

South Indian Agaricales — IX *)

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In this paper eight species of Agarics collected from different parts of South India are reported. Colour terminology used is that of Methuen Handbook of Colour (KORNERUP & WANSCHER, 1967). The specimens are deposited at the Herbarium of the Madras University Botany Laboratory (MUBL), Madras, India.

1. *Hygrocybe fornicata* (FR.) SINGER, Lilloa 22: 152 (1951). — Figs. 1—3

Pileus up to 4 cm diam., subconic to convex, becoming plano-convex, umbonate; surface smooth, viscid, orange grey (6 B 2) at the umbo region, white elsewhere; margin incurved, wavy and splitting radially. Lamellae adnate, white. Stipe 4 cm × 8 mm, cylindrical, solid, dry, white.

Basidia 26.4—35.0 × 5.6—7.0 μm, 4-spored, sterigmata up to 4.2 μm long. Spore-print colour white. Spores 4.9—6.3 × 3.5—4.2 μm, subovoid to short ellipsoid, collapsed in 10% KOH, inamyloid. Pleurocystidia and cheilocystidia absent. Hymenophoral trama regular, up to 132 μm in width, hyphae 2.8—5.6 μm in width. Context up to 3 mm thick, hyphae 2.8—4.2 μm in width. Pileocutis gelatinised, up to 132 μm thick, hyphae 1.4—2.8 μm in width. Stipe context of parallel hyphae, 1.4—5.6 μm in width. Clamp connections present in cuticular hyphae. Laticifers present in gill, pileus and stipe trama.

Habitat. — On ground among grasses, solitary. Mel-Odayaratty, Ootacamund, Nilgiris, Tamil Nadu, INDIA, 6th September 1978, Coll. N. RAMAN (MUBL, 2410).

This species occurs widely in Europa. According to HESLER & SMITH (1963) the pileus colour is variable, with some shade of grey colour predominating. In the present collection the spores are smaller than that of European collections.

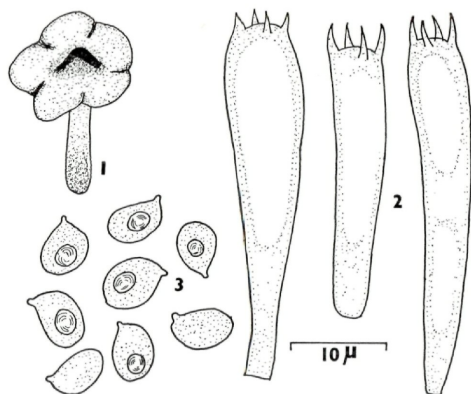
2. *Lepista sord' da* (FR.) SINGER in Lilloa 22: 193 (1951). — Figs. 4—6

Pileus up to 6 cm broad, convex with an umbo when young, becoming infundibuliform with a central depression at maturity;

*) Memoir No. 311 from the Centre of Advanced Study in Botany.

surface glabrous, hygrophanous, margin greyish lilac (16C2) when young, dull lilac (16B2) when old, centre violet white (15A2). Lamellae adnate to ascending, up to 1.2 cm broad, violet white (15A2); lamellulae of three lengths present. Stipe up to 8×1 cm, cylindrical, somewhat bulbous at the base, surface pubescent, yellowish white (4A2) to yellowish grey (4B2).

Basidia $21.0-28.0 \times 5.6-8.4$ μm , clavate, 4-spored, sterigmata up to 4.2 μm long. Spore-print colour orange grey (5B2) to greyish



Figs. 1-3. *Hygrocybe fornicata*: 1. Habit $\times \frac{1}{2}$. — 2. Basidia. — 3. Spores

orange (5B3). Spores $5.0-7.0 \times 4.2$ μm , ellipsoid, hyaline, thin-walled, with rugulose ornamentation, inamyloid. Pleurocystidia and cheilocystidia absent. Hymenophoral trama regular, up to 120 μm wide, thin-walled with clamp connections, hyphae normally $2.8-7.0$ μm in width, inflated up to 14 μm in width. Pileal surface a repent cutis of radially parallel hyphae, $2.8-14.0$ μm in width. Stipe context of parallel hyphae, $4.2-14.0$ μm in width.

