

Some pleurotoid agarics from Western Ghats, Kerala

K.B. VRINDA, C.K. PRADEEP, SIBI MATHEW AND T.K. ABRAHAM

Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram 695 563, Kerala

Four pleurotoid agaric species viz, *Chaetocalathus niduliformis* (Murr.) Singer, *Crepidotus citrinus* Petch, *Crepidotus pezizula* (Berk. & Br.) Sacc. and *Lactarius uyedae* Singer are reported.

Key words: Mushroom, taxonomy, Kerala

INTRODUCTION

Following an investigation into the agaricoid basidiomycota of Western Ghats of Kerala, several specimens were collected which consisted of basidiomes that were pleurotoid in nature. Four of them are described and illustrated here. All the species are described for the first time from India. The morphological characteristics were drawn from fresh materials. All sections were prepared in 3% KOH. Colour terminology used is that of Methuen (Kormerup and Wanscher, 1967). The materials are deposited in the Mycological Herbarium of the Microbiology division, TBGRI, Kerala.

Chaetocalathus niduliformis (Murr.) Singer Lilloa 8:521 (1942).

Pileus up to 6.5 mm diam., orbicular, cupulate, sessile, attached dorsally at the centre of the cap; surface smooth, white; margin entire, straight. Lamellae free to adnexed, radiating from a lateral or excentric point, subdistant with less than 15 lamellae and very few lamellulae; edge concolorous. Stipe absent. Smell not characteristic. Context very thin, white, composed of thin-walled, hyaline hyphae, 3.8-9 μ m diam. Spores 9-10.5 x 6.5-7.5 μ m, ellipsoid, thin-walled, hyaline; hyphae, 3.8-9 μ m diam; Spores 9-10.5x6.5 x 7.5 μ m, ellipsoid, thin-walled, hyaline dextrinoid. Basidia 26-27.5 x 8.5-9 μ m, clavate, bearing four sterigmata. Lamella-edge

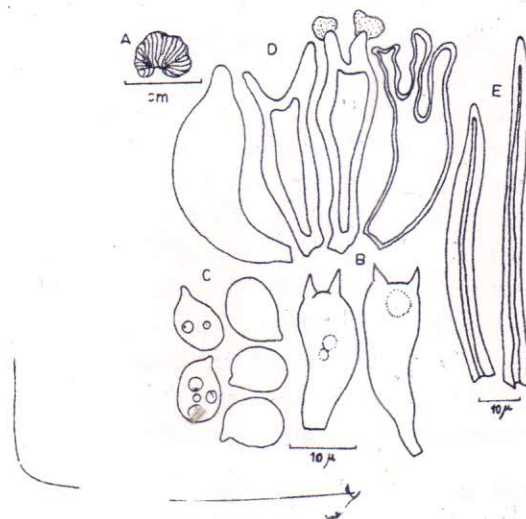


Fig. 1. *Chaetocalathus niduliformis*: A, habit; B, basidia; C, spores; D, cheilocystidia; E, cuticular hairs.

sterile; cheilocystidia 22.5-30 x 9-13.5 μ m, thick-walled, dextrinoid, variously shaped, with one, two or three apical prongs up to 13.5 μ m long, often with an encrustation, intermixed with thin-walled, non-dextrinoid elements. Hymenophoral trama subregular, composed of thin-walled, hyaline hyphae, 4.5 - 8.5 μ m diam. Pileal cuticle with abundant, unbranched, thick-walled hairs.

Scattered on dead twigs of *Ziziphus* sp. near the stream, TBGRI campus, Kerala, 11 November 1997,

Sibi 4241.

This minute species of *Chaetocalathus*, grows in large numbers on fallen twigs. *Chaetocalathus semisupinus* (Berk. & Br.) Pegler, from Sri Lanka, is also similar but has a strigose cap surface.

Crepidotus citrinus Petch Ann. Roy. Bot. Gard., Perad., 9:225 (1924), non *C. citrinus* Larsen (1932).

