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Notes on some species of genera Ceriporia and Ceriporiopsis (Polyporaceae)

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The new species Ceriporia herinkii Vampola of the group of Ceriporia purpurea (Fr.) Donk is described. This probably thermophilous species differs from C. purpurea s.s. mainly in the strikingly smaller spores. It has so for been found in the Czech Republic, Slovakia and a territory of the former Yugoslavia till now but it is elsewhere probably overlooked or confused with C. purpurea. Ceriporia mellita (Bourd.) Bond. et Sing. is incorrectly placed in the synonymy of Ceriporia purpurea (Fr.) Donk. by some mycologists. In fact both species are distinct and especially the different basidiospore size and shape provide a very good diagnostic feature. Ceriporia metamorphosa (Fuckel) Ryv. et Gilberts. has sometimes incorrectly been regarded as as form of Ceriporiopsis aneirina (Sommerf.) Domań., from which it differs especially in the simple-septate hyphae and the ability to form an imperfect state. The new combination Ceriporiopsis cremea (Parm.) Vampola et Pouz. is proposed. Ceriporiopsis balaenae Niemelä is reported from the Czech Republic (Central Europe) for the first time and the variability of its hymenophores is discussed. Ceriporiopsis jelicii (Tortić et David) Ryv. et Gilberts. is for the first time reported from Slovakia (Central Europe). The classification of Ceriporiopsis rivulosa (Berk. et Curt.) Gilberts. et Ryv. within the genus Ceriporiopsis is regarded as rather problematic, and the previously published classification in Rigidoporus and the recent combination into Physisporinus, however, remain a subject for a detailed future study, especiall of the hyphal systems.

Key words: Ceriporia, Ceriporiopsis, Polyporaceae, taxonomy

Vampola P. a Pouzar Z. (1996): Poznámky k některým druhům rodů Ceriporia a Ceriporiopsis (Polyporaceae). – Czech Mycol. 48: 315–324

Z příbuzenstva Ceriporia purpurea (Fr.) Donk – pórnatky purpurové je popsán nový druh Ceriporia herinkii Vampola – pórnatka Herinkova. Tento pravděpodobně teplomilný druh se od typické C. purpurea liší hlavně nápadně menšími výtrusy. Dosud byl nalezen v České republice, Slovenské republice a na území bývalé Jugoslávie, jinde však je pravděpodobně přehlížený nebo spojovaný s C. purpurea. Ceriporia mellita (Bourd.) Bond. et Sing. – pórnatka medová – je některými mykology nesprávně kladena do synonymiky Ceriporia purpurea (Fr.) Donk – pórnatky purpurové. Ve skutečnosti jsou oba druhy rozdílné a zvláště velikost a tvar výtrusů jsou velmi dobrými diagnostickými znaky. Ceriporia metamorphosa (Fuckel) Ryv. et Gilberts. – pórnatka měnlivá – byla v minulosti někdy nesprávně považována za formu Ceriporiopsis aneirina (Sommerf.) Domań. – pórnatky klamné, od které se však liší mimo jiné jednoduchými přehrádkami hyf a schopností tvořit imperfektní stádium. Je navržena nová kombinace Ceriporiopsis cremea (Parm.) Vampola et Pouz. Ceriporiopsis balaenae Niemelä – pórnatka jemná – je poprvé uváděna z České republiky a současně je diskutována variabilita hymenoforu tohoto druhu. Ceriporiopsis jelicii (Tortić et David) Ryv. et Gilberts. – pórnatka Jeličova – je poprvé uváděna ze Slovenské republiky. Zařazení Ceriporiopsis rivulosa (Berk. et Curt.) Gilberts. et Ryv. – pórnatky kubánské – v rodě Ceriporiopsis je považováno za poněkud problematické, avšak zařazení do rodu Rigidoporus nebo nedávná kombinace do rodu Physisporinus budou vyžadovat ještě další detailní studium, zejména hyfových systémů.

