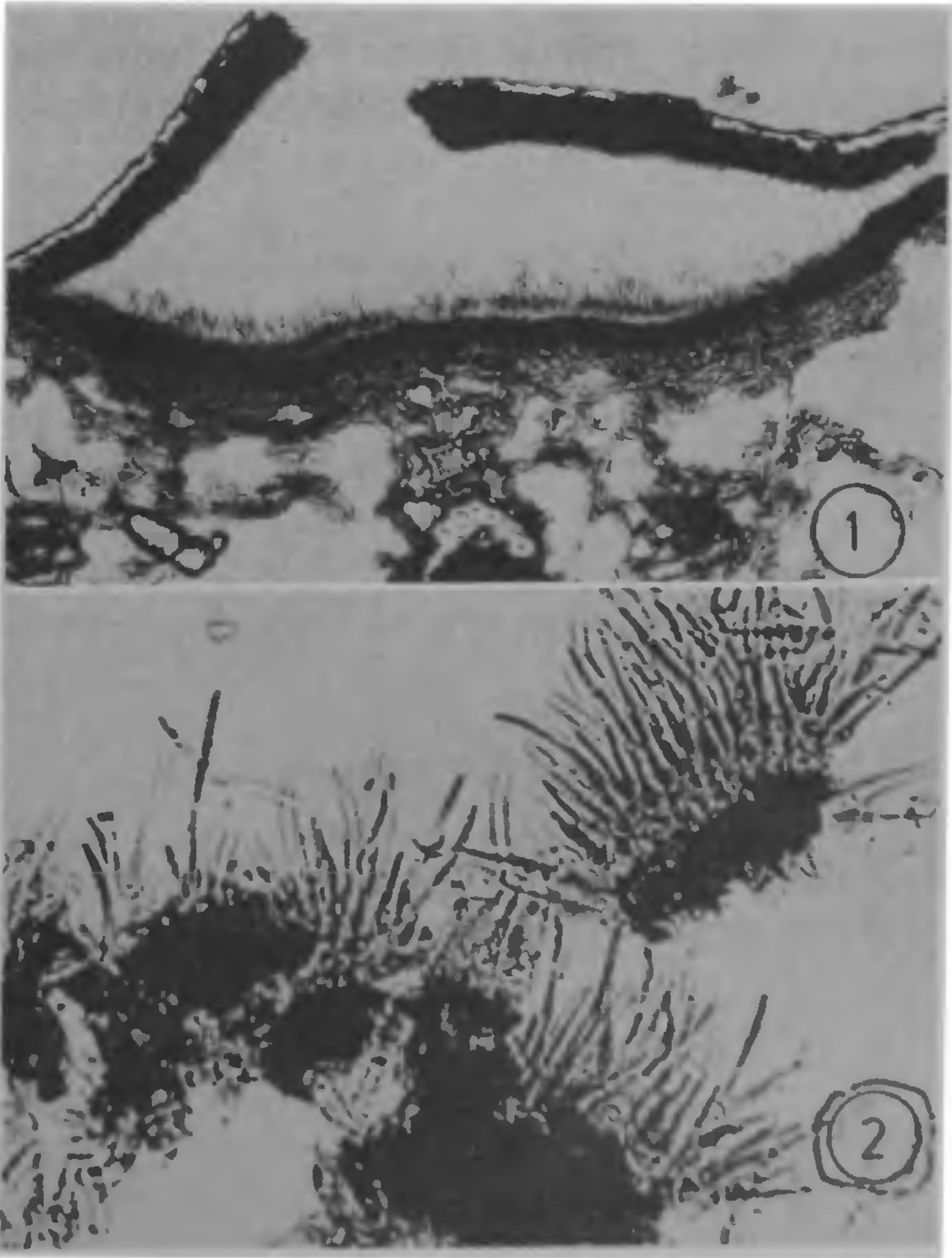


**Table 2** Effect of root extracts obtained after 24 hr incubation with rhizoplane fungi on the root surface on growth of *R. bataticola*

Fungi incubated on roots	Growth of <i>R. bataticola</i>	
	mm	Difference over the control
Control (sterile water)	86	0
<i>R. stolonifer</i>	80	- 6
<i>A. niger</i>	46	- 40
<i>P. funiculosum</i>	24	- 62
<i>Phoma</i> sp	89	+ 3
<i>F. oxysporum</i>	78	- 8
<i>F. semitectum</i>	26	- 60
<i>R. bataticola</i>	20	- 66

