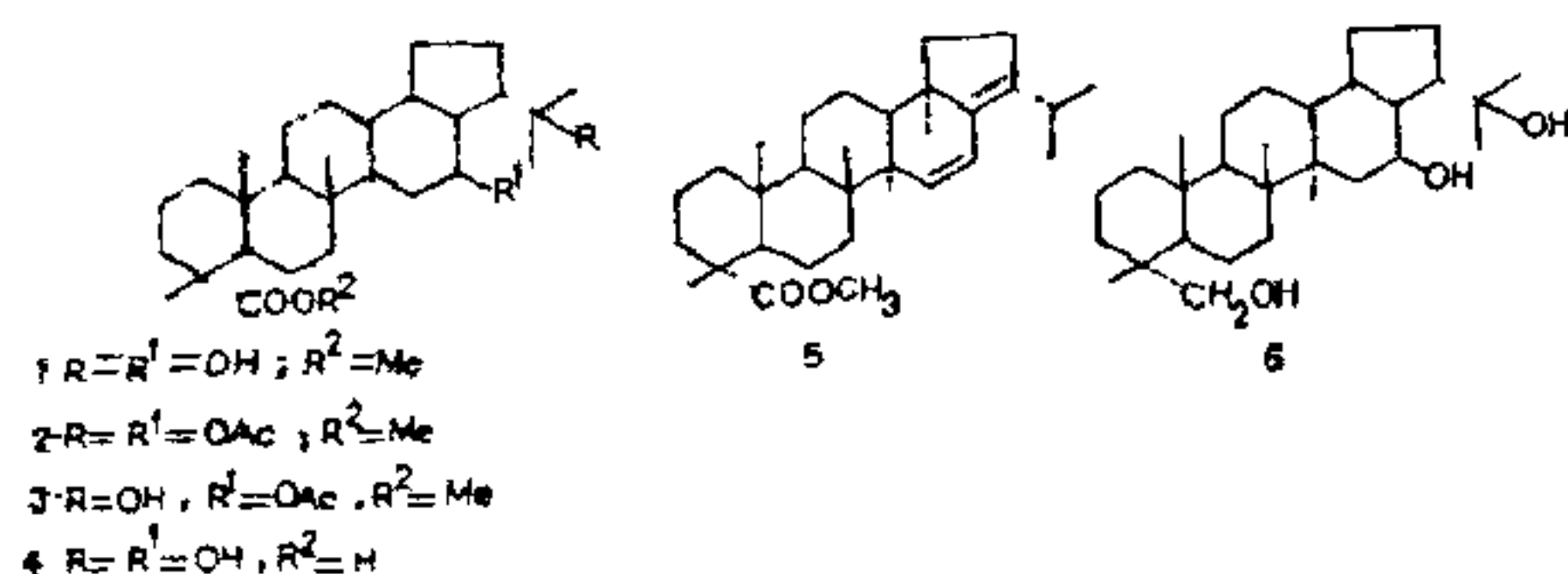


its m.p. 200–202° (lit. m.p. 203°)³. The LAH reduction of (1) gave a known triol (6), m.p. 245–47°, (lit. m.p. 247°)³.

These findings along with the consideration of the probable common biogenetic origin enable the compound (1) to be assigned a structure (1) which was also in full agreement with its mass spectral data [MS at m/z: 488 (M⁺, 65%), 473 (25%), 470 (15%), 455 (20%), 429 (20%), 396 (60%), 297 (90%), 277 (85%), 253 (100%)].



Isolation and purification of the compounds: Air-dried and powdered stem bark of *S. eugnifolium* (3 kg), procured from the United Chemicals and Allied Products, Calcutta (India), was exhaustively extracted with EtOH under reflux for 25 days. The ethanol from the percolates (30 litres) was concentrated (500 ml) under reduced pressure and kept at room temperature for a few days. It deposited a white mass which was then washed successively with petroleum ether and C₆H₆. The petroleum ether fraction on TLC examinations showed the presence of a mixture of two compounds which was passed through a column of neutral alumina, successively eluted with hexane:petroleum ether (5:5) and petroleum ether which yielded β -sitosterol (yield 400 mg), m.p. 134–36° (m.m.p. and Co-TLC)⁴ and moretenone (yield 600 mg), m.p. 202–4° (m.m.p. and Co TLC)¹ respectively. The C₆H₆ soluble portion was concentrated and passed through a column of neutral alumina, eluted with C₆H₆ to give (1) as colourless needles shaped crystals (C₆H₆-CHCl₃) (yield 900 mg) (Found: C, 76.0; H, 11.2; C₃₁H₅₂O₄ required C, 76.2; H, 11.6%); IR 3400, 2950, 2895, 1725, 1480, 1380, 1365, 1285, 1180; ¹H NMR; 0.80 (s, 3H, 1 × Me), 0.85 (s, 3H, 1 × Me), 1.22 (s, 9H, 3 × Me), 1.58 (s, 3H, 1 × Me), 1.60 (3H, 1 × Me), 3.85, 3.60 and 4.10.

