

FIG. 1 A-E. Showing the direct photos of cleared leaves using the method of Rao *et al.*<sup>6</sup> A, Normal leaf; B-E, Showing the dichotomous, trichotomous incision of the lamina. (A—1.5 ×; B—3 ×; C—1 ×; D—1.5 ×; E—1 ×).

throws some light on phylogenetic relationship. (See also Kalyanasundaram<sup>5</sup>, Datta and Mitra<sup>3</sup> and Bennet<sup>2</sup>).

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## HELICOMINA CARBONICA SP. NOV.

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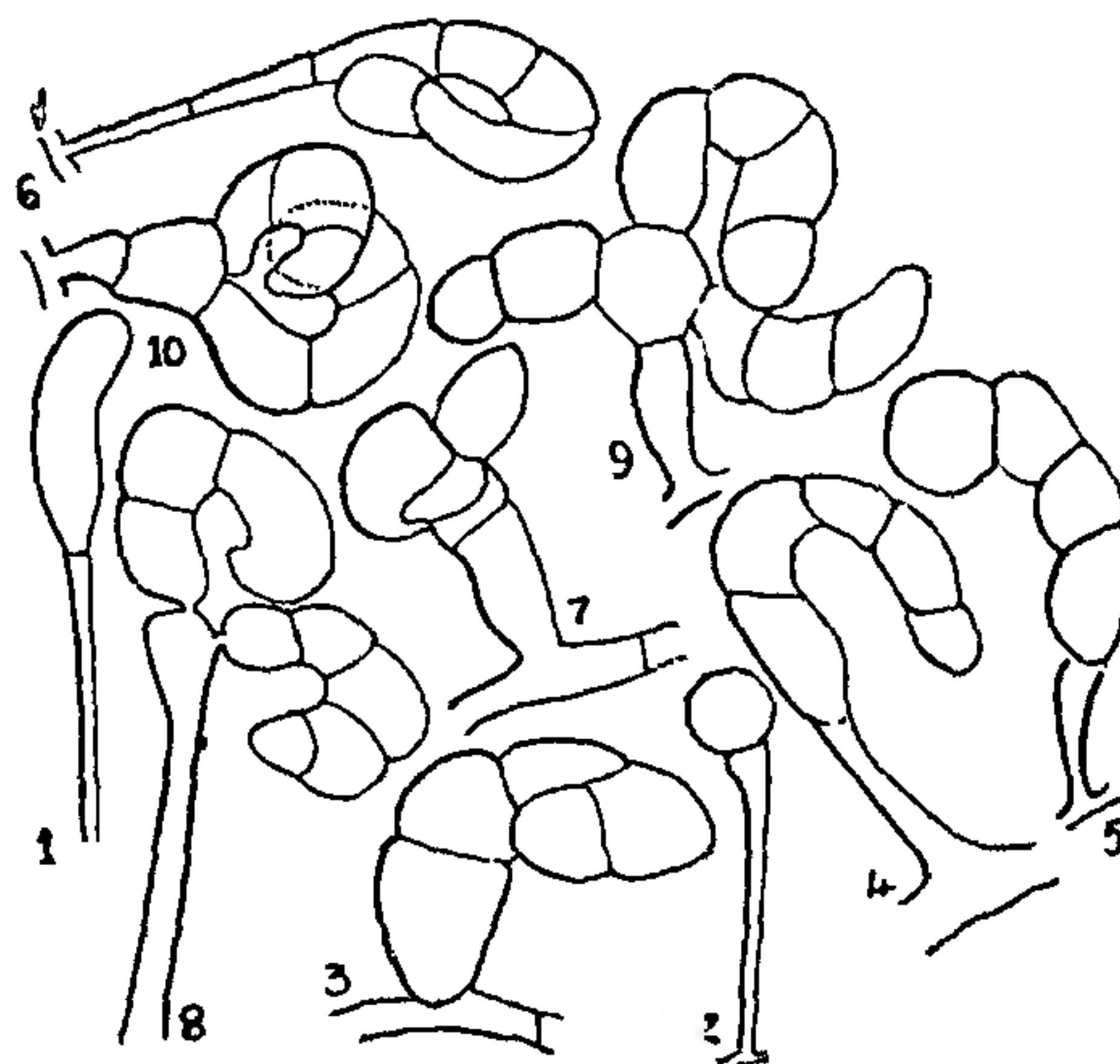
THE genus *Helicovina* Olive was erected in 1948 to accommodate plant pathogenic *Helicoma* like species having both curved and straight conidia (Olive, 1948).

During the course of studies on Hyphomycetes an undescribed species of *Helicovina* distinct from all the known species in both morphology and culture characters was observed growing on YpSs agar plates as laboratory contaminant. The characters recorded here are those of monosporic culture grown on malt agar at 28° C.

