella*, *Micarea botryoides*, *M. myriocarpa*, *M. polycarpella*, *Psilolechia clavulifera* and taxa of the genera *Absconditella*, *Macentina*, *Vezeadae* etc.). Altogether 82 taxa are discussed, of which 53 are new for the Czech Republic; of these 10 are new for Central Europe (*Absconditella pauxilla*, *Chaenotheca sphaerocephala*, *Chaenothecopsis epithallina*, *C. nigra*, *Japewia subaurifera*, *Micarea contexta*, *M. deminuta*, *M. lapillicola*, *M. marginata*, *M. vulpinaris*). Furthermore, some of the collections included represent other new country records. The following species are presumably reported for the first time from the respective countries: *Absconditella celata* (Slovakia), *Agonimia allobata* (Slovakia), *Catillaria alba* (Slovakia), *Chaenotheca sphaerocephala* (Rumania), *Fellhaneropsis vezeadae* (Slovakia), *Hypocomyce leucococca* (Rumania), *Macentina dictyospora* (Slovakia), *Micarea hedlundii* (Slovakia), *Micarea lynceola* (France), *Micarea myriocarpa* (Austria), *Micarea polycarpella* (Sweden), *Micarea vulpinaris* (Germany), *Porina leptalea* (Sweden), *Scoliosporum curvatum* (Rumania, Slovakia), and *Trapelia corticola* (Rumania). The following new combination – *Micarea lynceola* (Th. Fr.) Palice comb. nov. is proposed. *Trapeliopsis percrenata* is here considered to be conspecific with *T. glaucolepidea*.

**Key words:** *Absconditella*, *Micarea*, *Trapeliopsis*, *Vezeadae*, Czech Republic, Bohemia, Šumava Mts, lichens

### Introduction

The area of the Czech Republic is lichenologically explored very unequally in both time and space horizons. The best known and most thoroughly explored areas are situated in

mountainous (especially mountain complex of the Sudeten) and, on the other hand, in xerothermic regions (central Bohemia, S Moravia). In general, Moravia seems to be up to now more intensively studied than Bohemia (mainly due to the comprehensive investigations of Kovář, Suza, Vězda and others).

The vast majority of floristic papers dealing with the Czech lichen flora originated in the first half of this century, especially thanks to lichenological activity of Anders, Kovář, Kuťák, Hilitzer, Podzimek, Suza, Servít, Klement, Nádvorník, Černohorský and other workers from the earlier generation. More recently, Vězda also published a number of floristic papers and many lichens are still being issued in his lichen exsiccata [a detailed account of the papers dealing with the lichenological exploration on the territory of former Czechoslovakia (excl. Transcarpathian Ukraine) is given by Vězda (1980) in his catalogue]. In recent decades, the amount of floristic papers from the territory of the Czech Republic has been decreasing. A well arranged survey of the intensity and range of lichenological exploration in the Czech and Slovak Republics in the past was published by Liška (1992).

In the present paper, collections mainly from the Šumava Mts (Böhmerwald, the Bohemian Forest) are reported. These mountains form a range extending to the territories of three states – the Czech Republic, Germany and Austria (part of the area named “Mühlviertel”). The importance of the Šumava Mts for biodiversity in the Czech Republic was stressed by Liška et al. (1996, 1998a, 1998b). They presented pre- and post-1970 distribution maps of some selected endangered lichens; many of these species occur at present only in the Šumava Mts where the last relict Czech localities of some lichens are situated, e. g. *Cladonia botrytes*, *Lobaria amplissima*, *Lopadium disciforme*, *Nephroma bellum*, *N. parile*, *N. resupinatum*, *Peltigera aphthosa*, *Ramalina thrausta*, *Sphaerophorus globosus* (i. e. the lichens endangered by extinction in Central Europe as a whole, excluding the Alps). Presumably the greatest contribution to the knowledge of the lichen flora on the Czech side of the Bohemian Forest was that by Alfred Hilitzer who mentioned more than two hundred lichens from this area in his floristic papers (Hilitzer 1924, 1926, 1929). He also cited several species from the neighbouring German area (Javor = Grosser Arber, Roklan = Rachel, Luzný = Lusen etc.). Of all his interesting findings in the Bohemian Forest, *Porina thuretii* (Hepp) Lettau (Hilitzer 1929: 105) and *Pyxine soredata* (Ach.) Mont. (Nádvorník 1947: 121, sub *Physcia endochrysoides*) are particularly worth of mentioning (the locality of the latter species lies probably at the territory of Germany yet; Poelt, in litt.). Moreover, some so far unknown or poorly known lichen taxa for the Czech Republic and in one case also for Germany were discovered during the revision of Hilitzer's rich lichen material (PRM). These specimens were included in this paper and are mentioned below.

## Material

Recent collections of the present author and/or his colleagues as well as material deposited in some public herbaria (BRA, GB, H-NYL, M, PRC, PRM, UPS) were studied. Few collections were kindly provided from several private herbaria (herb. Bayerová, herb. Halda, herb. Printzen, herb. Vězda). The collections cited below are kept in the herbaria of the collectors, unless mentioned otherwise. The nomenclature of taxons not followed by author's name corresponds to Vitikainen et al. (1997) for lichens and lichen-allied fungi and to Corley & Crundwell (1991) for bryophytes.

## Special part

[Explanations: \* – new to the Czech Republic; (\*) – new to the Czech Republic, but issued before already in A. Vězda: Lich. rar. exs.; + – non-lichenized fungus (lichenicolous or lichen-allied fungus)]

### \* *Abscuditella celata* Döbblers et Poelt, Herzogia 4: 364 (1977)

E Bohemia, the Labe valley, Chvaletice: sedimentation basin near the power station, ca 1 km E of the village, on moist contaminated soil, alt. 220 m, 5. XI. 1995 and 21. III. 1996, Z. Palice (some duplicates distributed to different herbaria as *A. fossarum*); S Bohemia, the Šumava Mts, Volary: Mt Jelení vrch (ca 3 km S of Černý Kříž), rest of beech forest on E slope, cut surface of *Picea* stump, 850–900 m, 25. IX. and 4. XII. 1994, Z. Palice; Ibid.: Mt Stožec, on rotting wood near “Stožecká kaple” chapel, together with *Placynthiella icmalea* and *Thelocarpon intermediellum*, 930 m, 26. I. 1997, B. Buryová et Z. Palice (herb. Palice); Ibid., 15. X. 1997, Z. Palice

Characterized by very small (in diameter ca 0.05–0.1 mm), orange-red to red-brown, at the beginning perithecioid, then rather deeply urceolate apothecia and four-celled, fusiform ascospores (10–18 × 4–6.5 μm). The apothecia are usually very dispersed on the substrate and a bit of patience is necessary to find them in single samples.

It occupies various acidic substrates as decaying *Sphagnum*, wood or compacted soil (Purvis et al. 1992: 57, Santesson 1993: 7). Reported from Sweden (the type locality) and Great Britain so far. There is also a specimen known from Finnish North Karelia (Palice, in prep.). Terricolous *Abscuditella fossarum* described from Slovakia (Vězda & Pišút 1984: 342) and reported also from France (Diederich et al. 1988: 20) and the Netherlands (van den Boom 1998: 40–41) might be conspecific with *A. celata*, but a detailed study is necessary to elucidate its real taxonomic value.

New to Slovakia.

Additional record: Slovakia: N. P. Slovenský raj, Hrabušice: nature reserve “Priem Hornádu” – nearby the point “Letanovský mlyn”, on wood of half-immersed log lying across the stream of the Hornád river, alt. 520–530 m, 9. VI. 1998, Š. Bayerová, J. Halda et Z. Palice 904

### *Abscuditella lignicola* Vězda et Pišút, Nova Hedwigia 40: 344 (1984)

(frequent in the Šumava Mts; only extra-Šumava collections are mentioned specifically in the following text)

W Bohemia, the Brdy Mts, Radošice: valley of Smolivecký potok brook, on the bark of spruce stump, together with *Placynthiella icmalea*, 600 m, 15. II. 1997, Z. Palice; Central Bohemia, the Brdy Mts, Jince-Ohrazenice: at forest-road cutting at the beginning of the climb of Mt Koníček (NE slope) near the forest margin, ca 2 km SW of Jince, on old polypore at decaying stump, alt. 470 m, 21. II. 1998, Š. Bayerová, A. Guttová et Z. Palice 1046; Central Bohemia, Beroun: nature reserve “Čísařská rokle” near Srbsko, the mouth of the gorge, on wood, alt. ca 300 m, 11. XII. 1994, Z. Palice; Ibid.: 1. V. 1996, Š. Bayerová et Z. Palice; Central Bohemia, Praha-Čimice: reserve “Drahanské údolí”, in valley of the brook, alt. ca 200 m, 8. IV. 1995, J. Halda 337; S Bohemia, the Novohradské hory Mts: Žofinský prales virgin forest, on fallen decorticated trunks, alt. 740–800 m, 16. XI. 1994, Z. Palice et P. Šimek (herb. Palice); S Bohemia, Třeboň: nature reserve “Stará řeka”, on the bark of branch of lying spruce trunk, 1. IV. 1997, Z. Palice; E Bohemia, Český ráj, Hrubá Skála: a gorge leading from the basin “Vidlák” to Krčkovice, alt. 300 m, 25. II. 1995, Z. Palice; Ibid.: the Čertoryje gorge, on rotten wood, alt. ca 300 m, 26. II. 1995, Z. Palice et P. Špryňar (herb. Palice); E Bohemia, the Orlické hory Mts: nature reserve “Zemská brána”, on spruce stump, alt. 500 m, 9. III. 1997, Z. Palice; SW Moravia, Jihlava: nature reserve “Kloc”, alt. 650 m, 17. X. 1996, Z. Palice (Liška 1997: 19); Ibid.: Mt Špičák, on E slope below the top, alt. 710–720 m, Z. Palice (Liška 1997: 19); N Moravia, Javorníky Mts, Velké Karlovice: Podřaté settlement, on decaying log near the brook, alt. 650 m, 25. IV. 1998, Z. Palice 263

A frequent, but easily overlooked species growing principally on decorticated lying trunks and stumps, but also on shaded bark, decaying mosses, old polypores etc. in humid and mostly darkened situations. Except of natural and close-to-natural habitats, it was collected many times even in planted spruce stands at lower altitudes, nowadays badly affected by human activity (e. g. spruce plantations in small valleys in central and eastern Bohemia). From the Czech Republic, it was published three times: by Vězda (1995) in his *Lich. rar. exsic.* (n. 191), in the list of Liška (1997: 19) and by Kocourková-Horáková (1998a: 224). Probably widely distributed in the cool to temperate zones of the Northern Hemisphere as indicated by recent records from North America (Nash et al. 1998) and Siberia (see below).

*Additional records:* Germany: Bavaria, Vorderer Bayerischer Wald: Otterbachtal valley, on decaying wood, 19. VIII. 1995, J. Halda, Z. Palice et R. Türk (Bresinsky et al. 1995: 576); Baden-Württemberg, Schwäbische Alb (Mittlere Alb), Bad Urach: Föhrental valley (N of the Hohenwittlingen ruin), on decaying wood in the bed of the brook, alt. ca 550 m, 17. IV. 1998, Š. Bayerová, J. Halda et Z. Palice 1092; Baden-Württemberg, Schwäbisch-Fränkischer Wald, 7124 NW: Schmerbachtal valley (ca. 6 km NW of Alfdorf, W of Hüttenbühl), on wood, alt. 460–470 m, 19. IV. 1998, Š. Bayerová, J. Halda et Z. Palice 1077; Russia: W Siberia, the Altaj Mts: Teletskoe ozero lake, in forest (*Larix sibirica*) 1.5 km E of Jajlju village, on rotting wood, alt. 440 m, 3. X. 1995, J. Halda 1365, 1387 (herb. Halda, herb. Palice)

\* *Absoconditella pauxilla* Vězda et Vivant, *Folia Geobot. Phytotax.* 10: 205 (1975)

S Bohemia, the Šumava Mts, Volary, Nové Údolí: remnants of a military shelter near the railway stop, on decaying moss (*Atrichum undulatum*) and plant debris, alt. ca 820 m, 17. XI. 1995, Z. Palice 193; N Bohemia, Česká Lípa: damp meadow near the road between Doksy and Jestřebí villages, ca 1.5 km SE of Jestřebí, on wood in mud, alt. 260 m, 28. IX. 1995, Z. Palice

Pale and very small apothecia (ca 0.1–0.2 mm in diameter) of this species are quite similar to those of the better known *A. lignicola* and *A. trivialis*. It is well recognizable microscopically by narrowly fusiform, four-, occasionally six-celled ascospores (22–33 × 1.5–2 µm) which are pointed at both apices. It could be mistaken for *A. annexa* (Arnold) Vězda – an arctic-alpine species which has larger, 5- to 7-septate ascospores and also for *Bryophagus gloeocapsa* Nitschke ex Arnold (cf. Purvis et al. 1992: 57). So far reported from the French Pyrenees – over mosses on rock (the type locality) and Great Britain – on wood (Purvis et al. 1992). Other collections were made in the Netherlands (Brand et al. 1988: 18, Aptroot et al. 1998: 43). New to Central Europe.

*Absoconditella sphagnum* Vězda et Poelt, *Preslia* 37: 242 (1965)

(a relatively frequent species on peat-bogs in the Šumava Mts, therefore remarkable findings are mentioned only, such as the extra-Šumava collections or those from non-peat-bog habitats)

W Bohemia, the Krušné hory Mts, Přebuz: nature reserve “Velké jeřábí jezero”, on hummocks of *Sphagnum rubellum*, alt. 935 m, 20. X. 1997, A. Kolmanová et Z. Palice (herb. Palice); S Bohemia, Třeboň: nature reserve “V Rájích”, over *Sphagnum* sp., ca 500 m, 14. IX. 1993, Z. Palice; SW Bohemia, the Šumava Mts, Kvilda: mossy wet rock on the right bank of the Teplá Vltava stream, on *Sphagnum* overhangs, alt. 1000 m, 2. IX. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary: Mt Stožec, on rotting wood near “Stožecká kaple” chapel, alt. 930 m, 15. X. 1997, Z. Palice; E Bohemia, the Krkonoše Mts: Úpské rašeliniště peat-bog, on decaying *Sphagnum*, alt. 1420–1430 m, 3. VI. 1998, Z. Palice 1013

One of the most conspicuous species of the genus. In the Czech Republic collected mainly in the Šumava Mts, where it is locally rather frequent, occurring especially in peat-bogs. Nevertheless, three collections originate from true peat-bogs (except mossy overhangs



with *Sphagnum* in a glacial cirque and along a stream, there is also a collection on wood in mixed primeval forest – see the second last locality mentioned above). The most luxuriant population has been observed in Mrtvý luh peat-bog (issued by Vězda (1995): Lich. rar. exsic. n. 151) in eastern part of the Šumava Mts, where the species was collected practically during all over the year on a broad range of substrates. But quality and quantity of the population have strikingly declined due to changes of local conditions during year periods. Thus, regarding the species as a shortliving (ephemeral) lichen (Poelt & Vězda 1990: 380) is doubtlessly rightful. Bults of *Sphagnum fuscum* are preferred as substrate (the lichen thallus – when well developed – forms here distinct greyish-green spots), but also other *Sphagnum* species, *Polytrichum* sp. or the liverwort *Mylia anomala*, furthermore lying wood, plant debris and turf, respectively are overgrown. The species is most likely widely distributed in the boreal to temperate zone of the Northern Hemisphere, but undercollected by lichenologists.

*Absconditella trivialis* (Tuck. ex Willey) Vězda, Preslia 37: 241 (1965)

S Bohemia, the Šumava Mts, Nové Údolí: on soil among mosses (*Pogonatum* sp.) and liverworts (*Cephaloziella* sp.) in a sandy quarry (0.8 km SSE from the railway stop), alt. 850 m, 25. III. 1995, Z. Palice; Ibid.: on trampled ground between railings near the railway-stop, alt. 800 m, 21. IX. 1996, Z. Palice; S Bohemia, the Šumava Mts, Volary: a sandy quarry in forest ca 2 km S of Černý Kříž, alt. 775 m, 17. VI. 1996, Z. Palice

From the territory of the Czech Republic so far reported only once by Vězda (1970: 316) from Moravia. The specimen had previously been issued by him (Vězda 1966) in his Lichenes selecti exsiccati (n. 280).

\* *Agonimia allobata* (Stizenb.) P. James in Coppins, P. James et D. Hawksw., Lichenologist 24: 366 (1992)

Syn.: *Polyblastia allobata* (Stizenb.) Zschacke

S Bohemia, the Šumava Mts, Nová Pec: Mt Hraničník – N slope, remnants of mountain mixed forest, on weathering bark of old *Fagus*, alt. 1200–1250 m, 17. VI. 1995, Z. Palice, det. O. Breuss; E Bohemia, the Orlické hory Mts: nature reserve “Zemská brána”, on exposed roots of (?) *Alnus* under shaded boulder overhang near the water level of the Divoká Orlice river, alt. 500 m, 9. III. 1997, Z. Palice 192, conf. O. Breuss

This suboceanic lichen was ranked until recent time within the genus *Polyblastia*. It is well distinguishable from members of that genus especially by its granulose to subsquamulose thallus with pseudo-parenchymatous cortex. It grows usually on shaded tree-bases in sheltered and humid sites. In Slovakia, however, it was collected also on pieces of decaying wood and plant debris over calcareous ground at forest-road cuttings. As was shown by Longán & Gómez-Bolea (1998) this is clearly an early colonizer, which is probably undercollected to a great degree.

In Central Europe it was known up to now e. g. from the Ranna valley (Berger & Türk 1995: 179) and the Danube valley (Berger 1996: 48) in Upper-Austria. Another locality exists in Transcarpathian Ukraine (Palice, in prep.). New to Slovakia.

*Additional records*: Slovakia: the Carpathians, Muránska planina plateau: by the red tourist footpath ca 0.5 km W of abandoned game-keeper house “Maretkino”, on detritus at forest-roadside, alt. 980 m, 12. V. 1997, Z. Palice 1734, conf. O. Breuss; Ibid.: Hrdzavá dolina valley, on shaded bark of *Ulmus*, alt. 440 m, 13. V. 1997, Z. Palice 1727; Ibid.: a depression at forest-roadside on tourist red-marked footpath, ca 4 km N of Murán village, on decaying root of an eradicated tree, alt. 950 m, 11. V. 1998, Z. Palice; Ibid.: Javorníková dolina valley, piece of wood on

naked soil, alt. 440–460 m, 12. V. 1998, Z. Palice 455; Ibid.: Mt Štíance – S-SSE slope, light scree forest, at the very base of *Quercus*, alt. 800–860 m, 15. V. 1998, Z. Palice 457

*Anisomeridium nyssaegenum* (Ellis et Everh.) R. C. Harris, *Evansia* 2: 44 (1985)

SW Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S slope, on *Fagus*, 1200 m, 11. VI. 1997, J. Liška et Z. Palice (Palice 1998: 56); SW Bohemia, the Šumava Mts, Modrava: Mt Smrkový vrch – SE slope, *Fagus* and *Acer pseudoplatanus*, alt. 1100 m, 10. VIII. 1994 and 21. VI. 1995, Z. Palice, det. J. Poelt; S Bohemia, the Šumava Mts, Nová Pec: Mt Smrčina – N slope, the Řasovka valley, *Acer pseudoplatanus*, alt. 1200 m, 6. VII. 1996, Z. Palice; Ibid. – NE slope, valley of Medvědí potok brook, *Acer pseudoplatanus*, alt. 1150–1200 m, 6. VIII. 1997, Z. Palice; S Bohemia, the Šumava Mts, Volary: Mt Stožec, nature reserve “Stožecká skála” – lower part, deciduous forest with a spring, on weathered bark at base of *Fraxinus*, alt. 900 m, 30. XII. 1998, Z. Palice 1573; Central Bohemia, “Kokořín Protected Landscape Area”, Mšeno: managed deciduous forest in the Pšovka valley SSW of Kroužek mill and NNE of Štampach settlement, *Sambucus*, alt. 215 m, 11. XII. 1998, Z. Palice 1425; Central Bohemia, “Kokořín Protected Landscape Area”, Želízky: the Liběchovka valley, crossing of blue tourist footpath over the Liběchovka, *Salix*, alt. 175 m, 11. XII. 1998, Z. Palice 1447; N Moravia, the Javorníky Mts, Velké Karlovice: a former alley, ca 0.5 km NW of Mt Bařínka, at base of *Sorbus aucuparia*, alt. 780 m, 25. IV. 1998, Š. Bayerová et Z. Palice 250

In Austria and southern Germany, only relatively recent collections of this epiphyte were cited by Poelt & Türk (1994: 76). The lichen is suggested to be a neophyte in Central Europe with original occurrence in North America. The species prefers more humid localities and trees with nutrient-rich bark as a substrate. In the Czech Republic probably overlooked. Mostly only characteristic pycnidia are present in the collections.

*Additional records:* Austria: Oberösterreich, Mühlviertel: valley of Wössenbach brook – “Durchlass” through “Schwarzenberger Schwemmkanal” canal, ca 5,5 km NNE of Aigen, *Fagus*, alt. 810 m, 5. VIII. 1997, Z. Palice; Rumania: Bihor Mts, Padiș area, deciduous forest with fir-trees intermixed on NE slope of the point 1238, SE of Cețățile Ponorului gorge, *Acer pseudoplatanus*, alt. 1100–1200 m, 28. VII. 1998, Š. Bayerová, J. Halda et Z. Palice 795

\* *Anzina carneonivea* (Anzi) Scheidegger in Vězda, *Lich. Sel. Exsic.*, Fasc. 73: 5 (1982)

Syn.: *Varicellaria carneonivea* (Anzi) Erichs.