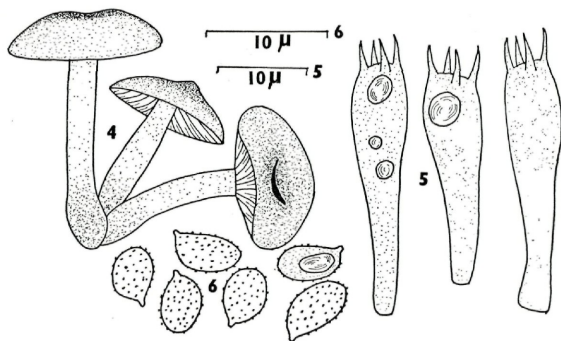
Habitat. — On Elephant dung manure, in groups. Deer park, Guindy, Madras, Tamil Nadu, INDIA; 5th November, 1978. Coll. N. RAMAN (MUBL, 2411).

The characteristic features of this species are the thin, hygrophanous, lilaceous pink to lilaceous brown pileus and the cespitose habit. The present collection agrees well with the description of PEGLER (1977), which was based on the materials collected from East Africa.

3. *Hohenbuehelia myxotricha* (LÉV.) SINGER in Lilloa 22: 225 (1951). — Figs. 7—11

Pileus dimidiate, up to 1 cm diam., laterally attached, sessile; surface pubescent, white, later turning yellowish grey (3B2); margin regular, incurved. Lamellae white, close.

Basidia 22.4—28.0 × 5.6—7.0 μ m, 4-spored, sterigmata up to 4.2 μ m long. Spore-print colour white. Spores 6.3—7.0 × 3.5—4.2 μ m, smooth, ellipsoid, inamyloid. Pleurocystidia in the form of metuloids, 43.4—70.0 × 11.2—18.2 μ m, fusoid ventricose with encrusted apex, walls up to 4.2 μ m thick. Cheilocystidia 21.0—26.6 × 4.2—7.0 μ m, lecythiform, the capitellum up to 2.8 μ m in diam. Hymeno-



Figs. 4—6. *Lepista sordida*: 4. Habit $\times \frac{1}{2}$. — 5. Basidia. — 6. Spores

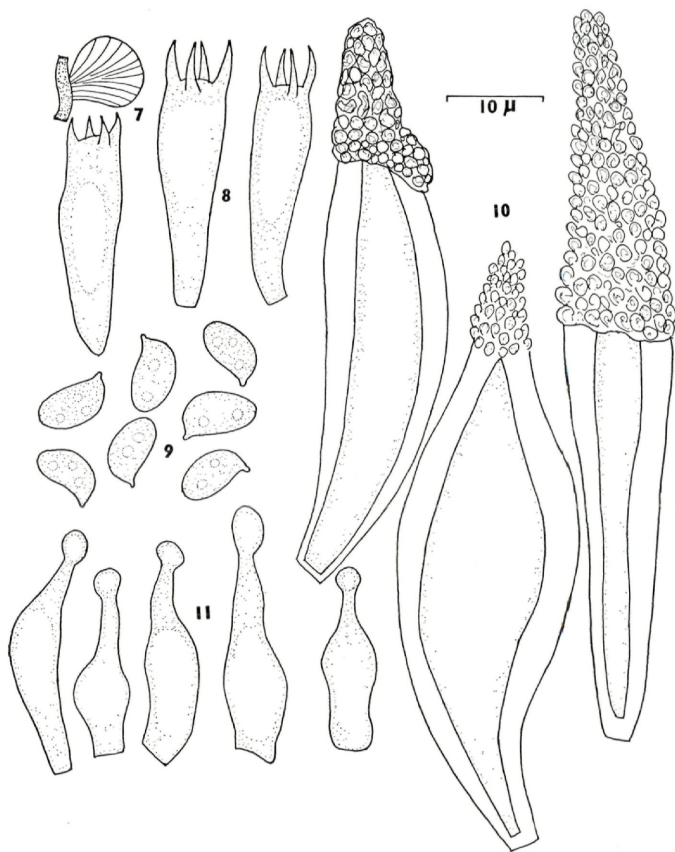
phoral trama subregular, up to 66.0 μ m in diam., hyphae 1.4—4.2 μ m in width, non-gelatinized. Context thin, up to 1 mm thick, gelatinized, hyphae interwoven, 1.4—4.2 μ m in width. Pileal surface a thin layer of cutis, the hyphae 2.8—7.0 μ m in width. All hyphae with clamp connections.

