

Mycological examination of sawdust depots in Hungary II.

By

M. BABOS

(Received November 17, 1981)

Abstract: Two new fungi taxa from a mixture of rotten bark and sawdust are described: *Pluteus nigroviridis* sp.n. and *Collybia distorta* (Fr.) Quél. var. *amara* var.n.

Pluteus nigroviridis Babos sp.n. (Figs. 2, 3)

Pileus 3-5-8 cm latus; gibbosus-convexus, explanatus; metallice-nitidus, nigrescenti viridis; radialiter, minute obsite fibrillosus. Lamellae e rosaceo in incarnatum transigentes. Stipes cylindricus, 4-6 x 0.5-1 cm, ad basim parum bulbosus (ad 1.4 cm); albidus, fibrillis nigrescenti-viridibus ornatus, parte inferiori obscuro coerulescenti-viridis. Caro alba. Odore et sapore sub-nullo. Sporae ellipsoideae; 7-9.3-(10.9) x 5.4-6.5-7 μ m. Basidia cylindraceo-clavate, 4-sporigera. Cheilocystidia clavato-vesiculosa vel vesiculose-pedicellata; 31-62 x 10.9-18-(20) μ m. Pleurocystidia metuloidea, partim cornigera (C-typus), partim ad M-typum pertinentia; 46-85 x 14-22 μ m. Epicutis pilei cellulis hypharum apicalibus olivaceis; 80-210 x 12.4-20 μ m; fibuligerae. Cellulae apicalis fusiformes (apice 4.7-9.3 μ m lata) vel elongate clavata.

Habit.: in silva frondosa, ad lignum putridum (ad corticem et scobi admixti).

Typus: 72.880 in Herbario Musei Hist.-nat. Hung., Budapest. Loc.: Uzsa (com. Veszprém), Hungaria, 30 Oct. 1978, leg.: Babos - Bohus - Kustos - Rimóczi.

Further herbarial data: same locality, 21 Oct. 1978, leg.: Babos - Friesz - Kustos (Herb. A. Friesz); 16 Sept. 1979, leg.: Babos.

Pileus 8 cm in diameter (in subsequent gatherings smaller: (3) -5cm); obtusely umbonate-convex then expanded; when young concentrically wrinkled; blackish-green with a metallic lustre; with radially innate fibrillose structure. Lamellae free; up to 8 mm deep; turning to pale rose to flesh-colour. Stipe 4-6 x 0.5-1 cm; cylindrical, at the base slightly bulbous (to 1.4 cm height); white, with blackish-green fibrils, towards the base dark bluish-green. Flesh silky, white; soft in the pileus but fibrous in the stipe. Taste and smell is not characteristic. Spores ellipsoid; 7-9.3-(10.9) x 5.4-6.5-7 μ m. Basidia cylindrical-clavate; 23-30 x 7-8.5 μ m; four-spored. Cheilocystidia thin-walled, clavate-vesiculose or vesiculose-pedicellate; 31-62 x 10.9-18-20 μ m. Pleurocystidia metuloid type (C and M type) but relatively thin-walled; 46-85 x 14-22 μ m. (On the lamellae of the type-material - in consequence of juvenile stage - few C-type metuloid, possessing developed crown, could be seen, but on the lamellae of over-ripe specimens collected at the same place on 16 Sept. 1979, numerous C-type metuloids with well developed crown were found. The scanning electron micrographs were made from the type material, and the development of the crown is well demonstrated by them (Figs. 2, 3). The hyphae of the cuticle of the pileus with

* Part I appeared in *Studia bot. hung.*, 1981, 15: 33-46.

olivaceous-green coloured end-cells. The end-cells 80-210 x 12.4-20 μm ; fusiform (apex 4.7-9.3 μm) or elongated clavate; with clamp connections.

Habitat: Deciduous forest, decaying wood (on mixture of bark and sawdust).

Pluteus nigroviridis is similar to P. atricapillus. Both species have a fibrillose stipe at full length. But they can be distinguished on the basis of their colour easily.