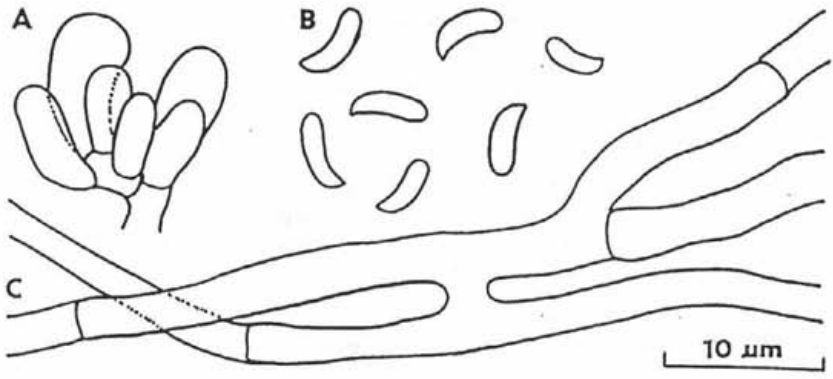

Fig. 1 *Ceriporia herinkii* Vampola. – A) fragment of hymenium, B) spores, C) hyphae. Del. P. Vampola

Ceriporia herinkii Vampola spec. nov.

Carposomata annua, resupinata, *Ceriporiae purpureae* (Fr.) Donk similes. Systema hypharum monomiticum, cum hyphis generativis hyalinis, tenuiter tunicatis, sine fibulis. Hymenium solum e basidiis et basidiolis constat. Basidiosporae 4,5–5,5(6) × 1,3–1,8(2) µm, cylindraceae, subcurvatae, hyalinae. Ad ligna decorticata arborum frondosarum.

Holotypus: Bohemia, Nový Hradec Králové, in clivo collis "Kopec sv. Jana", s. m. ca 275 m, *Prunus sp.* ? – ad truncum decorticatum iacentem, 8. IX. 1994, leg. P. Vampola, in herbario Musei Nationalis Pragae asservatur (PRM 842 926).

Carpophores of this new species are very similar and macroscopically sometimes almost indistinguishable from carpophores of *Ceriporia purpurea* (Fr.) Donk. They form thin, irregular and in colour quite varied coatings on fallen, mostly decorticoid trunks and branches of hardwoodtrees. Young carpophores can be pure white, pinkish or yellowish, later becoming honey coloured or with a pinkish tint, the older and dried ones are darker, however mostly without a vinaceous or dark purple hue, typical of *C. purpurea*. Tubes thick-walled when fresh, with entire and very finely ciliate edges. Pores round to somewhat angular, 3–5 per mm.

Hyphal system monomitic, generative hyphae thin-walled, branched, mostly slightly encrusted, simple-septate, 2–4 µm in diam. Basidia tetrasterigmatic, clavate, 8–14 × 4–5 µm, simple-septate at the base. Basidiospores cylindrical, curved, smooth, hyaline, 4.5–5.5(6) × 1.3–1.8(2) µm. As mentioned above, *C. herinkii* is very similar to *C. purpurea* and both species can only be distinguished microscopically. While the spores of typical *C. purpurea* are larger and varied in size (6–8(9) × 1.5–2.2(2.5) µm), the spore size of *C. herinkii* is more constant and spore length never exceeds 6 µm.

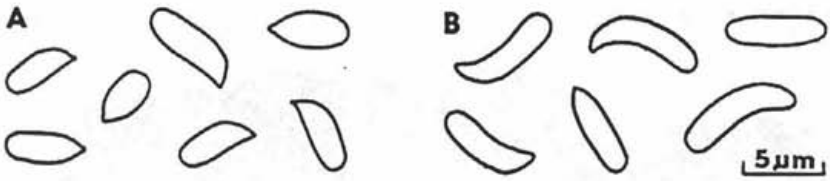

Fig. 2 Spores: A) *Ceriporia mellita* (Bourd.) Bond. et Sing., B) *Ceriporia purpurea* (Fr.) Donk. Del. P. Vampola

With regard to microfeatures, *Ceriporia spissa* (Schw.:Fr.) Rajch. is very similar as well; it differs, however, in the incrustation of the hyphae reddishing in KOH. In addition, the pore surface of *C. spissa* is bright orange when fresh and the pores are smaller (7–9 per mm).

As for distribution, *C. herinkii* is so for known from 7 localities in the Czech Republic, Slovakia and a territory of the former Yugoslavia. It is certain, however, that this species occurs in other countries as well but is overlooked there or confused with *C. purpurea*.

The new species is named after the prominent and renowned Czech mycologist MUDr. Josef Herink.

