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PHOMOPSIS ICHNOCARPI SP. NOV. ON ICHNOCARPUS FRUTESCENS*

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WHILE studying the diseases of understorey plants in a mixed plantation of deciduous tree species in the campus of this Institute, a severe leaf spot disease of *Ichnocarpus frutescens* (L.) R. Br., belonging to family Apocynaceae, was recorded during December 1985. Leaf spots, initially appeared as minute dots, enlarged gradually to light brown amphigenous, irregular necrotic areas with a distinct outline (figure 1). The necrotic leaf spots, measuring 5–12 mm in diameter, were observed



Figure 1. Leaf spots of *Ichnocarpus frutescens* caused by *Phomopsis ichnocarpi*.

only on mature leaves. Consistent isolations from the infected leaves yielded a *Phomopsis* sp. on potato dextrose agar medium (PDA). Pathogenicity of the isolate was confirmed on leaves of *I. frutescens* inoculated on the abaxial and adaxial surfaces with a homogeneous spore suspension. Characteristic leaf spot symptoms developed after 10 days of inoculation. Since no *Phomopsis* sp. has earlier been reported either on *I. frutescens* or on any other plant of Apocynaceae¹⁻³ and as this isolate differs in taxonomical characters from the species reported earlier, it is described as a new species of *Phomopsis* viz *Phomopsis ichnocarpi*. The most important characters of *P. ichnocarpi* are the production of irregular multilocular conidiomata, which are occasionally unilocular and in most cases localization of β -conidia at the base and α -conidia on the upper side of the pycnidial cavity.

Phomopsis ichnocarpi sp. nov. (figures 2 and 3).

Colony on PDA light pinkish, reverse yellowish brown, mycelium appressed, conidioma pycnidial, produced after one month of incubation, irregular with hyphal projections, multilocular, occasionally unilocular composed of thin-walled angular cells,

