

FIG. 1. *Solheimia kamatii* sp. nov. A. Synnemata; B. Conidiophores with conidia; C. Conidia.

*Matrix*: On dead leaves of *Pandanus* sp. (F. Pandanaceae) Legit. K.I.M.V. (20-1-1976) at Wynaad, Kerala, No. AMH 2869 (Holotypus).

The genus *Solheimia* reported here constitutes a new generic record and an addition to the Fungi of India<sup>2</sup>. The specific epithet has been chosen in honour of Prof. M. N. Kamat for his well-known contributions to Indian Mycology and Plant Pathology.

The writers are grateful to Prof. M. N. Kamat for his keen interest, to the Director for laboratory facilities, and to the Ministry of Education, Govt. of India, for the award of S.R.T. to one of them (K. I. M. V.).

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#### CARPELLARY VASCULATURE AND THE OVULAR VASCULAR SUPPLY IN *UVARIOPSIS GLOBIFLORA* L. AND *MONOCYCLANTHUS VIGNEI* KEAY

VASCULARIZATION of the ovules by the carpellary dorsal bundle in two species of the Annonaceae, e.g., *Cananga odorata* H.f. and T. and *Sacconetatum tomentosum* H.f. and T., has been described. During the course of a study of the floral anatomy of the family, the present author has observed the same feature in two African species. Since such a type of vascularization is a rare feature, it may be worthwhile to put it on record.

The carpel in both the present plants, *Uvariopsis globiflora* L. and *Monocyclanthus vignei* Keay, is

open for a greater part of its length with only the margins appressed closely. In *U. globiflora*, the ovules are many in number and are two-seriate in a carpel. They arise a little distance away from the margin so that the placentation appears laminar. *M. vignei* shares these features, but the number of ovules is fewer, generally 6–8 per carpel.