Ceriporia mellita (Bourd.) Bond. et Sing., Ann. Mycol., 39: 50, 1941; *Poria mellita* Bourd., Myc. Not. (red. Lloyd) 40 (Mycol. Writ. 4):543, 1916.

This species originally described from France has by some authors (e.g. Ryvarden 1976, Jülich 1984, Ryvarden and Gilbertson 1993) been placed in the synonymy of *Ceriporia purpurea* (Fr.) Donk and only exceptionally been accepted as an independent species (e.g. Pilát 1936-42, Domański 1972, Donk 1974, David and Lecot 1990, Lowe 1966). It should be admitted that *Ceriporia purpurea* is highly variable and probably represents a complex of two or more very similar and with difficulty distinguishable species. However, *C. mellita* is strikingly different both macro- and microscopically. Macroscopically it differs in permanently honey coloured tubes and a very wide thin sterile whitish margin which, on a dark woody surface, can look like a violet cobweb. This sterile mycelium is rarely intertwined with the thin and at most 0.4 mm wide mycelial cordons (rhizoids) of a surface layer of the substrate. Microscopically *C. mellita* differs from *C. purpurea* especially in spore size and shape. Spores of *C. mellita* are almost straight or only slightly curved, ellipsoid to cylindrical with a rather sharply pointed apiculus, according to our measurements (4)4.4–6.3 × 1.7–2.2 µm, Q = 2.1–3.2 (Fig. 2A). Spores of *C. purpurea* are distinctly larger, cylindrical and always strikingly curved, 6–8 × 1.5–2.2 µm, Q = 3–4 (Fig. 2B).

C. mellita could possibly be mistaken for *C. camaresiana* (Bourd. et Galz.) Bond. et Sing., because both species have more or less the same distribution area

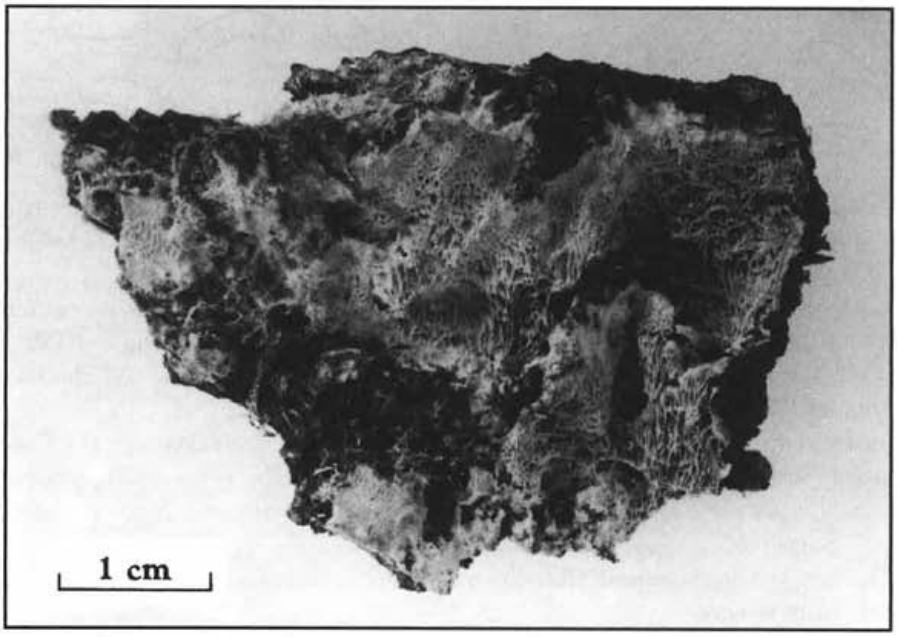

Fig. 3 *Ceriporia mellita* – Belgium, Ardennes, *Fagus sylv.*, 21. IX. 1956 (PRM 715747).

and are rather similar especially microscopically. By the presence of fine rhizoids *C. mellita* aproaches *Ceriporia davidii* (= *Riopa davidii* Reid) but differs from it in the rather small size of the pores and narrower spores.

C. mellita grows on wood of deciduous trees and was previously known from France only. The new locality of *C. mellita* from Belgium is presented below.

