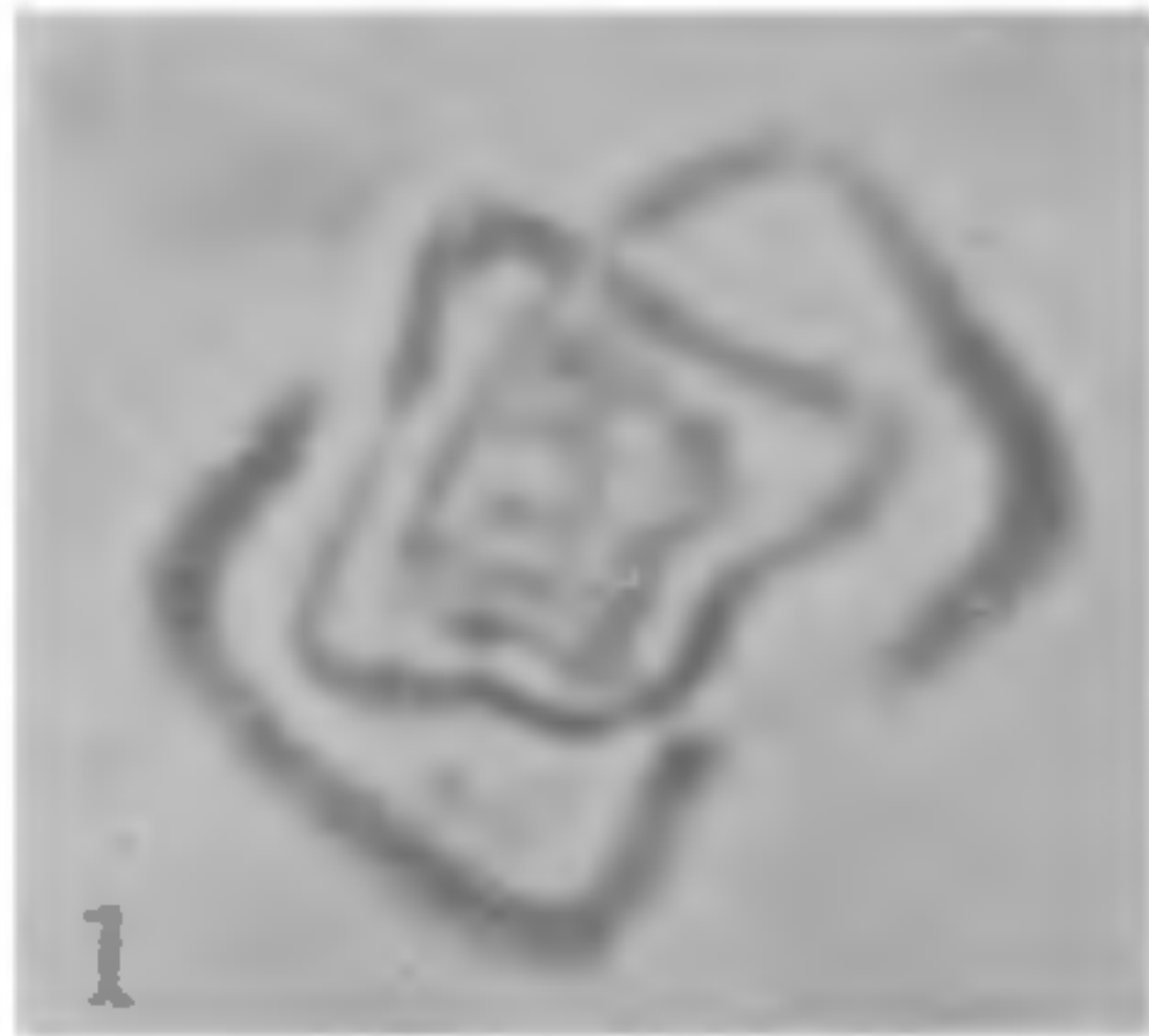


noticed. The cytoplasm of the parent cell contracts and develops a wall assuming identical features as the mother cell, before it is liberated by the rupture of the mother cell wall along the two deeply concave sides (Fig. 1). The pyrenoid in such cases



FIGS. 1-2. *Tetraedron minimum* var. *scrobiculatum*. Fig. 1. Showing single autospore formation and its liberation along two deeply concave sides, ( $\times 2,500$ ). Fig. 2. Formation of a single aplanospore and rupture of the parent cell wall, ( $\times 2,000$ ).

persists and never degenerates and is observable throughout the development of the autospore up to its maturity. In cases where the contents divide into 2-4, some daughter protoplasts mature into autospores while 1, 2 and 3 or them gradually degenerate.