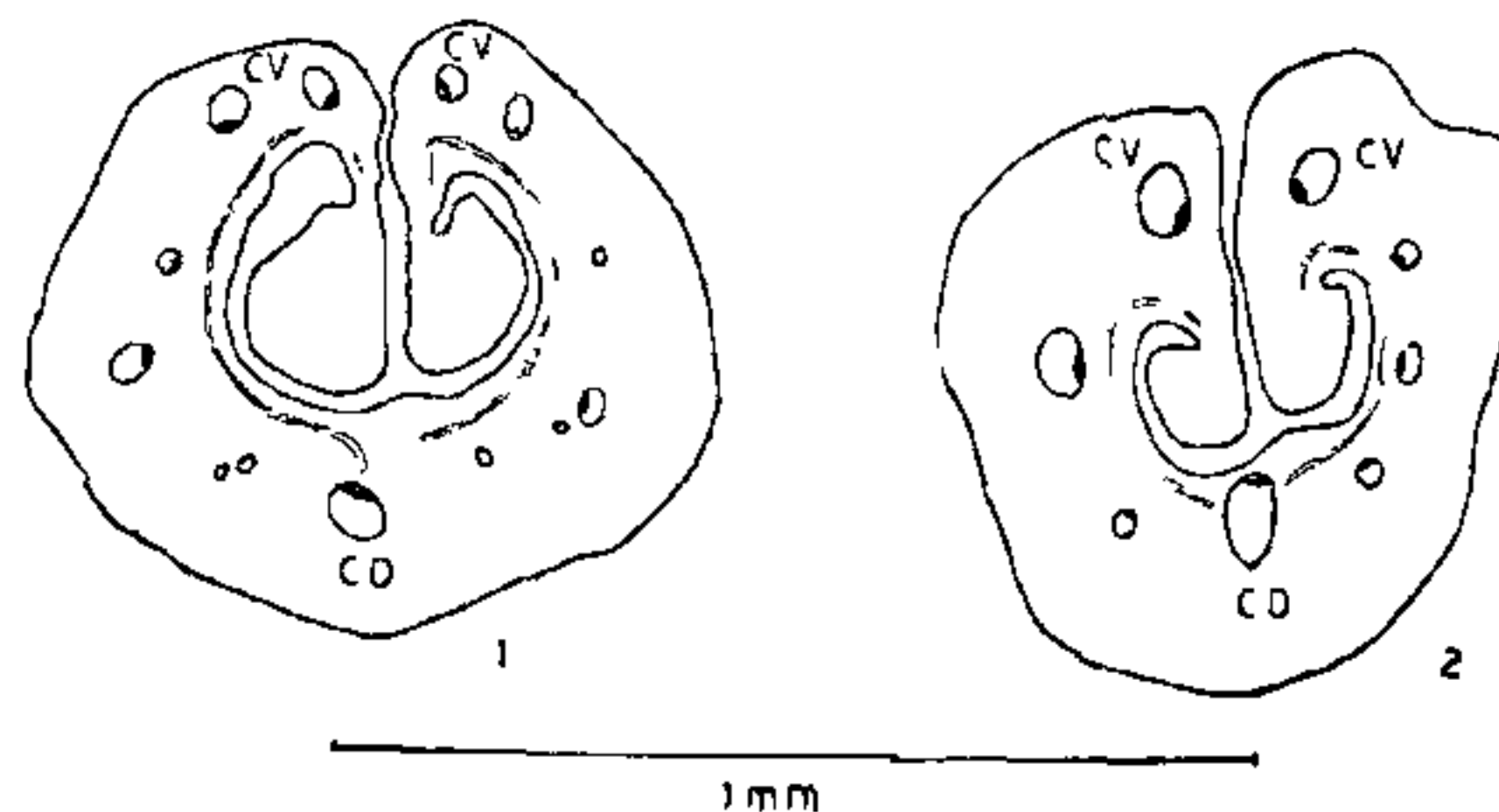


FIG. 1-2. Fig. 1. *Uvariopsis globiflora*. Fig. 2. *Monocyclanthus vignei*. CD, Carpellary dorsal; CV, Carpellary ventral.

In both these species, the carpels have five principal traces—a carpellary dorsal, two carpellary ventrals and two laterals. The latter generally bear a few lateral branches which establish as tiny strands in the carpellary wall, while each of the carpellary ventral bundles bifurcates sooner or later into two strands. The carpellary dorsal bundle bears branches on either side which travel in the carpellary wall towards the ventral side and then enter the ovules. These traces are procambial even in the mature carpel<sup>4</sup>.

Vascularization of the ovules by the carpellary dorsal bundle is a relatively primitive feature observed only in some of the ranalian taxa<sup>1-6</sup>. In the Winteraceae and the Degeneriaceae, where the carpels show a number of primitive features, the ovules receive their vascular supply from both the carpellary dorsal and carpellary ventral bundles<sup>1</sup>. The present observations are significant because the dorsal bundle alone is concerned with the vascular supply to the ovules in these annonaceous plants which otherwise show a number of advanced characters and also because this feature is of more common occurrence within the family as observed by Satrio<sup>5</sup>. They may also be taken as additional evidence in support of the conduplicate nature of the carpel.

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#### PETRIFIED SPOROCARPS OF SALVINIACEAE

MEGASPORES of *Salvinia* were first recorded from the Intertrappean Cherts of Sausar by Sahni and Srivastav (1934) under the name *Sausarospermum fermori* thinking them to be seeds of Gymnosperms. These were later referred to the family Salviniaceae by Mahabale (1950) as megaspores of *Salvinia intertrappea*. No sporocarps, however, were described by either of the authors.

Present specimen from a piece of Deccan Intertrappean Chert of Mohgaonkalan, which is about 60 miles away from Sausar, shows the same type of megaspore, as described earlier by above authors, inside a distinct sporocarp (Fig. 1). Preservation of this spore and the sporocarp is good. The latter contains remnants of some decayed tissue, possibly the aborted spores. Sporangial wall is not preserved except for a few traces.

