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Bramhamyces, a new anomorphic genus from India

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Abstract: *Bramhamyces*, a new genus with its type *Bramhamyces ilicis* has been described and illustrated.

Keywords: Fungi, *Brahmamyces,* new genus.

Introduction

The genus *Asterina* is characterised by having lateral appressoria, brown, branched mycelium with discrete, astomatous thyriothecia which dehisces stellately at maturity. Contrary to it, certain fungi are devoid of appressoria on the main hyphae but produce them around stomata by forming areole. To accommodate such fungi, Doidge (1921) proposed the genus *Isiphinga*, with type *I. areolata* Doidge. Arx & and Muller (1975) made this genus synonymous to *Symphaster* Theiss. & Sydow. Morphological characters of this genus have been dealt in detail by Hansford (1946) and the present collection matches well with it. Since it is in its anamorph, it has been accommodated in a new genus. Part of the collection has been deposited in HCIO, New Delhi.

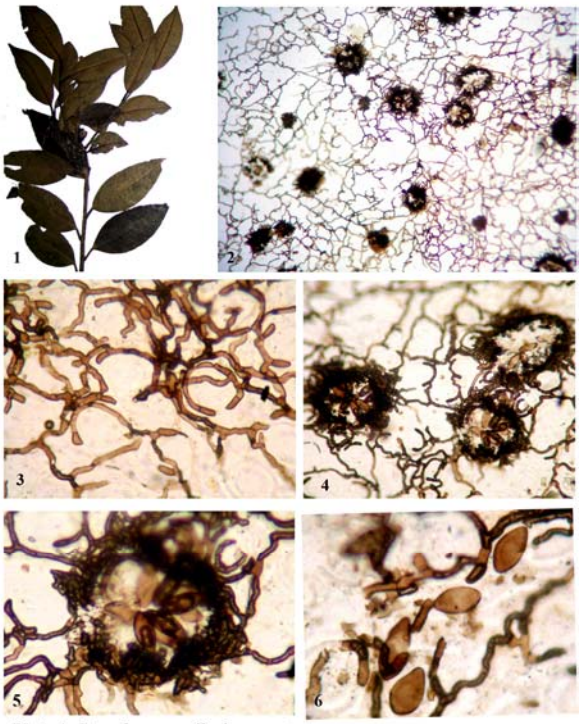

Plate 1. ***Bramhamyces ilecis*** gen. et. sp. nov.

1. Infected leaves, 2. Mycelial colony with pycnothyria, 3. Hyphae coiled around stomata and ended with appressoria, 4. Pycnothyria, 5. Pycnothyrium with pycnothyriospores, 6. Pycnothyriospores

Taxonomy

Bramhamyces V.B.Hosagoudar, gen.nov. (anomorph of the genus *Symphaster*) (etiomology: Bramha-Mythological God)

Mycetae foliicolae. Hyphae brunneae, ramosae, septatae, ramosae tantum circa stomata et formans 'areole' vel producentes 1-3-appressoria. Hyphis portionio alius ex-appressoriatus. Appressoria producentes circa cellulae stomata (guard) producentes haustoria coralloides in cellulae adjans. Stomata saepe mycelialis stipatum. Pycnothyria subhyphis, orbicularis, connate; pycnothyriosporae unicullaris, brunneae, ovalis, ellipsoideae.

Foliicolous fungi. Hyphae brown, branched, septate, ramify in the grooves only around stomata to form 'areole' to produce 1-3-appressoria. Remaining hyphae devoid of appressoria. Appressoria produced on the guard cells of the stoma produce corolloid haustoria in the neighbouring cells. Stomata often plugged with mycelium. Pycnothyria grown below the mycelium, orbicular, connate; pycnothyriospores, unicellular, brown, oval, pyriform.

Type species: *Bramhamyces illices* sp. nov.

Mycelium devoid of appressoria but are produced around the stomata of the host plant by forming 'areole' is the character of this anamorph genus.

Bramhamyces ilecis V.B. Hosagoudar *et.* Chandraprabha, sp. nov. (Plate 1, Fig.1)

Coloniae amphigenae, densae, ad 2 mm diam., raro confluentes.Hyphae rectae vel flexuosae, acuteque vel laxe ramosae, laxe vel arte reticulatae, cellulae 22-33 x 4-7 µm. Hyphis portionio alius ex-appressoriatus sed circa formans stomatus areola et producentees 1-3 appressoriis. Appressoria producentes a myceliis areolata sed circa cellulae stomata (guard) producentes haustoria coralloides in cellulae adjans, appressoria unicellularis, ovate, oblonga, integra, 9-15 × 4-7 µm. Pycnothyria connata, subhyphis, orbicularis, ad 110 µm diam., stellatim dehiscentes ad centro, margene crenatae vel fimbriatae; pycnothyriosporae unicullaris, brunneae, ovalis vel ellipsoideae, pyriformes, 20-26 × 8-11 µm, parietus glabrus.

Colonies amphigenous, dense, up to 2 mm in diameter, rarely confluent. Hyphae straight to flexuous, branching at acute to wide angles, loosely to closely reticulate, cells 22-33 × 4-7 µm, devoid of appressoria but hyphae form an 'areole' around the stoma by producing one to three appressoria. Appressoria produce on the tip of the 'areolar' net, produce corolloide haustoria in the cells adjacent to the guard cells, appressoria unicellular, ovate, oblong, entire, 9-15 × 4-7 µm. Pycnothyria connate, formed below the mycelium, orbicular, up to 110 µm in diameter, stellately dehisce at the center, margins crenate to fimbriate; pycnothyriospores unicellular, brown, oval to ellipsoidal, pyriform, 20-26 × 8-11 µm, wall smooth.

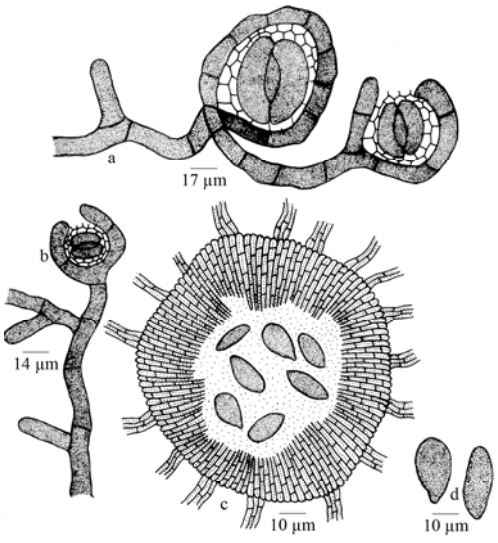

Fig. 1. *Bramhamyces ilecis* sp. nov.
a-b.Brown, branched mycelium formed 'areole' around stomata and showing appressoria at the tip of the mycelium near the guard cells, c- Pycnothyrium, d-Pycnothyriospores.

Material examined: On the leaves of *Ilex wightiana* Wall. (Aquifoliaceae), Mannavan shola, Munnar, Idukki, Kerala, India, May 11, 1999, C.K.Biju HCIO 48300 (type), TBGT 3019 (isotype).

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