[N Bohemia, the Sudeten Mts] Jizerské hory: Kneipa [a peat-bog], [on moribunding bark of a conifer], alt. 990 m, 30. VII. 1950, J. Nádvořník (BRA); E Bohemia, the Sudeten, the Krkonoše Mts: “Úpské rašeliniště” peat-bog, on creeping branch of *Pinus mugo*, alt. 1420–1430 m, 3. VI. 1998, Z. Palice 998, 1002 (herb. Palice, UPS); Ibid.: Úpská jáma corrie, “Krkonošova zahrádka”, on creeping branch of *Pinus mugo*, alt. ca 1350 m, 3. VI. 1998, Z. Palice 993; S Bohemia, the Šumava Mts: Mt Trojmezí hora – N slope below the top, on dead branch of *Pinus mugo*, alt. ca 1300 m, 29. V. 1998, Z. Palice 1626; Ibid.: Mt Plechý, a spring area in light swampy spruce forest ca 0.5 km NE of Trojmezí (Dreiländereck), on twigs and bark at basis of young but dead *Picea*, alt. 1330–1340 m, 28. VI. 1998, Z. Palice 1544, 1545, 1549

A tiny microlichen widely distributed in the boreal zone of Northern Europe and in the subalpine region of Central Europe (Scheidegger 1985: 191). As late as three years ago, it was reported also from Central Siberia (Zhurbenko 1996: 196) and mountains of Pacific North America (Goward et al. 1996: 440). It grows unspecifically on peat, plant remnants, mosses, other lichens, moist wood and bark. However, in the Czech Republic it was collected so far only on bark of *Pinus mugo* and – in one case – *Picea abies*, and it seems to follow approximately natural distribution of the former phorophyte here.

For a long time, the lichen was treated among *Pertusariaceae*. On the basis of ascus structure and other features the species was placed by Scheidegger (1985) into the family *Trapeliaceae*. For a detailed account see there.

*Additional record*: Germany: Bayern, Böhmerwald: Mt Bayerische Plöckenstein (= Trojmezna hora), boulder-scrub in the top part, on bark of *Pinus mugo*, alt. 1360 m, 18. X. 1998, J. Halda, Z. Palice et V. Wirth

(\* *Arthonia helvola* (Nyl.) Nyl., *Flora* 50: 330 (1867)

Central Bohemia, the Labe valley, Libice n. Cidl.: floodplain forest "Libický luh", on bark of *Fraxinus excelsior*, alt. 190 m, 18. III. 1995, Z. Palice; Bohemia centralis, Libice nad Cidlinou, in silva Libický luh dicta, ad truncum arboris (*Fraxinus excelsior*), 190 m s.m., 9. IV. 1995, Z. Palice (A. Vězda: Lich. rar. exsic. n. 161); Central Bohemia, the Vltava valley, Davle: near Záhofanský potok brook, ca 1 km up the stream from the confluence with the Vltava, on *Fraxinus*, alt. 215 m, 28. III. 1998, J. Halda et Z. Palice 153 (herb. Halda, herb. Palice, UPS); S Moravia, Břeclav: floodplain forest ca 5 km SSW of Lanžhot, bark of *Fraxinus* (ca 300 m from the Dyje river), alt. 150 m, 4. VII. 1995, Z. Palice

Within the genus *Arthonia* easily identified by its brightly orange-red, spot-like apothecia (K+ dark violet-red) and mostly three-celled ascospores.

The lichen has a disjunct distribution in Europe. It is known from France (the type locality), Germany, Switzerland, Finland and Sweden (Redinger 1937: 117, Sundin & Tehler 1998: 394–395). Most of the collections originate in Fennoscandia from the last century and the ecology of the species is very insufficiently known. The species seemed to be missing in Central Europe for more than one hundred years. The last Central European collection from Switzerland cited by Redinger (1937: 117) was made by Hegetschweiler in period 1882–1884 (cf. Sundin & Tehler 1998: 394–395). According to Sundin & Tehler (1998: 394), *A. helvola* is confined to forest with long continuity in Sweden. In the Czech Republic, so far it has been collected only in humid lowland deciduous forests – a habitat omitted by lichenologists. Presumably the same kind of forest was formerly also habitat for now missing populations of the species in Germany (cf. Wirth 1995: 135). At the presented localities, the lichen grew on bases of not too old ashes (in one case also on planted *Acer negundo*). The following accompanied lichens were detected: *Arthonia spadicea*, *Arthothelium ruanum*, *Chromatochlamys vezdae*, *Dimerella pineti*, *Lepraria* sp., *Opegrapha atra* and *Porina aenea*. The species seems to be quite toxitolerant, since the Bohemian localities are situated comparatively close to industrial sources.

*A. helvola* was up to now almost surely undercollected in on humid forests for its perfect inconspicuousness. It may resemble subepidermal dots of young, free-living colonies of *Trentepohlia*.

\* *Arthonia muscigena* Th. Fr., *Bot. Notiser* (1865): 182

Syn.: *Arthonia leucodontis* (Poelt et Döbbeler) Coppins

W Bohemia, the Krušné hory Mts, Přebuz: Rolavské rašeliniště peat-bog, on (?) *Picea* stump together with *Bacidina* cf. *chlorotricula*, alt. 925 m, 20. X. 1997, Z. Palice et P. Uhlík; W Bohemia, Slavkovský les: the Teplá valley, on basis of *Salix* (exposed roots) near the water level together with *Bacidina inudata*, 27. IV. 1997, B. Gruna et Z. Palice; S Bohemia, the Šumava Mts, Volary, Černý Kříž: Hučina brook valley, ca 200 m of the confluence into the Studená Vltava river, on twigs of young *Picea* together with *Fellhanera subtilis*, alt. 740 m, 4. VIII. 1997, Z. Palice 181; S Bohemia, the Šumava Mts, Volary, Černý Kříž: Mt Jelení vrch (ca 3 km SSW of Černý Kříž), beech forest on its E slope, decaying mosses on old *Fagus*, 850–900 m, 21. IV. 1998, Š. Bayerová et Z. Palice 211; S Bohemia, the Šumava Mts: Mt Trojmezna hora – N slope below the top, on twig of *Sorbus*

*aucuparia* together with *Fellhanera subtilis*, alt. ca 1300 m, 29. V. 1998, Z. Palice 1621; S Moravia, Moravský Krumlov, the Rokytná valley, between Rokytná and Budkovice villages, loose pebble on bare soil, alt. 280 m, 19. V. 1996, B. Gruna, Z. Palice et A. Věžda (herb. Palice)

A species occurring in a wide range of habitats, growing on twigs, shaded bark, wood, over bryophytes on tree trunks, and on shaded acidic or slightly calcareous rocks (Coppins 1989a: 203). Probably widely distributed, ubiquitous lichen, but very inconspicuous.

\* *Bacidia carneoglauca* (Nyl.) A. L. Sm., Monogr. Brit. Lich. 2: 155 (1911)

E Bohemia, the Orlické hory Mts: nature reserve “Zemská brána”, on shaded base of *Acer pseudoplatanus* near the stream of the Divoká Orlice river, alt. 500 m, 20. IV. 1996, Š. Bayerová et Z. Palice 200, dupl. conf. B. Coppins; Ibid., base of *Acer pseudoplatanus* and exposed roots of *Picea*, 9. III. 1997, Z. Palice 220, 221

A skiophilous species requiring very humid oceanic climate, growing on siliceous overhangs and bases or exposed roots of trees. Reported mainly from Western Europe – Great Britain, Ireland, France (Purvis et al. 1992: 113) and discovered also in Austria (Berger & Türk 1993: 172). The material contains no apothecia, but characteristic conspicuous white pycnidia (ca 0.2–0.3 µm in diameter, pycnospores 4–6 × 1.5 µm) and an often distinct white prothallus bordering the grey-green thallus are present.

\* *Bacidia viridifarinoso* Coppins et P. James in Coppins, P. James et D. Hawksw., Lichenologist 24: 353 (1992)

E Bohemia, the Orlické hory Mts: nature reserve “Zemská brána”, on shaded basis of *Acer pseudoplatanus* near the stream of the Divoká Orlice river, alt. 500 m, 20. IV. 1996, Š. Bayerová et Z. Palice, conf. B. Coppins

Discovered on a small piece of bark intermixed in a sample of the preceding species, which is taxonomically closely related. It forms pale green, effusely sorediate thallus with a peculiar UV+ orange reaction. It has a similar ecology as *Bacidia carneoglauca*, but preferably grows as epiphyte (Purvis et al. 1992: 113). Distributed in western and north-western Europe: Great Britain, Belgium, Luxembourg, Norway and Sweden (Purvis et al. 1992). From Central Europe it was until now reported only once from the Danube valley in Austria (Berger 1996: 52). It occurs even in Pacific North America (Tønsberg 1998: 522).

Both *Bacidia carneoglauca* and *B. viridifarinoso* together with *B. trachona* form a distinctive group within *Bacidia*, not actually belonging to that genus (Coppins, in litt.).

\* *Brodoa atrofusca* (Schaer.) Goward, Bryologist 89: 222 (1986)

Syn.: *Hypogymnia atrofusca* (Schaer.) Räs.

[E Bohemia, the Sudeten, the Krkonoše Mts:] Violík, 11. IX. 1923, A. Hilitzer (PRM – 836961, sub *Parmelia encausta*)

It differs from a more widely distributed *Brodoa intestiniformis* in having thicker thallus, and in the absence of flattened secondary lobes and its chemical properties – the medulla reacts KC+ red (Krog 1974: 138). In the Czech Republic, it is probably much more rare than *B. intestiniformis*, presuming it at least from the preliminary examination of the numerous respective material in Prague herbaria (PRM, PRC).

\* *Caloplaca herbidella* (Hue) H. Magn., Bot. Notiser (1932): 430

S Bohemia, the Šumava Mts, Volary: Mt Stožec, nature reserve in the top part, bark of *Acer platanoides*, alt. ca 1050 m, 29. VIII. 1993, Z. Palice, det. J. Liška

In Europe, the lichen occurs mainly in its western part. In Central Europe it is restricted to natural mountainous forests with oceanic climate (Wirth 1995: 208, 231–232). As a very rare epiphyte it was reported also from Böhmerwald (Macher 1992: 77) on the German side of the Šumava Mts.

*Caloplaca obscurella* (Lahm ex Körb.) Th. Fr., Lich. Scand. 1: 182 (1871)

W Bohemia, the Šumava Mts, Železná Ruda, Debrník: alley at roadside (direct. Železná Ruda), *Acer platanoides*, 820 m, 11. VI. 1997, Z. Palice (a few apothecia); Ibid., 11. VII. 1998, Z. Palice 577 et C. Printzen (sterile); S Bohemia, the Šumava Mts, Volary, České Žleby: “Kamenná Hlava”, *Acer platanoides* at roadside, 900 m, 24. VI. 1995, Z. Palice (sterile); Ibid.: Krásná Hora (an abandoned village), on *Malus*, 29. XII. 1997, Z. Palice (sterile); Ibid., 4. IV. 1999, Z. Palice (fertile); S Bohemia, the Šumava Mts, Strážný: N of the village, on bark of *Fraxinus*, ca 700–800 m, 8. IX. 1996, Z. Palice (a few apothecia); S Bohemia, distr. Jindřichův Hradec, Novobystřická vrchovina: W slope of crest Homolka – Fabián – “Lesovna v Dubovnici”, ca 12 km S of Jindřichův Hradec, on bark of *Malus* together with *Pachyphiale fagicola*, alt. 540 m, 13. II. 1999, Z. Palice 1863 (sterile); S Moravia, Náměšť n. Osl., the Oslava valley: “Lamberk” ruins, on bark of *Fagus*, 7. X. 1998, Z. Palice 1505 (sterile)

The species is well characterized by discrete crateriform soralia, often tinged bluish grey, and brown apothecia, which are, however, rarely developed. It is very similar to *C. ulcerosa* Coppins et P. James which differs by possessing orange apothecia and the soralia of that species never turn bluish grey (Purvis et al. 1992: 156, 158).

Only a few old records of this lichen exist from the territory of the Czech Republic (cf. Vězda 1980: 61). Presently, it was usually collected on somewhat corky, nutrient-rich bark of solitary broad-leaved trees. Surely undercollected and much more widespread in the Czech Republic.

\* *Catillaria alba* Coppins et Vězda in Vězda, Lich. Rar. Exsic., Fasc. 6: 2 (1993)

W Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S slope, remnant of mountain mixed forest, near a forestry trail, on wood of dry *Picea*, alt. 1170 m, 10. VII. 1998, Z. Palice 551 et C. Printzen; S Bohemia, the Šumava Mts, Volary, Černý Kříž: Mt Jelení vrch (ca 3 km SSW of Černý Kříž), beech forest on its E slope, on wood of a dead standing tree, 850–900 m, 21. IV. 1998, Š. Bayerová et Z. Palice 209; S Bohemia, Třeboň: nature reserve “Stará řeka”, on wood of *Quercus*, 1. IV. 1997, Z. Palice 75, 77; Central Bohemia, distr. Přeborn, Brdý Mts: Skládaná skála rock near Strašice village, on rotting wood of a root, alt. ca 600 m, 25. VI. 1997, Š. Bayerová; N Moravia, the Javorníky Mts, Velké Karlovice: nature reserve “Razula”, on wood of a standing dead conifer, alt. ca 750 m, 25. IV. 1998, Š. Bayerová et Z. Palice 256

Most of the collected material from the Czech Republic contain no or only few pruinose apothecia, however, distinct, whitely pruinose, sessile to stalked pycnidia are always formed abundantly. The specimens correspond well to the holotype of the species deposited in the herbarium of A. Vězda.

The species grows both on wood of conifers and broad-leaved trees particularly in old woodland. It occupies both very soft, strongly moribund wood and also – on the contrary – wood which is relatively hard. It was collected almost exclusively on dry wood of stumps, snags and on decorticated parts or in hollows of still standing living trees. It was either not

accompanied by any other lichens or sometimes associated by members of genera *Calicium* and *Chaenotheca* (e. g. *Calicium trabinellum*, *Chaenotheca xyloxena*). The lichen could be classified as an indicator of natural, old-growth forest.

The known distribution of the lichen provided by Coppins & Vězda in Vězda (1993) includes Germany, Austria, Denmark, Scotland, Spain and Italy. It was recently reported also from Transcarpathian Ukraine (Coppins et al. 1998: 147). The closest published locality to the Czech sites lies in the Danube valley in Austria (Berger 1996: 55). New to Slovakia.

The species does not belong to the genus *Catillaria* sensu stricto, as already pointed out in the protologue and the real taxonomic position remains unclear.

*Additional records:* Slovakia: the Carpathians, Muránska planina plateau: nature reserve “Poľudnica”, on hard wood of stump of a conifer, alt. 600–700 m, 22. IX. 1995, Z. Palice 72; Ibid.: Hrdzavá dolina valley, a light deciduous scree forest on S-facing slopes, on stump of *Quercus*, 450–500 m, 14. V. 1997, Z. Palice 73, 74, 83; Ibid.: Mt Šiance – S-SSE slope, light scree forest, on wood of *Quercus*, alt. 800–860 m, 15. V. 1998, Z. Palice 337; Ibid.: Mt Cigánka – scree forest on W-facing slopes below Muránsky hrad castle-ruin, on hard and dry wood of a stump, alt. 880–900 m, 16. V. 1998, Z. Palice 374

+\* *Cecidonia xenophana* (Körb.) Triebel et Rambold, Nova Hedwigia 47: 291 (1988)

E Bohemia, the Sudeten, the Krkonoše Mts: Úpská jáma corrie, a rock wall NE of “Limprichtova skalka” rock, on thallus of *Porpidia glaucophaea*, alt. 1350–1400 m, 3. VI. 1998, Z. Palice 1003 (herb. Palice, UPS)

In Europe, there occur two cecidogenous lichenicolous species of the genus *Cecidonia*: *C. umbonella* (so far not recorded from the Czech Republic) – parasitic on *Lecidea lapicida* and *C. xenophana* parasitic on various species of genus *Porpidia*. The latter species was previously collected in the Sudeten only once – the type specimen of Körber from the Polish side of the Krkonoše Mts. *C. xenophana* is known only from a few localities in Scandinavia, Iceland, British Isles, Austria, Poland and the Canary Islands (Triebel & Rambold 1988: 293–295). *Porpidia glaucophaea* broadens the range of known lichen-hosts for this species.

\* *Chaenotheca sphaerocephala* Nádvl., Ann. Mycol. 40: 134 (1942)

S Bohemia, the Šumava Mts, Nová Pec: Mt Plechý, glacial cirque of Plešné jezero lake – central part, in underside of exposed roots of *Picea abies* in steep slope, alt. ca 1200 m, 28. V. 1994, Z. Palice 78; Ibid., on decaying overhanging bryophytes on boulder near the lake, alt. 1095 m, 15. VIII. 1995, Z. Palice 79, det. L. Tibell (herb. Palice, UPS); Ibid.: climax spruce forest on N slopes between Mt Plechý and Mt Trojmezna hora, on shaded weathered bark at base of old but dead *Picea*, alt. ca 1300 m, 29. V. 1998, Z. Palice 1631

This poorly known lichen was originally known only from the type locality in Chile (Nádvlorník 1942: 134). However, it seems to be more widespread in the cool to temperate areas of both hemispheres (Tibell, pers.com.). It is well delimited from other members of the genus by its pale, finely granular to sorediate thallus (reacting Pd<sup>+</sup> yellow) with chlorococcoid photobiont, fairly stout apothecia, with strongly, brown to brownish-white pruinose stipes and poorly developed excipulum. The tissue of the stalks and capitulum reacts intensively K<sup>+</sup> orange-red (although not forming visible crystals as in the case of norstictic acid). In herbaria, it may have been filed as *Chaenotheca stemonea* or *Cybebe gracilentia*. However, both these species contain *Stichococcus* as photobiont and have smaller apothecia. Except that, *C. stemonea* which has a similar, leprose, Pd<sup>+</sup> yellow

thallus and similarly sized ascospores (3–4.5  $\mu\text{m}$ ) differs by having a more or less well developed excipulum with a whitish-brownish pruina-like web (reaching the upper part of stipe only, unlike the pruina in *C. sphaerocephala* which usually covers all of the stipe). Superficially it may resemble *C. gracilenta*, which also has a poorly developed excipulum, a leprose thallus, pruinose stipes, and also occurs in quite strongly shaded habitats. *C. gracilenta*, however, differs in having more slender, rather long stipes, by greyish-white pruina which may cover even the mazaedium, by having smaller ascospores (2–3  $\mu\text{m}$ ) and by the negative thallus reaction.

In the Czech Republic and Rumania, *C. sphaerocephala* is an inhabitant of humid woodlands with indigenous *Picea abies*.

*Additional record*: Rumania: the Bihor Mts, Padiş area, a right-hand-side tributary of V. Feredului brook, SSW of Cheile Someşului Cald canyon, at base (exposed but sheltered roots) of old *Picea*, alt. 1300 m, 26. VII. 1998, Š. Bayerová, J. Halda et Z. Palice 746, conf. L. Tibell (herb. Bayerová, herb. Halda, herb. Palice, UPS)

+\* *Chaenothecopsis epithallina* Tibell, Symb. Bot. Ups. 21: 116 (1975)

S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – N part, *Picea*, on thallus of *Chaenotheca trichialis*, alt. 1200–1250 m, 28. V. 1994, Z. Palice, det. L. Tibell (PRC); Ibid.: climax spruce forest on N slopes between Mt Trojmezna hora ad Mt Plechý, old but dead *Picea*, on thallus of *Chaenotheca trichialis*, alt. ca 1300–1330 m, 29. V. and 28. VI. 1998, Z. Palice 1516, 1600

The species is well characterized by its host association and by the dark septum of the ascospores. For the first time reported from Central Europe from Styria by Poelt & Hafellner (1981: 144). It is ranked into the group of Northern Hemisphere temperate species by Tibell (1994: 165).

+\* *Chaenothecopsis nigra* Tibell, Symb. Bot. Ups. 27: 132 (1987)

W Bohemia, the Šumava Mts, Železná Ruda: on wood of dry *Picea* near Černé jezero lake, associated with *Chaenotheca xyloxena*, alt. 1010 m, 22. X. 1996, M. Réblová, det. Z. Palice, conf. L. Tibell (herb. Palice)

The species was originally described from cold temperate rain forests in Tasmania and New Zealand (Tibell 1987: 132, 135). Tibell has subsequently (in litt.) recorded the species in *Nothofagus* stands in the southernmost part of South America and also from Sweden. The European distribution furthermore includes Scotland (Purvis et al. 1992: 183), Wales (Hitch 1997: 48) and Finland (Vitikainen et al. 1997: 19). This is probably the first record from Central Europe.

+\* *Chaenothecopsis subparoica* (Nyl.) Tibell in Tibell et Ryman, Nova Hedwigia 60: 215 (1995)

S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – N part, overhanging boulder in forest, on *Haematomma ochroleucum*, alt. 1150 m, 1. VI. 1996, Z. Palice, conf. L. Tibell

A rare parasymbiotic fungus growing on leprarioid thalli of *Haematomma ochroleucum* on overhanging siliceous rocks. In a recent revision of short-stalked species of genus *Chaenothecopsis*, it was mentioned only from Finland, Italy and Sweden (Tibell & Ryman 1995: 215).