C. sulphurinus Imaz. & Toki in Bull. Govn. For. Sta., Tokyo 67:38 (1954).

Pileus up to 20 mm diam, dimidate, flabelliform with dorsal attachment; surface "sunflower yellow" (4A7), becoming dull on drying, hygrophanous, smooth and glabrous, subfloccose towards the base; margin entire to incised, wavy. Lamellae radiating from a lateral point, concolorous to the pileus, becoming pale brown on drying, up to 2mm wide, crowded, with lamellulae; edge entire, concolorous. Stipe nil. Smell none. Context very thin, pale yellow, of slightly inflated, thin-walled hyaline hyphae, up to 18 μm diam. Occasionally with clamp-connexions. Spores 6.5 - 7.5 x 6-7.5 μm , subglobose, yellowish brown, thick-walled, ornamented with coarse verrucae. Basidia 16.5 - 19.5 x 6-9 μm , clavate, bearing one, two or four sterigmata. Lamella-edge sterile; cheilocystidia 12-37.5 x 4.5-7.5 μm , Clavato-cylindric to utriform with a short to elongate non-capitate apex, thin-walled, hyaline. Hymenophoral trama regular, composed of thin-walled, parallel hyphae. Subhymenial layer interwoven. Pileipellis an epicutis of repent, radially arranged, thin-walled hyphae, often encrusted by a granular pigment.

Caespitose on dead logs, medicinal garden TBGRI campus, Kerala, 18 August 1998, Sibi 4479; 25 August 1998, S 4508.

This is a minute agaric growing gregariously on wood. *C. velutinus* Petch, is very similar in both the colour of the basidiomes and in the spore ornamentation but the latter are larger in *C. velutinus*.

Crepidotus pezizula (Berk. & Br.) Sacc. Syll. Fung. 5:884 (1887).

Agricus pezizula Berk. & Br. in Journ. Linn. Soc., Bot. 1432 (1873).

Pileus up to 5 mm diam., subcupulate, sessile, attached dorsally; surface uniformly 'greyish white' (2B.1),

weakly hygrophanous, with a brownish tint on drying; margin slightly incurved, entire, non-striate. Lamellae

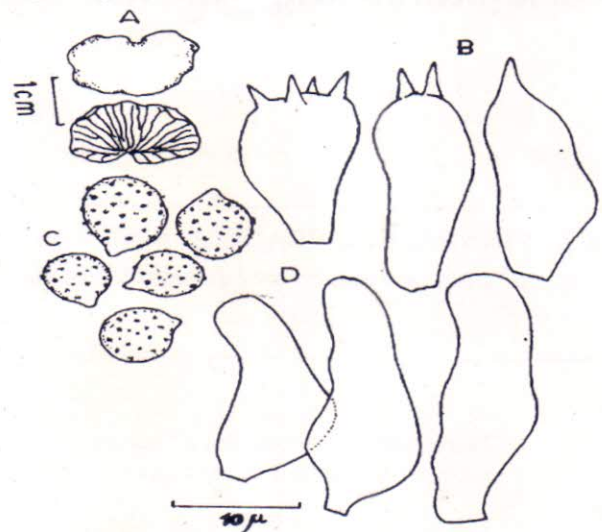


Fig. 2. *Crepidotus citrinus*: A, habit; B, basidia; C, spores; D, cheilocystidia.

radiating from an excentric point, dull white, with a slight brownish tint under the stereo, subdistant, with one or two lamellulae; edge white, fimbriate. Stipe none, attachment dorsal with white mycelium at the region of attachment (visible only under the stereo). Smell nil. Context very thin, composed of thin-walled hyphae, up to 9 μm diam., with clamp-connexions. Spores 7.5-9 x 5.5-6 μm , broadly ovoid to ellipsoid, yellowish brown with a smooth, thickened wall and a large, refractive guttule. Basidia 18-21 x 7.5-8 μm , clavate, bearing four sterigmata. Lamella-edge sterile; cheilocystidia 31.5-45 x 4.5-7.5 μm , crowded in fascicles, sinuous - cylindric, often with an inflated capitate apex, hyaline, thin-walled. Hymenophoral trama regular, composed of thin-walled, hyaline hyphae, 1.5-10.5 μm diam. Subhymenium pseudoparenchymatous. Pileipellis a repent epicutis, disrupted by tufts of suberect, thin-walled hyphae, encrusted with a granular pigment. The hyphal ends often forms hyaline, sinuous cylindrical to filiform cystidioid elements measuring up to 9 μm diam.

Scattered on a fallen log in the FRLHT project area, TBGRI campus, 4 november 1997, Sibi 4229.

