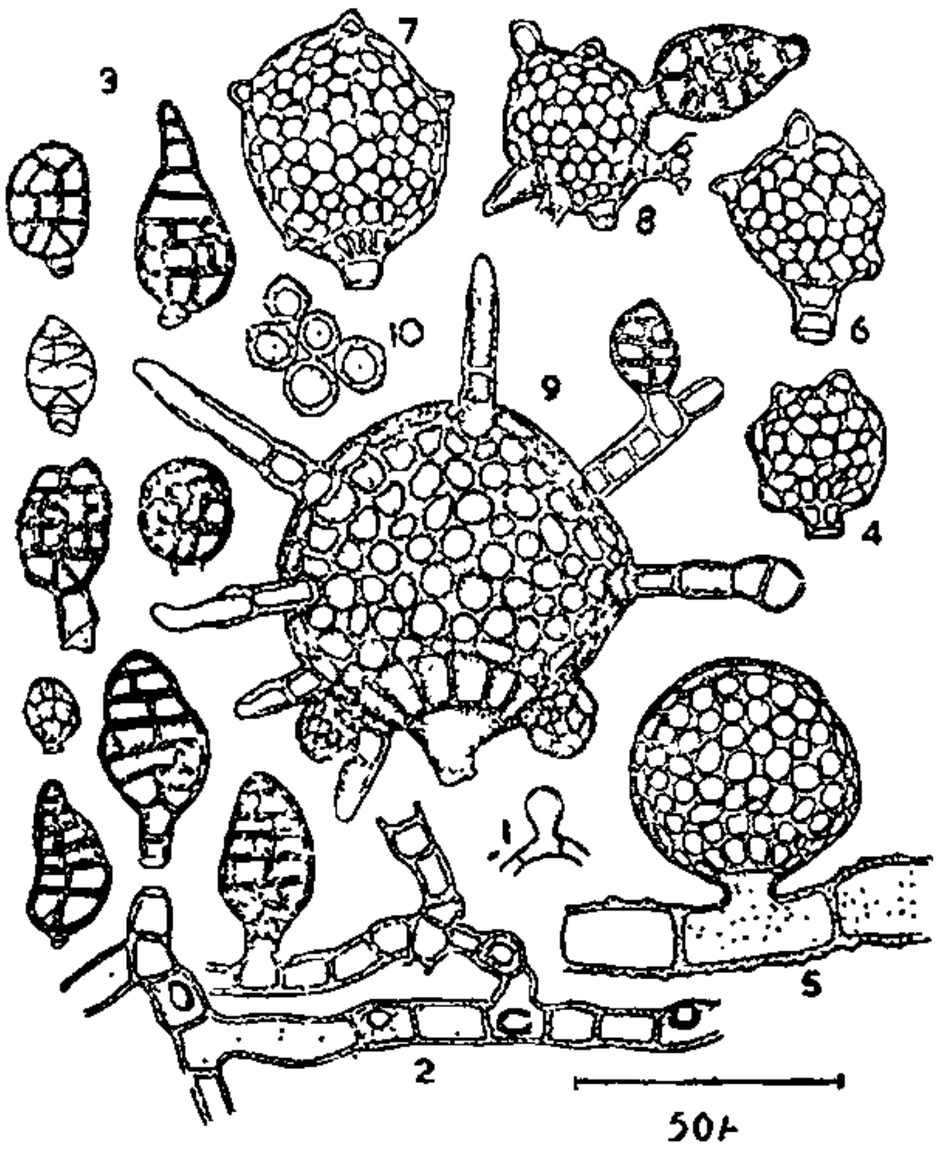
The specimen was examined by Dr. M. B. Ellis who considers it to be a new species of *Pithomyces*. It is, therefore, being described here as a new species.



FIGS. 1–10. *Pithomyces bulbilius.* Fig. 1. Developing conidium. Fig. 2. Hyphae with a conidium in side view and five scars of broken conidiophores in top view. Fig. 3. Conidia. Figs. 4–9. Stipitate bulbils. Fig. 10. Cells in a small fragment of bulbil.