Belgium: Ardennes, ad ligna *Fagi sylv.*, 21. IX. 1956, leg. A. Pilát ut *Poria* sp., rev. P. Vampola 12. I. 1993 (PRM 715747).

Ceriporia metamorphosa (Fuck.) Ryv. et Gilberts. European Polypores 1: 185, 1993; *Polyporus metamorphosus* Fuckel, Jahrb. Nassau. Ver. Naturk. 27–28: 87, 1873.

Until recently this very rare species known only from Europe was regarded as a form of *Ceriporiopsis aneirina* (Sommerf.) Domań. (Bourdot and Galzin 1928, Domański 1972) with the only exception of Wakefield (1952), who correctly recognized its taxonomic position. This certainly independent species differs from *Ceriporiopsis aneirina* not only microscopically by its simple-septate hyphae, more narrow spores and the presence of conidia, but ecologically too. The only hosts of *C. metamorphosa* are various species of oak (*Quercus*) and most collections date from the summer season (probably only Romell's collection from Ekybyholm near Stockholm from November 1917 is an exception – see Romell 1926). On the other

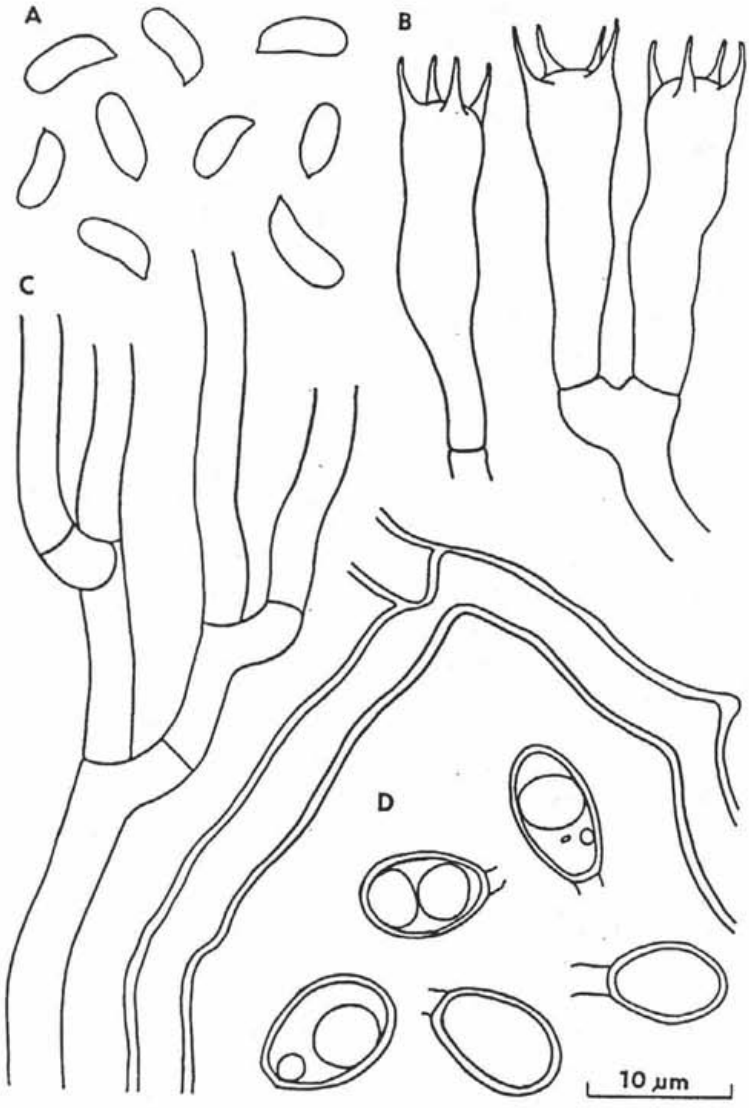

Fig. 4 *Ceriporia metamorphosa* (Fuckel) Ryv. et Gilberts. – A) spores, B) basidia, C) hyphae, D) conidia.

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hand, the most frequent hosts of *C. aneirina* are various species of poplar (*Populus*) and most of the collections have been made in late autumn, winter or early spring.

For a comparison of both species the following exsiccate collection can be used: P. Vampola: Polyporales exsiccati Čechoslovaciae, Fasc. I (1991), no. 19 – *Ceriporiopsis aneirina*, Fasc. IV. (1993), no. 90 – *Poria metamorphosa*.