Habitat. — On fallen twigs, in groups. Indian Institute of Technology Campus, Guindy, Madras, Tamil Nadu, INDIA, 1st November, 1978. Coll. N. RAMAN (MUBL, 2412).

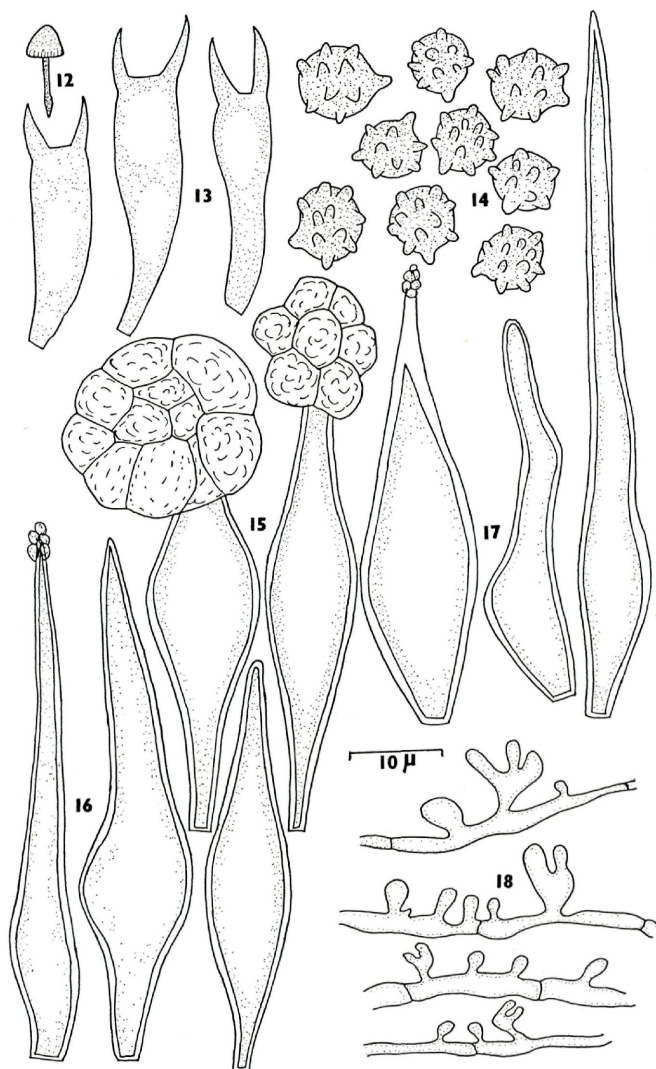
4. *Mycenella bryophila* (VOGL.) SING., Notul. Syst. Sect. Crypt. Inst. Bot. Acad. Sci. U. S. S. R. fasc. 10—12: 9 (1938). — Figs. 12—18

Pileus up to 5 mm diam., conical; surface smooth, brownish grey (5C2); margin regular. Lamellae adnate, white. Stipe up to 13 mm long, cylindrical; surface pubescent, white; pseudorrhiza present.