Pithomyces bulbilius Satya sp. nov.

Coloniae effusae, fuscae vel atrae, irregulares. Mycelium superficiale ex hyphis septatis, subhyalinis vel brunneis, levibus, rarius verrucossis, 3–7·5–15 μm crassis, reticulatis compositum ; conidiophora singula ex lateribus hypharum oriunda, simplicia, recta, cylindrica, continua, subhyalina vel pallide brunnea, 3–10·5 μm longa, 3–5 μm crassa ; conidia singula in apice conidiophori oriunda, recta vel curvata, obclavata vel obpyriforma vel rotunda vel ovalia, dictyospora, 5–18 cellularia, vulgo cellulis in 3–8 ordines transversa depositis, brunnea vel atrobrunnea, levia, 20–38 μm longa, 15–23 μm crassa. Bulbiliophora singula ex lateribus hypharum oriunda, simplicia, recta, cylindrica, hyalina vel subhyalina, 7–13·5 μm longa, 6·5–15 μm crassa, bulbilia vulgo globosa, 27–50–75 μm in diam., brunnea vel atrobrunnea, levia vel tuberculata vel cum 5–20 apendicibus ; appendices rigidi, recti, similis hyphis, 0–5 septati, 20–55 μm longi, 3–5 μm lati, simplices, non-nunquam producentes conidia acropleurogena.

In cortice emortuis *Eucalypti* sp. leg. H.N.S. die 1 Januari, anni 1965, typus positus in C.M.I., Kew, sub numero IMI 111863.

The type specimen has been deposited at C.M.I., Kew, London, as No. IMI 111863. The author expresses his grateful thanks to Dr. S. B. Saksena, Department of Botany, University of Saugar, for encouragement and to Prof. O. N. Handoo for facilities. He thanks Dr. M. B. Ellis, Director, C.M.I., Kew, for helpful suggestions and Rev. Fr. Devanand for Latin diagnosis.

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Department of Botany,
S.N. College, Khandwa,
January 10, 1975.

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A NEW SPECIES OF *MASSARINA* SACC.

AUTHORS collected a species of *Massarina* on dried stem pieces of *Lantana camara* L., which differed from all the existing species[1-4] in having 3-celled ascospores and uniseriate arrangement of ascospores. Hence it is being described here as a new species.