Sometimes, spores with a very thin outer membrane and devoid of flagella, (aplanospores) are formed singly (Fig. 2) or 2, 4 or 8 within parent cells. They are liberated in the same manner as autospores and attain the normal thick wall gradually outside the parent cell. Formation of single autospore and aplanospores and the persistence of the pyrenoid from parent cell to the daughter cell are features hitherto unrecorded for the genus *Tetraedron*<sup>4</sup>.

The present material slightly differs from *Tetraedron minimum* var. *scrobiculatum* in possessing a prominent papilla at each angle and a minutely wavy cell wall.

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#### A NEW FRUIT ROT OF *PSIDIUM GUAJAVA*

DURING a survey of the local fruit market, a hitherto unrecorded, severe, soft rot disease of guava (*Psidium guajava*) fruit was observed. The infected portion becomes macerated, soft, pulpy, water soaked, light brown in colour (Fig. 1). The complete internal rotting in 8-10 days was evident on cutting open the infected fruit.



FIG. 1. Symptoms of *G. roseum* on Guava fruit.

The causal organisms was isolated from diseased fruit of guava and identified as *Gliocladium roseum* Bainier. The fungus grew well on potato dextrose agar and host pulp agar media. Some healthy fruits of guava were inoculated with the fungus by inoculum disc after pricking the fruit surface and also by spraying. After seven days, the fruits pricked showed disease symptoms. From the inoculated fruit the same fungus was re-isolated.

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upto 7 and are roughly flask shaped. The conidia are hyaline, broadly elliptical and are found in short chains. The larvae inoculated by topical application of spores, exhibited loss of appetite, general sluggishness and decreased irritability within 48 hours. Towards the later stages, diseased larvae appeared lighter in colour than the healthy ones. Death occurred in 3 to 4 days. Under moist conditions whitish external growth of the fungus appeared 24 hours after death. The fungus was found to be highly pathogenic causing over 95 per cent mortality in the inoculated larvae.

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**PAECILOMYCES FARINOSUS (DICKSON ex FRIES) BROWN AND SMITH A NEW FUNGAL PARASITE OF THE MANGO LEAF WEBBER, *ORTHAGA EXVINACEA* H.**

DURING February–March 1976, several larvae of the mango leaf webber, *Orthaga exvinacea* (Noctuidae : Lepidoptera) killed by *Paecilomyces farinosus* (Deuteromycetes : Moniliaceae) were collected from the Agricultural College Farm, Vellayani, Kerala. In India *P. farinosus* has been reported on the whitefly, *Bemisia tabaci*<sup>1</sup>. There is no previous record of its occurrence on *O. exvinacea*.