Basidia 21.0—29.4 \times 5.6—7.0 μ m, 2-spored, sterigmata up to 7.0 μ m long. Spores 5.6—8.4 μ m, globose to subglobose, covered by tuberculate projections up to 1.4 μ m long, with a long apiculus, inamyloid. Pleurocystidia and cheilocystidia similar, 42.0—63.0 \times 9.8—14.0 μ m, fusoid, ventricose, apically encrusted, the encrusted portion up to 28.0 μ m in width. Hymenophoral trama regular, up

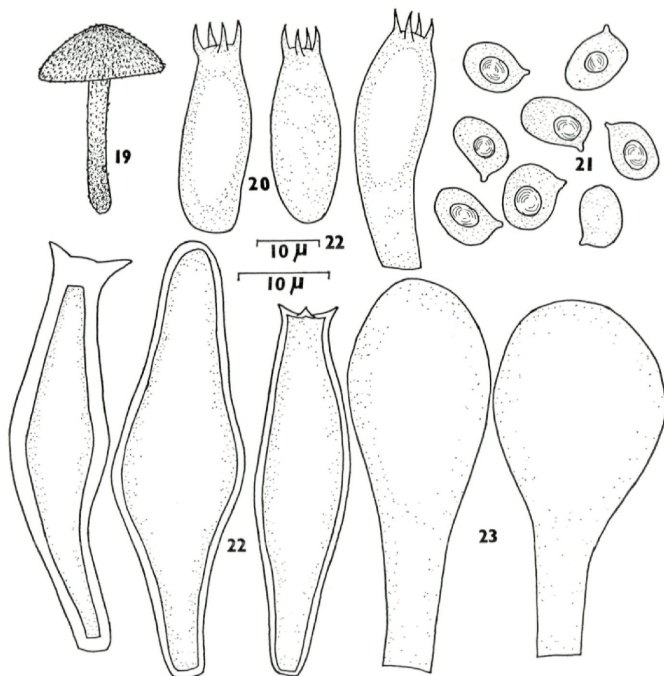


Figs. 7—11. *Hohenbuehelia myxotricha*: 7. Habit \times 1. — 8. Basidia. — 9. Spores. — 10. Pleurocystidia. — 11. Cheilocystidia



Figs. 12—18. *Mycenell a bryophila*: 12. Habit $\times 1$. — 13. Basidia. — 14. Spores. — 15. Cheilocystidia and Pleurocystidia. — 16. Pileocystidia. — 17. Caulocystidia. — 18. Elements of epicutis

to $66.0\ \mu\text{m}$ in width, pale yellow in 10% KOH, hyphae $2.8\text{--}5.6\ \mu\text{m}$ width. Pileal surface hyphae covered by numerous short rod-like branched projections. Pileocystidia similar to pleurocystidia but less encrusted, scattered, $44.8\text{--}61.5 \times 7.0\text{--}12.5\ \mu\text{m}$. Stipe context of parallel hyphae, $2.8\text{--}7.0\ \mu\text{m}$ in width, along with generative hyphae



Figs. 19—23. *Pluteus cervinus*: 19. Habit $\times \frac{1}{2}$. — 20. Basidia. — 21. Spores. — 22. Pleurocystidia. — 23. Cheilocystidia

long, inflated, mostly unbranched hyphae with slightly thickened walls, up to $14.0\ \mu\text{m}$ in width were also present. Caulocystidia $37.8\text{--}77.0 \times 7.0\text{--}11.2\ \mu\text{m}$, in clusters, less encrusted. All hyphae without clamp connections.

Habitat. — On rotting wood, solitary. Forest near Gandhipettai, Ootacamund, Nilgiris, Tamil Nadu, INDIA, 12th September, 1978. Coll. N. RAMAN (MUBL, 2414).

The subgenus *Mycenella* LANGE (of the genus *Mycena*) was elevated to generic level by SINGER (1938). SMITH (1947) places *M. bryophila* under the subgenus *Mycenella* of the genus *Mycena* and the present collection agrees with SMITH's description. The typical sarcodimitic structure as described by CORNER (1966) for *M. bryophila* is evident in this collection also.

5. *Pluteus cervinus* Fr., *Epicrisis*, 1836. — Figs. 19—23

Pileus up to 4 cm broad, convex; surface pubescent, brown (6F7); margin regular. Lamellae free, white, up to 4 mm wide; lamellulae present. Stipe 5 cm × 5 mm, cylindrical, solid; surface somewhat hairy, light brown (6D4).