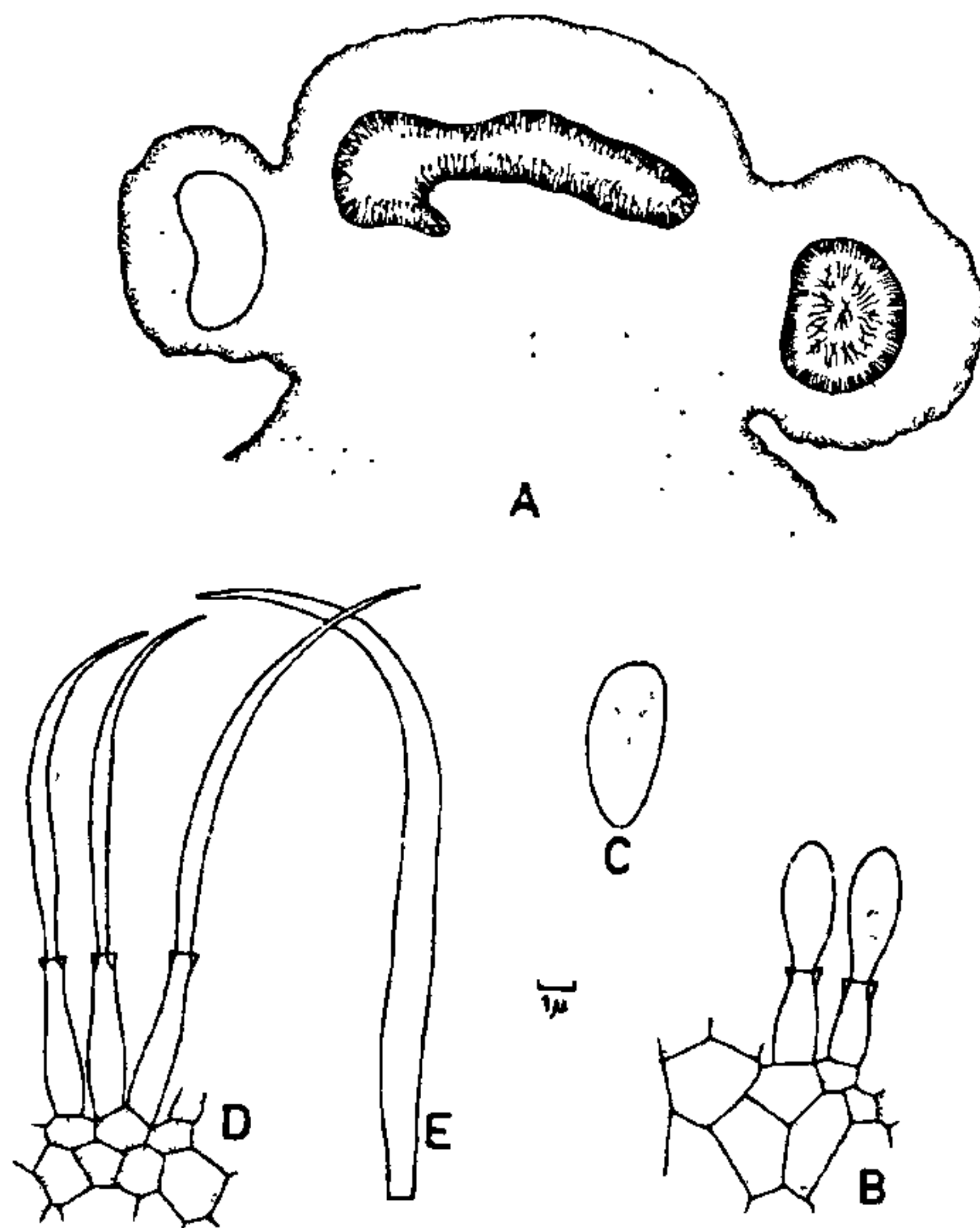
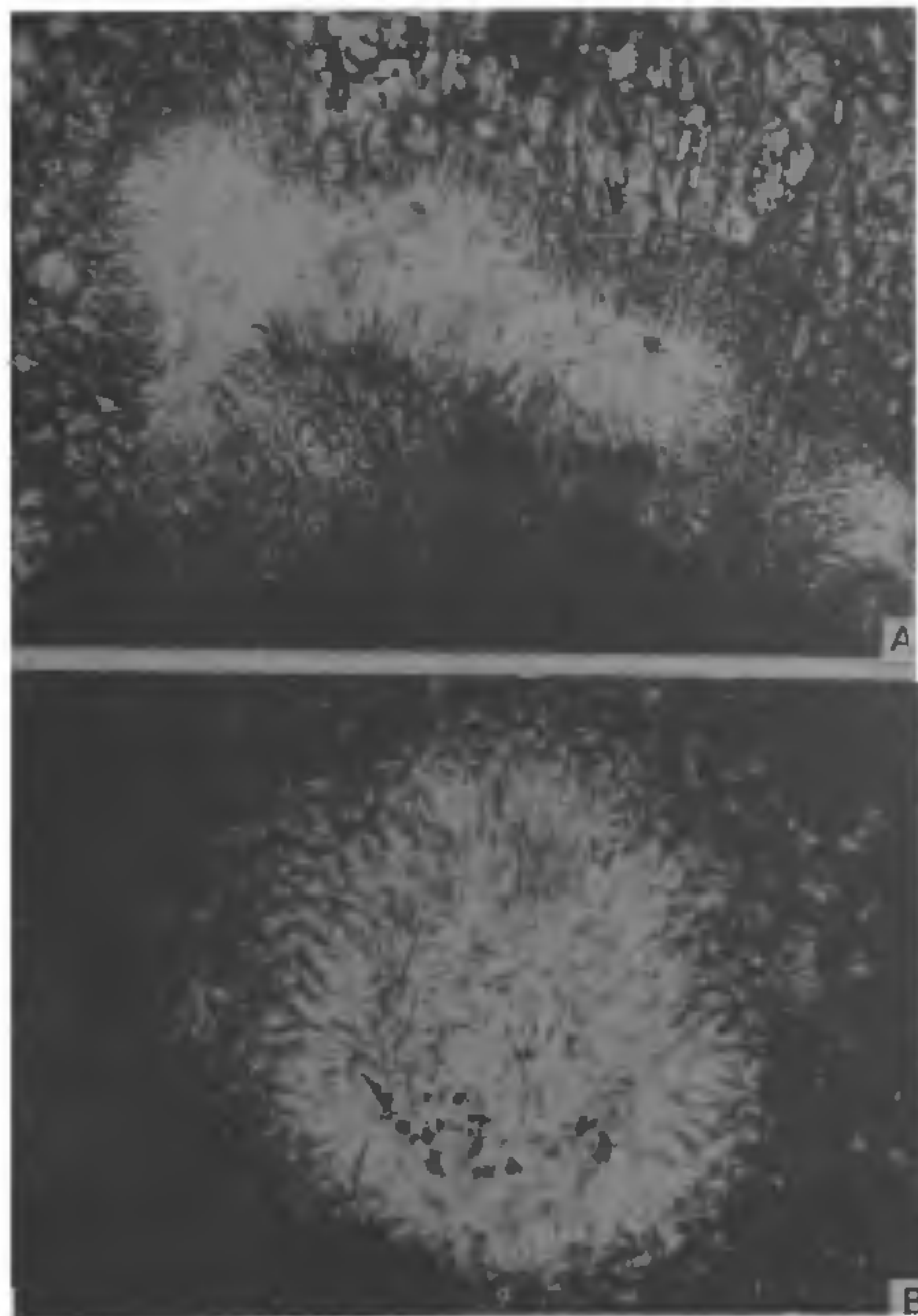