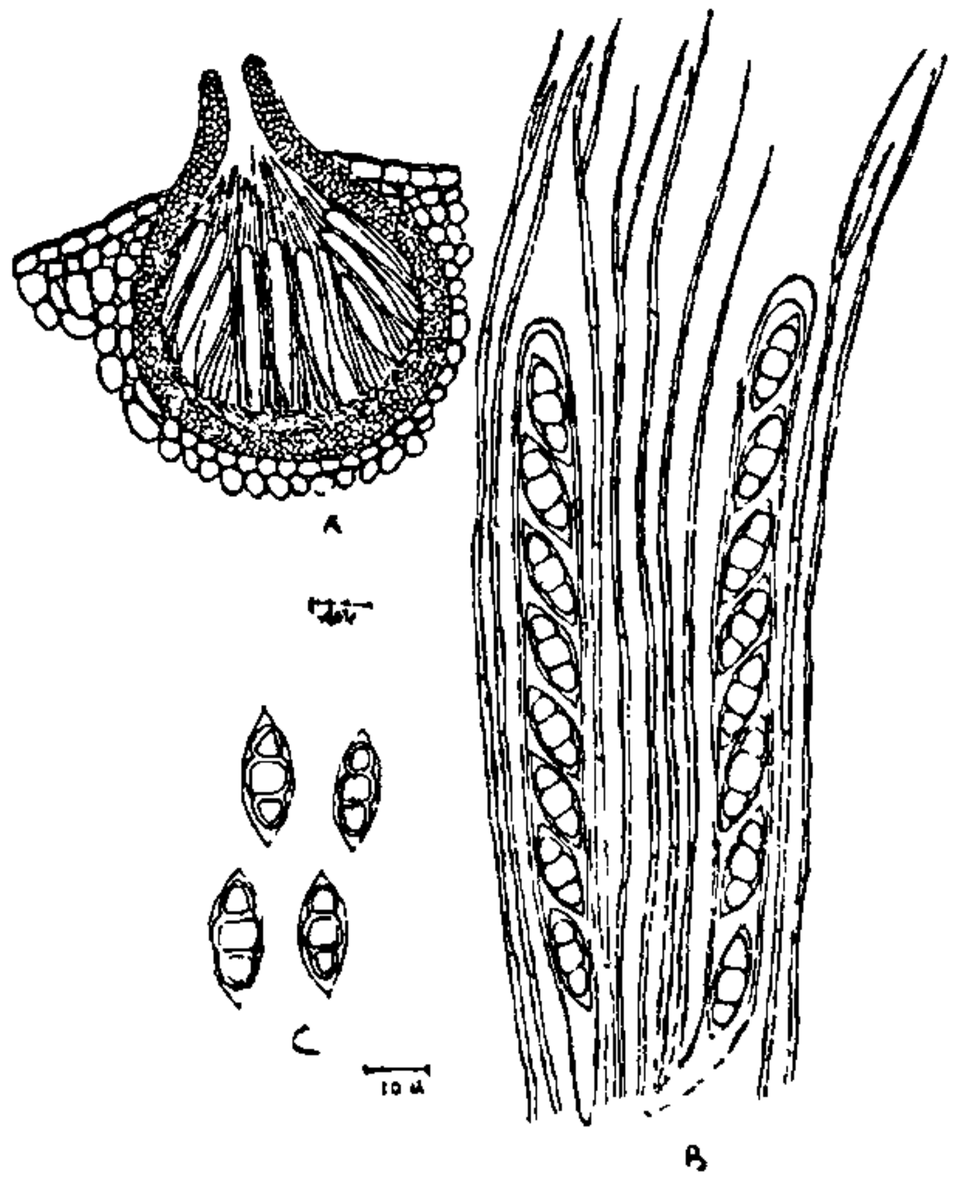

FIG. 1. A. Median L.S. Perithecium, B. Asci containing ascospores, paraphysoids. C. Ascospores with mucous sheaths.

Massarina tricellula Sp. Nov. Panwar and Kaur

Ascocarpae pyriformes, innatae, dispersae inter emortuorum ramunculorum corticem, rostrum nigrum, erumpens, 220–405 × 200–385 μ magnitudinis. Ascocarpae quarum crassitudo parietis est amplitudinis 3–4 cellulae, habent crassos parietes, cellulae polyhedrae, et cellulae interiorae cavitatem versus

hyalinae et parietis gracilis. Asci 8-sporati, breviter stipitati, cylandrici, bitunicati, qui apud apicem crassi, 108–135 × 6–8 μ. Vagina mucosa ascosporas tegens, ad utrasque extremas acuta, oblique uniseriatae, ellipticae, hyalinae, 2-septatae, apud septa constrictae, 13·5–19 × 5·4–6·7 μ. Paraphysoidae numerosae, tenues, hyalinae, filiformae, septatae, pars supera tenuis et ramosa, 1·4–4·0 μ in diam. (Fig. 1 A, B and C).

Collecta in caulibus emortuis *Lantana camara* L. Mount Abu, Rajasthan, VIII, 1974.

Specimen apud C.M.I., Kew, Herb. depositum IMI 188026 typis, atque Botany Department, University Jodhpurensis, Jodhpur, J.U.M.L. 359.

We are grateful to Dr. Sivanesan for the help in the identification of the fungus and to Prof. H. C. Arya for providing laboratory facilities. Thanks are also due to the Rev. Father William Barracos for the Latin diagnosis.

Mycology and Plant Pathology Laboratory, Department of Botany, University of Jodhpur, Jodhpur, India, *December* 15, 1974.