In this paper we accept the classification of *Poria metamorphosa* (Fuckel) Cooke in the genus *Ceriporia* Donk, but we are aware of the considerable isolation of this species. Especially by the existence of an imperfect state – which Donk (1974) identified with the hyphomycete *Sporotrichum aureum* Link – this fungus differs from other species of that genus.

A significant character of *C. metamorphosa*, which could be used in separating it from other species, is the amyloidity of the walls of the basal hyphae. This reaction is stable and sufficiently strong, hence making no difficulties observing it.

New localities of *Ceriporia metamorphosa*:

Moravia: Silva virginea "Ranšpurk" apud Lanžhot, distr. Břeclav, s. m. 150 m, ad truncum iacentem *Quercus roboris*, 5. X. 1988, leg. et det. Z. Pouzar (PRM 870326, 870339, 870340, 870341, 871894, 871865, MJ 1628); ibid. 7. VII. 1990, leg. et det. P. Vampola (ed. in Polyporales Exsiccati Čechoslovaciae, no. 90, PRM 877454, MJ 3293);

Slovacia: In colle "Táborisko" apud Čabrad prope Cerovo (vicinitas Levice); loco saxoso stepposo insolato, ad truncum iacentem *Quercus cerris*, 23. IX. 1984, leg. et det. Z. Pouzar (PRM 871784);

Germania: Dahlen, distr. Oschatz, ad codicem putridum arboris frondosae, VI. 1967, leg. V. Bergstädt, det. Z. Pouzar 1. VIII. 1991 (PRM 871885);

Polonia: Augustów, loco "Kozi Rynek", in codice *Quercus roboris*, IX. 1974, leg. et det. Z. Pouzar (PRM).

Ceriporiopsis balaenae Niemelä, Naturaliste canad., 112:449,1985.

A very interesting species, described from Québec (Canada) only eleven years ago (Niemelä 1985) and recently recorded from North Europe, too (Niemelä et al. 1992, Ryvarden and Gilbertson 1993). This resupinate polypore, however, also occurs in the Czech Republic (Central Europe) and has repeatedly been collected here at one site since 1968. The collections, however, have earlier not been identified or have incorrectly been regarded as *Ceriporiopsis cremea* (Parm.) Vampola et Pouz. – comb. nov.; basionymum: *Fibuloporia cremea* Parmasto, Issl. Prirody Dalnego Vostoka, 1: 255, 1963, – a species described from the peninsula of Kamchatka more than 30 years ago. Only when the specimen of *Ceriporiopsis balaenae* collected by the author of this species in Finland (Inarin Lappi, Utsjoki, Kevo Subarctic Station, on standing, dead trunk of *Salix*, 5. IX. 1970 leg. T. Niemelä – 408 b) was sent to the National Museum in Prague in 1993, we found our collections to be identical with that species; for this reason we have been regarding *C. balaenae* a synonym of *C. cremea*. Dr. Niemelä, however, has recently had the opportunity to study many specimens of *C. cremea* from the Russian Far East and after his comparative study he kindly imparted to us that *C. cremea* and *C. balaenae* are really two different species.

