

application as the centre. Similarly the single band of aspartic acid, serine and glycine was also mapped. These strips were then carefully and evenly cut out from the marked area on the paper incorporating the whole band of amino-acids in it as seen in Chromatogram No. 1. One end of the strip was cut to shape like a bottleneck for guiding the amino-acids along it during the second run. These strips were then stitched with a fine needle and thread to one end of the ascending Whatman No. 1. paper of 5" × 15" size at equidistance to serve as wicks. This specially prepared paper was then developed, in the usual ascending type of chromatography glass chamber, with either pyridine-water (80 : 20) or phenol-water (4 : 1) over the day or overnight. The length of time of this development could be adjusted according to R_f values of the amino-acids under separation. This time will vary with different individual substances. These five amino-acids which are not separable with any one type of solvent can thus be separated into distinct bands by using any one of the above two solvents as seen in Chromatogram No. 2.



FIG. 2. Ascending Paper chromatogram No. 2 in Pyridine: Water, showing separation of the five amino-acids.

The strips to serve as wicks could be shaped and stitched variously, e.g., horizontally or vertically. But as the wick is obtained from a circular paper with the radial force operating in its fibres, there is a tendency for the separated amino-acid bands to show trailing with maximum concentration of the substance towards the convex side of the cut-out arc. The best results with this modified technique were dependent on the preparation of a proper wick cut out evenly without any edges on the sides. The bottleneck type of the wick was most satisfactory for this purpose, which, besides counteracting the radial force, would allow the flow of the amino-acids through the narrow neck at the distal end. Colorimetric evaluations showed no loss of the substance quantitatively.

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A NEW SPECIES OF *CERCOSPORA* CAUSING LEAF-BLIGHT OF *MARSILEA QUADRIFOLIATA*

Cercospora leaf-blight of *Marsilea quadrifoliata* L., a common weed growing on the bunds of wet lands and irrigation channels, was observed in South Arcot and Tanjore Districts. Serious incidence of the disease was noticed during November-February, 1968-69. Infected leaves soon dried giving a scorched appearance of the area in patches. Studies of the affected leaves revealed that a new species of *Cercospora* was responsible for the leaf-blight.

Cercospora marsileæ RAGUNATHAN, PRASAD
AND PURUSHOTHAMAN SP. NOV.

Leaf spots brown to rusty brown with chlorotic halos often giving 'V'-shaped appearance with a deep brown centre, 2-14 mm. in length, sometimes spreading to the entire leaflet (Fig. 1). Fruiting amphigenous; stroma well developed consisting of brown cells; conidiophores in fascicles of 2-10 brown, pale near the apex, geniculate, with distinct scars, 1-3 septate, obtuse at tip, 4.0-5.0 × 48-94 μ; conidia hyaline, cylindrical, straight or curved, 4-26-septate, obtuse to sub-obtuse at tip, truncate at base, 4-5.5 × 45-224 μ (Fig. 2),

Habit: On living leaves of *Marsilea quadrifoliata* L.

Leg.: V. Ragunathan, November 5, 1965, Annamalainagar, Tamil Nadu.

Type specimens are deposited in the Herb. Crypt. Ind. Orient., IARI, New Delhi (Accession No. 29330).



FIG. 1. Diseased leaves of *Marsilea quadrifoliata*.

