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NOTES ON THE GENUS *PANELLUS*

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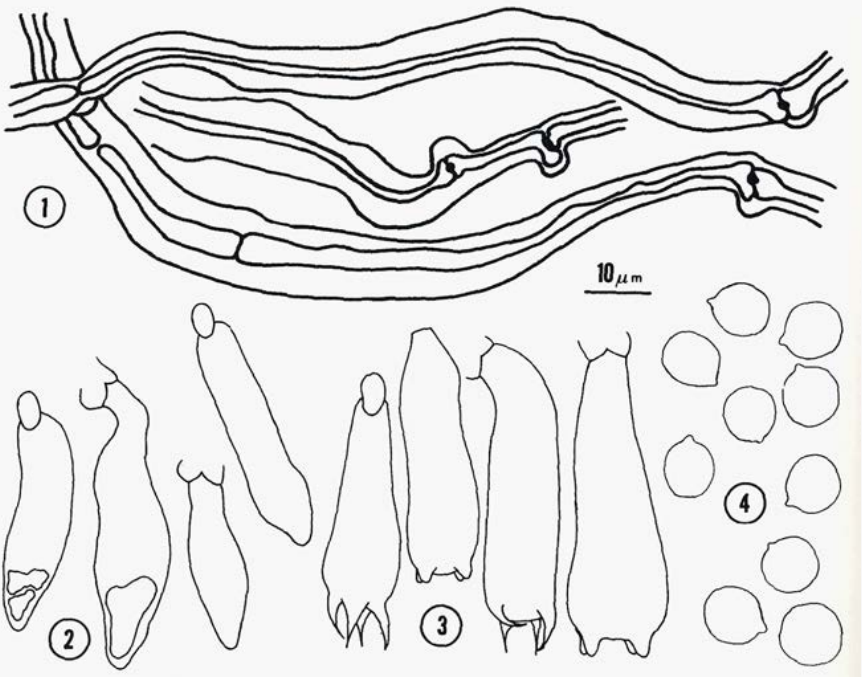
A new combination in *Panellus* is proposed for *Dictyopanus orientalis.* Erroneous information previously published on cultural characters and mating compatibility of *P. pusillus* and *P. stipticus* is corrected. Three *Dictyopanus* taxa are put in synonymy with *P. pusillus* and the location of type specimens of two others is discussed.

INTRODUCTION

Burdsall and Miller (1975) treated the genus *Panellus* Karst. and included two species formerly in *Dictyopanus* Pat. When that work was published the type specimens of several other species were not yet available for study. Some of these have since been located and deserve comment. In the same paper information was presented concerning single sporeisolates and the mating compatibility between *P. stipticus* (Bull. per Fr.) Karst. and *P. pusillus* (Pers. per Lév.) Burds. et Miller. Some of that information was erroneous and is corrected below.

I. *Panellus orientalis* (Kobay.) Burds. et O.K. Miller, Jr., comb. nov. ≡ *Dictyopanus orientalis* Kobay., Bull. Nat. Sci. Mus. Tokyo 6:360. 1963. Figs. 1–4.

Basidiocarps gregarious; pileus 1–3.5 x 2–4.5 mm, broadly reniform to orbicular, convex to planate, with depression at stipe attachment, white (reddish–brown when dried) reviving when moistened, surface dry, smooth to pubescent, nonluminescent (Kobayasi 1963, p. 361). Hymenophore poroid, pores about 3 per mm, less than 1 mm long, nearly circular, edges entire, pale tan. Stipe lateral, up to 2 x 1 mm, dry, pubescent, concolorous with the pileus.



Figures 1–4.––Line drawings of microscopic structures of *P. orientalis.* 1. contextual hyphae. 2. cystidia. 3. basidia. 4. basidiospores.

Basidiospores (Fig. 4) globose to subglobose, 7–9.5 x 7–8.5 µm, smooth, thin–walled, apiculate, hyaline in H_2O and KOH, amyloid (walls blue) in Melzer's reagent; basidia (Fig. 3) broadly clavate to nearly cylindrical, 30–45 x 9–12 µm, hyaline, thin–walled, clamped at base, 4 sterigmate, sterigmata up to 6 µm long; pleurocystidia 28–40 x 6.5–9 (–12) µm nearly fusoid to cylindrical and tapered rather sharply to apex, hyaline, thin–walled, clamped at base, often with one or more large globular inclusions; dichohyphidia covering dissepiment much branched, hyaline, thin–walled, clamped, often acanthophysoid, also with flexuous cells up to 5 µm diam, thin–walled hyaline, with refractive content staining densely in 2% KOH–phloxine, more numerous here than in pileus cuticle.