+\* *Chaenothecopsis tasmanica* Tibell, Publ. Herb. Univ. Ups. 16: 6 (1985)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake – the left part (view of dam), on bark of *Picea*, parasiting on algae of genus *Stichococcus*, 1150–1200 m, 12. X. 1995, Z. Palice, det. L. Tibell; S Bohemia, the Šumava Mts, Volary: glacial cirque of Plešné jezero lake – N part (swampy forest in “pseudocorrie”), on free-living algae on bark of relatively young but dead *Picea*, alt. 1130–1150 m, 9. VII. 1998, Z. Palice 520 et C. Printzen

Like *Chaenothecopsis nigra* it is characterized by a strongly pigmented ascospore septum, but differs by having darker and slightly larger ascospores, and by having a stalk consisting of hyaline, strongly swollen and intertwined hyphae (Tibell 1987: 135, 161; see there for details).

A widely distributed, so-called antitropical species (Tibell: 1994: 172) occurring in the cool-temperate to temperate areas of both hemispheres. In Central Europe, it was quite recently recorded by Doll (1995: 92) from Northern Germany and by Vězda (1997) from the High Tatra Mts (Slovakia).

+\* *Chaenothecopsis viridireagens* (Nádv.) A. Schmidt, Mitt. Staatsinst. Allg. Bot. Hamburg 13: 153 (1970)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake – S part, bark of *Picea*, 1100–1200 m, 12. X. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary: wet pine forest near the railway station “Černý Kříž”, on vertical side of dry stump, alt. 740 m, 30. IV. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary: glacial cirque of Plešné jezero lake – C part (not far from the lake), on moribund stump, on thallus and stalks of *Chaenotheca* sp., alt. 1100 m, 9. VII. 1998, Z. Palice 522 et C. Printzen

A species easily identified by the reddish, K+ green pigment of apothecia and pycnidia. One of the collections (Palice 522) exhibits the nicely developed coelomycetous anamorph, which is comprehensively described by Tibell (1993).

A widely distributed species on both hemispheres. Like the preceding species it is ranked among so-called antitropical species by Tibell (1994: 172).

\* *Chromatochlamys vezdae* H. Mayrhofer et Poelt, Herzogia 7: 39 (1985)

S Moravia, Břeclav: floodplain forest ca 5 km SSW of Lanžhot, bark of *Fraxinus* (ca 300 m from the Dyje river), alt. 150 m, 4. VII. 1995, Z. Palice, det. H. Mayrhofer

A poorly known and easily overlooked pyrenolichen, reported only from a few localities in the Carinthian and Styrian Alps (Mayrhofer & Poelt 1985, Hafellner 1991: 513) and the Tatra Mts in Slovakia (Kyselová 1990: 89). So far known specimens were collected exclusively on rotting wood covered by different decaying mosses and liverworts, often associated with the ephemeral lichen *Absoconditella lignicola*. The species is morphologically similar to be altered the arctic-alpine species *Thelenella pertusariella* (Nyl.) Vainio. Both species have inapparent pale perithecia (that of *Thelenella pertusariella* immersed in thalline warts) to 0.5 mm and submuriform ascospores. *Chromatochlamys vezdae* slightly differs in the apical thickening of the ascus unlike the unthickened apex of *Thelenella pertusariella*. (cf. Fig. 1 in Mayrhofer & Poelt 1985: 24). Far from that, the hamathecium of *C. vezdae* consists of richly branched and anastomosing paraphysoids unlike the almost unbranched paraphysoids of the second species (Mayrhofer & Poelt 1985: 39, 65). However, according to Mayrhofer (1987: 19 and in litt.) the ranking of the species in the genus

*Chromatochlamys* is provisional and the real taxonomic status of this taxon remains uncertain.

In the given locality (floodplain forest), the species grew at the very base of a middle-aged ash-tree accompanied by *Arthonia helvola*. Unfortunately, the locality was strongly damaged by flood-disaster in July 1997 (Gruna, pers. com.).

*Collema occultatum* Bagl., Comm. Soc. Critt. Ital. 1: 1 (1861)

S Bohemia, the Šumava Mts, Volary: Mt Stožec, nature reserve "Stožecká skála", on foot of *Acer platanoides*, alt. 940 m, 15. X. 1997, Z. Palice

A small, corticolous *Collema* species, easily identified by its almost cuboid ascospores. In the territory of the Czech Republic, it was collected in the past only three times in Moravia (cf. Černohorský et al. 1956: 44, Pišút 1968: 8).

\* *Fellhaneropsis myrtillicola* (Erichs.) Sérusiaux et Coppins in Sérusiaux, Lichenologist 28: 199 (1996)

Syn.: *Bacidia myrtillicola* Erichs.

SW Bohemia, the Šumava Mts, the Vydra valley: at Hálkova chata chalet, on twigs and needles of *Picea abies* and *Vaccinium myrtillus*, alt. 850 m, 12. VI. 1997, Š. Bayerová, J. Liška et Z. Palice; S Bohemia, the Šumava Mts, Volary, Černý Kříž: Hučina brook valley (ca 200 m of the confluence into the Studená Vltava river), on twigs and needles of young *Picea* together with *Fellhanera subtilis*, alt. 740 m, 4. VIII. 1997, Z. Palice

This very inconspicuous pioneer lichen was erroneously considered by some recent authors as synonymous to *Fellhanera subtilis* (Sérusiaux 1996: 203). As noted by Sérusiaux (1996), this is also the case of the only record of *F. myrtillicola* from the Czech Republic (Vězda 1989). However, these two species are easily distinguishable. In comparison to *Fellhanera subtilis*, *Fellhaneropsis myrtillicola* possesses much smaller, bluish-grey apothecia, much less conspicuous pycnidia of two types (with filiform or bacilliform to cylindrical pycnospores), a dark hypothecium and some other features. For a detailed description, nomenclature, ecology and distribution see Sérusiaux (1996).

Both cited specimens correspond well with the description given by Sérusiaux (1996). In accordance with his observations, one young apothecium of the latter specimen produced filiform pycnospores from its excipulum.

\* *Fellhaneropsis vezdae* (Coppins et P. James) Sérusiaux et Coppins in Sérusiaux, Lichenologist 28: 208 (1996)

Syn.: *Bacidia vezdae* Coppins et P. James, *Fellhanera vezdae* (Coppins et P. James) V. Wirth

W Bohemia, the Šumava Mts, Železná Ruda: the Debrník valley, on *Acer pseudoplatanus*, alt. 730–750 m, 11. VII. 1998, Z. Palice et C. Printzen (pycnidia only); S Bohemia, the Šumava Mts, Nové Údolí: the valley of Světlá brook, ca 0.5 km NEE of Mt Kamenná, on wood of dead (?) *Sorbus* by the stream, 850 m, 3. VI. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary: Mt Stožec – E slope, lower part of nature reserve "Medvědice", *Acer pseudoplatanus* by roadside, 820 m, 9. III. 1996, Z. Palice; S Bohemia, the Šumava Mts, Volary: small valley of right tributary of Hučina brook, ca 0.5 km N of Jelení Vrchy, on rotting stump, 880 m, 1. VI. 1996, Z. Palice 228; Ibid.: Mt Jelení vrch (ca 3 km SSW of Černý Kříž), on decorticated part of *Picea* stump, 850–900 m, 8. II. 1997, Z. Palice (pycnidia only); S Bohemia, the Šumava Mts, Nová Pec: Mt Smrčína – N slope, the Rasovka val-

ley, bark of *Acer pseudoplatanus*, ca 1200 m, 6. VII. 1996, Z. Palice; Ibid.: Mt Hraničnick – N slope, on *Acer pseudoplatanus*, 1200–1300 m, 6. VIII. 1996, Z. Palice 226 (pycnidia only); S Bohemia, the Šumava Mts, Volary, Černý Kříž: the Hučina valley, ca 1 km up the stream of confluence with the Studená Vltava, on bricked wooden pillar at the stream, 745 m, 12. I. 1997, Z. Palice 224; Ibid.: margin of forest, ca 0.5–0.6 km NNW from the railway station, edge of planted *Picea* forest with *Alnus* intermixed, at base of *Alnus incana*, 740 m, 25. XII. 1997, Z. Palice 173 (herb. Palice, UPS; pycnidia only); Central Bohemia, “Kokořín Protected Landscape Area”, Mšeno: managed deciduous forest in the Pšovka valley ca 100 m SSW of Kroužek mill, *Fraxinus*, 215 m, 11. XII. 1998, Z. Palice 1436 (pycnidia only); Ibid.: Vrbodol valley, *Fraxinus*, 250–300 m, 10. IV. 1998, J. Halda et Z. Palice; E Bohemia, the Orlické hory Mts – S part, the valley of Divoká Orlice, nature reserve “Zemská brána”, *Acer pseudoplatanus*, 550 m, 20. IX. 1998, J. Halda et Z. Palice (pycnidia only)

The species has been provisionally ranked into the genus *Bacidia* relatively long time (e. g. Purvis et al. 1992: 111, Santesson 1993: 31), but also to *Fellhanera* (Wirth 1987: 511, 1995: 395) characterized by some common features to both of the mentioned genera but in fact not belonging to any of them. Therefore, a new genus *Fellhaneropsis* was recently established (Sérusiaux & Coppins in Sérusiaux 1996), where also *Fellhanera myrtillicola* was placed. Half of the cited Czech material contains at least several apothecia, although the given species is known to be often sterile (Wirth 1990: 317). Almost all the cited collections but one contain characteristic, redbrown pycnidia with numerous long “*Bacidina*-like” pycnospores.

In the British Isles, it occurs even in rather polluted areas (Coppins & James 1978: 193). In the Czech Republic, this subatlantic species was collected especially in sheltered places of narrow valleys. It prefers shaded bases of trees and stumps, rarely overgrowing also bryophytes and other lichens (Sérusiaux 1996), and is often accompanied by *Dimerella pineti*.

New to Slovakia.

*Additional record*: Slovakia: N. P. Slovenský raj, Hrabušice: Veľký Sokol brook valley – “Kamenné vráta” gullie, at base of *Acer pseudoplatanus*, alt. 750–800 m, 10. VI. 1998, Š. Bayerová, J. Halda et Z. Palice 1861 (pycnidia only)

\* *Fuscidea maculosa* (H. Magn.) Poelt in Poelt et Vězda, Bibl. Lichenol. 16: 363 (1981)

Syn.: *F. gothoburgensis* f. *maculosa* H. Magn.

[W Bohemia, the Šumava Mts, Železná Ruda:] Jezerní Stěna [= glacial cirque of Černé jezero lake], 4. VIII. 1926, A. Hilitzer (PRM – 782054, cum *Fuscidea kochiana*); Ibid.: glacial cirque of Černé jezero lake – N part, on vertical mica-schistaceous rock, 1180 m, 26. VIII. 1994, Z. Palice, conf. I. Pišút (PRC); SW Bohemia, the Šumava Mts, the Vydra valley: a boulder scree above Hálkova chata chalet, on half-shaded overhanging sides of boulders, 850–900 m, 12. VI. 1997, Š. Bayerová, J. Liška et Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – N part, on vertical shaded rock, 1200–1250 m, 15. VI. 1996, Z. Palice (PRC)

The above presented specimens form sterile, mosaic-like thalli composed of dispersed pale areoles bursting into rather large (0.5–2 mm), rounded soralia delimited by distinct black prothallus. (cf. fig. 5 in Oberhollenzer & Wirth 1985: 7). According to Oberhollenzer & Wirth (1985), apothecia are unknown in *F. maculosa*.

In Central Europe, the species occurs very rarely in humid montane to high-montane areas. The lichen is ombrophobous, occupying shaded perpendicular or overhanging hard siliceous rocks (Wirth 1995: 401, 405). In the Šumava Mts, it grows in relatively cold and humid habitats of glacial cirques and boulder screes – a similar place as in Böhmerwald on the German side of the mountain ridge (cf. Wirth 1969: 340). Possibly more widely dis-

tributed even in other boundary siliceous mountain ridges of the Czech Republic, but overlooked because of its sterility.

Purvis et al. (1992: 253) consider *F. maculosa* to represent only a morph of the very variable *F. gothoburgensis* (H. Magn.) V. Wirth et Vězda (see Fig. 1 in Oberhollenzer & Wirth 1985: 3 for well developed specimen with apothecia), with which it is said to intergrade. It is treated as a synonym of *F. gothoburgensis* also by other authors (e. g. Santesson 1993: 86, Vitikainen et al. 1997: 27). Since *Fuscidea gothoburgensis* sensu stricto (usually better developed, more contiguous thallus; distinctly smaller soralia: 0.1–0.2 (–0.4) mm; apothecia may be present) has not been so far collected in Central Europe (Oberhollenzer & Wirth 1985) and appears to have a somewhat different distribution pattern I follow here the Central European trend (Poelt et Vězda 1981: 153, Clauzade & Roux 1985: 369, Oberhollenzer & Wirth 1985, Wirth 1995: 401, 405, Pišút et al. 1996: 11) in treating *Fuscidea maculosa* as a separate species.

### *Heterodermia speciosa* (Wulfen) Trevis., Atti Soc. Ital. Sci. Nat. Milano 11: 614 (1869)

W Bohemia, the Šumava Mts, Modrava: Mt Medvěď, bark of *Acer pseudoplatanus*, alt. 1136 m, 6. VIII. 1994, Z. Palice, conf. A. Vězda

A suboceanic species, widely distributed in subtropical to temperate areas, extending to northern Scandinavia (Moberg 1997: 193). In Central Europe, nowadays, it is a very rare lichen confined to the most humid places with oceanic climate (Wirth 1995: 420–421). The recent finding in the Šumava Mts means confirmation of the lichen after more than half of century on the territory of the Czech Republic, where – outside the Šumava Mts – it was previously recorded also in the Sudeten (Jeseníky Mts) and southern Moravia (serpentine rocks near Tišnov) (Nádvorník 1947: 76). A critically endangered lichen of the Czech lichen flora.

### \* *Hypocnomyce friesii* (Ach.) P. James et G. Schneider in G. Schneider, Bibl. Lichenol. 13: 84 (1980)

SW Bohemia, the Šumava Mts, the Vydra valley: light coniferous stand at boulder slope above Hálkova chata chalet, on bark, wood and twigs of *Picea abies* and *Pinus sylvestris*, alt. 850–900 m, 17. X. 1998, Š. Bayerová, J. Halda, J. Kocourková et Z. Palice 1492, 1493, conf. V. Wirth

It is closely related to *H. caradocensis* (Leight. ex Nyl.) P. James et G. Schneider, with which it shares an identical chemistry. When well developed, it differs from that species by having adnate, usually more plane to concave (to slightly convex), and more glossy squamules and in having constantly non-septate spores and relatively longer cells in paraphyses. Apothecia and pycnidia are usually present in *H. friesii*, whereas *H. caradocensis* is frequently sterile (Timdal 1984: 96, 99–100).

*H. friesii* is the species of the boreal coniferous forest zone with a rare occurrence in the Alps (Poelt & Vězda 1981: 168) and is presumably uncommon also in other parts of Central Europe. In Scandinavia, it is fairly common (Timdal 1984: 100), as well as in Finland (cf. Vitikainen et al. 1997: 28). The presence of *H. friesii* in the Vydra valley documents the relict character of this famous site, where e. g. one of the richest populations of *Cladina stellaris* in the Czech Republic thrives.

\* *Hypocenomyce leucococca* R. Sant. in Moberg, Thunbergia 2: 3 (1986)

[W Bohemia, the Šumava Mts, Železná Ruda:] Jezerní Stěna [= glacial cirque of Černé jezero lake], *Picea*, *Fagus*, *Acer pseudoplatanus*, 16. VII. 1923, IX. 1926, VIII. 1926, omnia leg. A. Hilitzer (PRM – sine n., cum *Mycoblastus sanguinarius*; PRM – 479005, cum *M. sanguinarius*; PRM – 782035, cum “*Lecidea helvolla* f. *efflorescens*”); [W Bohemia, the Šumava Mts:] Prášílské jezero, *Populus tremula*, 31. VII. 1924, A. Hilitzer (PRM – 826508, cum “*Lecidea pullata*”); W Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S slope, a young managed stand with *Fagus* and *Picea* predominant, on *Fagus*, alt. 1100–1150 m, 10. VII. 1998, Z. Palice 562 et C. Printzen; S Bohemia, the Šumava Mts, Nová Pec: Mt Plechý, bark of *Sorbus*, 1350 m, 7. VIII. 1996, J. Halda, Z. Palice et C. Printzen; Ibid.: Mt Smrčina – N slope, Řasovka brook valley, bark of *Fagus*, 1170 m, 6. VII. 1996, Z. Palice, conf. E. Lisická

The species is known in sterile state only (Tønsgberg 1992: 147), forming small greyish white, crustose to subsquamulose thalli with usually delimited soralia. It is often dispersed among other lichens. Older herbarium material is often tinged pinkish (Lisická 1995: 125). Thanks to this fact there were detected also some intermixed specimens in PRM.

New to Rumania.

*Additional record*: Rumania: the Bihor Mts, Padiş area, ca 0.5 km NNW of Cabana Padiş at blue and red tourist footpath, on *Fagus*, alt. 1300 m, 27. VII. 1998, Š. Bayerová, J. Halda et Z. Palice 771

\* *Hypocenomyce praestabilis* (Nyl.) Timdal, Nord. J. Bot. 4: 101 (1984)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake – central part, wood of *Picea*, 1150–1250 m, 11. X. 1995, Z. Palice (sor.); S Bohemia, the Šumava Mts, Nová Pec: “Kamenné moře” stony field near Plešné jezero lake, on dry branch of *Pinus*, 1080 m, 1. XI. 1994, Z. Palice; S Bohemia, the Šumava Mts, Volary: “Smolná Pec”, pine-birch forest along the Studená Vltava river, on wood of *Pinus*, 730 m, 22. XII. 1996, Z. Palice (sor.)

There is only one specimen developed in the characteristic, non-sorediate form. The rest of them are locally slightly sorediate in smaller, limited parts of the thallus (these specimens signed as “sor.” above), but not forming soralia regularly. All the cited samples are likely to represent one taxon of the genus *Hypocenomyce* only, and not mixed material of *H. praestabilis* and *H. sorophora* growing side by side, as often observed by Timdal (1984: 106) in Scandinavian material, where *H. sorophora* was found intermingled in most (70%) packets of *H. praestabilis*.

Another problematic Central European collections (from the Western Carpathians) of the species and eventual explanations on the origin of transitional forms between these two taxa are presented by Lisická (1995: 126–127).

*Hypocenomyce sorophora* (Vainio) P. James et Poelt in Poelt et Vězda, Bibl. Lichenol. 16: 364 (1981)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, on wood of dry *Picea*, 1200–1300 m, 11. X. 1994, Z. Palice; W Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S-SW slope, bark of *Picea*, 1200–1250 m, 23. V. 1996, Z. Palice (Palice 1998: 56); Ibid., on wood of *Picea*, 10. VII. 1998, Z. Palice 560 et C. Printzen; SW Bohemia, the Šumava Mts, Modrava: peat-bog “Weitfällerská slat”, wood of *Picea*, ca 1100 m, 6. VIII. 1994, Z. Palice, det. E. Lisická (fertile!); Ibid.: peat-bog “Mlynářská slat”, wood of *Pinus* × *pseudopumilio*, 1050 m, 27. VI. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary: “Krásná Hora” near České Žleby, bark of *Malus*, ca 900 m, 15. IV. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary, Černý Kříž: by the Studená Vltava river, on bark of *Alnus incana*, 16. IV. 1995, Z. Palice; Ibid.: peat-bog “Mrtvý luh”, on wood of destructed small wooden construction, 740 m, 20. V. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary, Nové Údolí: peat-bog “Spálený luh, wood of pine branch, 800 m, 21. VII. 1995, Z. Palice; S Bohemia, the

Šumava Mts, Volary: "Smolná Pec", pine-birch forest along the Studená Vltava river, on wood of *Pinus*, 730 m, 22. XII. 1996, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: nature reserve "Houska", on wood of *Pinus rotundata*, alt. 725–730 m, 8. VIII. 1998, Z. Palice 832 (herb. Palice, UPS; fertile!); S Bohemia, the Šumava Mts, Nová Pec: "Rakouská louka" meadow below the top of Mt Plechý, bark of *Picea*, 1345 m, 1. X. 1995, Z. Palice; Ibid.: glacial cirque of Plešné jezero lake, an avalanche track in S part of the corrie, on dry *Picea*, 1150 m, 19. V. 1995, Z. Palice; S Bohemia, the Šumava Mts, the Vltava valley: on wood of stumps between bank of "Lipno" water-reservoir and "Kyselovský les" wood, 725 m, 13. VII. 1995, Z. Palice

Not infrequent in the Šumava Mts, occurring mainly in wooded peat-bogs and light coniferous forests. The species prefers decorticated trunks, boles and twigs of pines and spruces, but also acidic bark of both conifers and broad-leaved trees. The extensive sorediate crusts of this lichen cover sometimes quite large patches.

The species is probably distributed in the Czech Republic more widely, especially at higher altitudes. It should possibly be treated only as a sorediate form of *Hypocenymyce praestabilis* (see under that species), because transitions between these two taxa were observed several times (see comments on *Hypocenymyce praestabilis*).