K. S. Panwar.
Swarn Jeet Kaur.

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ENDOGENOUS GROWTH SUBSTANCE LEVEL IN SWEET ORANGE LEAVES AS INFLUENCED BY 'SANKUTEGULU'

A disease locally known as 'Sankutegulu' of unknown etiology has been reported by Reddy and Murthi[1]. This disease is widely prevalent in Cuddapah and Anantapur Districts of Andhra Pradesh, causing heavy losses to the citrus crop. The chief symptoms are the yellowing and reduction in size of the leaves, premature leaf drop, distorted fruits and even small fruits turning dull yellow becoming stony and ultimately leading to the death of the tree. In the present investigation an attempt has been made to elucidate the effect of the disease on the endogenous growth substance levels in the leaves to understand as to what extent the promoter/inhibitor balance has been altered.

The material for the study was collected in a citrus orchard near Kadiri (A.P.) showing typical disease symptoms. Leaves from the healthy and diseased plants of the same age were collected and the endogenous growth substance levels were estimated. The leaves were extracted as per the method of Goldschmidt and Monselise[2] and the rice coleoptile bioassay was carried out to assay the growth substance activity according to the method of Das *et al.* (1965). The results presented in the histograms are the mean of four independent estimations. The data were statistically analysed.

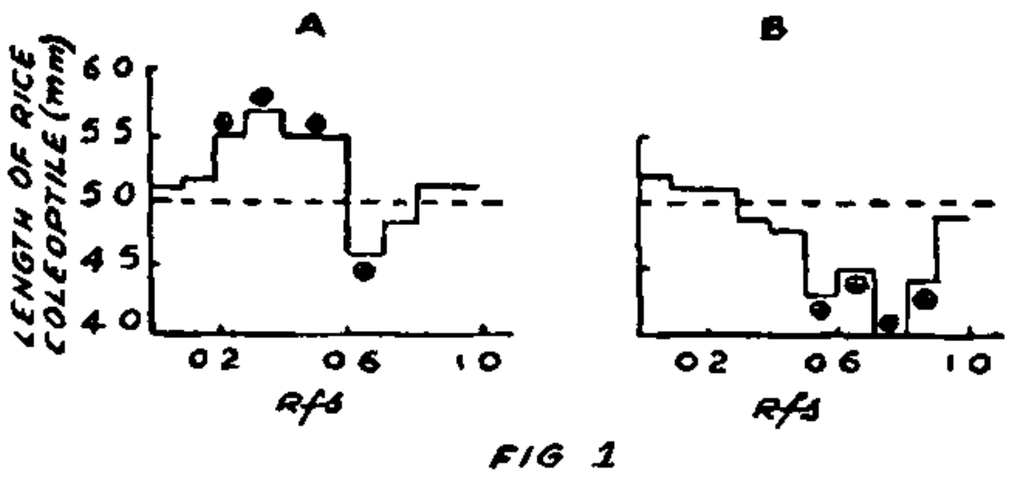

FIG 1

Fig. 1. Endogenous growth substance levels in (A) Healthy and (B) Diseased Sweet Orange leaves. *Note* : Dotted lines indicate the length of rice second leaf sheath in distilled water control.

⊕ Indicates significance at 1% level.

In the healthy leaves (Fig. 1 A), a significant promoting actvity was noticed at R_f 0·2–0·6, while it was not significant at R_f 0·0–0·2. The inhibitory activity was significant at R_f 0·6–0·7. In the diseased leaves (Fig. 1 B) significant promoting activity was not evident at any of the R_f. However, a band of significant inhibitory activity was seen at R_f 0·5–0·9 (partly corresponding to the β-inhibitor zone of 0·4–0·7). Thus a tilt in the hormonal balance towards the accumulation of inhibitors is apparently clear. The conspicuous absence of significant promoting activity in the diseased leaves as in the present study was also reported in mosaic injected Sathgudi leaves (Rao and Narasimham[4]). Hanks and Feldman[5] also observed a reduction in the endogenous promoter level in exocortis infected citrus terminals.

The first author is grateful to the C.S.I.R. for financial assistance.

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