



**Figures 1-5.** *Asterina gopalkrishnanii* sp. nov. 1. *Syzygium cumini* leaf with infection; 2. Thyrothecium; 3. Hypha with capitulate hyphopodia; 4. Ascus with eight ascospores; 5. An ascospore.

This species of *Asterina* differs from *Asterina fawcetti* Ryan<sup>1</sup> on the same host in having spinules and a dark band in the middle of each cell of the dark brown ascospores and hence is a new species reported from India<sup>2</sup>.

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1. Rayan, R. W., *The microthyriaceae of Porto Rico*, 1924, **16**, 177.
2. Bilgrami, K. S., Jamaluddin and Rizwi, M. A., *Fungi of India, Part I*, Today and Tomorrow's Printers and Publishers, 1979.

#### A RAPID STAINING TECHNIQUE FOR STAGING OF MICROSPORES IN RICE (*ORYZA SATIVA* L.) AND RICE BEAN (*VIGNA UMBELLATA*)

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BREEDING through haploids reduces the time needed to reach homozygosity and allows expres-

ion of recessive genes in an early generation. In androgenic haploid production the stage of microspore at which the anthers are cultured is known to be crucial than the composition of the nutrient medium. There is a staging optimum for each species as has been reported in several cases. Anthers of many cereals respond better at the early uninucleate microspore stage<sup>1</sup> or on mid-uninucleate stage i.e. when the microspores are half-way through the uninucleate stage e.g. maize<sup>2</sup>, wheat<sup>3</sup> and rice<sup>4</sup>.

Microscopic staging of microspores for determining the mid uninucleate stage is desirable before plating of anthers, but some researchers have used external morphological features of the panicle to select microspores of this stage<sup>5,6</sup>. The use of such morphological features has been found to be erroneous in our laboratory, and also by Mercy *et al*<sup>7</sup>. Therefore, microscopic staging can only lead to the exact determination of the stage. The stain generally used in microscopic staging is 2% acetocarmine<sup>8</sup> which in our experience does not stain nucleus and cytoplasm differentially<sup>9</sup>. A modified acetocarmine staining was advocated by Genovesi and Magill<sup>10</sup>, nevertheless, many researchers have found even this method as not very satisfactory. The present investigation reports an easy and rapid staining technique for the staging of microspores in rice.

Young panicles of rice<sup>2</sup>, while enclosed in the boot leaf, were collected from field and stored in a