Figure 2A–E. A. A vertical section (v.s.) of conidioma; B, C. α -conidia and phialides, D, E. β -conidia and phialides.

* KFR I Paper No. 129.



Figures 3A and B. A. A magnified view of pycnidial cavity in v.s. to show the production of α -conidia on the upper side and β -conidia on the lower side; B. A transverse section of conidioma showing only β -conidia in the cavity.

light brown, except towards the periphery where the cells are dark brown and thick-walled, ostioles absent; conidiophores densely clustered, hyaline, cylindrical, straight or slightly bent; α -conidia produced on the upper side and β -conidia at the base of the pycnidial cavity; α -conidia hyaline, fusiform, straight, guttulate, aseptate, $4.6-6.9 \times 2.3 \mu\text{m}$; β -conidia hyaline, filiform, hamate, rarely straight, $16.20-21.6 \times 0.9 \times 1 \mu\text{m}$.

Habitat : On leaves of *Ichnocarpus frutescens* (L.) R. Br. causing spots.

Holotype : Peechi, Trichur (Dist.), Kerala, India, K. Yesodharan, 10th April 1986, IMI 302055.

Phomopsis ichnocarpi sp. nov.

Coloniae in agaris cum solani tuberosi et dextroso composito satae pallide roseolae, reversae luteobrunneae mycelium appressum, conidiomata pycnidialia, post menstruum culturae producta, haud

regularia, eminentiis hyphalibus ornata, multilocularia nonnumquam unilocularia, e ullulis tenuiter tunicatis angularibus composita. Pallide brunnea sed prope peripheriam cellulis obscure brunneis, crasse tunicatis, ostiola nulla, conidiophora dense aggregata, hyalina, cylindrica, recta vel paulum ascerata. α -conidia supra, β -conidia infra in pycnidii caverua producta. α -conidia hyalina, fusiformia, recta, guttulata, continua, $4.6-6.9 \times 2-3 \mu\text{m}$. β -conidia hyalina, filiformia, plerumque hamata, raro recta $16.2-21.6 \times 0.9 \times 1 \mu\text{m}$. Habitat in foliis *Ichnocarpus frutescens* (L.) R. Br. maculus efficiens.

The genus *Phomopsis*, comprising more than 400 taxa has widespread occurrence as plant pathogens⁴. There has been no modern revisionary treatment of *Phomopsis* as a whole and reliable documentation of individual species is scattered in the literature. Revisionary studies based on correlation of *Diaporthe* teleomorphs and *Phomopsis* anamorphs for future delimitation of taxa in the genus have been suggested⁴. This raises some practical problems because teleomorphs are not commonly produced in culture as in the case of *P. ichnocarpi*. This is the first report of *Phomopsis* sp. causing a leaf spot disease of *I. frutescens*.

The authors are thankful to Dr E. Punithalingam, CAB International Mycological Institute, England for help in the identification of *Phomopsis* sp. and to Dr C. T. S. Nair, Director, KFRI, for encouragement.

6 April 1987

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