

of each fold of leaf lamina ranges from 1.3 to 3.9 cm. In *Latania*<sup>1</sup> a borassoid type of palm, the breadth of each fold varies from 7.8 to 9.1 cm which is comparable to our specimen (7-11 cm). As the specimen is incomplete, all that can be said regarding its affinities is that it is likely to be the leaf of a borassoid type of palm. Although a large number of palm stems have been described from the Deccan Interrappean series<sup>2</sup> as far as the authors are aware, this is probably the first record of a palm leaf from this series.

Dept. of Botany,  
Lucknow University,  
Lucknow, May 24, 1971.

B. S. TRIVEDI.  
R. CHANDRA.

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#### TETRAPLOID CHROMOSOME NUMBER IN THE GENUS *SPILANTHES* LINN.

COVAS and Schnack<sup>2</sup> have reported the chromosome number,  $2n = 26$ , in *Spilanthes decumbens*, L. However, the available literature shows no record of the chromosome number in another species *acmella* of the same genus. This species includes annuals which are erect or ascending with hairy stems and branches, and leaves which are opposite, ovate, acute, serrate and petiolate; heads are  $\frac{1}{4}$ " to  $\frac{3}{4}$ " long and solitary with long peduncles. Ray florets are generally absent. These annuals are cultivated for ornamental and medicinal purposes. The heads when chewed give hot burning taste and cause profuse salivation. They are generally chewed for getting relief from cough (Cooke<sup>1</sup>).

This species was collected from Maharajbagh, Nagpur, in the year 1968 and was grown in pots in the Botany Section of this College. It was studied cytologically for chromosome number and behaviour. For meiotic and pollen grain studies 1% aceto-carminic technique was used. The chromosome count was made at diakinesis and metaphase I of meiosis.

Earlier stages of prophase I could not be studied because of comparatively large chromosome number in a small-sized pollen mother cell. At diakinesis 26 bivalents could be clearly counted (Fig. 1), out of which two bivalents were seen attached to the nucleolus, thereby pointing to the tetraploid nature of the species. The association of chromosomes was purely in the form of bivalents. No quadrivalent, trivalent and univalent were noticed at diakinesis.

Metaphase I also showed 26 bivalents. At anaphase I 26 chromosomes were found at each pole. Metaphase II and anaphase II were found to be regular thereby leading to the formation of fertile pollen grains to the extent of 99%.

