
Agaricales from Western Ghats - I

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Four species of agarics viz., *Hemimycena longicytis* Heim, *Hohenbuehelia pergelatinosa* Singer, *Hygrocybe alwisii* (Berk & Br.) Pegler, and *Hypholoma trinitensis* (Dennis) Pegler are described and illustrated for the first time from India.

Key words : Agaricales, Western Ghats, new records, India

During a survey of the agaric flora of Western Ghats of Kerala state, we collected some agarics not so far recorded from India. Detailed descriptions and illustrations of these are given below. The descriptions are based on fresh materials collected by the authors. Colour terminology used is that of Methuen (Kornerup and Wancher, 1967). The collections are deposited at the herbarium of the Microbiology division, TBGRL, Palode, Kerala.

Hemimycena longicytis Heim in Sydowia 1561 (1962). Fig. 1, A-D.

Pileus 1-3 cm diam, convex to applanate, at times slightly depressed; surface white to yellowish grey' (4B2), some times orange white (5A2) at the disk, translucent striate, glabrous. Lamellae adnate, white, up to 3 mm wide, distant with irregular lamellulae and interveining. Stipe 0.7-1.3 cm × 1-2 mm, central to excentric, cylindric, slightly tapering towards the base, fistulose; surface white, glabrous. Context up to 2 mm thick at the disk, thin elsewhere, white of hyaline, inflated hyphae, 3-12 µm diam, with clamp-connections. Spores 10.5-13.5 × 3.5-5.5 µm, clavate fusoid, inamyloid, thin-walled, hyaline, with numerous refractive guttules. Basidia 30-39 × 6-9 µm, clavate, bearing four sterigmata. Lamella-edge heteromorphous; cheilocystidia 61.5-82.5 × 9-12 µm, cylindric to lageniform, with a slender neck, thin-walled, hyaline. pleurocystidia none. Hymenophoral trama irregular, hyaline, inamyloid, composed of 3-16.5 µm wide hyphae. Subhymenial layer interwoven. Pileal surface an undifferentiated epicutis of thin-walled, inflated, repent hyphae, 3-16.5 µm diam.

Scatter in large numbers on dead logs.

Specimens examined : India, Kerala: TBGRI campus; 6 April 1995, No. 54; 3 November 1993, No. 220; 6 October 1994, No. 1591; 7 October 1994, No. 1592; 4 November 1994,

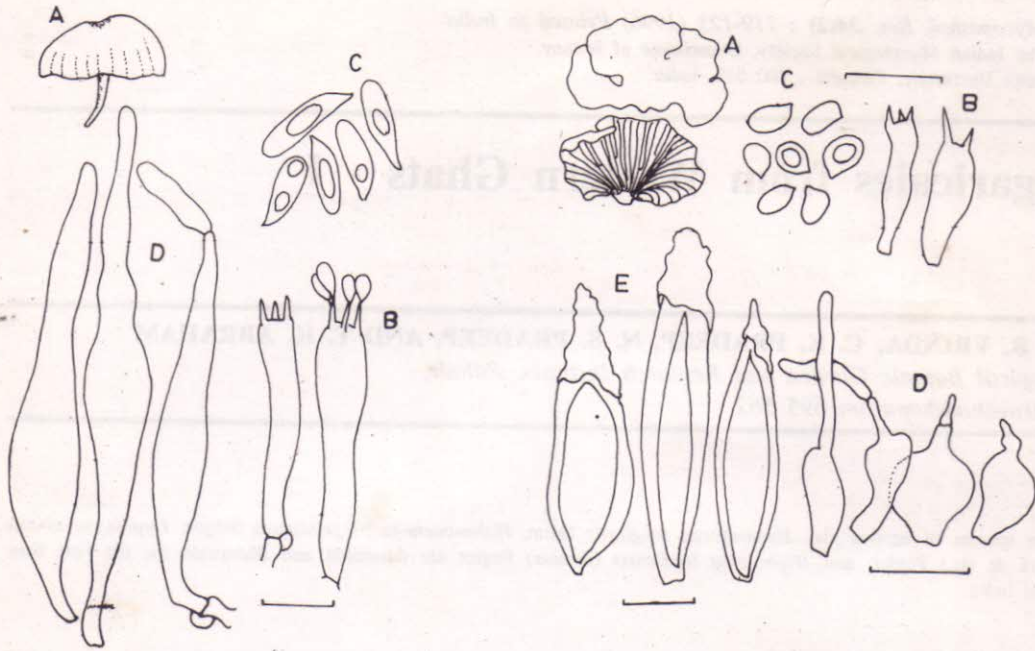


Fig. 1, A-D., *Hemimycena longicystis*. A. habit $\times 1$; B. basidia; C. spores; D. cheilocystidia

Fig. 2, A-E., *Hohenbuehelia pergelatinosa*. A. habit $\times 1/2$; B. basidia; C. spores; D. cheilocystidia; E. pleurocystidia

