
Hormisciomyces—a new generic record for India

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A new anamorphic dematiaceous hypomycete genus characterized by superficial hyphae with cells generally longer than broader; conidiophore arise as upright branches with swollen apical cell and with 8 to 10 presumed phialides; spores are hyaline and subglobose. The taxon was identified as *Hormisciomyces* which is a new addition to fungi of India at generic level.

Key words: *Phialophores, phialoconidia, whorl of phialides*

INTRODUCTION

Survey of microfungi (2006-2007) colonizing various medicinal plants from some localities and Forest areas of Jabalpur has resulted in the discovery of one novel dematiaceous hypomycetes from India. The genus *Hormisciomyces* has been proposed by Batista and Nascimento (1957) from Cuba with *H. prepusum* as its type species. It is an imperfect stage produced by species of *Euantennaria* (Hughes, 1970). Previously there is no record of this genus from India (Bilgrami et al., 1991 Jamaluddin et al., 2001). Hughes (1970, 1972 and 1974) has reported it for the first time from New Zealand. Detail investigation of present species *Hormisciomyces indiae* sp. nov. has been made.

MATERIALS AND METHODS

During routine survey of foliicolous fungi from forests of Central India, authors came across a fungus causing sooty mold disease of *Azadirachta indica*. The fungi superficially associated with host were mounted on a glass slide by colloidion technique. When a drop of colloidion solution was applied to the colonies of such organisms on a leaf, the fungus got entirely embedded and the dried film was peeled off readily from the host surface. Removal of the colloidion by acetone on a glass slide resulted in undisturbed preparations.

OBSERVATION

***Hormisciomyces* Bat. and Nascim., 1957 (Fungi, Ascomycota, Ascomycetes, Capnodiales, Euantennariaceae)**

Hyphae superficial, usually brown to dark brown, usually wide, cylindrical or more or less cylindrical, composed of cells generally longer than breadth, forming a sparse network. *Phialiophores* (conidiophores) arise from subicules hyphae as upright branches and are 1 to 10 septate, branched or unbranched with a swollen apical cell bearing a whorl of 8 to 10 presumed phialides. Phialides more or less oval, pale brown to brown distally darkest and thicker walled. Spores hyaline, subglobose, 1µm in diameter and aggregated in a slimy head. Occasionally a phialophore proliferates through a whorl of phialides to produce another whorl of higher level (Hughes, 1970, 1972, 1974).

***Hormisciomyces indiae* Dubey and Pandey sp. nov. (Fig 1-5)**

Coloniae limosus, obscurus nigra. Mycelium superficialis. Phialophora exorior instar rectus rameus ac instar lateralis remeus hyphae ac 1-13 septatus, 15-80 µm longus, 6.6-7.5 µm latus sub-apex. Acro-cella unicellularis ad bilocularis (unus septatus), fuscus, globosus, 6.6-15.4µm inflatus, ac fero verticillatus 3-10 phialis. Phialis globosus ad