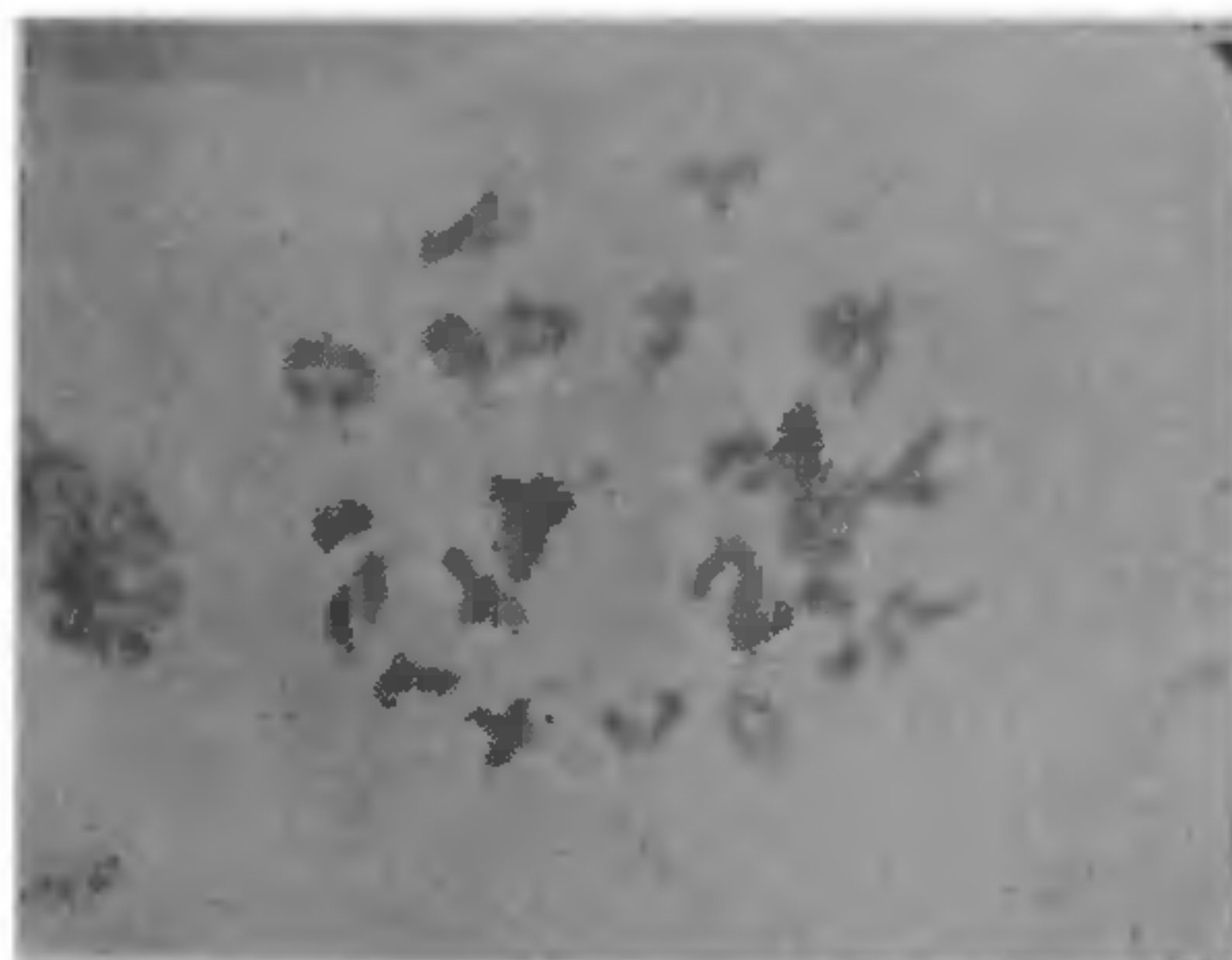


FIG. 1. Shows 26 bivalents at diakinesis  $\times 1,000$ .

From the fact that no cytological abnormalities were found at different stages of meiosis I and II and the formation of fertile microspores, the allotetraploid nature of the species is confirmed.

Botany Section,  
Agric. College,  
Nagpur (M.S.), June 11, 1971.

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B. A. PHADNIS.

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#### A NOTE ON *MELIOLA JUTTINGII* HANSF. ON *PANDANUS* *ODORATISSIMUS* L. FROM KERALA

A sooty mould was collected by the author from Tellicherry, S. India, during January 1970 on the leaves of *Pandanus odoratissimus* growing near a stream. Further critical examination showed this to be a species of the genus *Meliola*, viz., *M. juttingii* Hansf<sup>2</sup>.