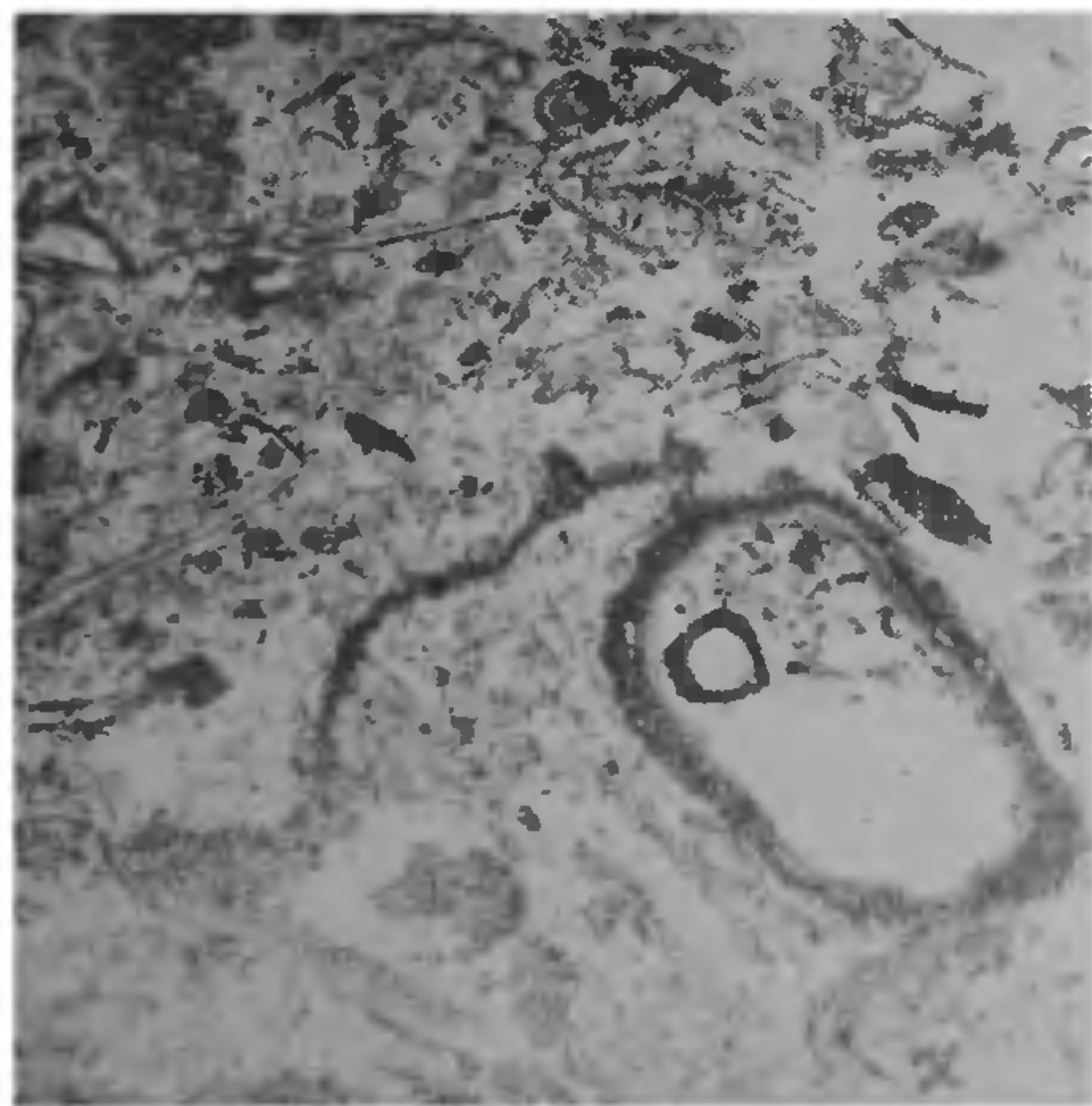


FIG. 1,  $\times 4.5$  (x—Second sporocarp).

As is seen in living *Salvinia* the wall of the sporocarp in this fossil specimen is formed by a modified leaf. Sporocarps are developed here in a row, since a little portion of a second sporocarp (Fig. 1 x) is seen adhered at the distal end of the first complete sporocarp.

Along with these sporocarps in close association many roots (modified leaves), stems and complete leaves, looking very much like those of *Salvinia*, are nicely preserved. These will be described at a later date.