Höhn which are separated by conidial size. *P. acerinum* has been reported on leaves of *Betula* sp, *Eucalyptus globulus*, *Eucalyptus* sp, *Quercus* sp, and *Acer opulifolium* from Italy, Great Britain, California, USA, Brazil, Spain and New Zealand. In the present report the fungus is described for the first time from a tropical country occurring as a saprophyte on decaying leaves of *Calophyllum inophyllum* L and *Eucalyptus* sp. The fungus has been fully described recently by Sutton<sup>1</sup>. The fungus is characterized by the presence of typical, lenticular and stromatic pycnidia. The Indian collection differs from other collections in having much larger pycnidia measuring up to 1.5 mm in diameter whereas in collections from other countries the pycnidia are only 200μ in diam. The conidiogenous cells line the basal region of the cavity, lageniform, phialidic, integrated, hyaline, tapered towards the apices, 18–25 × 2–3 μ (figures 2 and 4). The conidia are falcate, aseptate, hyaline, slightly coloured in mass, apex acute, base acute to obtuse, thinwalled, eguttulate, 15–18 × 2–2.5 μ (figure 3). There is no ostiole and dehiscence



**Figures 1, 2.** 1. Vertical section of the pycnidium (× 250). 2. Tease mount showing the conidiogenous cells and young conidia (× 1000).

pathogens. Hence, such chemicals in the host can be considered as phytoalexins as reported earlier<sup>3,4</sup>.  
The authors are grateful to Dr B. V. Srinivasulu, Head of the Botany Department and to Dr E. B. Brahmankar, Principal of the college, for the facilities and encouragement.

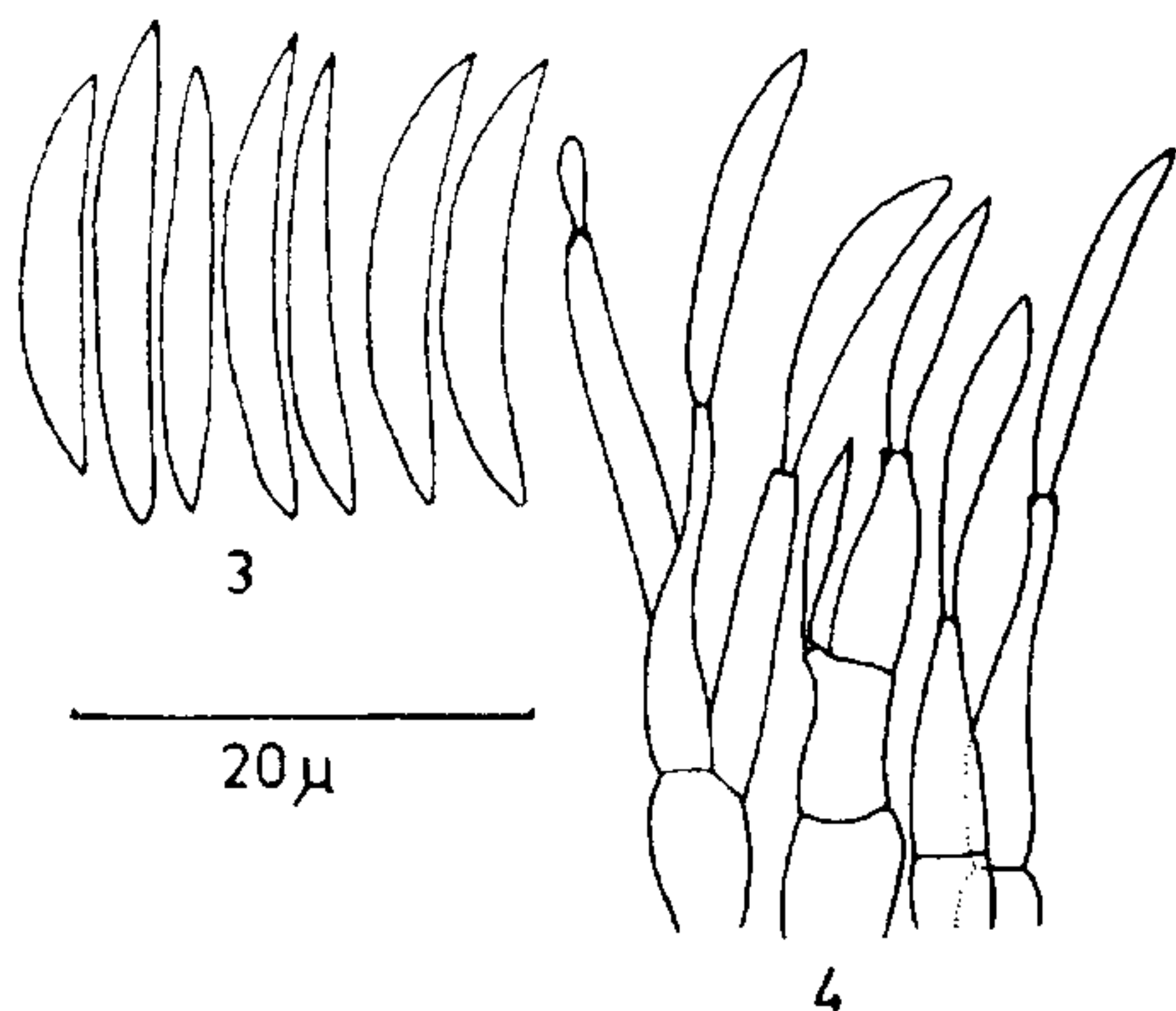
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**PILIDIUM ACERINUM KUNZE, A NEW GENERIC RECORD FOR INDIA**

