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## A NEW SPECIES OF TRICHOBOTRYS FROM THE WESTERN GHAT FORESTS, INDIA

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### ABSTRACT

A new dematiaceous hyphomycete, *Trichobotrys ramosa* sp. nov., isolated from decaying leaves of *Dendrocalamus strictus* Nees (F. Poaceae) is described and illustrated from the forests of Western Ghats in southern India.

### INTRODUCTION

During our studies on the taxonomy and diversity of microfungi occurring in association with flowering plants of the Western Ghats in southern India, an interesting hyphomycete producing catenate, dark brown, spherical and echinulate conidia on fertile lateral branches with polyblastic conidiogenous cells developing on dichotomously branched, flexuous conidiophores was isolated from fallen and dead leaves of *Dendrocalamus strictus* Nees from Mollem forest in Goa State. The fungus is described here as a new species of the genus *Trichobotrys* Penzig & Saccardo.

The dead and decaying leaves of *Dendrocalamus strictus* were thoroughly washed in distilled water and incubated in sterile moist chamber for 7-14 days. Fungal colonies appeared on the leaf surface were individually examined under the microscope.

### TAXONOMIC PART

*Trichobotrys ramosa* Maria et Bhat sp. nov. (Figure 1)

*Coloniae* effusae, atro brunneae, velutinae. *Mycelium* partim superficialis, partim immersis, hyphae ramosae, hyalinae vel pallide brunneae 1.5-2.5  $\mu\text{m}$  lat. compositae. *Setae* absentia. *Conidiophora* mononematosa, erecta, recta vel flexuosa, septata, ramosa dichotome in supra, fertilis in media, atro-vel rubrobrunnea, verruculosa, 330-600  $\mu\text{m}$  longa, 10-18  $\mu\text{m}$  lata ad basim, 8-10  $\mu\text{m}$  lata et conspicuus echinulata ad inferne dimidiata, terminaliter in sterilis, scitiformis, diverse curvata, pale brunnea vel hyalina, usque ad 6  $\mu\text{m}$  lata ad apicalis; conidiophoris ramosis fero bravis, fertilis, atro vel pallide brunnis, verruculosis, laxae spatii, 1-2-septatis, usque ad 25  $\mu\text{m}$  longis, 3-5  $\mu\text{m}$  latis lateralis formatis. *Cellulae conidiogae* in conidiophoris incorporatae, polyblasticae, subterminalis vel terminalis ad ramosis fertilis, denticulatae in supra dimidiatae, elongatae, interdum lapsum into cupulatum formata, 5-10 x 2-3  $\mu\text{m}$ . *Conidia* sicca, catenata, plerumque in ramosa, acropetalis catenula, globosa, atro brunnea, verruculosa, aseptata, 3-5  $\mu\text{m}$  diam.