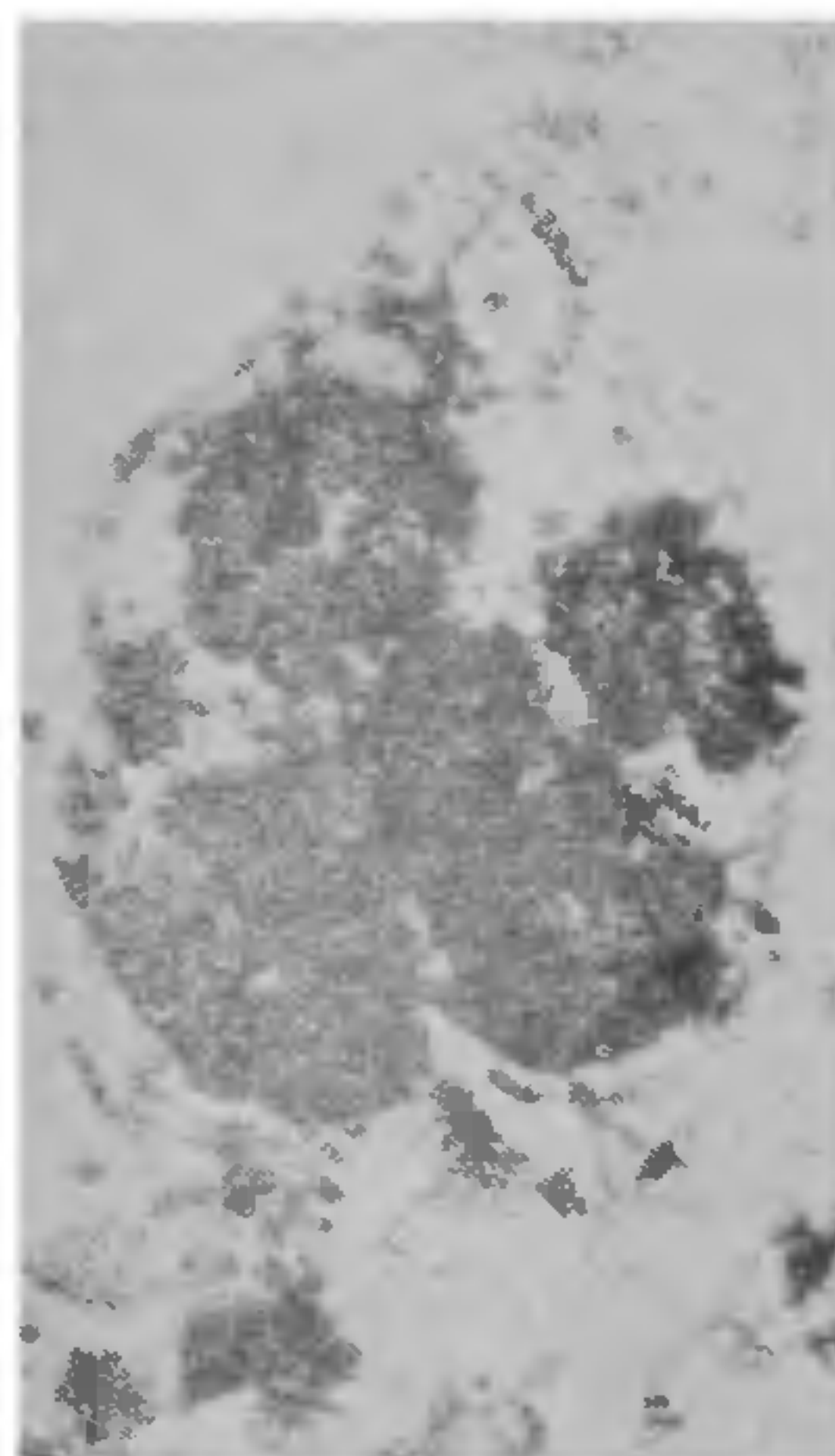


FIG. 2. *Azolla microsporocarp*,  $\times 50$ .

In the same specimen a developing young microsporocarp is observed (Fig. 2) with an indusium, enclosing microsporangia with massulae and spores. Glochidia are not fully developed. This microsporocarp, no doubt, belongs to *Azolla*, probably *A. intertrappea*. So far such a complete microsporocarp with indusial wall has not been described by either Sahni (1941) or Rao (1957). The latter gave a report of few groups of sporangia together, with a suggestion that they were surrounded by a sporocarp wall, traces of which were observed by him. However, neither photos given by him show any clear sporocarp wall, nor it is described by him in detail. Hence the present report will be the first record of a complete young developing microsporocarp of *Azolla* from these beds.

This discovery of these petrified fertile parts of Salviniaceae from the Deccan Intertrappean beds of Mohgaonkalan is of great significance. Detailed description of both the sporocarps—Megasporecarps of *Salvinia* and microsporocarp of *Azolla*—along with the vegetative parts of the former, will be published after further investigation.

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