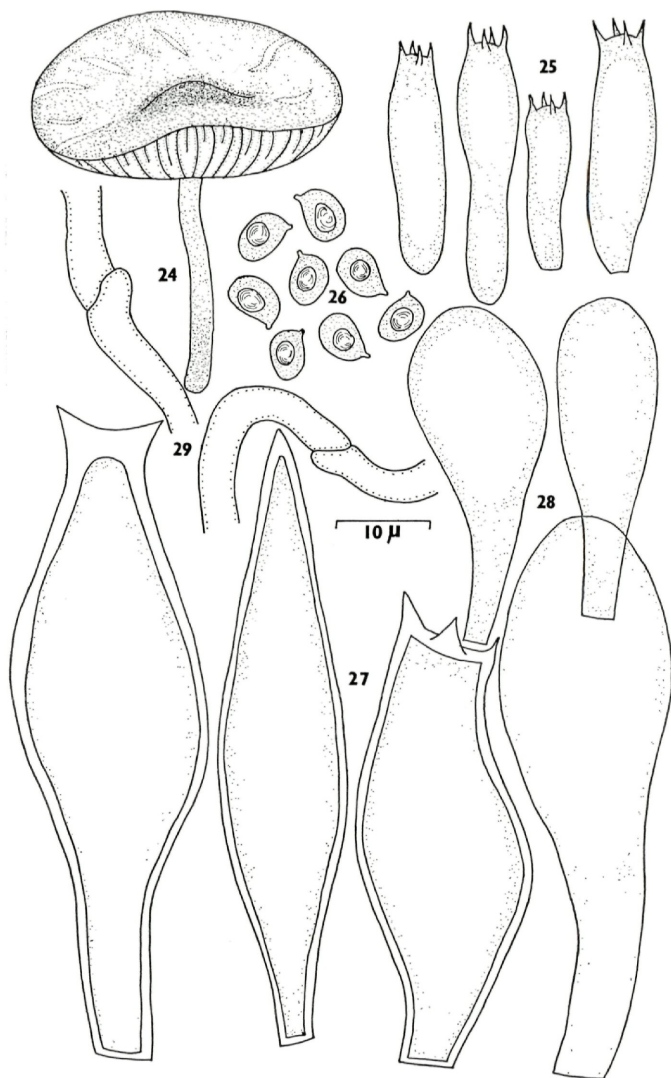
Basidia 18.2—25.2 × 7.0—8.6 μ m, clavate, 4-spored, sterigmate up to 2.8 μ m long. Spore-print colour pinkish white (12A2). Spores 5.6—7.0 × 4.2—5.6 μ m, ovoid to ellipsoid, slightly thick walled, smooth, guttulate, inamyloid. Cheilocystidia 26.4—42.0 × 9.8—16.8 μ m, obpiriform to clavate, pale yellow in 10% KOH, thin-walled. Pleurocystidia metuloidal, 61.6—78.4 × 12.6—22.4 μ m, fusoid to ventricose, wall hyaline, thickened (up to 3.5 μ m), apex with 1, 2 or 3 hook-like prongs. Hymenophoral trama inverse, up to 66.0 μ m wide, hyphae thin-walled, 1.4—7.0 μ m. Context thin, up to 3 mm wide, hyphae thin-walled, 2.8—7.0 μ m in width, inflated up to 14.0 μ m. Pileal surface an epicutis of repent hyphae, yellow in 10% KOH, 2.8—11.2 μ m in width. No pileocystidia observed. Stipe context of parallel hyphae, 2.8—21.0 μ m in width. All hyphae without clamp connections.

Habitat. — On wood, solitary. Doddabetta, Ootacamund, Nilgiris, Tamil Nadu, INDIA, 9 th September, 1979. Coll. N. RAMAN (MUBL, 2415).