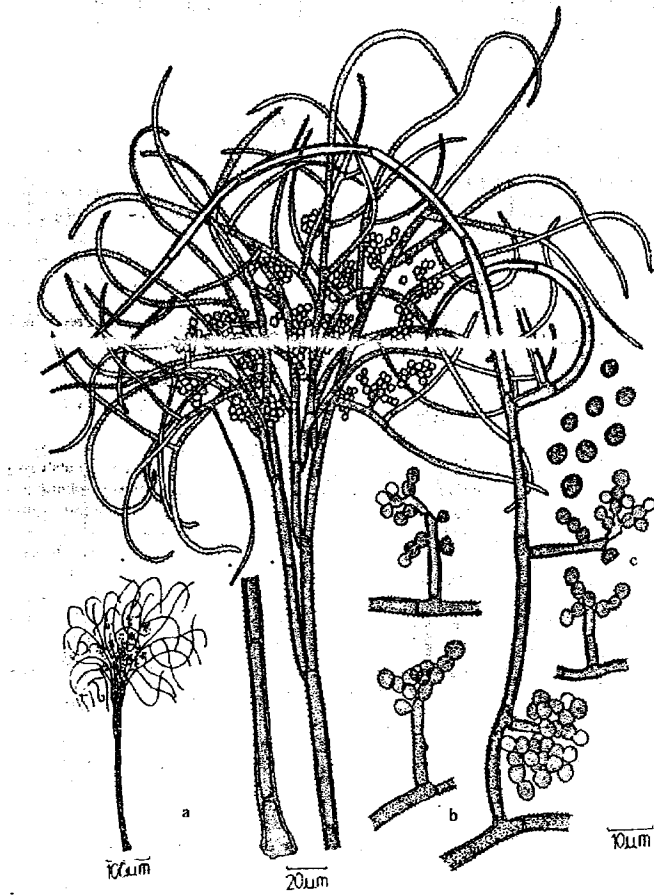


Fig. 1. *Trichoborys ramosa*. a. Entire conidiomata; b. Portion of conidiophore with fertile lateral branches; c. Conidiogenous cell and conidia.

In foliis putrescentibus *Dendrocalamus strictus* Nees, Mollem, Bhagwan Mahavir Wildlife Sanctuary, Goa, India, 11 March 1999, M.D' Souza, Herb. No. IMI 386393 holotypus, GUFCC-0274, isotypus.

Terrestrial litter, hyphomycete. Colonies effuse, dark olivaceous brown, velvety. Mycelium partly superficial, partly immersed, composed of branched, colourless to pale brown hyphae 1.5-2.5  $\mu\text{m}$  wide. Setae absent. Conidiophores mononematous, erect, straight or flexuous, septate, dichotomously branched in the above half, fertile in the middle, dark to reddish brown, verruculose, 330-600  $\mu\text{m}$  long, 10-18  $\mu\text{m}$  wide at the base, 8-10  $\mu\text{m}$  wide and conspicuously echinulate in the below half, terminating in sterile, setiform, variously curved, pale brown to hyaline, up to 6  $\mu\text{m}$  wide apical branches. The conidiophore branches bear short, fertile, dark to pale brown, verruculose, widely spaced, 1-2-septate, up to 25  $\mu\text{m}$  long, 3-5  $\mu\text{m}$  wide laterals. Conidiogenous cells polyblastic, integrated, terminal to subterminal on fertile branches, elongated, denticulate in the upper half, sometimes collapsing into cupulate form, 5-10  $\times$  2-3  $\mu\text{m}$ . Conidia dry, catenate, usually in branched, acropetal chains, spherical, dark brown, verruculose, aseptate, 3-5  $\mu\text{m}$  diam.

On dead leaves of *Dendrocalamus strictus* Nees, Mollem, Bhagwan Mahavir Wildlife Sanctuary, Goa, India, 11 March 1999, M.D' Souza, Herb. No. IMI 386393 holotypus, GUFCC-0274, isotypus.

ADDITIONAL SPECIMENS EXAMINED: On dead leaves of *Dendrocalamus strictus*, Mollem, Bhagwan Mahavir Wildlife Sanctuary, Goa, India, 29 Dec.1999, M.D'Souza, No. GUFCC-0320. On dead leaves of *Dendrocalamus strictus*., Mollem, Bhagwan Mahavir Wildlife Sanctuary, Goa, India, 20 Sep.2000, M.D'Souza, No. GUFCC-0315.

Besides the type species, *Trichobotrys effusa* (Berk. & Br.) Petch = *T. pannosa* Penzig & Saccardo, the genus *Trichobotrys* Penzig & Saccardo so far accommodates two species, namely *T. ipomoeae* Sawada and *T. trechispora* Petch (Ellis, 1971; Morgan-Jones et al., 1987; Hawksworth et al., 1995). The genus is characterised by mononematous conidiophores producing catenate, dark brown, spherical and echinulate conidia on fertile, smooth, short, lateral branches with polyblastic conidiogenous cells. In the type species, *T. effusa*, the conidiophore is setiform, not dichotomously branched, and the fertile lateral branches are smooth, often unciniform and 0-1-septate, arise directly on the main stipe, the characters which *T. ipomoeae* and *T. trechispora* largely share. In *T. ramosa*, the conidiophore is dichotomously branched with the numerous branches terminating in setiform sterile ends. The fertile lateral branches are short, straight, 1-2-septate, pale brown towards the apex and arise only from the primary and secondary branches of the conidiophore. The fertile branches are always verrucose.

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