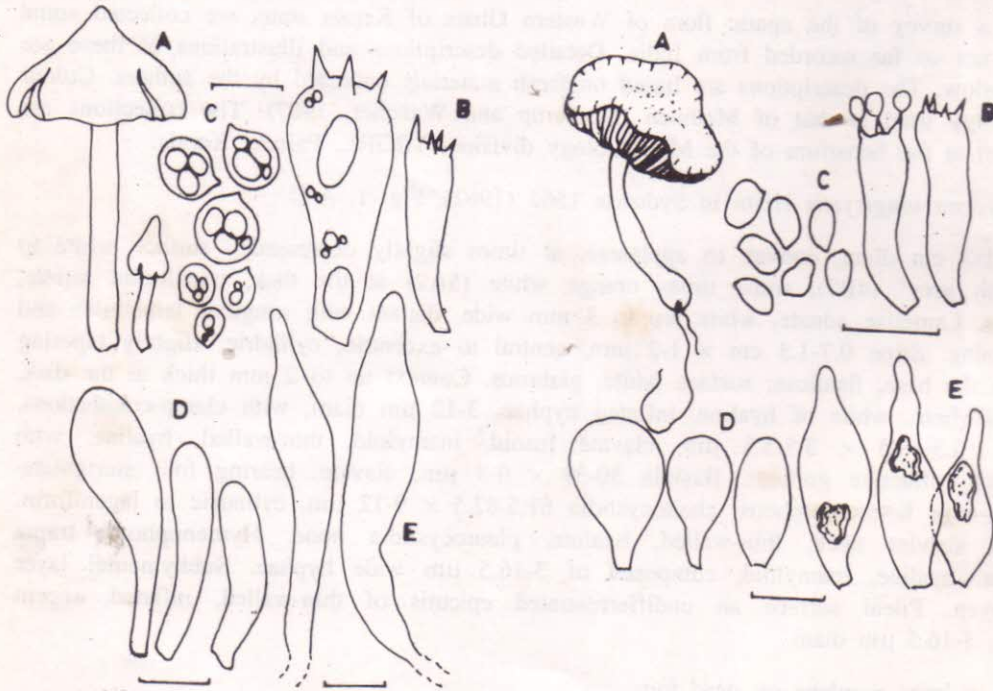


Fig. 3, A-E, *Hygrocybe alwisii*. A. habit $\times 1/2$; B. basidia, C. Spores, D. Cheilocystidia, E. pleurocystidia

Fig. 4, A-E., *Hypoholoma trinitensis*. A. habit $\times 1$; B. basidia; C. spores; D. cheilocystidia; E. chrysocystidia.

Scale bar = 10 μ m

No. 1897; 19 May 1995, No. 2186; 13 June 1995, No. 2258; 9 October 1995, No. 2596. 25 October 1995, No. 2618; 26 October 1995, No. 2632.

The basidiocarps grow in large numbers on the bark of living trees as well as fallen twigs. The species was initially described by Heim from the Malagasy Republic. The large spores and elongate cheilocystidia readily distinguish this species. The present collection agrees in all respects with the collections from Tanzania (Pegler, 1977).

Hohenbuehelia perglatinosa Singer in Beih Z. Nova Hedwigia, 29:19 (1978) Fig. 2, A-E.

Pileus 2-9 cm diam, convex to flabelliform, sometimes with an umbo like elevation, with narrow attachment; surface 'golden grey' (4C2) to 'beige' (4C3), paler towards the margin, smooth and glabrous, glutinous when fresh; margin at first entire, becoming regularly lobate, undulate, translucent striate. Lamellae white, radiating from a lateral point, moderately crowded, up to 5 mm wide, with lamellulae of different lengths. Stipe absent. Context thick, dull white or 'grey' (4B1), sticky, up to 4 mm thick, composed of an upper gelatinous layer of loosely arranged, thin-walled, hyaline hyphae, with clamp-connections, embedded in a gelatinous matrix, and a lower non gelatinous layer of thin-walled, hyaline, hyphae, with clamp-connections. Spores $3.5-6.5 \times 3-4.5 \mu\text{m}$, ovoid to ellipsoid, hyaline, thin-walled, smooth, inamyloid. Basidia $10.5-15 \times 2.5-3 \mu\text{m}$ clavate, bearing two to four sterigmata. Lamella-edge sterile. cheilocystidia $10.5-21 \times 3-9 \mu\text{m}$, broadly ventricose, some, more cylindric than ventricose, with an apical neck, a secondary septum often present in the neck, thin walled hyaline. Metuloids very numerous on edges and sides of the lamellae; $22.5-63 \times 7.5-13.5 \mu\text{m}$, fusoid ventricose, thick walled, with a narrow lumen, deep yellowish brown strongly crystalline-incrusted in the upper part. Hymenophoral trama regular, hyaline. Subhymenial layer interwoven. Pielipellis an epicutis, sometimes forming erect fascicles of hyphae.

