

exposed intermittently over a total strike length of about 2 km, with width varying from 5 to 40 m. It is a sheared conglomerate, in which pebbles are oriented in NNE-SSW direction without any plunge. Matrix is silicious and sericitic, with pebble to matrix ratio ranging from 2:1 to 1:2.

Under the microscope, the conglomerate shows a lot of sub-rounded quartz with undulatory extinction. Feldspars include predominant microcline and minor plagioclase. The pebbles are fractured. Heavy minerals include zircon, apatite, rutile, goethite, sphene, monazite and thorite. A major portion of the radioactivity is contributed by thorite and monazite. Thorite is euhedral, while monazite is irregularly shaped.

The conglomerate and its variants record radioactivity of the order of 2 to 10× bg. Grab samples from them have analysed %e U_3O_8 , % U_3O_8 and % ThO_2 in the range of 0.023 to 0.069, 0.005 to 0.018, and 0.044 to 0.14 respectively.

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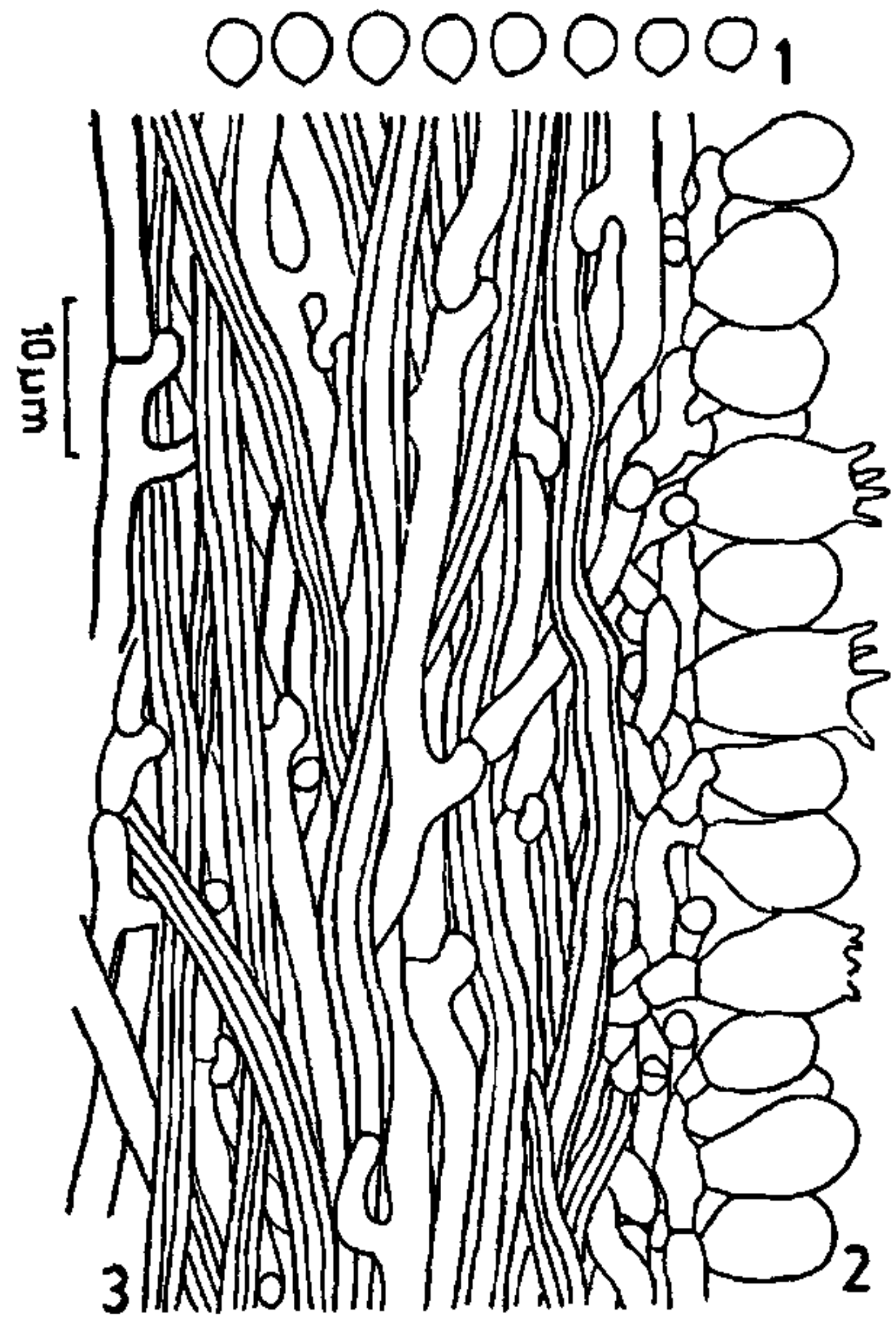


Figure 1. *Microporellus obovatus* (1) Basidiospores; (2) hymenium with clavate basidia; (3) part of trama showing dimitic hyphal system.

MICROPORELLUS MURR. (POLYPORACEAE): A NEW GENERIC RECORD FROM INDIA

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AN interesting polypore, *Microporellus obovatus* (Jungh.) Ryv., was collected from Cherrapunji on one of several trips in the Khasi, Jaintia and Garo hills (Meghalaya). *Microporellus* is morphologically similar to the widely distributed genus *Microporus* but the latter differs anatomically in having a trimitic hyphal system, the presence of typical coralloid elements in hymenium, and in having allantoid to cylindric-ellipsoid basidiospores. The collections have been deposited in the Herbarium, Department of Botany, Panjab University, Chandigarh (PAN).

