Basidia clavate, hyaline, 4-spored, 9–11 × 6–7.5 μm. Basidiospores hyaline, thin-walled, smooth, globose to subglobose, non-amyloid, 3.2–4.6 × 3–4.2 μm.

Collection examined: India, Meghalaya, Cherrapunji, Mawsmai falls, on decaying angiospermic stump, S. S. Virdi 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 Johansen[1]. 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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2 November 1988

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

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 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 literature[1] 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.

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

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 ± 2°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.

Infected plants were stunted and their leaves were greatly reduced in size. Distinct, countable, chlorotic, circular lesions were produced on *C. amaranticolor* 9–11 days after inoculation. These turned necrotic with a pale halo after 18–20 days. The disease could also be transmitted to healthy sissoo plants by cleft grafting. Transmission studies have clearly indicated the aetiology of the disease of sissoo to be viral in nature. This virus disease is being reported for the first time from India.

30 July 1988; Revised 21 November 1988

1. Noordam, D., *Identification of Plant Viruses: Methods and Experiments*, Oxford & IBH Publishing Co., New Delhi, 1973, p. 207.
2. Bawden, F. C., *Plant Viruses and Plant Virus Disease*, 4th edn, Chronica Botanica, Waltham, Massachusetts, 1964.

SCANNING ELECTRON MICROSCOPIC STUDIES ON HILUM STRUCTURES IN BLACK AND GREEN GRAMS

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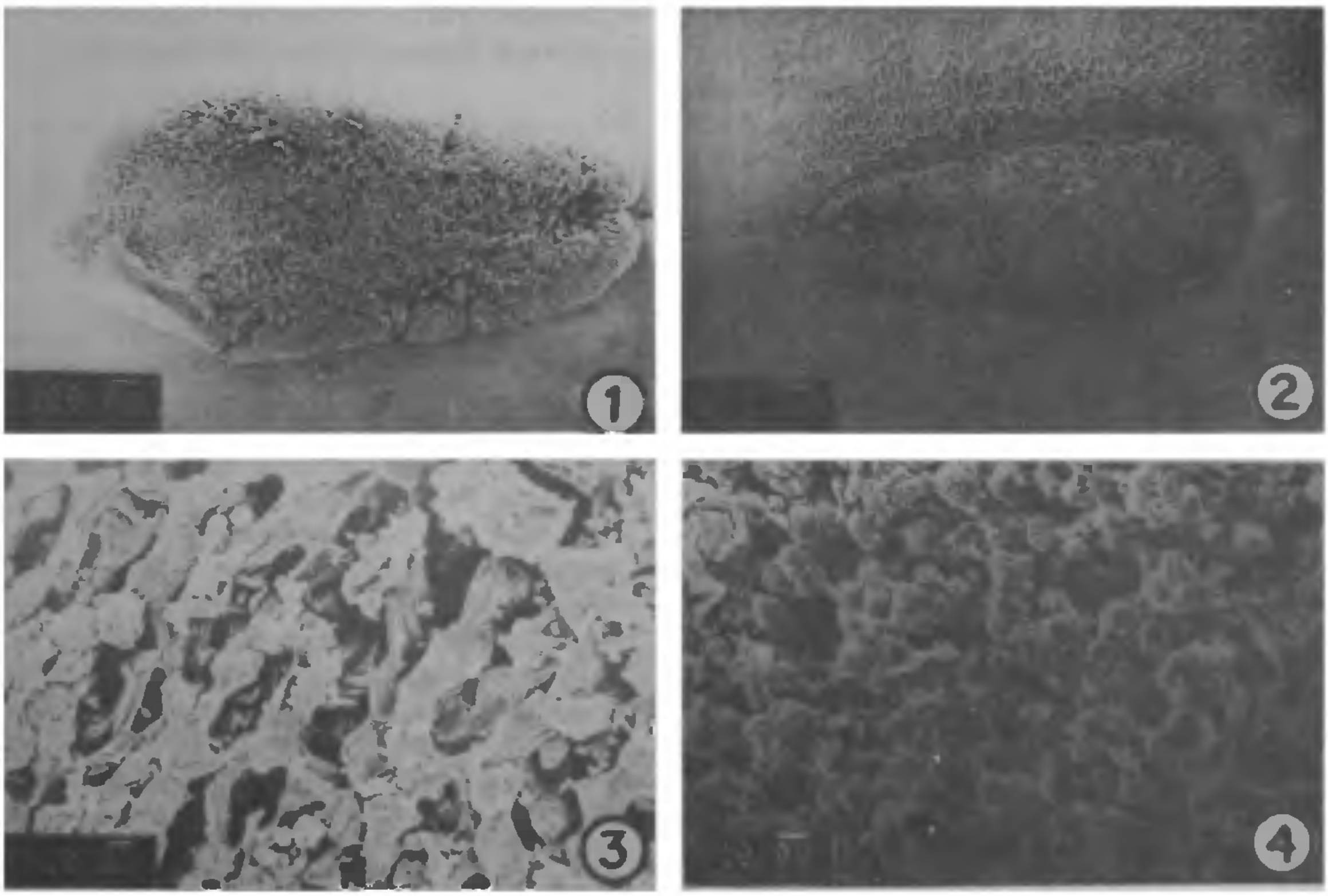
THE genus *Vigna* (Phaseoleae: Papilionoideae: Leguminosae) has many cultivated species, of which *Vigna mungo* (L.) Hepper, former synonym *Phaseolus mungo* L. (black gram), and *Vigna radiata* (L.) Wilczek, former synonym *Phaseolus radiatus* L. (green gram), are most important grain legumes of the Indian subcontinent[1]. They differ from each other in many morphological features, colour of seed and shape of hilum being the main distinguishing features[2–4]. Scanning electron microscopy (SEM) has been employed to study testa topography by many workers[5–9]. However, the hilum has remained uninvestigated. The present SEM studies deal with



Figures 1–4. SEM photographs of hilum of seeds of *Vigna mungo* and *V. radiata*. **1**, *V. mungo*: ovate and concave hilum with thick and raised hilar rim (× 54); **2**, *V. radiata*: lanceolate and flat hilum without any rim (× 54); **3**, *V. mungo*: reticulo-tuberculated pattern (× 540); **4**, *V. radiata*: simple tuberculated pattern (× 540).