Cuticle of pileus a loose *textura intricata*, hyphae 2–3.5 µm diam, hyaline, thin–walled, clamped, ends of hyphae differentiating into acanthophysoid–like cells, with scattered, densely staining hyphal end–cells up to 5 µm diam, thin–walled, hyaline, with refractive content; cuticle continues over margin and onto dissipiments; context of pileus up to 125 µm thick, a compact *textura intricata;* hyphae (Fig. 1) 5–10 µm diam, hyaline, thick–walled (walls up to 3.5 µm thick), not equally thickened throughout hypha, resulting in appearance of the lumen

wandering from one side of hypha to other, refractive, wall surface undulating or sometimes appearing eroded; pore trama like context; subhymenium only 2–3 cells thick, hyphae 2–3 µm diam, hyaline, thin–walled, clamped, smooth.

SPECIMEN EXAMINED: TNS–F–193006, Oosumi, Kagoshima Pref. Japan 17. IX. 1962. K. Aoshima 341. (HOLOTYPE-ex TNS)

REMARKS: The amyloid smooth spores, thick–walled refractive contextual hyphae and the structure of the cutis and lateral attachment of stipe support the placement of *P. orientalis* in the genus *Panellus.* According to Kobayasi (1963, p. 361) the basidiocarps are not luminescent, but since luminescence does not appear to be a constant characteristic in *Panellus* (Burdsall and Miller, 1975) that feature alone does not exclude it from the genus.

II. On single spore isolates and compatibility

Because of an error in labeling single spore isolates when mating compatibility was being investigated, *P. pusillus* was paired with *Pleurotus sapidus* (Schulzer) Kalchbr., not *Panellus stipticus* as reported (Burdsall and Miller, 1975). This error was recognized when the compatible intra–specific crosses fruited just prior to the appearance of the volume, which could no longer be corrected. The information on the mating studies, therefore, is not valid. The description of the single spore isolates of *P. stiptieus* are, instead, descriptions of those of *Pleurotus sapidus.* Since discovering this error we have obtained new single spore isolates of *Panellus stiptieus* and paired them with single spore isolates of *P. pusillus.* The pairings resulted in no clamp connection formation in any of the matings performed, indicating that the two species are distinct.

III. on some *Dictyopanus* species

Burdsall and Miller (1975) cited six *Dietyopanus* names for which type specimens were unavailable. *Dictyopanus orientalis* was one of these and is discussed above. The holotypes of three other names–– *D. pusillus* var. *sublamellatus* Corner (1954, p. 259), *D. gloeocystidiatus* Comer (1954, p. 258) and *D. pusillus* var. *pseudorhipidium* Singer (1953, p. 14)––were studied and found to be specimens of *P. pusillus.* The holotypes of D. *luminescens* Corner (1954, p. 423) and D. *foliicolus* Kobay. (1963, p. 361) are apparently not extant. Corner (pers. comm.) was unable to locate the type of *D. luminescens* in his collection and indicated that it may be at SING but it is reportedly not on deposit there. According to Dr. Doi at TNS (pers. comm.), the type specimen of *D. foliicolus* is in none of the Japanese herbaria. He indicated the same to be true of most Philippine plant specimens collected during World War II. Two other names for which we could not find holotypes are D. *flabelliformis* Kobay. and *D. illuminans* Corner (Kobayasi 1951, p. 4).

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LITERATURE CITED

BURDSALL, H. H., JR., and O. K. MILLER, JR. 1975. A reevaluation of *Panellus* and *Dictyopanus* (Agaricales). Beih. Nova Hedw. 51:79-91 + 25 figs.

CORNER, E.J.H. 1950. Descriptions of two luminous tropical agarics (*Dictyopanus* and *Mycena*). Mycologia 42:423-431.

CORNER, E.J.H. 1954. Further descriptions of luminous agarics. Trans. Brit. Mycol. Soc. 37:256-271.

KOBAYASI, Y. 1951. Contributions to the luminous fungi of Japan. J. Hattori Bot. Lab. 5:1-6.

_____. 1963. Revision of the genus *Dictyopanus* with special reference to Japanese species. Bull. Nat. Sci. Mus., Tokyo. 6:359-364.

SINGER, R. 1953. Quelques agraics nouveaux de l'Argentine. Rev. Mycol. 18:13-23.