### *Japewia subaurifera* Muhr et Tønsberg in Tønsberg, Lichenologist 22: 206–207 (1990)

W Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S slope, on bark of middle-aged *Picea*, alt. 1200–1250 m, 10. VII. 1998, Z. Palice 233 et C. Printzen, det. T. Tønsberg; S Bohemia, the Šumava Mts, Volary: climax spruce forest on NW slope of Mt Plechý, on bark of middle-aged *Picea*, alt. ca 1280 m, 14. IX. 1997, Z. Palice 556, det. T. Tønsberg; Ibid.: boulder scree below Plešné jezero lake, on bark of *Betula*, alt. ca 1060 m, 14. IX. 1997, Z. Palice; S Bohemia, the Šumava Mts, Volary: Mt Plechý – light boggy spruce forest NW of "Rakouská louka" and NE of "Trojmezí", on hard wood of *Picea*, alt. 1280–1320 m, 28. VI. 1998, Z. Palice 1555, conf. T. Tønsberg; S Bohemia, the Šumava Mts, Volary: glacial cirque of Plešné jezero lake – N part, on bark of young but dead *Picea*, alt. 1130–1150 m, 9. VII. 1998, Z. Palice 521 et C. Printzen

In Bohemia, only sterile specimens were collected. The species is well characterized by its strikingly coloured soralia (at first discrete, later becoming confluent) which are brightly yellow to yellowish green when the external brown soredia are shed (Tønsberg 1990: 207, 1992: 151). Some Bohemian specimens (e. g. Palice 556) produce in parts almost orange soralia.

The soralia of all examined specimen gave KC+ fleeting orange reaction in squash preparations what is obviously the result of the presence of so far unidentified "subaurifera" pigments giving the characteristic bright pigmentation of the soralia (Tønsberg 1992). Except that, traces of lobaric acid are known in the lichen.

In the Šumava Mts, *J. subaurifera* grows as epiphytic or epixylic species in humid forests with indigenous *Picea abies*; once it was collected on *Betula* in a cold boulder scree. It is presumably a rather frequent species in the zone of boreal coniferous forest in the Northern Hemisphere since Tønsberg (1990: 211–212, 1992: 152) reported it from numerous localities in Sweden, Finland, Scotland and Pacific North America. It was recently reported also from Serra da Estrela in Portugal on *Calluna* stems at an altitude of 1475 m (van den Boom & Giralt 1996: 150, 153), so that it is possible to anticipate the species to be more common also in Central European mountains.

*Koerberiella wimmeriana* (Körb.) Stein in Cohn, Kryptogamen-Fl. Schlesien 2: 143 (1879)

Syn.: *Aspicilia leucophyma* (Leight.) Hue

E Bohemia, the Sudeten, the Krkonoše Mts: Úpská jáma corrie, “Horní úpský vodopád” waterfall, on periodically inundated stones, ca 1300 m, 24. IX. 1998, Z. Palice 1393, det. V. Wirth

This member of the family *Porpidiaceae* is rather variable as for the external appearance, and both isidiate and non-isidiate forms may occur (Rambold et al. 1990: 233). The authors regard these forms as different developmental stages of the species. The collected specimen is sterile with frequent isidia, possessing a distinct blue-grey prothallus and according to the concept of Rambold et al. (1990) it represents an earlier developmental stage.

According to Wirth (1995: 437) *Koerberiella wimmeriana* grows on mineral-rich siliceous, periodically inundated rocks. In Europe, it shows more or less arctic-alpine distribution. On the locality, it is accompanied by another rare lichen with similar requirements – *Placynthium flabellum*, which was until now collected only once in the Czech Republic by Servít (Gyelnik 1940: 32, sub *Anziella adglutinata*) in the Mumlava valley (a further well-known locality in the Krkonoše Mts).

Previously, *K. wimmeriana* was collected only once on the territory of the Czech Republic – in the last century by Stein in the western part of the Krkonoše Mts – in the area of Mt Kotel (= Kesselkoppe, Kokrháč) as the type collection of *Sagediopsis aquatica* (Stein) Triebel. This lichenicolous fungus is restricted to *K. wimmeriana* as a host and was formerly misinterpreted as a lichen under the name *Gongylia aquatica* Stein (Triebel 1989: 112, Rambold et al. 1990: 239).

\* *Lecanora lojkaeana* Szatala, Ann. Hist.-Nat. Mus. Nat. Hung., n. ser. 5: 136 (1954)

[W Bohemia, the Šumava Mts, Železná Ruda]: Jezerní Stěna [= glacial cirque of Černé jezero lake], 2. VII. 1920, A. Hilitzer (PRM – 755272, sub “*Lecanora sordida* var. *swartzii*”); S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – SW part, on overhanging rock together with *Chrysothrix chlorina*, ca 1300 m, 15. VI. 1996, Z. Palice (PRC); S Bohemia, distr. Tábor, the Lužnice valley: a perpendicular silic. rock above left bank of the river beneath Přeběnice castle-ruin, 390 m, 5. VI. 1997, Z. Palice

A sorediate counterpart of the closely related *L. swartzii*, which is practically identical both chemically and ecologically (see Leuckert & Poelt 1989 and Wirth 1995). The specimen from PRM was included here with some hesitation because it is a quite poor collection with transitional characters to *Lecanora swartzii* and it seems problematic to refer it without any doubt to *L. lojkaeana*, because of the sparse, very locally formed soralia and the presence of a number of apothecia, which should be rare in this species.

*Lecidea betulicola* (Kullh.) H. Magn., Fört. Skand. Växter 4: 32 (1936)

[W Bohemia, the Šumava Mts, Železná Ruda]: Jezerní Stěna [= glacial cirque of Černé jezero lake], *Acer pseudoplatanus*, VII. 1926, A. Hilitzer (PRM – 782035, cum “*Lecidea helvolla* f. *efflorescens*”); Ibid.: Mt Jezerní hora – the top forested part, *Sorbus aucuparia*, 1330–1340 m, 24. V. 1996, Z. Palice; W Bohemia, the Šumava Mts, Prášily: Mt Ždanidla – S slope, a young managed stand with *Fagus* and *Picea* predominant, on *Sorbus aucuparia*, alt. 1100–1150 m, 10. VII. 1998, Z. Palice 567 et C. Printzen (herb. Palice, UPS); S Bohemia,



the Šumava Mts, Nová Pec: Mt Plechý, *Sorbus aucuparia*, 1350 m, 7. VIII. 1996, Z. Palice et C. Printzen, det. C. Printzen (herb. Palice; Printzen 1997: 99, s.loc.); [E Bohemia, the Sudeten, the Krkonoše Mts:] Spindelmühle im Riesengebirge [= Špindlerův Mlýn], [on bark of *Picea*], 1923, V. Kuřák (PRM – herb. Servít 22. 112, sub “*Lecidea helvola*”); [E Bohemia, the Sudeten, the Krkonoše Mts:] Elbegrund im Riesengebirge [= Labský důl valley], [on wood], 1922, V. Kuřák (PRM – herb. Servít 22. 113–4, sub “*Lecidea gibberosa* Ach.”); [N Moravia, the Sudeten] Jeseník: na smrku při výstupu od Studénkové hole na Furmanštýn [= Mt Vozka], 17. VII. 1911, J. Suza (PRM – 589029, cum *Biatora helvola*; BRA, sub *Lecidea atroviridis*, Nádvořík 1961: 308)

Similarly as other, usually epiphytic or epixylic taxa traditionally filed under *Lecidea* s. l., not belonging here (Hertel 1995: 138). However, the systematic position of the species still remains unclear (Printzen 1995: 162). Well recognizable species due to its asci containing mostly 12–16 spores. Both the colour and the shape of apothecia may vary considerably according to its age and site conditions. At the beginning the apothecia are relatively flat, often bluish-grey coloured, usually with distinct, evanescent, paler margin. Later they become convex, with margin indistinct. The colour of apothecia varies from pale grey, dull orange brown to dark brown. The species may be confused with *Biatora ocelliformis* in the field. *Lecidea betulicola*, however, differs in more convex apothecia (when older) with a constricted base, which is very rare in *B. ocelliformis* (Printzen, in litt.).

Printzen (1997: 99, sub “*Biatora*” *betulicola*) reported the species from the German side of the Šumava Mts (Böhmerwald) and noted its presence on the Czech side as well (however, without locality). *L. betulicola* is the species of boreal coniferous forest zone, and in Central Europe occurs rarely in mountainous forests (Wirth 1995: 492).

*Additional records*: Austria: Oberösterreich, Mühlviertel: Mt Hochficht – SE slope, *Acer pseudoplatanus*, only 1–2 m from the border with the Czech Republic, alt. 1250 m, 6. VIII. 1997, Z. Palice; Rumania: the Bihor Mts, Padiș area, ca 0.5 km NNW of Cabana Padiș at blue and red tourist footpath, on decorticated part of *Fagus*, alt. 1300 m, 27. VII. 1998, Š. Bayerová, J. Halda et Z. Palice 776; Slovakia: the Carpathians, Veporské vrchy hills: Mt Fabova hol’a [1439] – the top part, *Sorbus aucuparia*, alt. 1420–1430 m, 14. V. 1998, Z. Palice 318

### \* *Lecidea commaculans* Nyl., Flora 51: 476 (1868)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, on more exposed rock in N part of the corrie, ca 1250 m, 11. X. 1995, Z. Palice (PRC); Ibid.: stony field on SW slope between Mt Svaroh and Mt Jezerní hora, ca 1280 m, 24. V. 1996, Z. Palice, conf. H. Hertel (herb. Palice, M); [E Bohemia, the Sudeten] Krkonoše: Vysoké Kolo, 24. IX. 1963, Z. Černohorský (PRC)

This fairly inconspicuous lichen with black and strongly convex apothecia is quite easily recognized on account of more unique features. It is particularly characterized by a distinctly purplish-red-coloured hypothecium (the colour intensifies in K) which is not distinguishable from the subhymenium, by a soon excluded excipulum composed of paraphyses-like radiating hyphae, by fairly stout, richly branched and anastomosing paraphyses ensheathed by a thick gelatine, by a well delimited greenish black epihymenium, and by the characteristic 1-celled (occasionally 2-celled) narrowly ellipsoid to almost dumb-bell-like spores (Schwab 1986: 370–371, Purvis et al. 1992: 326). Schwab (1986: 264, 371–372) describes a specific type of ascus for this species, which he calls “*Lecidea commaculans*-Typ” (see fig. 11 in Schwab 1986: 304): “Im deutlich amyloiden Tholus noch nicht voll ausgereifter Asci ist bisweilen eine schmal kegelige ‘*chambre oculaire*’ erkennbar. Selten ist um diese ‘*chambre oculaire*’ ein feiner farbloser Saum erkennbar, der allerdings nicht eindeutig als ‘*masse axiale*’ anzusprechen ist. Bei Asci mit ausdifferenzierten Sporen ist die ‘*chambre oculaire*’ meist breit kegelförmig”.

The species was not included in European members of *Lecidea* sensu stricto neither by Hertel (1995) nor by Wirth (1995). Schwab (1986: 372) treated *L. commaculans* as a rather isolated taxon not closely related to the genus *Lecidea* sensu stricto and he suspected it to be a member of a monotypic, so far undescribed genus within Lecanoralean lichens. According to Purvis et al. (1992: 326), *L. commaculans* together with the terricolous *L. limosa* may refer to the genus *Austrolecia* Hertel.

An arctic-alpine species occupying relatively exposed but humid and more quickly weathering siliceous boulders and rocks (Wirth 1995: 517). According to Schwab (1986: 374) it is a rather rare species in Europe, collected only few times in Scotland, Spitzbergen, Iceland, Norway, Finland and Italy. Except for that, it is also known from Germany (Wirth 1995).

*Leptogium teretiusculum* (Wallr.) Arnold, Ber. Bayer. Bot. Ges. 2: 26 (1892)

[W Bohemia, the Šumava Mts, Železná Ruda:] Jezerní Stěna – na plošince [= glacial cirque of Černé jezero lake], *Acer pseudoplatanus*, 12. VII. 1925, 25. VIII. 1925, A. Hilitzer, det. Z. Palice, conf. A. Guttová (PRM – 166598, cum *Gyalecta ulmi*; PRM – 827590, cum *Leptogium saturninum*; PRM – 826690, cum *Biatora sanguineoatra*; PRM – 697553, cum *Catillaria atropurpurea*)

An inconspicuous species growing especially as epiphyte on basal parts of trees with coarse, nutrient-rich bark. From the Czech Republic recorded so far only by Vězda (1972) from Moravia.

(\*) *Macentina abscondita* Coppins et Vězda, Lichenologist 9: 47 (1977)

Syn.: *Leucocarpia abscondita* (Coppins et Vězda) Hafellner

Central Bohemia, Praha-Radotín: on piece of wood at heaped material in a quarry near the bus-stop “U cementárny”, alt. 230 m, 11. I. 1998, Z. Palice; SW Bohemia, the Šumava Mts, Prášily: on solitary *Sorbus* at margin of the village, 900 m, 10. VI. 1997, Z. Palice; Ibid: Gsenget (a former German settlement), on shaded bark of *Acer pseudoplatanus*, 1030 m, 11. VI. 1997, Z. Palice; SW Bohemia, the Šumava Mts, Javoří Pila: Mt Smrkový vrch, on weathered bark of *Acer pseudoplatanus*, 1100 m, 8. VI. 1995, Z. Palice (poor and damaged collection); S Bohemia, the Šumava Mts, Nové Údolí: valley of Světlá brook, ca 2 km NEE of Mt Kamenná, on *Sambucus racemosa*, 850 m, 3. VI. 1996, Z. Palice, conf. B. Coppins; Ibid.: at cross-roads Stožec – Trístoličník – Haidmühle, on *Sambucus racemosa*, 830 m, 17. XI. 1995, Z. Palice, conf. B. Coppins; Bohemia merid., montes Šumava (Gabretta), distr. Volary, loco dicto “Nové Údolí”, ad corticem arboris emortuae (*Ulmus glabra*), 11. V. 1996, Z. Palice (A. Vězda: Lich. rar. exsic. n. 336); S Bohemia, the Šumava Mts, Volary, Černý Kříž: nearby “Trávní cesta” forest road, on weathered bark of *Fagus*, 820 m, 7. I. and 24. II. 1996, Z. Palice; Ibid.: Mt Jelení vrch, ca 3 km S of Černý Kříž, on bark of *Acer pseudoplatanus* and *Fagus*, 850–900 m, 26. IV. 1996, Z. Palice; S Bohemia, the Šumava Mts, Stožec: dumped material near the water-cleaning station, on small stones among dry stems of *Urtica dioica*, alt. 785 m, 30. III. 1998, Z. Palice 113, 114; Ibid.: at roadside in direction Černý Kříž, near the railway crossing, on fallen branch of *Alnus* in ditch, alt. 775 m, 30. III. 1998, Z. Palice 123; E Bohemia, the Orlické hory Mts: nature reserve “Zemská brána”, *Fagus* by the Divoká Orlice river, alt. 525 m, 15. I. 1996, J. Halda 697 et Z. Palice; N Moravia, the Javorníky Mts, Velké Karlovice: a former alley, ca 0.5 km NW of Mt Bařinka, at base of *Sorbus aucuparia* and *Acer pseudoplatanus*, alt. ca 780 m, 25. IV. 1998, Š. Bayerová et Z. Palice 251, 252

A very inconspicuous lichen with sessile or slightly immersed, pale rose to orange, almost translucent perithecia (0.05–0.1 mm in diameter only) occurring usually on nutrient-richer bark (mainly on *Sambucus*, but also on weathered bark of *Ulmus*, *Acer*, *Sorbus* or *Fagus*) or wood (both on wood of standing old trees, as well as on secondarily nutrient-enriched pieces of wood lying on the ground). The lichen was collected even on “fresh”, shaded, probably slightly dusted stones at railway- and road-sides. This type of substrate, was mentioned before already in Hitch (1994: 60). The broad ecological amplitude is usual for a vast range of other ephemeral lichens. The species was first reported by Poelt (1994: 107) and Hafellner & Maurer (1994: 124, as *Leucocarpia abscondita*) from Central Europe. Except Austria, it is known from Great Britain (Purvis et al. 1992: 364), the Netherlands (Aptroot et al. 1998: 23), Belgium, Luxembourg (van den Boom et al. 1996b: 88), Germany (Bresinsky et al. 1995: 579) and Finland (Vitikainen et al. 1997: 38). A species with certainly much greater pattern of distribution than so far cited in literature.

\* *Macentina dictyospora* A. Orange, Lichenologist 23: 16 (1991)

Syn.: *Leucocarpia dictyospora* (A. Orange) R. Sant.

SW Bohemia, the Šumava Mts, Zhůří: “Bílý Potok”, the end of Pěnivý potok brook valley, bark at foot of *Ulmus laevis*, ca 750 m, 4. V. 1995, Z. Palice, det. B. Coppins; Ibid.: nature reserve “Povydí”, *Acer pseudoplatanus* by Zhůřský potok brook ca 50–100 m from the confluence with the Vydra near Turnerova chata cottage, ca 800 m, 2. IX. 1995, Z. Palice; S Bohemia, Šumava Mts, Volary: Mt Jelení vrch (ca 3 km SSW of Černý Kříž), on bark and wood of old *Fagus*, 850 m, 16. VI. 1995, 15. X. 1995 and 8. II. 1997, Z. Palice; Ibid.: Mt Stožec, scree forest around “Stožecká kaple” chapel, shaded basis of *Ulmus glabra*, 940 m, 20. VII. 1995, Z. Palice; Ibid.: Mt Radvanovický vrch near České Žleby, bark of *Acer platanoides*, ca 950 m, 31. VIII. 1995, Z. Palice; Ibid.: Mt Spáleníště near České Žleby, bark of *Ulmus glabra*, 850 m, 7. II. 1997, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake, on moribund bark of *Acer pseudoplatanus*, 1200–1250 m, 19. VI. 1995, Z. Palice (PRC, very poor collection); Ibid.: Mt Smrčina – N slope, the Řasovka valley, on moribund bark of *Acer pseudoplatanus*, 1200 m, 6. VII. 1996, Z. Palice; S Bohemia, the Šumava Mts, Frymburk: Vítkův Kámen, *Acer platanoides* in surroundings of the castle-ruin, 1030 m, 19. IV. 1997, Z. Palice 213

Tiny, creamy white, dull yellowish brown to red-brown, ± superficial, half-immersed to almost immersed perithecia (darker perithecia have usually paler apex), ascospores with occasional longitudinal septa and thallus composed of fine, soredia-like goniocysts are the diagnostic features for this species. It is quite similar to *Porina leptalea*, which has, however, distinctly larger perithecia, immersed thallus and four-celled ascospores, and paraphyses developed. Without microscoping, it might be eventually mistaken also for pycnidia of *Bacidina* sp. div. In Bohemia, it was collected mainly in natural humid stands inhabiting preferably “corky” or flaking-off, relatively quickly weathering bark and wood (covering also old pyrenomycetes, polypores, bryophytes, etc.) at shaded bases of old deciduous trees. Associated lichens included *Biatoridium monasteriense*, *Cladonia* sp., *Dimerella pineti*, *Lecania* cf. *cyrtellina* (Nyl.) Sandst., *Lepraria* sp. However, it may occur also in secondary habitats. Interestingly, it was found by railway-side in urbanised landscape of Bratislava, the capital of Slovakia, where it grew on a piece of dusted bark lying on the ground. A wide ecological amplitude is documented by recent Spanish records, where the lichen was collected several times in pioneer communities on burnt wood (Longán & Gómez-Bolea 1998) and on thalli of two *Peltigera* species (Martínez & Hafellner 1998: 283, as *Leucocarpia dictyospora*). Except Spain, up to now reported only from a few localities in Sweden (Santesson 1993: 129, sub *Leucocarpia dictyospora*), Fin-

land (Vitikainen et al. 1997: 38) and Switzerland (Dietrich 1991: 176). It is also known from North America (Esslinger 1998). Surely much more widely distributed but an undercollected lichen. New to Slovakia.

*Additional records:* Slovakia: SW Slovakia, Bratislava – Lamač: by the railway close to a railway station, on lying dusted piece of bark (from a branch of ?*Picea*), 11. XI. 1997, Z. Palice; the Carpathians, Muránska planina plateau: a depression at forest-roadside along tourist red-marked footpath, ca 4 km N of Murán village, on decaying root of an eradicated tree, alt. 950 m, 11. V. 1998, Z. Palice 304; *Ibid.*: spruce forest beneath forest-road, ca 0.5 km ENE of Mt Kľak, on weathering bark of *Sorbus*, alt. 1300–1350 m, 11. V. 1998, Z. Palice 397; *Ibid.*: Javorníková dolina valley, on rotting stump, alt. 440–460 m, 12. V. 1998, Z. Palice 458.

\* *Melaspilea granitophila* (Th. Fr.) Coppins, *Lichenologist* 21: 211 (1989)

Syn.: *Arthonia granitophila* Th. Fr., *Melaspilea subarenacea* Nowak et Kiszka

SW Bohemia, the Šumava Mts, Kvilda: on siliceous overhang in spruce forest on the left side of the road Kvilda-Františkov, ca 1000 m, 20. VI. 1995, Z. Palice

A rare montane species, which occupies shaded siliceous overhangs in wooded areas. Its area of distribution ranges from NW Europe to the Central European Mts. So far known records originate from Great Britain, Norway, Sweden, Poland, Germany (Purvis et al. 1992: 369), Austria (Türk & Poelt 1993: 73, Berger & Türk 1995: 195, Hafellner 1997: 17) and Slovakia (Wirth 1975: 112, sub *Arthonia granitophila*; Vězda 1980: 12). Collected also in Transcarpathian Ukraine (Palice, in prep.).