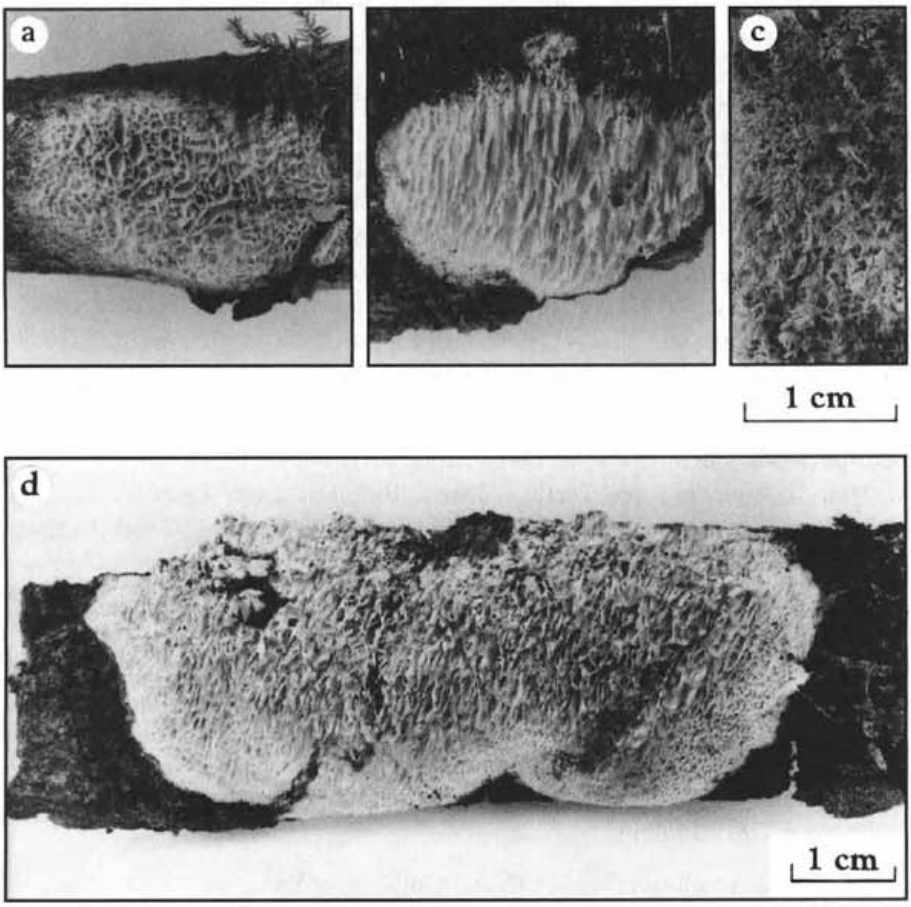

Fig. 5 *Ceriporiopsis balaenae* Niemelä – Examples of the variability of the hymenophore – a) poroid, b) raduloid, c) coralloid, d) fruitbody with both poroid and raduloid hymenophore. Photo: P. Vampola

The detailed description of *C. balaenae* can be found in Niemelä's work (Niemalä 1985). It is necessary, however, to note that the macroscopic features of this species are highly variable and especially the hymenophore can be variously formed. We have studied this variability on a large number of collections. A poroid hymenophore prevails in most of the fruitbodies but some fruitbodies can have a raduloid or coralloid hymenophore, too (Fig. 5). In our opinion the variability of the hymenophore is a typical feature of some species. As another typical and well known example *Sistotrema muscicola* (Pers.) Lund. in Lund. et Nannf. 1947 could be mentioned. The specimens No. 1415a (with a poroid hymenophore) and No. 1415b (with a hydnoid hymenophore) included in the exsiccate collection Fungi exsiccati

Suecici in our opinion represent one homogenous, though even very variable species, too.

New locality of *Ceriporiopsis balaenae*:

Bohemia: "Borkovická (Soběslavská) blata", 8 km occ.-mer.-occ. versus Soběslav, distr. Tábor, s. m. 420 m, ad ramum siccum *Salicis cinereae*, 8. IX. 1968, leg. Z. Pouzar, det. P. Vampola 1993 (PRM 879873), ibid. 26. VIII. 1983, leg. J. Vlasák, 15. II. 1993 det. P. Vampola ut *Fibuloporia cremea* (herb. J. Vlasák 8308/46, MJ), ibid. 27. XI. 1982, 8. XII. 1984, 8. XI. 1986 et 5. XI. 1989, leg. J. Vlasák, det. J. Vlasák 1994 (herb. J. Vlasák 8211/57, 8412/9 – 10, 8611/6, 8911/2 – 3), ibid. 2. XII. 1992, 17. IX. et 21. X. 1993, 31. VIII. 1994, leg. et det. P. Vampola (MJ 315/92, 455/93, 608/93, 274/94), ibid. ad ramum emort. *Salicis auritae*, 10. III. 1995, leg. F. Kotlaba, det. Z. Pouzar (PRM 883419); ib., 31. III. 1995, leg. et det. F. Kotlaba (PRM 883717).

Ceriporiopsis jelicii (Tortić et David) Ryv. et Gilberts. European Polypores 2: 641, 1994; *Skeletocutis jelicii* Tortić et David, Bull. Soc. Linn. Lyon 50: 217, 1981.