Microporellus obovatus (Jungh.) Ryv., *Norw. J. Bot.*, 19(3-4): 232, 1972. Figures 1-3.

Fructification annual, laterally stipitate, solitary or in small groups of two to four with fused pilei and

free stipes, soft and coriaceous when fresh, hard and brittle on drying. Pileus flabelliform to spatulate, up to 5 cm long, 3 cm wide and 2 mm thick; upper surface light brown to yellowish brown to greyish brown, darkening on drying, finely tomentose when young, glabrous due to agglutination of hyphae with age, radially striate on drying; margin papery, thin, sterile below, brown, incurved on drying. Stipe up to 2.5 cm long and 1-2 mm thick, yellowish brown, finely velvety to glabrous, concolorous with pileus, smooth when fresh, radially wrinkled on drying, expanded gradually into a mycelial disc at the base, solid. Pore surface cream to light brown when fresh, entire; pores small, round to rarely angular, thin-walled, 6-7 per mm, 60-96 µm in diameter; dissepiment entire, 24-78 µm thick; tubes in one layer, brown, 1.4 mm deep in section. Context thin, brown, homogeneous, non-xanthochroic, up to 0.6 mm thick.

Hyphal system dimitic; generative hyphae hyaline to subhyaline, thin- to thick-walled, branched, septate, clamped, 1.5-4.5 µm in diameter; skeletal hyphae hyaline to subhyaline, thick-walled, aseptate, unbranched, 2.8-4 µm in diameter. Cystidia absent.

Basidia clavate, hyaline, 4-spored, $9-11 \times 6-7.5 \mu\text{m}$. Basidiospores hyaline, thin-walled, smooth, globose to subglobose, non-amyloid, $3.2-4.6 \times 3-4.2 \mu\text{m}$.

Collection examined: India, Meghalaya, Cherrapunji, Mawsmi falls, on decaying angiospermic stump, S. S. Viridi 21864, 21865 (PAN), August 16, 1984.

This is the first report of the occurrence of *M. obovatus* in India. The species seems to be restricted in its distribution to the Khasi hills since various explorations in the eastern Himalayas and adjoining hills yielded the above cited collections from Cherrapunji. The description of the species as given above matches closely with that given by Ryvarden and Johansen¹. The species is distinguished by laterally stipitate, coriaceous fructifications; spathulate to flabelliform pilei; fine, tomentose, brown to reddish brown upper surface; dimitic hyphal system; and hyaline, thin-walled, globose to subglobose basidiospores.

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1. Ryvarden, L. and Johansen, I., In: *The Preliminary Polypore Flora of East Africa*, Fungiflora, Oslo, 1980, p. 624.

margin. These spots are generally 2-3 mm in diameter, but several spots might merge to affect most of the leaf area. On the underside of these spots, white, fluffy growth of the fungus can be seen. The farinose growth was more prominent on the lower surface of the fallen leaves. The infection was confined to the leaves only. Premature defoliation causes heavy yield loss. However, this disease was not observed in summer and rainy-season crop.

The causative organism was identified as *Mycovellosiella phaseoli* (Drummond) Deighton. The pathogenicity was established by spraying spores and mycelial suspension on leaves. The typical disease symptom appeared within 7 to 10 days. The diseased specimen has been deposited in the herbarium of CMI, Kew, England, under reference no. IMI 322046. A perusal of the literature¹ indicated that this fungus has not been reported earlier, and therefore this is a new record from India.

The authors are grateful to the Director, CMI, Kew, England, for identification of the fungus.

30 September 1988; Revised 13 December 1988

1. Bilgrami, K. S., Jamaluddin and Rizwi, M. A., *Fungi of India, Part II*, Today and Tomorrow's Printers and Publishers, New Delhi, 1981.

FARINOSE SPOT OF FRENCH BEAN—A NEW DISEASE

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FRENCH bean (*Phaseolus vulgaris*) has gained popularity as a pulse crop in Sikkim in the recent past although it has been grown for a long time as a vegetable. During a disease survey, an apiphytotic of farinose spot was found in November 1987 at elevations between 1000 and 1350 m above MSL. The disease caused heavy defoliation; about 65% of the lower leaves were affected.

The disease symptoms first appear on the lower leaves as yellowish spots and progress upward. In severe infection these appear as yellow mottling. In old infection the spots become brown with yellow

A MOSAIC DISEASE OF SISSOO (*DALBERGIA SISSOO* ROXB.)—A NEW RECORD

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DURING a field survey around Agra in 1986-87, mosaic symptoms were seen on leaves of sissoo. The symptoms were suspected to be viral in origin, and on review of the literature it was observed that there was no record of any virus disease on this plant. Therefore studies were carried out on this virus in an insect-proof glasshouse following methods described earlier^{1,2}. The inoculated sissoo and *Chenopodium amaranticolor* plants were kept in the insect-proof glasshouse at $30 \pm 2^\circ\text{C}$ and were observed regularly.

On sissoo, chlorotic, circular spots appeared 9-11 days after inoculation. When inoculation was done at 4-5-leaf stage these spots gradually became irregular and changed into a mosaic pattern.