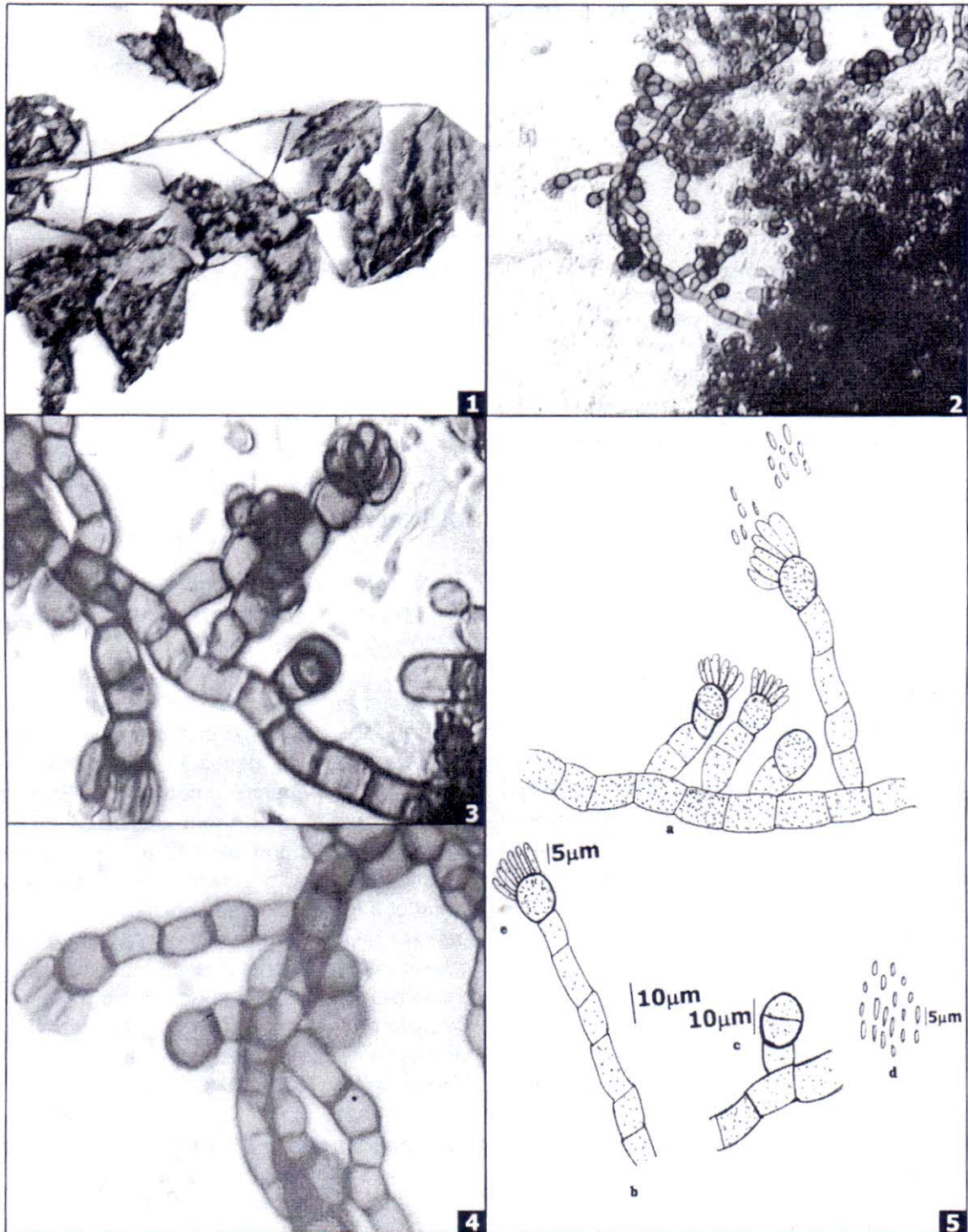


Fig. 1 : *Hormisciomyces indiae* sp. nov. (gen.nov. et sp.nov. to Fungi of India)
 1. Sooty mold disease of *Azadirachta indica*. 2. Conidia & Conidiophores (X100) 3. Phialophores, Apical cell, Phialides & Phialospores (X400) 4. A pical cell with whorl of Phialides (X400) 5. Camera Lucida Drawing (a. Hyphae, b. conidiophore c. apical cell, d. phialides, e. Phialospores).

ethipsoideus, 6.6-8.8µm × 4.4-6.6 µm; Phialo conidii hyalo, subglobosus (1.5µm in diametro) ad ellipsoideus (2.2-5.6 × 1.5-2.5 µm), aggego in mucosus massa, aliquando disseminatus.

Colonies slimy, dark black; mycelium superficial. Phialophores arise as upright branches as well as lateral branches of repent hyphae and are 1-13 septate, 15-80 µm long, 6.6-7.5 µm wide below the apex. Apical cell unicelled to bicelled (1 septate), dark brown, spherical, 6.6-15.4µm swollen, and bears a whorl of 3-10 phialides, phialides spherical to ellipsoidal (rod shaped), 6.6-8.8 × 4.4-6.6µm; Phialoconidia are hyaline, subglobose (1.5µm in diameter) to ellipsoidal (2.2-5.6 × 1.5-2.2µm) aggregated in slimy mass, sometimes scattered.

Etymology : Species epithet was given on the name of the country, as it is reported for first time from India.

Specimen Examined : On sooty mould leaves of *Azadirachta indica* (Meliaceae) Jabalpur (M.P.),

13.7.2007, HCIO No. 48113 (Holotype), HDBJ # 23, (Isotype) and FGCC # 426, Leg Rashmi Dubey.

The taxon described and examined above differs from the known species of *Hormisciomyces* significantly in number of septation of phialophore, shape and size of apical cell, in presence of separate phialides & hyaline conidia and in absence of Antennatula conidia. Therefore, the dissimilarities have given the liberty to describe and illustrate it as a new species namely *Hormisciomyces indiae* sp. nov.

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Table 1. Comparative account of *Hormisciomyces indiae* sp. nov. with related species.

| Fungal characteristics | <i>H.prepusum</i> | <i>H.bellum</i> | <i>H.indiae</i> sp.nov. |
|-------------------------------|---------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Phialides (so called conidia) | Globose, brown 4.5µm in diam. | Oblong or subspherical, brown, 3.5-8 × 3.7µm | Phialides spherical to ellipsoidal, 6.6-8.8×4.4-6.6µm. |
| Hyaline conidia | Not observed | Not observed | Subspherical to ellipsoidal, hyaline, in slimy mass, 1.5µm (sub spherical), 2.2×5.6-2.2µm (ellipsoidal) |
| Antennatula conidia | Rarely present, 7-10 septate. | Rarely present, 9-septate. | Antennatula conidia were not seen. |
| Apical cell | Slightly swollen | Slightly swollen | Swollen and sometimes septate |
| Perfect stage | <i>Euantennaria tropicicola</i> | <i>Euantennaria tropicicola</i> | Not observed. |

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