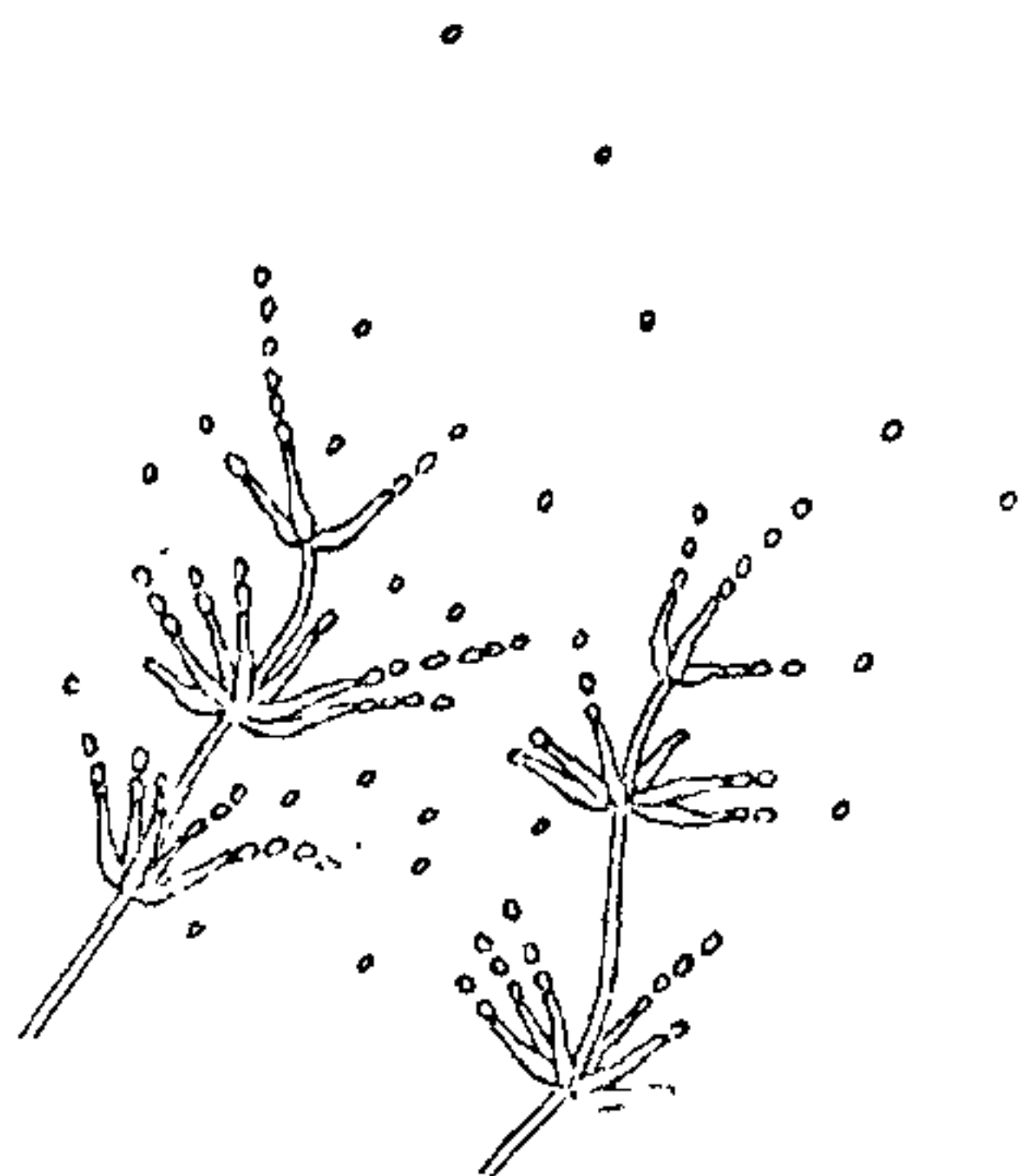


FIG. 1. *Paecilomyces farinosus*.

The fungal colony on potato-dextrose-agar medium has a tough matted basal felt and a loose hairy hyphal growth. The phialides (Fig. 1) are in whorls

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**OBSERVATIONS ON THE POLLEN GRAINS OF *GYROCARPUS AMERICANUS* JACQ.**

*Gyrocarpus* (Hernandiaceae ; Cronquist)<sup>2</sup> is a tropical genus represented in India by the species *G. americanus* Jacq. characterised by polygamous inflorescence, with numerous male, and a few female and bisexual flowers. The family has been variously treated by different taxonomists<sup>1</sup>. Pax<sup>3</sup> and also Cronquist<sup>2</sup> placed the family under Magnoliales, while Hutchinson<sup>5</sup> placed it in Laurales, which are currently considered to constitute the primitive Magnolian angiosperms.

In *Gyrocarpus jacquini* (*G. americanus* Jacq.) from Australia, Erdtman<sup>4</sup> observed non aperturate and spinulate pollen grains, with an average diameter of 45  $\mu$ . Walker<sup>9</sup> made a mention of the pollen morphology of the family. Hardly any information is available on the different aspects of the biology of the taxa of Hernandiaceae as a whole.

The material for the present study was collected from the deep forest at "MEKE DHATU" near Kanakapura (Bangalore District) of Karnataka State, India, during February 1976. The material was preserved in glacial acetic acid and pollen preparations were made by the alcohol method of Nair<sup>8</sup> in which the protoplasm is not dissolved as compared with the acetolysis method.

The pollen grains are inaperturate and spinulate (very small), and are provided with very thin exine and sparse spinules on the exine surface (Fig. 1). The most notable feature in the present material is the large range of size variations from 30–64  $\mu$  (size classes : 30  $\mu$  = 4.4%, 34  $\mu$  = 14.8%, 40  $\mu$  = 14.4%, 45  $\mu$  = 19%, 49  $\mu$  = 13%, 53  $\mu$  = 8%, 56  $\mu$  = 6.6%, 60  $\mu$  = 3.2%, 64  $\mu$  = 2%).