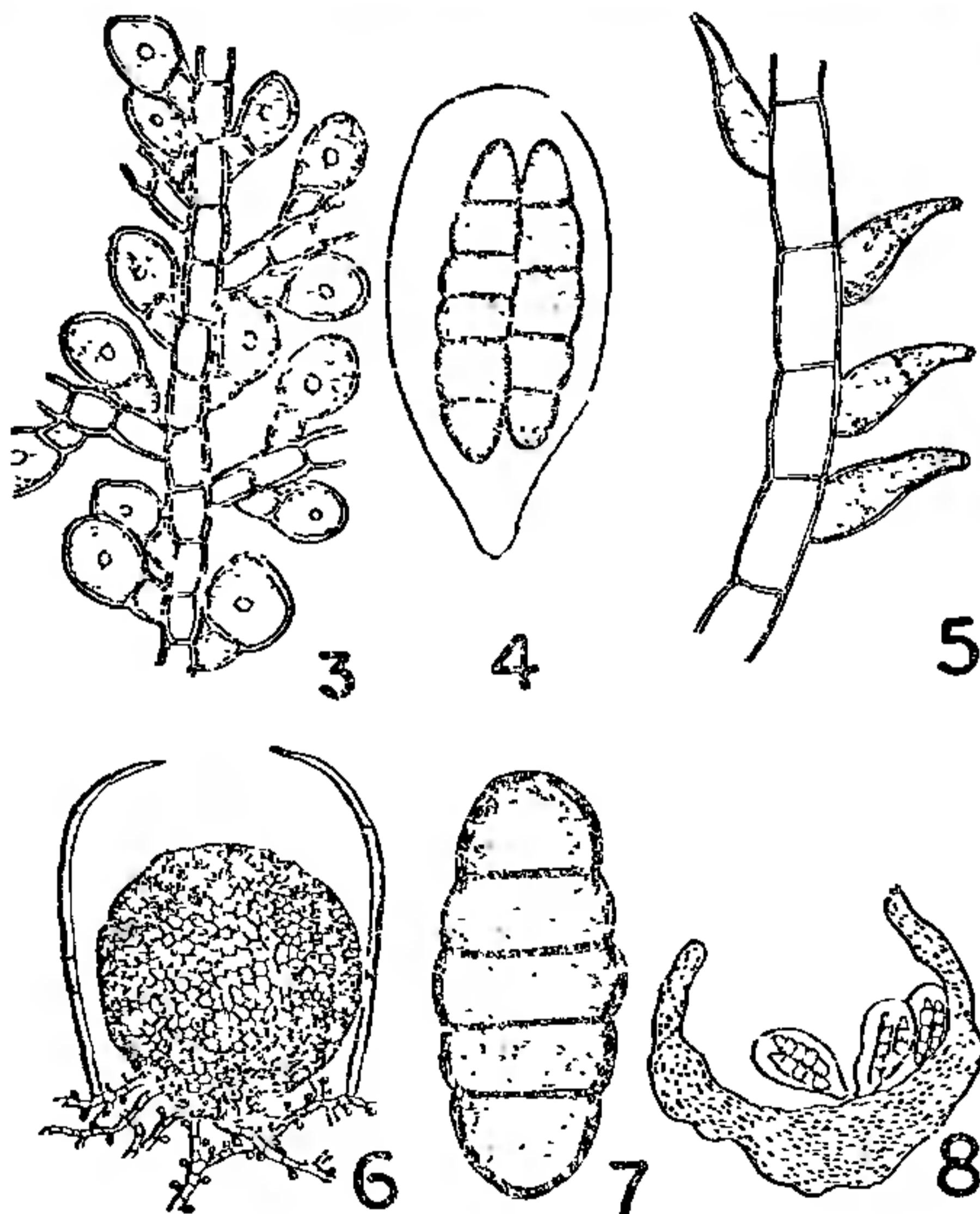
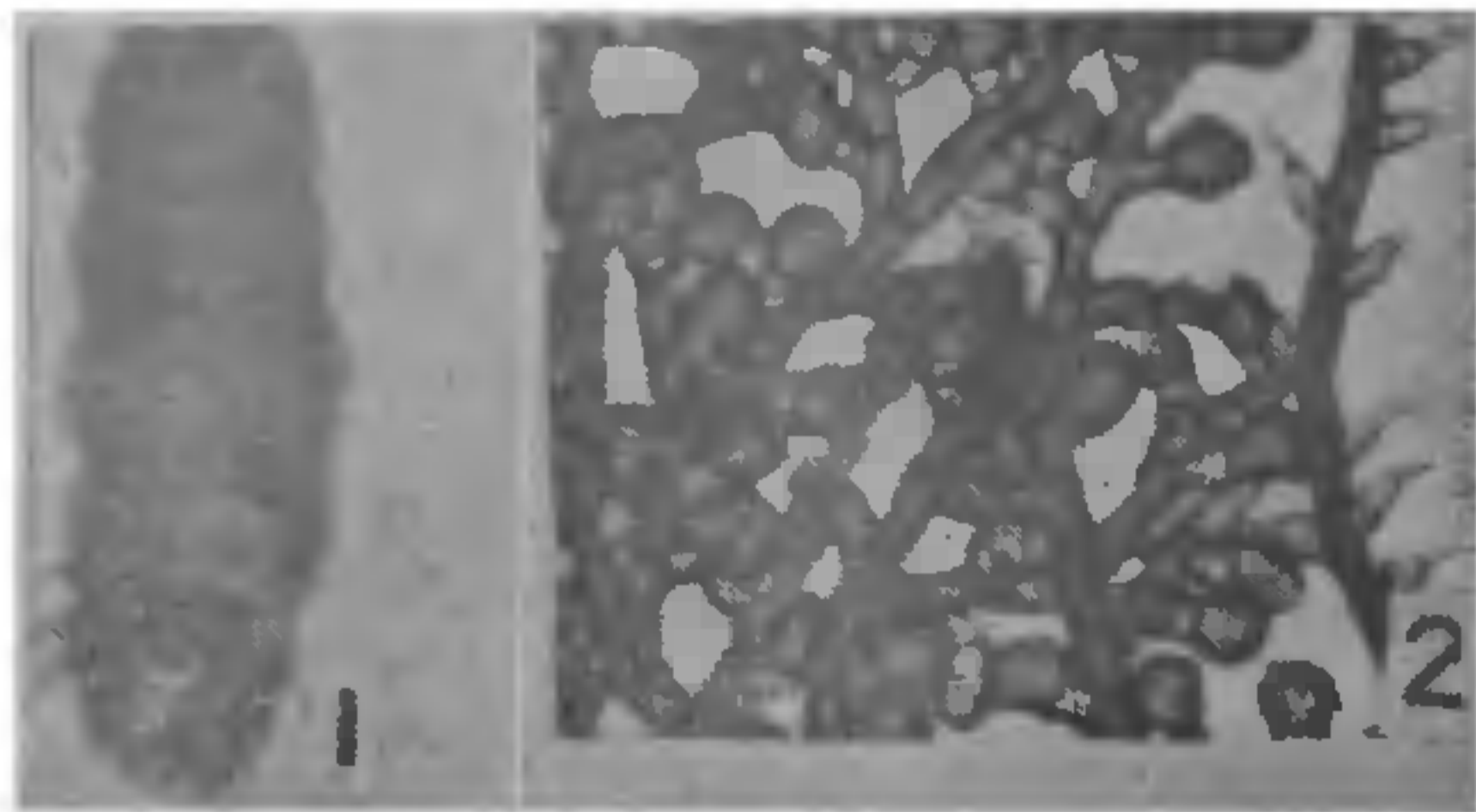
The epiphyllous colonies form dense black spots more or less completely covering the leaves. The dark superficial mycelium is branched and septate (Fig. 2). The length and diameter of the mycelial cells are almost uniform throughout— $21-23 \mu \times 12-13 \mu$ . Branching is mostly alternate, very rarely opposite.