This is a member of a small group of species within the subsection *Fibulantini* which form minute basidiomes with narrow, filamentous cheilocystidia, and encrusted epicuticular hyphae. The present collection is in close agreement with the description of the type.

from Sri Lanka (Pegler, 1986).

Lactarius uyedae Singer in Nova Hedwig. 40:436-438 (1984).

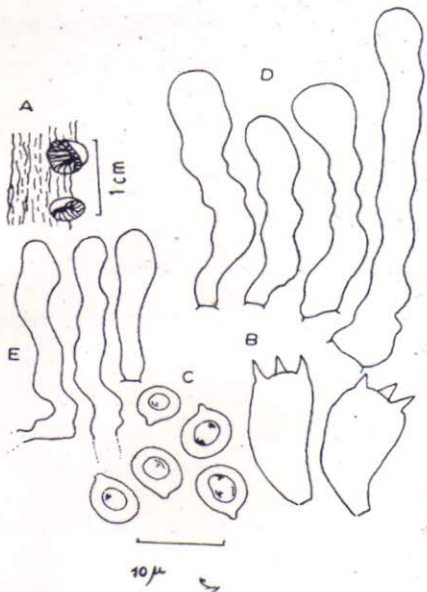


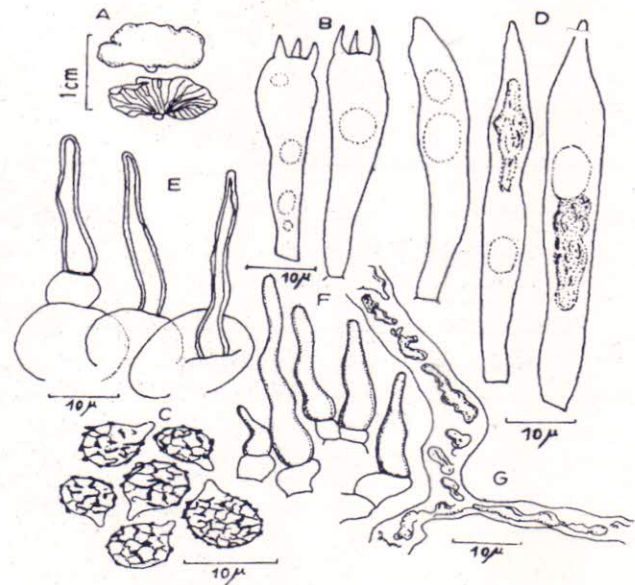
Fig. 3. *Crepidotus pezizula*: A, habit; B, basidia; C, spores; D, cheilocystidia.

Basidiomes small, pleurotoid. Pileus up to 1 cm diam., subreniform, convex to plane; surface uniformly white, sometimes with a 'brownish orange' (5C3) centre, pellucid-striate pubescent at the margin (under the stereo). Lamellae decurrent, white, up to 1 mm wide, subdistant, with lamellulae. Stipe very reduced, excentric to lateral; surface white, pubescent, arising from an extensive tomentose basal mycelial system. Context white, thin, soft. Taste strong, acrid. Odour aromatic, of *Curcuma amada* Roxb. Latex not observed. Spores 7.5-9 x 6-6.5 μ m (incl. ornament), subglobose to shortly ellipsoid, hyaline, with an amyloid ornamentation of numerous verrucae joined by connectives forming a complete reticulum, suprahilar plage inamyloid. Basidia 33-45 x 7.5-10.5 μ m, clavate bearing four sterigmata. Lamella-edge heteromorphous; macrocystidia scattered, 42-82.5 x 6-7.5 μ m, lanceolate to fusoid, thin-walled, with contents. Hymenophoral trama subregular, intermixed with numerous sphaerocysts and laticiferous hyphae. Pileipellis an epithelium, with subglobose to clavate, thin-walled elements, and erect hairs with a thickened wall, deeprooted in the epithelium. Stipe surface also with similar hairs. Clamp-connexions absent.

Scattered on soil and on living roots of *Myrstica*

malabarica Lam., medicinal garden, TBGRI campus, 9 September 1996, Sibi 3582; 10 September 1996, S 3587.

The pleurotoid stature and the lignicolous habitat are typical features of sect. *Panuoides* Singer, a group



cheilocystidia; E, caulocystidia.

characterised by *Lactarius panuoides* Singer, and its allies. (Singer, 1984). *Lactarius uyedae* differs from rest of the species in having a white pileus and hymenophoral trama with scattered sphaerocysts.

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