PHAEODACTYLIUM VENKATESANUM GEN. ET SP. NOV. ON ELETTARIA CARDAMOMUM MAT. FROM KERALA

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On the High Ranges in Kerala, cardamom (Elettaria cardamomum Mat.) is grown extensively.

During October 1967, following the heavy monsoon rains, in the course of investigations on an undetermined leaf disease of cardamom, the author came across a very interesting phragmosporous dematiaceae.

Both the mature and young unfolded leaves are affected on the clump. The leaves present water-soaked lesions in early stages, the lesions spread and ultimately the leaves become completely shredded. Some of the leaves examined revealed a mealy-white fungus on the underface (Plate VI, Fig. 1). Isolation of the fungus into pure culture and its pathogenicity are contemplated.

A search through the published literature on phragmosporous dematiaceae did not reveal any genus to which the present collection could be assigned and hence a new genus is erected to accommodate the fungus occurring on Cardamom.

Phaeodactylium Gen. Nov. Agnihothrudu


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Phaeodactylium Gen. Nov. Agnihothrudu

Fungi imperfecti, hyphomycetes, dematiaceae. Colonies effuse on the undersurface of the leaf, mealy-white, mycelium partly superficial, partly immersed, composed of branched sepatate, subhyaline to olivaceous brown, smooth hyphae; Conidiophores formed singly or in small groups from the sterile, repent mycelium, erect, smooth, septate, brown, branching from about the middle in an irregular dichotomous fashion. Conidia borne on the ultimate branches as blown-out ends, single, successive, obovate to elongate ovoid, with 1 to 3 transverse septa, hyaline smooth-walled.

This species is named after the late Mr. C. V. Venkatesan, who was associated with the activities of Fertilizers and Pesticides Division of Rallis India Limited, for nearly two decades.

Text-Fig. 1. Phaeodactylium venkatesanum gen. et sp. nov. Agnihothrudu. A, Base of the conidiophore; B, C and D, Branching of the conidiophore and the ultimate branches bearing conidia; E, Conidia.
Phaeodactylium venkatesanum Sp. Nov. Agnihothrudu


Habitat in foliis viventibus Elettariae cardamomi. Typus die 10 a octobris anni 1967 in praedio Sathurangapara, High Ranges, Kerala, India, ab V. Agnihothrudu, lectus, in herbario C.M.I., Kew, U.K. sub numero positus est.

Phaeodactylium venkatesanum Sp. Nov. Agnihothrudu

Spots appearing a water-soaked lesions, colonies effuse, mealy-white on the undersurface of the leaf. Mycelium partly superficial, partly immersed, composed of branched septate; subhyaline to olivaceous brown hyphae, smooth, up to 10 μ wide; conidiophores arising from dark basal cells, single or in small clusters, erect, brown below, subhyaline above, measuring up to 350 μ long and 5–7 (−10) μ wide at the base, septate, branching from about the middle in an irregular dichotomous fashion; the branched part, subhyaline to hyaline 4–6 μ wide, the ultimate branches single, two or rarely in groups of three, cylindrical measuring 15–20 (−24) × 3·5 (−4) μ. Conidia formed as blown-out ends, produced singly and successively at the tip of each branch, obovate to elongate, ovoid, hyaline smooth-walled, with 1–3 transverse septa measuring 14–21 (−26) × 3–5 (−7) μ.

Habitat on living leaves of Elettaria cardamomum Mat. Sathurangapara estate, High Ranges, Kerala, India. Collected by V. Agnihothrudu, on the 10th of October, 1967, deposited in Herbarium, Commonwealth Mycological Institute, Kew, U.K., under No. 129936.

The only fungus which has close resemblance to the one under report is Dactylium alpiniae Sawada (1928) described on Alpinia speciosa K. Schum. (= Elettaria speciosa) from Formosa, but the fungus collected in Kerala manifestly does not belong to the genus Dactylium. Dactylium
FIG. 1. A cardamom leaf showing the affected part.
Phaeodactylium venkatesanum *Gen. Flettaria cardamomum* *Mat.* 209

Nees ex Fr. is a phragmosporous moniliaceae with slender, repeatedly branched verticillate conidiophores with the spores borne on ultimate branches which are themselves arranged in a verticillate fashion. Besides, most of the species of *Dactylium* are agaricolous. It is most likely that Sawada’s (*loc. cit.*) fungus is same as the one described here, but in the absence of type material, the synonymy could not be established conclusively.

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**REFERENCE**