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THIS paper describes an interesting Coelomycetous fungus, *Pilidium acerinum* Kunze which is a new record to India.  
Sutton accepted two species in the genus *Pilidium* Kunze i.e. *P. acerinum* Kunze and *P. concavum* (Desm)



Figures 3, 4. 3. Mature conidia. 4. Phialides with young developing conidia.

is by irregular, stellate rupture of the upper wall of the pycnidium. The fungus was collected on leaves of *Calophyllum inophyllum* for three consecutive years in the same season. This shows that this Coelomycetous fungus plays an important role in the decomposition of tropical leaf litter.

**Habitat:** 1) Collected on fallen leaves of *Calophyllum inophyllum* L., Y. W. C. A. Hostel, Madras, by J. Muthumary, 2-10-1983. Herb. MUBL 2912.

2) On fallen leaves of *Eucalyptus* sp. Kodaikanal, on the way to Berijam, by J. Muthumary, 10-10-1984. Herb. MUBL 2913.

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## DEVELOPMENT OF GAMETOPHYTES IN *BIGNONIA INCARNATA* AUBL

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BIGNONIACEAE is a large family and literature on embryology is scanty. Davis<sup>1</sup> mentioned the embryological work of *Bignonia megapotamica*, *Jacaranda*, *Tecoma* and *Oroxylum indicum*. Shirke<sup>2</sup> described the embryogeny of *Spathodea campanulata*. The present work was undertaken to understand the locally available members of Bignoniaceae.

In antherlobe, one of the hypodermal cells is differentiated as an archesporial initial and it divides and forms sporogenous tissue (figure 1). The cells are ploygonal when young but become poly to hexagonal later. Division in the PMC is of successive type, with the haploid chromosome number,  $n = 20$  (figure 2). A mature pollen grain is tricolpate (figure 3). Ovules are unitegmic, tenuinucellate and anatropous. Archesporium directly acts as a megaspore mother cell (figures 4 and 5). Degeneration of nucellar cells is greater at chalazal region. Nucleus of MMC starts dividing and undergoes synizeisis, forming dyad,; followed by a second transverse division resulting in T-shaped tetrad (figure 6). The chalazal megaspore is functional and gives rise to mature embryosac. Functional megaspore cell enlarges, cytoplasm becomes vacuolated, its nucleus divides resulting in two-nucleate stage (figure 7). Two nuclei are situated at the centre with a vacuole on either side. The next division forms a four-nucleate stage (figure 8). The third division results in eight-nucleate embryosac (figures 9 and 10). In a mature embryosac the chalazal and micropylar polar nuclei move and fuse, forming a secondary nucleus. Development of female gametophyte conforms to the monosporic, eight-nucleate, polygonum type and well compared with the work of Swamy<sup>3</sup>.

10 February 1986; Revised 25 March 1986

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