Comparing P. nigroviridis to the greenish (bluish green and greyish green) coloured taxa of Section Trichoderma Subsection Cervini it was unidentical. Pluteus salicinus (Pers. ex Fr.) Kummer occurs in Europe and North America, has a lighter colour, the pileus is grey or greyish-greenish, bluish-greyish. The stipe is nearly white or slightly greyish-greenish-bluish shade of colour. The dimensions of the spores are 7-8.5 x 5-6 μm by MOSER (1978); 8-10 x 6-7 μm by ROMAGNESI (1961). It has C-type metuloid. The presence of clamp connection is an important feature for identification. By SINGER (1956): "Hyphae with clamp connections", and the connection can be seen well in the figure published by KONRAD & MAUBLANC (1925). ROMAGNESI (1961) stated that hyphae are "non bouclées", LANGE (1936) left this feature out of consideration.

Pluteus glaucus Singer (1961) occurring in Nothofagus forests of South America and P. glaucus var. chilensis Horak (1964) have a greenish-bluish-grey-patina colour. Edges of lamellae are greenish-bluish. These colours can be seen on the stipe as well, but it is partly fibrillose or naked (SINGER: "in lower part fibrillose sagebrush (Artemisia) colour on pallid white ground, at apex white and glabrous", HORAK: "weisslich mit patinagrünlichem Reflekt, glatt und ohne Langfasern"), Hyphae are with clamp connections. The crown of metuloids differs from that of the European species.

Collybia distorta (Fr.) Quél. var. amara Babos var.n. (Fig. 1)

A typo differt: Cutis pilei amara. Margo pilei juvenilis albidе pruinosis-plumescens. Stipes plerumque valde alte sulcatus, costatus.

Habit.: in silva frondosa, ad lignum putridum (ad cumulum corticem et scobi admixti).

Typus: 65.572 in Herbario Musei Hist.-nat.Hung., Budapest. Loc.: Uzsa (com. Veszprém), Hungaria, 21 Oct. 1978, leg.: Babos - Friesz - Kustos.

Further herbarial data: same locality, 30 Oct. 1978, leg.: Babos - Bohus - Kustos - Rimóczy; 16 Sept. 1979, leg.: Babos; 31 July, 1980, leg.: Babos.

Pileus 3-6 cm in diameter (it is also 1.8-8 cm collected in other date); obtusely umbonate-convex, flattened, at the margin often irregular; reddish-brown, brownish-red, later on more or less pale coloured, but it may be flesh-colour or yellowish flesh-colour as well; here and there also with rusty spots; when young white bloomy-pubescent; margin involute. Lamellae crowded; sinuate - with a teeth decurrent; up to 4 mm deep; edge serrated; white, cream-colour, on the adult specimens also with reddish-brown spots; chemical reaction: with FeSO_4 turning to red colour slowly. Stipe 4-7 x 0.5-2 cm (in the case of specimens collected in subsequent date even 11.5 cm long): the shape variable, often sharpened but also evenly thick or downward thicker or clavate (Fig. 1); white, whitish, sometimes with a reddish-brownish shade; mostly sharp- and deep sulcate; often twisted; at the base often with white cord-like mycelium. Flesh whitish, sharply fibrous in the stipe; later hollow. Smell is not characteristic. Taste in cuticle is bitter. Sporenpulver with a pale cream-coloured tinge. The characteristic features of the spores are identical with that of C. distorta (Fr.) Quél. ss. Fries (1838, non 1867), J. LANGE, KÜHNER & ROMAGNESI, MOSER: subglobose-globose, smooth; 3.9-4.4 x 3.2-3.9 μm . Basidia: 15.6-17 x 5.4-6.2 μm ; four-spored.

Habitat: Deciduous forest, decaying wood (on mixture of bark and sawdust) in groups or solitary.

The characteristics of the majority of the collected specimens corresponds to the photo (No. 1037) of Collybia fodiens published by CETTO (1979) and to CETTO's description concerning to the external appearance of the mushroom. But some of the specimens are like to C. distorta in CETTO (1976, No. 547). The sharp-sulcate stipe and the white bloom or pubescence at the margin of the pileus are characteristic of C. fodiens. Because of its bitter taste of the cuticle we could consider it C. fodiens. Although, KALCHBRENNER (1877) did not mention the bitter taste of the mushroom in his description but CETTO (1979) wrote about this characteristic as follows: "Wert: essbar, aber eher bitter". While he did not regard to flesh of the C. fodiens as a bitter one