\* *Micarea adnata* Coppins, *Bull. Brit. Mus. Nat. Hist.* 11: 108–109 (1983)

[W Bohemia, the Šumava Mts, Železná Ruda:] pod horizontálou k Jezeru [= glacial cirque of (?) Čertovo jezero lake], 6. VII. 1925, A. Hilitzer (PRM – 826792, sub “*Biatora uliginosa*”); S Bohemia, the Šumava Mts, Volary: valley of the right-hand-side tributary of Hučina brook, ca 0.5 km N of Jelení Vrchy, on bark of *Picea abies*, 890 m, 1. VI. 1996, Z. Palice

A unique lichen species through the forming of sporodochia (Coppins 1983: 109, Nash 1996: 57). Probably very rare taxon of the Czech lichen flora. It is suspected to be limited with its occurrence to the most preserved humid and highly forested regions.

*Additional record:* Austria: Oberösterreich, Ennstaller Alpen: Laussabacheralm (15 km E of Windischgarsten), on rotting wood together with *Micarea hedlundii*, alt. ca 850 m, 24. VII. 1994, Z. Palice

\* *Micarea anterior* (Nyl.) Hedl., *Bih. K. Svenska Vetensk Akad. Handl.* III, 18: 76, 86 (1892)

S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake, on old stump beneath dropping rock in N part of the corrie, 1200–1250 m, 19. VI. 1995, Z. Palice 124, conf. B. Coppins; S Bohemia, the Šumava Mts, Volary, Nové Údolí: the Světlá valley, on stump near the brook, alt. 830 m, 30. III. 1998, Z. Palice 125

*Micarea anterior* is similar in many respects to *M. misella* as for the appearance and the ecology. Nevertheless it is much rarer than the latter species. It is characterized by the immersed thallus, brown stipitate pycnidia (paler at base) and reddish brown apothecia (rare in the material cited above). Unlike *M. misella*, pycnidia and apothecia of *M. anterior* lack the greenish pigment which turns to violet in K. Except for pigments, there are also some minor differences in shape and size of ascospores. For a more detailed description and differences from other species see Coppins (1983: 113–114). According to the author, the li-

chen occupies rather dry and soft wood. Wirth (1995: 580) characterizes the lichen (in Central European conditions) as an inhabitant of montane spruce forests situated near the timber line and as a member of the epixylic "*Parmeliopsidetum hyperoptae*". From Central Europe cited only from Germany (Kalb 1982: 80, Wirth 1995).

*Micarea botryoides* (Nyl.) Coppins in D. Hawksw., P. James et Coppins, *Lichenologist* 12: 107 (1980)

W Bohemia, the Krušné hory Mts, Přebuz: on margin of Rolavské rašeliniště peat-bog, an eradicated tree – over dying mosses, alt. 920 m, 20. X. 1997, Z. Palice et P. Uhlík; W Bohemia, the Šumava Mts, Hojsova Stráž: Mt Ostrý – E slope, on silic. stone overhang by blue tourist path, alt. 1100 m, 25. X. 1997, Z. Palice; W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, on overhanging mica-schistaceous rocks, 1007–1300 m, 23. X. 1996, Z. Palice (PRC); W Bohemia, the Šumava Mts, Prášíly: glacial cirque of Laka lake, on silic. overhang in forest, 1200 m, 23. V. 1996, Z. Palice; SW Bohemia, the Šumava Mts, the Vydra valley: forest-road cutting between Antýgl and Turnerova chata cottage, on decaying liverwort (*Diplophyllum albicans*), ca 870 m, 2. IX. 1995, Z. Palice; SW Bohemia, the Šumava Mts, Kvilda: forest on the left side of the road Kvilda – Františkov, on humus, 1000–1020 m, 20. VI. 1995, Z. Palice (pycnidia only); S Bohemia, the Šumava Mts, Volary: on decaying mosses in Schwarzenberský kanál canal near Jelení Vrchy, 900 m, 27. VIII. 1995, Z. Palice; S Bohemia, the Šumava Mts, Volary: Mt Spáleníště, on siliceous rock in forest, ca 850 m, 1. V. 1995, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake, on mossy overhangs, 1095–1250 m, 15. VIII. 1995, Z. Palice (PRC); *Ibid.*, 29. V. 1998, Z. Palice 1612; *Ibid.*: climax spruce forest on N slopes of crest Mt Trístoličník – Mt Trojmezná hora, on moribund wood of mossy stump, alt. 1300–1330 m, 28. VI. 1998, Z. Palice 1536; C Bohemia, "Kokořín Protected Landscape Area", Kokořínský důl: Apatyka gorge, over decaying bryophytes on perpendicular sandstone rock, 270–280 m, 11. IV. 1999, Z. Palice et K. Vincencová (herb. Palice); N Bohemia, "Kokořín Protected Landscape Area", Dubá: the end of Vlkovská rokle gorge, over mosses on overhanging sandstone rock, alt. ca 350 m, 27. XI. 1997, Z. Palice; N Bohemia, protected area "Českosaské Švýcarsko", Kyjov: over mosses on overhanging sandstone rock ca 1 km E of the village, 4. V. 1996, Z. Palice; E Bohemia, the Krkonoše Mts: Obří důl valley, a boulder scree, on *Polytrichum*, alt. 1350 m, 19. V. 1997, M. Suková, det. Z. Palice (herb. Palice); *Ibid.*: Modrý důl valley, on humus below eradicated tree, alt. 1100–1200 m, 2. VI. 1998, Z. Palice 966; *Ibid.*: Úpská jáma corrie – Studniční stěna rock-wall, over decaying bryophytes, alt. 1350–1400 m, 3. VI. 1998, Z. Palice 1017; E Bohemia, the Orlické hory Mts: nature reserve "Zemská brána", on shaded rock near the stream of the Divoká Orlice, alt. 500 m, 9. III. 1997, Z. Palice; N Moravia, the Javorníky Mts, Lidečko: nature reserve "Pulčín-Hradisko", Pulčínské skály rocks, on a branch and decaying mosses in sandstone-rock crevices, alt. 600–650 m, 24. IV. 1998, Z. Palice 279, 281

A frequent *Micarea* species occurring often in its pycnidial state only. Very common especially in sandstone and mountainous areas with siliceous underground. From the Czech Republic it was reported for the first time by Kocourková-Horáková (1998a: 233).

\* *Micarea contexta* Hedl., *Bih. K. Svenska Vetensk Akad. Hand.*, III, 18: 83, 96 (1892)

S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – central part, on hard wood of *Picea* stump, alt. 1150–1200 m, 9. VII. 1998, Z. Palice 534 et C. Printzen (herb. Palice)

The specimen corresponds quite well to the description given by Coppins (1983: 124) – it has an endoxylic thallus, ordinarily 2-celled ovoid ascospores (upper cell usually broader than the lower one as on fig. 12a in Coppins (1983: 38)). In addition, pycnidia in the examined specimen were detected (20–50 µm in diameter) containing narrowly cylindrical pycnospores 4–4.5 × 0.8–1.2 µm – referring probably to microconidia of the species (cf. Coppins 1983: 124). As noticed by Coppins (1983), *M. contexta* is most probably apt to be confused with diminutive or immature specimens of *M. melaena*, but that species usually

has better developed thallus, more variable (as for the septation) and when mature, larger spores and significantly longer microconidia.

Species of coniferous boreal forest, up to now reported from Sweden (Coppins 1983: 125) and Scotland (Purvis et al. 1992: 377). Presumably new to Central Europe.

\* *Micarea deminuta* Coppins, *Bibl. Lichenol.* 58: 58 (1995)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, on rotting wood together with *Micarea prasina*, 1100–1200 m, 11. X. 1995, Z. Palice, det. B. Coppins; *Ibid.*: glacial cirque of Čertovo jezero lake, on bark of lying rotting trunk, 1050–1060 m, 24. V. 1996, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – the uppermost, SW part, on coniferous stump, alt. 1330–1350 m, 29. V. 1998, Z. Palice 1608

A recently described minute species growing on decaying wood, bark and mosses of lying trunks and stumps. The specimens mentioned above were collected on the substrate covered by filmy coating of non-lichenized algae, similarly as pointed out already by Coppins (1995: 60). So far known from Great Britain and Belgium only. Probably new to Central Europe.

\* *Micarea hedlundii* Coppins, *Bull. Brit. Mus. Nat. Hist.* 11: 135–136 (1983)

S Bohemia, the Šumava Mts, Volary: Hučina brook valley, on rotting stump in alder stand ca 2 km S of Černý Kříž, alt. 750–760 m, 25. IX. 1994, Z. Palice; S Bohemia, the Šumava Mts, Volary: valley of the right tributary of Hučina brook, ca 0.5 km N of Jelení Vrchy, on rotting stump, 880 m, 2. VI. 1995, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero – S part, on rotting wood of coniferous stump, alt. 1200–1250 m, 29. V. 1998, Z. Palice 1610

Although the apothecia are often a few or completely absent (Coppins 1983: 135–136, Wirth 1995: 577) as in the case of the above mentioned collections, the species is easily identified thanks to its stalked, pale, tomentose pycnidia with positive K<sup>+</sup> violet reaction and the thallus composed of goniospores with a “micareoid” photobiont. The species is quite rare and occurs on often strongly moribund wood and over bryophytes on shaded stumps in woodlands of Northern, Western and Central Europe and North America (Purvis et al. 1992: 375).

*Additional records:* Austria: Oberösterreich, Ennstaler Alpen: Laussabacheralm (15 km E of Windischgarsten), on rotting wood together with *Micarea adnata*, alt. ca 850 m, 24. VII. 1994, Z. Palice; France: Brittany, Gorges de Goulis (ca 12 km NNE of Rostrenen), on rotting wood, 3. X. 1996, J. Halda 1094 et Z. Palice; Germany: Baden-Württemberg, Schwäbisch-Fränkischer Wald, Schmerbachtal valley (ca. 6 km NW of Alfdorf, W of Hüttenbühl), on moribund wood of stump in shaded forest, alt. ca 470 m, 19. IV. 1998, Š. Bayerová, J. Halda et Z. Palice 1070; Slovakia: N. P. Slovenský raj, Hrabušice: the end of Sokol brook valley, ca 0.5 km up the stream of the confluence with the Veľká Biela voda, on moribund wood of stump, alt. 650 m, 10. VI. 1998, Š. Bayerová, J. Halda et Z. Palice 834

\* *Micarea lapillicola* (Vainio) Coppins et Muhr, *Graphis Scripta* 8: 47 (1997)

W Bohemia, the Šumava Mts, Železná Ruda: alluvium of Debník brook valley (= Ferdinandovo údolí), on loose flooded out pebbles together with *Trapelia* sp., alt. 725 m, 11. VII. 1998, Z. Palice 756 et C. Printzen; S Bohemia, the Šumava Mts, Volary, Nové Údolí: on “fresh” silic. stone in a former sandy quarry (ca 1.2 km SE from the railway-stop), alt. 850 m, 3. VIII. 1997, Z. Palice; S Bohemia, the Šumava Mts, Volary, Nové Údolí: on strongly weathering silic. boulder in a sandy quarry (ca 0.5 km NEE from the railway stop), alt. 805 m, 30. III. 1998, Z. Palice 104, 105

The cited specimens correspond well to the comprehensive description by Coppins & Muhr (1997). Like *Micarea erratica*, it has well developed excipulum, composed of radiating, branched and anastomosing hyphae, which are readily separable after using of K. Unlike that species, the thallus of *M. lapillicola* is well developed, formed by pale, convex areolae and containing a small, micareoid photobiont. The specimen from the Debrník valley (Palice 756) has a thallus tinged orange caused by iron oxids. The lichen was so far known only from Scotland, Sweden and Finland. Presumably new to Central Europe.

\* *Micarea lynceola* (Th. Fr.) Palice comb. nova

Basionym: *Lecidea lynceola* Th. Fr., *Lich. Scand.* 2: 561 (1874); type: [Norway, Akershus,] Christiania [Oslo par.]: Tveten, 20. V. 1868, *N. G. Moe* 257 (UPS-holotypus)

Syn.: *Micarea excipulata* Coppins, *Notes R. Bot. Gard. Edinburgh* 45: 161 (1988); type: Österreich, Kärnten, Karawanken: Am Eingang zur Trögner Klamm (ca. 7 km WSW Eisenkappel), 46°28' N, 14°31' E. Pioniervegetation auf lose am Grund liegenden, weich verwitternden Silikatsteinchen, 700 m, 5. VIII. 1973, *J. Poelt* (M-holotypus; UPS-isotypus), [H. Hertel: *Lecideaceae exsic.* n. 54]

W Bohemia, the Šumava Mts, Železná Ruda: alluvium of Debrník brook valley (= Ferdinandovo údolí), on loose flooded out pebbles together with *Trapelia* sp., alt. 725 m, 11. VII. 1998, Z. Palice 575 et C. Printzen; S Bohemia, the Šumava Mts, Volary, Nové Údolí: on weathering silic. boulder in a sandy quarry (ca 0.5 km NEE from the railway stop), alt. 805 m, 17. I. 1998, Z. Palice (herb. Palice, UPS); [E Bohemia, Jilemnice] Železný brod: Kopanský potok, 340 m, 10. VIII. 1959, J. Nádvořík (BRA, sub *Lecidea* sp.)

Since Th. Fries described *Lecidea lynceola* (Th. Fries 1874: 561) it was treated only a few times in literature (Lång 1910: 37–38, Vainio 1934: 307, Hertel 1975: 379–381). Later the lichen was synonymized with *Micarea bauschiana* (Körb.) V. Wirth et Vězda (Coppins 1983: 117). Moreover, Coppins (1983: 118) shortly mentioned a species with certain similarities to *M. bauschiana*, which he suspected, had not been described before. This lichen was formally introduced later (Coppins 1988: 161–164) as *M. excipulata* Coppins. According to the diagnosis (Coppins 1988: 161) *M. excipulata* differs from *M. bauschiana* primarily by possessing a well developed excipulum, monomorphic paraphyses and a larger-celled photobiont.

I examined the original material of *Lecidea lynceola* in UPS. It is well developed, containing two specimens – one of them is signed as holotype (Hertel in sched.), the second one presumably represents a topotype. The excipulum of the apothecia is distinctly developed, composed of radiating hyphae, the paraphyses are monomorphic, more or less branched and anastomosing, and the cells of the photobiont are thick-walled and large-celled, exceeding occasionally even 20 µm in diameter. Thus the material is unlike to be conspecific with *M. bauschiana*, where the excipulum is absent, paraphyses are dimorphic and the photobiont is much smaller (Coppins 1988: 162). Moreover, the holotype was compared with one of the isotypes of *Micarea excipulata* (UPS) and subsequently also with the holotype deposited in M, with which it is identical in all respects.

Since *Lecidea lynceola* Th. Fr. proved to be conspecific with *Micarea excipulata* Coppins, and the epithet “lynceola” has nomenclatoric priority, the new combination



*Micarea lynceola* (Th. Fr.) Palice is proposed here.

*M. lynceola* may be easily mistaken for *M. polycarpella* – another small-sized *Micarea* which is very similar in many characters: a large-celled photobiont with distinct haustorial penetrations (cf. fig. 55 in Coppins 1983: 138), a greenish pigment in apothecia and pycnidia, small non-septate spores, a strongly amyloid, slightly diverging tube-like structure in the ascus apex and the ecology (early colonizers growing preferably on loose small stones). However, the apothecia of *M. lynceola* are usually less convex to almost flat and distinctly larger (the apothecia often exceed 0.2 mm in diameter; in *M. polycarpella* rarely exceeding this size). More importantly, *M. lynceola* is distinguished by a well developed, 30–40 µm thick excipulum composed of outwardly radiating and branched hyphae, whereas *M. polycarpella* does not develop any distinct excipulum having a narrow, 7–12 µm wide, dark green excipulum-like rim, composed of coherent (even in K), dark-walled hyphae. The difference between the two species is best seen on apothecial sections after KI treatment when the non-amyloid excipulum contrasts with the strongly amyloid hymenium in *M. lynceola* (Coppins 1988: 162; cf. fig. 2c, p. 163) while *M. polycarpella* does not show such a character. An exhaustive description of *M. lynceola* (as *M. excipulata*) is provided by Coppins (1988: 161–162, 164). See also Purvis et al. (1992: 382) and Coppins & Muhr (1997: 48). In addition to mentioned descriptions it should be noted that the intensity of the olivaceous pigmentation in hypothecium may vary from specimen to specimen, depending – of course – also on the thickness of apothecial section. In some of the examined specimens this pigment was not always evident. Consequently, the hypothecium may appear to be colourless as was stated e. g. by Hertel (1975: 380) in his description of the species.

As pointed out by Coppins (1988: 164), this is a member of pioneer communities. It was collected usually on loose siliceous stones. Accompanied lichens in examined specimens included *Baeomyces rufus*, *Micarea lithinella*, *M. polycarpella*, *Porpidia crustulata*, *Rhizocarpon obscuratum* and *Trapelia coarctata* s. ampl. Like many other ruderals it may occur on wider range of substrates. It was reported e. g. from pieces of cardboard of a cable drum in an urban site in England (Gilbert 1990: 97–98, as *Micarea excipulata*).

Besides the old records from Norway (Th. Fries 1874) and Finland (Lång 1910), *M. lynceola* is known from Austria (Hertel 1975, Coppins 1988), Great Britain (Purvis et al. 1992: 382) and Germany (Wirth et al. 1994: 16, 1996: 342). New to France.

*Additional records*: France: Brittany, Huelgoat: valley of a right-hand-side tributary of the Dour Yvonnec Rou river, on loose stones on the ground in a forest clearing together with *Baeomyces rufus*, *Micarea lithinella* and *Trapelia coarctata* s. ampl., alt. 120–150 m, 1. X. 1996, Z. Palice (herb. Palice, UPS); Germany: [Oberbayern,] Sandsteine in der Kiesgrube südlich bei Laufzorn. München. 12. VI. 1892, F. Arnold (M, sub *Lecidea atomaria*; *Micarea polycarpella* intermixed)

\* *Micarea marginata* Coppins et Muhr in Coppins, Notes R. Bot. Gard. Edinburgh 45: 164 (1988)

E Bohemia, the Krkonoše Mts: Mt Studničná – E slope, upper part of “Čertova zahrádka” gullie, on shaded overhanging, N-NE facing rock below “Čertův hřeben” crest, alt. 1250–1300 m, 4. VI. 1998, Z. Palice 1034

The specimen corresponds to the description of the species in most respects. Comparison with the original description revealed a small difference in macroconidia, which were shorter and slightly broader (14–24 × 1.2–1.8 µm) in the Bohemian specimen than those mentioned by Coppins (1988: 167) – 24–32 × 1–1.3 µm. The lichen was also compared with the paratypus of the species from Värmland (H – dupl. Muhr 7013), where, however, no pycnospores were detected.

*M. marginata* was until now recorded from Sweden (the type locality) and more recently in a number of localities in Scottish highlands – on rock and pebbles around areas of prolonged snow cover (Fryday in Hitch 1996: 43, Fryday 1996: 532). There are also three unpublished collections from Transcarpathian Ukraine (Palice, in prep.). New to Central Europe.

\* *Micarea myriocarpa* V. Wirth et Vězda ex Coppins, Bull. Brit. Mus. Nat. Hist. 11: 161–162 (1983)

W Bohemia, the Šumava Mts, Hojsova Stráž: Mt Ostrý – E slope, on silic. stone overhang by blue tourist path, alt. 1100 m, 25. X. 1997, Z. Palice; W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Čertovo jezero lake, on overhanging mica-schistose rock, ca 1100 m, 24. V. 1996, Z. Palice, dupl. det. B. Coppins; Ibid.: glacial cirque of Černé jezero lake, an avalanche track in SW part of the corrie, stone overhang, 1150–1250 m, 11. X. 1995, Z. Palice (PRC); S Bohemia, the Šumava Mts, Volary: Mt Stožec, nature reserve “Medvědice”, siliceous stone overhangs in scree forest, ca 900 m, 18. VI. 1995, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: old-growth forest ca 1.5 km N of Plešné jezero lake, on exposed roots of eradicated tree together with *Micarea* sp., alt. 1020–1030 m, 30. III. 1997, Z. Palice 164; Ibid.: Mt Smrčina, the Řasovka valley, on dry exposed root of *Picea*, ca 1000 m, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: “Jezerní luh” peat-bog – moist spruce forest around, on roots of eradicated *Picea* near a brook, 930–940 m, 11. VII. 1997, Z. Palice 147, 148; S Bohemia, the Šumava Mts, Prachatice-Blažejovice: the Blanice valley, overhanging rock below Hus castle-ruin, alt. 725 m, 16. IX. 1997, Z. Palice

A very inconspicuous species growing on dry stone and root underhangs. Often associated e. g. with *Psilolechia clavulifera*, *Micarea botryoides* and *Chaenotheca furfuracea*.

The lichen is reported here as new to Austria.

*Additional records*: Austria: Oberösterreich, Mühlviertel: valley of Bügelbach brook, wood of eradicated tree, alt. 770 m, 5. VIII. 1997, Z. Palice; Germany: Baden-Württemberg, Schwäbisch-Fränkischer Wald, Schmerbachtal valley (ca. 6 km NW Alfdorf, W of Hüttenbühl), on root of an eradicated tree, alt. ca 460 m, 19. IV. 1998, Š. Bayerová, J. Halda et Z. Palice 1064

\* *Micarea nigella* Coppins, Bull. Brit. Mus. Nat. Hist. 11: 163 (1983)

[W Bohemia, the Šumava Mts, Železná Ruda:] Eisenstein-Hamry [between Železná Ruda and Hamry], [on wood], VI. 1906, M. Servít (PRC – cum *Placynthiella icmalea* – orig. sub “*Biatora botryosa*”); N Moravia, the Javorníky Mts, Velké Karlovice: nature reserve “Razula”, on wood of a standing dead conifer, alt. ca 750 m, 25. IV. 1998, Š. Bayerová et Z. Palice 261 (herb. Palice)

Unfortunately, no apothecia are present in the material mentioned above. However, the species is readily distinguishable from other *Micarea* species with dark stipitate pycnidia by the presence of a purple-brown pigment (similarly as in apothecia), which turns dark green after using K (see Coppins 1983: 163–164). A rarely collected lichen of relatively moribund and soft wood. Up to now known only from the British Isles, Denmark (Coppins 1983: 165, Purvis et al. 1992: 377), Switzerland (Dietrich 1991: 173) and Sweden (Santesson 1993: 139).