Acetylation of (1) at reflux temperature

Compound (1) (100 mg) was acetylated with acetic anhydride (6 ml) and pyridine (5 ml) as usual to give (2) which was crystallized from C₆H₆-CHCl₃

as white crystalline needles (2) (Found; C, 71.2; H, 9.2; C₃₅H₅₆O₇ required C, 71.4; H, 9.5%); IR; 1735 (OAc), 1725 (COOMe); ¹H NMR; 0.80 (s, 3H, 1 × Me), 0.85 (s, 3H, 1 × Me), 1.22 (s, 9H, 3 × Me), 1.55 (s, 3H, 1 × Me), 1.60 (3H, 1 × Me), 3.85 (3H, s, 1 × COOMe), 2.00 (s, 3H, 1 × OAc) 2.10 (s, 3H, 1 × OAc) and 5.10 (m, 1H).

Acetylation of (1) at room temperature

Compound (1) (100 mg) was acetylated with acetic anhydride (6 ml) and pyridine (5 ml) at room temperature for 72 hr, which afforded the corresponding monoacetyl monomethyl leucotylate (3) as white crystalline substance (Found: C, 74.5; H, 10.0; C₃₃H₅₄O₅ required C, 74.7; H, 10.1%). IR (KBr, cm⁻¹): 3400, 1735 and 1725; ¹H NMR: 0.80 (s, 3H, 1 × Me) 0.85 (s, 3H, (1 × Me), 1.20 (s, 9H, 3 × Me), 1.58 (s, 3H, 1 × Me) 1.60 (s, 3H, 1 × Me), 2.00 (s, 1 × OAc), 3.85 (s, 3H, 1 × COOMe) and 5.10 (m, 1H).

The authors express their sincere thanks and gratitude to Director, CDRI, Lucknow, India for microanalysis and spectral data of the compound. One of us (MS) thanks UGC, New Delhi for the award of a fellowship.

19 July 1986

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LACTARIUS SANGUIFLUUS FR: AN EDIBLE MUSHROOM NEW TO INDIA

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AN edible species of *Lactarius*, *L. sanguifluus* Fr, unrecorded from India so far¹ is widely distributed in Himachal Pradesh. The immature, trugid basidiocarps are consumed by the natives along with *L.*

deliciosus (L) Fr. The fruiting bodies exude a blood red to purple red latex which turns greenish on exposure. The specimens have been deposited in the Herbarium Department of Biosciences, H. P. University, Shimla and with Dr M. Locquin, France.

Lactarius sanguifluus Fries, *Epicr. Syst. Myc.* p. 341. 1833. (figure 1).

Pileus 6–15 cm wide, convex, plane to subinfundibuliform, sub-viscid to viscid, brittle, glabrous with carrot coloured² and paler zones, margin incurved to decurved or plane, regular, smooth; flesh 4–8 mm thick at disc, dull carrot coloured; Latex deep red to purplish red, taste mild, odour indistinct; Lamellae up to 5 mm broad, sub-decurrent, to decurrent, crowded, with lamellulae of 3–4 lengths, brittle, dull purplish red; Stipe 5–8 cm long and 0.8–1.5 cm

diameter, central, cylindrical, stuffed or hollow, usually paler and dull than pileus; flesh dull carrot coloured; spores pale yellow in mass, 7–9 × 6–7.5 μm, broadly ellipsoid to subglobose, ridges and warts forming the reticulum; apiculus 0.8–1.4 μm long; spores amyloid; ornamentation 0.4–0.7 μm. Basidia 33–56 × 3–10.5 μm; Pleuro and Cheilocystidia similar 30–65 (–80 μm) × 3–7 μm fusoid ventricose to acicular, thin walled, subhymenium not well differentiated 8–15 μm wide, made up of pseudo-parenchymatous cells; Hymenophoral trama of interwoven connective tissues and lactifers, the hyaline connective hyphae thin walled, septate, branched 1.5–5 μm diameter; Pileus cutis 60–110 μm thick, single layered highly gelatinized, consisting of horizontally arranged branched, septate, hyaline, hyphae 1.5–4 μm diameter, lacking clamp connections; Pileus context heteromerous consisting of (i) branched, septate hyphae without clamp connections 2–5.5 μm diameter, (ii) Sphaerocysts 52–40 μm; Lactiferous hyphae 3.5–7 μm diameter.

Chemical tests: HNO₃: Cutis and Flesh-greenish; 10% FeSO₄: Cutis and Flesh-greenish red to violet; 2% aq. phenol; Cutis and Flesh-greyish green finally olive.

