

Group. The close correspondence (in terms of evolutionary grade) of the present specimen with typical Oligocene North American leptomerycids is strongly suggestive of an equivalent age (Oligocene) for the Lower Murrees. An examination of the pseudoconglomerates reveals that they are composed of calcareous pebbles, most of which are oval while some are flattened and squeezed into various forms tapering to one end. These pebbles are pedogenetic and were formed at the site of deposition rather than being transported as detritus. Such pseudoconglomerates are found at various levels in the Lower Murree section and represent incipiently developed soil profiles. This rules out the possibility of any tectonism and major hiatus, lending support to the idea of conformable sequence between the Subathu and Murree Groups. Recent palaeomagnetic studies<sup>6</sup> further support absence of disturbance and an Oligocene age for these sediments. Based on field relationship, sedimentological history and facies considerations, many workers<sup>7-11</sup> have also opined that the Subathu-Murree contact is a continuous and uninterrupted sedimentological phase. Thus the field relationship of the pseudoconglomerate unit (in Sial Sui I section) existing about 575 m above the Subathu-Murree contact at Jigni and the palaeontological evidence furnished by *Leptomeryx* clearly indicate that the lower limit of the Murree Group may extend to Oligocene or even lower without any interruption at the Subathu-Murree junction. This section corresponds to a similar section at Lachi Khan<sup>12</sup>, about 65 km north of the Murree type section, where both gradational contact (evidenced by similar pseudoconglomerate units) with the underlying Eocene sequence and Oligocene age for the Murree sediments have been indicated.

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## A NEW RECORD OF EDIBLE *AMANITA* FROM INDIA

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AN edible species of *Amanita*, *A. rubescens* (Fr.) S. F. Gray was collected during our studies on fleshy fungi of North-Western Himalayas and is described here as new to India<sup>1</sup>. The specimens have been deposited in the Herbarium, Department of Biosciences, Himachal Pradesh University, Shimla (HPUB).

*Amanita rubescens* (Fr.) S. F. Gray, *Nat. Arr. Brit.* Plate 1, 600, 1821, figure 1A-E.

Pileus 6-10 cm diam., ovoid at first, soon obtusely campanulate to broadly convex or nearly plane, sometimes with a low broad umbo, slightly viscid, reddish brown (8E<sub>7</sub>)<sup>2</sup> covered with numerous, floccose, greyish brown to dark brown (9D<sub>3</sub>-9F<sub>3</sub>) patches of universal veil which are readily washed off; margin smooth or occasionally the extreme margin indistinctly striate. Lamellae thin, crowded, free, moderately broad, white, staining reddish, lamellulae present between the lamellae; edges entire.

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Figure 1A-E. *Amanita rubescens* (Fr.) S. F. Gray. A. Basidiocarps and longitudinal section; B. Basidiospores; C. Basidia; D. Crushed remnants of veil from pileus, and E. Marginal cells of lamellae.

Stipe 7-12 cm long and 1-2 cm diam., central, clavate, tapering slightly upward, stuffed, minutely fibrillose, sometimes squamulose, greyish brown to reddish brown (9D<sub>3</sub>-8E<sub>7</sub>), base slightly swollen. Annulus broad, superior, fragile, white, staining reddish, often striated above. Volva fragile, volval fragments adhering to the basal bulb of stipe, bulb and volval remnants both staining reddish. Flesh white, thin, soft and fragile, staining reddish when bruised or in age. Taste and odour not distinctive. Spore colour in mass white. Spores 6.5-9.5 × 4.5-6.5 μm, ellipsoid, hyaline, thin-walled, apiculate, amyloid, containing a large refractive guttule. Basidia 30-42 × 6.5-9.5 μm, clavate, tetrasporic; sterigmata 2-4.5 μm long. Marginal cells of lamellae are hyaline, thin-walled, clavate, saccate or balloon-shaped, often forming a sterile band, 20-50 × 10-30 μm. Subhymenium 12-20 μm wide, made up of pseudoparenchymatous cells. Hymenophoral trama bilateral, divergent, made up of hyaline, thin-walled hyphae, 3-18 μm diam. Pileus cutis is made up of hyaline, thin-walled, septate, branched interwoven

hyphae, 3-10 μm diam., inflated to 16 μm diam. Pileus context consisting of hyaline, thin-walled hyphae, 3-30 μm diam. Remnants of universal veil from the pileus consisting of thin-walled inflated cells, clavate, ovoid to spherical in shape, up to 65 μm diam., interspersed with thin-walled, septate, branched hyphae, 2.5-10 μm diam. Clamp connections absent in all the hyphae.

Habit and habitat: Solitary-scattered. Growing on the ground in coniferous and mixed woodlands, associated with *Cedrus deodara*, *Pinus roxburghii*, *Quercus incana* and *Rhododendron arboreum*.

Specimens examined: Acc. Nos. Shimla; HPUB 1051, 1479, 1570, 1638.

Remarks: The present species is in conformity with *Amanita rubescens* (Fr.) S. F. Gray. It is reported to be edible by Lincoff<sup>3</sup>, Wakefield and Dennis<sup>4</sup>, and Weber and Smith<sup>5</sup>.

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## PEACOCK SPOT OF OLIVES IN INDIA

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MUCH against the fundamentals of plant quarantine<sup>1</sup>, bulk introduction of olive (*Olea europea* L.) plant material was made in Jammu and Kashmir state