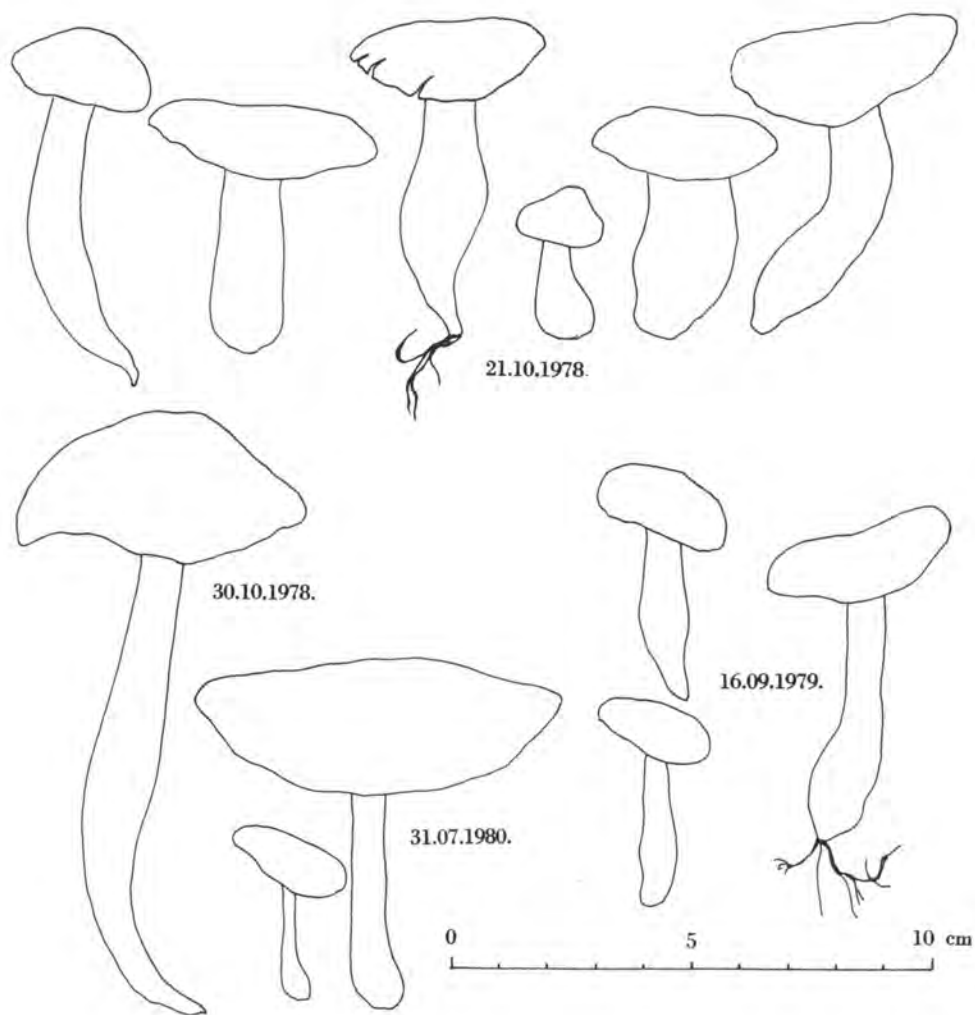


Fig. 1. *Collybia distorta* var. *amara* var.n. - Variability of the stipe of the fruit body developing from the same thallus (2/3 nat. size)

('Fleisch: . . . ohne besondere Geruch und Geschmack'). On the basis of microscopical examinations - considering the small, roundish spores - we can identify it, among the related species, as *C. distorta*. The conversion of the colour of the lamellae to red as a result of FeSO₄ was mentioned by the authors as a characteristic feature of the *C. distorta* as well (KÜHNER & ROMAGNESI, 1953; MOSER, 1967).