6. *Pluteus subcervinus* (BERK. & BR.) Sacc., *Syll. Fung.* 5: 666 (1887). — Figs. 24—29

Pileus up to 10 cm broad, plano convex to plane; surface brownish orange (6C4), glabrous, radially fibrillose, with a slight depression in the centre; margin incurved. Lamellae free, pink; lamellulae present. Stipe up to 9 cm × 6 mm; surface white, glabrous.

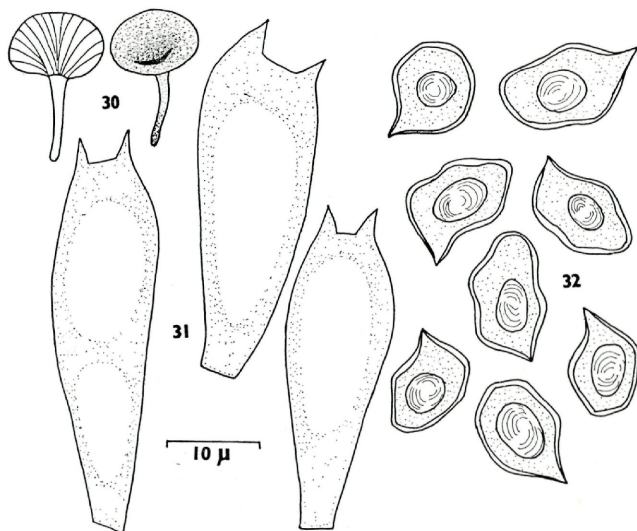
Basidia 18.2—28.0 × 4.2—7.0 μ m, clavate, 4-spored, sterigmata up to 2.8 μ m long. Spore-print colour greyish orange (5B3). Spores 4.9—6.3 × 3.5—4.2 μ m, ovoid to short-ellipsoid, slightly thick-walled, smooth, guttulate, inamyloid. Cheilocystidia 28.0—60.0 × 9.8—19.6 μ m, obpiriform to inflated clavate, hyaline, thin-walled. Pleurocystidia metuloidal, 49.0—70.0 × 11.2—19.2 μ m, fusoid, some times ventricose below, walls hyaline, thickened (up to 3.5 μ m), apex with 1, 2 or 3 hook-like prongs. Hymenophoral trama inverse, up to 50.0 μ m



Figs. 24—29. *Pluteus subcervinus*: 24. Habit $\times \frac{1}{2}$. — 25. Basidia. — 26. Spores. — 27. Pleurocystidia. — 28. Cheilocystidia. — 29. Hyphae with clamp connections

in width, hyaline, hyphae 2.8—8.4 μm in width. Context thin, up to 50.0 μm thick, white, of thin-walled hyphae, 2.8—5.6 μm in width, inflated up to 28.0 μm , with clamp connections. Pileal surface an epicutis of radially parallel hyphae, 4.2—11.2 μm , inflated up to 14.0 μm , with brown contents. No pileocystidia observed. Stipe context of parallel hyphae, 4.2—8.4 μm in width. Caulocystidia absent.

Habitat. — On ground, solitary. Senkaltheri, Tirunelveli District, Tamil Nadu, INDIA, 13th February, 1979. Coll. K. NATARAJAN (MUBL, 2416).



Figs. 30—32. *Claudopus byssisedus*: 30. Habit $\times 1$. — 31. Basidia. — 32. Spores

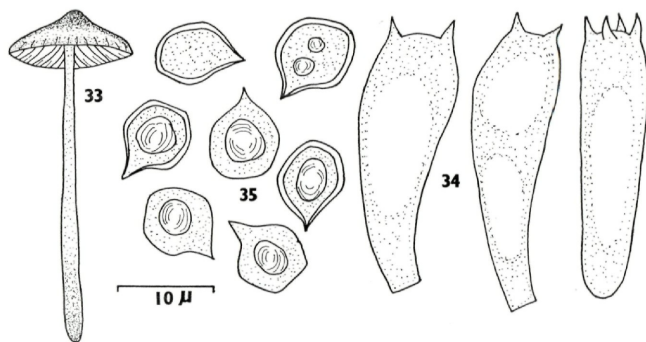
The present collection closely agrees with the description of *P. subcervinus* given by PEGLER (1977). This species differs from *P. cervinus* in having white stipe, smaller spores and in the presence of clamp connections.