Habit and Habitat: Scattered to gregarious in mixed coniferous forests usually under the fern *Onychium contiguum* Wall ex Hope.

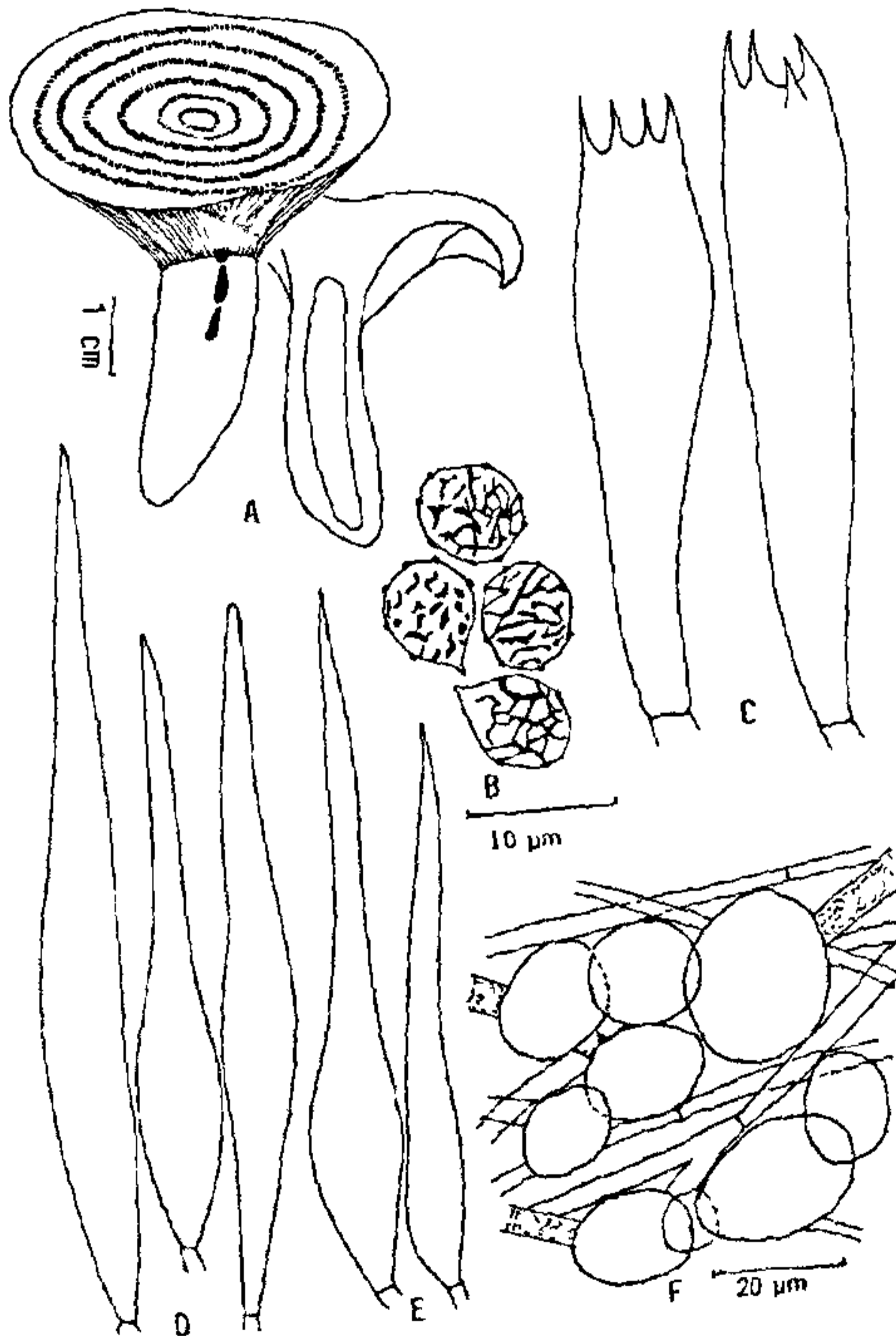
Specimens Examined: Acc. Nos. Shimla: HPUB 358, 375, 448, 480, 500, 1017, 1646, 1672, 1790, 1828, 3081, 3105, 3115, 3422, 3521, 3558, 3585, 3629, 3780; Kullu: HPUB 1423, 1424.

Remarks: The species has a characteristic flavour and aroma and is consumed in a variety of ways. It is locally known as 'Lal chhatri' and 'Khunyo'.

Thanks are due to DST, New Delhi for financial assistance.

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Figures 1A–F. *Lactarius sanguifluus* fr. A, Basidiocarp and longitudinal section; B, Basidiospores; C, Basidia; D, Pleurocystidia; E, Cheilocystidia; and F, Pileus context.