*Micarea polycarpella* (Erichs.) Coppins et Palice in Coppins, Palice et Soldán, Bryonora 16: 23 (1995)

Syn.: *Lecidea polycarpella* Erichs.

W Bohemia, the Šumava Mts, Kašperské hory: “U čističky”, on loose stones on the ground at a path, alt. ca 700 m, 14. III. 1997, Z. Palice; S Bohemia, the Šumava Mts, Volary, Nové Údolí: on strongly weathering silic. boulder in a sandy quarry (ca 0.5 km NEE from the railway stop), alt. 805 m, 30. III. 1998, Z. Palice 102; S Bohemia, the Šumava Mts, Volary: on small stones at railway (direction Černý Kříž and Vimperk) ca 100–200 m from the railway station, alt. 755 m, 14. IV. 1998, Š. Bayerová et Z. Palice 823 (herb. Palice, UPS); Central Bohemia, the Brdy Mts, Jince – Ohrazenice: valley of Pstruhový potok brook, a dumped heap of stones near a small field, alt. 415 m, 21. II. 1998, Š. Bayerová, A. Guttová et Z. Palice 1052; E Bohemia, the Labe valley, Chvaletice: sedimentation basin near the power station, ca 1 km E of the village, on silic. stone at a dumped row stones, alt. 220 m, 14. X. 1994, Z. Soldán, det. B. Coppins (E, PRC; Coppins et al. 1995: 24); Ibid., V. 1995, Z. Soldán (herb.

Palice); Ibid., on loose silic. stones on the ground, 21. III. 1996 and 14. IV. 1997, Z. Palice; Ibid., on piece of wood on the ground, 15. VII. 1997, Z. Palice; N Moravia, distr. Vsetín: the Senica valley near Lidečko, on pebbles at bank of the stream, ca 500 m, 9. X. 1971, A. Vězda; N Moravia, the Javorníky Mts, Velké Karlovice: near a former alley, ca 0.5 km NW of Mt Bařínka, on loose stone at forest-road cutting, together with *Trapelia coarctata* and *T. placodioides*, alt. ca 780 m, 25. IV. 1998, Z. Palice 255

This lichen was forgotten for a long time by lichenologists since Erichsen's description in 1929 until the reviving by Jacobsen & Coppins (1989) who provided its first detailed description.

This is a peculiar species of the genus through the presence of very narrow excipulum-like rim composed of coherent (even in K), dark-walled hyphae. This feature was the main reason why the lichen was retained until recently in the broadly circumscribed genus *Lecidea* (Jacobsen & Coppins 1989: 264, Purvis et al. 1992: 334), even if close affinities to some members of the genera *Micarea* and *Psilolechia* were obvious and well known by the same authors. Another interesting feature of the lichen appears to be a large celled photobiont presented e. g. by Coppins (1983: 25, 138; 1988: 161–162) for *Micarea intrusa* (Th. Fr.) Coppins (= *Carbonea intrusa* (Th. Fr.) Rambold et Triebel) and *Micarea excipulata* (= *M. lynceola*). On the basis of microscopic features (character of asci, paraphyses, pycnidia etc.) and due to a revised interpretation of the hyphae forming the apothecial margin (newly regarded only as remnants of a hyphal layer surrounding the apothecium in its initial stages), it was recently transferred from genus *Lecidea* into *Micarea* (Coppins et al. 1995). The species is apt to be confused with *M. lynceola* (see below that species for differences).

An inconspicuous pioneer lichen growing usually in secondary habitats on loose or dumped siliceous stones (Jacobsen & Coppins 1989, Purvis et al. 1992: 334, Coppins et al. 1995: 24), bricks (in Hitch 1994: 58), more rarely also on dusted pieces of wood lying on the ground. It prefers acidic, perhaps even secondarily slightly nutrient-enriched substrates. As a "ruderal lichen", it may prove to be more widely distributed in disturbed urban habitats, even if it is so far known only from relatively small number of scattered localities in Central and NW Europe. In herbaria, additional misidentified material could be hidden, e. g. under *Lecidea atomaria* Th. Fr. – a member of *Lecidea sensu stricto* – which is with certainty known only from Sweden, and Central European material referred to this species probably does not belong here (Hertel 1995: 154). This statement was supported now by examination of numerous Arnold's specimens from Munich herbarium, where most of them named as *Lecidea atomaria* proved to be just *Micarea polycarpella*.

New to Sweden.

*Additional records:* Germany: An kleinen Sandsteinen des braunen Jura am Waldhohlwege zwischen Lichtenfels und dem Staffelferge in Oberfranken, 10. X. 1887, F. Arnold [Arnold: Lich. exs. 1239] (M, sub *Lecidea atomaria*); [Oberbayern,] Glimmersteine einer Waldgrubens am Waldsäume südwestlich bei Obersendling (München), XI. 1888, F. Arnold (M, sub *Lecidea atomaria*); [Oberbayern,] Glimmerstein im lichten Gehölze zwischen Pasing und Lochham bei München, VI. 1890, F. Arnold (M, sub *Lecidea atomaria*); [Oberbayern,] Sandsteine in der Kiesgrube südlich bei Laufzorn (München), 12. VI. 1892, F. Arnold (M, sub *Lecidea atomaria*, together with *Micarea lynceola*); [Oberbayern,] Sandstein am Waldsaum beim Park westlich von Pullach (München), 16. VI. 1888, F. Arnold (M, sub *Lecidea atomaria*); [Oberbayern,] Steinhauften am Park westlich von Pullach (München), VI. 1890, F. Arnold (M, sub *Lecidea atomaria*); [Oberbayern,] Auf Sand- und Glimmersteinen eines Steinhauftens am Waldsaume westlich von Pullach. München, 8. VI. 1890, F. Arnold [Arnold: Lich. Monacenses exs. 114] (M, sub *Lecidea atomaria*); Sweden: Södermanland, Västerno, 1875, 1876, O. G. Blomberg (M, in herb. sub *Micarea bauschiana*, ad sched. sub *Lecidea lynceola*); Ibid., 1875, 1877, P. J. Hellbom (UPS, in herb. sub *Micarea bauschiana*, ad sched. sub *Lecidea lynceola*); Värmland: Övre Ullerud par., Hägerberget, on stone in a bridge fundament, 26. X. 1981, S. W. Sundell 15 112 (GB, cum *Thelocarpon laureri*)

\* *Micarea vulpinaris* (Nyl.) Muhr, Svensk Bot. Tidskr. 81: 25 (1986)Syn.: *Micarea muhrii* Coppins

[W Bohemia, the Šumava Mts, Železná Ruda:] Čertovo jezero, alt. 1030 m, 24. VIII. 1935, A. Hilitzer, conf. B. Coppins (PRM – 782251, 782252, sub “*Lecidea Gabrettae* Hlz.”); Ibid.: ad ligna immersa in lacum Černé jezero, alt. 1005 m, 20. IX. 1933, A. Hilitzer (PRM – 782253, PRM – 782254, sub “*Lecidea Gabrettae* Hlz.”); Ibid.: Jezero Laka [Laka lake], 14. VII. 1922, A. Hilitzer (PRM – s. n.); S Bohemia, the Šumava Mts, Nová Pec: Plešné jezero lake – on wood half-immersed in water near the bank beneath the rock-wall, 1090 m, 11. VII. 1997, Z. Palice; Ibid., on overflooded loose piece of bark at SE bank of the lake, 29. VI. 1998, Z. Palice 1529; Ibid., on immersed wood at S margin of the lake, 18. X. 1998, J. Halda et Z. Palice 1490

Hilitzer’s samples of *Micarea vulpinaris* were discovered incidentally in PRM labelled as “*Lecidea Gabrettae*” [Silva Gabre(t)ta is an old Latinized Celtic name for the Bohemian Forest] during my random checking of Hilitzer’s material from the Šumava Mts. Nevertheless the epithet “gabrettae” has never been used by him in literature.

The species is interesting from the ecological point of view. In Scandinavia and North America it might occur both on wood and stones periodically overflooded by water, frequently in brooks. In the Šumava Mts it has been collected so far in glacial lakes only, occupying half- to completely immersed, very slowly decaying, hard wood (in one case also bark) at their banks. The dystrophic nature of the water of the glacial lakes supports the wood to be almost conserved for a long time and to decay very slowly.

It is so far known from Finland (Muhr 1986: 25, Vitikainen et al. 1997: 40), Norway, Sweden (Coppins 1983, Muhr 1986: 25–26, Santesson 1993) and the Pacific part of North America (Brodo 1995: 155–156).

New to Germany.

*Additional record:* Germany: [Bayern, Böhmerwald:] Javorské jezero [= (?Grosser)Arbersee], 19. VIII. 1924, A. Hilitzer (PRM – s. n., sub “*Lecidea Gabrettae*”)

+\* *Microcalicium ahlneri* Tibell, Bot. Notiser 131: 234 (1978)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, an avalanche track in SW part of the corrie, on old spruce stump, ca 1150 m, 23. X. 1996, Z. Palice (PRC); SW Bohemia, the Šumava Mts, Modrava: Břežník, on rotting stump of *Picea*, ca 1150 m, 12. VIII. 1994, Z. Palice, conf. L. Tibell; S Bohemia, the Šumava Mts, Volary: valley of the hand-right-side tributary of Hučina brook, ca 0.5 km N of Jelení Vrchy, on rotting stump, 880 m, 2. VI. 1995, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: Mt Trojmezna hora – N slope, climax spruce forest, on wood of *Picea*, alt. ca 1300 m, 28. VI. 1998, Z. Palice 1598; Ibid.: on bank of Plešné jezero lake below the rock-wall, on wood of stump, alt. 1090 m, 29. V. 1998, Z. Palice 1599

A saprophytic member of “calicioid” fungi growing mostly on shaded, hard to very decayed, dry wood of mostly coniferous stumps. Besides the ecology, it differs from the common *M. arenarium* by shorter stalks, in having a poorly developed excipulum and persistent, sclerotized hyphae in the mazaedium (Tibell 1978: 234).

\* *Ochrolechia microstictoides* Räs., Lich. Fen. Exsic. n. 226 (1936)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake – central part, on dry *Picea*, 1100–1200 m, 11. X. 1995, Z. Palice (PRC); Böhmen, Böhmerwald: Auf dem Rücken des Plöckenstein, nah der österr. Grenze, auf stehender toter *Picea*, 1300–1350 m, 5. IV. 1994, J. Poelt et R. Türk, det. J. Poelt (herb. Palice); S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake, an avalanche track in S part of the corrie, on twigs of young *Picea*, ca 1150 m, 19. V. 1995, Z. Palice (PRC)

Until recently this always sterile lichen was frequently regarded as a synonyme to *Ochrolechia turneri*, from which, however, it differs in more aspects – chemically (by the presence of lichesterinic acid), morphologically (soralia become confluent early to form a leprarioid crust) and ecologically (species of non-eutrophic, acidic bark and wood) (Tønsgaard 1992: 243). In the Czech Republic presumably not rare in mountainous woodland areas.

*Parmelina pastillifera* (Harm.) Hale, Smithsonian Contr. Bot. 33: 39 (1976)

Syn.: *Parmelia pastillifera* (Harm.) Schub. et Klem.

S Bohemia, the Šumava Mts, Volary, Černý Kříž: “U hotelu”, on solitary *Fraxinus excelsior*, alt. 740 m, 19. I. 1996, Z. Palice 197

The lichen with an oceanic tendency (Wirth 1995: 664) was collected on one older solitary ash-tree (originally only two thalli were present) in front of a tourist pension in the eastern part of the Šumava Mts. In a similar habitat – on a solitary tree in a village – it was collected also in Slovakia in the Malá Fatra Mts (Pišút & Guttová 1997: 497). From the territory of the Czech Republic recently mentioned from Moravia, not far from the border with Slovakia (Liška & Pišút 1995: 138).

*Polyblastia gothica* Th. Fr., Acta Soc. Sci. Ups. 3: 25 (1877)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, an avalanche track in S part of the corrie, on decaying mosses together with *Epigloea soleiformis*, ca 1200 m, 12. X. 1995, Z. Palice, conf. O. Breuss (PRC); S Bohemia, the Šumava Mts, Nová Péc: Mt Plechý – N slope, a boulder scree close to the Stifter monument, over dead mosses (*Sphagnum*), ca 1330 m, 14. X. 1995, Z. Palice

A rarely collected lichen with very wide but scattered distribution in Eurasia and North America. So far known from Northern Europe – Scotland and Sweden (Poelt 1969: 531, Purvis et al. 1992: 484, Santesson 1993: 173), Macaronesia (Hafellner 1995: 73), higher Central European mountains – the Sudeten (Servít 1954: 63, sub *Amphoroblastia gothica*), the Carpathians (Vězda 1961: 2) and the Alps (van den Boom et al. 1996a: 644, Hafellner 1997: 24), furthermore from Siberia (Zhurbenko 1996: 217) and North America (Esslinger & Egan 1995: 521). The lichen overgrows decaying mosses and plant debris in cool and open situations on silicates, but also on limestones (Vězda 1961, van den Boom et al. 1996a: 626), when obviously a high layer of humus is developed.

\* *Porina hibernica* P. James et Swinscow in Swinscow, Lichenologist 2: 35 (1962)

Syn.: *Zamenhofia hibernica* (P. James et Swinscow) Clauz. et Roux

[W Bohemia, the Šumava Mts, Železná Ruda]: na stěně Čertova jezera [glacial cirque of Čertovo jezero lake], *Fagus*, IX. 1926, A. Hilitzer (PRM – 853378–9, cum *Porina thuretii*); W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, *Acer pseudoplatanus* below the dripping rock-wall, alt. 1227 m, 29. VIII. 1994, 12. X. 1995, Z. Palice, dupl. det. B. Coppins

The species is sometimes ranked into *Zamenhofia* Clauz. et Roux which comprises isidiate, usually sterile lichens.

The recent collection originated from the glacial cirque of Černé jezero lake (the specimen was kindly determined by B. Coppins). Subsequently, older material collected by Hiltzer in neighbouring Čertovo jezero lake was discovered intermixed in a very rich collection of another rare *Porina* – *P. thuretii*. The recently collected specimens were growing together with other “oceanic” lichens – *Nephroma parile*, *Parmeliella triptophylla*, *Rinodina archaea* and *Strigula stigmatella* (Ach.) R. C. Harris.

In Europe, it was known until now from its strongly oceanic part only (Purvis et al. 1992: 649, Coppins, in litt.). Very recently it was discovered in more localities of old forests in the western part of Transcarpathian Ukraine (Coppins et al. 1998: 157, 159, sub *Zamenhofia hibernica*). It occurs also in North America (Esslinger & Egan 1995: 522).

*Porina leptalea* (Durieu et Mont.) A. L. Sm., Monogr. Brit. Lich. 2: 333 (1911)

Syn.: *Segestria leptalea* (Durieu et Mont.) R. C. Harris

W Bohemia, the Šumava Mts, Železná Ruda: Černé jezero lake, at base of *Picea* just near the bank of the lake, 1008m, 25. X. 1997, Z. Palice, det. P. McCarthy; E Bohemia, the Orlické hory Mts: nature reserve “Zemská brána”, bark of old *Fagus*, 500–550 m, 15. I. 1996, J. Halda 738 et Z. Palice (Halda 1997: 17); Ibid.: the Bělá valley, old *Fagus* near the stream under cross-roads Skuhrov – Jedlová – Uhřínov, together with *Dimerella pineti* and *Arthonia vinoso*, 530 m, 21. IV. 1996, Z. Palice

A widely distributed species occurring in both hemispheres. It grows usually as an epiphyte but is also known to be facultatively saxicolous (e. g. Purvis et al. 1992: 492, Harris 1995: 176). In Germany, it appears to prefer especially oceanic areas with mild climate (Wirth 1995: 762–763).

In the Czech Republic, it was discovered quite recently in the Orlické hory Mts (Halda 1997: 17), where it occurs in humid valleys growing on shaded bark of *Fagus*. It has been subsequently collected also in the western part of the Šumava Mts – at the very base of old *Picea* standing just at the bank of a glacial lake. The species was expected in this area, since it was reported also from Böhmerwald on the German side of the border (Printzen 1997: 101). The specimen from the Šumava Mts has unusually dark brown perithecia. However, it is always within the range of variation of this species (McCarthy, in litt.).

The lichen is reported here as new to Scandinavia.

*Additional records*: France: Brittany, Gorges de Goulvic (ca 12 km NNE of Rostrenen), *Fagus*, 3. X. 1996, Z. Palice; Rumania: the Bihor Mts, Padiș area, Cheile Galbenei gorge, on dry twigs of *Picea abies*, alt. 750 m, 29. VII. 1998, Z. Palice 811; Sweden: Östergötland: Kvarsebo. På alrötter [on roots of *Alnus glutinosa*], 1910, J. Hulting (GB, cum *Porina aenea* – orig. sub *Verrucaria aethiobola*)

\* *Porpidia ochrolemma* (Vainio) Brodo et R. Sant., Mycotaxon 56: 161 (1995)

Syn.: *Hymenelia ochrolemma* (Vainio) Gowan et Ahti, *Porpidia pseudomelinodes* Schwab

E Bohemia, the Sudeten, the Krkonoše Mts: Obří důl valley, by the waterfall “Dolní úpský vodopád”, on dripping silic. vertical rock, alt. 980 m, 2. VI. 1998, Z. Palice 947; Ibid., 25. IX. 1998, J. Halda et Z. Palice 1366

Always sterile lichen with pale grey thallus which is frequently tinged orange by iron oxides and forming pale to blue-grey crateriform soralia. It is very similar to *Porpidia melinodes* (Körb.) Gowan et Ahti. It differs from the latter species primarily by the pres-

ence of stictic acid rather than confluent acid (Schwab 1988: 430, 433; Gowan & Ahti 1993: 71). Gowan & Ahti (1993) also pointed out that *P. ochrolemma* has a thinner, less commonly areolate thallus, less pigmented soralia and an often patchily pale grey thallus (in *P. melinodes* more or less uniformly rusty thallus without grey patches).

The lichen grows in high montane (rarely montane) to alpine areas on dripping siliceous rocks by waterfalls etc. It is distributed in Fennoscandia, Central European mountains and North America (Schwab 1986: 431–432). It is a very rare lichen, at least within Central Europe. Except the Alps, until now recorded only from the Tatra Mts, Schwarzwald and Vosges (Wirth 1995: 420, 422), where the lichen is regarded to be a glacial relic. More recently Fryday (1996: 523) reported the species also from Wales.

(\* *Psilolechia clavulifera* (Nyl.) Coppins, Bull. Brit. Mus. Nat. Hist. 11: 201 (1983)

W Bohemia, the Brdy Mts, Radošice: valley of Smolivecký potok brook, on bark, pebbles and ground among roots in underhang of eradicated *Picea*, 600–630 m, 15. II. 1997, Š. Bayerová et Z. Palice; W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, on boulder underhang in S part of the corrie, 1150–1200 m, 23. X. 1996, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: old-growth forest ca 1.5 km N of Plešné jezero lake, on exposed roots of up-ended tree log, with *Micarea* sp. and *M. myriocarpa*, alt. 1020–1030 m, 30. III. 1997, Z. Palice 151; S Bohemia, the Šumava Mts, Nová Pec: “Jezerní luh” peat-bog – moist spruce forest around, on roots of eradicated *Picea* near a brook, together with *Micarea* sp. and *M. myriocarpa*, alt. 930–940 m, 11. VII. 1997, Z. Palice 146; S Bohemia, the Šumava Mts, Volary, Černý Kříž: near “Tovární cesta” forest road, on dry basis of dead deciduous tree together with *Micarea* sp., alt. 800 m, 16. XII. 1995, Z. Palice 149; Ibid.: Mt Jelení vrch (ca 3 km SSW of Černý Kříž), remnants of beech forest on E slope, on dry roots of eradicated tree, alt. 850–900 m, 16. VI. 1995, Z. Palice 1554; Ibid.: Hučina brook valley, ca 100 m of the confluence into the Studená Vltava river, *Picea* near the brook, alt. 740 m, 4. VIII. 1997, Z. Palice 218, 219 (herb. Palice, UPS); S Bohemia, the Šumava Mts, Volary, Nové Údolí: a sandy quarry (ca 0.8 km SSE from the railway stop), on underhanging side of silic. boulder, together with *Micarea* sp., alt. 850 m, 3. VIII. 1997, Z. Palice 217; Ibid.: the Světlá valley, on stump near the brook, alt. 830 m, 30. III. 1998, Z. Palice 126

Very frequent species in wooded (but not exclusively) areas, but for its inconspicuousness and the specific ecology often undercollected. Naturally it often grows e. g. in dry underhangs of up-ended trees or other similar habitats protected from direct rain overgrowing roots, plant debris, pebbles, compacted soil, etc. The lichen may grow also in secondary habitats such as underhangs of forest path-cuttings or overhanging stones in gravel-pits. It is not infrequently accompanied by other, often ombrophobous lichens, as e. g. *Chaenotheca furfuracea*, *Lepraria* sp. div., *Micarea myriocarpa*. In their paper on the genus *Psilolechia*, Coppins & Purvis (1987: 32) mention that this species is distributed also in the former Czechoslovakia; however, without closer localization, referring probably to the area of present Slovakia, where the species was included by Pišút et al. (1996: 20) in the list of Slovak lichens on the basis of a report by Szatala (1939: 353). Quite recently, one collection of *Psilolechia clavulifera* from the Czech Republic (leg. Š. Bayerová) was issued by Vězda (1998) in his Lich. rar. exsic. (n. 349).