Hyphopodia are of two types: capitate and mucronate. The capitate hyphopodia (Figs. 2 and 3) are two-celled and arise laterally. They are mostly alternate, very rarely opposite. The terminal cell is sub-globose,  $36-37 \mu \times 25-26 \mu$ , and slightly bent forwards. Almost every cell



of the mycelium gives rise to either a hyphopodium or a branch. Capitate hyphopodia are found evenly distributed throughout the colony and are "antrorse".

The mucronate hyphopodia (Figs. 2 and 5) measure  $33\text{--}39\ \mu \times 12\text{--}13\ \mu$  and unlike the capitate ones, are limited to certain special branches. Such branches are generally found towards the periphery of the colony. They are alternate or opposite and ampulliform. These flask-shaped structures have a distinct 'body' and a terminal 'neck'. The neck is slightly lateral.



FIGS. 1-8. *Meliola juttingii*. Hansf. on *Paudanus odoratissimus*. Fig. 1. Ascospore,  $\times 435$ . Fig. 2. Branched septate mycelium with capitate and mucronate hyphopodia,  $\times 200$ . Fig. 3. Capitate hyphopodia,  $\times 250$ . Fig. 4. Ascus with 2 ascospores,  $\times 435$ . Fig. 5. Mucronate hyphopodia,  $\times 435$ . Fig. 6. Perithecium surrounded by mycelial setae,  $\times 75$ . Fig. 7. Ascospore,  $\times 435$ . Fig. 8. Perithecium with few asci and ascospores,  $\times 75$ .

Mycelial setae, which are one of the distinguishing features of *Meliola*, are present in this species also. They measure  $246\ \mu \times 12\ \mu$ . They are black in colour, like the perithecia, and are found to occur in groups around the base of each perithecium, arising from the subperithecial subiculum. They do not arise from the perithecia. The setae are septate, simple and bent at their apices (Fig. 6).

The perithecia are dark globose structures, which measure about  $258\ \mu$  in diameter and are found aggregated into a central group in the colony. The wall of the perithecium is made up of 3-4 layers of cells. At the apex there is a small round pore. The mature perithecium rests on a thin subiculum (base) closely adherent to the cuticle of the host (Fig. 6), the several asci forming a loose basal group within the perithecium (Fig. 8). Each ascus has two ascospores (Fig. 4). In the mature perithecium the asci undergo autolysis and the ascospores lie loose in a mucilaginous matrix.

There are normally 8-16 asci in each perithecium. The ascospores are uniform in size and septation and are  $56\text{--}69\ \mu$  long and  $21\text{--}28\ \mu$  broad. They are 4 septate, rarely 5 septate and are constricted at the region of the septa (Figs. 1 and 7). They have a smooth surface. The spores have dark walls and have the septa also of the same thickness.

*Meliola juttingii* does not appear to have been recorded from India so far<sup>1,3-7</sup>.

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Dept. of Botany, LIZZIE N. NAIR.  
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