7. *Claudopus byssisedus* (FR.) GILL., Champ. Fr., p. 427, 1876. — Figs. 30—32.

Pileus up to 1.5 cm broad, planoconvex with a depression at the point of attachment of the stipe; surface minutely scaly, brownish

grey (9F2); margin regular. Lamellae adnate or subdecurrent, 2 mm wide, pale orange (6A3). Stipe eccentric, up to 3 cm long; surface hairy, brown (6E4).

Basidia 28.0—35.0 × 9.8—12.6 μ m, clavate, 2-spored, sterigmata up to 2.8 μ m long. Spores 9.8—12.6 × 7.0—8.4 μ m, 5—6-sided, angular-nodulose, inamyloid. Pleurocystidia absent. Cheilocystidia not observed. Hymenophoral trama regular, up to 50.0 μ m width, hyphae 4.2—7.0 μ m in width. Context thin, white. Pileal surface a repent cutis, hyphae 4.2—9.8 μ m in width, inflated up to



Figs. 33—35. *Nolanea mammiifera*: 33. Habit × 1. — 34. Basidia. — 35. Spores

16.8 μ m width. Pileocystidia not seen. Stipe context of parallel hyphae, 4.2—14.0 μ m in width. All hyphae without clamp connection.

Habitat. — On litter, solitary. Madras Christian College Campus, Tambaram, Madras, Tamil Nadu, INDIA, 29th September, 1978. Coll. N. RAMAN (MUBL, 2417).

But for the presence of a longer stipe, the present collection closely agrees with the description given by HESLER (1967).

8. *Nolanea mammiifera* (ROMAGN.) PEGLER, Preliminary Agaric Flora of East Africa, Kew Bull. Addit. Ser. 6: 535 (1977). — Figs. 33—35

Pileus up to 2 cm broad, plano convex with an umbo; surface smooth, yellowish grey (4B2) at the umbo region, greyish brown (9E3) at the margin; margin slightly striate. Lamellae adnate to adnexed, 2 mm wide, orange grey (5B2) when young, brownish orange (6C4) at maturity; lamellulae present. Stipe up to 5 cm × 3 mm,

cylindrical; surface greyish brown (6D3), smooth to minutely pubescent.

Basidia 22.4—29.4 × 7.0—9.8 μ m, clavate, 2—4-spored, sterigmata up to 2.8 μ m long. Spore-print, colour reddish brown (8D7). Spores 8.4—11.2 × 7.0—8.4 μ m, isodiametric, angular-subglobose, showing 4—6 facets with one to two guttules, pseudoamyloid. Cheilocystidia and pleurocystidia absent. Hymenophoral trama regular, hyphae thin-walled, 2.8—7.0 μ m in width. Context thin, hyphae thin-walled, 2.8—5.6 μ m in width, inflated up to 16.8 μ m. Pileal surface a repent epicutis, hyphae 8.4—19.6 μ m in width, pale yellow in 10% KOH. Stipe context of parallel hyphae, 2.8—14.0 μ m in width. All hyphae without clamp connections.

Habitat. — On ground, solitary. Bear Shola, Kodaikanal, Tamil Nadu, INDIA, 16th August, 1978. Coll. N. RAMAN (MUBL, 2418).

The present collection closely agrees with the description given by PEGLER (1977). But as observed by ROMAGNESI (1956) both bisporic and tetrasporic basidia are present in this collection.

Acknowledgement

We are extremely thankful to Prof. C. V. SUBRAMANIAN, Director, C. A. S. in Botany, University of Madras, for his encouragement. One of us (N. R.) is thankful to the Council of Scientific and Industrial Research, New Delhi, for the award of a Junior Research Fellowship.

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Artikel/Article: [South Indian Agaricales - X. 225-235](#)