\* *Rhizocarpon leptolepis* Anzi, Comm. Soc. Critt. Ital. 1: 158 (1862)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake, on exposed rock-face in N part of the corrie, 1250–1300 m, 11. X. 1995, Z. Palice; S Bohemia, Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake – S part, 1300 m, 15. VI. 1996, Z. Palice; Ibid.: Mt Trojmezna hora, on vertical granitic rock, alt. 1360 m, 28. VI. 1998, Z. Palice 1512



A relatively rare montane species of hard siliceous rocks. It was already reported by Poelt (1972: 138) from Böhmerwald (on German side of the Bohemian Forest) in a boulder scree between Seewand (“Jezerní stěna” rock-wall) and Zwercheck (Mt Svaroh), a site not far from the glacial cirque of Černé jezero lake – one of the localities mentioned above.

\* *Rinodina griseosoralifera* Coppins, *Lichenologist* 21: 169 (1989)

W Bohemia, the Šumava Mts, Modrava: “Medvědí hřbet” below Mt Rachel, near “Judenweg” path, bark of solitary *Acer pseudoplatanus* on the Bohemian side of the state border, alt. 1130 m, 10. VI. 1997, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: glacial cirque of Plešné jezero lake, *Acer pseudoplatanus* on former “iron curtain” together with *Physcia* sp., 1200–1250 m, 19. VI. 1995, Z. Palice, conf. B. Coppins

This obviously suboceanic lichen has so far been recorded in several countries from NW-W to Central Europe (Dietrich & Scheidegger 1996: 254). It is also known from North America (Esslinger & Egan 1995: 528). It occupies mainly subneutral bark of solitary broad-leaved trees (cf. e. g. Coppins 1989b: 171, Schreiner & Hafellner 1992: 246).

It is characterized usually by the absence of apothecia, having discrete, rounded, blue-grey soralia, and by chemical properties (atranorin and zeorin). The content of atranorin in the thallus and soralia may be presumably quite low, since I was unable to observe any distinct yellow spot reaction at present material by K treatment. This is in accordance with Coppins (1989b: 170), Purvis et al. (1992: 549) and Giralt et al. (1993: 711), who report for this species a negative or only faint yellow spot reaction with K, respectively. On the other hand, Diederich (1989: 204), Schreiner & Hafellner (1992: 244) and Wirth (1995: 824) mention a K+ yellow reaction. For a detailed description of the species and other confusable species see Coppins (1989b: 169–170), Schreiner & Hafellner (1992: 244–246) and Tønsberg (1992: 290–291). The species is keyed together with other sorediate and blastidiolate species of *Rinodina* by Giralt et al. (1993: 711–712).

*Additional record:* Germany: Bavaria, Böhmerwald: a meadow with soliters near the border with the Czech Republic, ca 1 km S of Mt Beerenkopf [1158m], 3 km NNW of Mt Gr. Rachel, on wood of solitary *Acer pseudoplatanus*, alt. 1130 m, 10. VI. 1997, J. Liška et Z. Palice

\* *Rinodina interpolata* (Stirton) Sheard, *Lichenologist* 5: 461 (1973)

W Bohemia, the Šumava Mts, Železná Ruda: glacial cirque of Černé jezero lake – N part, on shaded mica-schistaceous overhang in a gully, together with *Chrysothrix chlorina* and *Acarospora* cf. *smaragdula*, alt. 1250–1300 m, 11. X. 1995, Z. Palice, conf. H. Mayrhofer (PRC, GZU, herb. Palice, herb. Vězda)

The species was collected on one microlocality only – in one of the sheltered gullies incised in the steep rock-wall of the glacial cirque of Černé jezero lake – a site with very humid local climate. This lichen is interesting mainly from the lichenogeographical point of view. It occurs from NW to SW Europe (with occasional Central European disjunctions) and in the Southern Hemisphere – in southern Africa (Mayrhofer 1984: 426), and was previously also reported from South Georgia (Lindsay 1973: 87). Nevertheless, the identity of the South African specimen was recently re-evaluated and it perhaps represents still another species (Matzner & Mayrhofer 1996: 27). In Europe, it occurs especially in coastal sites, less frequently inland. Most of the known localities origin in Northern Europe, southwards the species becomes more sporadic. The cited locality possibly represents so far the most inlandish locality on the continent (cf. map in Mayrhofer 1984: 427).

\* *Rinodina septentrionalis* Malme, Svensk Bot. Tidskr. 6: 920 (1913)

S Bohemia, Český Krumlov, Blanský les: valley of Křenovský potok brook, bark of *Salix*, together with *Amandinea punctata*, alt. ca 700 m, 17. IV. 1994, Z. Palice, det. H. Mayrhofer

This corticolous, rarely lignicolous species is characterized by an inapparent or badly developed thallus, small, sessile and base-constricted apothecia with persistent brownish thalline margin and *Physcia*-type of ascospores with well developed torus (Giralt & Mayrhofer 1995: 153). The lichen is widely distributed in Fennoscandia and was recorded also in Siberia (Magnusson 1947: 274–275). Furthermore, it occurs at middle to high altitudes in montane areas of Central Europe (Ropin & Mayrhofer 1993: 821–823) and Mediterranean Europe (Giralt & Mayrhofer 1995: 154–155). It is known also from North America (Esslinger & Egan 1995: 528). Ropin & Mayrhofer (1993: 821) reported one collection from the former Czechoslovakia among the specimens examined: “... Böhmen: Tielhavy bei Teplicka, auf *Abies*; 1872; H. Lojka (W)”. As this locality is situated on the territory of Slovakia yet, the above presented recent collection seems to be the first one for the Czech lichen flora.

(\*) *Scoliciosporum curvatum* Sérusiaux, Nord. J. Bot. 13: 458 (1993)

SW Bohemia, the Šumava Mts, the Vydra valley, Antýgl: a young spruce forest between the river and tourist path leading to Turnerova chata chalet, ca 500 m from the bridge in Antýgl, alt. 850 m, 12. VI. 1997, Š. Bayerová et Z. Palice; S Bohemia, the Šumava Mts, Lenora: nature reserve “Velká Niva” – a marginal part, on needles of *Picea*, alt. 750 m, 12. VII. 1997, Z. Palice; S Bohemia, the Šumava Mts, České Žleby: Mt Radvanovický vrch – SSW slope, on needles of *Abies alba*, close to a forest way, alt. 920–930 m, 31. VIII. 1995, Z. Palice, conf. E. Sérusiaux et A. Vězda; S Bohemia, the Šumava Mts, Volary, Černý Kříž: in woods “Za kočovnou” and “U jezírka”, on needles of *Picea abies*, alt. 740–745 m, 16. III. 1997, Z. Palice; Bohemia meridionalis, montes Šumava, reservatum naturae Houska dictum, prope stationem viae ferreae “Ovesná”, ad folia *Piceae excelsae*, alt. 730 m s.m., 15. III. 1997, 13. VI. 1997, Š. Bayerová, J. Liška et Z. Palice (A. Vězda: Lich. rar. exsic. n. 350); Ibid., 15. III. 1997, Z. Palice; S Bohemia, the Šumava Mts, Horní Planá: nature reserve “Račínské prameniště” on the right side of Lipno dam, needles of *Picea*, alt. 750 m, 3. V. 1997, Z. Palice

It is a foliicolous species of humid sites in Western Europe occurring frequently even in urbanized areas there (parks etc.) and therefore it is regarded as quite toxitolerant (Sérusiaux 1993: 460). The very tiny apothecia of this lichen are easily overlooked in the field. In range of genus *Scoliciosporum* readily recognizable due to its ecology (foliicolous) and one-septate, lunuliform ascospores. In Central European conditions, the lichen – often together with non-symbiotic aerophilous green algae – occupies usually upper surface of living needles from *Abies alba* and *Picea abies*, more rarely even *Pinus sylvestris* (Palice 1129), and was so far reported only by Poelt (1994: 108) from two sites in Austria. Nevertheless it might be much more widespread in Central Europe. In the above mentioned localities in the Šumava Mts, the species occurs in great quantities. It seems, that the lichen was overlooked in Central Europe for its inconspicuousness. On the other hand, it could eventually also represent a new invasive, eastwards spreading element (in humid areas) as it is known to be quite toxitolerant in western Europe. Moreover, it is so far not known to be intermixed within older collections of foliicolous lichens from the area.

New to Rumania and Slovakia.

*Additional records:* Germany: Baden-Württemberg, Schwarzwald, Schramberg: a mixed forest around Ramstein ruin on slopes above Schiltachtal valley, on needles of *Abies alba*, *Picea abies* and *Pinus sylvestris*, alt. 680–700 m, 18. IV. 1998, Š. Bayerová, J. Halda et Z. Palice 1128, 1129; Rumania: the Bihor Mts, Padiș area, deciduous forest with fir-trees intermixed on NE slope of the point 1238, SE of Cetățile Ponorului gorge, on needles

of *Abies alba*, alt. 1100–1200 m, 28. VII. 1998, Š. Bayerová, J. Halda et Z. Palice 800; Slovakia: N. P. Slovenský raj, Hrabušice: the end of Piecky valley, on needles of *Picea abies*, alt. 490 m, 8. VI. 1998, Š. Bayerová, J. Halda et Z. Palice 887; Sweden: Västergötland: Väne-Asaka par., Högsäter, on needles of young *Picea abies*, alt. ca 100 m, 14. III. 1998, S. Hultengren, Z. Palice et L. Tibell (herb. Palice, UPS)

*Scoliciosporum* cf. *schadeanum* (Erichs.) Vězda, Folia Geobot. Phytotax. 13: 411 (1978)

Syn.: *Bacidia schadeana* Erichs.

S Bohemia, the Šumava Mts, Prachatic: the Blanice valley, ca 600–800 m down the stream of Hus castle-ruin, basis of *Populus tremula*, alt. 700 m, 16. IX. 1997, Z. Palice 178 (herb. Palice, UPS); E Bohemia, the Orlické hory Mts, the Divoká Orlice valley: nature reserve “Zemská brána”, on bark of *Fagus sylvatica* and *Acer pseudoplatanus*, alt. 500–550 m, 20. IX. 1998, J. Halda et Z. Palice (herb. Halda, herb. Palice, UPS)

Since Erichsen's first records of the species in northern Germany, *S. schadeanum* was reported only from the former Czechoslovakia (Vězda 1978: 411) and Austria (Berger & Türk 1993: 191, Hafellner 1993: 179). *S. schadeanum* is most closely related to the much better known *S. pruinosum* (P. James) Vězda described by James (1971: 119, sub *Bacidia pruinoso*), which was recently found not to belong to the genus *Scoliciosporum* sensu stricto (Ekman 1996: 46).

*S. schadeanum* is said to differ from *S. pruinosum* by an absent or only poorly developed epipsamma (well developed in *S. pruinosum*) and less frequently branched and ramified paraphyses in upper part of hymenium (James 1971). Similarly, following the keys by Vězda (1978: 414), Poelt & Vězda (1981: 308) and Clauzade & Roux (1985: 708), *S. schadeanum* is said to differ from *S. pruinosum* by the absence of an epipsamma and by scant paraphyses which are not so frequently branching in epihymenial zone. On the basis of the above mentioned distinctions I was, however, unable to determine unambiguously the recent Czech specimens. The apothecia of all the examined specimens from Bohemia have an epipsamma ± developed. However, the pruina on the surface of the apothecia is not clearly noticeable as e. g. in the case of the specimen of *S. pruinosum* from Pyrenees (leg. J. Vivant, A. Vězda: Lich. sel. exsic. n. 2455). Nevertheless, both the above mentioned specimens agree well with Kuřák's collection from northern Bohemia published by Vězda as *S. schadeanum* (1978: 411). Consequently – and considering the fact that an epipsamma may occur in *S. schadeanum* (James 1971) – I refer the recent Bohemian material tentatively to *Scoliciosporum schadeanum*. Nevertheless, in future, a detailed comparison of the Czech material with the Erichsen's type is necessary.

+ *Sphinctrina anglica* Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 334 (1857)

Syn.: *S. microcephala* (Sm.) Körb.

S Bohemia, the Šumava Mts, Nové Údolí: abandoned community “Krásná hora”, on a sterile thallus, wood of dead deciduous tree (?*Sorbus*), alt. 900 m, 15. IV. and 23. VI. 1995, Z. Palice

According to Löfgren & Tibell (1979:124) it is a widely distributed species in the temperate to hemiboreal zone of Europe and North America, but strongly declining; e. g. Santesson (1993: 207) reports no findings for Scandinavia since 1950. Recently, it was recorded several times in Austria (see Türk & Poelt 1993: 120) and it was discovered even in western Europe in the Netherlands (Spier & van Herk 1993). In the Czech Republic, it was

by now collected only once by A. Vězda in southern Bohemia near Jindřichův Hradec on bark of *Fraxinus excelsior* (Vězda 1963: 158, Löfgren & Tibell 1979: 125). Part of this collection (A. Vězda: Lich. Sel. Exs. n. 104, BM) was designated as neotype of the species by Löfgren & Tibell (1979: 122).

+ *Sphinctrina turbinata* (Pers.) De Not., Giorn. Bot. Ital. 2: 314 (1846)

S Bohemia, the Šumava Mts, Volary: a rest of scree forest on the left side of the road Záhvozdí – Arnoštov (ca 3 km from Záhvozdí community), bark of dead *Ulmus*, on *Pertusaria* sp., 800 m, 21. X. 1994, Z. Palice; Ibid.: Mt Stožec – S slope, on the border of nature reserve “Stožec”, bark of *Fagus*, on *Pertusaria* sp., 1020 m, 22. X. 1994, Z. Palice

*Sphinctrina turbinata* is – according to Löfgren & Tibell (1979: 136) – the commonest species of the genus, widely distributed in the temperate-to-hemiboreal zone in Europe and also in North America. In the Czech Republic it has so far only been recorded in Moravia (Servít 1910: 12, Suza 1922: 15, Löfgren & Tibell 1979).

*Thelocarpon pallidum* G. Salisbury, Northw. Naturalist, N. S., 1: 75 (1953)

N Bohemia, “Kokořín Protected Landscape Area”: a former quarry N of Újezd settlement, ca 1.5 km SE of Strachaly and 3 km NNE of Chcebus, on loose piece of (?lime-enriched) sandstone on the ground, alt. 300 m, 27. XI. 1997, Z. Palice, conf. J. Kocourková (Kocourková-Horáková 1998b: 299)

The specimen was already included and shortly treated in a recent paper by Kocourková-Horáková (1998b). The lichen was collected only thanks to moist weather conditions when the swollen thalline warts were readily observable in the field (with the help of a hand-lens). However, after drying of the sample, the warts became almost completely invisible (easily confusable with numerous silicate drops of similar size on the sandstone surface) and then re-moistening was necessary in order to find them again.

The given specimen corresponds well to the description given by Salisbury (1966: 188) in his monograph on the genus *Thelocarpon* except for the photobiont. The cells of green algae, unlike Salisbury's measurements (6–10 µm), are much greater (7–21 µm), distinctly penetrated by haustoria and this way resembling the photobiont mentioned by Coppins (1983: 25,138) for *Micarea* (= *Carbonea*) *intrusa*. Such a photobiont was reported also from other pioneer microlichens, as e. g. *Micarea lynceola* (Coppins 1988: 161–162,164, sub *M. excipulata*) or *Micarea polycarpella* (Jacobsen & Coppins 1989: 263, sub *Lecidea polycarpella*; Coppins et al. 1995: 22).

From other species of the genus with thalline sheath, *T. pallidum* is easily distinguishable due to its often completely non-pruinose warts and distinctly larger ascospores (Purvis et al. 1992: 597).

Besides the Czech Republic, it is so far known only from Great Britain (Purvis et al. 1992) and the Netherlands (Aptroot et al. 1998: 26).

\* *Thelopsis flaveola* Arnold, Verhandl. Zool. Bot. Ges. Wien 23: 505 (1873)

S Bohemia, the Šumava Mts, Nová Pec: Mt Hraničník – N slope, on weathered bark of *Fagus*, 1200–1250 m, 6. VIII. 1996, Z. Palice

A rare, skiophilous and ombrophobous lichen growing on strongly weathered bark of old broad-leaved trees (*Fagus sylvatica*, *Acer pseudoplatanus*) in humid mountainous ancient

forests (Vězda 1968: 375). Except that, it occurs also in the subalpine belt (Vězda l.c., Hinteregger 1994: 303) on creeping shrubs of *Salix* sp. div. and *Rhododendron* sp. div.

(\* *Trapelia corticola* Coppins et P. James, *Lichenologist* 16: 254 (1984)

S Bohemia, the Šumava Mts, Volary, Jelení Vrchy: valley of right-hand-side tributary of Hučina brook, ca 0.5 km N of the settlement, at base of *Picea*, alt. 880 m, 1. VI. 1996, Z. Palice 189; S Bohemia, the Šumava Mts, Nová Pec: Mt Hraničník – N slope, remnants of mountain mixed forest, on *Abies*, alt. 1200–1250 m, 6. VIII. 1996, Z. Palice 190; S Bohemia, the Šumava Mts, Volary: glacial cirque of Plešné jezero lake – N part (the “pseudocorrie”), *Picea*, alt. 1130–1150 m, 1. VI. 1996, Z. Palice 199, 206; W Bohemia, the Šumava Mts, Železná Ruda: a lime alley in unnamed wooded valley by green tourist footpath between crossroads “Debrník” and state border with Germany, on old *Tilia*, alt. 750–780 m, 11. VII. 1998, Z. Palice 579 et C. Printzen; Bohemia austr.-occidentalis, montes Šumava (Gabreta), Železná Ruda, in valle confluvii dextri vallis rivi Debrník, Ad corticem *Tiliae* secus viam, 750 m s.m., 11. VII. 1998 (A. Vězda: Lich. rar. exsic. n. 362); W Bohemia, the Šumava Mts, Železná Ruda: the Debrník valley, on bark of *Abies* and hard wood of a stump, alt. 750–780 m, 11. VII. 1998, Z. Palice 596, 614 et C. Printzen; W Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S slope, on bark of (?) *Fagus*, alt. 1200–1250 m, 10. VII. 1998, Z. Palice 561 et C. Printzen; N Moravia, the Javorníky Mts, Velké Karlovice: nature reserve “Razula”, at base of old *Fagus*, alt. ca 750 m, 25. IV. 1998, Š. Bayerová et Z. Palice 259

A rare sorediate lichen growing on acidic bark and wood in humid woodland areas. The lichen appears to have a somewhat suboceanic tendency (Holien 1998: 323). All the Czech material is sterile. For detailed descriptions of the lichen see Coppins & James (1984: 254–255) and Tønserberg (1992: 301).

*Additional records:* Germany: Baden-Württemberg, Schwäbisch-Fränkischer Wald, sandstone area Brunnenklinge and Hägelesklinge (ca. 5 km WSW of Geschwend), on *Fagus*, alt. ca 500 m, 19. IV. 1998, Š. Bayerová, J. Halda et Z. Palice 1086; Rumania: the Bihor Mts, Padiș area, a right-hand-side tributary of V. Feredeului brook, SSW of Cheile Someșului Cald, on old *Picea*, alt. 1300 m, 26. VII. 1998, Š. Bayerová, J. Halda et Z. Palice 748

(\* *Trapeliopsis glaucolepidea* (Nyl.) G. Schneider, *Bibl. Lichenol.* 13: 148 (1980)

Type: [Ireland:] On the top of a mountain, 1812, *M. Hutchins* (BM, lectotypus, not seen; H-NYL 20650, isolectotypus)

Syn.: *Trapeliopsis percrenata* (Nyl.) G. Schneider, *Bibl. Lichenol.* 13: 151 (1980); type: [Österreich, Oberösterreich:] An morschen Stöcken im St. Peterswalde bei Seitenstetten, 29. IV. 1885, *P. Strasser* (H-NYL 20936, holotypus)

S Bohemia, the Šumava Mts, Lenora: nature reserve “Velká Niva”, *Pinus rotundata* stand, alt. 750 m, 12. VII. 1997, Z. Palice; S Bohemia, the Šumava Mts, Volary, Černý Kříž: wet pine forest near the railway station, on humus among roots of eradicated tree and on turf, 740 m, 26. IX. and 3. XI. 1996, Z. Palice; S Bohemia, the Šumava Mts, Volary: peat-bog “Mrtvý luh” near Černý Kříž, a small remnant of wood with *Pinus rotundata*, 740 m, 24. V. 1997, Z. Palice; *Ibid.*, 3. VIII. 1997, B. Buryová et Z. Palice; S Bohemia, the Šumava Mts, Volary: nature reserve “Malá Niva” near Soumarský Most, on turf in wet pine forest, alt. 740 m, 11. X. 1996, Z. Palice; S Bohemia merid., montes Šumava, the Vltava valley: in turfosis “Houska” prope stationem viae ferreae “Ovesná”, ad turfam, 735 m s.m., 15. III. 1997, Z. Palice (A. Vězda: Lich. rar. exsic. n. 290 sub *T. glaucolepidea*; in fasc. 34 corrected for *T. percrenata*); *Ibid.*, 27. IX. 1998, Z. Palice 1481; S Bohemia, the Šumava Mts, the Vltava valley: Kyselovský les forest near Lipno water-reservoir, on turf in wet pine wood (*Pinus rotundata*), 725 m, 13. VII. 1997, Z. Palice; S Bohemia, the Šumava Mts, Nová Pec: on moist boulder near N bank of Plešné jezero lake, alt. 1090 m, 29. V. 1998, Z. Palice 1606; *Ibid.*: climax spruce forest on N slopes between Mt Třstoličník and Mt Plechý, on decayed wood and humus among roots of up-ended trees, on rotten wood of stumps and on bare soil, alt. 1250–1330 m, 28. VI. 1998, Z. Palice 1537, 1539, 1546, 1558, 1601; Bohemia merid., montes Šumava

(Gabreta), distr. Volary, reservatum naturae “Vltavský luh” prope stationem viae ferreae “Pěkná”, ad turfam in radicibus arboris, 780 m s.m., 15. X. 1998, Z. Palice, J. Kocourková et A. Vězda (A. Vězda: Lich. rar. exsic. n. 378 sub *T. percrenata*).