Besides the former Yugoslavia (Tortić and David 1981) and Finland (Kotiranta 1984, Kotiranta and Niemelä 1993) this very rare species grows also in Slovakia, where it was found in Nízke Tatry Mountains more than 30 years ago; it was, however, not identified at that time. The Slovak specimen is the first evidence of its occurrence in Central Europe and it probably represents the oldest record of this species in general.

New locality of *Ceriporiopsis jelicii*:

Slovacia: Montes Nízke Tatry, in the valley of "Trangoška" dicta, s. m. 900 – 1400 m, *Abies alba*, 3. VIII. 1954, leg. M. Svrček et J. Svrčková, det. P. Vampola 10. II. 1993 (PRM 814 627).

Ceriporiopsis rivulosa (Berk. et Curt.) Gilberts. et Ryv.

North Am. polypores, 1: 109, 1986; *Poria rivulosa* (Berk. et Curt.) Cooke, Grevillea 14: 109, 1886; *Physisporinus rivulosus* (Berk. et Curt.) Ryv., Mycotaxon 20: 353, 1984.

This interesting species described from Cuba is, according to Gilbertson and Ryvarden (1986), rare in the eastern states of North America and more common in the western ones. In Europe it was for the first time published from France (David 1971), later from the former Yugoslavia (Tortić 1980), Italy and Austria (Bernicchia 1986, 1990) and quite recently from Finland, too (Niemelä 1993). This species has a strange position in the genus *Ceriporiopsis* due to its almost globose spores and numerous spindle formed cystidioles in the hymenium (Fig. 6). These exemption at characters could be the reason why this species has previously been placed in *Rigidoporus* by David (1971) and by Ryvarden (1984) has recently been combined in *Physisporinus*. The taxonomic justification of these classifications, however, should be confirmed by another detailed study of the hyphal systems of this fungus.

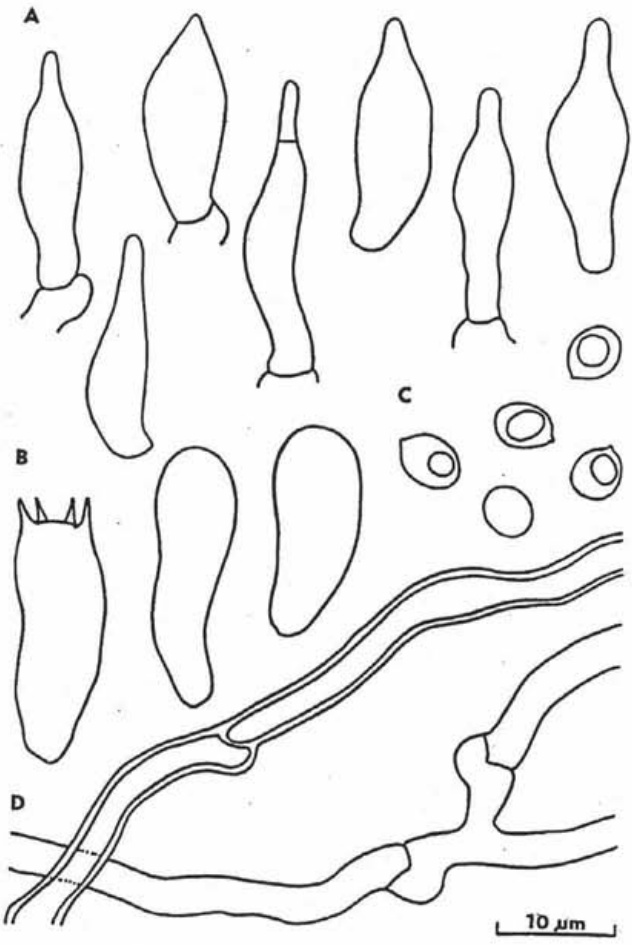

Fig. 6 *Ceriporiopsis rivulosa* (Berk. et Curt.) Gilberts. et Ryv. – A) cystidioles, B) basidia, C) spores, D) hyphae.

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New locality of *Ceriporiopsis rivulosa*:

Belarus: Provincia Brest, Ivanovskij rajon, district Zavišče, ad ramum *Pini sylvestris*, 1. IX. 1958, leg. E. Komarova, det. P. Vampola 1992 (PRM 872429 – dupl. ex MSK).

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