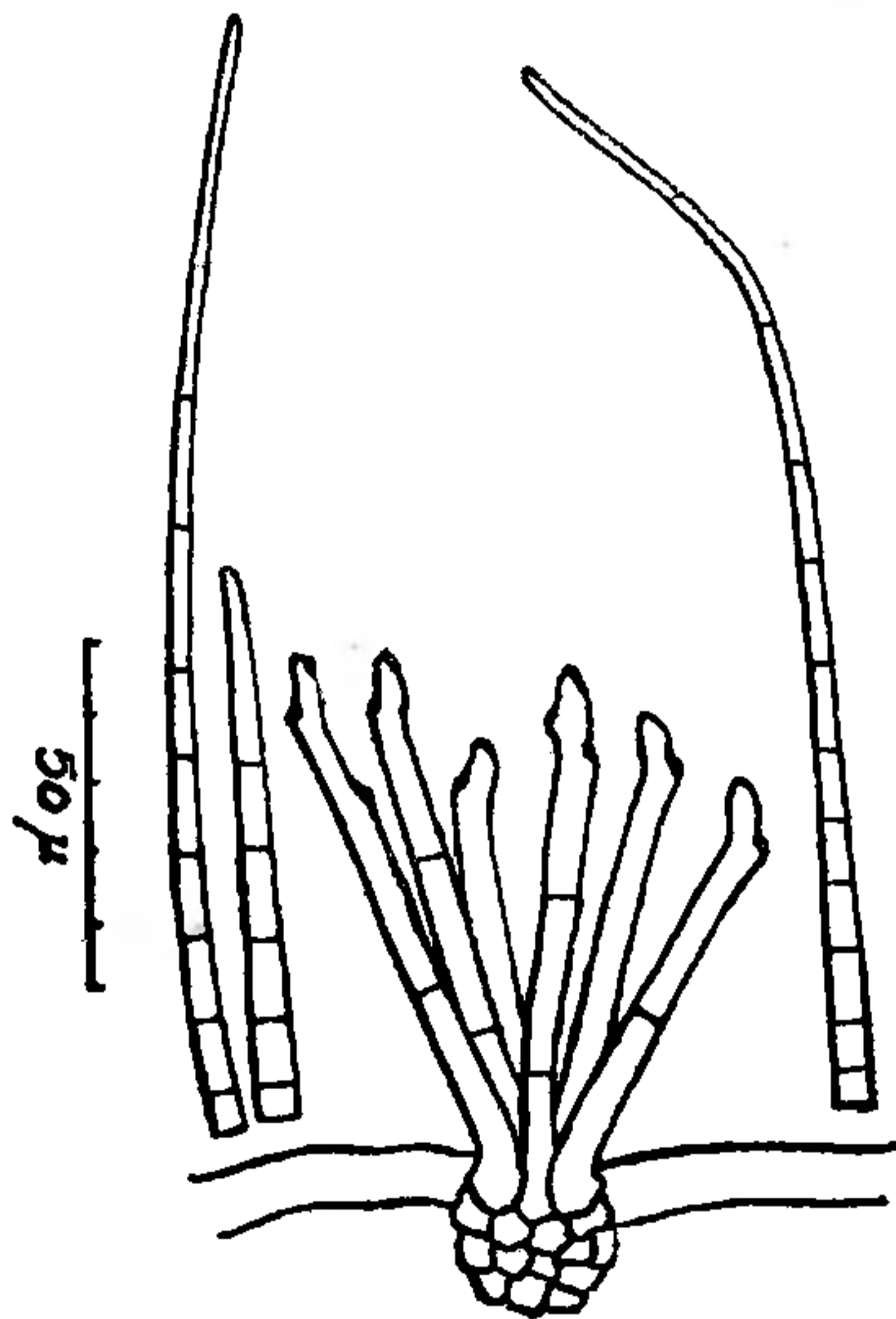


FIG. 2. Conidia and conidiophores of *Cercospora marsileae*.
Cercospora marsileae RAGUNATHAN, PRASAD AND
PURUSHOTHAMAN SP. NOV.

Stromata in maculis foliaribus brunneis 'V' rubiginosobrunneis zona rhlorotira cinctis, 2-14 mm. longis, interdum trianguliformibus, medio atrobrunnea, nonnumquam folium totum occupantibus, producta, amphigena, matura e cellulis brunneis composita; conidiophora 2-10 in fasciculo instructa, brunnea, apicem versus pallida, geniculata, apice obtuso, 1-3-septata, distincte cicatricibus notata, 4.0-5.0 × 48-94 μ, conidia hyalina, cylindrica, recta vel curvula,

4-26 septata, ad apicem obtusa vel sub-obtusa, ad basim truncata, 4-5.5 × 45-224 μ.

In foliis vivis *Marsilea quadrifoliata* L. Leg. V. Ragunathan, November 5, 1965, prope Universitatem Annamalai, Annamalainagar, Tamil Nadu, India.

The fungus was isolated on carrot leaf agar medium. The pathogenicity of the fungus to its host was established. On inoculation, the following plants were not affected, viz., *Oryza sativa* L., *Cynodon dactylon* Pers., *Cyperus rotundus* L., *Dolichos lablab* L., *Eclipta alba* (L.) Hassk., *Phaseolus mungo* L., *P. aureus* Roxb., and *Ipomoea aquatica* Forsk.

Leaf-blight of *Marsilea quadrifoliata* due to *Cercospora* sp. was first reported from this laboratory.³ Further studies on its pathogenicity and host range revealed that the fungus was host-specific and hence the name *Cercospora marsileae* has been proposed to recognise it as a new species. No report of *Cercospora* occurring on this host could be traced from the available literature.¹⁻²⁻⁴

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A NEW SPECIES OF *SCOLECOBASIDIUM*

A FUNGUS found growing on an earthen water pot was isolated in pure culture. This appears to be a new species of *Scolecobasidium* and is described below.

Scolecobasidium indicum Sp. Nov.

The fungus formed irregular, scattered, and black patches on the surface of the pot. In pure culture, on P.D.A. the colonies are fluffy and dark olivaceous-brown. The vegetative hyphae are hyaline to subhyaline, septate, smooth, about 1.5 μ wide, and form chlamydospores in chains. The conidiophores are simple, light olivaceous-brown, septate, straight or bent, short, 8-40 × 1.6-2.0 μ. The conidia are pro-