*Helicovina carbonica* A. Subrahm. sp. nov. (Figs. 1-10).

On malt agar at 28° C growth restricted; colonies heaped, buff black in colour with irregular margin; diffusible pigment none; reverse colony black; sporulation moderate.

Mycelium brown 2.0 μ in diameter septate, smooth and branched; conidiophores pale brown, aseptate or rarely septate, unbranched, elongate with conidium bearing distal end slightly enlarged, 10-11 × 2.0-2.5 μ or short and narrow at the base with enlarged terminal



FIGS. 1-10. *Helicovina carbonica* sp. nov. Fig. 1. Aseptate conidiophore bearing celled conidium 1500 ×. Fig. 2. Conidiophore with slightly enlarged distal end bearing one celled conidium, 1,500 ×. Fig. 3. Conidium in lateral position 1,500 ×. Figs. 4 and 5. Variously bent septate conidia 1,500 ×. Fig. 6. Septate conidiophore bearing a bent conidium 1500 ×. Figs. 7-10. Conidiophore with enlarged distal end bearing more than one conidia. 1,500 ×.

Cell bearing two or more conidia  $5.5-6.5 \times 3.0-4.5 \mu$ . Conidia terminal or lateral more or less straight or variously curved, cylindrical or slightly reniform three to four septate constricted at the septa, occasionally globose and 0-septate, smooth walled and light brown in colour. Straight conidia  $11.0-13.5 \times 3.0-4.5 \mu$ ; bent conidia  $8.8-11.5 \times 5.5-11.0 \mu$ . Habitat; Isolated as laboratory contaminant, Pimpri: Poona.

HACC No. AS100 Type culture is deposited at ATCC No. 42784.

The present isolate can easily be distinguished from all the known species by the presence of more than one conidium on an enlarged distal end of the conidiophore and also the one celled spherical conidia.

*Helicomina carbonica* A. Subrahm. sp. nov.  
(Figs. 1-10).

Coloniae in malto agar ad  $28^{\circ}\text{C}$  pulvinate bubalinaeatae, restrictae, revere atro; conidiophora pallide brunnea, aseptate vel raro septate ramosa  $10-11 \times 2.0-2.5 \mu$  conidia 1, 2 vel plura (una, dua vel plura) plus minusve vel recta vel vario curvata 0-4 septate, constrictae ad septa; recta conidia magnit  $11.0-13.5 \times 3.0-4.5 \mu$  curvata conidia magit  $8.8-11.5 \times 5.5-11.0 \mu$ .

Thanks are due to Dr. Mrs. Pande for rendering the latin diagnosis and also to Dr. M. G. Vidya and Dr. V. H. Pawar for laboratory facilities.

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## OCCURRENCE OF A NEW BLIGHT DISEASE OF MANGO CAUSED BY *CURVULARIA*

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A NEW blight disease of mango in different parts of Delhi was detected during recent surveys. The initial symptoms appear as small, isolated, dark brown irregular spots on the leaves. The lesions rapidly enlarge, coalesce and form irregular patches mostly towards tips and margins and cause symptoms of a severe blight disease (Fig. 1). The symptoms were also observed on young shoots. It was observed that natural disease incidence was more in nurseries than in olders plants. Disease incidence was high in nursery plants when high dosages of NPK fertilizers were used.

The pathogenic fungus was isolated from the diseased leaves and the young shoots on Potato-Dextrose-Agar. The pure culture was maintained on the same medium for morphological studies and pathogenicity tests. One-year old mango seedlings were artificially inoculated in the glass house by spraying the spore suspension on injured as well as uninjured leaf surfaces. Seedlings kept as control were not inoculated but sprayed with plain water. These seedlings were kept for 72 hours in moist chambers. Typical symptoms developed after 5 to 6 weeks. Experiments clearly showed that an injury at the site of inoculation was necessary for a successful infection. The same fungus was reisolated from these diseased leaf bits. The fungus was identified as *Curvularia tuberculata* Jain.

The vegetative hyphae branched, septate, pale brown, smooth,  $2.16-4.32 \mu\text{m}$  wide. Conidiophores arise as lateral branches from cells of older hyphae or some times terminally; they are decumbent or erect, often branched, wider and of lighter shade towards the apex, dark brown,  $4.32-6.48 \mu\text{m}$  wide, septate. Conidia borne spirally or alternately at the tip, brown to dark brown, mostly straight, ellipsoidal or somewhat barrel-shaped and sometimes slightly curved, usually 3, rarely 4-5 septate; quite prominent, thick and dark brown. Conidia are characteristically tuberculate all over the surface and tubercles are of variable size. The second cell from base of conidium is largest and darkest; generally the two middle cells are somewhat larger and darker than the distinctly paler and smaller end cells. The apical



FIG. 1. Natural infection of *Curvularia*—blight of mango.