While examining specimens of an unknown squamulose *Trapeliopsis* from the Šumava Mts I faced the problem: which of the two potential species (*T. glaucolepidea* or *T. percrenata*) it is. Due to wrong interpretation of the published data I had used to determine and comprehend the Šumava specimens as *T. glaucolepidea* and *T. percrenata*, and vice versa until I had the possibility to study more material in UPS. The ambiguous data on the taxa resulted also in a confusion when the two first records of the species from the Czech Republic (A. Vězda in his *Lichenes rariores exsiccati*) were presented. One and the same specimen was reported under two names within a relatively short period. Being first issued as *T. glaucolepidea* (Vězda 1997: fasc. 29), the collection was, however, renamed as *T. percrenata* shortly after then (Vězda 1998: corrigenda in fasc. 34). In addition, recently a further specimen was issued as *T. percrenata* (Vězda 1999: fasc. 38) from a neighbouring locality (cf. the cited specimens above). Problems with distinguishing *T. percrenata* from *T. glaucolepidea* at Scandinavian material were encountered also previously by Muhr (1986: 30, 31), who states under *T. percrenata*: “I report this species with some hesitation. According to Timdal (in litt.) the Scandinavian material named *T. glaucolepidea* shows intermediates between small and large, sorediate squamules, corresponding to *T. percrenata* and *T. glaucolepidea*, respectively...”

Small green-grey squamules with capitate to lip-shaped soralia at their apices of the species may well resemble any immature stage of the genera *Cladonia* or *Hypogymnia*. The thallus is formed by greyish-green to glaucous grey, (0.25) 0.3–3 (4) mm wide, usually sorediate squamules, which may be scattered to more or less contiguous and mutually overlapping. The colour of the soralia varies from pale, creamy white, pale greenish, greenish grey to almost blue-grey depending on light intensity at the site and the extent of shedding of the external soredia. Very young squamules may be esorediate (older squamules, however, can be esorediate as well, especially in richly fertile specimens; cf. Wirth 1973: 185). On the other hand, young squamules may sometimes almost entirely dissolve into punctiform (capitate) soralia (this way they may resemble soralia of *Trapelia corticola*, which has, however, different chemical properties) as was first pointed out by Holien (1994: 42); apothecia are rarely developed in the collected material and many times they are still immature (more or less flat with constricted base and paler margin), reaching ca 1.2 (–1.5) mm in diameter only. The apothecia are rather variable regarding the colour, being mostly dark greenish grey to dark green-black, but also dull brown, and may be even pale rose in freshly collected specimens.

All the Bohemian specimens are chemically homogeneous, containing one dominant UV+ (bluish)white and KC+ dull orange-red (sometimes rather faint spot reaction) unknown substance, which was reported and described (in R<sub>f</sub> values for single solvent systems) e. g. by Söchting (1980, as “unknown A”) for *T. glaucolepidea* and by Holien (1994: 41–42) for *T. percrenata*. Schneider (1980: 37–38) reported two unknown substances for *T. glaucolepidea* as well as for *T. percrenata* and made a note on KC- spot reaction in the former species and KC+ orange reaction in the latter one (Schneider l.c.: 149, 153), though this information is not clearly given in his determination key. The following authors, who treated both the species (Poelt & Vězda 1981: 334, Coppins & James 1984: 250–253, Clauzade & Roux 1985: 759–760, Purvis et al. 1992: 612–613, Fryday & Coppins 1997:



319) did not mention the alleged chemical differences and did not give any positive spot reaction. The species are distinguished exclusively on the morphological (thallus, apothecia) and ecological grounds. What is more, some statements (cf. e. g. Muhr 1986: 30, Timdal 1991: 120, Purvis et al. 1992: 613) even implicate the idea of the two species being chemically identical. Recently, at least partial chemical identity was really confirmed, when Vitikainen (in litt.) carried out comparative TLC analysis of the type material plus the two exsiccata (A. Vězda: Lich. sel. exs. n. 536; A. Vězda: Lich. rar. exs. n. 290) and detected an unknown dominant substance (see above) in all four specimens. No chemical difference sensu Schneider (1980) was found.

A great morphological variation in other members of the genus *Trapeliopsis* is well known not only regarding the thallus (cf. the description above), but also the apothecia, particularly their pigmentation. Although the apothecia of the studied specimens are generally rare, the variation is significant even in small collections. Apart from this, the differences in the colour of fruiting bodies of the taxa within the genus *Trapeliopsis* do not seem to be of taxonomic significance. *T. granulosa* could be an example. The apothecia may vary in colour from pale rose-orange to dark green-black with distinct hues of different colours even within single apothecia (cf. e. g. Purvis et al. 1992: 613–614). Moreover, the two more narrowly conceived species of the genus – *T. gelatinosa* and *T. aeneofusca*, which are traditionally distinguished only on basis of their different epihymenial pigment, are doubtfully distinct (Fryday & Coppins 1997: 319).

In the Šumava Mts, evidently only one, extremely variable species occurs, forming a continuum of intermediate types between the supposed taxa (as far as the size and colour of the thallus and soralia). Apothecia are relatively rare, no sufficient number has been found. The diameter of the disc rarely exceeded 1.5 mm, mostly they were smaller than the given limit, still immature. The size corresponds to that of *T. percrenata* given in the literature. The same is true for their predominantly dark colour. Nevertheless, the scale of the tinges comprises lighter shades.

I assume, that the variability is caused predominantly by a combination of environmental factors, e. g. lighting, humidity, character of substrate (texture, decay rate, disturbance of surface), but also by intra- and intercompetitive relations with other lichens, bryophytes or algae as well as fungi. It is possible to observe a certain correlation between squamule size and type of substrate. The thalli on slowly rotting wood with relatively low degree of surface disturbance, and a greater number of competitors (e. g. some crustose lichens) are formed by small squamules, which are only occasionally as large as those overgrowing the rotten wood or peat, where the disintegrated substrate is otherwise naked. The species is supposedly able to spread horizontally quite rapidly thanks to its soredia and thus occupy new, naked area because of rapidly growing squamules. This feature enables it to compete with other organisms living on the unstable peat substrate.

The reasons given above made me to be fairly convinced, that a segregation of *T. glaucolepidea* and *T. percrenata* into two separate species is unjustified.

In the Šumava Mts (and the Austrian Mühlviertel), the species often inhabits humid coniferous, taiga-like stands with predominant *Pinus rotundata*. It occurs also in moist climax spruce forests. It overgrows especially naked peat (frequently among roots of up-ended trees, but occupies also mineral soil, dead tufts of *Sphagnum*, pieces of wood immersed in peat, moist undecayed to strongly moribund wood of stumps etc., associated by lichens such as *Absconditella sphagnorum*, *Cladonia* sp. div., *Hypogymnia physodes*,



*Micarea melaena*, *M. prasina*, *Omphalina umbellifera*, *Placynthiella icmalea*, *P. uliginosa*, *Trapeliopsis granulosa*, *T. viridescens* and bryophytes as *Calypogeia neesiana*, *Cephaloziella rubella*, *Lepidozia reptans*, *Ptilidium ciliare*, *Atrichum undulatum*, *Dicranella heteromalla*, *Dicranum scoparium*, *Pohlia nutans*, *Polytrichum juniperinum*, *Sphagnum* sp. div. and *Tetraphis pellucida*. In one case, it was collected on a moist boulder at a glacial lake-margin accompanied by *Trapeliopsis granulosa* and squamules of an undetermined *Cladonia*.

The European distribution of the lichen is wide and covers NW to Central Europe. So far it was reported from Austria, Germany, the British Isles, Denmark (Schneider 1980: 149, 153), Sweden (Søchting 1980, Muhr 1986: 28, 30, Santesson 1993: 224), Norway (Holien 1994: 41–43), Finland (Thor 1988: 18, Vitikainen et al. 1997: 63), Belgium (Diederich et al. 1988: 32) and the Netherlands (Brand et al. 1988: 54, Aptroot et al. 1998: 26, 80). Outside Europe, it was recorded on high elevation areas of the tropics of eastern Africa (Swinscow & Krog 1988: 313) and South America (Schneider 1980: 149).

*Additional record*: Austria: Oberösterreich, Mühlviertel: Bayerische Au – Torfau peat-bog, a light stand of *Pinus rotundata*, on peat among roots of an eradicated tree, alt. 730 m, 5. VIII. 1997, Z. Palice

\* *Verrucaria bryoctona* (Th. Fr.) A. Orange, *Lichenologist* 23: 3 (1991)

Syn.: *Thelidium bryoctonum* Th. Fr.

E Bohemia, the Labe valley, Chvaletice: sedimentation basin near the power station ca 1 km E of the village, on bare soil of dumped heap, 220 m, 14. IV. 1997, Z. Palice, conf. A. Orange; W Bohemia, the Šumava Mts, Železná Ruda: Mt Svaroh, Juránkova chata cottage ruin, on soil, alt. 1330 m, 25. X. 1997, Z. Palice; S Bohemia, the Šumava Mts, Volary, Černý Kříž: on humus among stones between disused railings, not far from the railway station, alt. 740 m, 14. XI. 1998, Z. Palice

The species is easily recognizable due to its ecology (terricolous or lignicolous habitat), the formation of a grey-green, granular-verrucose thallus, a hyaline layer of the perithecium surface and characteristic ascospores (the older ones are often septate), at least some of them possessing gelatinous appendages at the apices. For detailed description and differences from similar species see Orange (1991).

(\* ) *Vezdaea acicularis* Coppins, *Lichenologist* 19: 169 (1987)

W Bohemia, the Krušné hory Mts, Přebuz: a clearing on margin of nature reserve “Velké jeřábí jezero”, on the ground and bryophytes along a pathway, alt. 930 m, 20. X. 1997, Z. Palice et P. Uhlík; Central Bohemia, the Brdy Mts, Jince-Ohrazenice: on forest-road cutting at the beginning of the climb of Mt Koníček (NE slope) near the forest margin, ca 4 km SW of Jince, alt. 470 m, 21. II. 1998, Š. Bayerová, A. Guttová et Z. Palice 1045; Bohemia centralis, Chvaletice, statio vim electricam fabricanda, ad terram prugamine corruptam, alt. 220 m s.m., 5. XI. 1995, Z. Palice (A. Vězda: Lich. rar. exsic. n. 229); E Bohemia, the Labe valley, Chvaletice: sedimentation basin near the power station ca 1 km E of the village, on moist contaminated soil, thalli of *Peltigera didactyla* and plant debris, 220 m, 21. III. 1996, Z. Palice; S Bohemia, the Šumava Mts, Volary, Černý Kříž: “U Petričáka”, on sandy soil and over plant debris in railway cutting, 745 m, 24. III. 1996, Z. Palice; Ibid.: rest of bridge across the Studená Vltava river at entrance into nature reserve “Mrtvý luh”, over mosses on trodden humus, 740 m, 6. IV. 1996, Z. Palice; Ibid.: a sandy quarry near “Hučická” forest road, ca 2 km S of Černý Kříž, on bare soil together with *Moelleropsis* sp. and *Steinia geophana*, 775 m, 25. IV. and 17. VI. 1996, Z. Palice

The species is easily identified by its acicular ascospores. The apothecia – when moist – are relatively large for a species of the genus *Vezdaea*.

On almost all the above cited localities the lichen is forming very rich populations, especially in late autumn, winter and early spring. In the Šumava Mts, the apothecia were observed in various amounts almost during the whole year except part of the summer period (July, September), when only goniocysts were seen. The apothecia of *V. acicularis* were met mainly directly on sandy soil (often covered by algal films), and also over bryophytes, other lichens and plant debris. It is apparently more acidophilous than the similarly sized *V. aestivalis*.

*Veizdaea aestivalis* (Ohl.) Tsch.-Woess et Poelt in Brown D. H., Hawksworth D. L. et Bailey R. H. (eds.), *Lichenology: Progress and problems* 91 (1976)

Syn.: *Pachyascus byssaceus* (Vězda) Vězda

[W Bohemia, the Šumava Mts, Železná Ruda:] "Jezerní Stěna, na plošince v sedle" [Mt Jezerní hora], *Acer pseudoplatanus*, 12. VII. 1925, A. Hilitzer (PRM – 827590, cum *Leptogium saturninum*; PRM – 185027, cum "*Bacidia sphaeroides*"); S Bohemia, the Šumava Mts, Nová Pec: Mt Hraničník – N slope, over mosses (*Pterigynandrum filiforme*) on weathered bark of *Fagus*, 1200–1250 m, 6. VIII. 1996, J. Halda, Z. Palice et C. Printzen

From the Czech Republic so far reported only from Moravia (Vězda 1970: 318, Tschermak-Woess & Poelt 1976: 93, Giralt et al. 1993: 718). A common lichen species (Purvis et al. 1992: 643), but in many areas surely undercollected for its inconspicuousness. According to my field observations from Slovakia, the species is frequent especially in wooded, humid calcareous areas. The lichen preferably occupies nutrient-enriched substrates, covering e. g. bryophytes and plant debris on lime-rich soils, stones and mossy, nutrient-rich bark of deciduous trees. It may grow also on decaying wood and exposed roots.

\* *Veizdaea leprosa* (P. James) Vězda in Poelt et Döbbeler, *Lichenologist* 9: 170 (1977)

E Bohemia, the Labe valley, Chvaletice: sedimentation basin near the power station ca 1 km E of the village, stony wall – on *Ceratodon purpureus*, 220 m, 21. III. 1996, Z. Palice; *Ibid.*: on plant remnants, *Ceratodon* and on the ground under young *Robinia pseudoacacia* trees, 15. VII. 1997, Z. Palice

The leprose thallus and pale, stipitate apothecia are diagnostic for this lichen. A comprehensive description of the species from a morphological, ecological, sociological and chorological point of view, based on populations observed for several years in northern Germany, was provided by Ernst (1995).

*Additional records*: France: Brittany, highway Rennes – St. Brieuc, the turn on Caulnes and St. Jouan (43 km from Rennes), on soil and plant debris below metal banister along the road, 29. IX. 1996, Z. Palice; Brittany, Huelgoat: "la Mine" quarry ca 1 km E of Huelgoat, on plant debris on the ground, alt. 100–130 m, 1. X. 1996, J. Halda 1067 et Z. Palice

\* *Veizdaea retigera* Poelt et Döbbeler, *Lichenologist* 9: 170 (1977)

S Bohemia, the Šumava Mts, Volary, Nové Údolí: a stony basis of bridge over the Studená Vltava river by nature reserve "Spálený luh", on the thallus of *Peltigera didactyla* and on mosses, 800 m, 9. IV. 1993, Z. Palice, det. A. Vězda; E Bohemia, the Labe valley, Chvaletice: sedimentation basin near the power station, ca 1 km E of the village, on piece of ferruginous stone and adjacent mosses at a heap spoil, alt. 220 m, 14. IV. 1997, Z. Palice; E

Bohemia, the Orlické hory Mts: the Bělá valley, on soil in road-cutting ca 1.5 km NNE of Klečkov castle, 550 m, 21. IV. 1996, Z. Palice (poor collection)

In accordance with Coppins (1987: 173) and Giralt et al. (1993: 721), a great variation in the size of ascospores among single collections was found. Smooth one-celled ascospores, the asci tightly ensheathed by numerous paraphyses and goniocysts with relatively short “spines” – these features seem to be sufficient to delimitate *Veizdaea retigera* from *V. rheocarpa*.

### *Veizdaea rheocarpa* Poelt et Döbbeler, *Lichenologist* 9: 170 (1977)

W Bohemia, the Šumava Mts, Prášíly: Mt Ždanidla – S-SW slope, old *Fagus*, on *Peltigera* sp. and spongy bark, alt. 1180 m, 11. VI. 1997, Z. Palice (Palice 1998: 58); E Bohemia, the Labe valley, Chvaletice: sedimentation basin NNW of the power station, near a drainage tower, on soil, plant debris and decaying thalli of *Peltigera didactyla*, alt. 220 m, 21. IV. 1999, Z. Palice 1957, 1958

The collection from the Šumava Mts is comparatively poor. However, a warted ascospore surface and relatively long “spines” at goniocysts as characteristic for the species were observed.

### \* *Veizdaea stipitata* Poelt et Döbbeler, *Lichenologist* 9: 170 (1977)

S Bohemia, the Šumava Mts, Nová Pec: Mt Hraničník – N slope, a rest of mountainous mixed forest, over mosses (*Pterigynandrum filiforme*) on weathered bark at base of *Fagus*, 1150 m, 23. VI. 1996, Z. Palice

The lichen is very closely related to *V. leprosa*, which in fact differs only by forming an external “leprose” thallus composed of goniocysts. In addition, *V. stipitata* is said to have less frequent paraphyses (Poelt & Döbbeler 1975: 338, Giralt et al. 1993: 716). Furthermore, *V. stipitata* shows slightly different ecological tendencies. Although both species seem to be stress-tolerant ruderals (see Scheidegger 1995), each occurs in rather different habitats. *V. stipitata* prefers ± natural, e. g. woodland areas and has not yet been recorded from sites strongly affected by man (e. g. by heavy metals contaminated substrates) as almost exclusively happens in the case of *V. leprosa*.

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## Souhrn

Cílem předkládaného příspěvku je doplnit stále neúplné znalosti o lišejnících rostoucích na území České republiky. Autor vychází jak z vlastního terénního výzkumu, tak i z revize herbářového materiálu. Je zmíněno celkem 73 druhů lichenizovaných a 9 druhů nelichenizovaných hub (lichenikolní hálkotvorná houba *Cecidonia xenophana* a některé obligátně či fakultativně lichenikolní zástupci a jeden saprofyt z řádu *Caliciales* – rody *Chaenothecopsis*, *Microcalicium* a *Sphinctria* – skupina, která je tradičně studovaná lichenology). Více než polovina z vyjmenovaných druhů (53) je z našeho území udáváná vůbec poprvé.

Většina pojednávaných taxonů patří mezi méně nápadné mikrolišejníky, které často pro svou velikost snadno unikají pozornosti. Z lišejníků, které u nás mohou být přehlíženy, je možné jmenovat následující: *Anisomeridium nyssaegenum*, *Arthonia muscigena*, *Caloplaca obscurella*, *Micarea botryoides*, *M. myriocarpa*, *M. polycarpella*, *Psilolechia clavulifera* a druhy rodů *Absconditella*, *Macentina*, *Vezeada* atd. Některé ze zmiňovaných lišejníků se ovšem u nás zřejmě vyskytují skutečně vzácně – např. druhy substrátové a mikroklimaticky vázané na staré lesní porosty s původní dřevinnou skladbou, ať už se jedná o lišejníky oceánicky laděné (např. *Caloplaca herbiddella*, *Heterodermia speciosa*, *Porina hibernica*, *Thelopsis flaveola*) či lišejníky severského jehličnatého lesa (např. *Chaenotheca sphaerocephala*, *Hypocynomyce friesii*, *Japewia subaurifera*, *Lecidea betulicola*, *Micarea anterior*, *M. contexta*, *Trapeliopsis glaucolepidea*). Tyto druhy byly v současné době sbírány pouze na Šumavě. K vzácným druhům u nás patří také některé horské a vysokohorské typy, zatím zaznamenané často pouze v Krkonoších (např. *Koerberiella wimmeriana*, *Micarea marginata*, *Porpidia ochrolemma*), ale rovněž i na Šumavě (*Lecidea commaculans*, *Polyblastia gothica*). Oceánicky laděné druhy převislých silikátových skal jako *Fuscidea maculosa*, *Melaspilea granitophila*, *Rinodina interpolata* byly zatím nalezené také pouze na Šumavě.

Každý druh je doplněn poznámkou, týkající se nejčastěji jeho ekologie, celkového rozšíření, popř. jeho charakteristických morfologických znaků, možné záměny za podobné taxony apod. Kromě toho jsou v článku zahrnuty rovněž některé málo známé lišejníky, udávané až dosud z našeho území pouze z jedné či několika lokalit.

V České republice se zájem lichenologů v posledních letech soustřeďuje především na území Šumavy, odkud také pochází největší část zde zveřejněných údajů. Vybrané druhy jsou doplněny zahraničními sběry (Francie, Německo, Rakousko, Rumunsko, Rusko, Slovensko, Švédsko). Jedná se jak o autorem navštívené lokality, tak o lokality revidovaných položek.

Byla navržena následující nová kombinace: *Micarea lynceola* (Th. Fr.) Palice comb. nov. (= *Micarea excipulata* Coppins). Jméno variabilního taxonu *Trapeliopsis percrenata* (Nyl.) G. Schneider je pokládáno za synonymum jména druhu *Trapeliopsis glaucolepidea* (Nyl.) G. Schneider.

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