Caespitose on rotten wood.

Specimen examined : India, Kerala state, TBGRI campus; 12 April 1995, No. 575; 31 May 1994, No. 813 14 November 1994, No. 1961; 16 June 1995, No. 2285.

The basidiomes typically form caespitose clusters on rotting wood. The species was originally described from Colombia (Singer, 1978). This very distinctive species may be identified by the sticky greyish cap and small spores. In the present collection the spores slightly smaller than those of the type.

Hygrocybe alwisii (Berk & Br.) Pegler in Kew Bull. Addit Ser. 12: 66 (1986). Fig. 3, A-E.

Pileus 2.5-7.5 cm diam, conical then expanded umbonate; surface pure white, silky striate, smooth and glabrous, viscid when wet; margin irregular often lobed or undulate. Lamellae free to adnexed, white, ventricose, up to 5 mm broad, crowded with lamellulae of different lengths. Stipe 7-11 cm \times 7.10 mm central, cylindric to slightly compressed, equal, twisted, hollow, surface white, longitudinally, silky-striate glabrous. Context up to 2 mm thick, white, of loosely woven, thin-walled, gelatinised hyphae, 3-30 μm diam, with clamp-connections. Spores dimorphous, macrospores $7.5-10.5 \times 6.8-10.5 \mu\text{m}$, subglobose to ovoid, hyaline, thin-walled, with refractive contents. Basidia dimorphous; large basidia $36-60 \times 12-19.5 \mu\text{m}$, broadly clavate, bearing four sterigmata, small basidia $28.5-31 \times$

7.5-9 μm , narrowly clavate bearing four sterigmata. Lamella-edge sterile; cheilocystidia crowded, thin-walled; hyaline, 16.5-36 \times 4.5-10.5 μm , clavate. Pleurocystidia scattered, 43.5-82.5 \times 7.5-25.5 μm , digitate, thin-walled; hyaline, tramal in origin. Hymenophoral trama regular, hyaline, with inflated hyphae 3-25.5 μm diam., Pileipellis a repent epicutis of thin-walled, hyaline, hyphae.

Scattered on ground.

Specimens examined: India, Kerala state, TBGRI campus: 27 April, 1994, No. 658; 23 June 1994, No. 986; 19 April 1995 No. 2032.

This large *Hygrocybe* is easily recognised by its shiny, pure white, conical pileus. The dimorphism of the spores and basidia are typical of the sect. *Firmae*. This species, hitherto only known from the type specimen, (Pegler, 1986) of which the lamella-edge could not be recovered, therefore the existence of cheilocystidia was unknown.

Hypholoma trinitensis (Dennis) Pegler in Kew Bull. Addit. Ser. 9: 506 (1983). Fig. 4, A-E

Pileus 3-3.5 cm diam, convex to applanate, slightly depressed at the centre, surface hygrophanous, 'yellowish brown' (5D5), translucent striate when moist, paling to buff, minutely squamulose, glabrescent margin entire. Lamellae adnate, 'yellowish brown' (5D5), upto 5mm wide, moderately crowded, with lamellulae of different lengths. Stipe 3-3.5 cm \times 4mm central cylindrical, equal or slightly thicker at the apex, fibrous; surface 'cream' (4A3), glabrous arising from white rhizomorphic mycelial strands. Anulus fugacious. Context thin, composed of thin-walled, inflated hyphae, 2-20 μm diam, with clamp connections. Odour of underground tubers. Spores 4.5-7.2 \times 3.2 - 4.5 μm , ovoid to ellipsoid, occasionally reniform, with a fuscous brown, smooth wall and inconspicuous germ pore. Basidia 22.5-30.5 \times 6.5-8 μm , clavate, bearing four sterigmata. Lamellae edge sterile, with crowded cheilocystidia.

Cheilocystidia 22.5 - 56 \times 9.5 - 17.5 μm , clavate pyriform, hyaline, thin-walled. Chrysocystidia numerous, ventricose or lageniform, 22.4 - 56 \times 9.6 - 17.6 μm thin-walled, with yellowish contents inside. Hymenophoral trama subregular. Subhymenium interwoven. Pileipellis a repent epicutis of hyaline hyphae.

Scattered on soil.

Specimen examined : India, Kerala state, TBGRI campus: 7 December 1993, No. 460.

A species known by the type collection from Trinidad as *Pholiota trinitensis* (Dennis 1970). It is closely related to *P. ealaensis* Beeli, from East Africa (Pegler, 1977), having a similar overall appearance. *P. ealaensis* differs, however, by the smaller spores and a smooth pileal surface. *Hypholoma trinitensis* was reported by Pegler from Martinique (Pegler, 1983) and our collection is in remarkable agreement with the Lesser Antillean collection.

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