REFERENCES

- CETTO, B. (1976): I funghi dal vero, 2. - Arti Grafiche Saturnia, Trento, 714 pp.
CETTO, B. (1979): Der grosse Pilzführer, 3. - BLV Verlagsgesellschaft, München-Bern-Wien, 635 pp.
HORAK, E. (1964): Fungi austroamerici. II. *Pluteus* Fr. - *Nova Hedwigia*, 8 (1-2): 163-199 (Tab. 22-41).
KALCHBRENNER, K. (1877): Magyarországi hártýagombáinak válogatott képei. *Icones selectae Hymenomycetum Hungariae*, 4. - Budapest, Athenaeum Nyomda, pp. 51-66 (Tab. XXXI-XL).
KONRAD, P. & MAUBLANC, A. (1925): *Icones selectae fungorum*, 1. - Paris, Pl. 1-100.
KÜHNER, R. & ROMAGNESI, H. (1953): *Flore analytique des champignons supérieurs*. - Paris, 557 pp.
LANGE, J.E. (1936): *Flora Agaricina Danica*, 2. - Copenhagen, 105 pp., Pl. 41-80.
MOSER, M. (1967, 1978): Die Röhrlinge und Blätterpilze. - In: GAMS, H.: *Kleine Kryptogamenflora II b/2*, 3. Aufl., G. Fischer Verlag, Stuttgart, 443 pp.; 4. Aufl., G. Fischer Verlag, Jena, 532 pp.
ROMAGNESI, H. (1961): *Nouvel atlas des champignons*, 3. - Bordas, Pl. 155-236.
SINGER, R. (1956): Contributions towards a monograph of the genus *Pluteus*. - *Trans.Br.mycol. Soc.*, 39 (2): 145-232.
SINGER, R. (1961): Monographs of South American Basidiomycetes, especially those of the East Slope of the Andes and Brazil. 4. *Inocybe* in the Amazone region, with a Supplement to part 1. (*Pluteus* in South America). - *Sydowia*, 15 (ersch 1962): 112-132, Pl. 12-18.

Author's address: M. BABOS
Botanical Department of the
Hungarian Natural History Museum
Budapest, Pf: 222
H-1476
HUNGARY

Figs. 2, 3. *Pluteus nigroviridis* Babos sp.n.

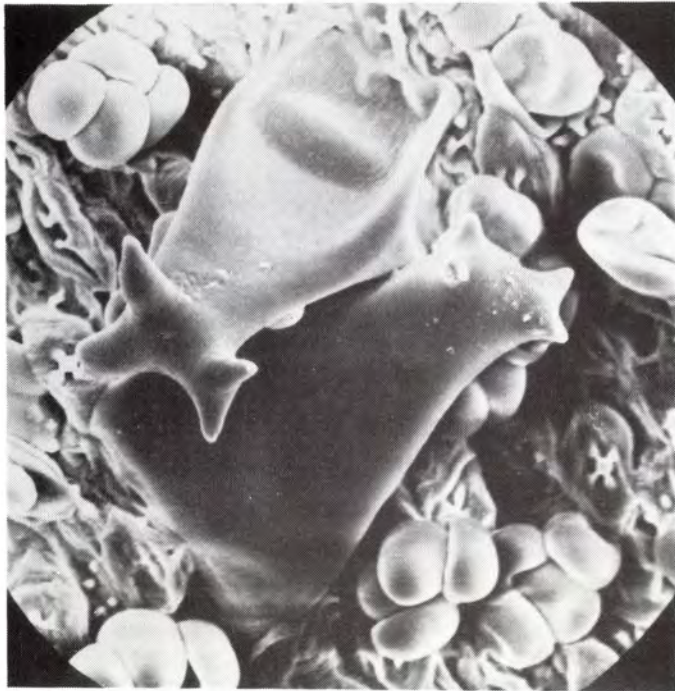


Fig. 2.

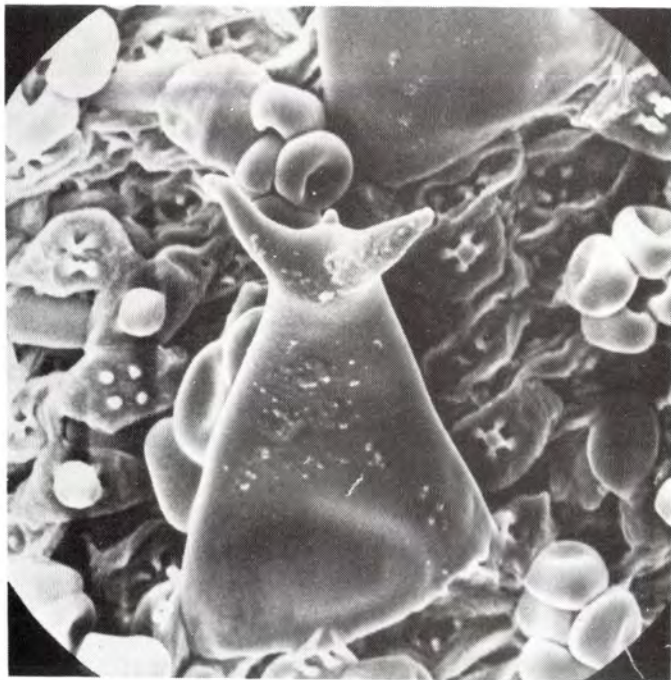


Fig. 3.